Final

Site Inspection for the Former Naval Ocean Systems Center Site

Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii

August 2015

Department of the Navy
Naval Facilities Engineering Command, Hawaii
400 Marshall Road
JBPHH HI 96860-3139



Architect-Engineering Services
Contract Number N62742-11-D-1821, CTO 0015

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Prepared For:



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Prepared Under:
Architect-Engineering Services
Contract Number N62742-11-D-1821, CTO 0015

Executive Summary

This report documents the results of the Site Inspection (SI) conducted at the Former Naval Ocean System Center (NOSC) Site within Marine Corps Base (MCB) Hawaii, Kaneohe Bay, Oahu, Hawaii. This report was prepared for the Naval Facilities Engineering Command (NAVFAC) Hawaii under Contract Number (No.) N6742-11-D-1821, Contract Task Order (CTO) 0015.

The former NOSC facility was operational from the early 1970s through 1993. Used metal and plastic drums were brought from Pearl Harbor two to four times a year for use as aquatic float pens at the NOSC facility. Residual liquids from the incoming drums were reportedly dumped onto the bare ground southeast of the former NOSC test pool. There are no records of the type of liquids that may have been in the drums.

Contaminants of potential concern (COPCs) were selected based historic materials/wastes that the Navy typically stored in 55-gallon drums. COPCs included total petroleum hydrocarbons-gasoline range organics (TPH-GRO); TPH-diesel range organics (DRO); TPH-oil range organics (ORO); volatile organic compounds (VOCs); semi-volatile organic compounds (SVOCs); polycyclic aromatic hydrocarbons (PAHs); organochlorine pesticides; chlorinated herbicides; polychlorinated biphenyls (PCBs); 13 priority pollutant metals, antimony (Sb), arsenic (As), beryllium (Be), cadmium (Cd), chromium (Cr), copper (Cu), mercury (Hg), nickel (Ni), lead (Pb), selenium (Se), silver (Ag), thallium (Tl), and zinc (Zn); and dioxins.

The State of Hawaii, Department of Health (DOH) Tier 1 Environmental Action Levels (EALs) for soil where the potentially impacted groundwater is not a current or potential drinking water resource and a surface water body is located within 150 meters of the release site (DOH 2012) were used as the Project Action Levels (PALs). Soil benchmarks from these resources are protective of potential hazards to soil invertebrates and terrestrial plants.

The SI activities were conducted in accordance with the *Project Procedures Manual* (Department of the Navy [DON] 2007) and the project Work Plan (WP) (Element Environmental, LLC [E2] 2013) and included: utility clearance; drilling of 150 soil borings and collection and analysis of multi-increment soil samples from three depth intervals; and performance of a human health hazard evaluation.

After initial screening against the PALs, contaminants of concern (COCs) identified at the Site included:

- PCBs and Dalapon exceeded their respective soil PALs in DU 1 in 0.5 to 2.0, and 0 to 0.5 feet bgs depth horizons, respectively.

The human health hazard evaluation considered potential health hazards to current and future receptors based on current environmental conditions. Based on the land use and location of the release Site the following evaluation is made:

- Although the PCB soil concentrations exceed their respective DOH Tier 1 Direct-Exposure Action Level at the Site, the sample results do not exceed the DOH Tier 2 Direct-Exposure Action Levels.

- Dalapon concentrations exceed the Leaching Action Levels; however, Dalapon is not persistent in the environment and the total mass of Dalapon in the DU and depth horizon it was detected will not pose an unacceptable hazard to the environment.

Based on the findings of the SI, the Site is recommended for No Further Action (NFA).

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Acronyms and Abbreviations

°F	degree Fahrenheit
µg/m^3	micrograms per cubic meter
%BD	percent breakdown
%D	percent difference
%R	percent recovery
%RSD	percent relative standard deviation
A	indicates the finding is based upon technical validation criteria
Ag	Silver
APPL	Agriculture & Priority Pollutants Laboratory, Inc.
ARF	Analysis Request Form
As	Arsenic
atm	atmospheres
Be	Beryllium
bgs	below ground surface
CAS	Chemical Abstracts Service
CCH	City and County of Honolulu
Cd	Cadmium
CD-ROM	compact disc – read only memory
cm^3/g	cubic centimeters per gram
Cr	Chromium
CLP	Contract Laboratory Program
COC	Contaminants of Concern
COPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
CTO	Contract Task Order
Cu	Copper
DoD	Department of Defense
DOH	State of Hawaii, Department of Health
DON	Department of the Navy
DOT	Department of Transportation
DQI	Data Quality Indicator
DQO	Data Quality Objective
DU	Decision Unit
DRO	Diesel Range Organic
E2	Element Environmental, LLC
EAL	Environmental Action Level
EDD	Electronic Data Deliverable
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency
ft	feet
g/mole	grams per mole
GC	Gas Chromatograph
GRO	Gasoline Range Organic
HAR	Hawaii Administrative Rules
Hg	Mercury
HGS	Hawaii Geophysical Services, Inc.

HRGC	High Resolution Gas Chromatograph
HRMS	High Resolution Mass Spectrometer
ICPMS	Inductively Coupled Plasma Mass Spectrometer
ID	Identification
IDW	Investigation Derived Waste
INRMP/EA	Integrated Natural Resources Management Plan and Environmental Assessment
J	Indicates an estimated value
Kg	kilogram
L	liter
LCS	Laboratory Control Sample
LDC	Laboratory Data Consultants, Inc.
LOD	Limit of Detection
LOQ	Limit of Quantitation
MCB	Marine Corps Base
m^3	cubic meters
mg/kg	milligram per kilogram
mg/L	milligram per liter
MI	Multi-increment
mL	milliliter
MS	Mass Spectrometer
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NA	not applicable
NAVFAC	Naval Facilities Engineering Command
NEESA	Naval Energy and Environmental Support Activity
ng/kg	nanogram per kilogram
Ni	Nickel
NJ	Presumptive evidence of presence of the compound at an estimated quantity
No.	number
NOAA	National Oceanic and Atmospheric Administration
NOSC	Naval Ocean Systems Center
ORO	Oil Range Organic
P	Indicates the finding is related to a protocol/contractual deviation
PAH	Polynuclear Aromatic Hydrocarbon
PAL	Project Action Limit
PARCCS	Precision, Accuracy, Representativeness, Comparability, Completeness, and Sensitivity
Pb	Lead
PCB	Polychlorinated Biphenyl
PPE	Personal Protective Equipment
PQO	Project Quality Objective
PSQ	Principal Study Question
QA	Quality Assurance
QC	Quality Control
QSM	Quality Systems Manual
r^2	coefficients of determination
R	Quality control indicates the data is not usable
RCRA	Resource Conservation and Recovery Act

RPD	Relative Percent Difference
RRF	relative response factor
RSD	Relative Standard Deviation
Sb	Antimony
SDG	Sample Delivery Group
Se	Selenium
SI	Site Inspection
SOP	Standard Operating Procedure
SVOC	Semi-Volatile Organic Compound
TEQ	Toxic Equivalents
Tl	Thallium
TPH	Total Petroleum Hydrocarbon
U	Indicates the compound or analyte was analyzed for, but not detected at or above the stated limit
UIC	Underground Injection Control
UJ	Indicates the compound or analyte was analyzed for, but not detected and the sample detection limit is an estimated value
U.S.	United States
VOA	Volatile Organic Analysis
VOC	Volatile Organic Compound
WP	Work Plan
Zn	Zinc

Section 1 Introduction

1.1 Purpose and Objectives

This report documents the results of a Site Inspection (SI) conducted at the Former Naval Ocean Systems Center (NOSC) (herein after the "Site") located on Marine Corps Base (MCB) Hawaii, Kaneohe, Oahu, Hawaii. This report was prepared for the Naval Facilities Engineering Command, Hawaii (NAVFAC Hawaii) under Contract Number (No.) N62742-11-D-1821, Contract Task Order (CTO) 0015. The SI was conducted in accordance with the Work Plan (WP) prepared for this project (Element Environmental, LLC [E2] 2013).

The intent of the SI was to delineate and characterize the nature and extent of the contamination caused by historic potential release(s) of residual liquid from drums onto the bare soil at the site, and to provide a basis for developing effective remedial measures and response actions for the area. The SI will provide information to assess the potential hazards to human health and the environment; and to support the development, evaluation, and selection of appropriate response alternatives.

1.2 Report Organization

This report is comprised of 11 sections that are organized as follows:

1. Introduction
2. Background
3. Summary of Previous Investigations
4. Summary of Data Quality Objectives
5. Site Inspection Activities
6. Site Inspection Results
7. Data Quality Control and Validation
8. Nature and Extent of Contamination
9. Environmental Hazard Evaluation
10. Summary and Conclusions
11. References

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Section 2 Background

2.1 Site Location and Features

MCB Hawaii occupies the entire 2,951 acre Mokapu Peninsula and is located on the windward side of Oahu. MCB Hawaii is bordered to the north by the Pacific Ocean, to the east by Kailua Bay, to the south by fishponds and to the west by Kaneohe Bay. South of the fishponds, MCB Hawaii is bordered by Kaneohe Bay Drive, the City and County of Honolulu (CCH) Kailua Regional Wastewater Treatment Plant, and the residential communities of Kaneohe and Kailua.

Located in the western portion of MCB Hawaii, the Former NOSC Facility is next to the western end of Sumner Road (Figure 2-1).

2.1.1 Former NOSC Project Site

During the historic operation of the NOSC, the site was open, flat, and un-vegetated. The NOSC facility consisted of a test pool and nearby administrative buildings. The former NOSC test pool was located to the east of Buildings 1375 and 1623. The project Site encompasses approximately 27,300 square feet (130 feet [ft] x 210 ft), southeast of the former NOSC test pool. The 27,300 square foot area project Site is centered on a 6,500 square foot area (50 ft x 130 ft) where a former NOSC Facility employee stated that residual drum contents were dumped onto the ground. The area immediately surrounding the disposal area is also included within the project site to determine if contamination has migrated from the release area (Figure 2-2).

Currently, the project site is open and vegetated with grass, maintained by periodic mowing. An adjacent open area is sometimes used for open storage of trailers or shipping containers. There are no plans to change the site use.

2.1.2 Climate

Northeasterly trade winds prevail over Oahu approximately 80 percent of the time. The trade winds blow most strongly and consistently from April through December, with average wind speeds ranging from 10 to 15 miles per hour. Southerly or “Kona” winds occur roughly less than half the time during the months of December through March. The northeasterly trade winds carry a large quantity of moisture from the Pacific Ocean to the island. Orographic lifting as the trade winds encounter the Koolau Mountain range causes the air temperature to drop and air moisture to precipitate. The mean annual precipitation at the upper reaches of the Koolau Mountains is approximately 150 inches, and the windward side of the island generally experiences more rainfall than the leeward side. The orographic effect also tends to produce most of the precipitation in the form of passing showers in the evenings and early mornings.

The overall climate on Oahu is warm and humid year round, with an average daily temperature ranging between 65 and 85 degrees Fahrenheit (°F) with a relative humidity ranging between 30 and 90 percent. Based on a 38-year study at MCB Hawaii, the mean daily temperature at the project site is 71.6°F and the average rainfall is 38.9 inches. Prevailing northeasterly tradewinds occur at MCB Hawaii throughout the year at a mean wind speed of 7.0 knots (Juvik & Juvik 1998).

2.1.3 Geology and Soils

MCB Hawaii is located on the windward side of the island of Oahu on the Mokapu Peninsula. The topography of the peninsula is dominated by three remnant hydromagmatic volcanic features (Ka'au or Pyramid Rock, Pu'u Hawaii Loa, and Ulupa'u Crater), which erupted during the post-erosional phase of volcanism on the island (Honolulu Volcanic Series) between 500,000 to 1,000,000 years ago. The volcanic activity associated with these eruptions produced layered ash deposits, which blanketed much of MCB Hawaii. The ash eventually underwent a cementing process that transformed the originally unconsolidated ash into a cemented tuff. Large fluctuations in sea levels produced coral reefs atop the base of these volcanic vents, which today comprise much of the peninsula's relatively porous, calcareous land surface. Other portions of the peninsula are covered by sand dunes created by the prevailing tradewinds blowing the sand present on the long beaches fringing the windward Mokapu shores inland.

The soils on MCB Hawaii are generally thin and range from fine beach sand to dense silty clay. The flat portions of the peninsula are commonly covered by either fill or Mamala Loam, a well-drained soil developed from coral, lava, and alluvium. The slopes of the volcanic craters are commonly covered by Makalapa Clay, which has a high shrink-swell potential. The NOSC facility is located near other project sites that are adjacent to a sand dune and are underlain by silty sand material in the shallow subsurface and potentially Makalapa clay (created by weathering of tuffaceous material) at depth, due to proximity to Pu'u Hawai'i Loa. However, the soil borings collected during the SI fieldwork, the NOSC Facility soils are primarily fill material.

2.1.4 Hydrology

The topography of the NOSC facility is relatively flat with a ground elevation of between four to five feet. The project area is currently a grass covered field, bordered by a brush line to the east, with a general surface gradient towards Kaneohe Bay to the southwest. However, the small volumes of residual liquids that were historically released at the site would likely have simply infiltrated into the subsurface, rather than flowing away from the subject property.

2.1.5 Hydrogeology

The aquifer identification and classification maps designate the aquifer systems on Mokapu Peninsula the same as those present in the nearby town of Kailua (Mink and Lau 1990). According to this designation, the groundwater beneath the NOSC project site consists of a shallow, basal, unconfined sedimentary aquifer that is currently used, is ecologically important, is low in salinity (i.e., between 250 to 1,000 milligrams per liter [mg/L] chloride), is irreplaceable, and has a high vulnerability to contamination (Mink and Lau, 1990). A compilation of water level measurements were made during an IAS conducted on MCB Hawaii in 1983 showed no well-defined shallow groundwater gradients on Mokapu Peninsula (Naval Energy and Environmental Support Activity [NEESA] 1984). The IAS estimated a hydraulic gradient of around one foot per mile and a groundwater flow velocity of around 10 feet per year for the shallow aquifer system beneath the peninsula. This gradient is only a reasonable guess to give perspective of the magnitude of the gradient and is not site specific within the Mokapu Peninsula.



	DATE: AUG 2015	PROJECT TITLE: SITE INSPECTION FOR THE FORMER NOSC SITE MCB HAWAII, KANEOHE, OAHU, HAWAII
	FIGURE TITLE: SITE VICINITY MAP	FIGURE NO.: 2-1



	DATE: AUG 2015	PROJECT TITLE: SITE INSPECTION FOR THE FORMER NOSC SITE MCB HAWAII, KANEOHE, OAHU, HAWAII
	FIGURE TITLE: SITE LOCATION MAP	FIGURE NO.: 2-2

Beneath the shallow basal aquifer, a deeper aquifer (located several hundred feet below sea level at the project site) is designated a basal, confined, dike/flank lava aquifer that is currently used for drinking water and is considered to be irreplaceable with a low vulnerability to contamination (Mink and Lau 1990). Despite this designation, MCB Hawaii does not contain a viable drinking water source and lies seaward of the Underground Injection Control (UIC) line.

The UIC line was developed by the State of Hawaii, Department of Health (DOH) to delineate the boundary between non-drinking water aquifers and underground sources of drinking water throughout the state (DOH 1992). Areas that are seaward of the UIC line are considered to be located above non-drinking water aquifers.

The shallow groundwater beneath the NOSC Site is encountered at a depth of approximately four feet below ground surface (bgs) and is likely highly brackish and not suitable for human consumption. The groundwater is tidally influenced and discharges into Kaneohe Bay.

2.2 Site History

The NOSC facility was in operation from the early 1970s to 1993. A former NOSC employee stated that two to four times a year, 30 to 40 used metal and plastic drums were brought from Pearl Harbor to the NOSC. Any residual liquid remaining in the drums brought to the NOSC facility was reportedly dumped onto the bare ground prior to use as a float for aquatic pens. No records have been maintained of the type of liquids that may have been in the drums.

Since the closure of NOSC facility, the disposal area is maintained as an open grass covered field.

2.3 Land Use

2.3.1 Former NOSC Site

2.3.1.1 Previous Site Use

The NOSC facility was operational from the early 1970s through 1993 and is located next to the western end of Sumner Road. The NOSC facility utilized an aboveground test pool which employed used drums as aquatic float pens. A former NOSC employee stated that all the used metal and plastic drums were brought from Pearl Harbor. Prior to use in the test pool, residual liquids from the incoming drums were reportedly dumped onto the bare ground southeast of the former NOSC test pool.

2.3.1.2 Current and Future Land Use

The current site use is industrial, and the former disposal area is maintained as an open grass-covered field. The test pool has been removed and while the brush line to the east has remained the same, the area has gone from a non-vegetated area to a grassy field. Fencing has been constructed southwest of the former disposal area. Adjacent areas are occasionally used for open storage of trailers or shipping containers. There are no current plans to change the land use for the Site.

2.4 Ecology

2.4.1 Terrestrial Habitat

The terrestrial habitat in and surrounding the Site is low quality, indicated by the Site having been heavily altered from a natural state with extensive soil disturbances and no native vegetation types present. As noted in the Marine Corps Base Hawaii Integrated Natural Resources Management Plan and Environmental Assessment (MCBH INRMP/EA), most of the vegetation in the occupied lands of the base are typically Bermuda grass and a variety of native and non-native planted trees and shrubs (MCB Hawaii 2006). There are no natural occurrences of plants currently listed or pending listing as "Endangered" under the Federal Endangered Species Act though in some areas of MCB Hawaii endangered plants have been deliberately planted into the landscaping (MCB Hawaii 2006). The animals likely to be found in this area are non-indigenous species such as rats, mongoose, and feral cats.

The National Oceanic and Atmospheric Administration (NOAA) Environmental Sensitivity Index map for the area notes that along the shoreline in the vicinity of the Former NOSC site, there are man-made structures, rocky and sandy shores. The shoreline provides habitat for gulls, shorebirds, and terns, but the area is not used for nesting for these species, none of which are protected or endangered species. The resident native waterbird species at MCB Hawaii are observed primarily in the wetlands on the base, none of which are part of or adjacent to the Former NOSC site. These species include the Hawaiian Stilt (*Himantopus mexicanus knudseni*), the Hawaiian Gallinule (*Gallinula chloropus sandvicensis*), the Hawaiian Coot (*Fulica americana alai*), and the Hawaiian duck (*Anas wyvilliana*). These species primarily nest at the Nu'upia Ponds Wildlife Management Area, at a distance of approximately 2 miles to the southeast.

2.5 Conceptual Site Model

The Conceptual Site Model (CSM) for the NOSC facility is presented on Figures 2-3 and 2-4; and identifies potential exposure pathways for the ecological and human receptors that were evaluated during the SI.

The CSM is based on information provided by MCB Hawaii Environmental personnel as well as observations made by E2 personnel at the former NOSC facility during the site reconnaissance conducted in May 2012 (see Section 3.1). The concern was that the historic means of disposing excess liquids from drums for re-use as floats may have contaminated the soils at the site with chemicals contained in the disposed fluids.

FIGURE 2-3
CONCEPTUAL SITE MODEL
SURFACE SOILS FORMER NOSC SITE
MARINE CORPS BASE HAWAII, KANEOHE, HAWAII

Exposure Pathway			Receptors								
			Current Land Use			Future Land Use					
Contributing Source	Transport Mechanism	Exposure Route	Onsite Occupational Workers	Recreational Users	Ecological Receptors	Onsite Occupational Workers	Onsite Construction Workers	Recreational Users	Residential Users	Ecological Receptors	Rationale
Surface Soil	Direct Contact	Incidental Ingestion	Potentially Complete	Potentially Complete	Potentially Complete	Potentially Complete	Potentially Complete	Potentially Complete	Potentially Complete	Potentially Complete	Incidental ingestion of surface soil by onsite workers, recreational users, construction workers and residents is potentially complete. Ecological receptors may incidentally ingest surface soil while feeding and grooming.
		Dermal	Potentially Complete	Potentially Complete	Insignificant	Potentially Complete	Potentially Complete	Potentially Complete	Potentially Complete	Insignificant	Contact with surface soil by onsite workers, recreational users, construction workers and residents is potentially complete. Ecological receptors may contact surface soil while feeding and grooming; however, exposure is expected to be insignificant compared to other pathways.
	Air Transport	Inhalation of VOCs	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Air transport and inhalation of VOCs by onsite workers, recreational users, construction workers, residents, and ecological receptors is potentially complete. However, due to the length of time since the release, VOCs are likely not present in surface soils.
		Inhalation of Particulates	Potentially Complete	Potentially Complete	Insignificant	Potentially Complete	Potentially Complete	Potentially Complete	Potentially Complete	Insignificant	Air transport and inhalation of particulates by onsite workers, recreational users, construction workers and residents is potentially complete. Ecological receptors may inhale particulates; however, exposure is expected to be insignificant compared to other pathways.
	Bio-uptake	Ingestion of Plants / Animals	Incomplete	Incomplete	Potentially Complete	Incomplete	Incomplete	Incomplete	Incomplete	Potentially Complete	Incomplete for current and future onsite workers, recreational users, construction workers and residents because workers and recreational users are not expected to ingest any site plants or animals. Potentially complete for ecological receptors since they may eat the natural vegetation growing on site and feed on prey living on site.
	Stormwater Runoff to Kaneohe Bay Surface	Incidental Ingestion	Incomplete	Incomplete	Potentially Complete	Incomplete	Incomplete	Incomplete	Incomplete	Potentially Complete	Incomplete for the current and future onsite workers, recreational users, construction workers and residents because surface water is not used as a drinking water source. The predominantly relatively flat topography and distance from the site to Kaneohe Bay (less than 1,000 feet) allow for some infiltration, and the ground surface vegetation (grasses and brush) minimizes sediment transport via runoff. Potentially complete for ecological receptors.
		Dermal	Incomplete	Incomplete	Potentially Complete	Incomplete	Incomplete	Incomplete	Incomplete	Potentially Complete	Incomplete for the current and future onsite workers, recreational users, construction workers and residents because the coastline where the storm water would likely discharge is not utilized for recreation. The predominantly relatively flat topography and distance from the site to Kaneohe Bay (less than 1,000 feet) allow for some infiltration, and the ground surface vegetation (grasses and brush) minimizes sediment transport via runoff. Potentially complete for ecological receptors.

FIGURE 2-4
CONCEPTUAL SITE MODEL
SUBSURFACE SOILS FORMER NOSC SITE
MARINE CORPS BASE HAWAII, KANEOHE, HAWAII

Exposure Pathway			Receptors								
			Current Land Use			Future Land Use					
Contributing Source	Transport Mechanism	Exposure Route	Onsite Occupational Workers	Recreational Users	Ecological Receptors	Onsite Occupational Workers	Onsite Construction Workers	Recreational Users	Residential Users	Ecological Receptors	Rationale
Subsurface Soil	Direct Contact	Incidental Ingestion	Incomplete	Incomplete	Insignificant	Incomplete	Potentially Complete	Incomplete	Potentially Complete	Insignificant	Incomplete for occupational workers and recreational users who will not come into direct contact with subsurface soils. Potentially complete for construction workers and residents because possible excavation activities could allow direct contact and thus possible ingestion of subsurface soils. For ecological receptors, exposure is assumed to be insignificant compared to exposure to surface soil.
		Dermal Contact	Incomplete	Incomplete	Insignificant	Incomplete	Potentially Complete	Incomplete	Potentially Complete	Insignificant	Incomplete for occupational workers and recreational users who will not come into direct contact with subsurface soils. Potentially complete for construction workers and residents because possible excavation activities could allow direct contact with subsurface soils. For ecological receptors, exposure is assumed to be insignificant compared to exposure to surface soil.
	Air Transport	Inhalation of VOCs	Potentially Complete	Potentially Complete	Insignificant	Potentially Complete	Potentially Complete	Potentially Complete	Potentially Complete	Insignificant	Air transport and inhalation of VOCs by onsite construction workers and residents is potentially complete should the subsurface soil become exposed during excavation activities. Onsite workers and recreational users may also be exposed to VOCs that migrate through the soil gas. Ecological receptor exposure is insignificant compared to other pathways.
		Inhalation of Particulates	Incomplete	Incomplete	Incomplete	Incomplete	Potentially Complete	Incomplete	Potentially Complete	Incomplete	Air transport and inhalation of particulates by onsite construction workers and residents is potentially complete should the subsurface soil become exposed during excavation activities. Occupational workers, recreational users, and ecological receptor exposure is incomplete.
	Leaching to Groundwater	Ingestion	Incomplete	Incomplete	Incomplete	Incomplete	Potentially Complete	Incomplete	Incomplete	Incomplete	Incomplete for occupational workers, recreational users, residents, and ecological receptors because groundwater is located a minimum of approximately 5 ft bgs, there is no point of exposure such as a spring, and shallow groundwater is not a current or likely future source of drinking water. Potentially complete for future construction workers that may be exposed to groundwater during excavation activity.
		Dermal Contact	Incomplete	Incomplete	Incomplete	Incomplete	Potentially Complete	Incomplete	Incomplete	Incomplete	Incomplete for occupational workers, recreational users, residents, and ecological receptors because groundwater is located a minimum of approximately 5 ft bgs and there is no point of exposure such as a spring. Potentially complete for future construction workers that may be exposed to groundwater during excavation activity.
		Inhalation of VOCs	Incomplete	Incomplete	Incomplete	Incomplete	Potentially Complete	Incomplete	Incomplete	Incomplete	Incomplete for occupational workers, recreational users, residents, and ecological receptors because groundwater is located a minimum of approximately 5 ft bgs and there is no point of exposure such as a spring. Potentially complete for future construction workers that may be exposed to groundwater during excavation activity.
	Discharge of Groundwater to Kaneohe Bay	Ingestion	Incomplete	Incomplete	Potentially Complete	Incomplete	Incomplete	Incomplete	Incomplete	Potentially Complete	Incomplete for the current and future onsite workers and recreational users, future construction workers, and future residents because the coastline where the groundwater would likely discharge is not utilized for recreation. Potentially complete for ecological receptors.
		Dermal Contact	Incomplete	Incomplete	Insignificant	Incomplete	Incomplete	Incomplete	Incomplete	Insignificant	Incomplete for the current and future onsite workers and recreational users, future construction workers, and future residents because the coastline where the groundwater would likely discharge is not utilized for recreation. Dermal adsorption by ecological receptors due to discharge of groundwater into Kaneohe Bay will not be addressed because of a lack of exposure factors for the dermal pathway.
		Inhalation of VOCs	Incomplete	Incomplete	Insignificant	Incomplete	Incomplete	Incomplete	Incomplete	Insignificant	Incomplete for the current and future onsite workers and recreational users, future construction workers, and future residents because the coastline where the groundwater would likely discharge is not utilized for recreation. Inhalation of VOCs by ecological receptors due to discharge of groundwater into Kaneohe Bay will not be addressed because of a lack of exposure factors for the inhalation pathway.
	Bio-uptake	Ingestion of Fish/Shellfish	Incomplete	Incomplete	Potentially Complete	Incomplete	Incomplete	Incomplete	Incomplete	Potentially Complete	Incomplete for the current and future onsite workers and recreational users, future construction workers, and future residents because the coastline where the groundwater would likely discharge is not utilized for recreation. Potentially complete for marine benthic organisms (fish and shellfish) inhabiting sediments off the nearshore environment because these receptors could contact site contaminants through the discharge of groundwater into Kaneohe Bay. Potentially complete for ecological receptors who may potentially ingest these organisms.

Because the primary source is no longer active, the CSM focuses on secondary sources and release mechanisms and potential pathways for exposure of human and ecological receptors. There are no records of the types of liquid that may have been in the drums brought to the site. Based on historic materials/wastes that the Navy typically stored in 55-gallon drums, the list of Contaminants of Potential Concern (COPCs) for the SI included:

- Volatile Organic Compounds (VOCs);
- Semi-Volatile Organic Compounds (SVOCs);
- Total Petroleum Hydrocarbons as Gasoline (TPH-GRO);
- TPH as Diesel (TPH-DRO);
- TPH as Oil (TPH-ORO);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Organochlorine Pesticides;
- Chlorinated Herbicides;
- Polychlorinated Biphenyls (PCBs);
- 13 Priority Pollutant Metals – Antimony (Sb), Arsenic (As), Beryllium (Be), Cadmium (Cd), Chromium (Cr), Copper (Cu), Mercury (Hg), Nickel (Ni), Lead (Pb), Selenium (Se), Silver (Ag), Thallium (Tl), and Zinc (Zn); and
- Dioxins.

The intent of the SI is to evaluate the presence of these COPCs in site soils. The suspected source of contamination at the site is related to the episodic disposal of small volumes of residual liquid potentially containing COPCs from used drums onto the ground surface. A former NOSC employee reported that any liquids remaining in the drums when they arrived from Pearl Harbor were emptied onto the ground. Due to the mode of potential release, site contamination (if present) would be in the surface soil and shallow subsurface soils at the site, which is where the proposed multi-increment sampling was conducted.

As shown on Figure 2-3, the receptors evaluated for the SI include current and future onsite occupational workers, onsite construction workers, recreational users, and ecological receptors. Although MCB Hawaii has no current plans to redevelop the site, the SI also evaluated for the hypothetical future on-site resident. Potential transport mechanisms considered include direct contact, air transport, bio-uptake, storm water runoff and leaching to groundwater. Potential exposure routes include ingestion, dermal contact, ingestion of plants/animals, and inhalation of particulates. Potentially complete pathways and exposure routes include:

- ingestion and dermal contact of surface and subsurface soil by future onsite construction workers and future residents;
- ingestion and dermal contact of surface soil by current and future onsite occupational workers and recreational users;
- inhalation of VOCs from subsurface soils by current and future onsite workers and recreational users;
- inhalation of VOCs and particulates from subsurface soils by future onsite construction workers and future residents;

- dermal contact and ingestion of groundwater by current and future onsite construction workers;
- inhalation of VOCs leached to groundwater by current and future onsite construction workers;
- contact with and ingestion of groundwater and surface runoff discharged to Kaneohe Bay by current and future ecological receptors; and
- bio-uptake of fish and shellfish by current and future ecological receptors.

Section 3 Summary of Previous Investigations

There have been no previous environmental investigations conducted at the NOSC site.

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Section 4 Summary of Data Quality Objectives

The data quality objectives (DQOs) for this investigation were developed based on *Guidance for the Data Quality Objectives Process* (Environmental Protection Agency [EPA] QA/G-4) (EPA 2006) and are presented in detail in the WP (E2 2013). Project Quality Objectives (PQOs) are qualitative and quantitative statements, presented in an if/then format, and are developed using a systematic planning process.

4.1 Problem Statement

Liquid wastes from drums were historically disposed onto the ground surface in the vicinity of the former NOSC facility from the early 1970s to 1993. The SI will investigate potential surface and shallow subsurface soil contamination at the site, and assess the corresponding potential threats to human health and the environment.

The project Site consists of the former NOSC facility where episodic releases of unidentified liquids may have released COPCs into the surrounding soils. The SI will delineate the nature and extent of the contamination that may have been previously released at the NOSC Site (Figure 2-2).

A screening level risk assessment will be performed using the environmental data collected from the site to determine if the contamination related to releases at the Site poses an environmental risk. COPCs have been identified based on historical use of 55-gallon drums at Pearl Harbor and include: VOCs, SVOCs, TPH-GRO, TPH-DRO, TPH-ORO, PAHs, organochlorine pesticides, chlorinated herbicides, PCBs, 13 Priority Pollutant Metals, and dioxins. The SI soil characterization work will focus on the depth interval located at 0 feet bgs to 4.0 feet bgs within a 27,300 square foot area where soil contamination is thought to be contained.

4.2 Principal Study Questions

There are three principal study questions (PSQs) for this project (E2 2013):

1. Do COPC concentrations in soil exceed human and ecological risk-based screening criteria?
2. If COPCs in soil exceed human and ecological risk-based screening criteria, do COPCs in soil pose an unacceptable risk to human health and the environment?
3. Do Toxic Equivalent (TEQ) Dioxin concentrations in soil fall into DOH Category A, B, C, or D?

In order to address the PSQs, the following actions were taken:

- Conducted utility clearance surveys to identify underground utilities prior to intrusive work. Section 5.2 discusses the geophysical survey activities.
- The site was separated into three Decision Units (DUs). Installed 150 soil borings, and collected multi-increment (MI) soil samples from three depth horizons per boring, and compared concentrations of COPCs detected to project-specific screening criteria. Section 5.3 discusses borehole drilling and Section 5.3.1 discusses MI soil sample collection field activities.

4.3 Screening Criteria

Human health and ecological risks will be evaluated by comparing sample results to risk-based screening criteria, also known as Project Action Limits (PALs) as follows:

- DOH Tier 1 Environmental Action Levels (EALs) for soil where potentially impacted groundwater is not a current or potential drinking water resource and a surface water body is located within 150 meters of the release site (Table B-2, DOH 2012).

Section 5 Site Inspection Activities

SI activities were conducted in accordance with standard operating procedures (SOPs) as presented in the *Project Procedures Manual* (Department of the Navy [DON] 2007). The project WP (E2 2013) provided a detailed description of the COPCs, general sampling methodology employed during the field work, analytical methods and parameters, and the number of samples necessary to collect sufficient environmental data to evaluate the problem statement.

Investigation activities at the Site included: a utility clearance survey, and drilling of borings and collection of MI soil samples from three depth intervals in three DUs.

5.1 Field Documentation

The dedicated project field logbook was used to document all field measurements and observations (Appendix A), with reference to appropriate logs. The field logbook was maintained in accordance with the *Project Procedures Manual* (DON 2007). Entries were recorded in chronological order and in sufficient detail to enable a reviewer to reconstruct pertinent events that occurred during field work. The logbook served as the primary record of field activities and was maintained in good condition in a clean area. Activities were clearly identified in the logbook by name of the activity, person assigned responsibility for maintenance of the logbook, and the beginning and ending dates of the entries. Entries were signed or initialed by the individual making the entries at the end of each day. Page numbers were entered onto each logbook page. Designated field personnel scanned completed pages periodically and the logbook was reviewed on a regular basis during the course of the field work.

All field data was kept on file in the Project Manager's office, after the completion of field activities. Field data entered onto field logs was converted into electronic format at the completion of field activities. The analytical laboratories, Agricultural Priority Pollutants Laboratories, Inc. (APPL) provided fully documented data packages. Laboratory data package deliverables included electronic data deliverables (EDD), using a template provided by NAVFAC Hawaii, and final hard copy deliverables. Analytical data was transferred directly using electronic versions of the data obtained from the analytical laboratory. Data was stored, organized, sorted, and queried using the database. The project WP (E2 2013) details the documentation and records procedures followed during this project.

5.2 Utility Clearance

On August 28, 2014, the MI soil sampling locations were marked by the field crew using stakes, flagging, and paint. Potential underground utility locations were also marked. A geophysical survey was conducted by Hawaii Geophysical Services, LLC (HGS) to locate underground utilities prior to excavation and drilling activities. HGS utilized both electromagnetic and ground penetrating radar instruments to complete the utility clearance.

5.3 Borehole Drilling

The field activities at the Site included the installation of 150 soil borings. Three DUs were established in the area (Figure 5-1); a rectangular DU (DU 1) which is located directly over the suspected area where historic disposal of waste is suspected, and two perimeter DUs that will

characterize the surrounding areas where historic releases of COPCs are not suspected (DUs 2 and 3). The borings within each DU were located based on a MI soil sampling grid design. The sampling design at the former NOSC facility was focused on minimizing field sampling error caused by compositional and distributional heterogeneity. Grouping and segregation error due to compositional and distributional heterogeneity were controlled by utilizing a systematic grid with a random starting location to locate 30 increments for each MI sample to capture the spatial variability within each DU.

The 150 borings were advanced from September 2 to September 3, 2014, using a direct push Geoprobe 6620DT drill rig to maximum depth of five feet bgs to evaluate the nature and lateral and vertical extent of the potential soil contamination in the study area. Field personnel recorded the soil types and changes in lithology throughout the depths of the soil borings on field boring logs (Appendix A).

5.3.1 Multi-Increment Soil Sample Collection

A total of 150 soil borings were installed in the three DUs; one set of primary borings for each DU (30 primary soil borings per set), and two sets of replicate borings (30 replicate borings per set) installed in DU 1. Three depth horizons (0-0.5 feet bgs, 0.5 to 2.0 feet bgs, and 2.0-4.0 feet bgs) were sampled from each of the DUs.

The TerraCore® sampling system was used to collect uniform 5-gram soil plugs from the bottom of the sample interval for the volatile analysis. For each of the 30 soil increments, a 5-gram increment for volatile analysis were placed into a pre-weighed 500-milliliter (mL) amber glass jar equipped with Teflon septum containing 150 ml of methanol, per DOH protocol.

After collection of the soil increment used for volatile analysis, the TerraCore® sampling system was then used to collect 10 uniform 5-gram soil plugs from the entire sample interval for the non-volatile analysis. For each of the 30 soil increments, a 50-gram increment for non-volatile analysis were placed into a food-grade, resealable plastic bag.

Field replicates, matrix spike/matrix spike duplicate (MS/MSD), equipment and field blanks were also collected along with the primary samples. All samples were collected in accordance with the *Project Procedures Manual* (DON 2007) Procedure I-B-1 *Soil Sampling.* A summary of the sampling and analysis program is presented below in Table 5-1.



	DATE: AUG 2015	PROJECT TITLE: SITE INSPECTION FOR THE FORMER NOSC SITE MCB HAWAII, KANEOHE, OAHU, HAWAII
	FIGURE TITLE: SAMPLE LOCATIONS	FIGURE NO.: 5-1

Table 5-1: Sampling and Analysis Program

Analyte / Analytical Group	No. of Samples	No. of Field Replicates[a]	No. of MS/MSD	No. of Field Blanks[b]	No. of Equipment Blanks[c]	No. of VOA Trip Blanks	Total No. of Samples to Laboratory
TPH-GRO	9	6	1	1	2	0	19
TPH-DRO	9	6	1	1	2	0	19
TPH-ORO	9	6	1	1	2	0	19
VOC	9	6	1	1	2	3	22
SVOC	9	6	1	1	2	0	19
PAHs	9	6	1	1	2	0	19
Organochlorine Pesticides	9	6	1	1	2	0	19
Chlorinated Herbicides	9	6	1	1	2	0	19
PCBs	9	6	1	1	2	0	19
13 Priority Pollutant Metals	9	6	1	1	2	0	19
Dioxins[d]	1	0	0	0	0	0	1

[a] Two replicate MI soil samples (field triplicates) were collected from DU 1 in all depth horizons established at the site.
[b] One field blank was collected per water source. Only one water source was required for the entire project.
[c] One equipment blank was collected per day; two days for sample collection.
[d] No replicates or other QC samples were collected or analyzed for Dioxins.

5.4 Sample Control Procedures

5.4.1 Sample Designation and Labeling

Samples were labeled using indelible ink with a descriptive sample identifier and a blind EPA number in accordance with the *Project Procedures Manual* (DON 2007) Procedure I-A-9, *Sample Naming*. The EPA number used to facilitate data tracking and storage was assigned as follows: xyzzz, where: x was the sampling organization (i.e., E for E2); y was the site identification (ID) (i.e., N for NOSC); and zzz was a chronological number. The label also included the date and time of collection, initials of the person collecting the sample, sample preservatives, and analyses to be performed. Table 5-2 below compiles the sample identifiers assigned to the various samples collected during this SI along with the associated blind EPA number.

Table 5-2: Samples Collected

EPA ID	SDG No.	Lab ID	Matrix	Location ID	Depth Horizon
EN001	74218	AZ02099	Soil	Primary, DU 1	0-0.5 feet bgs
EN002		AZ02100	Soil	Replicate 1, DU 1	0-0.5 feet bgs
EN003		AZ02101	Soil	Replicate 2, DU 1	0-0.5 feet bgs
EN004		AZ02102	Soil	Primary, DU 1	0.5-2.0 feet bgs
EN005		AZ02103	Soil	Replicate 1, DU 1	0.5-2.0 feet bgs
EN006		AZ02104	Soil	Replicate 2, DU 1	0.5-2.0 feet bgs
EN007		AZ02105	Soil	Primary, DU 1	2.0-4.0 feet bgs
EN008		AZ02106	Soil	Replicate 1, DU 1	2.0-4.0 feet bgs

EPA ID	SDG No.	Lab ID	Matrix	Location ID	Depth Horizon
EN009		AZ02107	Soil	Replicate 2, DU 1	2.0-4.0 feet bgs
EN010		AZ02108	Water	Field Blank	NA
EN011		AZ02109	Water	Rinsate	NA
EN012		AZ02110	Soil	Primary, DU 2	0-0.5 feet bgs
EN013		AZ02111	Soil	Primary, DU 2	0.5-2.0 feet bgs
EN014		AZ02112	Soil	Primary, DU 2	2.0-4.0 feet bgs
EN015		AZ02113	Soil	Primary, DU 3	0-0.5 feet bgs
EN016		AZ02114	Soil	Primary, DU 3	0.5-2.0 feet bgs
EN017		AZ02115	Soil	Primary, DU 3	2.0-4.0 feet bgs
EN018		AZ02116	Water	Rinsate	NA
Trip Blank		AZ02235	Water	Trip Blank	NA

Note:
Sample EN002 contained MS/MSD samples.

5.4.2 Sample Handling, Storage, and Shipping

On September 4, 2014, soil and Quality Assurance (QA)/Quality Control (QC) samples were shipped to the project analytical laboratory, APPL, via overnight courier in coolers packed with gel ice and bubble wrap. Upon receipt, the laboratory's sample custodian signed and inserted the date/time of receipt on the chain-of-custody form, recorded the condition of the samples and cooler, and entered sample information into the laboratory system. All samples requiring preservation were checked for proper preservation by measuring temperature.

E2 received a confirmation receipt on September 5, 2014, including Analysis Request Forms (ARF) and Sample Receipt Forms from the lab. Each form showed the lab-assigned sample delivery group number (SDG), field sample IDs, the corresponding lab IDs, date and time sampled, analyses requested, and the container type, size, preservative, and counts. The Cooler Receipt Form provides a detailed checklist of how the coolers were received, including the condition of the cooler, if the custody seals were present and intact, what packing materials were used, the type of ice used, if there was a completely-filled out chain-of-custody form, if the sample containers were labeled completely, the condition of the sample containers, and other preservation and hold time information.

Sample custody procedures were followed in accordance with those established in the *Project Procedures Manual* Procedure III-E, *Record Keeping, Sample Labeling, and Chain-of-Custody Procedures*, and III-F, *Sample Handling, Storage, and Shipping Procedures* (DON 2007). The ARF, Chain-of-Custody, and Cooler Receipt Forms were made a part of the final laboratory reports included in Appendix B.

5.5 Sample Analysis

All soil samples were shipped to APPL for preparation and analysis. APPL is currently accredited by the Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP) for the analyses required for this project (e.g., soil sample analysis, including QC sample analyses.

All primary and replicate soil samples were analyzed for the following:

- TPH-DRO, TPH-GRO, and TPH-ORO (SW-846 8015C);
- Organochlorine Pesticides (SW-846 8081A);
- PCBs (SW-846 8082A);
- Chlorinated Herbicides (SW-846 8151A);
- SVOCs (SW-846 8270C);
- PAHs (SW-846 8270C);
- VOCs (SW-846 8260B);
- Priority Pollutant Metals (SW-846 6020A, 7470A, and 7471B); and
- Dioxins (SW-846 8290).

The laboratory analyses were compliant with all DoD Quality Systems Manual (QSM) for Environmental Laboratories, Final Version 4.2 (DoD 2010), and requirements specified in the analytical methods of the WP.

The laboratory provided fully documented data packages that included a cover page, case narrative, results for field samples, results for associated QA/QC data, raw data, and chromatograms. Laboratory data package deliverables included an EDD, using the template provided by NAVFAC Hawaii, and final hard copy deliverables. The final laboratory reports are included in Appendix B.

5.6 Decontamination

Personnel and equipment decontamination was performed as indicated below. Contamination prevention techniques, such as wrapping sampling equipment in plastic after each use, were also used wherever feasible. All decontamination wastes were disposed of as investigation-derived waste (IDW).

5.6.1 Personnel Decontamination

Site conditions did not require personnel decontamination other than for the purposes of avoiding cross-contamination of environmental samples. Other than frequent hand washing, use of nitrile gloves during sampling activities negated the need for personnel decontamination. However, there were 5-gallon buckets with soap and water for all personnel to wash their face and hands prior to leaving site for lunch and/or for the day.

5.6.2 Equipment Decontamination

All sample collection equipment that was reused was decontaminated prior to each use in accordance with the project WP and the *Project Procedures Manual* procedures, to limit the cross-contamination of the samples among sample locations; and to limit worker exposure to contamination. Equipment was decontaminated prior to personnel decontamination.

Plastic sheeting was used on the ground surface beneath the decontamination area to contain any decontamination water spills and excess soil removed from sampling equipment. The

decontaminated equipment was then placed on a clean surface for drying, in plastic bags, or in clean 5-gallon buckets, and covered with plastic until used. Plastic sheeting and decontamination water or debris was placed in 55-gallon, Department of Transportation (DOT)-approved drums for IDW disposal.

5.7 IDW Management

The field investigation activities generated IDW (i.e., soil cuttings; decontamination water, plastic sheeting, and disposable personal protective equipment [PPE] and sampling equipment) that was classified as non-hazardous.

Disposable sampling equipment and PPE were not heavily soiled; therefore, they were rendered non-hazardous through gross physical removal of adhering soil. The PPE and disposable sampling equipment were collected in double plastic trash bags and disposed of offsite as non-hazardous municipal waste. All waste materials generated in the support zone were considered non-IDW trash and were properly disposed of as municipal waste.

Soil cuttings from the MI soil sampling (a total of 2 drums) were sealed, labeled, and temporarily stored on spill-containment pallets (covered with plastic sheeting) in the southeast corner of DU 3. The IDW was disposed by Motu Services, LLC.

5.8 Deviations from Work Plan

No deviations from the project WP were implemented in the field.

Section 6 Site Inspection Results

6.1 Project Action Limits

The PALs were provided in the approved WP (E2 2013). The proposed soil PALs are the following:

- DOH Tier 1 EALs for soil where potentially impacted groundwater is not a current or potential drinking water resource and a surface water body is located within 150 meters of the release site (Table B-2, DOH 2012).

6.2 Analytical Results

All project soil samples were shipped to APPL for preparation and analysis. APPL is currently accredited by the DoD ELAP. All soil samples were analyzed for TPH-DRO, TPH-GRO, TPH-ORO, VOCs, SVOCs, PAHs, organochlorine pesticides, chlorinated herbicides, PCBs, 13 priority pollutant metals, and Dioxins. The laboratory analyses were compliant with all DoD QSM for Environmental Laboratories, Final Version 4.2 (DoD 2010), and requirements specified in the analytical methods of the WP.

The laboratories provided fully documented data packages that included a cover page, case narrative, results for field samples, results for associated QA/QC data, raw data, and chromatograms. Laboratory data package deliverables included an EDD, using the template provided by NAVFAC Hawaii, and final hard copy deliverables. The final laboratory reports can be found in Appendix B.

6.2.1 Soil Sample Results

A total of 150 soil borings were installed in the three DUs during the investigation. Samples were collected from three depth horizons; 0 to 0.5 feet bgs, 0.5 to 2.0 feet bgs, and 2.0 to 4.0 feet bgs. Replicate samples were collected from DU 1, in addition to source blank, equipment rinsate, and MS/MSD samples. The complete analytical results are summarized in Appendix D.

A summary of the soil sample analytical results is presented in Table 6-1 below.

Table 6-1: Soil Sample Results Summary

Analyte	CAS. No.	Number of Samples	Number of Detections	Maximum Detected Concentration (mg/kg)	Number of Detections above PALs	PAL (mg/kg)
TPH (SW-846 8015B)						
TPH Gasoline	NA	9	0	*57*	0	100
TPH-Diesel Range	NA	9	9	14	0	500
TPH-Oil Range	NA	9	9	56	0	500
VOCs (SW-846 8260B)						
1,1,1-Trichloroethane	71-55-6	9	0	*1.1*	0	7.0
1,1,2,2-Tetrachlorethane	79-34-5	9	0	*1.1**	0	0.009
1,1,2-Trichloroethane	79-00-5	9	0	*1.8**	0	0.0089

Analyte	CAS. No.	Number of Samples	Number of Detections	Maximum Detected Concentration (mg/kg)	Number of Detections above PALs	PAL (mg/kg)
1,1-Dichloroethane	75-34-3	9	0	*1.1**	0	0.33
1,1-Dichloroethene	75-35-4	9	0	*1.8*	0	4.3
1,2,3-Trichloropropane	96-18-4	9	0	*3.6**	0	0.0013
1,2-Dibromoethane (EDB)	106-93-4	9	0	*1.1**	0	0.00087
1,2-Dichloroethane	107-06-2	9	0	*1.1**	0	0.02
1,2-Dichloropropane	78-87-5	9	0	*1.1**	0	0.052
2-Butanone (MEK)	78-93-3	9	0	*7.1*	0	15
4-Methyl-2-pentanone	108-10-1	9	0	*18**	0	0.5
Acetone	67-64-1	9	0	*18**	0	1.0
Benzene	71-43-2	9	0	*1.1**	0	0.67
Bromodichloromethane	75-27-4	9	0	*1.1**	0	0.014
Bromoform	75-25-2	9	0	*1.1*	0	28
Bromomethane	74-83-9	9	0	*1.8**	0	0.22
Carbon tetrachloride	56-23-5	9	0	*1.1**	0	0.087
Chlorobenzene	108-90-7	9	0	*1.8**	0	1.5
Chloroethane	75-00-3	9	0	*1.8*	0	11
Chloroform	67-66-3	9	0	*0.89**	0	0.023
Chloromethane	74-87-3	9	0	*1.8**	0	0.29
cis-1,2-Dichloroethylene	156-59-2	9	0	*1.1**	0	0.31
cis-1,3-Dichloropropene	10061-01-5	9	0	*1.1**	0	0.13
Dibromochloromethane	124-48-1	9	0	*1.1**	0	0.022
Ethylbenzene	100-41-4	9	0	*1.8*	0	21
Methylene chloride	75-09-2	9	0	*3.6**	0	1.1
Naphthalene	91-20-3	9	0	*1.8*	0	4.5
Styrene	100-42-5	9	0	*1.8*	0	2.9
Tetrachloroethene	127-18-4	9	0	*1.1**	0	0.088
Toluene	108-88-3	9	0	*1.1*	0	10
trans-1,2-Dichloroethene	156-60-5	9	0	*1.1*	0	2.7
trans-1,3-Dichloropropene	10061-02-6	9	0	*1.1**	0	0.13
Trichloroethene (TCE)	79-01-6	9	0	*1.1**	0	0.26
Vinyl chloride	75-01-4	9	0	*1.1**	0	0.072
Xylenes (total)	1330-20-7	9	0	*1.1*	0	11
Organochlorine Pesticides (SW-846 8081A)						
4,4-DDD	72-54-8	9	1	0.018	0	2.0
4,4-DDE	72-55-9	9	9	0.066	0	1.4
4,4-DDT	50-29-3	9	5	0.15	0	1.7
Aldrin	309-00-2	9	0	*0.002*	0	0.92
Technical Chlordane	12789-03-6	9	9	1.3	0	16
Dieldrin	60-57-1	9	0	*0.002*	0	1.8
Endosulfan I	959-98-8	9	0	*0.0016*	0	18

Analyte	CAS. No.	Number of Samples	Number of Detections	Maximum Detected Concentration (mg/kg)	Number of Detections above PALs	PAL (mg/kg)
Endosulfan II	891-86-1	9	0	*0.0016*	0	18
Endosulfan Sulfate	1031-07-8	9	0	*0.002*	0	18
Endrin	72-20-8	9	1	0.04	0	3.7
gamma-BHC (Lindane)	58-89-9	9	0	*0.002*	0	0.11
Heptachlor	76-44-8	9	0	*0.002*	0	0.053
Heptachlor epoxide	1024-57-3	9	0	*0.01*	0	0.3
Hexachlorobenzene	118-74-1	9	0	*0.002*	0	0.037
Methoxychlor	72-43-5	9	0	*0.002*	0	16
Toxaphene	8001-35-2	9	0	*0.05*	0	0.44
PAHS (SW-846 8270C SIM)						
1-Methylnaphthalene	90-12-0	9	1	0.0065	0	0.79
2-Methylnaphthalene	91-57-6	9	4	0.0047	0	0.87
Acenaphthene	83-32-9	9	0	*0.0017*	0	120
Acenaphthylene	208-96-8	9	2	0.0012	0	13
Anthracene	120-12-7	9	7	0.004	0	4.3
Benzo(a)anthracene	56-55-3	9	7	0.034	0	1.5
Benzo(a)pyrene	50-32-8	9	9	0.032	0	0.15
Benzo(b)fluoranthene	205-99-2	9	7	0.069	0	1.5
Benzo(g,h,i)perylene	191-24-2	9	9	0.026	0	27
Benzo(k)fluoranthene	207-08-9	9	7	0.069	0	15
Chrysene	218-01-9	9	8	0.028	0	10
Dibenz(a,h)anthracene	53-70-3	9	1	0.01	0	0.15
Fluoranthene	206-44-0	9	9	0.04	0	87
Indeno(1,2,3-cd)pyrene	193-39-5	9	5	0.012	0	1.5
Phenanthrene	85-01-8	9	8	0.011	0	69
Pyrene	129-00-0	9	9	0.045	0	44
PCBs (SW-846 8082)						
Aroclor 1016	12674-11-2	9	0	*0.02*	0	1.1
Aroclor 1221	11104-28-2	9	0	*0.02*	0	1.1
Aroclor 1232	11141-16-5	9	0	*0.01*	0	1.1
Aroclor 1242	53469-21-9	9	0	*0.01*	0	1.1
Aroclor 1248	12672-29-6	9	0	*0.01*	0	1.1
Aroclor 1254	11097-69-1	9	9	**1.2**	1	1.1
Aroclor 1260	11096-82-5	9	0	*0.01*	0	1.1
Polychlorinated Biphenyls	1336-36-3	9	9	**1.2**	1	1.1
SVOCs (SW-846 8270C)						
1,2,4-Trichlorobenzene	120-82-1	9	0	*0.167*	0	0.098
1,2-Dichlorobenzene	95-50-1	9	0	*0.167*	0	1.1
1,3-Dichlorobenzene	541-73-1	9	0	*0.167*	0	7.4
1,4-Dichlorobenzene	106-46-7	9	0	*0.167*	0	0.047

Analyte	CAS. No.	Number of Samples	Number of Detections	Maximum Detected Concentration (mg/kg)	Number of Detections above PALs	PAL (mg/kg)
Bis (2-chloroisopropyl) ether	108-60-1	9	0	*0.167*	0	0.66
2,4,5-Trichlorophenol	95-95-4	9	0	*0.167*	0	3.2
2,4,6-Trichlorophenol	88-06-2	9	0	*0.167*	0	12
2,4-Dichlorophenol	120-83-2	9	0	*0.167*	0	0.25
2,4-Dimethylphenol	105-67-9	9	0	*0.167*	0	9.0
2,4-Dinitrophenol	51-28-5	9	0	*0.167*	0	5.7
2,4-Dinitrotoluene	121-14-2	9	0	*0.167*	0	1.6
2,6-Dinitrotoluene	606-20-2	9	0	*0.167*	0	4.3
2-Chlorophenol	95-57-8	9	0	*0.167*	0	0.092
3,3´-Dichlorobenzidine	91-94-1	9	0	*0.167*	0	1.1
4-Chloroaniline	106-47-8	9	0	*0.167*	0	0.094
Bis (2-chloroethyl) ether	111-44-4	9	0	*0.167*	0	0.0045
Bis (2-ethylhexyl) phthalate	117-81-7	9	9	1.1	0	35
Diethyl phthalate	84-66-2	9	0	*0.167*	0	0.026
Dimethyl phthalate	131-11-3	9	0	*0.167*	0	0.035
Hexachlorobenzene	118-74-1	9	0	*0.167*	0	0.30
Hexachlorobutadiene	87-68-3	9	0	*0.167*	0	0.95
Hexachloroethane	67-72-1	9	0	*0.167*	0	0.68
Isophorone	78-59-1	9	0	*0.167*	0	1.4
Nitrobenzene	98-95-3	9	0	*0.167*	0	2.3
Pentachlorophenol	87-86-5	9	0	*0.167*	0	0.89
Phenol	108-95-2	9	0	*0.167*	0	40
Chlorinated Herbicides (SW-846 8151)						
2,4,5-T	93-76-5	9	0	*0.038*	0	12
2,4-D	94-75-7	9	0	*0.192*	0	0.2
Dalapon	75-99-0	9	1	0.65	1	0.16
Silvex	93-72-1	9	0	*0.037*	0	0.87
Metals (SW-846 6020A/7471B)						
Antimony	7440-36-0	9	4	0.24	0	2.4
Arsenic	7440-38-2	9	9	6.6	0	24
Beryllium	7440-41-7	9	9	0.30	0	31
Cadmium	7440-43-9	9	9	0.32	0	14
Total Chromium	7440-47-3	9	9	77.5	0	1100
Copper	7440-50-8	9	9	27.6	0	630
Lead	7439-92-1	9	9	32.9	0	200
Mercury	7439-97-6	9	8	0.077	0	4.7
Nickel	7440-02-0	9	9	169	0	760
Selenium	7782-49-2	9	8	0.14	0	78
Silver	7440-22-4	9	6	0.05	0	78

Analyte	CAS. No.	Number of Samples	Number of Detections	Maximum Detected Concentration (mg/kg)	Number of Detections above PALs	PAL (mg/kg)
Thallium	7440-28-0	9	6	0.05	0	0.78
Zinc	7440-66-6	9	9	124	0	1000
Dioxins (SW-846 8290)						
1,2,3,4,6,7,8-HPCDD	35822-46-9	1	1	0.000056	NA	NA
1,2,3,4,6,7,8-HPCDF	67562-39-4	1	0	*0.00000046*	NA	NA
1,2,3,4,7,8,9-HPCDF	55673-89-7	1	0	*0.00000063*	NA	NA
1,2,3,4,7,8-HXCDD	39227-28-6	1	1	0.0000024	NA	NA
1,2,3,4,7,8-HXCDF	70648-26-9	1	0	*0.00000077*	NA	NA
1,2,3,6,7,8-HXCDD	57653-85-7	1	0	*0.00000080*	NA	NA
1,2,3,6,7,8-HXCDF	57117-44-9	1	0	*0.0000030*	NA	NA
1,2,3,7,8,9-HXCDD	19408-74-3	1	0	*0.00000077*	NA	NA
1,2,3,7,8,9-HXCDF	72918-21-9	1	0	*0.00000093*	NA	NA
1,2,3,7,8-PECDD	40321-76-4	1	0	*0.00000066*	NA	NA
1,2,3,7,8-PECDF	57117-41-6	1	0	*0.0000013*	NA	NA
2,3,4,6,7,8-HXCDF	60851-34-5	1	0	*0.00000079*	NA	NA
2,3,4,7,8-PECDF	57117-31-4	1	0	*0.0000014*	NA	NA
2,3,7,8-TCDD	1746-01-6	1	0	*0.00000051*	NA	NA
2,3,7,8-TCDF	51207-31-9	1	0	*0.0000024*	NA	NA
OCDD	3268-87-9	1	1	0.00056	NA	NA
OCDF	39001-02-0	1	1	0.00004	NA	NA
TEQ	NA	-	-	0.0000023	0	0.00024

Notes:
Bold – Analyte was detected at a greater concentration than the PAL Value.
Italic - Detection Limit, when the analyte was not detected in any of the samples.
*Italic** - Detection Limit was greater than the PAL Value.

A summary of the PAL exceedances for each of the analytes is as follows:

- Dalapon in the 0 - 0.5 foot (ft) bgs samples from DU 1 at a concentration of 0.65 mg/kg, (PAL is 0.16mg/kg).
- PCB Aroclor 1254 in the 0.5 - 2.0 ft bgs sample from DU 1 at a concentration of 1.2 mg/kg, (PAL is 1.1 mg/kg).
- None of the 35 VOC analytes were detected. However, due to the automatic dilution factor of the methanol vial preservation method, the limit of detection for 24 of the VOC analytes exceeded their respective PALs.

The soil sample results with COPC concentrations that exceed PALs are summarized in Table 6-2 and displayed on Figure 6-1.

Table 6-2: Soil Sample Results Exceeding PALs

			DU Identifier:	DU 1	DU 1
			Sample Depth Range (ft bgs)	0 - 0.5	0.5 - 2.0
Analyte	**CAS. No.**	**PAL (mg/kg)**		**Result (mg/kg)**	**Result (mg/kg)**
PCBs (SW-846 8082)					
Aroclor 1254	11097-69-1	1.1		0.59J	**1.2J**
Total PCBs	1336-36-3	1.1		0.59J	**1.2J**
Chlorinated Herbicides (SW-846 8151)					
Dalapon	75-99-0	0.16		**0.65J**	U

Notes:
Bold – Analyte was detected at a greater concentration than the PAL Value.
J = Estimated Value
U = Not Detected



	DATE: AUG 2015	PROJECT TITLE: SITE INSPECTION FOR THE FORMER NOSC SITE MCB HAWAII, KANEOHE, OAHU, HAWAII
	FIGURE TITLE: SOIL SAMPLE RESULTS EXCEEDING PALS	FIGURE NO.: 6-1

Section 7 Data Quality Control and Validation

Field data and analytical laboratory data were reviewed and verified to ensure that the data presented in this report reflect what was actually done and fulfill applicable requirements in the DoD QSM for Environmental Laboratories, Version 4.2 October 2010 (DoD 2010) and the WP (E2 2013). The field replicate and laboratory QC samples were reviewed and verified against the criteria specified in the DoD QSM and against in-house laboratory criteria when applicable criteria were not available in the DoD QSM.

All samples were analyzed for the required parameters by APPL in Clovis, California and validated by Laboratory Data Consultants, Inc. (LDC) in Carlsbad, California. Laboratory data review and verification is described in Section 7.1. Following laboratory generation, review, and submittal of the analytical results, the data were reviewed and verified in-house by the project chemist, as described in Section 7.2.

7.1 Analytical Laboratory Review

The analytical laboratory reviewed data as follows:

- The analyst performing the analyses reviewed 100 percent of the data.
- The analyst review was followed by a 100 percent review by a peer or senior section analyst.
- The laboratory QA section performed a complete review of 10 percent of the data.

The laboratory project manager performed a final review on all completed data deliverables.

7.2 Data Verification and Review

The project chemist and subcontractor data evaluators verified the analytical data as follows:

- The laboratory hard copy deliverables, summary forms described in the WP (E2 2013) were compared to the laboratory electronic data deliverable to verify consistency among deliverables.
- The laboratory data were reviewed against the DoD QSM criteria and against in-house laboratory criteria when criteria were not available in the DoD QSM. Laboratory data were also reviewed for consistency with the field records (Chain-of-Custody forms and field logs) and the field QC samples.
- Data validation was performed by a third party validator, LDC.

7.3 Data Validation

Approximately 10% of analytical data was validated at full validation, which is an intensive review of the data that requires the validator to recalculate concentrations from raw data generated by the laboratory. The remaining 90% was validated at standard validation. Deliverables for full validation efforts include validated data, validation reports, and a Data Quality Analysis report. Validated data consisted of Contract Laboratory Program (CLP)-equivalent forms with associated qualifiers and qualification codes. Validation reports included a case narrative describing

discrepancies or anomalies in the data and the validated data themselves. The LDC Data Validation Report and associated APPL SDG are summarized in Table 7-1, while the complete data validation reports are included as Appendix E (on compact disc – read only memory [CD-ROM]).

Table 7-1: Data Validation Reports Summary

LDC Project #	APPL SDG #s	Description	Sample IDs
32797	74218	MI soil samples and QA/QC water samples	EN001-EN017

These data validation procedures assign qualifiers to the data that give the end users a qualitative measure of data usability. Quantification codes were assigned to each data point that has been qualified. These codes, presented in Attachment II-A-5.1 of procedure II-A, *Data Validation Presentation* (DON 2007), indicate the rationale for data qualification. Table 7-2 lists the laboratory qualifiers assigned to the project data as a result of the laboratory data reviews.

Table 7-2: Laboratory Qualifier Reports Summary

Qualifier	Description of Data Qualifier Reference Code
U	Indicates the compound or analyte was analyzed for, but not detected at or above the stated limit.
J	Indicates an estimated value.
R	Quality control indicates the data is not usable.
NJ	Presumptive evidence of presence of the compound at an estimated quantity.
UJ	Indicates the compound or analyte was analyzed for, but not detected. The sample detection limit is an estimated value.
A	Indicates the finding is based upon technical validation criteria.
P	Indicates the finding is related to a protocol/contractual deviation.
None	Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

Validated data was reviewed by the Project Chemist in the form of a usability assessment. The results of the usability assessment were reviewed by the E2 Project Team, who determined that the data can be used to answer the project PSQs.

7.3.1 Assessment Parameters

Laboratory data review was performed by LDC in accordance with the Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific (DON 2007) and the EPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, January 2012, and EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, thru update IV, February 2007, as well as the requirements outlined in the WP. The laboratory data review assessed the following parameters:

- Technical holding times
- Gas Chromatograph (GC), Mass Spectrometer (MS), Inductively Coupled Plasma Mass Spectrometer (ICPMS), High Resolution Gas Chromatograph (HRGC), High Resolution Mass Spectrometer (HRMS) instrument performance check
- Initial calibration
- Continuing calibration
- Blanks

- Surrogate spikes
- Matrix spike/matrix spike duplicates
- Laboratory control samples
- Internal standards
- Target compound identifications
- Compound quantitation
- System Performance
- Field Triplicates

7.3.1.1 Technical Holding Times

All cooler temperatures met validation criteria. All technical holding time requirements were met.

7.3.1.2 Instrument Performance Check

The GC/MS instrument performance was checked at 12 hour intervals and all ion abundance requirements were met.

The individual 4,4'-DDT and Endrin breakdowns (%BD) were less than or equal to 15%.

The ICPMS instrument had mass calibration within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5%.

The HRGC/HRMS instrument performance was checked at the required daily frequency. Retention time windows were established for all homologues.

The chromatographic resolution between 2,3,7,8-TCDD and the peaks representing any other unlabeled TCDD isomers was resolved with a valley of less than or equal to 25%.

7.3.1.3 Initial Calibration

Initial calibration was performed using required standard concentrations for the GC-MS instrument. Percent relative standard deviation (%RSDs) were less than or equal to 20.0% for each individual compound with some exceptions (See Appendix F, Table F-1). In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater or equal to 0.990. Average relative response factors (RRFs) for all compounds were within method and validation criteria.

Retention time windows were established as required by the method for samples on which a full review was performed. Raw data were not evaluated for the samples on which a standard review was performed.

A five point initial calibration was performed as required by the method for HRGC/HRGS. Percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds. The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

7.3.1.4 Continuing Calibration

Continuing calibration was performed at the required frequencies.

For all analyses, the percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for all compounds. The %D of the second source calibration standard were less than or equal to 20.0% for all compounds with some exceptions (See Appendix F, Table F-2). All of the continuing calibrations RRFs were within method and validation criteria. The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

7.3.1.5 Blanks

Four types of blanks were collected in the process of this investigation: laboratory method blanks, trip blanks, rinsate blanks, and source blanks.

Laboratory Method Blanks. A method blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank is carried through the complete sample preparation and analytical procedure. Method blanks are used to document contamination resulting from the analytical process. The DoD QSM specifies one method blank per analytical batch (as appropriate) and that the presence of analytes in a method blank shall not equal or exceed half of the method reporting limit, otherwise corrective actions should be implemented. One method blank was analyzed with this analytical batch.

Method blanks were reviewed for each matrix as applicable. No VOC, SVOC, PAH, organochlorine pesticides, PCB, metals, chlorinated herbicides, petroleum hydrocarbons, or dioxin contaminants were found in the method blanks with some exceptions (See Appendix F, Table F-3, Table F-4).

Trip Blanks. A trip blank is a clean sample of a matrix that is taken from the laboratory to the sampling site and transported back to the laboratory without having been exposed to sampling procedures. The purpose of this blank is to assess contamination introduced during shipping and field handling procedures. Typically one blank is included in each cooler shipped that contains samples being analyzed for volatiles.

Trip blanks were included in the coolers containing samples to be analyzed for volatiles. No VOC contaminants were found with some exceptions (See Appendix F, Table F-5).

Rinsate Blanks. A rinsate blank is a sample of analyte-free media that has been used to rinse the sampling equipment. It is collected after completion of decontamination and prior to sampling. This blank is useful in documenting adequate decontamination of sampling equipment. Samples EN011 and EN018 were identified as rinsate blanks.

No VOC, SVOC, PAH, organochlorine pesticides, PCB, metals, chlorinated herbicides, petroleum hydrocarbon, or dioxin contaminants were found in the rinsate blanks with some exceptions (See Appendix F, Table F-6).

Field Blanks. A field blank, which consists of the source water used in decontamination and cleaning, is collected and analyzed to determine the level of contamination introduced into the sample during decontamination. One field blank from each source of water was collected and analyzed for the same parameters as the related samples. Sample EN010 was identified as the project field blank for soil sampling.

No VOC, SVOC, PAH, organochlorine pesticides, PCB, metals, chlorinated herbicides, petroleum hydrocarbon, or dioxin contaminants were found in the field blanks with some exceptions (See Appendix F, Table F-7, Table F-8).

7.3.1.6 Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate percent recoveries (%R) were within QC limits with some exceptions (see Appendix F, Table F-9).

For EN016 and EN017, no data were qualified since the method allows for one base and one acid surrogate %R to be outside the QC limits if the surrogate %R is greater than 10%.

7.3.1.7 Matrix Spike/Matrix Spike Duplicates

Sample EN002MS/MSD, relating to sample EN002, was used by the laboratory to perform MS/MSD VOC, SVOC, PAH, organochlorine pesticides, PCB, metals, chlorinated herbicides, and petroleum hydrocarbon analyses. MS/MSD samples were reviewed for each matrix as applicable. Percent recoveries and relative percent differences (RPD) were within QC limits with some exceptions (see Appendix F, Table F-10).

For EN002MS/MSD, no data were qualified for Chromium, Lead, Nickel, and Zinc percent recoveries outside the QC limits since the parent sample results were greater than 4 times the spike concentration. Although the percent recoveries were severely low for Antimony, the associated sample results were qualified as estimated (J/UJ) since the post spike recoveries were within QC limits.

7.3.1.8 Laboratory Control Samples

A Laboratory Control Sample (LCS) is used to evaluate each analytical batch and to determine whether the method is within control limits. One LCS was analyzed with each analytical batch as specified in the DoD QSM. LCS compliance is evaluated based on %R.

Laboratory control samples were reviewed for each matrix as applicable. All %R and RPD were within QC limits with some exceptions (See Appendix F, Table F-11).

7.3.1.9 Internal Standards

All internal standard areas and retention times were within QC limits for samples on which a full review was performed with some exceptions (See Appendix F, Table F-12).

7.3.1.10 Target Compound Identifications

All target compound identifications were within validation criteria for samples on which an EPA Level IV review was performed. Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

7.3.1.11 Compound Quantitation

All compound quantitation and RLs were within validation criteria for samples on which an EPA Level IV review was performed with some exceptions (See Appendix F, Table F-13). The sample results for detected compounds from the two columns were within 40% relative percent differences (RPD) with some exceptions (See Appendix F, Table F-14).

Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

7.3.1.12 System Performance

The system performance was acceptable for samples on which an EPA Level IV review was performed. Raw Data were not evaluated for the samples reviewed by EPA Level III criteria.

7.3.1.13 Field Triplicates

Samples EN001/EN002/EN003, EN004/EN005/EN006, and EN007/EN008/EN009 were identified as field triplicates. The VOCs, SVOCs, PAHs, organochlorine pesticides, PCBs, metals, chlorinated herbicides, petroleum hydrocarbons, and dioxins that were detected in any of the sample triplicates are shown in Appendix F, Table F-18.

7.3.1.14 Overall Assessment of Data

The overall assessment of data was acceptable.

7.3.2 Data Validation Summary

A summary of the data validation exceptions identified during review of the analytical data is included in Appendix F, Tables F-15, F-16, and F-17.

7.3.3 PARCCS Evaluation

The standard analytical data quality indicators (DQIs) standards include objectives for precision, accuracy, representativeness, comparability, completeness, and sensitivity (PARCCS) as well as reporting limits, field QC, sample QA, and data acquisition requirements. DQIs were assessed according to measurement performance criteria. The complete PARCCS evaluation report is included in Appendix E (on CD-ROM).

7.3.3.1 Precision

Aside from those exceptions previously noted, project data met the measurement of performance criteria for precision specified in the WP. Laboratory analytical precision was assessed through analysis of laboratory duplicates and MS/MSDs. Precision is calculated from percent recovery of data of laboratory duplicates and MS/MSDs, and is expressed as the RPD:

$RPD = (D_1-D_2/\{1/2(D_1+D_2)\} \times 100$, where

D_1 and D_2 are the reported concentrations for sample and duplicate analyses.

7.3.3.2 Accuracy

Aside from those exceptions previously noted, project data met the measurement performance criteria for accuracy specified in the WP. All analytical equipment and instrumentation met proper calibration and maintenance criteria. Accuracy was monitored by the use of blank spikes or LCSs, MS, and surrogates. Percent R was calculated using the following equation:

$\%R = (A-B)/C \times 100$, where

A = measured concentration of the spike compound in the spiked sample,

B = measured concentration of the spike compound in the unspiked sample, and

C = concentration of the spiked compound.

7.3.3.3 Representativeness

The WP included methods and protocols that ensured that samples are accurately representing a parameter or characteristic of the site. Representativeness was ensured through appropriate sampling procedures, selection of analytical methods, sample identification, and chain-of-custody. The representativeness was evaluated quantitatively by second-party review of field and laboratory procedures and documentation. Care was taken to collect samples that represented the conditions to be measured. The QA/QC blank samples collected and analyzed to determine representativeness of the data are method blanks, trip blanks, equipment blanks, and field blanks. Holding times are evaluated to determine that the sample integrity is intact for accurate sample preparations and analyses.

Contaminants found in both the environmental sample and a blank sample are assumed to be laboratory artifacts if the concentration in the environmental sample is less than 10 times the blank value for common laboratory contaminants; methylene chloride, acetone and 2-butanone or 5 times the blank value for other laboratory contaminants.

The representativeness of the project data is considered acceptable after qualification for blank contamination.

7.3.3.4 Comparability

Aside from those exceptions previously noted, comparability was applied to data sets of like matrices only. Comparability of data was controlled by consistent application of the procedures outlined in the WP, including sample collection and handling techniques, matrix types, and analytical methods. Analytical methods, RLs, and units of measurement for the appropriate analytes were consistent throughout the project duration. APPL was used for all sampling events for soil samples. Comparability depended on variability of the physical and chemical characteristics of samples taken at different locations. However, these sample matrix effects were evaluated using MS/MSD and surrogate results.

The sampling frequency requirements were met in obtaining the replicates and necessary field blanks, and both laboratories used standard analytical methods for their analyses. Results were reported in the correct standard units, as well as the holding times, sample preservation, and sample integrity remaining with QC criteria with the exceptions noted in the validation reports. The overall comparability is considered acceptable.

7.3.3.5 Completeness

Completeness was assessed in terms of the percent of valid analytical results that are produced and was based in the data validator's findings. The goal for completeness for each target analyte in each matrix is 90 percent (i.e., no more than 10 percent of analytical data for each target analyte in each matrix deemed unacceptable). A summary of the completeness achieved during this project is shown in Appendix F, Table F-19.

7.3.3.6 Sensitivity

Sensitivity is the ability of an analytical method or instrument to discriminate between measurement responses representing different concentrations. It is important that calibration requirements, detection limits, and limits of quantitation presented in the WP are achieved in support of the DQOs. Additionally, sample results are compared to method blank, trip blank, field blank, and equipment rinsate sample results to identify potential effects of laboratory background and field procedures on sensitivity.

7.4 Data Usability, Completeness, and Field QC Summary

After undergoing the data review and verification process, the analytical results obtained during the SI are considered usable for the project objectives.

Section 8 Nature and Extent of Contamination

The information derived from SI activities presented in Section 5 and sampling results and statistical analysis presented in Section 6 was used to determine the lateral and vertical extent of contamination present at the Former NOSC Site, including:

- Evaluation of soil contamination associated with the Site; and
- The assessment of potential human health risks.

8.1 Project Action Level Determination

For the human health risk assessment, the DOH Tier 1 EALs for soil where the groundwater is not a current or potential drinking water resource and a surface water body is located within 150 meters of the release site (DOH 2012) were used. The PALs were used as the basis of comparison for contaminant occurrence.

8.2 Contaminants of Concern

SI results for COPCs were screened against the PALs. Contaminants with concentrations exceeding the screening levels were further identified as contaminants of concern (COCs). COCs identified for the project site are composed of analytes from various chemical classes including PCBs and Chlorinated Pesticides. A list of the COCs identified at the Site is provided in Table 8-1 below.

Table 8-1: Contaminants of Concern

COCs
PCB: Aroclor-1254
Dalapon

8.3 Soil Contamination

Soil samples were collected from three DUs laid out at the Site. The soil sample results are considered to be indicative of the regional contaminant distribution at the Site. The SI soil sample collection procedures are summarized in Section 5.3.

Three sample depth horizons are associated with the project soil samples, as follows:

- The first depth horizon of the shallowest soil samples collected is defined as 0 to 0.5 feet bgs;
- The second depth horizon for soil samples collected is defined as 0.5 to 2.0 feet bgs; and
- The third depth horizon for soil samples collected is defined as 2.0 to 4.0 feet bgs.

All three DUs were sampled at all three depth horizons. Most of the project site surface is covered with grass. MI soil sampling and analysis are discussed in detail in Section 6. Laboratory analysis for soil samples included TPH-DRO, TPH-GRO, TPH-ORO, VOCs, organochlorine pesticides, PAHs, PCBs, SVOCs, chlorinated herbicides, 13 priority pollutant metals, and dioxins.

Contamination in exceedance of the PALs was found in DU 1, in the central area of the project site. The MI soil sample results exceeding PALs are provided in Table 6-2 and shown on Figure 6-1.

8.3.1 PCBs

The distribution of PCBs in soil is summarized as follows:

DU distribution: The PCB Aroclor 1254 concentrations in DU 1 exceeded the PAL of 1.1 mg/kg.

Depth Horizon detection: In the 0.5 to 2.0 foot bgs depth horizon, the PCB concentration exceeded the human health PAL, with a concentration of 1.2 mg/kg.

8.3.2 Chlorinated Herbicides

The distribution of the herbicide in soil that exceeded PALs is summarized as follows:

8.3.2.1 Dalapon

DU distribution*:* The Dalapon concentration in DU 1 exceeded the PAL of 0.16 mg/kg.

Depth Horizon detections: In the 0 to 0.5 foot depth horizon, Dalapon exceeded the PAL with a concentration of 0.65 mg/kg.

8.3.3 Summary of Nature and Extent of Soil Contamination

The nature and extent of soil contamination is summarized as follows:

- Contaminants detected in the Site soils at concentrations above PALs include PCBs (Aroclor 1254) and the chlorinated herbicide Dalapon.
- The single instance of PCB PAL exceedance was in DU 1 in the 0.5 to 2.0 foot depth horizon.
- The single instance of Dalapon PAL exceedance was in DU 1 in the 0 to 0.5 foot depth horizon.

8.4 Summary of COCs

COCs identified for the soil at the Site include:

- PCBs – PCB Aroclor 1254 was detected in 9 soil samples taken and exceeded PALs in DU 1 in the 0.5 to 2.0 foot depth horizon.
- Chlorinated Herbicides – Dalapon was detected in one soil sample taken in DU 1 at a concentration exceeding the PAL in the 0 to 0.5 foot depth horizon.

8.5 Contaminant Fate and Transport

Once released into the environment, contaminants may undergo various processes that affect their fate and transport. COCs were identified in the surface and shallow subsurface soil at the Site in DU 1. Because the contamination was found at depths of up to 2 feet bgs, it can be

assumed that the contaminants are at least partially mobile. The absence of contamination in the soil in the perimeter DUs at the Site indicates that DU 1 encompasses the primary contamination at the Site.

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Section 9 Environmental Hazard Evaluation

This SI is intended to identify potential environmental hazards associated with contaminant concentrations in site media through comparison with DOH EALs established for common environmental hazards. A summary of these common environmental hazards are listed below:

Contaminated Soil

- Direct exposure: exposure to contaminants via incidental ingestion, dermal absorption, and inhalation of vapors or dust in outdoor air;
- Vapor intrusion: emission of volatile contaminants from soil into overlying buildings;
- Leaching: leaching of contamination from soil by infiltration of surface water (rainfall, irrigation, etc.) and downward migration of leachate into underlying groundwater;
- Terrestrial ecotoxicity: toxicity to terrestrial flora and fauna; and
- Gross contamination: potentially mobile free product, odors, aesthetics, explosive hazards, and general resource degradation.

Contaminated Groundwater

- Drinking water toxicity: toxicity concerns associated with contamination of groundwater used as a current or potential drinking water source;
- Vapor intrusion: emission of volatile contaminants from groundwater into overlying buildings;
- Aquatic ecotoxicity: discharges of contaminated groundwater to surface water bodies and toxicity to aquatic organisms, including fish and shellfish used for human consumption; and
- Gross contamination: potentially mobile free product, odors, aesthetics, explosive hazards, and general resource degradation.

9.1 Exposure Pathways

The Former NOSC Site encompasses an area currently used for open storage of containers and trailers, but will be evaluated based on residential activities. There are no plans to change the current land use. There are no onsite structures. The Site is currently open and vegetated with grass that is maintained with periodic mowing. There are no undisturbed ecological resources; however, groundwater transport of contaminants to Kaneohe Bay is possible. Given these land uses, the current and/or future receptors evaluated were onsite occupational workers, onsite construction workers, residents, recreational users, and ecological receptors.

For residential areas, future disturbance of soil situated deeper than three meters is generally considered to be unlikely. For commercial / industrial sites, soils situated below a depth of one meter are assumed to be “isolated” and not likely to be exposed during unauthorized subsurface activities; however, during the redevelopment of commercial/industrial or high-density residential use, excavation and removal of soils from depths up to five meters or greater is possible (e.g., for underground parking garages, elevator shafts, utilities, etc.) (DOH 2012).

Potential transport mechanisms to be considered include direct contact, vapor emissions, air transport, bio-uptake, leaching to groundwater, and stormwater runoff. Potential exposure routes include ingestion, dermal contact, and inhalation of vapors and particulates.

Potentially complete pathways and exposure routes for each receptor include the:

1. Onsite current or future construction worker who is exposed to:
    - Direct contact through incidental ingestion and dermal contact; and
    - Particulates through inhalation from contaminated soils and groundwater.
2. Onsite current or future occupational worker who is exposed to:
    - Direct contact through incidental ingestion and dermal contact; and
    - Particulates through inhalation from contaminated soils and groundwater.
3. Onsite future resident who is exposed to:
    - Direct contact through incidental ingestion and dermal contact; and
    - Particulates through inhalation from contaminated soils and groundwater.
4. Onsite current and future recreational user who is exposed to:
    - Direct contact through incidental ingestion and dermal contact; and
    - Particulates through inhalation from contaminated soils and groundwater.

- Ecological receptor who is exposed to:
    - Direct contact through incidental ingestion;
    - Bio-uptake of plants and animals;
    - Incidental ingestion and dermal contact with stormwater runoff to Kaneohe Bay;
    - Ingestion of contaminated groundwater to Kaneohe Bay; and
    - Bio-uptake of fish and shellfish.

9.2 Environmental Hazards

The CSM for the Former NOSC site (Figure 2-3) shows that the receptors identified for the site are onsite occupational workers, onsite construction workers, residents, recreational users, and ecological receptors.

Based on the data collected during this sampling event, the DOH Tier 1 screening identifies potential hazards related to the soil concentrations measured at the Site. The potential environmental hazards for the soil COCs are presented in Table 9-1.

Table 9-1: Screening Evaluation for Soil COCs

Analyte	Maximum Concentration (mg/kg)	Human Health Risks		Impacts to Terrestrial Habitats	Gross Contamination (mg/kg)	Leaching (mg/kg)
		Direct Exposure (mg/kg)	Soil Vapor ($\mu g/m^3$)			
PCBs	1.2	1.1	NV	Site-Specific	500	6.3
Dalapon	0.65	370	NV	Site-Specific	500	0.16

Notes:
1. Based on DOH Tier 1 EALs for Unrestricted Land Use Scenario (DOH Surfer Program 2012).
2. DOH discontinued the use of Terrestrial Ecotoxicity action levels in 2011 due to low confidence.
3. NV - Non-volatile

Potential environmental hazards were evaluated for their applicability to the site. DOH Tier 1 EAL Surfer Summary Reports for the COCs are included in Appendix G. Potential environmental hazards that are considered to be insignificant at the site based on available information were eliminated from further consideration and were not evaluated further. Potential environmental hazards identified as posing a potential threat to human health and/or the environment were evaluated further in the SI.

9.2.1 Direct Exposure

Direct exposure hazards to human health and the environment involve direct contact with contaminated soil. Direct contact can be made via incidental ingestion of soil, dermal contact with soil, and inhalation of soil particulates by human and ecological receptors.

The DOH Tier 1 Direct-Exposure Action Level in Table 9-1 is based on an unrestricted land use scenario; however, the site is primarily used for open storage of trailers and containers. COCs at the site were detected in the shallow soils of DU 1; PCBs were detected above PALs in the 0.5 to 2.0 foot bgs depth horizon, while Dalapon was detected above PALs in the 0 to 0.5 foot bgs depth horizon.

The DOH Tier 1 Direct-Exposure Action Levels for unrestricted, commercial/industrial and construction/trench worker exposure scenarios are presented in Table 9-2. As shown in the table, the PCB contamination at the Site exceeded DOH Tier 1 Direct-Exposure Action Levels for unrestricted land use scenarios, but no other land use scenarios. Dalapon contamination at the site did not exceed the DOH Tier 1 Direct-Exposure Actions for any land use scenarios.

Table 9-2: Tier 1 Direct-Exposure Action Levels for Soil COCs

Analyte	Maximum Concentration Detected (mg/kg)	DOH Tier 1 Unrestricted Land Use Scenario (mg/kg)	DOH Tier 1 Commercial / Industrial Land Use Scenario (mg/kg)	DOH Tier 1 Construction / Trench Worker Exposure Scenario (mg/kg)
PCBs	1.2	1.1	7.4	25
Dalapon	0.65	370	3,700	8,700

Notes:
1. DOH Direct-Exposure Tier 1 Direct- Exposure Action Levels Tables I-1, I-2, and I-3 (DOH Surfer Program 2012).

DOH has created a spreadsheet model that calculates site-specific, DOH Tier 2 direct-exposure action levels for soil based modifications to default site conditions and human exposure hazards. The DOH Tier 2 Soil Direct-Exposure Model Summary Reports are included in Appendix G.

The DOH Tier 2 Direct-Exposure Action Levels for Soil using the default site conditions are presented in Table 9-3. As shown in the table, neither the PCB nor the Dalapon contamination at the Site exceeds the DOH Tier 2 Direct-Exposure Action Levels for unrestricted and commercial/industrial land use scenarios. Based on the DOH Tier 2 Direct-Exposure Action Levels, the soil contamination at the Site is considered acceptable and does not pose a direct exposure risk to residents and industrial workers.

Table 9-3: Tier 2 Direct-Exposure Action Levels for Soil COCs

Analyte	Maximum Concentration Detected (mg/kg)	DOH Tier 2 Unrestricted Land Use (mg/kg)	DOH Tier 2 Commercial / Industrial Land Use (mg/kg)
PCBs	1.2	1.8	11
Dalapon	0.65	3,000	18,000

Notes:
1. DOH Direct Exposure Tier 2 Direct-Exposure Action Level (DOH Tier 2 Direct Exposure Program 2012)

9.2.2 Vapor Intrusion

Volatile chemicals detected in groundwater, soil, or soil gas can potentially migrate in a vapor phase through the unsaturated zone to indoor or ambient air where human populations could potentially be exposed.

As shown in Table 9-4, none of the COCs being evaluated in the SI are classified as volatile compounds by DOH. A chemical is classified as volatile if it has a Henry's constant greater than 1E-05 atmospheres-cubic meter per mole (atm-m^3/mole) and a molecular weight less than 200 grams per mole (g/mole). Therefore, no potential for vapor intrusion exposures exists for these chemicals and vapor intrusion is not considered a potential hazard at this site.

Table 9-4: Physio-Chemical Properties

Chemical	Physical State (a)	Molecular Weight (g/mol)	Henry's Law Constant H (atm-m^3/mol)	Henry's Law Constant H' (unitless)	Organic Carbon Partition Coefficient K_{oc} (cm^3/g)	Solubility (mg/L)	Soil-Water Partition Coefficient K_d (F_{oc} = 0.1%) (b)	Soil-Water Partition Coefficient K_d (F_{oc} = 0.6%) (b)
PCBs	NV / S	326	$2.93x10^{-4}$	0.012	33,000	0.032	33	198
Dalapon	NV / L	143	$9.02x10^{-8}$	$3.70X10^{-6}$	3.2	$5.02x10^{5}$	0.0032	0.0192

Notes:
cm^3/g = cubic centimeters per gram
V=volatile or NV=non-volatiles / L=liquid S=solid
Foc = fraction of organic carbon
(a) Chemical is considered to be volatile if it has a Henry's constant is greater than 1.0E-05 and the molecular weight is less than 200 (DOH 2012).
(b) Listed Kd values calculated by multiplying corresponding organic carbon partition coefficients (K_{oc}) by listed DOH default for fraction organic carbon (F_{oc})

9.2.3 Gross Contamination

Gross contamination of soil encompasses the presence of potentially mobile free product, offensive odors and objectionable taste (i.e., in drinking water), unaesthetic appearance, generation of explosive vapors or other safety hazards, and general resource degradation. As described in DOH guidance, it can be possible for soil to be contaminated at such high levels with some chemicals (e.g. xylenes and gasoline) that the soil could be flammable, but would not be considered toxic in the toxicological sense.

The Gross Contamination Soil Action Levels presented in Table 9-1 are based on unrestricted land use with the soil being exposed or potentially exposed. The Site is primarily used for open storage of trailers and containers. The contamination at the site is located in DU 1.

The DOH Tier 1 Gross Contamination Action Levels for the unrestricted, commercial/industrial and construction/trench worker exposure scenarios are presented in Table 9-5. As shown in the table, no PCB or Dalapon contamination at the Site exceeded the DOH Gross Contamination Action Levels for exposed or potentially exposed soil in the unrestricted and commercial/industrial land use scenarios.

Table 9-5: Gross Contamination Action Levels for Exposed or Potentially Exposed Soil COCs

Analyte	Maximum Concentration Detected (mg/kg)	Unrestricted Land Use (mg/kg)	Commercial / Industrial Land Use (mg/kg)
PCBs	1.2	500	1,000
Dalapon	0.65	500	1,000

Notes:
1. DOH Gross Contamination Action Levels for Exposed or Potentially Exposed Soil Table F-2 (DOH Surfer Program 2012).

9.2.4 Leaching

Leaching refers to the movement of contaminants dissolved in water percolating through soil in the vadose zone and potentially into underlying groundwater. Leaching potential is governed by chemical-specific properties and soil characteristics. Chemicals that are highly soluble in water and do not sorb tightly to soils have the highest leaching potential (i.e., are considered "mobile") and chemicals with low water solubility's that bind tightly to soils have low leaching potential (i.e., low mobility).

As shown in Table 9-4, the PCB contamination detected at the site has low solubility and the Dalapon contamination has high solubility: 0.032 and 5.02×10^5 mg/L, respectively. The K_{oc} values included in the table indicate how much a chemical will bind to soil. The higher the number, the tighter the chemical will bind to soil. Chemicals with a K_{oc} greater than 300 (3E+02) cm^3/g are generally considered to be relatively immobile. As indicated in Table 9-4, the K_{oc} value for PCBs is orders of magnitude larger than 300 cm^3/g (33,000 cm^3/g) and PCBs are therefore considered immobile. The K_{oc} value for Dalapon is orders of magnitude smaller than 300 cm^3/g (3.2 cm^3/g) and Dalapon is therefore considered mobile.

Similar to the evaluation of K_{oc} values, DOH evaluates the potential mobility of chemicals in soil leachate using a soil-water partition coefficient (K_d). Large K_d values indicate lower mobility in soil. DOH considers chemicals with a K_d value less than 1 cm^3/g to be highly mobile in soil. DOH considers chemicals with a K_d values greater than 20 cm^3/g to be essentially immobile. As indicated in Table 9-4, generic K_d values calculated for detected contaminants range from 33 cm^3/g (PCBs) to 0.0032 cm^3/g (Dalapon) assuming a total organic carbon content in soil of 0.1% (DOH default assumption for generic K_d calculations) and range from 198 cm^3/g (PCBs) to 0.0192 cm^3/g (Dalapon) assuming a total organic carbon content in soil of 0.6% (default listed in DOH Tier 1 EAL spreadsheets). Based on the K_d values calculated using the DOH default organic carbon content of 0.1%, PCBs have a K_d value greater than 20 cm^3/g and are considered immobile in soils. Dalapon has a K_d value less than 1 cm^3/g and is considered mobile in soils.

Based on the information presented above, Dalapon is considered to be mobile due to highly soluble characteristics and because it does not bind tightly to soil. PCBs are considered to be relatively immobile due to low soluble characteristics and because they do bind tightly to soil.

As shown in Table 9-6, Dalapon contamination detected in the soil at the Site is considered a leaching hazard because the TPH-DRO concentrations exceed the DOH Tier 1 Soil Leaching Action Level.

Table 9-6: Soil Action Levels for Leaching Concerns

Analyte	Maximum Concentration Detected (mg/kg)	Surface Water Within 150 meters (mg/kg)
PCBs	1.2	6.3
Dalapon	0.65	0.16

Notes:
1. DOH Soil Action Levels for Leaching Concerns Table E (DOH Surfer Program 2012).

Section 10 Summary and Conclusions

10.1 Background and Purpose of the Site Inspection

An SI was conducted at the former NOSC Site located on MCB Hawaii, Kaneohe, Oahu, Hawaii. The purpose of the SI was to evaluate the nature and extent of COPCs in shallow subsurface soils at the Site. The SI also provided data to assess potential risks to human health and the environment and to determine an appropriate method of site management to reduce potential exposures to contamination at the Site.

The Former NOSC facility was located in the western portion of MCB Hawaii next to the western end of Sumner Road. Historically, while the NOSC was in operation, the area was open, generally flat, and un-vegetated. The project site encompasses approximately 27,300 square feet (130 feet (ft) x 210 ft) southeast of the former NOSC test pool. The 27,300 square foot area project site is centered around a 6,500 square foot area (50 ft x 130 ft) where a former NOSC Facility employee stated that residual drum contents were dumped onto the ground. The area immediately surrounding the disposal area was included within the project site in order to determine if contamination has migrated from the release area. Currently, the site is not actively used and consists of an open grass covered field that is mowed periodically. The Former NOSC test pool has been removed since the closure and has been filled back to ground level. The area is used for open storage of trailers and containers and there are no plans to change the current site use.

No prior environmental investigations have taken place at the former NOSC site. Former NOSC employees have stated that during operational years, approximately 30 to 40 used drums were brought to the site from Pearl Harbor two to four times a year. Any liquids remaining in the used drums was reportedly dumped onto the bare ground prior to use as a float for the aquatic pens. There are no records of the type of liquids that may have been in the drums.

SI activities at the Former NOSC Site included: a utility clearance survey; drilling of 150 borings and collection of MI soil samples from three depth intervals, decontamination, and IDW handling and disposal. The lateral boundaries of the SI were based on the location where residual liquids were emptied on the ground as remembered by a former employee, with additional DUs surrounding the perimeter of the release area. The vertical boundary of the SI was based on the release mechanisms at the site and the depth to groundwater.

Multi-increment soil samples were collected from three depth horizons (0 to 0.5, 0.5 to 2.0 and 2.0 to 4.0 feet bgs) and were analyzed for VOCs, SVOCs, TPH-GRO, TPH-DRO, TPH-ORO, PAHs, organochlorine pesticides, chlorinated herbicides, PCBs, the 13 priority pollutant metals, and dioxins. All were found in concentrations below screening levels with the exceptions of PCBs and Dalapon, a chlorinated herbicide.

The information derived from SI activities was used to determine the lateral and vertical extent of contamination present at the Site. The information derived from SI activities was also used to conduct a risk screening, to determine whether the nature and lateral and vertical extent of the contamination and exposure to COCs in the soil pose an unacceptable risk to human health and the environment.

10.2 Site Screening

COPCs were selected based on historic materials/wastes that the Navy typically stored in 55-gallon drums and included VOCs, SVOCs, TPH-GRO, TPH-DRO, TPH-ORO, PAHs, organochlorine pesticides, chlorinated herbicides, PCBs, 13 priority pollutant metals, and dioxins.

The DOH Tier 1 EALs (DOH 2012) for unrestricted land use where the groundwater is not a drinking water sources and surface water is located within 150 meters were used as human health screening values for the identification of COPCs and the evaluation of the nature and extent of contamination at the Site.

SI results for COPCs were screened against the human health PALs and contaminants with concentrations exceeding the screening levels were further identified as COCs. The COCs identified for the Site are provided below.

Table 10-1: Contaminants of Concern

COCs
PCBs
Dalapon

10.3 Nature and Extent of Contamination

The project area includes an area surrounding the former NOSC Site that a former employee indicated was the location of residual liquid disposal. The nature and extent of contamination was evaluated by conducting soil sampling. 150 soil borings were installed in three DUs on site. The magnitude and extent of the COPCs were evaluated by collecting and analyzing MI soil samples at three depth intervals (0 to 0.5, 0.5 to 2.0, and 2.0 to 4.0 feet bgs).

10.3.1 Nature and Extent of Site Soil Contamination

A total of 150 boreholes were installed in three DUs during the SI investigation, and primary soil samples were collected from three depth horizons throughout the Site, for a total of 9 primary soil samples. Based on the soil data collected during the SI the following can be concluded:

- COPCs were detected in all 9 primary soil samples from all depth horizons in all DUs.
- COPCs TPH-DRO, TPH-ORO, 5 organochlorine pesticides, 15 PAHs, Aroclor-1254 and Total PCBs, 1 SVOC, 1 chlorinated herbicide, all 13 priority pollutant metals, and 4 dioxin analytes were detected at the Site.
- PCB Aroclor-1254 and the chlorinated herbicide Dalapon were detected in 1 each soil samples from DU 1 at concentrations above their respective PALs.
- The highest concentrations of PCBs (1.2 mg/kg) were found in DU 1 in depth horizon 0.5 to 2.0 feet bgs. The highest concentration of Dalapon (0.65 mg/kg) was found in DU 1 in depth horizon 0 to 0.5 feet bgs.
- All of the soil samples that exceeded the PALs were located in DU 1.

- None of the soil samples collected from the perimeter DUs contained COPCs above the PALs.
- Based on the sample results, the release site appears to match the location of DU 1.

10.4 Summary of COCs

COCs identified at the Site (shown on Figure **6-1**) include:

- PCB Aroclor-1254 in the soil at the site; in the 0.5 to 2.0 foot bgs depth horizon in DU 1; and
- Chlorinated herbicide Dalapon in the soil at the site; in the 0 to 0.5 foot bgs depth horizon.

10.5 Contaminant Fate and Transport

Once released into the environment, contaminants may undergo various processes that affect their fate and transport. COCs were identified in surface and subsurface soil at the Former NOSC Site at depths of 0 to 2.0 feet bgs. Groundwater leaching to Kaneohe Bay is a potential transport mechanism for ecological receptors, as is bio-uptake and direct contact. For human receptors, direct contact and inhalation of particulates are the potential transport mechanisms.

Dalapan leaches readily in soil, however where conditions for microbial growth is favorable, microbial degradation will probably proceed at a faster rate than leaching. In the absence of microbial action, Dalapon degradation is slow. If Dalapon leachate is released to water, decomposition via microorganisms will occur where conditions are favorable to microbial growth. Adsorption to sediments or bioaccumulation are not expected to be significant.

10.6 Environmental Hazard Evaluation

The environmental hazard evaluation was completed and evaluated the potential health risks to current and future receptors based on current environmental conditions. When considering the land use and location of the release Site the following evaluation is made:

- PCB soil concentrations exceed the DOH Tier 1 Direct-Exposure Action Level in DU 1 for unrestricted land use.
- PCB soil concentrations do not exceed the DOH Tier 2 Direct-Exposure Action Levels for unrestricted land use.
- PCBs soil concentrations do not exceed the action levels for gross contamination or leaching.
- Dalapon soil concentrations exceed the Leaching Action Level in DU 1.
- Dalapon soil concentrations do not exceed the action levels for direct exposure or gross contamination.

10.7 Summary of Findings

As a result of the performance of the SI, an adequate amount of data, of sufficient quality, exists to support the human health hazard evaluations. The three PSQs for this project (Section 4.2) have been resolved as follows:

- Resolution of PSQ #1: COC concentrations of PCBs exceed initial soil PALs due to Direct-Exposure hazards. COC concentrations of Dalapon exceed initial soil PALs due to Leaching hazards.
- Resolution of PSQ #2: Based on land use and location (lateral and vertical) of the release Site, the soil contamination does not currently pose an unacceptable hazard to human health or the environment.
    - PCB concentrations exceed DOH Tier 1 Direct-Exposure Action Levels; however, they do not exceed the DOH Tier 2 Direct-Exposure Action Levels.
    - Dalapon concentrations exceed the Leaching Action Levels; however, Dalapon is not persistent in the environment and the total mass of Dalapon in the DU and depth horizon it was detected will not pose an unacceptable hazard to the environment.
- Resolution of PSQ #3: Dioxin sampling indicates that the dioxin TEQ concentration in DU 1 was 2.3 nanograms per kilogram (ng/kg), thus categorizing the site soils as a Category A soil. A TEQ soil concentration lower than 20 ng/kg indicates a Category A soil which does not appear to be impacted by NOSC activities and no further action is warranted at the site.

10.8 Conclusions

Based on the findings summarized in Section 10.7 the Site is recommended for No Further Action.

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	NAVFAC: Kelly Akamine 471-1171 ext. 266	
	MCB: Jeff Larson 257-6999	

8/28/14 Thursday

Site NAME: Former Naval Ocean Systems Center, MCB Hawaii

Weather: Sunny, Partly cloudy, Slight Breeze

Team: Roger Aoki, Jeffrey Kahler
HGS: Larry Young

Activity: ① Geophysical Survey & Utility Clearance
② Site Layout

Equipment: GPS, paint, flags, tape, wheel, nails, whacks
Toners: E.M.

References: EZ Work Plan & HASP, EM 385-1-1, ERP procedure I-A-5

PPE: Level D

0800 - Roger Aoki, Jeffrey Kahler arrive on site, MCB, Former Naval Ocean Systems Center.
- Proceed to layout DU locations, stake corners using GPS.

0945 - Proceed to layout 30 sample locations within DU-1.

1000 - HGS, Larry Young arrives on site.

Rite in the Rain

8/28/2014 ~~Tuesday~~ Thursday

1005 - Larry process to conduct Utility clearance and geophysical survey.
- used E.M. to locate utilities in Boring locations.
- Electric Marked in Red.

1100 - HGS completes Utility clearance of site.

1105 - HGS off-site.

1110 - RA, JK process to layout sample locations using a Random but systematic grid.

- Nails + whiskers used to locate sample points

1200 - Layout of sample points @ DU-1 completed. RA + JK will layout sample points of DU-2, DU-3 tomorrow.
- Pack up and leave site 8/28/ Rain in the Rain.

Jolly Kat

8/29/2014 Friday

0900 - Roger ~~Aoki~~ and Jeffry Kohler arrive onsite @.
- Proceed to layout sample locations of DU-2 and DU-3.

Equipment: Hammer, nails, tape, whiskers, Paint, flagging.

1100 - Site sample locations are complete. ~~All local~~ 20 sample locations are layed out.
DU-1 - ORANG whiskers
DU-2 - Blue whiskers
DU-3 - ~~ORANG~~ Red whiskers

1130 - RA + JK pack-up and head off site

JKohler 8-29-14

Rite in the Rain.

9/2/2014 Tuesday

Site: Former Naval Oceans Systems Center, MCB Hawaii

Weather:

Team: Roger A. Jeff K. Bernice B. Geotek -

Activity: MI - Soil Sampling

Equipment: 6620 Drill Rig, PID

References:

PPE: Level D

0800 - JK, RA, BB arrive onsite

0830 - Drillers arrive onsite Geotek (Jon Shjegstad, Gabe Gutierres)

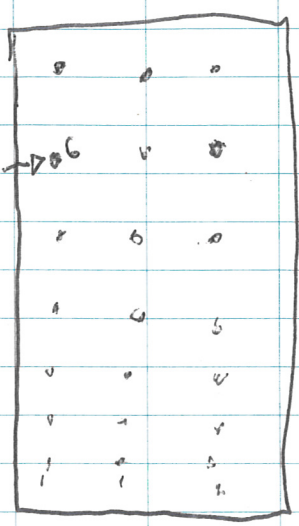
0910 - JK arrive back onsite

0912 - Calibrates PID

0915 - JK performs safety Brief

0920 - Begin Drilling @ DU-1. Starting @ NW side of DU-1. Down hole PID Reading taken from first hole

Rite in the Rain



9/2/2014 Tuesday

Sample Log

ID	Date	Time	Depth	Replicate	EPA ID
DU-1	9/2/14	0930	0.5	A	EN001
DU-1	9/2	0935	0.5	R1	EN002
DU-1	9/2	0940	0.5	R2	EN003
DU-1	9/2	0945	.5-2'	A	EN004
DU-1	9/2	0950	.5-2'	R1	EN005
DU-1	9/2	0955	.5-2'	R2	EN006
DU-1	9/2	1000	2'-4'	A	EN007
DU-1	9/2	1005	2'-4'	R1	EN008
DU-1	9/2	1010	2'-4'	R2	EN009
Rinsate	9/2	1900			EN011
Source	9/2	1845			EN010

Rite in the Rain

9/2/2014

1230- Drillers break for lunch

1330- Drillers arrive back onsite from Lunch.

1340- EZ Breaks for lunch

1355- Continue Drilling and Sampling triplicate of DU-1.

1525- Steve Spangler arrives onsite
-S.P. proceeds to join in with MI- soil sampling

1700- All 30 holes and Triplicate MI- soil samples collected and complete.
Drillers proceed to Pack up, fill holes w/ bentonite

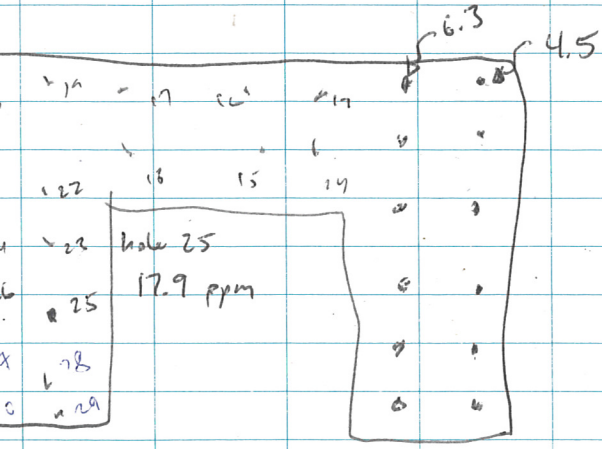
1710- RA, JK decontaminate Drill Rig shoe for equipment Rinsate

1735- EZ packs up, break-down, and proceeds offsite for the day.

1810- Arrive @ office, proceed to collect Source blank, Rinsate Samples
-Process Samples

2000- Done for the Day

DU-2 PID Readings > 1



DU-2 & DU-3

Spacing between points

9/3/2014 WED

Site: MCB Hawaii, Former Naval Ocean Systems Center

Weather: Sunny, part cloudy, Slight Breeze

Team: EA (Roger Anki, Bernice Balete, Jeffrey Kahlen)
Geotek (Gabe S., Gabe G.)

Activity: Bore hole Drilling, MI Soil Sampling

Equipment: Geoprobe 6620 DT Drill Rig, PID

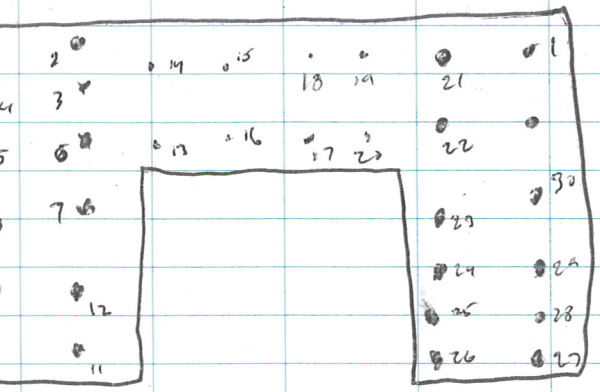
References:

0800 - PA, JK, BB arrive onsite
0820 - Geotek (JON + Gabe) arrive onsite
0830 - JK conducts safety brief
0835 - All personnel onsite prepare for sampling + Drilling of DU-2.
0945 - JK Calibrates PID
0900 - Begin Drilling
0900 - Take PID readings after each hole is made
1140 - Drillers finish all 30 holes of DU-2
- Drillers break for Lunch

1230 - Finish Soil sampling of DU-2
1240 - Drillers arrive back from Lunch, EA breaks for Lunch

Rite in the Rain.

DU-3 PID Readings



9/3/2014

Sampling Log

DU	Date	Time	Depth	EPA ID
2	9/3	0900	.5	EN012
2	9/3	0905	.5-2	EN013
2	9/3	0910	2-4	EN014
3	9/3	1300	.5	EN015
3	9/3	1305	.5-2	EN016
3	9/3	1310	2-4	EN017
Rinsate	9/3	1725		EN018

1300 - Begin Drilling and Sampling of DU-3.

1500 - Drillers finish Drilling all 30 holes @ DU-3,

~~1505~~ Proceed to fill holes w/Bentonite, pack-up, decontaminate

1525 - Sampling of DU-3 is finished, proceed to decontaminate

1530 - Drillers off-site

1600 - E2 has finish packing up, RA, TB, JK offsite, proceed to office to process Samples

1700 - Arrive @ the office, Proceed to collect ~~Equipment~~ Rinsate Sample ID: EN018 @ 1725

- Proceed to process samples and put all samples in the Refridgerator.

1800 - E2 packs up, put away equip, done for day

Rite in the Rain.

JKahlbaugh 9-3-14

9/4/14 Thursday

900 - RA, JK, BB prep samples for shipment @ the office

1300 - Depart office to deliver samples @ Fedex

1323 - Samples delivered to Fedex for shipment to APPL Laboratories in California

Rite in the Rain.

9/5/14 Friday

1000 - JK arrives on site @ NOSC Marine Corps Base Kaneohe.

- JK proceeds to place drums on top of spill pallet
- Label drums
- Cover drums w/ plastic sheeting

1100 - JK departs site

Drum Log 9/5/14

Drum ID:	Date	Contents	Volumes:
Drum-001	9/2/14	Soil, Drill Cuttings	Full
Drum-002	9/3/14	Soil, Drill Cuttings	Full

Rite in the Rain

Former NOSC Site Drum Inventory

Generator/ Site Name	CTO	Drum Number	Storage Location/ Condition	Origin	IDW Type	Volume (%)	Generation Date	Expected Disposal Date	Actual Disposal Date
SI for Former NOSC Site	0015	D001	Southeast corner of DU-3	Drill Cuttings	Soil	100	2014-09-02	Upon receipt of analytical data	TBD
SI for Former NOSC Site	0015	D002	Southeast corner of DU-3	Drill Cuttings	Soil	100	2014-09-03	Upon receipt of analytical data	TBD

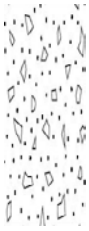
Recommended Analytical Methods

Drum Number	SW-846 8015B (TPHs)	SW-846 8260B (VOCs)	SW-846 8081A (Pesticides)	SW-846 8270C SIM (PAHs)	SW-846 8082 (PCBs)	SW-846 8270C (SVOCs)	SW-846 8151 (Herbicides)	SW-846 6020A/7471B (Metals / Inorganics)	SW-846 8290 (Dioxins)
D001	X	X	X	X	X	X	X	X	X
D002	X	X	X	X	X	X	X	X	X

Recommended Drum Disposition

Drum Number	Method of Disposition
D001	Offsite
D002	Offsite

Soil Lithology Key



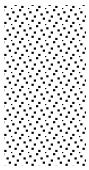
sandy coral gravel **GM**
clayey gravel **GC**



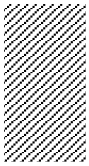
silty clay **CL**
gravelly clay **CL**
sandy clay **CL**



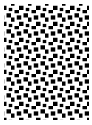
petroleum globules



medium sand **SP**



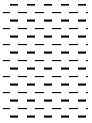
plastic clay, fat clay **CH**



gravelly sand **SP**



silty sand **SM**



clayey sand **SC**



SC



CH



coral

Boring Number:	DU-1-1		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-2		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-3		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-4		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA / SS:	Drive: NA / Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-5		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-6		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-7		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-8		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-9		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-10		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-11		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								Collected triplicate sample for
	1.25 –	5								triplicate analysis. Three sample
		6								cores driven adjacent to each
	1.5 –									other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-12		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-13		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-14		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-15		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								Collected triplicate sample for
	1.25 –	5								triplicate analysis. Three sample
		6								cores driven adjacent to each
	1.5 –									other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-16		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-17		Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum	Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/2/14**	Date and Time Completed **9/2/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**	Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples: Bulk **NA** SS	Drive **NA** Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level: First	After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**	Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			**0.0-3.0': Dry to slightly**	**GC**	25%	15%	60%	
	0.25 –	2			**moist, Yellowish Red (5YR4/6)**					**Triplicate sample collected 0-6"**
		3			**gravelly clay with sand**					
	0.5 –				**fill material**					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									**Triplicate sample collected 24"-48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									**EN004, EN005, EN006**
										EN007, EN008, EN009
	3.0 –	7								
		8			**3.0'-4.0': Slightly moist to**	**CL**	15%	55%	30%	
	3.25 –	9			**moist, Yellowish Red (5YR4/6)**					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				**4.0'-5.0': Wet, Light Gray (N7)**	**SP**	15%	80%	5%	
	4.25 –				**gravelly sand w/ clasts 5-30 mm**					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-18		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-19		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/2/14	Date and Time Completed: 9/2/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			0.0-3.0': Dry to slightly	GC	25%	15%	60%	
	0.25 –	2			moist, Yellowish Red (5YR4/6)					Triplicate sample collected 0-6"
		3			gravelly clay with sand					
	0.5 –				fill material					
										Fill material: 0-3.0'
	0.75 –									
										Triplicate sample collected 6"-24"
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									Triplicate sample collected 24"-48"
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									EN004, EN005, EN006
										EN007, EN008, EN009
	3.0 –	7								
		8			3.0'-4.0': Slightly moist to	CL	15%	55%	30%	
	3.25 –	9			moist, Yellowish Red (5YR4/6)					
					silty sand with gravel					
	3.5 –									
	3.75 –									
▽	4.0 –				4.0'-5.0': Wet, Light Gray (N7)	SP	15%	80%	5%	
	4.25 –				gravelly sand w/ clasts 5-30 mm					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: **DU-1-20**					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/2/14**			Date and Time Completed **9/2/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			**0.0-0.16': Dry, Asphault**	**GW**	95%	5%	0%	
	0.25 –	2			**Base Course**					**Triplicate sample collected 0-6"**
		3								
	0.5 –				**0.16-4.0': Dry to slightly**	**GC**	25%	15%	60%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-4.0'
	0.75 –				**gravel, clay and sand**					
					fill mixture					**Triplicate sample collected 6"-24"**
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									**Triplicate sample collected 24"-48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									**EN004, EN005, EN006**
		7								**EN007, EN008, EN009**
	3.0 –	8								
		9								
	3.25 –									
	3.5 –									
	3.75 –									
	▽ 4.0 –									
					4.0'-5.0': Wet, Light Gray (N7)	**SP**	15%	80%	5%	
	4.25 –				**gravelly sand w/ clasts 5-30 mm**					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-1-21							Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum					Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**	
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/2/14**					Date and Time Completed **9/2/14**	
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**					Total No. of Samples **3 MI**	
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS			Drive **NA**	Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First				After _____ Hours	
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**					Checked By/Date **K. Kilway 1/30/15**	

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			**0.0-0.16': Dry, Asphault**	**GW**	95%	5%	0%	
	0.25 –	2			**Base Course**					**Triplicate sample collected 0-6"**
		3								
	0.5 –				**0.16-4.0': Dry to slightly**	**GC**	25%	15%	60%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-4.0'
	0.75 –				**gravel, clay and sand**					
					fill mixture					**Triplicate sample collected 6"-24"**
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									**Triplicate sample collected 24"-48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									**EN004, EN005, EN006**
										EN007, EN008, EN009
	3.0 –	7								
		8								
	3.25 –	9								
	3.5 –									
	3.75 –									
▽	4.0 –									
					4.0'-5.0': Wet, Light Gray (N7)	**SP**	15%	80%	5%	
	4.25 –				**gravelly sand w/ clasts 5-30 mm**					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-1-22					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/2/14**			Date and Time Completed **9/2/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			**0.0-0.16': Dry, Asphault**	**GW**	95%	5%	0%	
	0.25 –	2			**Base Course**					**Triplicate sample collected 0-6"**
		3								
	0.5 –				**0.16-4.0': Dry to slightly**	**GC**	25%	15%	60%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-4.0'
	0.75 –				**gravel, clay and sand**					
					fill mixture					**Triplicate sample collected 6"-24"**
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									**Triplicate sample collected 24"-48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									**EN004, EN005, EN006**
		7								**EN007, EN008, EN009**
	3.0 –	8								
		9								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
					4.0'-5.0': Wet, Light Gray (N7)	**SP**	15%	80%	5%	
	4.25 –				**gravelly sand w/ clasts 5-30 mm**					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-1-23					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/2/14**			Date and Time Completed **9/2/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			**0.0-0.16': Dry, Asphault**	**GW**	95%	5%	0%	
	0.25 –	2			**Base Course**					**Triplicate sample collected 0-6"**
		3								
	0.5 –				**0.16-4.0': Dry to slightly**	**GC**	25%	15%	60%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-4.0'
	0.75 –				**gravel, clay and sand**					
					fill mixture					**Triplicate sample collected 6"-24"**
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									**Triplicate sample collected 24"-48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									**EN004, EN005, EN006**
		7								**EN007, EN008, EN009**
	3.0 –	8								
		9								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
					4.0'-5.0': Wet, Light Gray (N7)	**SP**	15%	80%	5%	
	4.25 –				**gravelly sand w/ clasts 5-30 mm**					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-1-24					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/2/14**			Date and Time Completed **9/2/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			**0.0-0.16': Dry, Asphault**	**GW**	95%	5%	0%	
	0.25 –	2			**Base Course**					**Triplicate sample collected 0-6"**
		3								
	0.5 –				**0.16-4.0': Dry to slightly**	**GC**	25%	15%	60%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-4.0'
	0.75 –				**gravel, clay and sand**					
					fill mixture					**Triplicate sample collected 6"-24"**
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									**Triplicate sample collected 24"-48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									**EN004, EN005, EN006**
		7								**EN007, EN008, EN009**
	3.0 –	8								
		9								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
					4.0'-5.0': Wet, Light Gray (N7)	**SP**	15%	80%	5%	
	4.25 –				**gravelly sand w/ clasts 5-30 mm**					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-1-25										Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**		Elevation and Datum				Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**		Date and Time Started **9/2/14**				Date and Time Completed **9/2/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**		Completion Depth **5.0'**				Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**		No. of Samples:	Bulk **NA**	SS		Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**		Water Level:	First			After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**			Hydrogeologist/Date **J. Kahler 6/4/14**				Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			**0.0-0.16': Dry, Asphault**	**GW**	95%	5%	0%	
	0.25 –	2			**Base Course**					**Triplicate sample collected 0-6"**
		3								
	0.5 –				**0.16-4.0': Dry to slightly**	**GC**	25%	15%	60%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-4.0'
	0.75 –				**gravel, clay and sand**					
					fill mixture					**Triplicate sample collected 6"-24"**
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									**Triplicate sample collected 24"-48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									**EN004, EN005, EN006**
		7								**EN007, EN008, EN009**
	3.0 –	8								
		9								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
					4.0'-5.0': Wet, Light Gray (N7)	**SP**	15%	80%	5%	
	4.25 –				**gravelly sand w/ clasts 5-30 mm**					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-1-26					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/2/14**			Date and Time Completed **9/2/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			**0.0-0.16': Dry, Asphault**	**GW**	95%	5%	0%	
	0.25 –	2			**Base Course**					**Triplicate sample collected 0-6"**
		3								
	0.5 –				**0.16-4.0': Dry to slightly**	**GC**	25%	15%	60%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-4.0'
	0.75 –				**gravel, clay and sand**					
					fill mixture					**Triplicate sample collected 6"-24"**
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									**Triplicate sample collected 24"-48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									**EN004, EN005, EN006**
		7								**EN007, EN008, EN009**
	3.0 –	8								
		9								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
					4.0'-5.0': Wet, Light Gray (N7)	**SP**	15%	80%	5%	
	4.25 –				**gravelly sand w/ clasts 5-30 mm**					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-1-27										Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**		Elevation and Datum				Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**		Date and Time Started **9/2/14**				Date and Time Completed **9/2/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**		Completion Depth **5.0'**				Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**		No. of Samples:	Bulk **NA**	SS		Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**		Water Level:	First			After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**			Hydrogeologist/Date **J. Kahler 6/4/14**				Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			**0.0-0.16': Dry, Asphault**	**GW**	95%	5%	0%	
	0.25 –	2			**Base Course**					**Triplicate sample collected 0-6"**
		3								
	0.5 –				**0.16-4.0': Dry to slightly**	**GC**	25%	15%	60%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-4.0'
	0.75 –				**gravel, clay and sand**					
					fill mixture					**Triplicate sample collected 6"-24"**
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									**Triplicate sample collected 24"-48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									**EN004, EN005, EN006**
										EN007, EN008, EN009
	3.0 –	7								
		8								
	3.25 –	9								
	3.5 –									
	3.75 –									
▽	4.0 –									
					4.0'-5.0': Wet, Light Gray (N7)	**SP**	15%	80%	5%	
	4.25 –				**gravelly sand w/ clasts 5-30 mm**					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-1-28					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/2/14**			Date and Time Completed **9/2/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			**0.0-0.16': Dry, Asphault**	**GW**	95%	5%	0%	
	0.25 –	2			**Base Course**					**Triplicate sample collected 0-6"**
		3								
	0.5 –				**0.16-4.0': Dry to slightly**	**GC**	25%	15%	60%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-4.0'
	0.75 –				**gravel, clay and sand**					
					fill mixture					**Triplicate sample collected 6"-24"**
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									**Triplicate sample collected 24"-48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									**EN004, EN005, EN006**
										EN007, EN008, EN009
	3.0 –	7								
		8								
	3.25 –	9								
	3.5 –									
	3.75 –									
▽	4.0 –									
					4.0'-5.0': Wet, Light Gray (N7)	**SP**	15%	80%	5%	
	4.25 –				**gravelly sand w/ clasts 5-30 mm**					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-1-29					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/2/14**			Date and Time Completed **9/2/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			**0.0-0.16': Dry, Asphault**	**GW**	95%	5%	0%	
	0.25 –	2			**Base Course**					**Triplicate sample collected 0-6"**
		3								
	0.5 –				**0.16-4.0': Dry to slightly**	**GC**	25%	15%	60%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-4.0'
	0.75 –				**gravel, clay and sand**					
					fill mixture					**Triplicate sample collected 6"-24"**
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									**Triplicate sample collected 24"-48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									**EN004, EN005, EN006**
		7								**EN007, EN008, EN009**
	3.0 –	8								
		9								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
					4.0'-5.0': Wet, Light Gray (N7)	**SP**	15%	80%	5%	
	4.25 –				**gravelly sand w/ clasts 5-30 mm**					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-1-30					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/2/14**			Date and Time Completed **9/2/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –	1			**0.0-0.16': Dry, Asphault**	**GW**	95%	5%	0%	
	0.25 –	2			**Base Course**					**Triplicate sample collected 0-6"**
		3								
	0.5 –				**0.16-4.0': Dry to slightly**	**GC**	25%	15%	60%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-4.0'
	0.75 –				**gravel, clay and sand**					
					fill mixture					**Triplicate sample collected 6"-24"**
	1.0 –									
		4								
	1.25 –	5								Collected triplicate sample for
		6								triplicate analysis. Three sample
	1.5 –									cores driven adjacent to each
										other in order to collect enough
	1.75 –									soil volume for analysis.
	2.0 –									**Triplicate sample collected 24"-48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN001, EN002, EN003
	2.75 –									**EN004, EN005, EN006**
		7								**EN007, EN008, EN009**
	3.0 –	8								
		9								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
					4.0'-5.0': Wet, Light Gray (N7)	**SP**	15%	80%	5%	
	4.25 –				**gravelly sand w/ clasts 5-30 mm**					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-2-1		Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum	Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**	Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**	Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples: Bulk **NA** SS	Drive **NA** Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level: First	After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**	Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-2-2				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number: DU-2-3										Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum					Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**					Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**					Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS			Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First				After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**					Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
	0.75 –				**moist, Yellowish Red (5YR4/6)**					Fill material: 0-3.0'
	1.0 –				**gravelly clay with sand**					
	1.25 –	2			**fill material**					**Sample collected 6"-24"**
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
	2.75 –									**EN012, EN013, EN014**
	3.0 –	*3*			**3.0'-3.5': Slightly moist to**	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
	3.5 –				**silty clay**					
	3.75 –				**3.5'-4.5':Moist to wet**	**SP**	30%	70%	0%	
	4.0 –				**Light Gray (N7)**					
	4.25 –				**fine sand with gravel**					
	4.5 –									
	4.75 –				**4.5'-5.0': Wet, Light Gray (N7)**	**SC**	0%	20%	80%	
	5.0 –				**sandy clay**					

Boring Number:	DU-2-4				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-2-5				Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
	0.75 –				**moist, Yellowish Red (5YR4/6)**					Fill material: 0-3.0'
	1.0 –				**gravelly clay with sand**					
	1.25 –	2			**fill material**					**Sample collected 6"-24"**
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
	2.75 –									**EN012, EN013, EN014**
	3.0 –	*3*			**3.0'-3.5': Slightly moist to**	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
	3.5 –				**silty clay**					
	3.75 –				**3.5'-4.5':Moist to wet**	**SP**	30%	70%	0%	
	4.0 –				**Light Gray (N7)**					
	4.25 –				**fine sand with gravel**					
	4.5 –									
	4.75 –				**4.5'-5.0': Wet, Light Gray (N7)**	**SC**	0%	20%	80%	
	5.0 –				**sandy clay**					

Boring Number:	DU-2-6				Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-2-7		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/3/14	Date and Time Completed: 9/3/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				0.0-0.16': Dry, Asphalt	GW	95%	5%	0%	
	0.25 –	1			Base Course					Sample collected 0-6"
	0.5 –				0.16-3.0': Dry to slightly	GC	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				gravelly clay with sand					
					fill material					Sample collected 6"-24"
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									Sample collected 24"- 48"
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	3								
					3.0'-3.5': Slightly moist to	CL	0%	0%	100%	
	3.25 –				moist,Yellowish Red (5YR4/6)					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	SP	30%	70%	0%	
	3.75 –				Light Gray (N7)					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	SC	0%	20%	80%	
	4.75 –				sandy clay					
	5.0 –									

Boring Number:	DU-2-8				Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
	0.75 –				**moist, Yellowish Red (5YR4/6)**					Fill material: 0-3.0'
	1.0 –				**gravelly clay with sand**					
	1.25 –	2			**fill material**					**Sample collected 6"-24"**
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
	2.75 –									**EN012, EN013, EN014**
	3.0 –	*3*			**3.0'-3.5': Slightly moist to**	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
	3.5 –				**silty clay**					
	3.75 –				**3.5'-4.5':Moist to wet**	**SP**	30%	70%	0%	
	▽ 4.0 –				**Light Gray (N7)**					
	4.25 –				**fine sand with gravel**					
	4.5 –									
	4.75 –				**4.5'-5.0': Wet, Light Gray (N7)**	**SC**	0%	20%	80%	
	5.0 –				**sandy clay**					

Boring Number:	DU-2-9				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-2-10				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-2-11				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-2-12				Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-2-13				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-2-14				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-2-15				Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-2-16				Sheet 1 of 1	
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**	
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**	
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**	
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours	
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**	

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
	0 –									Macrocore driven 0-5'
					0.0-0.16': Dry, Asphalt	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	15%	10%	75%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –				**2.5' - 2.75': Dry, light brown**	**GM**	0%	100%	0%	Sample IDs:
					(10YR8/3), coral limestone					**EN012, EN013, EN014**
	2.75 –									
					2.75'-3.5': Dry to slightly moist	**CH**	0%	0%	100%	
	3.0 –	*3*			**Yellowish Brown (10R3/6)**					
					Clay					
	3.25 –									
	3.5 –									
					3.5'- 5.0': Slightly moist to wet	**CL**	20%	0%	80%	
	3.75 –				**Light Brown (10YR8/3)**					
					gravelly clay w/ coral clasts					
	▽ 4.0 –				**(clasts 20-30 mm)**					
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-2-17				Sheet 1 of 1	
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**	
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**	
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**	
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours	
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**	

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
[redacted]	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	15%	10%	75%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –				**2.5' - 2.75': Dry, light brown**	**GM**	0%	100%	0%	Sample IDs:
					(10YR8/3), coral limestone					**EN012, EN013, EN014**
	2.75 –									
					2.75'-3.5': Dry to slightly moist	**CH**	0%	0%	100%	
	3.0 –	*3*			**Yellowish Brown (10R3/6)**					
					Clay					
	3.25 –									
	3.5 –									
					3.5'- 5.0': Slightly moist to wet	**CL**	20%	0%	80%	
	3.75 –				**Light Brown (10YR8/3)**					
					gravelly clay w/ coral clasts					
	▽ 4.0 –				**(clasts 20-30 mm)**					
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-2-18				Sheet 1 of 1		
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**		
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**		
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**		
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**	
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours		
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**		

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	15%	10%	75%	
	0.75 –				**moist, Yellowish Red (5YR4/6)**					Fill material: 0-2.5'
	1.0 –				**gravelly clay with sand**					
	1.25 –	2			**fill material**					**Sample collected 6"-24"**
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –				**2.5' - 2.75': Dry, light brown**	**GM**	0%	100%	0%	Sample IDs:
	2.75 –				**(10YR8/3), coral limestone**					**EN012, EN013, EN014**
	3.0 –	*3*			**2.75'-3.5': Dry to slightly moist**	**CH**	0%	0%	100%	
	3.25 –				**Yellowish Brown (10R3/6)**					
	3.5 –				**Clay**					
	3.75 –				**3.5'- 5.0': Slightly moist to wet**	**CL**	20%	0%	80%	
	▽ 4.0 –				**Light Brown (10YR8/3)**					
	4.25 –				**gravelly clay w/ coral clasts**					
	4.5 –				**(clasts 20-30 mm)**					
	4.75 –									
	5.0 –									

Boring Number:	DU-2-19				Sheet 1 of 1	
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**	
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**	
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**	
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours	
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**	

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
[redacted]	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	15%	10%	75%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –				**2.5' - 2.75': Dry, light brown**	**GM**	0%	100%	0%	Sample IDs:
					(10YR8/3), coral limestone					**EN012, EN013, EN014**
	2.75 –									
					2.75'-3.5': Dry to slightly moist	**CH**	0%	0%	100%	
	3.0 –	*3*			**Yellowish Brown (10R3/6)**					
					Clay					
	3.25 –									
	3.5 –									
					3.5'- 5.0': Slightly moist to wet	**CL**	20%	0%	80%	
	3.75 –				**Light Brown (10YR8/3)**					
					gravelly clay w/ coral clasts					
	▽ 4.0 –				**(clasts 20-30 mm)**					
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-2-20				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	15%	10%	75%	
	0.75 –				**moist, Yellowish Red (5YR4/6)**					Fill material: 0-2.5'
	1.0 –				**gravelly clay with sand**					
	1.25 –	2			**fill material**					**Sample collected 6"-24"**
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –				**2.5' - 2.75': Dry, light brown**	**GM**	0%	100%	0%	Sample IDs:
	2.75 –				**(10YR8/3), coral limestone**					**EN012, EN013, EN014**
	3.0 –	*3*			**2.75'-3.5': Dry to slightly moist**	**CH**	0%	0%	100%	
	3.25 –				**Yellowish Brown (10R3/6)**					
	3.5 –				**Clay**					
	3.75 –				**3.5'- 5.0': Slightly moist to wet**	**CL**	20%	0%	80%	
	▽ 4.0 –				**Light Brown (10YR8/3)**					
	4.25 –				**gravelly clay w/ coral clasts**					
	4.5 –				**(clasts 20-30 mm)**					
	4.75 –									
	5.0 –									

Boring Number:	DU-2-21				Sheet 1 of 1		
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**		
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**		
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**		
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**	
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours		
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**		

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
[redacted]	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	15%	10%	75%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –				**2.5' - 2.75': Dry, light brown**	**GM**	0%	100%	0%	Sample IDs:
					(10YR8/3), coral limestone					**EN012, EN013, EN014**
	2.75 –									
					2.75'-3.5': Dry to slightly moist	**CH**	0%	0%	100%	
	3.0 –	*3*			**Yellowish Brown (10R3/6)**					
					Clay					
	3.25 –									
	3.5 –									
					3.5'- 5.0': Slightly moist to wet	**CL**	20%	0%	80%	
	3.75 –				**Light Brown (10YR8/3)**					
					gravelly clay w/ coral clasts					
	▽ 4.0 –				**(clasts 20-30 mm)**					
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-2-22		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/3/14	Date and Time Completed: 9/3/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA / SS:	Drive: NA / Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				0.0-0.16': Dry, Asphalt	GW	95%	5%	0%	
	0.25 –	1			Base Course					Sample collected 0-6"
	0.5 –				0.16-4.0': Dry to wet	GC	15%	10%	75%	
	0.75 –				Yellowish Red (5YR4/6) gravel, clay and sand fill mixture					Fill material: 0-4.0'
	1.0 –									Sample collected 6"-24"
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									Sample collected 24"- 48"
	2.25 –									
	2.5 –									Sample IDs: EN012, EN013, EN014
	2.75 –									
	3.0 –	3								
	3.25 –									
	3.5 –									
	3.75 –									
	4.0 –				4.0'-5.0':Wet	SP	30%	70%	0%	
	4.25 –				Light Gray (N7) fine sand with gravel					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-2-23		Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum	Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**	Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**	Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples: Bulk **NA** SS	Drive **NA** Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level: First	After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**	Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-4.0': Dry to wet**	**GC**	15%	10%	75%	
	0.75 –				**Yellowish Red (5YR4/6)**					Fill material: 0-4.0'
	1.0 –				**gravel, clay and sand**					
	1.25 –	2			**fill mixture**					**Sample collected 6"-24"**
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
	2.75 –									**EN012, EN013, EN014**
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
	4.0 –				**4.0'-5.0':Wet**	**SP**	30%	70%	0%	
	4.25 –				**Light Gray (N7)**					
	4.5 –				**fine sand with gravel**					
	4.75 –									
	5.0 –									

Boring Number:	DU-2-24		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/3/14	Date and Time Completed: 9/3/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA / SS:	Drive: NA / Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				0.0-0.16': Dry, Asphalt	GW	95%	5%	0%	
	0.25 –	1			Base Course					Sample collected 0-6"
	0.5 –				0.16-4.0': Dry to wet	GC	15%	10%	75%	
	0.75 –				Yellowish Red (5YR4/6) gravel, clay and sand fill mixture					Fill material: 0-4.0'
	1.0 –									Sample collected 6"-24"
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									Sample collected 24"- 48"
	2.25 –									
	2.5 –									Sample IDs: EN012, EN013, EN014
	2.75 –									
	3.0 –	3								
	3.25 –									
	3.5 –									
	3.75 –									
	4.0 –				4.0'-5.0':Wet	SP	30%	70%	0%	
	4.25 –				Light Gray (N7) fine sand with gravel					
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-2-25		Sheet 1 of 1
Project Name: Naval Ocean Systems Center SI	Project Number: 120033	Elevation and Datum:	Location: Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii
Drilling Company: GeoTek	Driller: Jon Sheldstad, Gabe Gutierrez	Date and Time Started: 9/3/14	Date and Time Completed: 9/3/14
Drilling Equipment: 6620 DT Geoprobe	Drilling Method: Direct Push	Completion Depth: 5.0'	Total No. of Samples: 3 MI
Size and Type of Bit: Macrocore, 5 ft drive length	Hole Diameter: 2 1/4" OD, 1 1/2" Sample Core	No. of Samples: Bulk: NA SS:	Drive: NA Pitcher: NA
Drilling Fluid: NA	Drilling Angle: Right Angle	Water Level: First	After _____ Hours
Sample Hammer Type: NA Driving Wt.: NA Drop: NA		Hydrogeologist/Date: J. Kahler 6/4/14	Checked By/Date: K. Kilway 1/30/15

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				0.0-0.16': Dry, Asphalt	GW	95%	5%	0%	
	0.25 –	1			Base Course					Sample collected 0-6"
	0.5 –				0.16-3.0': Dry to slightly	GC	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				gravelly clay with sand					
					fill material					Sample collected 6"-24"
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									Sample collected 24"- 48"
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	3								
					3.0'-3.5': Slightly moist to	CL	0%	0%	100%	
	3.25 –				moist,Yellowish Red (5YR4/6)					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	SP	30%	70%	0%	
	3.75 –				Light Gray (N7)					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	SC	0%	20%	80%	
	4.75 –				sandy clay					
	5.0 –									

Boring Number:	DU-2-26				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-2-27				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-2-28				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-2-29							Sheet 1 of 1	
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum					Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**		
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**					Date and Time Completed **9/3/14**		
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**					Total No. of Samples **3 MI**		
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS			Drive **NA**	Pitcher **NA**	
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First				After _____ Hours		
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**					Checked By/Date **K. Kilway 1/30/15**		

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-2-30				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-3.0': Dry to slightly**	**GC**	15%	5%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-3.0'
	0.75 –				**gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
					3.0'-3.5': Slightly moist to	**CL**	0%	0%	100%	
	3.25 –				**moist,Yellowish Red (5YR4/6)**					
					silty clay					
	3.5 –									
					3.5'-4.5':Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
					4.5'-5.0': Wet, Light Gray (N7)	**SC**	0%	20%	80%	
	4.75 –				**sandy clay**					
	5.0 –									

Boring Number:	DU-3-1				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-3-2				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-3					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
	0 –									Macrocore driven 0-5'
					0.0-0.16': Dry, Asphalt	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-1.0': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.0'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
					1.0' - 2.0': Slightly moist	**GM**	20%	80%	0%	
	1.25 –	2			**Light Brown (10YR8/3)**					
					crushed coral sand					
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
					2.0'-3.5': Dry to slightly moist	**CH**	0%	0%	100%	
	2.25 –				**Yellowish Red (10R4/6)**					
					Clay					
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
					3.5'-5.0': Moist to wet	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: **DU-3-4**					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-5					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-6					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
	0 –									Macrocore driven 0-5'
					0.0-0.16': Dry, Asphalt	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-1.0': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.0'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
					1.0' - 2.0': Slightly moist	**GM**	20%	80%	0%	
	1.25 –	2			**Light Brown (10YR8/3)**					
					crushed coral sand					
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
					2.0'-3.5': Dry to slightly moist	**CH**	0%	0%	100%	
	2.25 –				**Yellowish Red (10R4/6)**					
					Clay					
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –				**3.5'-5.0': Moist to wet**	**SP**	30%	70%	0%	
					Light Gray (N7)					
	3.75 –				**fine sand with gravel**					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-7					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-1.0': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.0'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
					1.0' - 2.0': Slightly moist	**GM**	20%	80%	0%	
	1.25 –	2			**Light Brown (10YR8/3)**					
					crushed coral sand					
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
					2.0'-3.5': Dry to slightly moist	**CH**	0%	0%	100%	
	2.25 –				**Yellowish Red (10R4/6)**					
					Clay					
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –				**3.5'-5.0': Moist to wet**	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-3-8				Sheet 1 of 1		
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**		
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**		
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**		
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**	
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours		
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**		

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
	0.75 –				**moist, Yellowish Red (5YR4/6)**					Fill material: 0-2.5'
	1.0 –				**coral gravelly clay with sand**					
	1.25 –	2			**fill material**					**Sample collected 6"-24"**
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –				**2.5'-5.0': Slightly moist to wet**	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
	2.75 –				**fine sand with gravel**					**EN015, EN016, EN017**
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-9					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-10					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-11					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-12					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-13					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-3-14				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-3-15				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-3-16				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-1.0': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.0'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
					1.0' - 2.0': Slightly moist	**GM**	20%	80%	0%	
	1.25 –	2			**Light Brown (10YR8/3)**					
					crushed coral sand					
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
					2.0'-3.5': Dry to slightly moist	**CH**	0%	0%	100%	
	2.25 –				**Yellowish Red (10R4/6)**					
					Clay					
	2.5 –									Sample IDs:
										EN012, EN013, EN014
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –				**3.5'-5.0': Moist to wet**	**SP**	30%	70%	0%	
	3.75 –				**Light Gray (N7)**					
					fine sand with gravel					
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-17					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-18					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-19					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
	0.75 –				**moist, Yellowish Red (5YR4/6)**					Fill material: 0-2.5'
	1.0 –				**coral gravelly clay with sand**					
	1.25 –	2			**fill material**					**Sample collected 6"-24"**
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –				**2.5'-5.0': Slightly moist to wet**	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
	2.75 –				**fine sand with gravel**					**EN015, EN016, EN017**
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-3-20				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-3-21							Sheet 1 of 1	
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum					Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**		
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**					Date and Time Completed **9/3/14**		
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**					Total No. of Samples **3 MI**		
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS			Drive **NA**	Pitcher **NA**	
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First				After _____ Hours		
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**					Checked By/Date **K. Kilway 1/30/15**		

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-22					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-3-23				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
	0.75 –				**moist, Yellowish Red (5YR4/6)**					Fill material: 0-2.5'
	1.0 –				**coral gravelly clay with sand**					
	1.25 –	2			**fill material**					**Sample collected 6"-24"**
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –				**2.5'-5.0': Slightly moist to wet**	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
	2.75 –				**fine sand with gravel**					**EN015, EN016, EN017**
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: **DU-3-24**									Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**		Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**		Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**		Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**		No. of Samples:	Bulk **NA**	SS	Drive **NA**		Pitcher **NA**	
Drilling Fluid **NA**	Drilling Angle **Right Angle**		Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**			Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-25					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-3-26				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-27					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blown Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number:	DU-3-28				Sheet 1 of 1			
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**			
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**			
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**			
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**		
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours			
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**			

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-29					Sheet 1 of 1		
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**		
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**		
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**		
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA**	Pitcher **NA**	
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours		
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**		

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
	▽ 4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

Boring Number: DU-3-30					Sheet 1 of 1
Project Name **Naval Ocean Systems Center SI**	Project Number **120033**	Elevation and Datum			Location **Naval Ocean Systems Center, Kaneohe Marine Corps Base, Hawaii**
Drilling Company **GeoTek**	Driller **Jon Sheldstad, Gabe Gutierrez**	Date and Time Started **9/3/14**			Date and Time Completed **9/3/14**
Drilling Equipment **6620 DT Geoprobe**	Drilling Method **Direct Push**	Completion Depth **5.0'**			Total No. of Samples **3 MI**
Size and Type of Bit **Macrocore, 5 ft drive length**	Hole Diameter **2 1/4" OD, 1 1/2" Sample Core**	No. of Samples:	Bulk **NA**	SS	Drive **NA** / Pitcher **NA**
Drilling Fluid **NA**	Drilling Angle **Right Angle**	Water Level:	First		After _____ Hours
Sample Hammer Type **NA** Driving Wt. **NA** Drop **NA**		Hydrogeologist/Date **J. Kahler 6/4/14**			Checked By/Date **K. Kilway 1/30/15**

Lithology	Depth (Feet)	Samples	Recovery	Blow Count	Description	USCS Symbol	Estimated % Of GR	SA	FI	Comments
										Macrocore driven 0-5'
	0 –				**0.0-0.16': Dry, Asphalt**	**GW**	95%	5%	0%	
	0.25 –	*1*			**Base Course**					**Sample collected 0-6"**
	0.5 –				**0.16-2.5': Dry to slightly**	**GC**	10%	10%	80%	
					moist, Yellowish Red (5YR4/6)					Fill material: 0-2.5'
	0.75 –				**coral gravelly clay with sand**					
					fill material					**Sample collected 6"-24"**
	1.0 –									
	1.25 –	2								
	1.5 –									
	1.75 –									
	2.0 –									**Sample collected 24"- 48"**
	2.25 –									
					2.5'-5.0': Slightly moist to wet	**SP**	20%	80%	0%	
	2.5 –				**Light Gray (N7)**					Sample IDs:
					fine sand with gravel					**EN015, EN016, EN017**
	2.75 –									
	3.0 –	*3*								
	3.25 –									
	3.5 –									
	3.75 –									
▽	4.0 –									
	4.25 –									
	4.5 –									
	4.75 –									
	5.0 –									

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 74807

Data Validatable Report

October 2, 2014

Element Environmental
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

Attn: Roger Aoki

Title: Report of Data: Case 74218

Project: 120033 CTO 0015 MCBH NOSC

Contract #: Prime contract # for DoD: N62742-11-D-1821

Dear Mr. Aoki:

Fifteen soil and four water samples were received September 5, 2014, in good condition. Written results for the requested analyses are provided on this October 2, 2014.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Cynthia Clark, cclark@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Sharon Dehmlow, Laboratory Director
APPL, Inc.

SD/ab
Enclosure
cc: File

Number of pages in this report: 252

Data Validation Package
for
120033 CTO 0015 MCBH NOSC
ARF 74218
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Sample Data	1994
Calibration Data	2017
Raw Data	2162

SAMPLE RECEIPT INFORMATION

Sample receipt information

ARF: 74218

Project: 120033 CTO 0015 MCBH NOSC

Sample Receipt Information:

The samples were received on September 5, 2014, at 3.0°C, 3.0°C, 3.5°C, and 4.0°C. The sample group was assigned Analytical Request Form (ARF) number 74218. The sample numbers and requested analysis were compared to the chains of custody. The Trip Blank was added to the ARF per client instructions. No other exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
EN001	AZ02099	SOIL	09/02/14	09/05/14
EN002	AZ02100	SOIL	09/02/14	09/05/14
EN003	AZ02101	SOIL	09/02/14	09/05/14
EN004	AZ02102	SOIL	09/02/14	09/05/14
EN005	AZ02103	SOIL	09/02/14	09/05/14
EN006	AZ02104	SOIL	09/02/14	09/05/14
EN007	AZ02105	SOIL	09/02/14	09/05/14
EN008	AZ02106	SOIL	09/02/14	09/05/14
EN009	AZ02107	SOIL	09/02/14	09/05/14
EN010	AZ02108	WATER	09/02/14	09/05/14
EN011	AZ02109	WATER	09/02/14	09/05/14
EN012	AZ02110	SOIL	09/03/14	09/05/14
EN013	AZ02111	SOIL	09/03/14	09/05/14
EN014	AZ02112	SOIL	09/03/14	09/05/14
EN015	AZ02113	SOIL	09/03/14	09/05/14
EN016	AZ02114	SOIL	09/03/14	09/05/14
EN017	AZ02115	SOIL	09/03/14	09/05/14
EN018	AZ02116	WATER	09/03/14	09/05/14
Trip Blank	AZ02235	WATER	09/05/14	09/05/14

Percent moisture was determined using CLP 4.0.

The samples and blanks were screened for J-value responses between the detection limit (DL) and limit of quantitation (LOQ).

APPL's laboratory control limits generated in house statistically do not meet the control limits listed in DoD QSM 4.2 for all analytes. Laboratory control spike recoveries for this project meet all control limits listed in the DoD QSM 4.2 except where noted. A copy of our in house generated control limits is available upon request. In addition, a copy of our LOQ control limits, established using 7 data points, are also available upon request.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Measurement uncertainty can be reported upon request.

CASE NARRATIVE

EPA Method 8015C

Total Petroleum Hydrocarbons – DRO and LRO

Sample Preparation:

The water samples were extracted according to EPA method 3510C. The soil samples were prepared according to a modified Hawaii Department of Health MIS procedure: the samples were NOT dried, ground or sieved, but they were incrementally sampled (30 increments following Hawaii Department of Health guidelines) to the grossed up extraction volume previously determined using percent moisture. The soils were extracted according to EPA method 3550B. The samples were extracted within holding time.

Sample Analysis Information:

The samples were analyzed according to the method using an Agilent Gas Chromatograph with a flame ionization detector.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method. All calibration criteria were met.

Blanks:

No target compound was detected at or above one-half the LOQ in the method blanks.

Spikes:

Laboratory Control Spikes(LCS) were used for quality assurance. All spike recovery acceptance criteria were met.

Sample EN002 was designated by the client for MS/MSD analysis. TPH-DRO recovers below the lower control limit in the MS and the RPD exceeds the 30% limit. All other spike recoveries were acceptable.

Surrogates

Surrogate recoveries are summarized on the Form 2&8. All surrogate recoveries were within the control limits.

Summary:

No other problem was encountered.

EPA Method 8081A
Organochlorine Pesticides

Sample Preparation:

The soil samples were dried, sieved, manually ground, and incrementally sampled following Hawaii Department of Health guidelines, prior to being extracted according to EPA method 3550B. The water samples were extracted according to EPA method 3510C. All holding times were met.

Sample Analysis Information:

The samples were analyzed for Organochlorine Pesticides according to EPA method 8081A using an Agilent Gas Chromatograph equipped with an ECD. Technical chlordane was reported from column #2 because there is interference in column 1. Manual integrations were performed in accordance with APPL's SOP. Endrin aldehyde was manually integrated in the OCL degradation check. Chromatograms of before and after manual integration are enclosed.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method. All acceptance criteria were met.

Blanks:

No target analyte was detected above one half the LOQ in the method blanks.

Spikes:

Laboratory control spikes (LCS) were used for quality assurance. All acceptance criteria were met.

Sample EN002 was designated by the client for MS/MSD analysis. All spike recoveries were acceptable.

Surrogates:

Surrogate recoveries are summarized on the Form 2&8. All surrogate recoveries were within the control limits.

Summary:

No other problem was encountered. All data generated are acceptable

EPA Method 8082A
PCBs as Aroclors

Sample Preparation:

The soil samples were dried, sieved, manually ground, and incrementally sampled following Hawaii Department of Health guidelines, prior to being extracted according to EPA method 3550B. The water samples were extracted according to EPA method 3510C. All holding times were met.

Sample Analysis Information:

The samples were analyzed for PCBs as Aroclors according to EPA method 8082A using an Agilent Gas Chromatograph equipped with an ECD. Aroclor 1254 was detected in the samples. It was reported from column #2 because column #1 has interferences.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method. All other acceptance criteria were met.

Blanks:

No target analyte was detected above one half the LOQ in the method blanks.

Spikes:

Laboratory control spikes (LCS) were used for quality assurance. All acceptance criteria were met.

Sample EN002 was designated by the client for MS/MSD analysis. All spike recoveries were acceptable.

Surrogates:

Surrogate recoveries are summarized on the Form 2&8. All surrogate recoveries were within the control limits.

Summary:

No other problem was encountered. All data generated are acceptable

EPA Method 8151A
Chlorinated Herbicides

Sample Preparation:

The soil samples were dried, sieved, manually ground, and incrementally sampled following Hawaii Department of Health guidelines, prior to being extracted according to EPA method 8151A. The water samples were extracted according to EPA method 8151A. All holding times were met.

Sample Analysis Information:

The samples were analyzed for Chlorinated Herbicides according to EPA method 8151A using an Agilent Gas Chromatograph equipped with an ECD.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method. All other acceptance criteria were met.

Blanks:

No target analyte was detected above one half the LOQ in the method blanks.

Spikes:

Laboratory control spikes (LCS) were used for quality assurance. All acceptance criteria were met.

Sample EN002 was designated by the client for MS/MSD analysis. Dalapon and 2,4-D recovered below the control limits in MS/MSD. All other spike recoveries were acceptable.

Surrogates:

Surrogate recoveries are summarized on the Form 2&8. All surrogate recoveries were within the control limits.

Summary:

No other problem was encountered. All data generated are acceptable

EPA Method 8270C
Semi-Volatile Organic Compounds

Sample Preparation:

The soil samples were dried, sieved, manually ground, and incrementally sampled following Hawaii Department of Health guidelines, prior to being extracted according to EPA method 3550B. The water samples were extracted according to EPA method 3510C. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to EPA Method 8270C using an Agilent GC/MS.

Quality Control/Assurance

Spike Recovery

Laboratory control spikes (LCS) were used for quality assurance. For the soil LCS, one analyte recovered above the upper control limit. This analyte was not detected in the associated samples. All other acceptance criteria were met.

Sample EN002 was designated by the client for MS/MSD analysis. For the MS/MSD, two analytes recovered outside of the control limits in the MS, and three recovered outside of the control limits in the MSD. All other spike recoveries were acceptable.

Method blanks

No target metal was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Surrogates

Surrogate recoveries are summarized on Form 2 & 8. Two samples recovered Phenol-d6 above the 100% upper control limit. All other surrogate recoveries were within the control limits.

Calibration

The initial and continuing calibrations were performed according to the method. All method acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270C. All method criteria were met.

Summary:

No other problem was encountered. All data generated are acceptable.

EPA Method 8270C – Low Level Polynuclear Aromatic Hydrocarbons

Sample Preparation:

The water samples were extracted according to EPA method 3510C. The soil samples were prepared according to a modified Hawaii Department of Health MIS procedure: the samples were NOT dried, ground or sieved, but they were incrementally sampled (30 increments following Hawaii Department of Health guidelines) to the grossed up extraction volume previously determined using percent moisture. The soils were extracted according to EPA method 3550B. The samples were extracted within holding time.

Sample Analysis Information:

The samples were analyzed according to EPA Method 8270C using an Agilent GC/MS in selective ion monitoring mode. Benzo(b)fluoranthene and Benzo(k)fluoranthene could not be chromatographically separated in some of the samples due to the matrix. As a result, each of these were reported from the sum of the two area counts and may be biased high.

Quality Control/Assurance

Spike Recovery

Laboratory control spikes (LCS) were used for quality assurance. All acceptance criteria were met.

Sample EN002 was designated by the client for MS/MSD analysis. For the MS/MSD, nine analytes recovered outside of the control limits in the MS, eight outside of the control limits in the MSD, and three had RPDs greater than 30%. All other spike recoveries were acceptable.

Method blanks

No target analyte was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Surrogates

Surrogate recoveries are summarized on Form 2 & 8. The surrogate 2-Fluorobiphenyl recovered above the upper control limit in one sample and Terphenyl-d14 recovered above the upper control limit in nine samples and the MS/MSD. The high surrogate recoveries may have been due to the matrix since these samples were dark and viscous. All other recoveries met acceptance criteria.

Calibration

The initial and continuing calibrations were performed according to the method. All method acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270C. All method criteria were met.

Summary:

No other problem was encountered. All data generated are acceptable.

EPA Method 8260B
Volatile Organic Analysis

Sample Preparation:

The soil samples were received in ten methanol preserved vials. The vials were weighed and composited. The soils were purged according to EPA method 5035. The water were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to the EPA method 8260B using an Agilent Gas Chromatograph with a mass spectrometer detector. All holding times were met.

Quality Control/Assurance:

Calibrations:

Initial and continuing calibrations were performed according to the method. All calibration criteria were met.

Blanks:

No target analyte was detected above one half the LOQ in the method blanks.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. A second-source standard was used for the LCS. All LCS acceptance criteria were met.

Sample EN002 was designated by the client for MS/MSD analysis. All spike recoveries were acceptable.

Surrogates:

Surrogate recoveries are summarized on Form 2 & 8. All surrogate recoveries were within the control limits.

Tuning:

The instrument was tuned using BFB. All method criteria were met.

Internal Standards:

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method criteria were met.

Summary:

No analytical exception was encountered. The data generated are acceptable.

EPA Method 8015C

Total Petroleum Hydrocarbons - Gasoline

Sample Preparation:

The soil samples were received in ten methanol preserved vials. The vials were weighed and composited. The soils were purged according to EPA method 5035. The water were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to the method using a Hewlett Packard Gas Chromatograph with a FID detector. All holding times were met.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method. All acceptance criteria were met.

Blanks:

The blanks contained no target analyte at or above the reporting limit.

Spikes:

Laboratory Control Spikes (LCS) were used for quality assurance. All acceptance criteria were met.

Samples EN002 was designated by the client for MS/MSD analysis. All spike recoveries were acceptable.

Surrogates

Surrogate recoveries are summarized on Form 2 & 8. Samples EN002, EN009 and EN017 recovered the surrogate below its 76% lower control limit. The samples were analyzed again with similar results. All other surrogate recoveries were within the control limits.

Summary:

No other problem was encountered. Data generated are acceptable.

EPA Methods 6020A, 7470A and 7471B
Metals

Digestion Information:

The water samples were digested according to EPA methods 3015 and 7470A, and the soil samples were dried, sieved, manually ground, and incrementally sampled following Hawaii Department of Health guidelines, prior to being digested according to EPA methods 3050B and 7471A. No exception was encountered. All holding times were met

Analysis Information:

Samples:

The samples were analyzed for metals according to EPA method 6020A using an Agilent 7500cx ICP-MS and according to EPA methods 7470A and 7471A using a Perkin Elmer FIMS 400.

Calibrations:

Calibrations were performed according to the methods with no deviations for the initial calibration and the initial calibration verification. The initial calibration verification is prepared from a second source standard. All method criteria were met.

Blanks:

No target metal was detected above one-half the LOQ in the method blanks.

Spikes:

Laboratory Control Spikes (LCS), Matrix Spikes (MS/MSD), serial dilution tests (DT), and post digestion spike (PDS) were used for quality assurance. All LCS acceptance criteria were met.

Sample EN002 was designated by the client for MS/MSD analysis. The majority of the spike recoveries were outside control limits in the soil MS/MSD. The DT was not applicable. In the PDS, three metals recovered below the 75% limit.

Sample EN018 was selected by the laboratory as the QC sample for the water analytical batch. All acceptance criteria were met in the water MS/MSD and PDS.

Internal Standards:

All method criteria were met in the internal standards.

Summary:

No other analytical exception was noted.

EPA Method 8290
Dioxins/Furans by GC-HRMS

Sample Preparation:

The sample was extracted and cleaned up according to the EPA 8290 method. All holding times were met.

Analysis Information:

The sample was analyzed according to the EPA 8290, using a Waters Inc. Autospec Premier High Resolution Mass Spectrometer. The results were reported in accordance with EPA 8290 guidelines, as follows:

1. For analytes that had no chromatographic response in the samples, the EDL (Estimated Detection Limit) was reported in the EDL / EMPC column on the Form 1.
2. For analytes that exhibited chromatographic peaks in the samples (but did not meet the method requirements for positive identification), the EMPC (Estimated Maximum Potential Concentration) was reported in the EDL / EMPC column.
3. For the positively identified analytes the concentration was reported in the "Results" column, and EMPC was reported in the EDL / EMPC column. The EMPC is equal to the detected concentration.

The TEQ was calculated according to Element Environmental using the TEF values provided by the World Health Organization "Toxicity Equivalency Factor Table 2005".

Quality Control/Assurance

Calibrations:

Calibrations and Resolution Checks were performed according to the method. All calibration acceptance criteria were met.

Blanks:

The method blank contained no target analyte at or above one-half the PQL.

Spikes:

A Laboratory Control Spike (LCS) was used for quality control. All LCS recoveries met acceptance criteria.

No sample was designated by the client for an MS/MSD analysis.

Surrogate Recoveries (C13 Internal Standards):

C13 Internal Standards were added to the extracts in accordance with the method and reported on the Form 1s as surrogate recoveries. All recoveries met acceptance criteria.

Summary:

All data were acceptable. No analytical exception is noted.

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 74218

Client:	Element Environmental	Received by:	RBP
Address:	98-030 Hekaha St., Unit 9	Date Received:	09/05/14 Time: 10:15
	Aiea, HI 96701	Delivered by:	FEDEX
Attn:	Roger Aoki	Shuttle Custody Seals (Y/N):	Y Time Zone: -10
Phone:	808-479-3881 Fax: 808-488-1300	Chest Temp(s):	3,3,3.5,3.5,4°C
Job:	120033 CTO 0015 MCBH NOSC	Color:	VOA,L-PrpBrn,P-OrGrn
PO #:	120033	Samples Chilled until Placed in Refrig/Freezer:	Y
Chain of Custody (Y/N):	Y # 44305-44306	Project Manager:	Cynthia Clark
RAD Screen (Y/N):	Y pH (Y/N): Y	QC Report Type:	DVP4/ADR/HI
Turn Around Type:	2 WEEKS	Due Date:	09/19/14

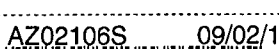
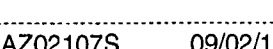
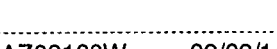
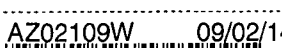
Comments:
14 day TAT for final form 1s, 28 day TAT for final report
login & prelims to raokl@e2hl.com. 1 hard copy to LDC, 1 labeled CD to Roger
Guidance: DOD QSM v4.2; use DOD forms with LOQ/LOD Database/DL
EDD: ADR A1/A3 (ADR 8.3a checker, http://hurley/u/2c) to raoki@e2hi.com & akong@lab-data.com
Dloxin TEQ calculate using 1/2 the EDL rather than 0 for non-detected analytes
MIS: Gross IS TPHe and PAHs prior to drying, get moist result before drying
VOA composite all methanol vials prior to analysis, include MEOH logbook In report
PCBs: xxx 1254& 1260; All dept include MIS logbook in report
Metals: Sb,As,Be,Cd,Cr,Cu,Pb,Ni,Se,Ag,Tl,Zn; TB not listed on COC added 09/09/14 cm

Sample Distribution: Charges: Invoice To:

GC: 15-$815E2CT015S, 15-$81ACTO15MIS, 15-$82HC45S, 15-$87CE2CT015S, 15-$DROCT47S, 15-$SIMHC08S, 3-$815E2CT015W, 3-$81HC07W, 3-$82ACATW, 3-$87CE2CT015W, 3-$DROWCT008, 3-$SIMHC08W
Extractions: 15-_MSE005MIS, 15-_SON002LLMIS, 15-_SON004GRMIS, 15-_SON009MIS, 15-_SON009SGRMIS, 1-_SOX8290MIS, 3-_SEP002, 3-_SEP004, 3-_SEP004S, 3-_SEP011, 3-_SEP025
VOA: 15-$86BHC08SM, 15-$GASHC23S, 4-$86BHC08W, 3-$GASHC12W
Metals: 15-$6020AMIS, 15-$HGDODMIS, 3-$6020ADODW, 3-$HGDODW
Wetlab: 15-MOIST
Other: 1-$8290IS, 15-_M3050LLMIS, 15-_M7471MIS, 3-_M3015, 3-_M7470

	Client ID	APPL ID	Sampled	Analyses Requested
1.	EN001	AZ02099S x-spk	09/02/14 09:30	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $8290IS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions
2.	EN002	AZ02100S x-spk/MS/MSD	09/02/14 09:35	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

3.	EN003	x-spk 	AZ02101S	09/02/14 09:40	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions
4.	EN004	x-spk 	AZ02102S	09/02/14 09:45	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions
5.	EN005	x-spk 	AZ02103S	09/02/14 09:50	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions
6.	EN006	x-spk 	AZ02104S	09/02/14 09:55	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions
7.	EN007	x-spk 	AZ02105S	09/02/14 10:00	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions
8.	EN008	x-spk 	AZ02106S	09/02/14 10:05	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions
9.	EN009	x-spk 	AZ02107S	09/02/14 10:10	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions
10.	EN010	x-spk 	AZ02108W	09/02/14 17:45	$6020ADODW, $815E2CT015W, $81HC07W, $82ACATW, $86BHC08W, $87CE2CT015W, $DROWCT008, $GASHC12W, $HGDODW, $SIMHC08W
11.	EN011	x-spk 	AZ02109W	09/02/14 19:00	$6020ADODW, $815E2CT015W, $81HC07W, $82ACATW, $86BHC08W, $87CE2CT015W, $DROWCT008, $GASHC12W, $HGDODW, $SIMHC08W
12.	EN012	x-spk 	AZ02110S	09/03/14 09:00	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions

13. EN013	x-spk AZ02111S	09/03/14	09:05	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions
14. EN014	x-spk AZ02112S	09/03/14	09:10	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions
15. EN015	x-spk AZ02113S	09/03/14	13:00	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions
16. EN016	x-spk AZ02114S	09/03/14	13:05	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions
17. EN017	x-spk AZ02115S	09/03/14	13:10	$6020AMIS, $815E2CT015S, $81ACTO15MIS, $82HC45S, $86BHC08SM, $87CE2CT015S, $DROCT47S, $GASHC23S, $HGDODMIS, $SIMHC08S, MOIST -- special IS instructions
18. EN018	x-spk AZ02116W	09/03/14	17:25	$6020ADODW, $815E2CT015W, $81HC07W, $82ACATW, $86BHC08W, $87CE2CT015W, $DROWCT008, $GASHC12W, $HGDODW, $SIMHC08W
19. Trip Blank	x-spk AZ02235W	09/05/14	00:01	$86BHC08W

APPL Sample Receipt Form

ARF# **74218**

Sample	Container Type	Count	pH
AZ02099	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02100	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02101	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02102	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02103	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02104	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02105	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02106	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02107	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02108	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	3	na
	17 Amber Liter	8	na
AZ02109	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	3	na
	17 Amber Liter	8	na
AZ02110	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02111	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02112	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02113	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02114	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02115	35 Plastic Bag	1	na
	42 40mL VOA, MeOH prsvd	10	na
AZ02116	6 PL 500mL - HNO3	1	1.7
	13 VOAs - HCL	3	na
	17 Amber Liter	8	na
AZ02235	13 VOAs - HCL	9	na

Sample	Container Type	Count	pH

74218

CHAIN OF CUSTODY RECORD

1 of 2

3.0 3.0 3.5 4.0

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 44305 YL 9/5/14 35,

Report to: PLEASE PRINT

Company Name: Element Environmental Phone: 808-488-1200

Address: 98-030 Hekaha St., Unit 9, Aiea, HI 96701 Fax: 808-488-1300

Attn: Roger Aoki

Invoice to: PLEASE PRINT

Company Name: same Phone:

Address: Fax:

Attn:

Project Name/Number: 120033

Purchase Order Number:

Sampler (Print): Roger Aoki, Bernice Balefo, Jeff Kahler

Sampler (Signature):

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Analysis Requested/Method Number	Date Shipped: / Carrier: / Waybill No.: / Comments:
EN001	MCBH NOSC	9/2/14	0930	HST	11			X	TPH-GRO/8015 · TPH-DRO/8015 (M-E) · VOCs/8260 · SVOCs/8270C · PAHs/8270C SIM · OCL Pesticides/8081A · PCBs/8082 · Chlorinated Herbicides/8151A · 13 PP Metals/6010/7470 · Dioxins/8290	
EN002			0935							MS/MSD
EN003			0940							
EN004			0945							
EN005			0950							
EN006			0955							
EN007			1000							
EN008			1005							
EN009			1010							
EN010			1845		12	X				
EN011			1900		12	X				

Shuttle Temperature:

Turnaround Requested: Check one
☑ Standard 2-3 wk ☐ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☑ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
J. Kahler J. Kahler	9/4	1345					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					9/5/14	10:15	Yang Z

White: Return to client with report Yellow: Laboratory Copy Pink: Sampler

See reverse side for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
Phone: (559) 275-2175
Fax: (559) 275-4422

CHAIN OF CUSTODY RECORD

2 of 2

C.O.C. 44306

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: See page 1 Phone:	Company Name: Phone:
Address: Fax:	Address: Fax:
Attn:	Attn:

Project Name/Number	Sampler (Print)
Purchase Order Number	Sampler (Signature)

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	Analysis Requested/Method Number: TPH-GRO/8015P	TPH DRO/8015 Mod-E	VOCs/8260B	SVOCs/8270C	PAHs/8270C/SIM	CA Perfluorinated/537 (PFC) 10/14	PCBs/8082	Chlorinated Herbicides/8151	13 PP Metals/6010-7470	Date Shipped: / Carrier: / Waybill No.: / Comments:
EN012	MCBH NOSC	9/3/14	0900	HST	11			X	X	X	X	X	X	X	X	X	X	X
EN013			0905															
EN014			0910															
EN015			1300															
EN016			1305															
EN017			1310															
EN018			1725		12	X												

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☐ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☐ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
J. Kahler J Kahler	9/4	1345					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					9/5/14	10:15	Yang Lu

White: Return to client with report Yellow: Laboratory Copy Pink: Sampler

See reverse side for Container Preservative and Sampling Information

COOLER RECEIPT FORM **ARF: 74218**

1) Project: 120033 CTO 0015 MCBH NOSC Date Received: 09/05/14

~~2) Coolers:~~ ~~Number of Coolers: 5~~

3) YES Were custody seals present and intact?
How many? 10 Name/Date on seal? SEE BELOW

4) YES Was there a shipping slip? Carrier name: FEDEX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags
X wet ice __ dry ice __ no ice __ other

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use A39267

8) Cooler temp(s): In °C
1: 3.0 2: 3.0 3: 3.5 4: 3.5 5: 4 6: ____
7: ____ 8: ____ 9: ____ 10: ____ 11: ____ 12: ____

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) NA Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: ____
Smaller than a pea: ____

Preservation Hold time:

18) YES Was a sufficient amount of holding time remaining to analyze the samples?

19) YES Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) YES Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?

22) NO Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: 90b05
Lab notified if pH was not adequate: ____

CUSTODY SEAL
APPL, Inc.
(559) 275-2175
Initials VK
Date 9-4-14

Notes/Deficiencies:
Received 9 VOA vials (Trip Blanks) not listed on the C.O.C.
OK to add to the ARF per C. Clark 09/09/14 cm

Personnel receiving samples: AD Second reviewer: RBP
Personnel labeling samples: BB
Project manager notified: ____ Date/Time of notification ____
Name of client notified: ____ Date/Time of notification ____

EPA 8015 Modified
Total Petroleum Hydrocarbons

EPA 8015 Modified
Total Petroleum Hydrocarbons
QC Summary

Method Blank
TPH-d Water EPA 8015C

Blank Name/QCG: **140909W-02108 - 190197**
Batch ID: #DROWC-140909A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	TPH-DRO (C10-C24)	50.0 U	150	50.0	40.4	ug/L	9/9/2014	9/22/2014
BLANK	TPH-LRO (C24-C36)	500.0 U	500	500.0	106.0	ug/L	9/9/2014	9/22/2014
BLANK	SURROGATE: OCTACOSANE (S)	113	28-142			%	9/9/2014	9/22/2014
BLANK	SURROGATE: ORTHO-TERPHEN	101	57-132			%	9/9/2014	9/22/2014

Quant Method:CTO707.M
Run #:922004
Instrument:Apollo
Sequence:140922
Initials:LA

GC SC-Blank-REG MDLs
Printed: 9/26/2014 1:44:04 PM

Method Blank

TPHE SOIL EPA 8015C IS GROSS

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **140910S-02100 - 190196**
Batch ID: #DROCT-140910A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	TPH-DRO (C10-C24)	1.00 U	5.0	1.00	0.65	mg/kg	9/10/2014	9/23/2014
BLANK	TPH-LRO (C24-C36)	10.0 U	50	10.0	3.5	mg/kg	9/10/2014	9/23/2014
BLANK	SURROGATE: OCTACOSANE (S)	78.9	47-140			%	9/10/2014	9/23/2014
BLANK	SURROGATE: ORTHO-TERPHEN	71.5	51-128			%	9/10/2014	9/23/2014

Quant Method:CTO707.M
Run #:922018
Instrument:Apollo
Sequence:140922
Initials:LA

GC SC-Blank-REG MDLs
Printed: 9/26/2014 1:44:03 PM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/22/2014

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140909A-BLK	Blank	28-142	113		57-132	101	
140909A-LCS	Lab Control Spike	28-142	64.3		57-132	74.0	
AZ02108	EN010	28-142	66.0		57-132	61.7	
AZ02109	EN011	28-142	72.2		57-132	65.4	
AZ02116	EN018	28-142	71.0		57-132	65.3	

Comments: Batch: #DROWC-140909A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/23/2014

Matrix: SOIL Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140910A-BLK	Blank	47-140	78.9		51-128	71.5	
140910A-LCS	Lab Control Spike	47-140	82.3		51-128	92.0	
AZ02099	EN001	47-140	94.6		51-128	77.8	
AZ02100-MS	Matrix Spike	47-140	91.7		51-128	83.0	
AZ02100-MSD	Matrix SpikeD	47-140	136		51-128	107	
AZ02100	EN002	47-140	74.9		51-128	69.8	
AZ02101	EN003	47-140	80.8		51-128	75.0	
AZ02102	EN004	47-140	79.3		51-128	83.1	
AZ02103	EN005	47-140	81.5		51-128	81.8	
AZ02104	EN006	47-140	69.8		51-128	81.2	
AZ02105	EN007	47-140	85.5		51-128	68.1	
AZ02106	EN008	47-140	103		51-128	73.2	
AZ02107	EN009	47-140	86.2		51-128	70.8	
AZ02110	EN012	47-140	111		51-128	77.2	
AZ02111	EN013	47-140	103		51-128	69.9	
AZ02112	EN014	47-140	74.3		51-128	61.2	
AZ02113	EN015	47-140	81.2		51-128	68.4	
AZ02114	EN016	47-140	89.5		51-128	75.6	
AZ02115	EN017	47-140	79.1		51-128	69.7	

Comments: Batch: #DROCT-140910A

Laboratory Control Spike Recovery
TPH-d Water EPA 8015C

APPL ID: **140909W-02108 LCS - 190451**
Batch ID: #DROWC-140909A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
TPH-DRO (C10-C24)	2000	1230	61.5	61-143
TPH-LRO (C24-C36)	2000	1250	62.5	61-143
SURROGATE: OCTACOSANE (S)	150	96.5	64.3	28-142
SURROGATE: ORTHO-TERPHENYL (S)	150	111	74.0	57-132

Comments: _____

Primary	SPK
Quant Method :	CTO707.M
Extraction Date :	9/9/2014
Analysis Date :	9/22/2014
Instrument :	Apollo
Run :	922005
Initials :	LA

Printed: 10/2/2014 2:25:25 PM
APPL Standard LCS

Laboratory Control Spike Recovery

TPHE SOIL EPA 8015C IS GROSS

APPL ID: **140910S-02100 LCS - 190196**
Batch ID: #DROCT-140910A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
TPH-DRO (C10-C24)	40.0	28.6	71.5	64-122
TPH-LRO (C24-C36)	40.0	27.1	67.8	50-150
SURROGATE: OCTACOSANE (S)	3.00	2.47	82.3	47-140
SURROGATE: ORTHO-TERPHENYL (S)	3.00	2.76	92.0	51-128

Comments: _____

Primary	SPK
Quant Method :	CTO707.M
Extraction Date :	9/10/2014
Analysis Date :	9/23/2014
Instrument :	Apollo
Run :	922019
Initials :	LA

Printed: 9/26/2014 1:43:56 PM
APPL Standard LCS

Matrix Spike Recoveries

TPHE SOIL EPA 8015C IS GROSS

APPL ID: **140910S-02100 MS - 190196**
Batch ID: #DROCT-140910A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
TPH-DRO (C10-C24)	40.0	10	23.6	43.2	34.0 #	83.0	64-122	58.7 #	30
TPH-LRO (C24-C36)	40.0	18	43.7	38.1	64.3	50.3	50-150	13.7	30
SURROGATE: OCTACOSANE (S)	3.00	NA	2.75	4.07	91.7	136	47-140		
SURROGATE: ORTHO-TERPHENYL (S)	3.00	NA	2.49	3.22	83.0	107	51-128		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	CTO707.M	CTO707.M
Extraction Date :	9/10/2014	9/10/2014
Analysis Date :	9/23/2014	9/23/2014
Instrument :	Apollo	Apollo
Run :	922022	922023
Initials :	LA	

Printed: 9/26/2014 1:43:53 PM
APPL MSD SCII

EPA 8015C-e

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/22/2014

Matrix: WATER Instrument: Apollo

Blank ID: 140909A-BLK Time Analyzed: 1051

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140909A-BLK	Blank	922004	9/22/2014 1051
140909A-LCS	Lab Control Spike	922005	9/22/2014 1117
AZ02108	EN010	922007	9/22/2014 1209
AZ02109	EN011	922008	9/22/2014 1235
AZ02116	EN018	922009	9/22/2014 1301

Comments: Batch: #DROWC-140909A

EPA 8015C-e

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/23/2014

Matrix: SOIL Instrument: Apollo

Blank ID: 140910A-BLK Time Analyzed: 1100

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140910A-BLK	Blank	922018	9/23/2014 1100
140910A-LCS	Lab Control Spike	922019	9/23/2014 1126
AZ02099	EN001	922021	9/23/2014 1218
140910A-MS	Matrix Spike	922022	9/23/2014 1244
140910A-MSD	Matrix SpikeD	922023	9/23/2014 1310
AZ02100	EN002	922026	9/23/2014 1428
AZ02101	EN003	922027	9/23/2014 1454
AZ02102	EN004	922028	9/23/2014 1520
AZ02103	EN005	922029	9/23/2014 1546
AZ02104	EN006	922030	9/23/2014 1612
AZ02105	EN007	922037	9/24/2014 0948
AZ02106	EN008	922038	9/24/2014 1014
AZ02107	EN009	922039	9/24/2014 1040
AZ02110	EN012	922040	9/24/2014 1106
AZ02111	EN013	922041	9/24/2014 1132
AZ02112	EN014	922042	9/24/2014 1158
AZ02113	EN015	922043	9/24/2014 1224
AZ02114	EN016	922044	9/24/2014 1250
AZ02115	EN017	922045	9/24/2014 1316

Comments: Batch: #DROCT-140910A

EPA 8015 Modified
Total Petroleum Hydrocarbons
Sample Data

TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN001

APPL ID: AZ02099

Sample Collection Date: 9/2/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 12.2 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	14 ++	5.0	1.00	0.65	mg/kg	9/10/2014	9/23/2014
EPA 8015C-	TPH-LRO (C24-C36)	37 J	50	10.0	3.5	mg/kg	9/10/2014	9/23/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	94.6	47-140			%	9/10/2014	9/23/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	77.8	51-128			%	9/10/2014	9/23/2014

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method:	CTO707.M
Run #:	922021
Instrument:	Apollo
Sequence:	140922
Dilution Factor:	1
Initials:	LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

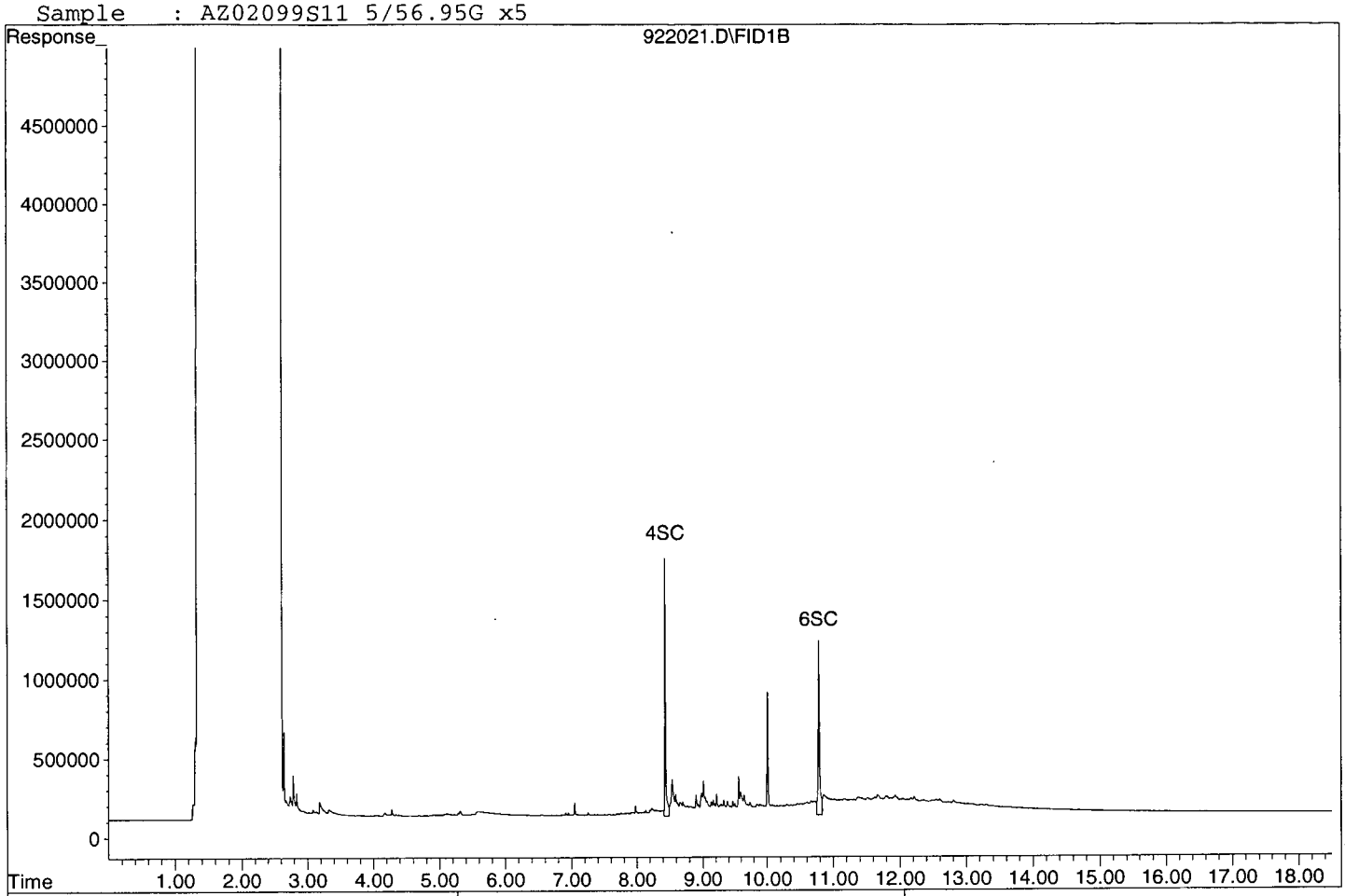
Data File : G:\APOLLO\DATA\140922\922021.D Vial: 21
Acq On : 9-23-14 12:18:23 Operator: lac
Sample : AZ02099S11 5/56.95G x5 Inst : Apollo
Misc : Soil Multiplr: 438.98
IntFile : events.e
Quant Time: Sep 25 14:33 2014 Quant Results File: CTO707.RES

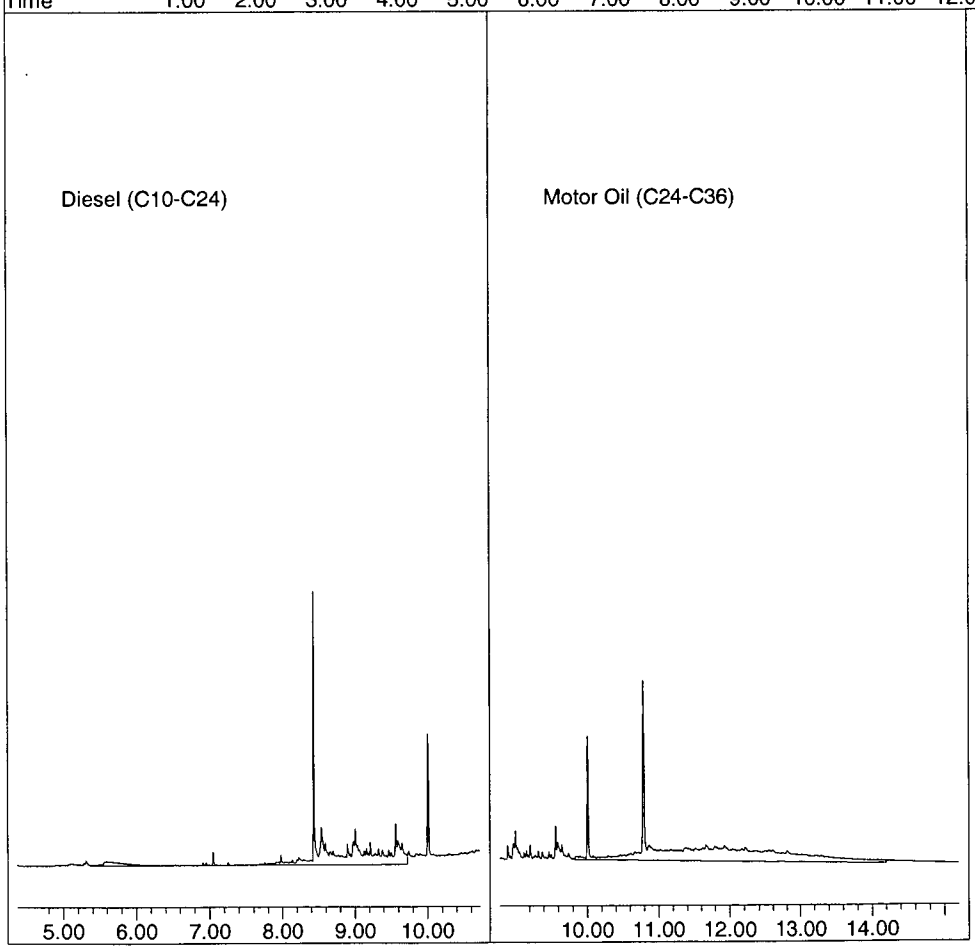
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SC Ortho-Terphenyl(S)	8.43	14717330	2049.605	ppb
Surrogate Spike 2633.889		Recovery	= 77.82%	
6) SC Octacosane(S)	10.79	16936468	2491.459	ppb
Surrogate Spike 2633.889		Recovery	= 94.59%	
Target Compounds				
1) HATM Diesel (C10-C24)	7.55	73355094	12419.854	ppb
2) HBTM Motor Oil (C24-C36)	11.99	117896002	32176.256	ppb

Data File: G:\APOLLO\DATA\140922\922021.D
Sample : AZ02099S11 5/56.95G x5





TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN002

APPL ID: AZ02100

Sample Collection Date: 9/2/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 11.3 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	12 ++	5.0	1.00	0.65	mg/kg	9/10/2014	9/23/2014
EPA 8015C-	TPH-LRO (C24-C36)	20 J	50	10.0	3.5	mg/kg	9/10/2014	9/23/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	74.9	47-140			%	9/10/2014	9/23/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	69.8	51-128			%	9/10/2014	9/23/2014

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method:	CTO707.M
Run #:	922026
Instrument:	Apollo
Sequence:	140922
Dilution Factor:	1
Initials:	LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\140922\922026.D Vial: 26
Acq On : 9-23-14 14:28:08 Operator: lac
Sample : AZ02100S11 5/56.37G x5 Inst : Apollo
Misc : Soil Multiplr: 443.50
IntFile : events.e
Quant Time: Sep 25 14:34 2014 Quant Results File: CTO707.RES

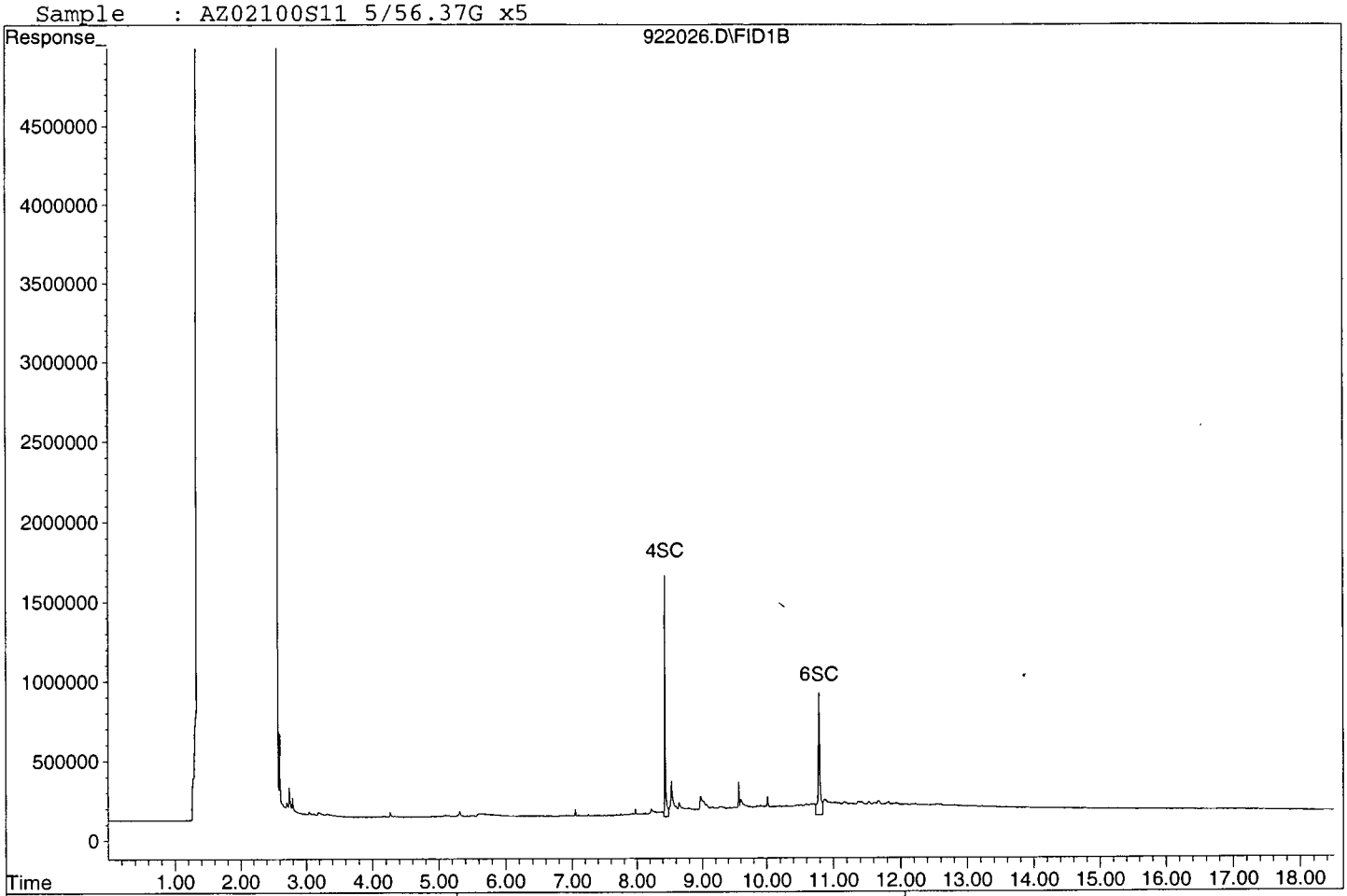
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

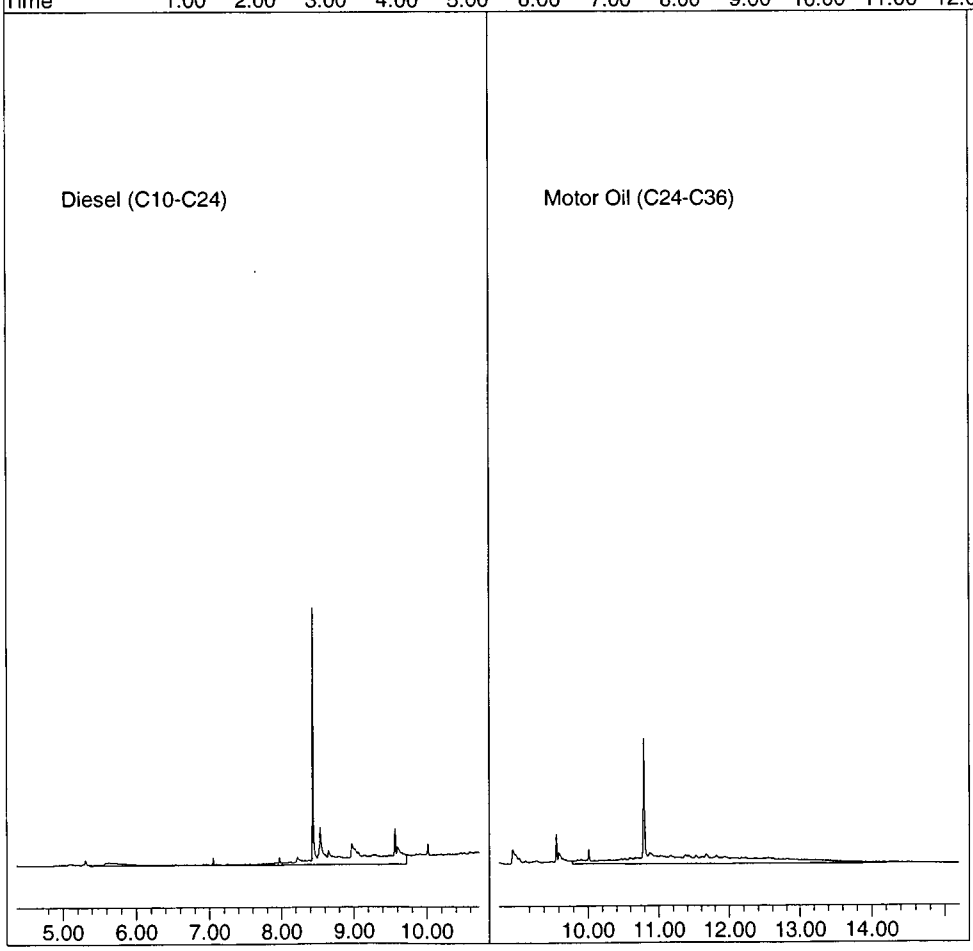
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.43	13194207	1856.391 ppb
Surrogate Spike 2660.990		Recovery	= 69.76%
6) SC Octacosane(S)	10.79	13413507	1993.509 ppb
Surrogate Spike 2660.990		Recovery	= 74.92%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	59666855	10206.206 ppb
2) HBTM Motor Oil (C24-C36)	11.99	65355628	18020.398 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
922026.D CTO707.M Thu Oct 02 12:48:12 2014 Page 1

Data File: G:\APOLLO\DATA\140922\922026.D
Sample : AZ02100S11 5/56.37G x5





TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN003

APPL ID: AZ02101

Sample Collection Date: 9/2/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 11.5 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	14 ++	5.0	1.00	0.65	mg/kg	9/10/2014	9/23/2014
EPA 8015C-	TPH-LRO (C24-C36)	23 J	50	10.0	3.5	mg/kg	9/10/2014	9/23/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	80.8	47-140			%	9/10/2014	9/23/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	75.0	51-128			%	9/10/2014	9/23/2014

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method:	CTO707.M
Run #:	922027
Instrument:	Apollo
Sequence:	140922
Dilution Factor:	1
Initials:	LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\140922\922027.D Vial: 27
Acq On : 9-23-14 14:54:07 Operator: lac
Sample : AZ02101S11 5/56.52G x5 Inst : Apollo
Misc : Soil Multiplr: 442.32
IntFile : events.e
Quant Time: Sep 25 14:35 2014 Quant Results File: CTO707.RES

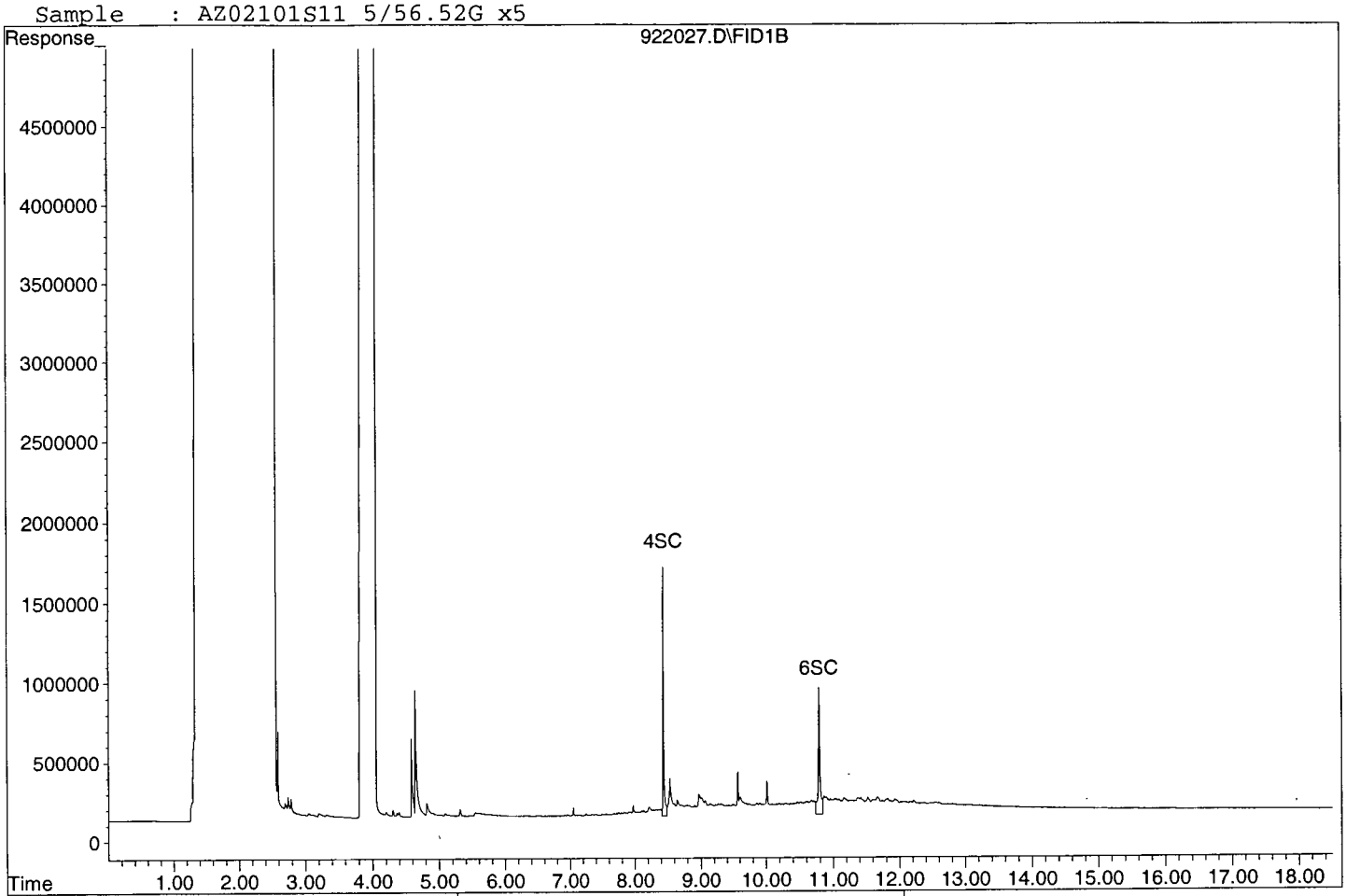
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

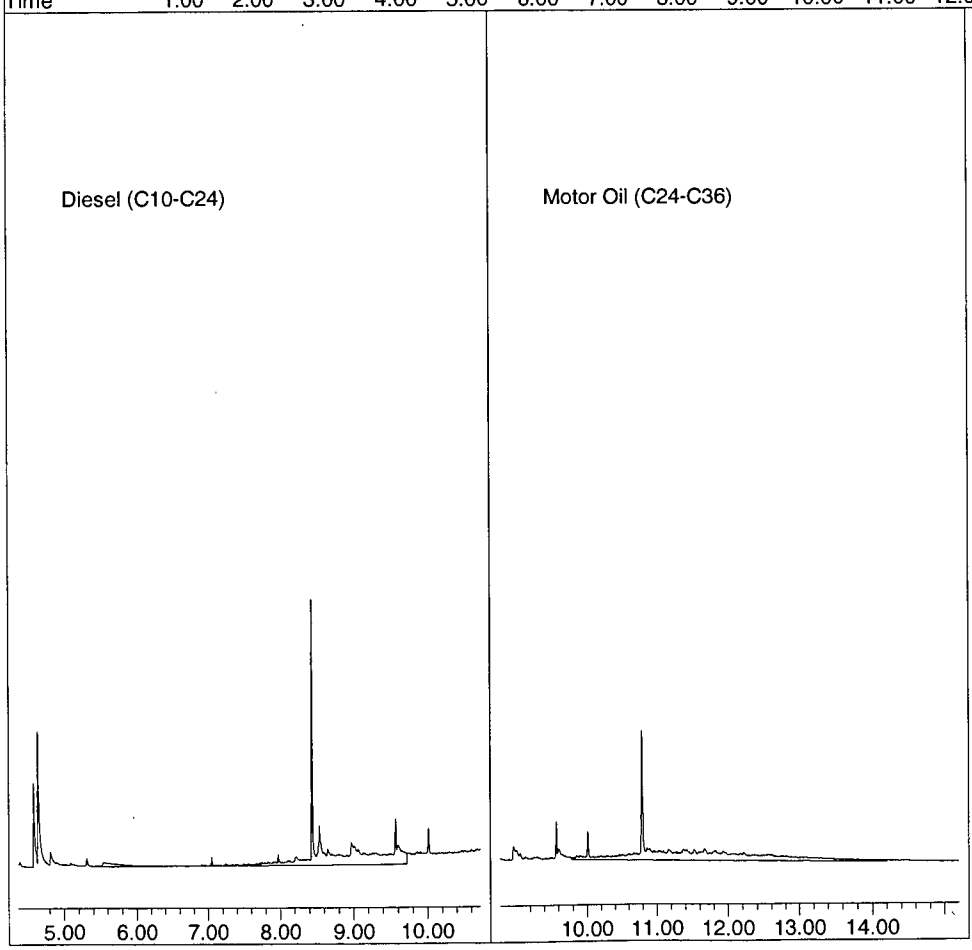
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.43	14184425	1990.415 ppb
Surrogate Spike 2653.928		Recovery	= 75.00%
6) SC Octacosane(S)	10.79	14471382	2145.022 ppb
Surrogate Spike 2653.928		Recovery	= 80.82%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	70527945	12032.013 ppb
2) HBTM Motor Oil (C24-C36)	11.99	72967729	20065.875 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
922027.D CTO707.M Thu Oct 02 12:48:14 2014 Page 1

Data File: G:\APOLLO\DATA\140922\922027.D
Sample : AZ02101S11 5/56.52G x5





TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN004

APPL ID: AZ02102

Sample Collection Date: 9/2/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 11.0 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	9.5 ++	5.0	1.00	0.65	mg/kg	9/10/2014	9/23/2014
EPA 8015C-	TPH-LRO (C24-C36)	19 J	50	10.0	3.5	mg/kg	9/10/2014	9/23/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	79.3	47-140			%	9/10/2014	9/23/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	83.1	51-128			%	9/10/2014	9/23/2014

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method: CTO707.M
Run #: 922028
Instrument: Apollo
Sequence: 140922
Dilution Factor: 1
Initials: LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

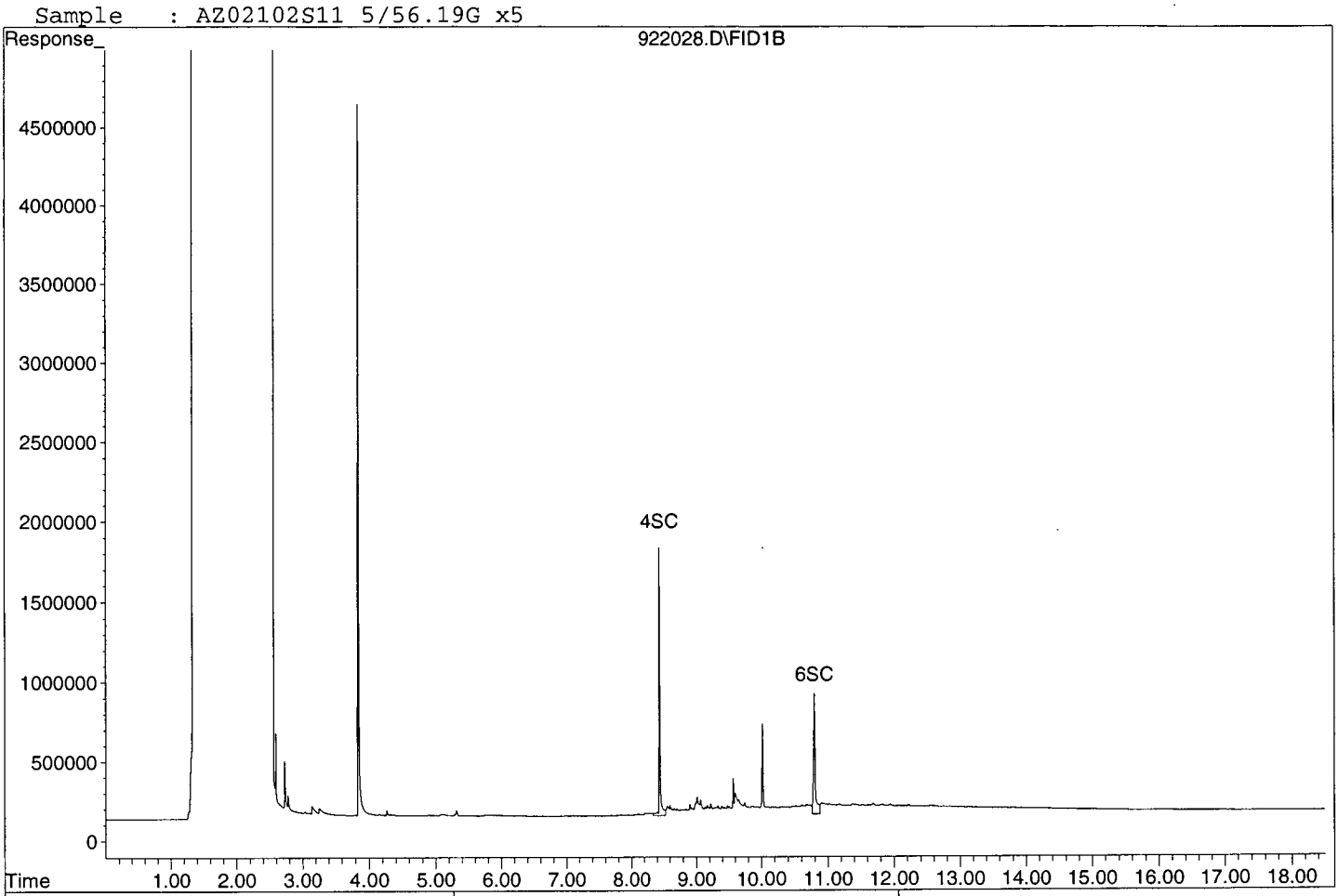
Data File : G:\APOLLO\DATA\140922\922028.D Vial: 28
Acq On : 9-23-14 15:20:08 Operator: lac
Sample : AZ02102S11 5/56.19G x5 Inst : Apollo
Misc : Soil Multiplr: 444.92
IntFile : events.e
Quant Time: Sep 25 14:37 2014 Quant Results File: CTO707.RES

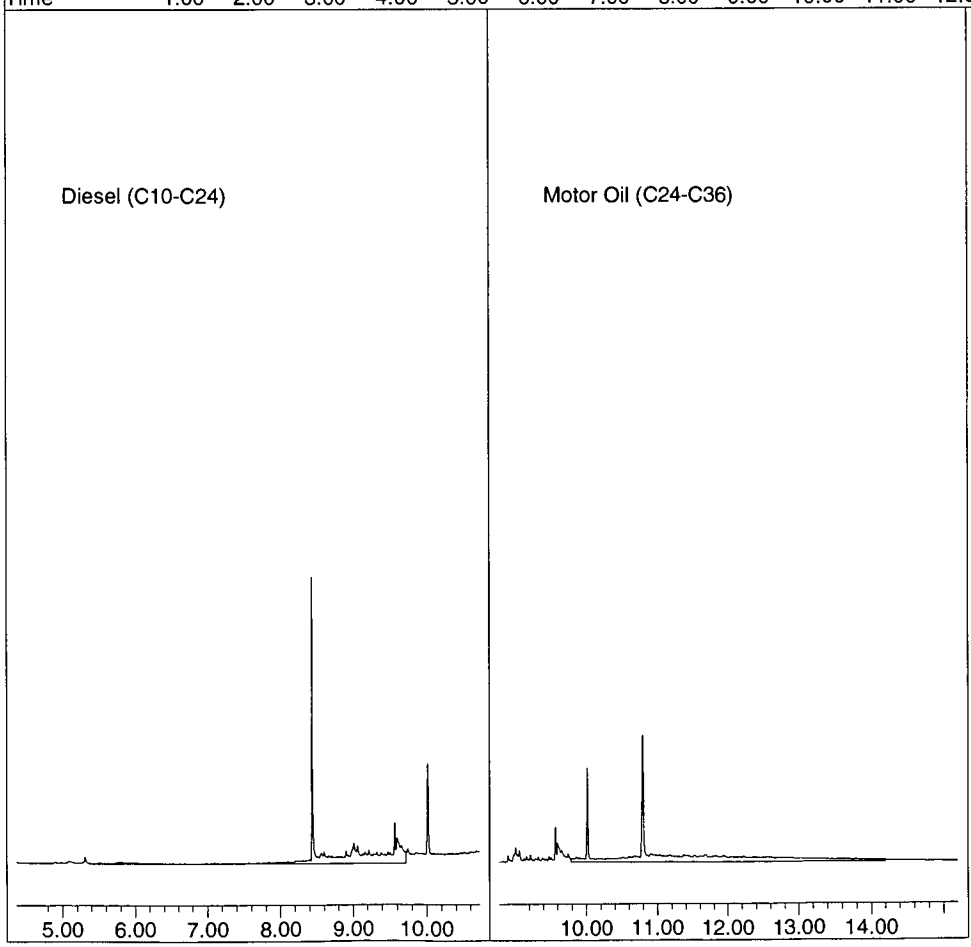
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.44	15713409	2217.920 ppb
Surrogate Spike 2669.514		Recovery	= 83.08%
6) SC Octacosane(S)	10.79	14196583	2116.650 ppb
Surrogate Spike 2669.514		Recovery	= 79.29%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	49476731	8490.269 ppb
2) HBTM Motor Oil (C24-C36)	11.99	62536059	17298.211 ppb

Data File: G:\APOLLO\DATA\140922\922028.D
Sample : AZ02102S11 5/56.19G x5





TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN005

APPL ID: AZ02103

Sample Collection Date: 9/2/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 15.8 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	11 ++	5.0	1.00	0.65	mg/kg	9/10/2014	9/23/2014
EPA 8015C-	TPH-LRO (C24-C36)	18 J	50	10.0	3.5	mg/kg	9/10/2014	9/23/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	81.5	47-140			%	9/10/2014	9/23/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	81.8	51-128			%	9/10/2014	9/23/2014

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method:	CTO707.M
Run #:	922029
Instrument:	Apollo
Sequence:	140922
Dilution Factor:	1
Initials:	LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

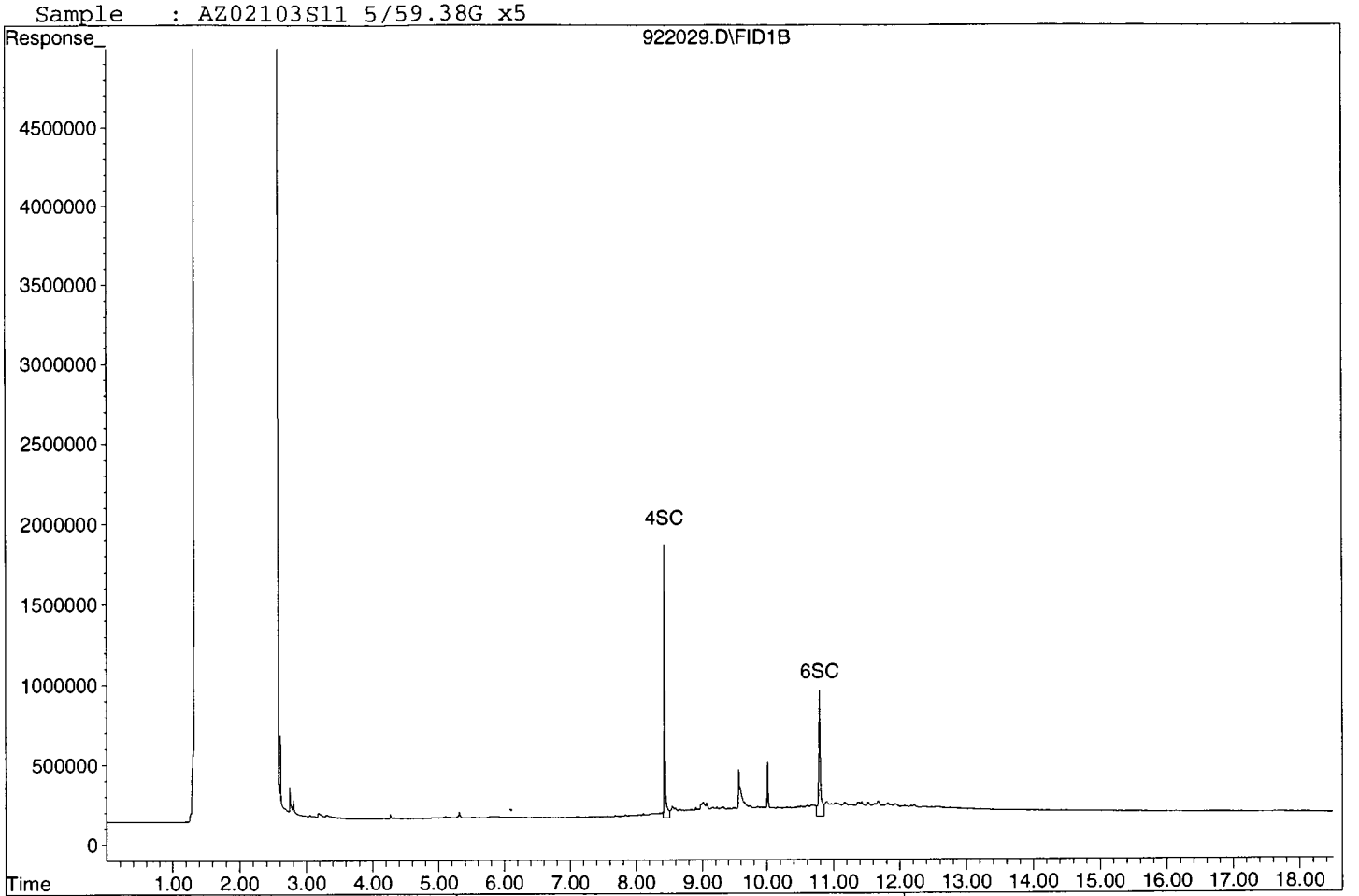
Data File : G:\APOLLO\DATA\140922\922029.D Vial: 29
Acq On : 9-23-14 15:46:01 Operator: lac
Sample : AZ02103S11 5/59.38G x5 Inst : Apollo
Misc : Soil Multiplr: 421.02
IntFile : events.e
Quant Time: Sep 25 14:37 2014 Quant Results File: CTO707.RES

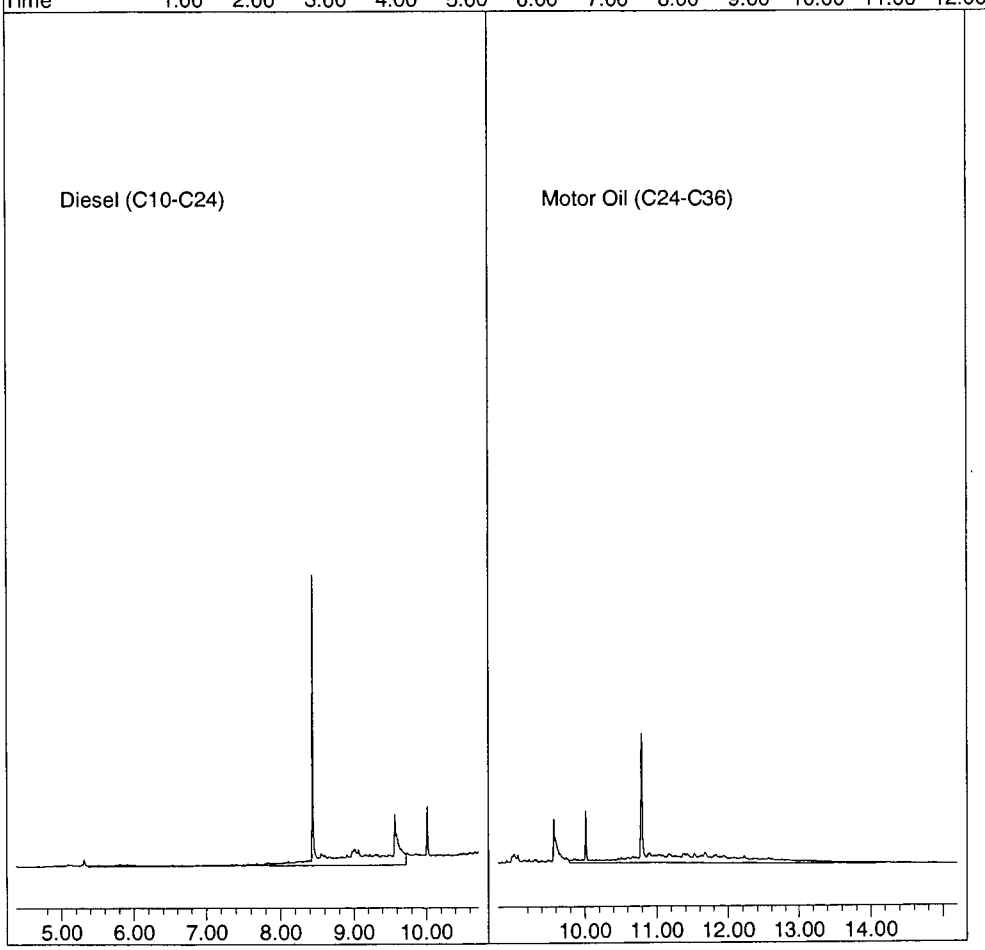
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.43	15461104	2065.069 ppb
Surrogate Spike 2526.103		Recovery	= 81.75%
6) SC Octacosane(S)	10.79	14584534	2057.673 ppb
Surrogate Spike 2526.103		Recovery	= 81.46%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	58760862	9541.734 ppb
2) HBTM Motor Oil (C24-C36)	11.99	58750848	15378.129 ppb

Data File: G:\APOLLO\DATA\140922\922029.D
Sample : AZ02103S11 5/59.38G x5





TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
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908 North Temperance Avenue
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Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN006

APPL ID: AZ02104

Sample Collection Date: 9/2/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 14.2 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	11 ++	5.0	1.00	0.65	mg/kg	9/10/2014	9/23/2014
EPA 8015C-	TPH-LRO (C24-C36)	20 J	50	10.0	3.5	mg/kg	9/10/2014	9/23/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	69.8	47-140			%	9/10/2014	9/23/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	81.2	51-128			%	9/10/2014	9/23/2014

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method:	CTO707.M
Run #:	922030
Instrument:	Apollo
Sequence:	140922
Dilution Factor:	1
Initials:	LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

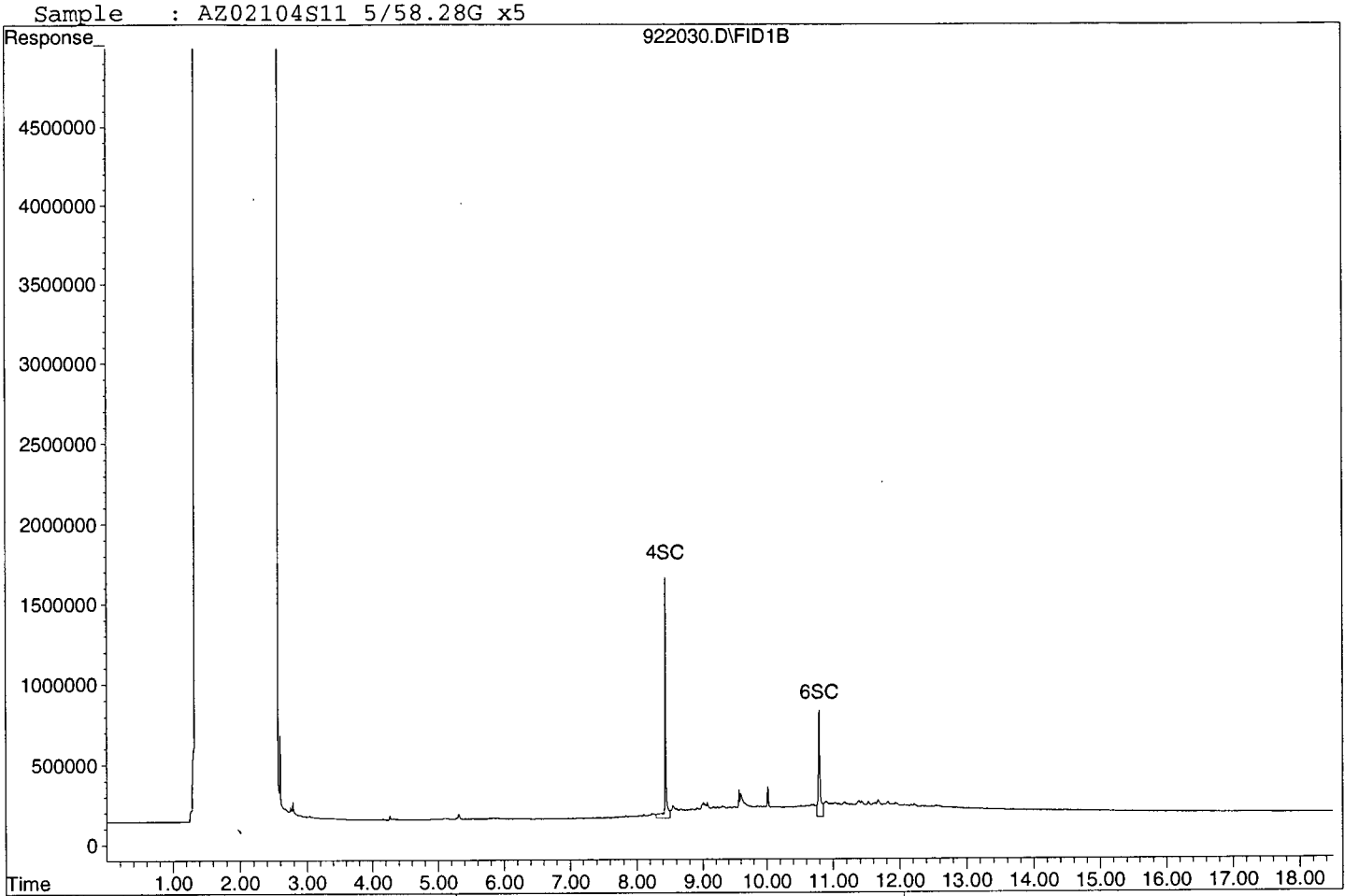
Data File : G:\APOLLO\DATA\140922\922030.D Vial: 30
Acq On : 9-23-14 16:12:00 Operator: lac
Sample : AZ02104S11 5/58.28G x5 Inst : Apollo
Misc : Soil Multiplr: 428.96
IntFile : events.e
Quant Time: Sep 25 14:38 2014 Quant Results File: CTO707.RES

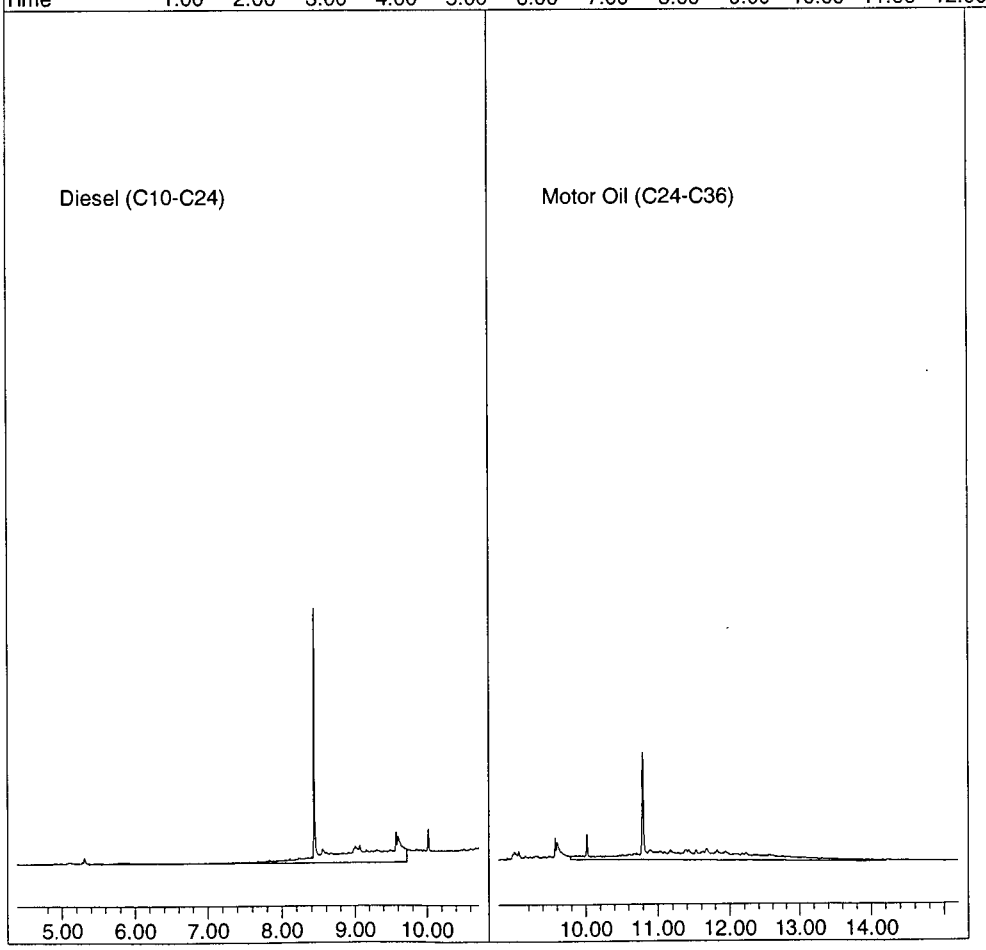
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.44	15360168	2090.313 ppb
Surrogate Spike 2573.782		Recovery	= 81.22%
6) SC Octacosane(S)	10.79	12499778	1796.831 ppb
Surrogate Spike 2573.782		Recovery	= 69.81%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	59422539	9831.314 ppb
2) HBTM Motor Oil (C24-C36)	11.99	64734335	17264.152 ppb

Data File: G:\APOLLO\DATA\140922\922030.D
Sample : AZ02104S11 5/58.28G x5





TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN007

APPL ID: AZ02105

Sample Collection Date: 9/2/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 24.0 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	4.0 ++J	5.0	1.00	0.65	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	TPH-LRO (C24-C36)	20 J	50	10.0	3.5	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	85.5	47-140			%	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	68.1	51-128			%	9/10/2014	9/24/2014

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method:	CTO707.M
Run #:	922037
Instrument:	Apollo
Sequence:	140922
Dilution Factor:	1
Initials:	LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

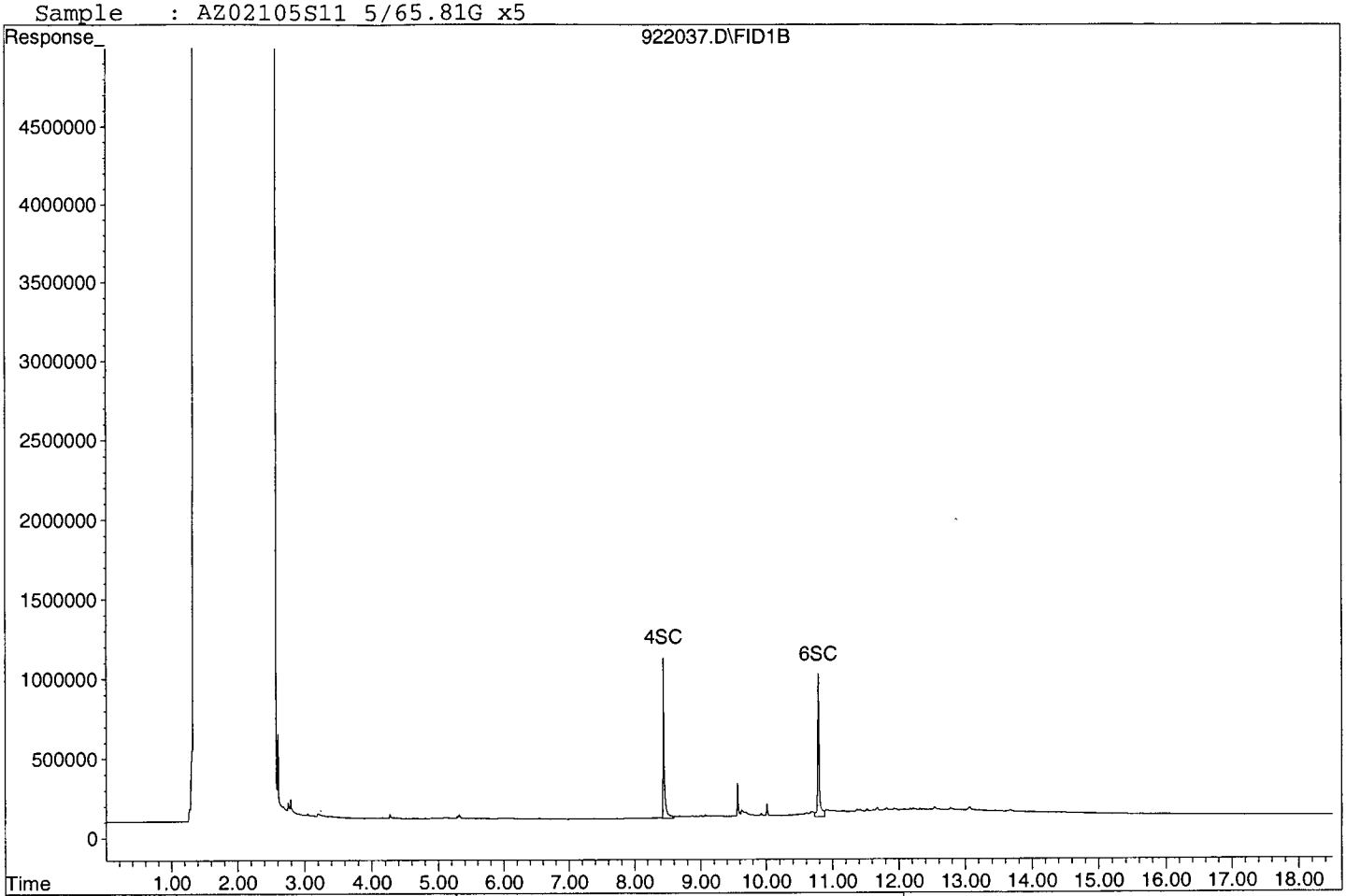
Data File : G:\APOLLO\DATA\140922\922037.D Vial: 37
Acq On : 9-24-14 9:48:23 Operator: lac
Sample : AZ02105S11 5/65.81G x5 Inst : Apollo
Misc : Soil Multiplr: 379.88
IntFile : events.e
Quant Time: Sep 25 14:39 2014 Quant Results File: CTO707.RES

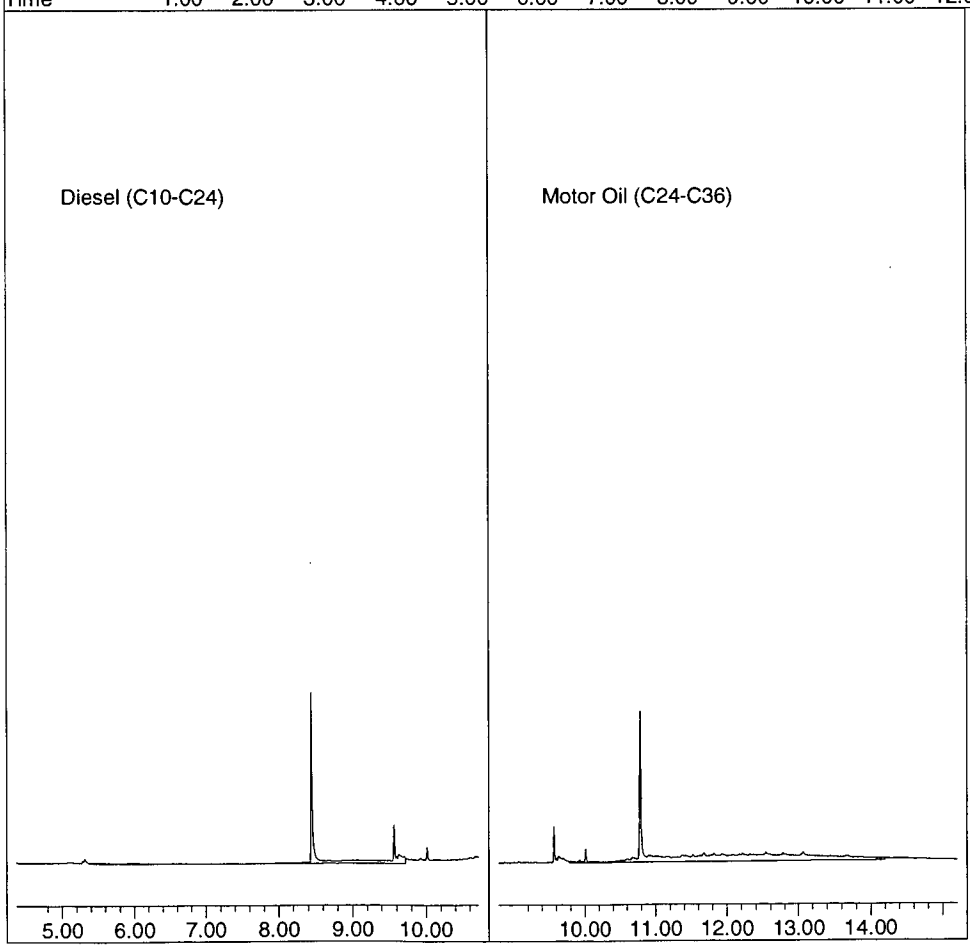
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.44	12883424	1552.649 ppb
Surrogate Spike 2279.289		Recovery	= 68.12%
6) SC Octacosane(S)	10.78	15301142	1947.850 ppb
Surrogate Spike 2279.289		Recovery	= 85.46%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	20531168	3008.159 ppb
2) HBTM Motor Oil (C24-C36)	11.99	63878674	15086.663 ppb

Data File: G:\APOLLO\DATA\140922\922037.D
Sample : AZ02105S11 5/65.81G x5





TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN008

APPL ID: AZ02106

Sample Collection Date: 9/2/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 29.8 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	5.4 ++	5.0	1.00	0.65	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	TPH-LRO (C24-C36)	48 J	50	10.0	3.5	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	103	47-140			%	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	73.2	51-128			%	9/10/2014	9/24/2014

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method: CTO707.M
Run #: 922038
Instrument: Apollo
Sequence: 140922
Dilution Factor: 1
Initials: LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

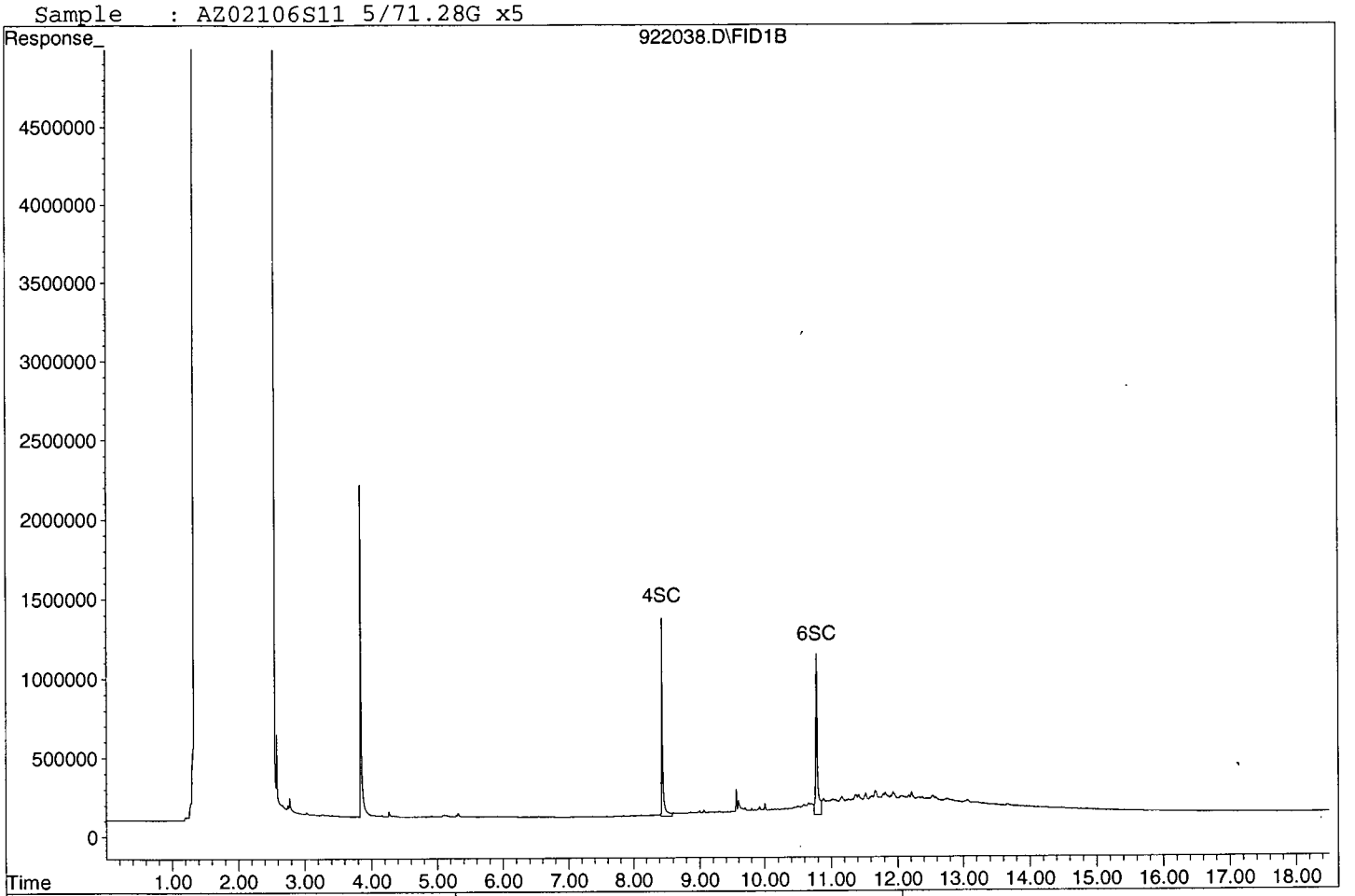
Data File : G:\APOLLO\DATA\140922\922038.D Vial: 38
Acq On : 9-24-14 10:14:21 Operator: lac
Sample : AZ02106S11 5/71.28G x5 Inst : Apollo
Misc : Soil Multiplr: 350.73
IntFile : events.e
Quant Time: Sep 25 14:39 2014 Quant Results File: CTO707.RES

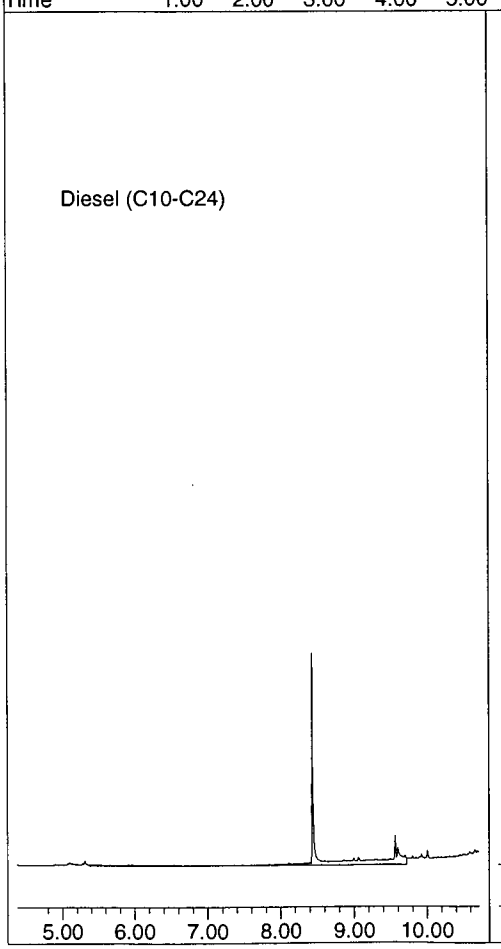
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

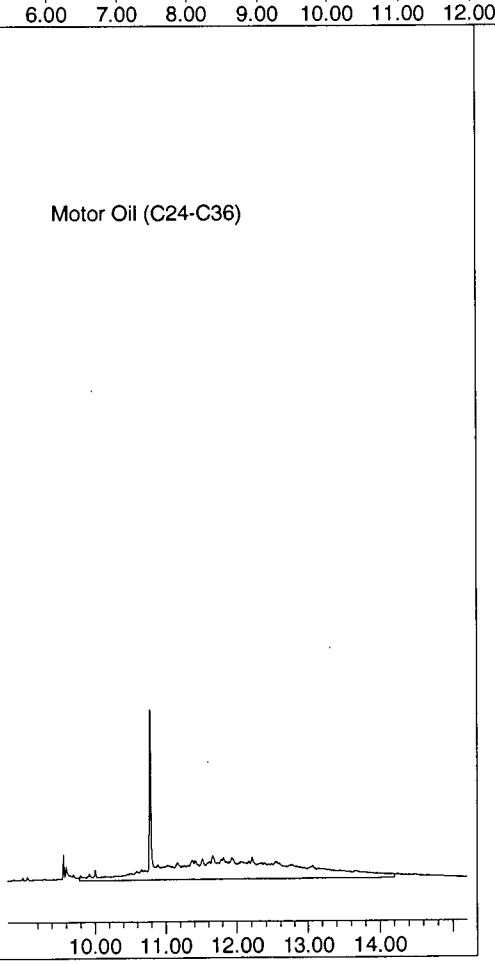
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.44	13849699	1541.018 ppb
Surrogate Spike 2104.377		Recovery	= 73.23%
6) SC Octacosane(S)	10.78	18390768	2161.509 ppb
Surrogate Spike 2104.377		Recovery	= 102.71%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	28235858	3819.561 ppb
2) HBTM Motor Oil (C24-C36)	11.99	155586845	33926.223 ppb

Data File: G:\APOLLO\DATA\140922\922038.D
Sample : AZ02106S11 5/71.28G x5







TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN009

APPL ID: AZ02107

Sample Collection Date: 9/2/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 23.4 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	5.1 ++	5.0	1.00	0.65	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	TPH-LRO (C24-C36)	17 J	50	10.0	3.5	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	86.2	47-140			%	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	70.8	51-128			%	9/10/2014	9/24/2014

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method:	CTO707.M
Run #:	922039
Instrument:	Apollo
Sequence:	140922
Dilution Factor:	1
Initials:	LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\140922\922039.D Vial: 39
Acq On : 9-24-14 10:40:34 Operator: lac
Sample : AZ02107S11 5/65.28G x5 Inst : Apollo
Misc : Soil Multiplr: 382.97
IntFile : events.e
Quant Time: Sep 25 14:40 2014 Quant Results File: CTO707.RES

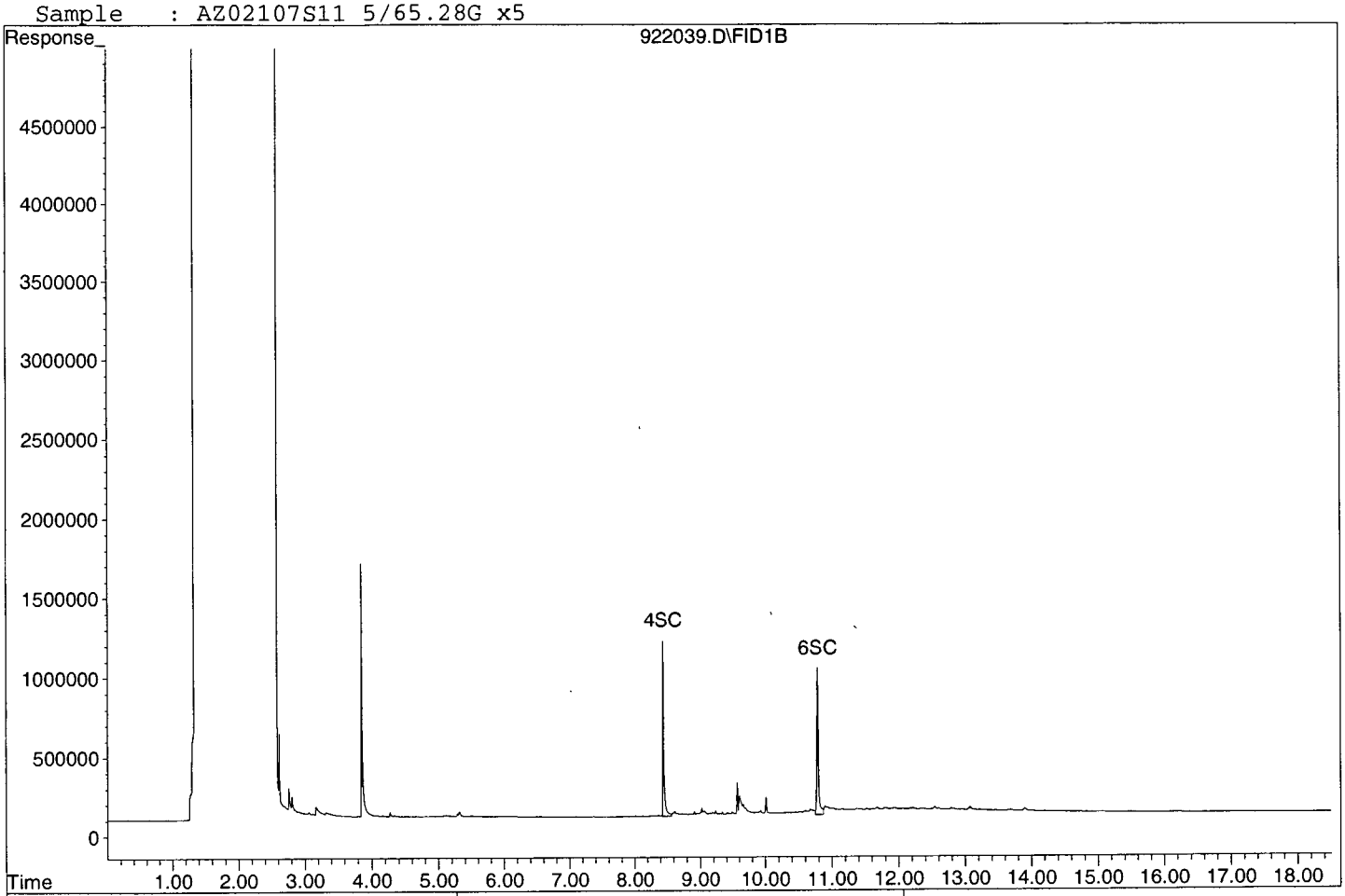
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

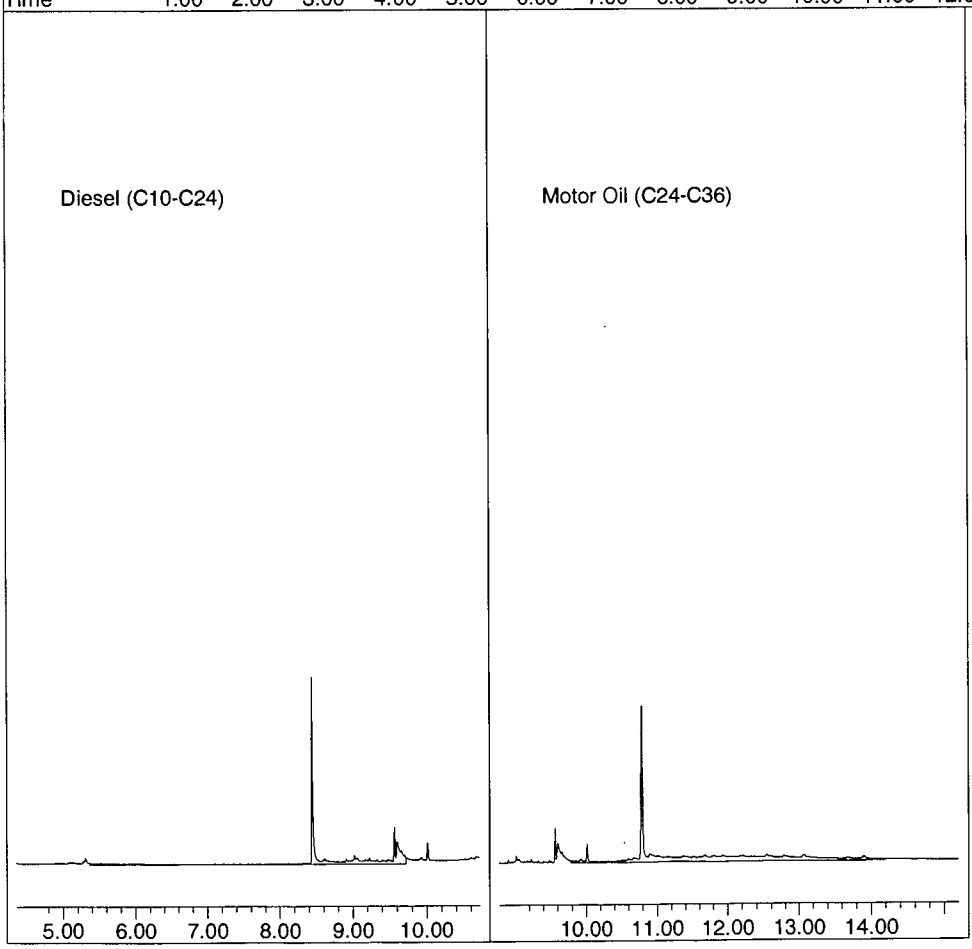
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.44	13386814	1626.417 ppb
Surrogate Spike 2297.794		Recovery =	70.78%
6) SC Octacosane(S)	10.79	15429992	1980.205 ppb
Surrogate Spike 2297.794		Recovery =	86.18%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	26690015	3942.290 ppb
2) HBTM Motor Oil (C24-C36)	11.99	53397464	12713.659 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
922039.D CTO707.M Thu Oct 02 12:48:32 2014 Page 1

Data File: G:\APOLLO\DATA\140922\922039.D
Sample : AZ02107S11 5/65.28G x5





TPH-d Water EPA 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN010

APPL ID: AZ02108

Sample Collection Date: 9/2/2014

QCG: #DROWC-140909A-190197

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015C-	TPH-DRO (C10-C24)	50.0 U	150	50.0	40.4	ug/L	9/9/2014	9/22/2014
EPA 8015C-	TPH-LRO (C24-C36)	500.0 U	500	500.0	106.0	ug/L	9/9/2014	9/22/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	66.0	28-142			%	9/9/2014	9/22/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	61.7	57-132			%	9/9/2014	9/22/2014

Quant Method: CTO707.M
Run #: 922007
Instrument: Apollo
Sequence: 140922
Dilution Factor: 1
Initials: LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

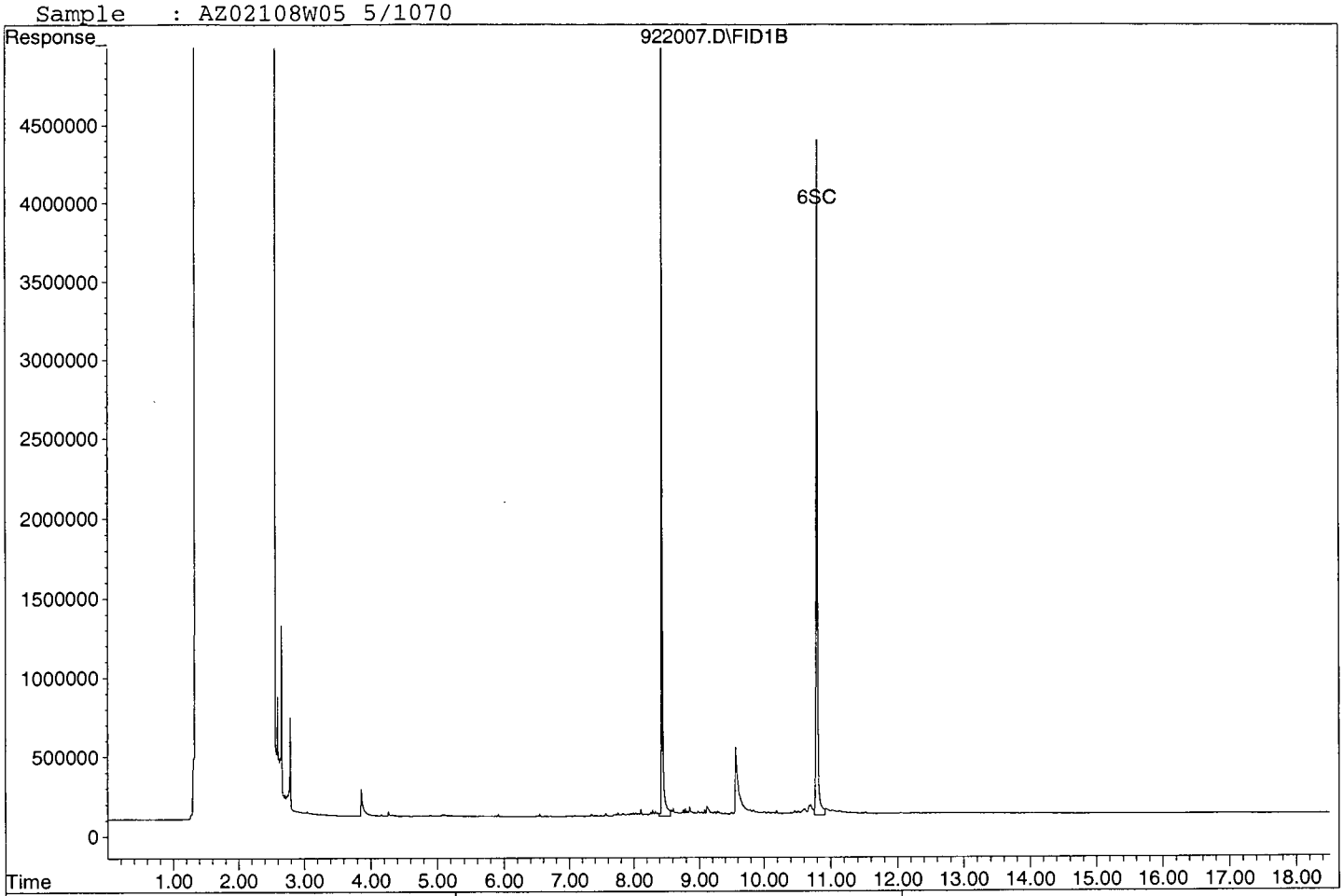
Data File : G:\APOLLO\DATA\140922\922007.D Vial: 7
Acq On : 9-22-14 12:09:03 Operator: lac
Sample : AZ02108W05 5/1070 Inst : Apollo
Misc : Water Multiplr: 4.67
IntFile : events.e
Quant Time: Sep 25 14:30 2014 Quant Results File: CTO707.RES

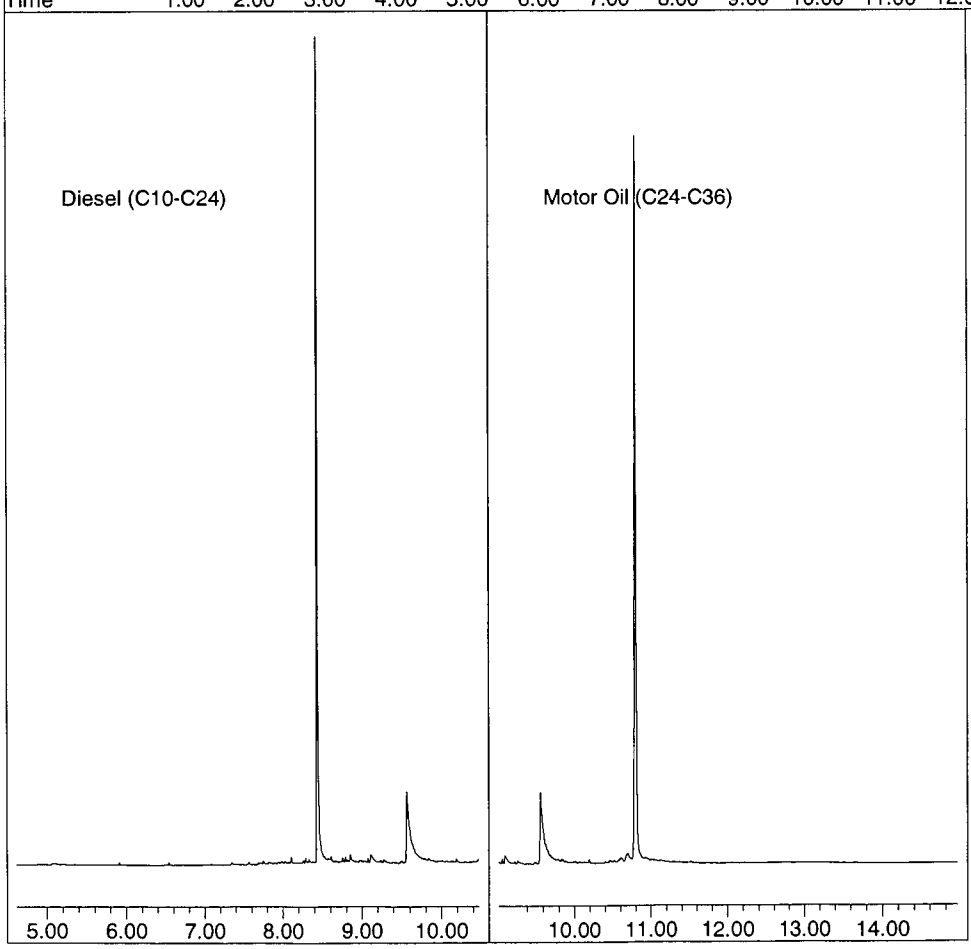
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.44	58356537	86.511 ppb
Surrogate Spike 140.187		Recovery =	61.71%
6) SC Octacosane(S)	10.80	59116224	92.572 ppb
Surrogate Spike 140.187		Recovery =	66.03%
Target Compounds			

Data File: G:\APOLLO\DATA\140922\922007.D
Sample : AZ02108W05 5/1070





TPH-d Water EPA 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN011

APPL ID: AZ02109

Sample Collection Date: 9/2/2014

QCG: #DROWC-140909A-190197

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015C-	TPH-DRO (C10-C24)	50.0 U	150	50.0	40.4	ug/L	9/9/2014	9/22/2014
EPA 8015C-	TPH-LRO (C24-C36)	500.0 U	500	500.0	106.0	ug/L	9/9/2014	9/22/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	72.2	28-142			%	9/9/2014	9/22/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	65.4	57-132			%	9/9/2014	9/22/2014

Quant Method:	CTO707.M
Run #:	922008
Instrument:	Apollo
Sequence:	140922
Dilution Factor:	1
Initials:	LA

Printed: 9/26/2014 1:44:01 PM

APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\140922\922008.D Vial: 8
Acq On : 9-22-14 12:35:13 Operator: lac
Sample : AZ02109W07 5/1050 Inst : Apollo
Misc : Water Multiplr: 4.76
IntFile : events.e
Quant Time: Sep 25 14:31 2014 Quant Results File: CTO707.RES

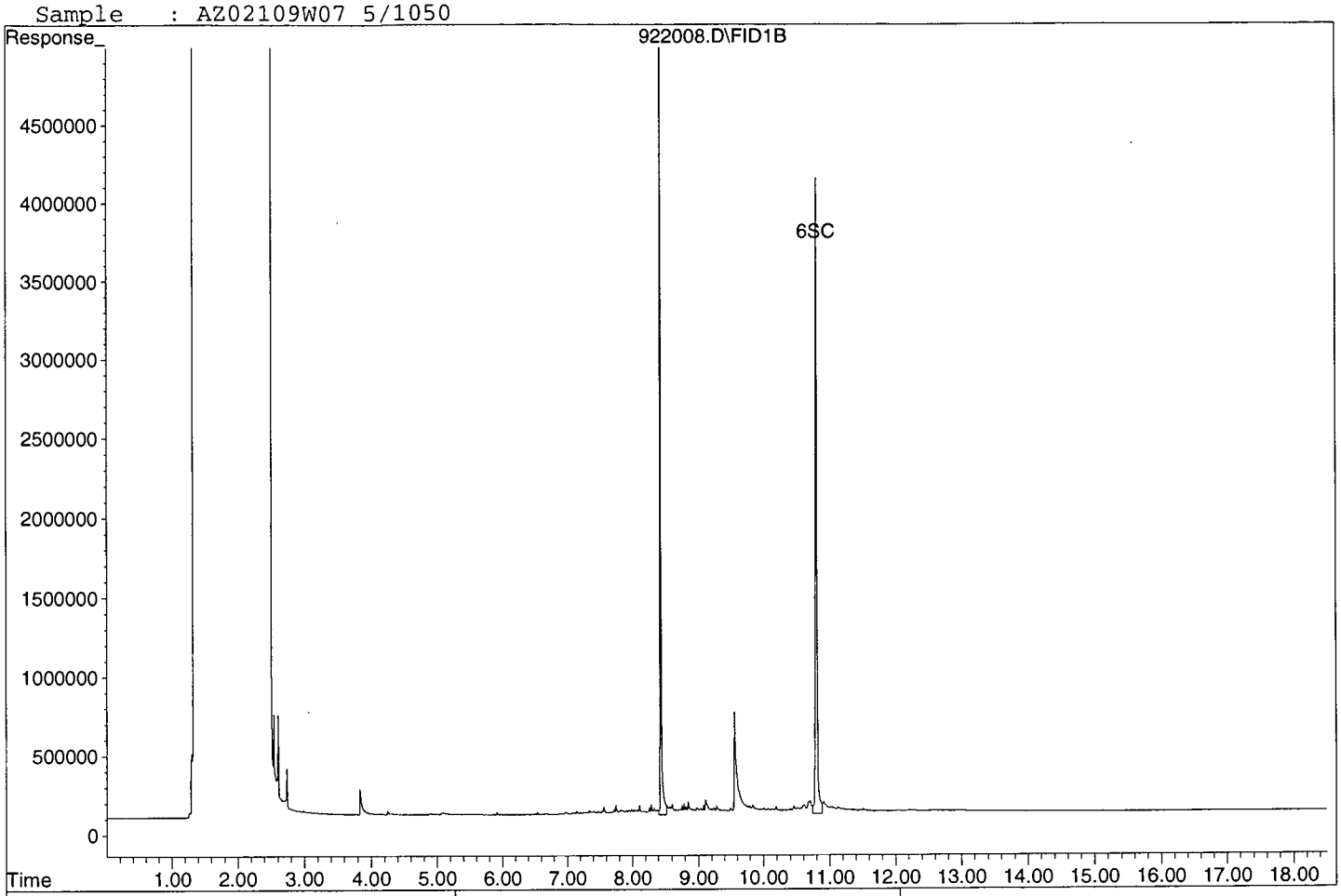
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

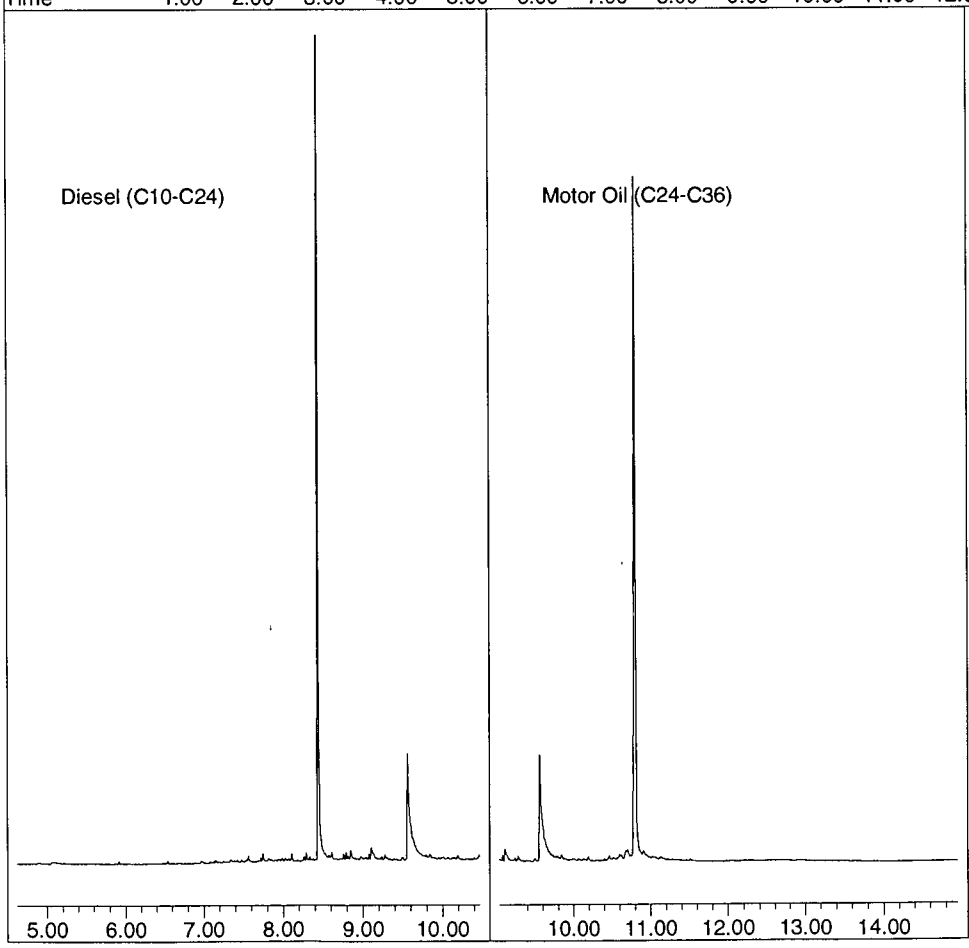
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.44	61869519	93.466 ppb
Surrogate Spike 142.857		Recovery =	65.43%
6) SC Octacosane(S)	10.80	64651964	103.168 ppb
Surrogate Spike 142.857		Recovery =	72.22%
Target Compounds			

Quantitation Report

Data File: G:\APOLLO\DATA\140922\922008.D
Sample : AZ02109W07 5/1050





TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN012

APPL ID: AZ02110

Sample Collection Date: 9/3/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 14.1 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	14 ++	5.0	1.00	0.65	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	TPH-LRO (C24-C36)	47 J	50	10.0	3.5	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	111	47-140			%	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	77.2	51-128			%	9/10/2014	9/24/2014

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method:	CTO707.M
Run #:	922040
Instrument:	Apollo
Sequence:	140922
Dilution Factor:	1
Initials:	LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\140922\922040.D Vial: 40
Acq On : 9-24-14 11:06:27 Operator: lac
Sample : AZ02110S11 5/58.22G x5 Inst : Apollo
Misc : Soil Multiplr: 429.41
IntFile : events.e
Quant Time: Sep 25 14:40 2014 Quant Results File: CTO707.RES

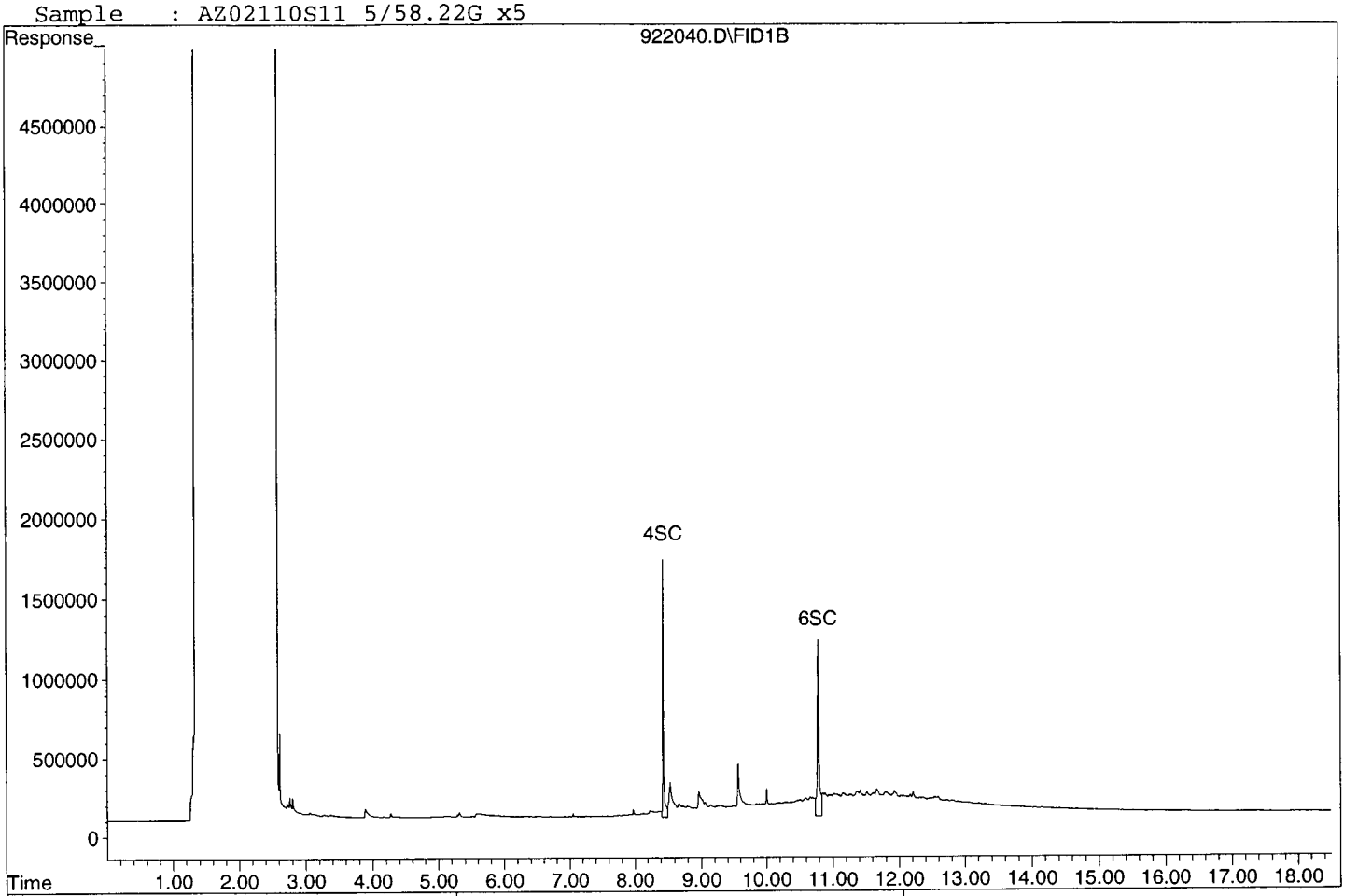
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

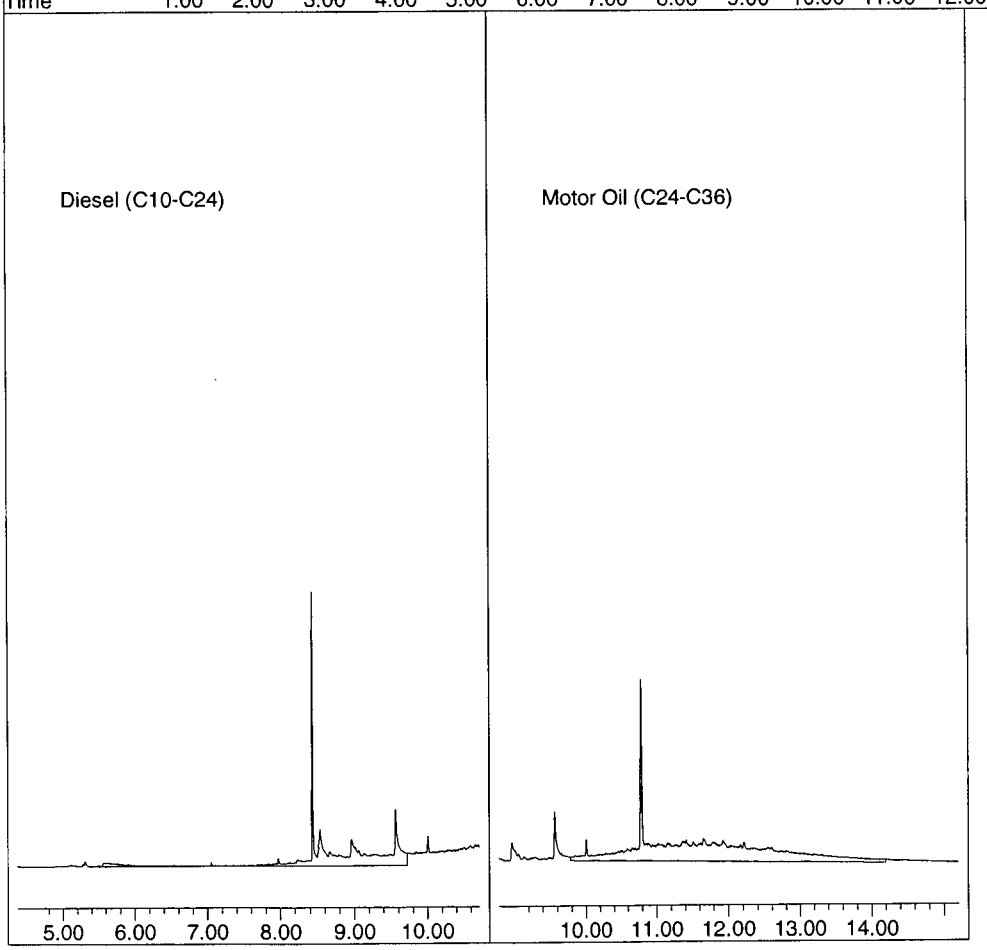
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.43	14599669	1988.866 ppb
Surrogate Spike 2576.434		Recovery	= 77.19%
6) SC Octacosane(S)	10.78	19830374	2853.535 ppb
Surrogate Spike 2576.434		Recovery	= 110.76%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	70904917	11743.133 ppb
2) HBTM Motor Oil (C24-C36)	11.99	152737174	40775.808 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
922040.D CTO707.M Thu Oct 02 12:48:34 2014 Page 1

Data File: G:\APOLLO\DATA\140922\922040.D
Sample : AZ02110S11 5/58.22G x5





TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN013

APPL ID: AZ02111

Sample Collection Date: 9/3/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 16.1 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	12 ++	5.0	1.00	0.65	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	TPH-LRO (C24-C36)	56	50	10.0	3.5	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	103	47-140			%	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	69.9	51-128			%	9/10/2014	9/24/2014

++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method:	CTO707.M
Run #:	922041
Instrument:	Apollo
Sequence:	140922
Dilution Factor:	1
Initials:	LA

Printed: 9/26/2014 1:44:01 PM

APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

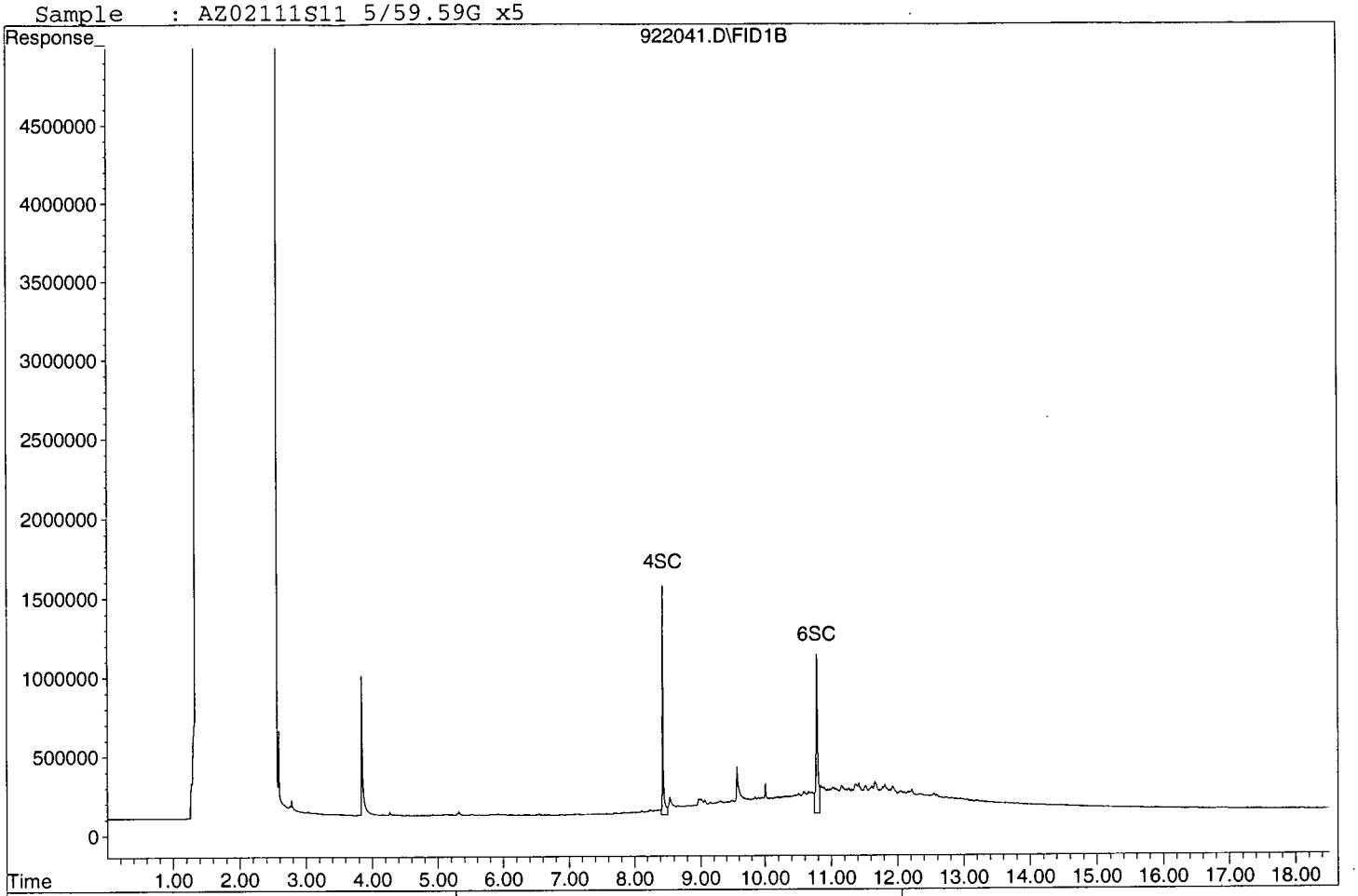
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Acq On : 9-24-14 11:32:38 Operator: lac
Sample : AZ02111S11 5/59.59G x5 Inst : Apollo
Misc : Soil Multiplr: 419.53
IntFile : events.e
Quant Time: Sep 25 14:51 2014 Quant Results File: CTO707.RES

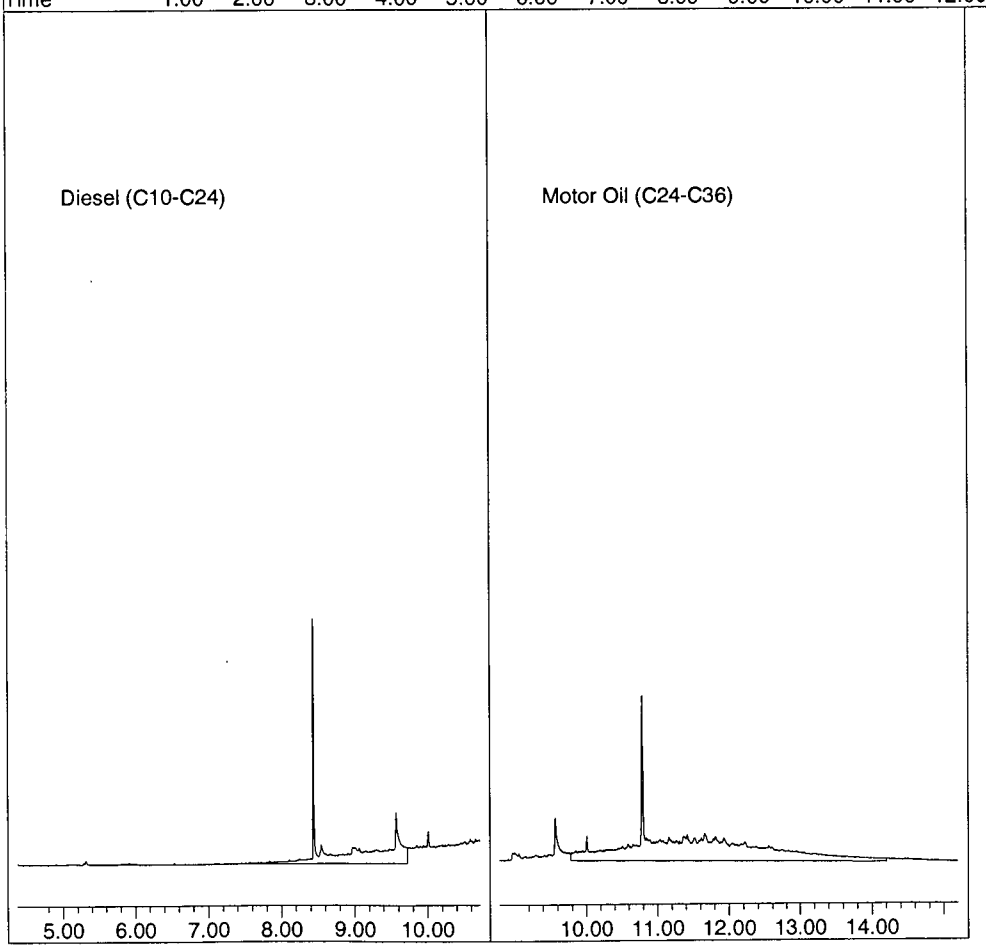
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.43	13215399	1758.899 ppb
Surrogate Spike 2517.201		Recovery	= 69.88%
6) SC Octacosane(S)	10.78	18451480	2594.069 ppb
Surrogate Spike 2517.201		Recovery	= 103.05%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	63775268	10319.483 ppb
2) HBTM Motor Oil (C24-C36)	11.99	181390599	47311.925 ppb

Data File: G:\APOLLO\DATA\140922\922041.D
Sample : AZ02111S11 5/59.59G x5





TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN014

APPL ID: AZ02112

Sample Collection Date: 9/3/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 23.2 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	4.7 ++J	5.0	1.00	0.65	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	TPH-LRO (C24-C36)	21 J	50	10.0	3.5	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	74.3	47-140			%	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	61.2	51-128			%	9/10/2014	9/24/2014

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method: CTO707.M
Run #: 922042
Instrument: Apollo
Sequence: 140922
Dilution Factor: 1
Initials: LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

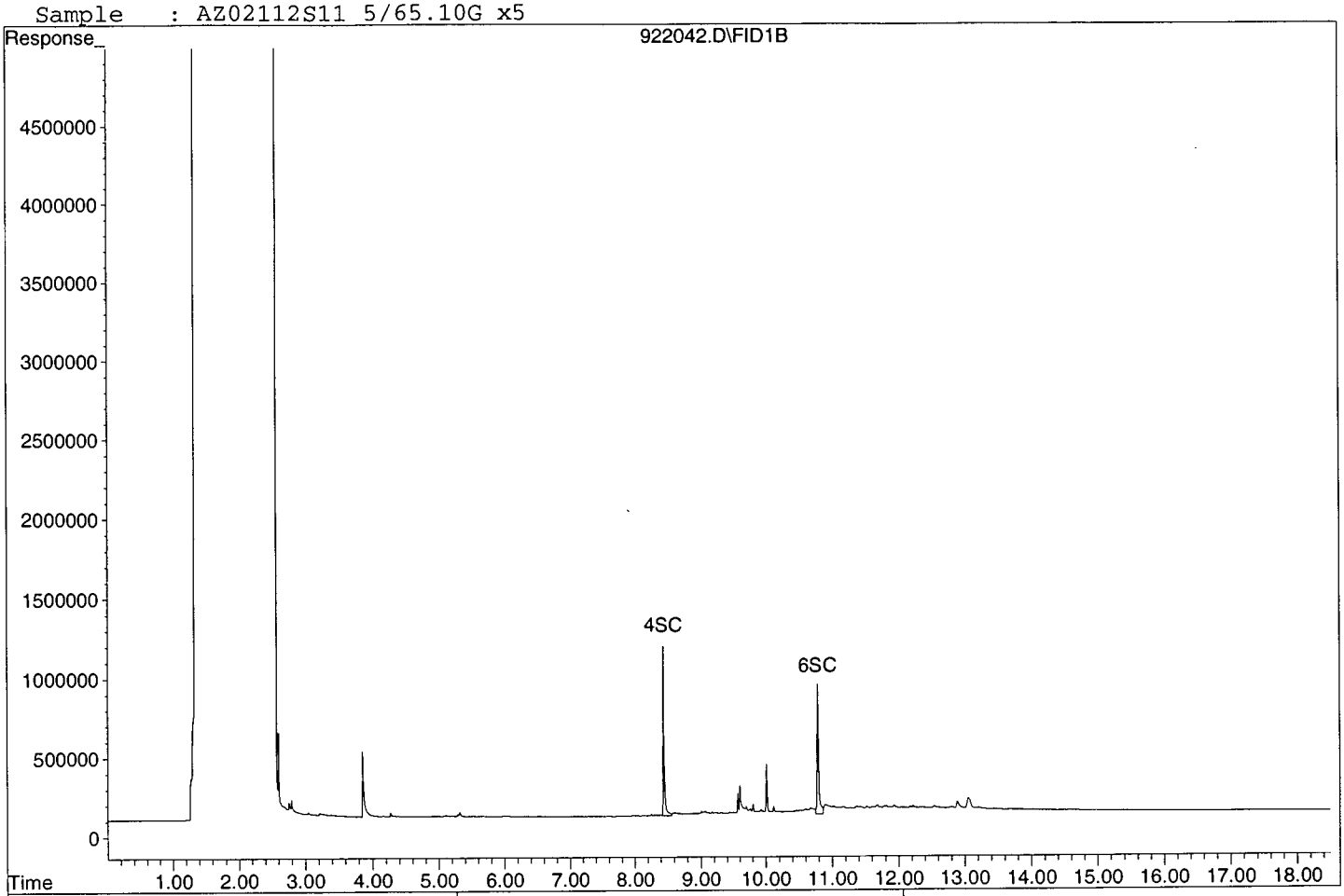
Data File : G:\APOLLO\DATA\140922\922042.D Vial: 42
Acq On : 9-24-14 11:58:34 Operator: lac
Sample : AZ02112S11 5/65.10G x5 Inst : Apollo
Misc : Soil Multiplr: 384.03
IntFile : events.e
Quant Time: Sep 25 14:52 2014 Quant Results File: CTO707.RES

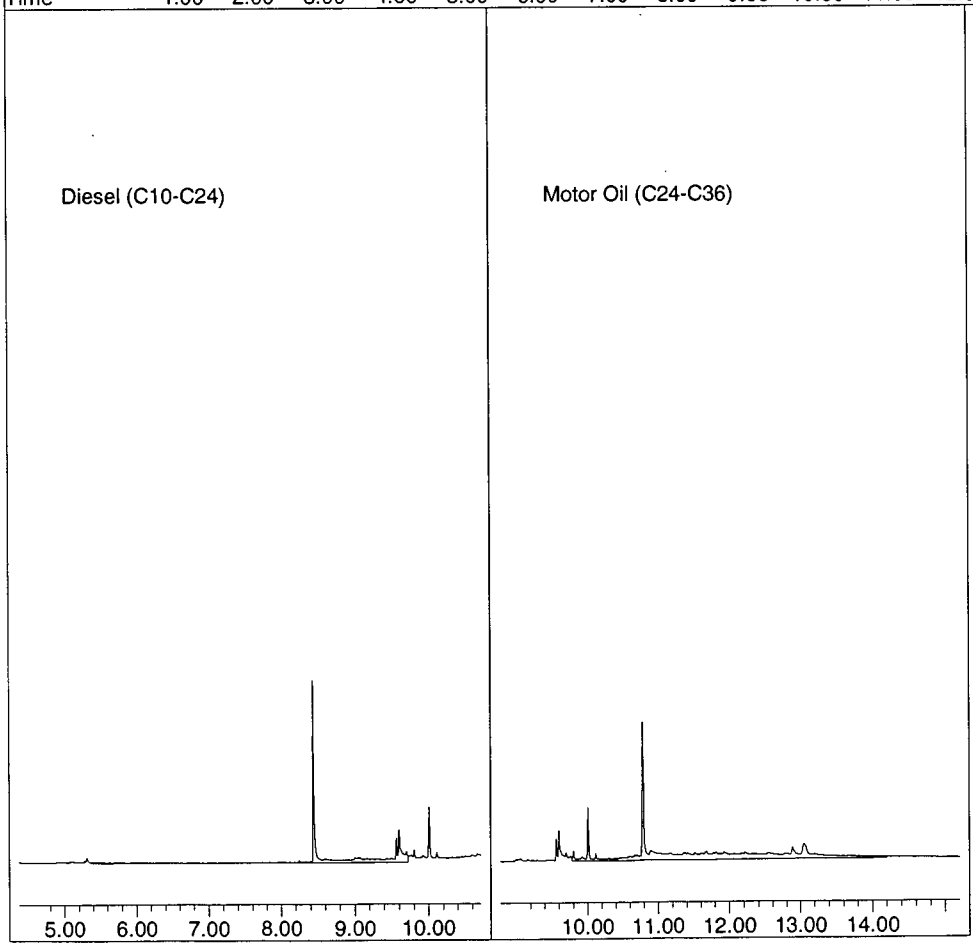
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.44	11565378	1409.009 ppb
Surrogate Spike 2304.147		Recovery =	61.15%
6) SC Octacosane(S)	10.78	13311129	1713.005 ppb
Surrogate Spike 2304.147		Recovery =	74.34%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	24627064	3647.637 ppb
2) HBTM Motor Oil (C24-C36)	11.99	66955445	15985.827 ppb

Data File: G:\APOLLO\DATA\140922\922042.D
Sample : AZ02112S11 5/65.10G x5





TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN015

APPL ID: AZ02113

Sample Collection Date: 9/3/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 13.6 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	10 ++	5.0	1.00	0.65	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	TPH-LRO (C24-C36)	16 J	50	10.0	3.5	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	81.2	47-140			%	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	68.4	51-128			%	9/10/2014	9/24/2014

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method:	CTO707.M
Run #:	922043
Instrument:	Apollo
Sequence:	140922
Dilution Factor:	1
Initials:	LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

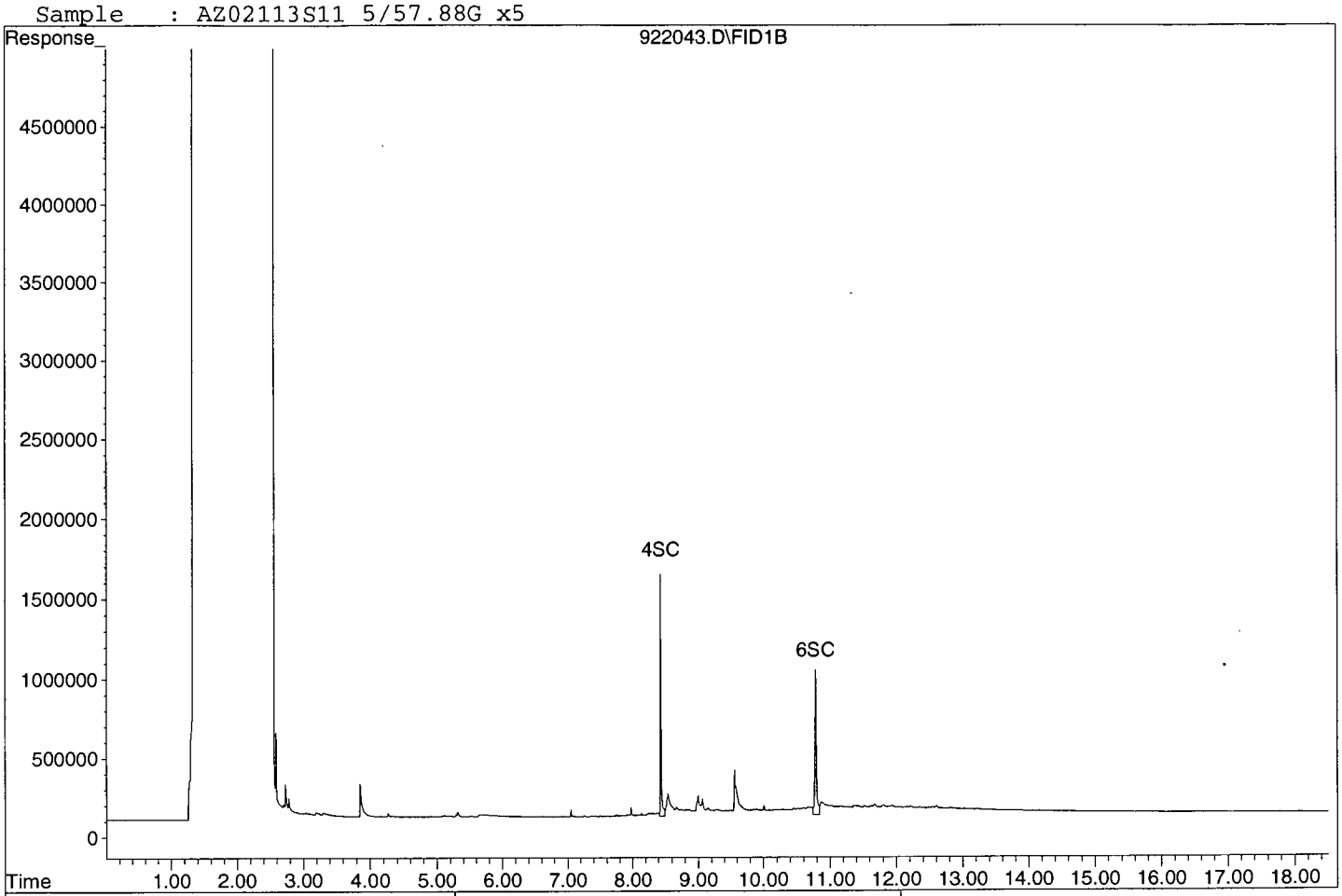
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Acq On : 9-24-14 12:24:30 Operator: lac
Sample : AZ02113S11 5/57.88G x5 Inst : Apollo
Misc : Soil Multiplr: 431.93
IntFile : events.e
Quant Time: Sep 25 14:52 2014 Quant Results File: CTO707.RES

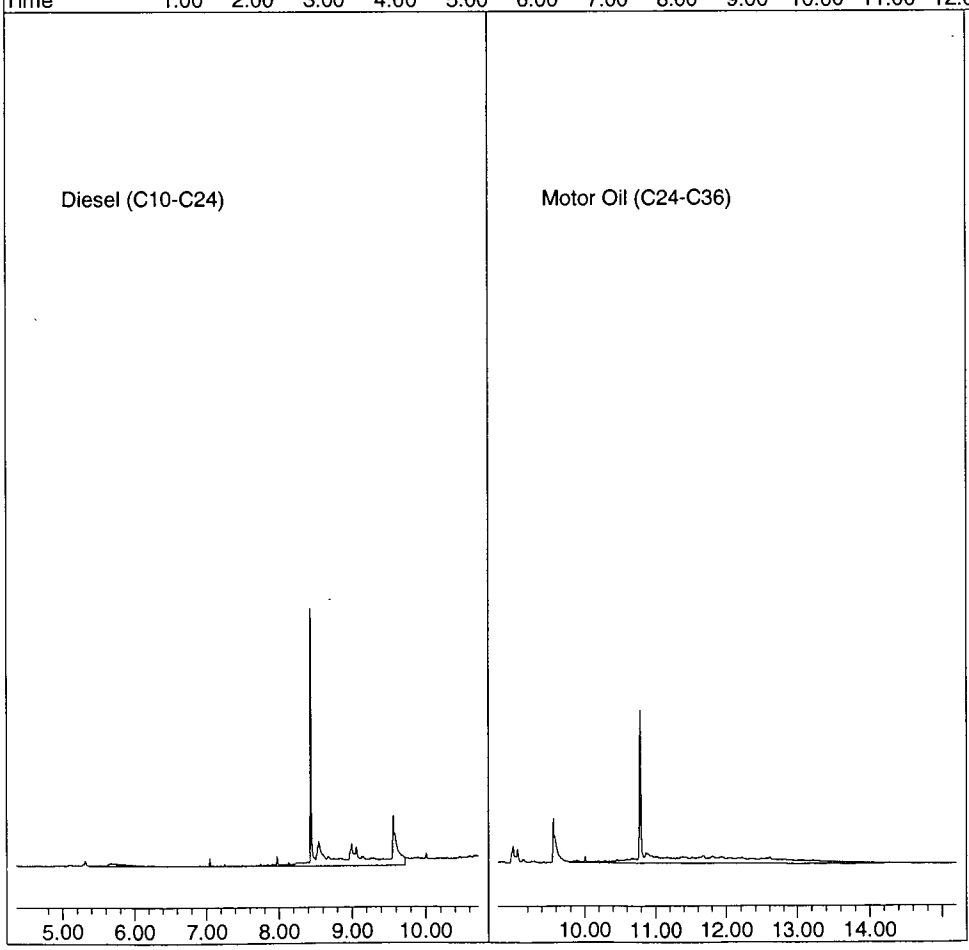
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.43	12942596	1773.484 ppb
Surrogate Spike 2591.569		Recovery	= 68.43%
6) SC Octacosane(S)	10.78	14531654	2103.345 ppb
Surrogate Spike 2591.569		Recovery	= 81.16%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	53337946	8885.608 ppb
2) HBTM Motor Oil (C24-C36)	11.99	52733581	14160.818 ppb

Data File: G:\APOLLO\DATA\140922\922043.D
Sample : AZ02113S11 5/57.88G x5





TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN016

APPL ID: AZ02114

Sample Collection Date: 9/3/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 16.4 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	8.4 ++	5.0	1.00	0.65	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	TPH-LRO (C24-C36)	20 J	50	10.0	3.5	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	89.5	47-140			%	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	75.6	51-128			%	9/10/2014	9/24/2014

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method:	CTO707.M
Run #:	922044
Instrument:	Apollo
Sequence:	140922
Dilution Factor:	1
Initials:	LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

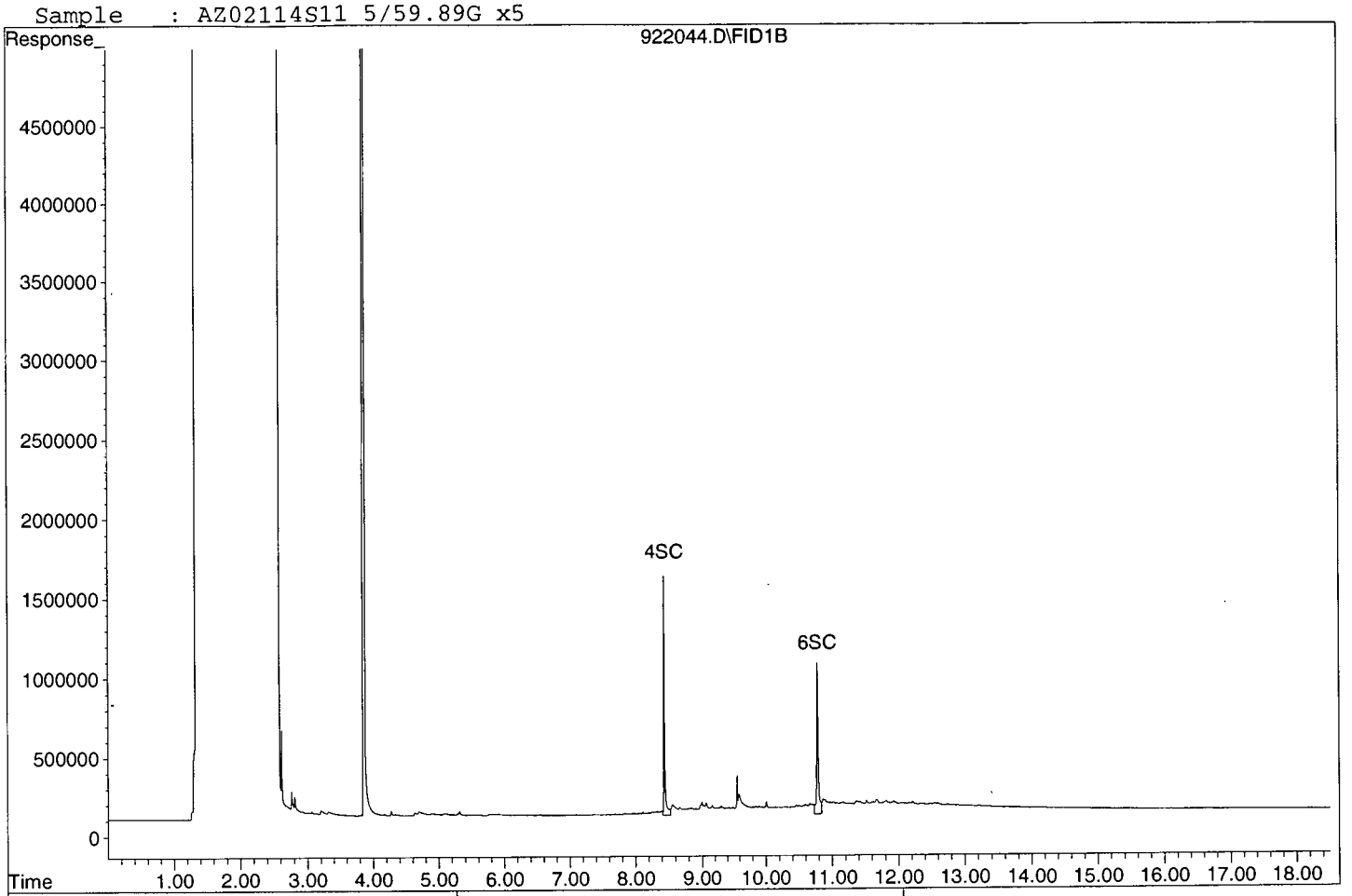
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Acq On : 9-24-14 12:50:21 Operator: lac
Sample : AZ02114S11 5/59.89G x5 Inst : Apollo
Misc : Soil Multiplr: 417.43
IntFile : events.e
Quant Time: Sep 25 14:52 2014 Quant Results File: CTO707.RES

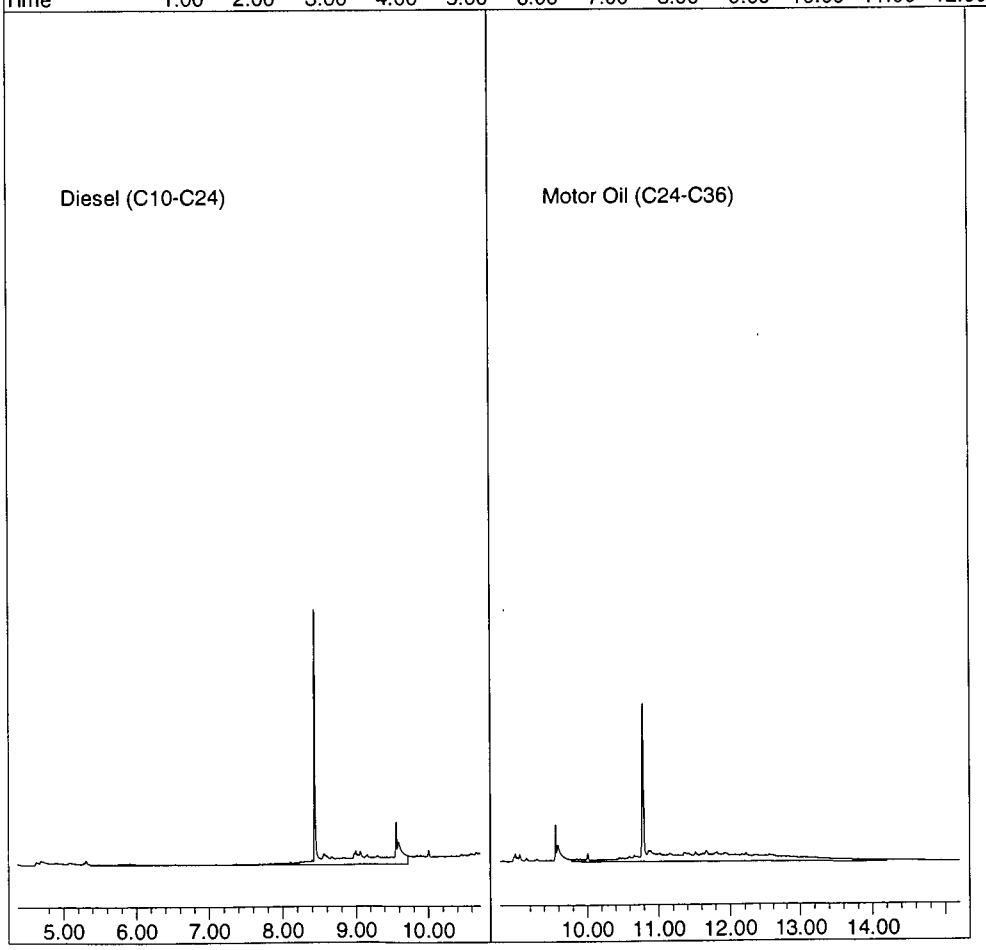
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Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.43	14295175	1893.083 ppb
Surrogate Spike 2504.592		Recovery	= 75.58%
6) SC Octacosane(S)	10.78	16023496	2241.440 ppb
Surrogate Spike 2504.592		Recovery	= 89.49%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	43703967	7036.328 ppb
2) HBTM Motor Oil (C24-C36)	11.99	65691507	17048.442 ppb

Data File: G:\APOLLO\DATA\140922\922044.D
Sample : AZ02114S11 5/59.89G x5





TPHE SOIL EPA 8015C IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN017

APPL ID: AZ02115

Sample Collection Date: 9/3/2014

QCG: #DROCT-140910A-190196

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 25.6 Percent Moisture.)								
EPA 8015C-	TPH-DRO (C10-C24)	4.8 ++J	5.0	1.00	0.65	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	TPH-LRO (C24-C36)	11 J	50	10.0	3.5	mg/kg	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	79.1	47-140			%	9/10/2014	9/24/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	69.7	51-128			%	9/10/2014	9/24/2014

J = Estimated value.
++(T3M) The analyst has noted that the chromatogram of this sample is mainly higher boiling hydrocarbons.

Quant Method: CTO707.M
Run #: 922045
Instrument: Apollo
Sequence: 140922
Dilution Factor: 1
Initials: LA

Printed: 9/26/2014 1:44:01 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

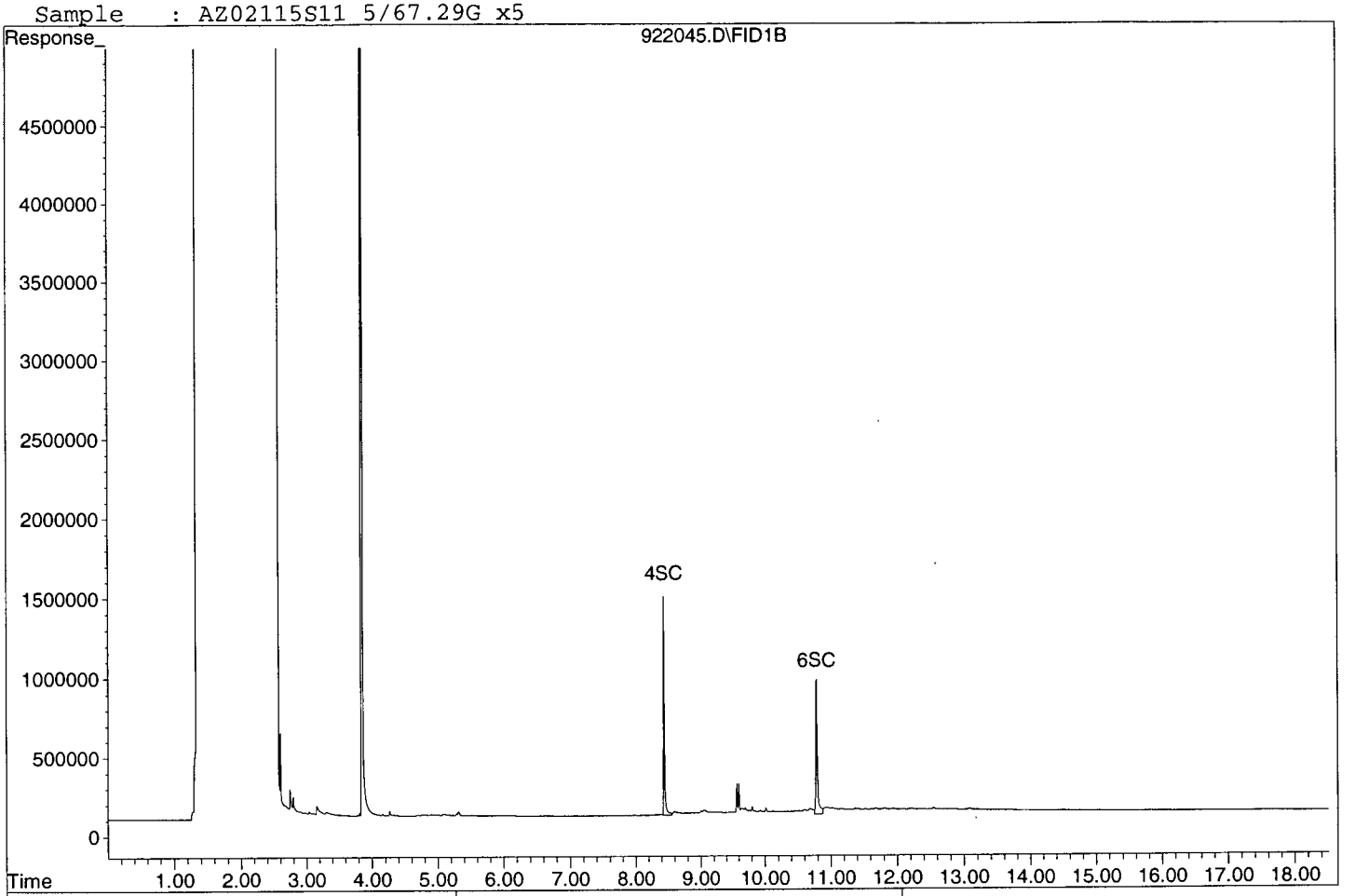
Data File : G:\APOLLO\DATA\140922\922045.D Vial: 45
Acq On : 9-24-14 13:16:25 Operator: lac
Sample : AZ02115S11 5/67.29G x5 Inst : Apollo
Misc : Soil Multiplr: 371.53
IntFile : events.e
Quant Time: Sep 25 14:53 2014 Quant Results File: CTO707.RES

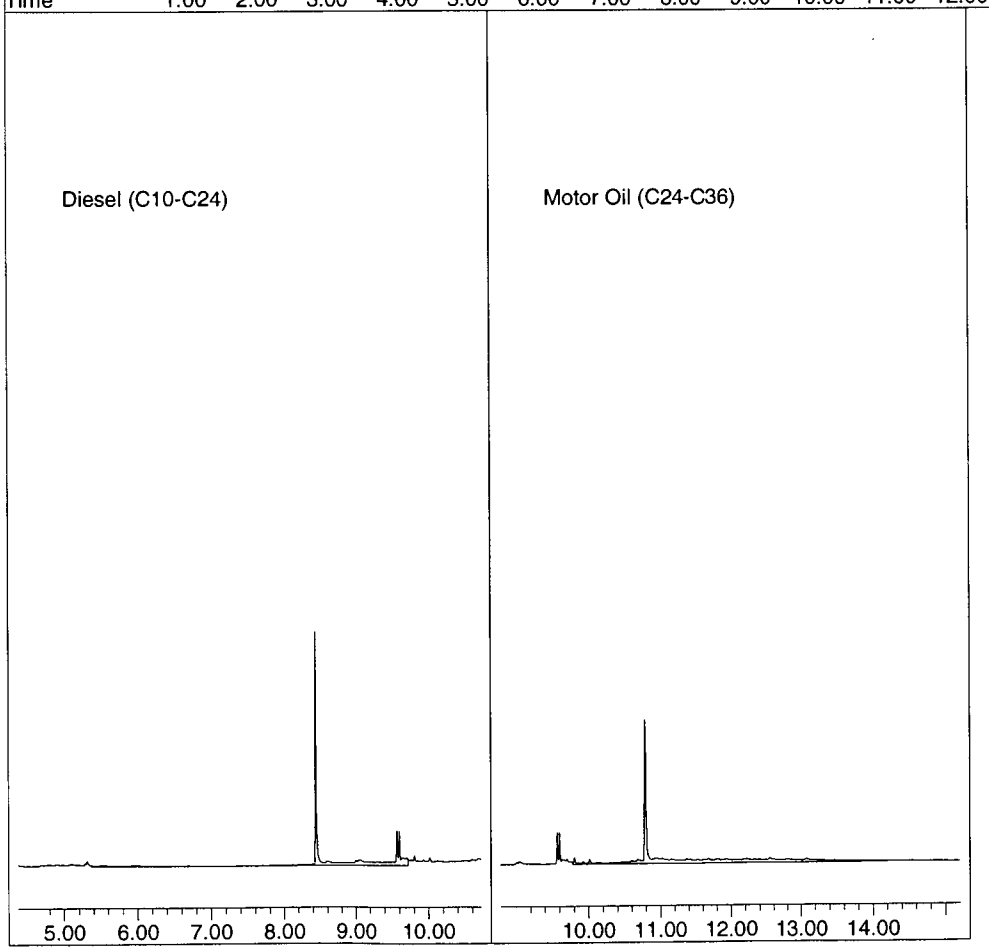
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.44	13180266	1553.488 ppb
Surrogate Spike 2229.157		Recovery	= 69.69%
6) SC Octacosane(S)	10.79	14156969	1762.559 ppb
Surrogate Spike 2229.157		Recovery	= 79.07%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	24869958	3563.722 ppb
2) HBTM Motor Oil (C24-C36)	11.99	35348676	8164.923 ppb

Data File: G:\APOLLO\DATA\140922\922045.D
Sample : AZ02115S11 5/67.29G x5





TPH-d Water EPA 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN018

APPL ID: AZ02116

Sample Collection Date: 9/3/2014

QCG: #DROWC-140909A-190197

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015C-	TPH-DRO (C10-C24)	50.0 U	150	50.0	40.4	ug/L	9/9/2014	9/22/2014
EPA 8015C-	TPH-LRO (C24-C36)	500.0 U	500	500.0	106.0	ug/L	9/9/2014	9/22/2014
EPA 8015C-	SURROGATE: OCTACOSANE (S)	71.0	28-142			%	9/9/2014	9/22/2014
EPA 8015C-	SURROGATE: ORTHO-TERPHENYL (S	65.3	57-132			%	9/9/2014	9/22/2014

Quant Method: CTO707.M
Run #: 922009
Instrument: Apollo
Sequence: 140922
Dilution Factor: 1
Initials: LA

Printed: 9/26/2014 1:44:01 PM

APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

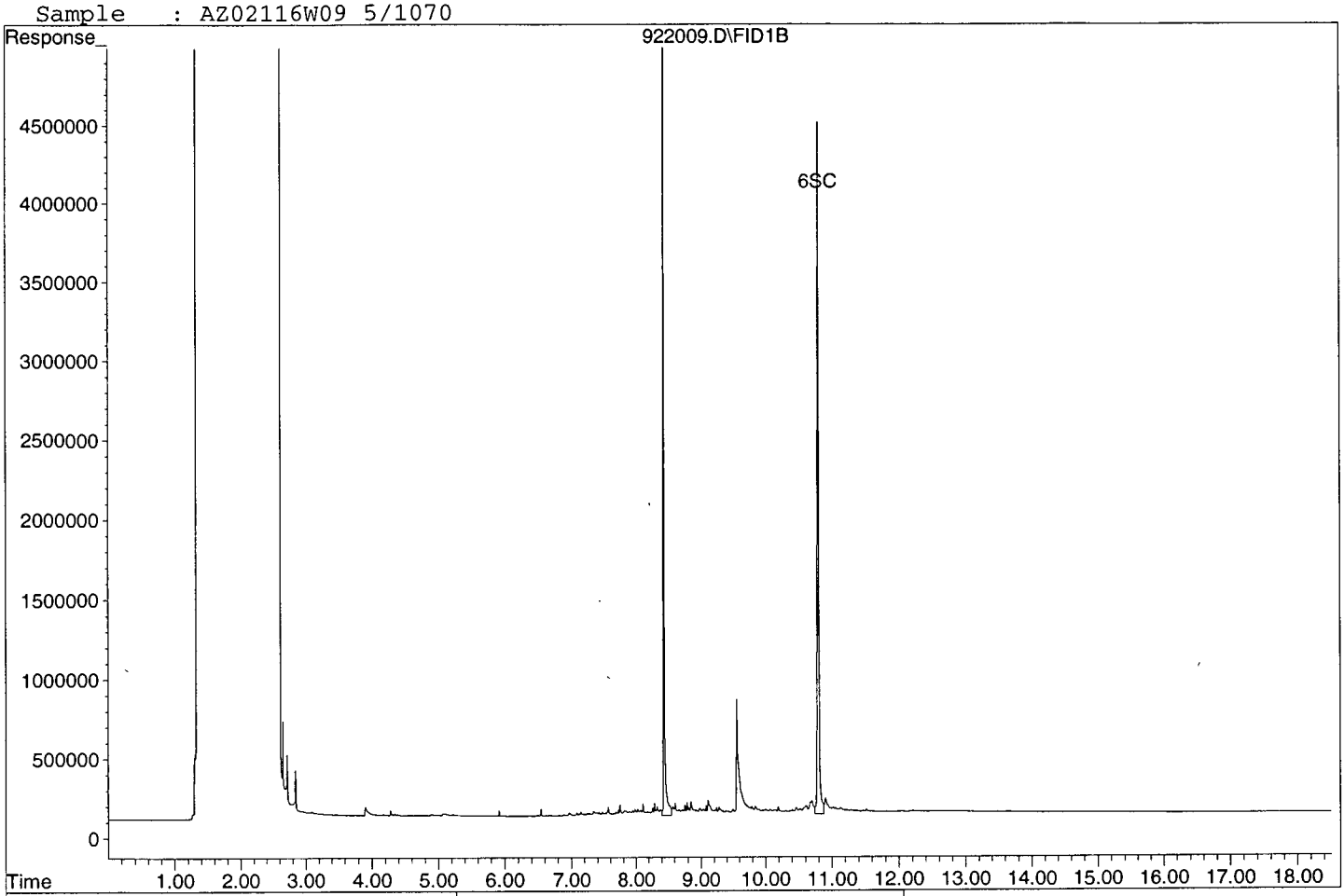
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Acq On : 9-22-14 13:01:11 Operator: lac
Sample : AZ02116W09 5/1070 Inst : Apollo
Misc : Water Multiplr: 4.67
IntFile : events.e
Quant Time: Sep 25 14:31 2014 Quant Results File: CTO707.RES

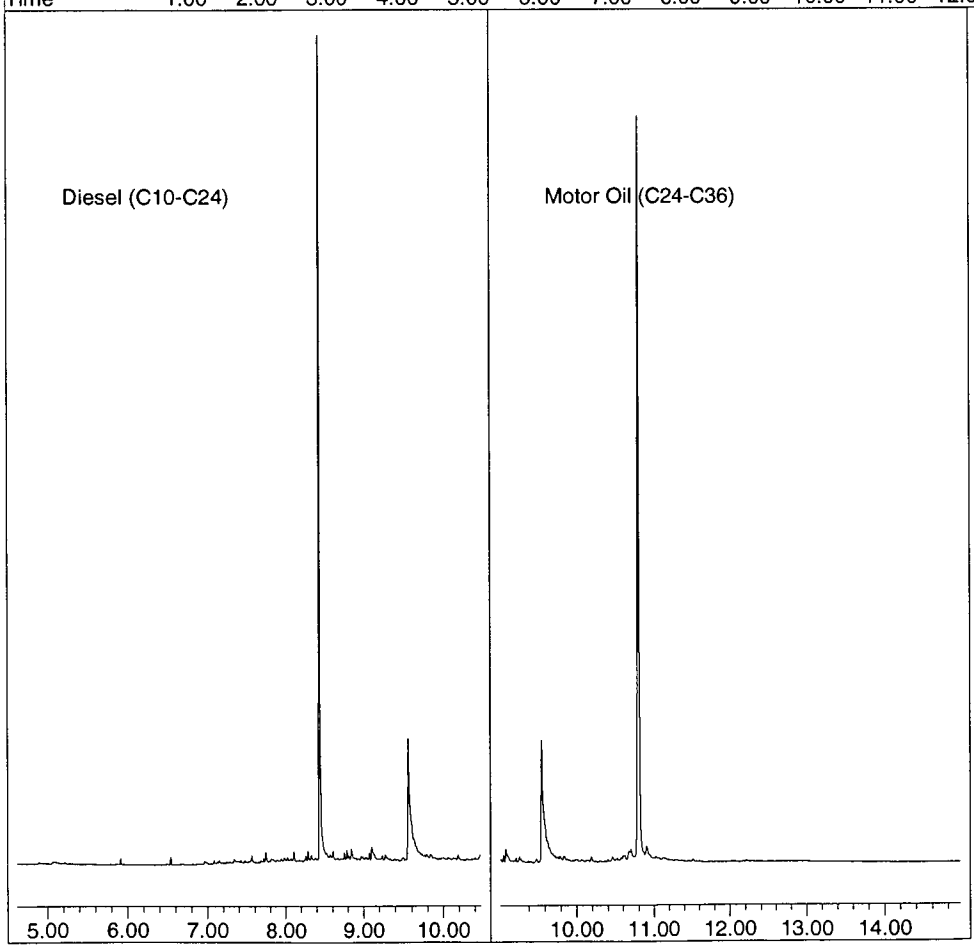
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.44	61700512	91.468 ppb
Surrogate Spike 140.187		Recovery =	65.25%
6) SC Octacosane(S)	10.80	63554307	99.521 ppb
Surrogate Spike 140.187		Recovery =	70.99%
Target Compounds			

Data File: G:\APOLLO\DATA\140922\922009.D
Sample : AZ02116W09 5/1070





EPA 8015 Modified
Total Petroleum Hydrocarbons

Calibration Data

TPH Extractables
CTO707

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 74218
Case No: Initial Cal. Date: 7/7/2014
Matrix: Instrument: Apollo
Initials: LAC

707003.D 707004.D 707005.D 707006.D 707007.D 707008.D
707011.D 707012.D 707013.D 707014.D 707015.D 707016 D
707018.D 707019.D 707020.D 707021.D 707022.D 707023.D

		Compound	1	2	3	4	5	6					Avg	%RSD		
1	HATM	Diesel (C10-C24)	1041037	1391838	1319999	1412780	1333288	1279305					1296375	10	HATM	
2	HBTM	Motor Oil (C24-C36)	877355	820449	836252	762722	794570	734032					804230	6.4	HBTM	
3	SA	Not Used(S)		2224770	2130713	2285696	2157329	2065478					2172797	4	SA	
4	SC	Ortho-Terphenyl(S)	1591878	1602217	1557118	1581307	1599839	1524062					1576070	1.9	SC	
5	SA	Not Used2(S)		1456097	1366335	1492868	1400982	1319390					1407134	5	SA	
6	SC	Octacosane(S)	1534248	1476775	1476501	1505641	1504831	1454355					1492058	1.9	SC	
7																
8																
9																
10																
11																
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Quantitation Report (Not Reviewed)

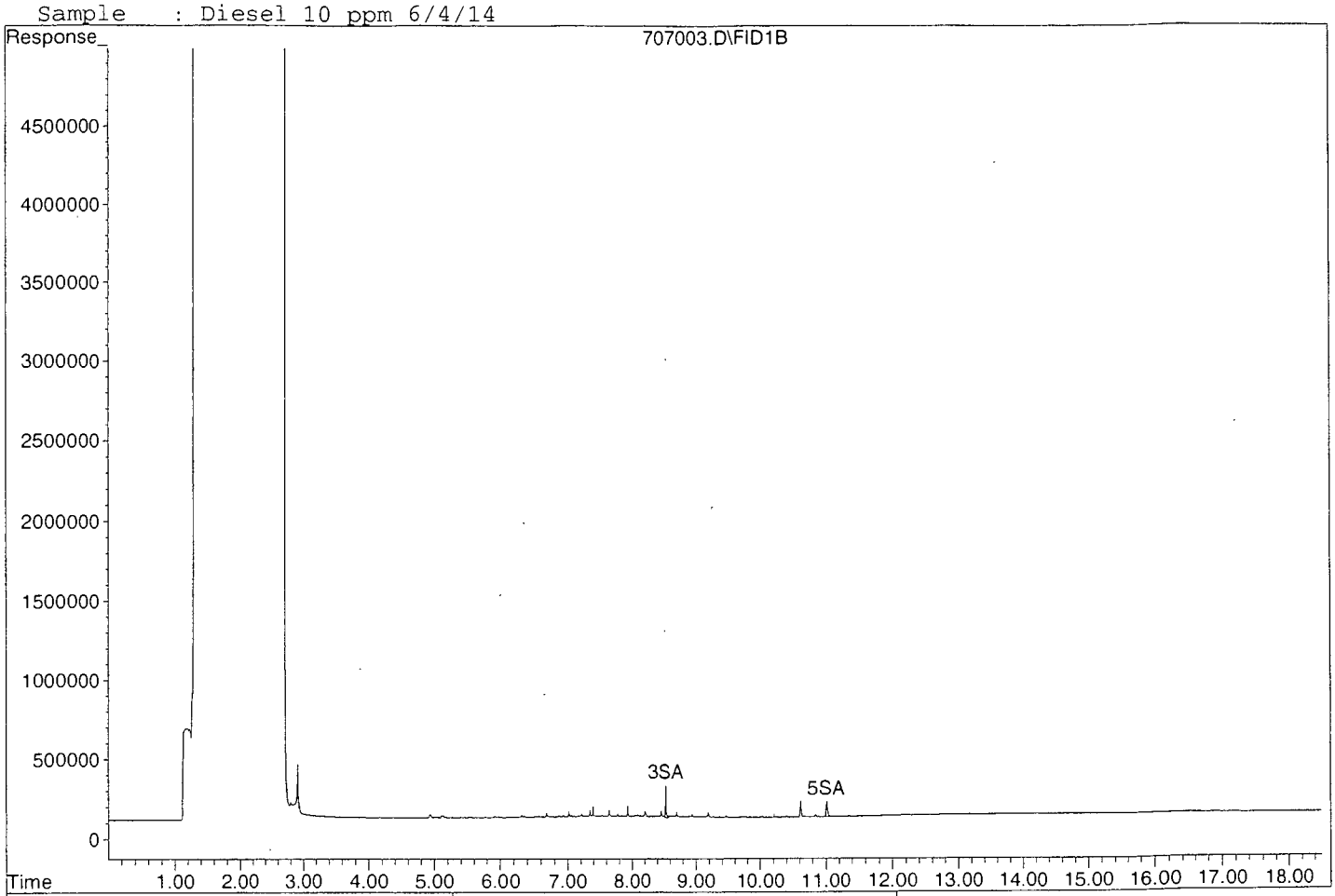
Data File : G:\APOLLO\DATA\140707\707003.D Vial: 3
Acq On : 7-7-14 13:02:59 Operator: MA
Sample : Diesel 10 ppm 6/4/14 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

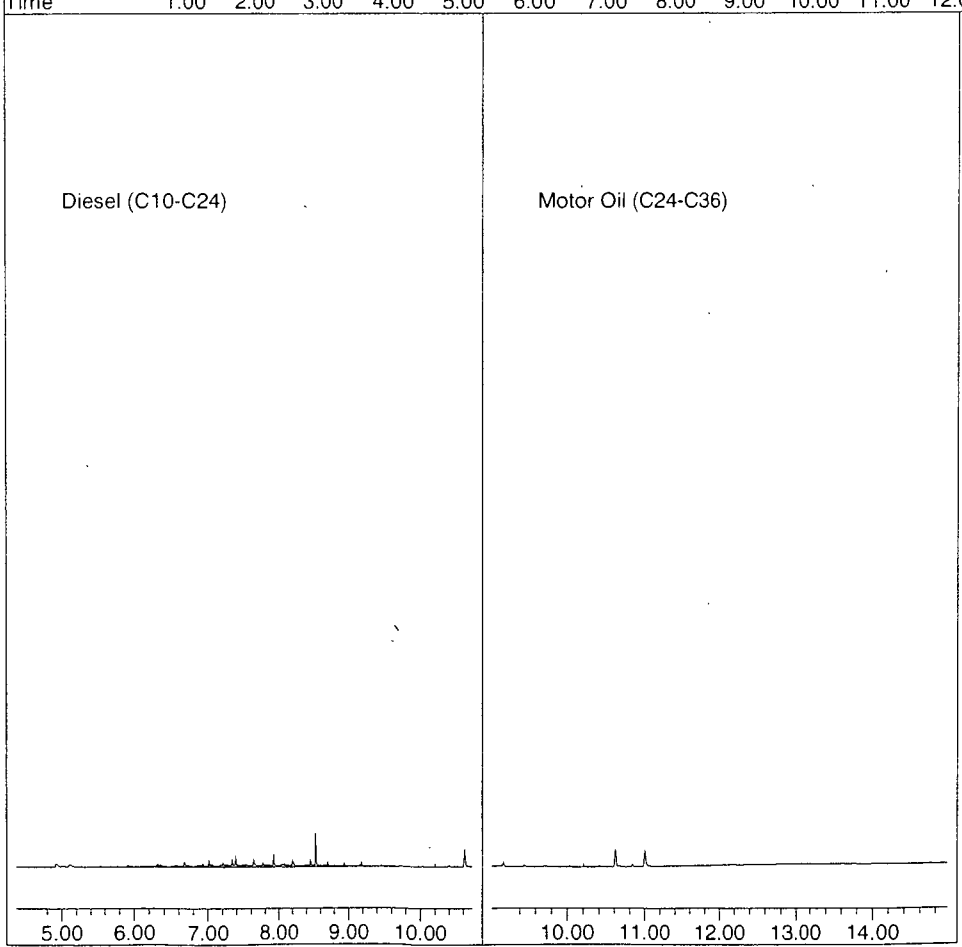
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Not Used(S)	8.53	1802568	0.482 ppb
Surrogate Spike 75.000	Recovery =		0.64%
5) SA Not Used2(S)	11.00	1708607	0.695 ppb
Surrogate Spike 75.000	Recovery =		0.93%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	20820740	7.768 ppb

Data File: G:\APOLLO\DATA\140707\707003.D
Sample : Diesel 10 ppm 6/4/14





Quantitation Report (Not Reviewed)

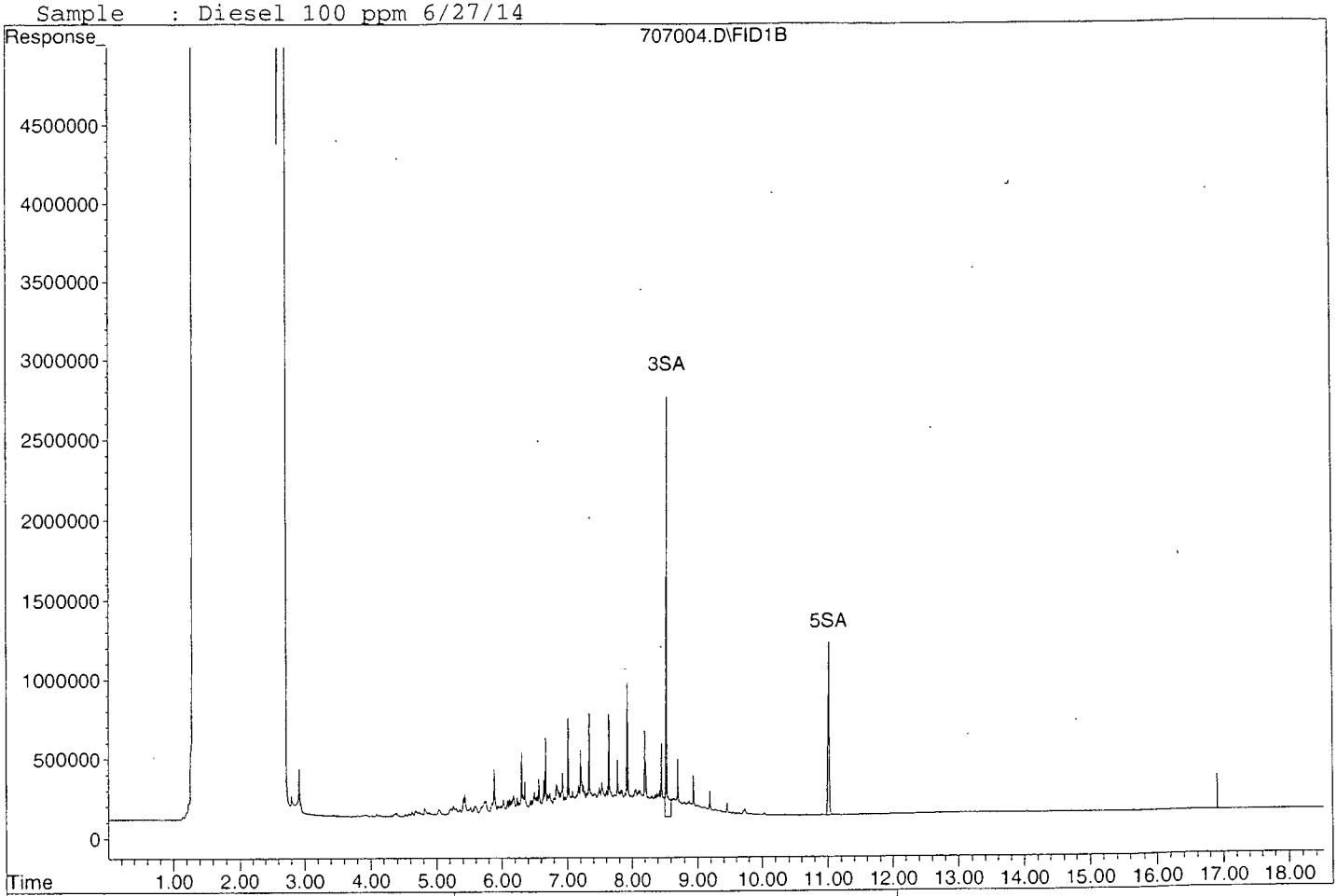
Data File : G:\APOLLO\DATA\140707\707004.D Vial: 4
Acq On : 7-7-14 13:27:32 Operator: MA
Sample : Diesel 100 ppm 6/27/14 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

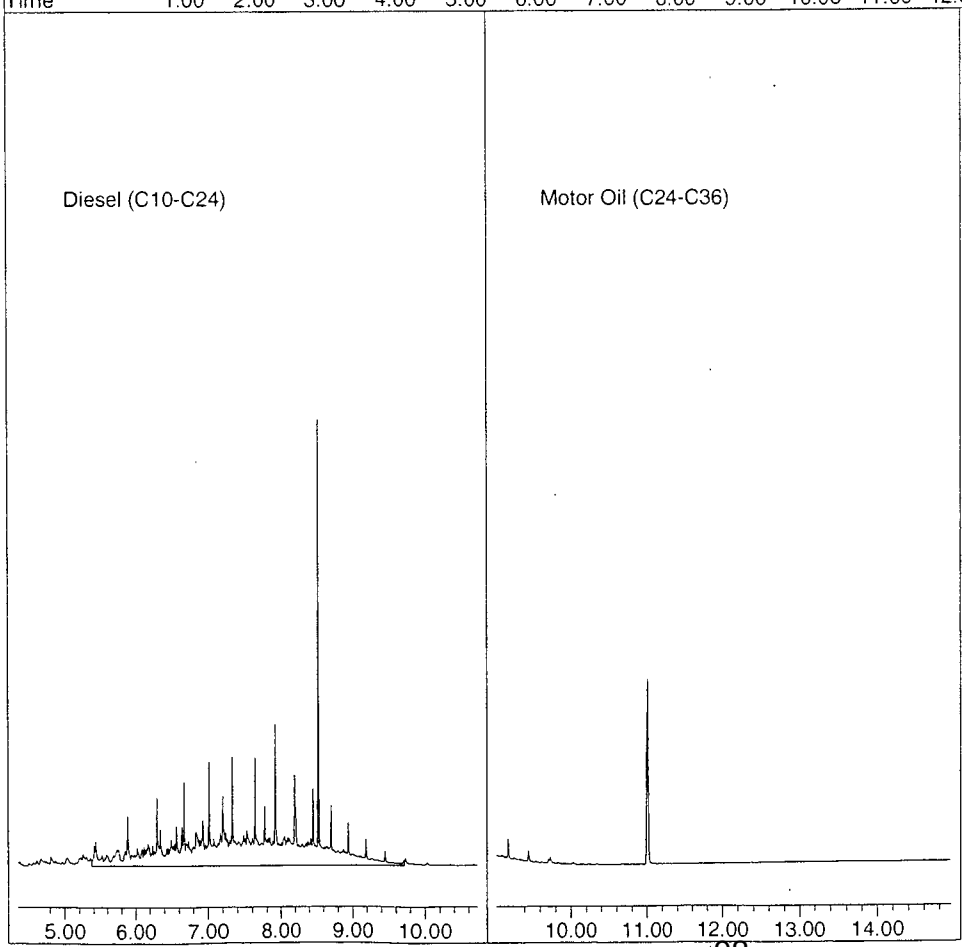
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Not Used(S)	8.53	22247703	5.946 ppb
Surrogate Spike 75.000	Recovery =		7.93%
5) SA Not Used2(S)	11.01	14560971	5.921 ppb
Surrogate Spike 75.000	Recovery =		7.89%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	278367547	103.859 ppb

Data File: G:\APOLLO\DATA\140707\707004.D
Sample : Diesel 100 ppm 6/27/14





Quantitation Report (Not Reviewed)

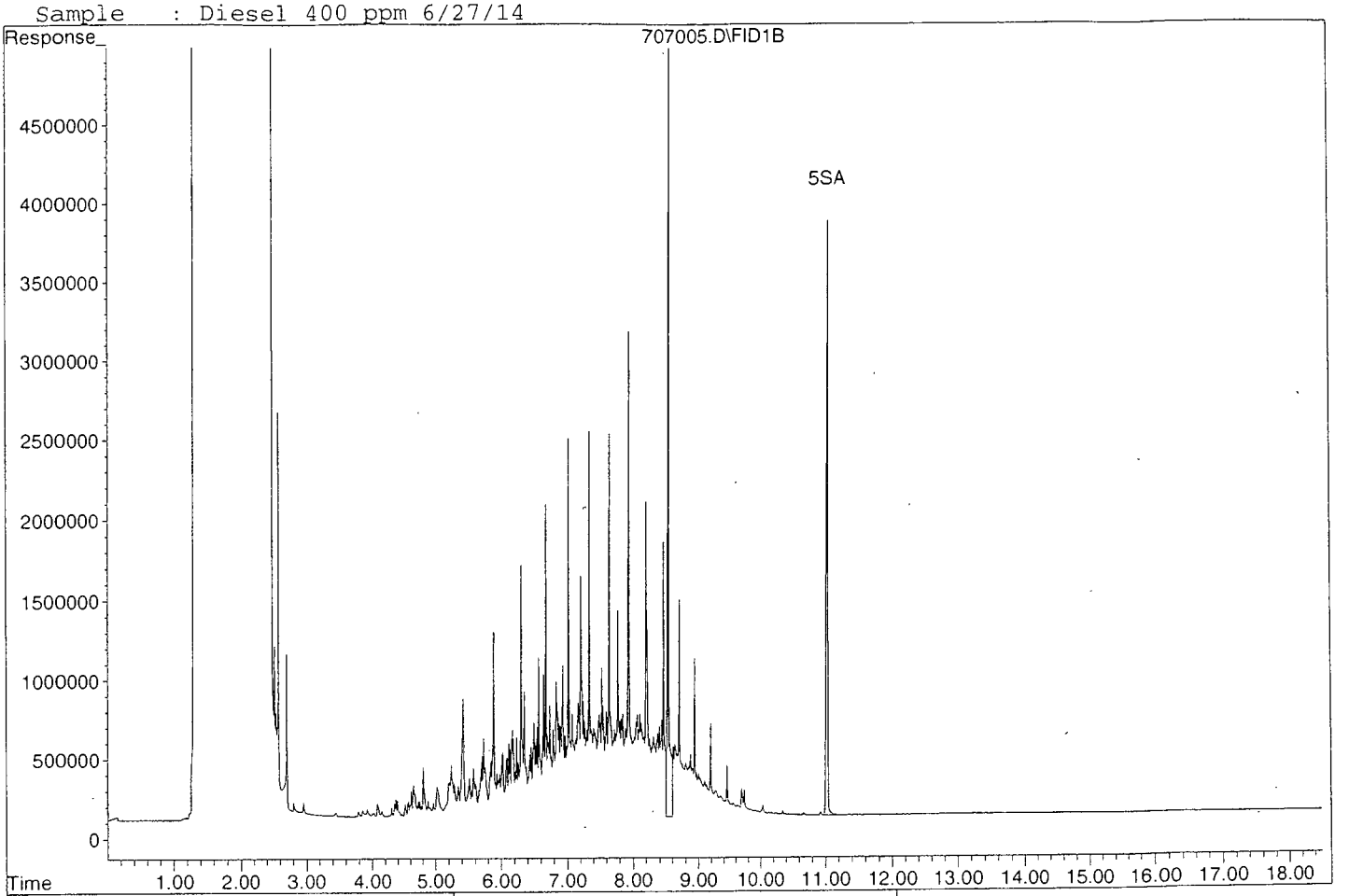
Data File : G:\APOLLO\DATA\140707\707005.D Vial: 5
Acq On : 7-7-14 13:52:19 Operator: MA
Sample : Diesel 400 ppm 6/27/14 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

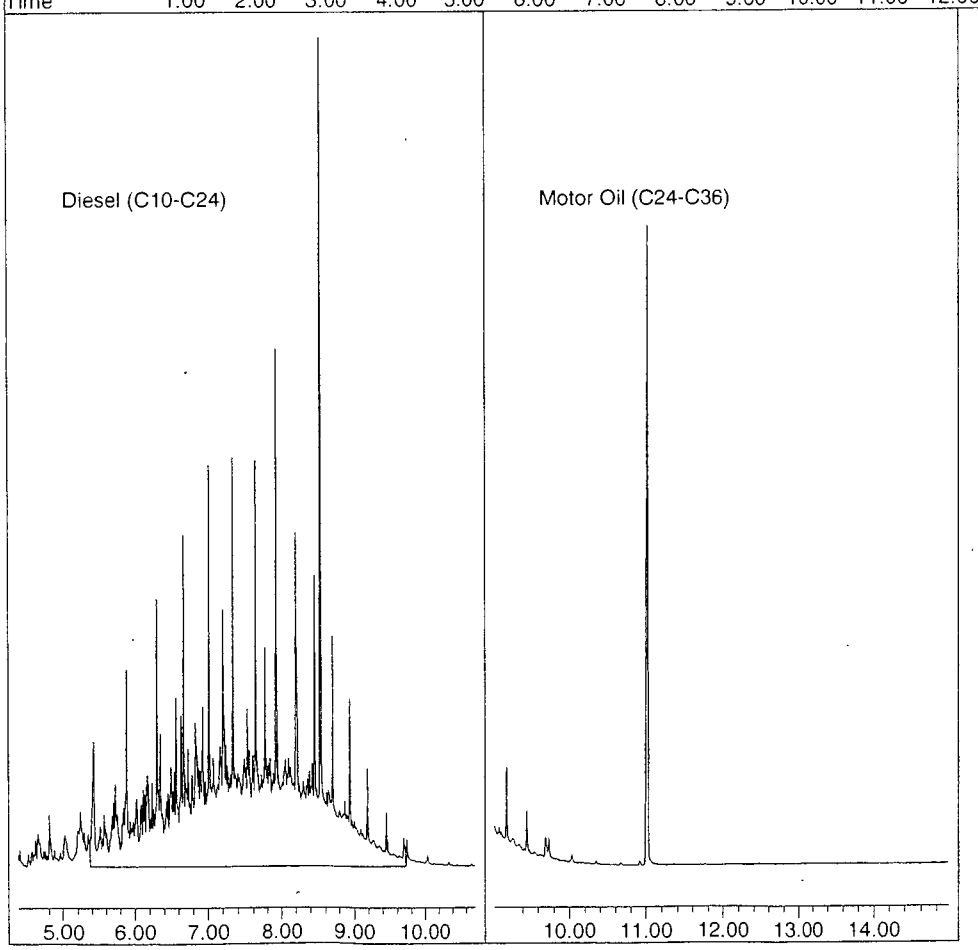
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Not Used(S)	8.53	85228531	22.779 ppb
Surrogate Spike 75.000	Recovery =		30.37%
5) SA Not Used2(S)	11.02	54653406	22.225 ppb
Surrogate Spike 75.000	Recovery =		29.63%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	1055999304	393.992 ppb

Data File: G:\APOLLO\DATA\140707\707005.D
Sample : Diesel 400 ppm 6/27/14





Quantitation Report (Not Reviewed)

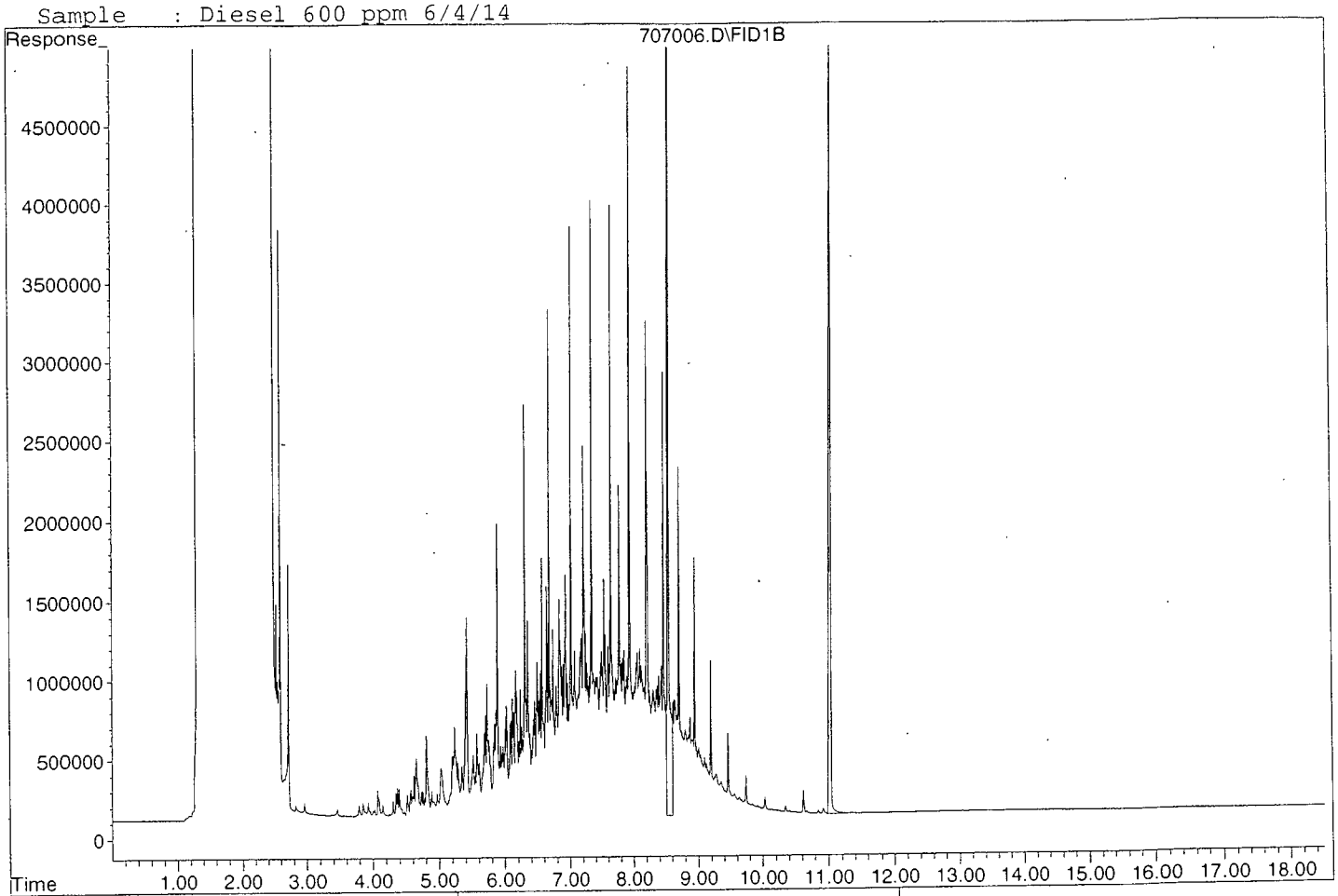
Data File : G:\APOLLO\DATA\140707\707006.D Vial: 6
Acq On : 7-7-14 14:16:58 Operator: MA
Sample : Diesel 600 ppm 6/4/14 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

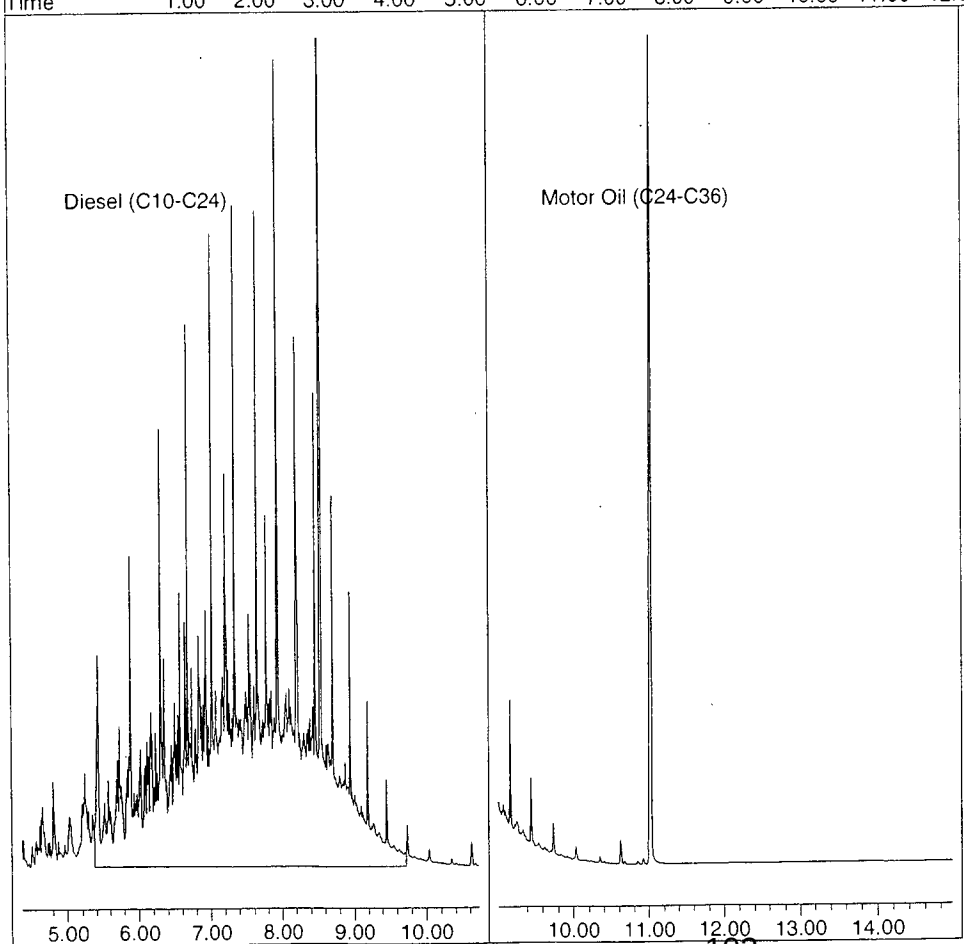
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Not Used(S)	8.54	137141781	36.654 ppb
Surrogate Spike 75.000	Recovery =		48.87%
5) SA Not Used2(S)	11.02	89572082	36.424 ppb
Surrogate Spike 75.000	Recovery =		48.57%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	1695336545	632.528 ppb

Data File: G:\APOLLO\DATA\140707\707006.D
Sample : Diesel 600 ppm 6/4/14





Quantitation Report (Not Reviewed)

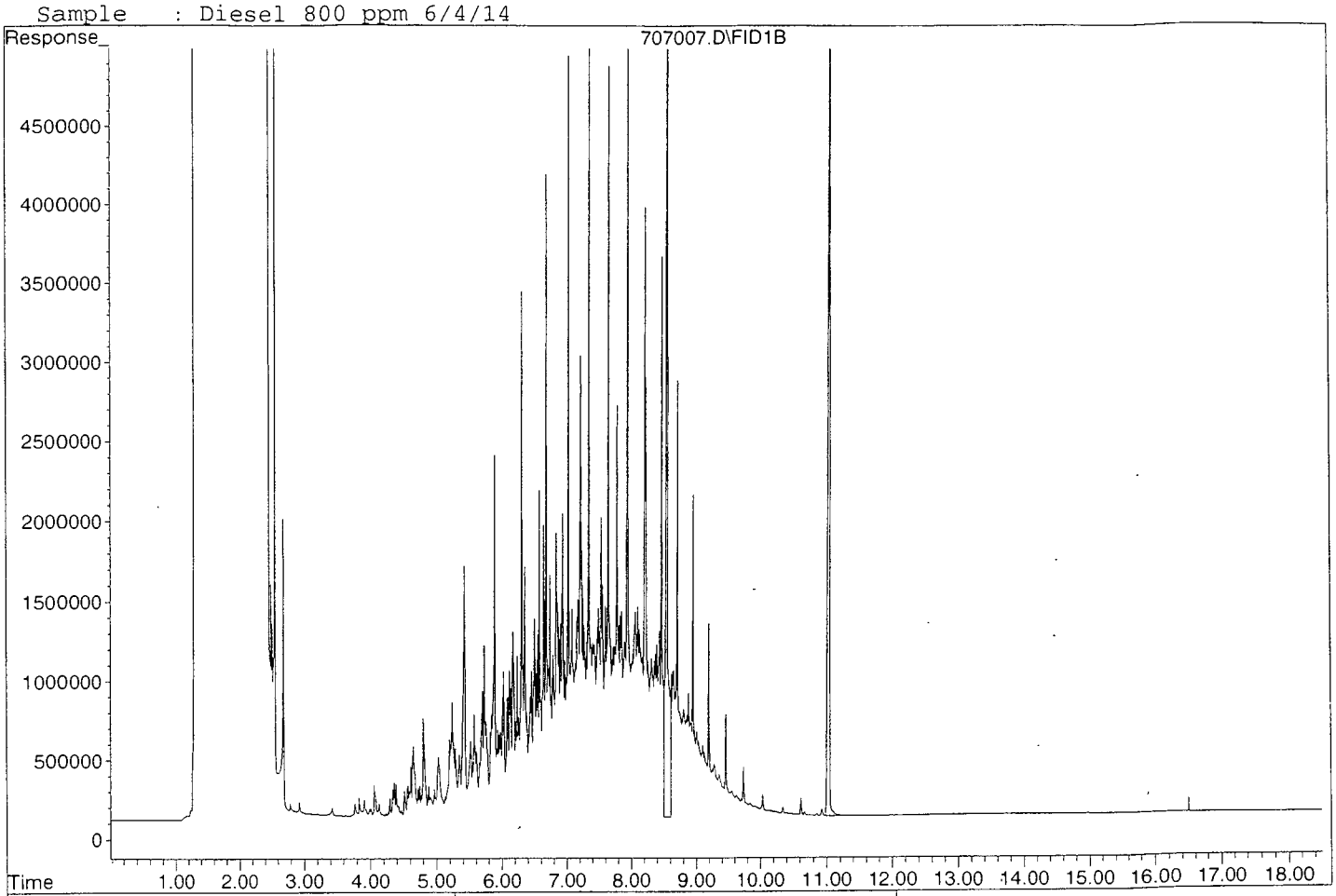
Data File : G:\APOLLO\DATA\140707\707007.D Vial: 7
Acq On : 7-7-14 14:41:40 Operator: MA
Sample : Diesel 800 ppm 6/4/14 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

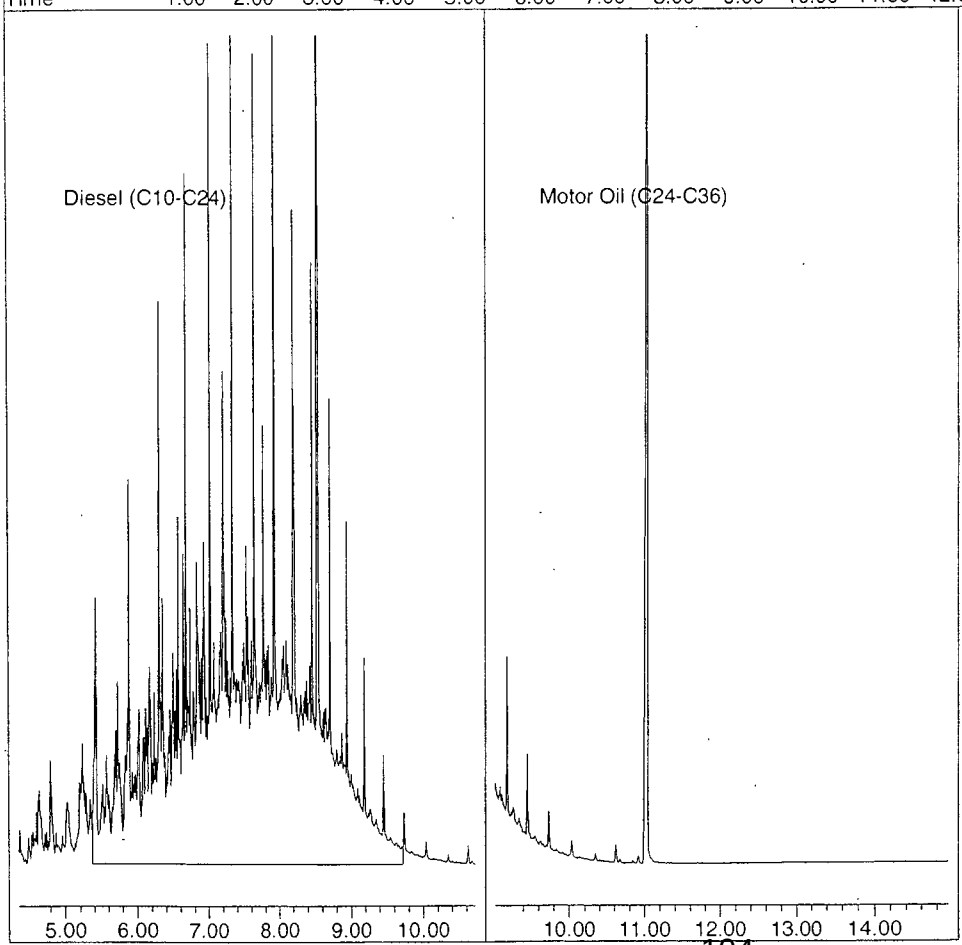
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Not Used(S)	8.54	172586284	46.128 ppb
Surrogate Spike 75.000	Recovery =		61.50%
5) SA Not Used2(S)	11.03	112078567	45.576 ppb
Surrogate Spike 75.000	Recovery =		60.77%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	2133260728	795.917 ppb

Data File: G:\APOLLO\DATA\140707\707007.D
Sample : Diesel 800 ppm 6/4/14





Quantitation Report (Not Reviewed)

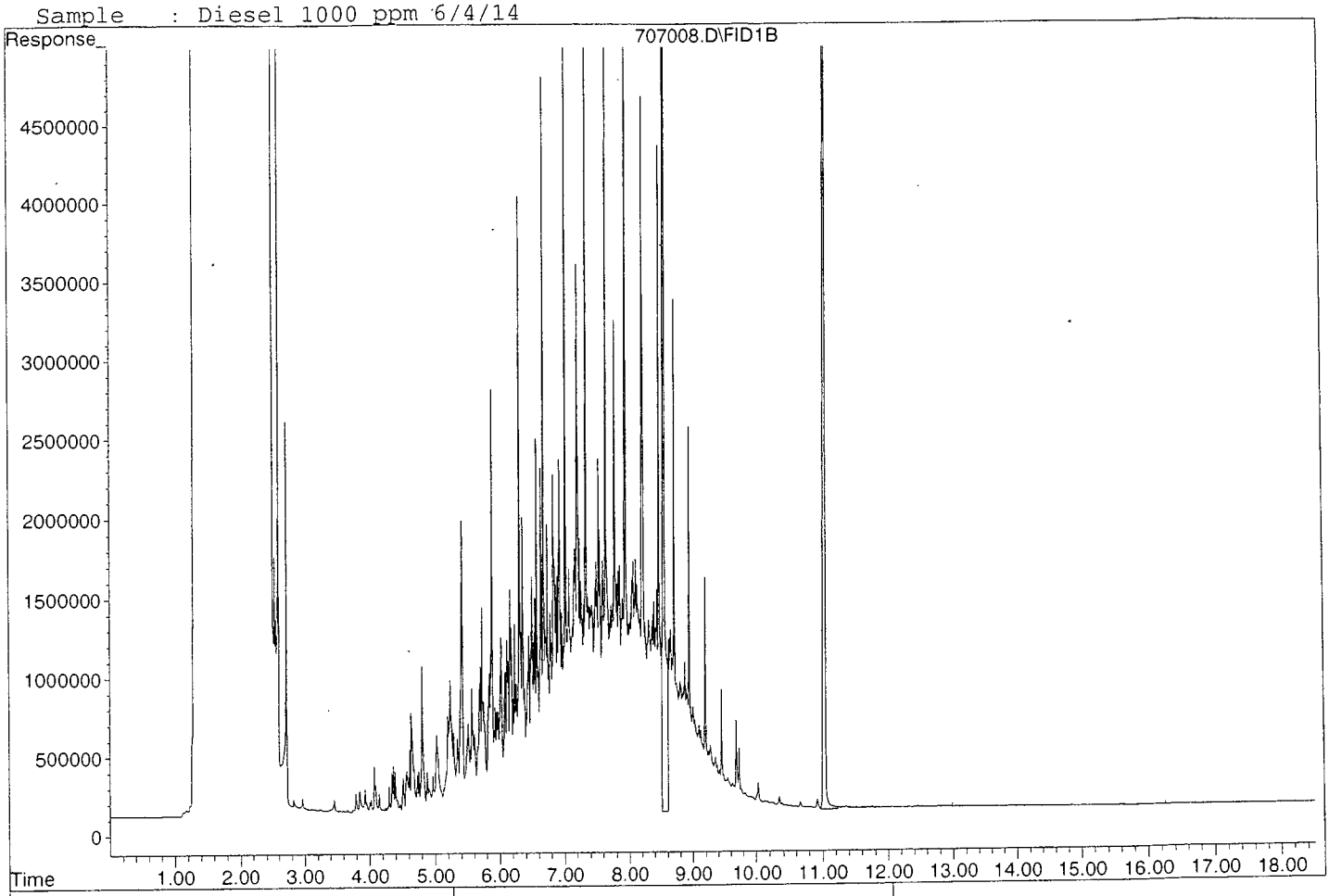
Data File : G:\APOLLO\DATA\140707\707008.D Vial: 8
Acq On : 7-7-14 15:06:56 Operator: MA
Sample : Diesel 1000 ppm 6/4/14 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

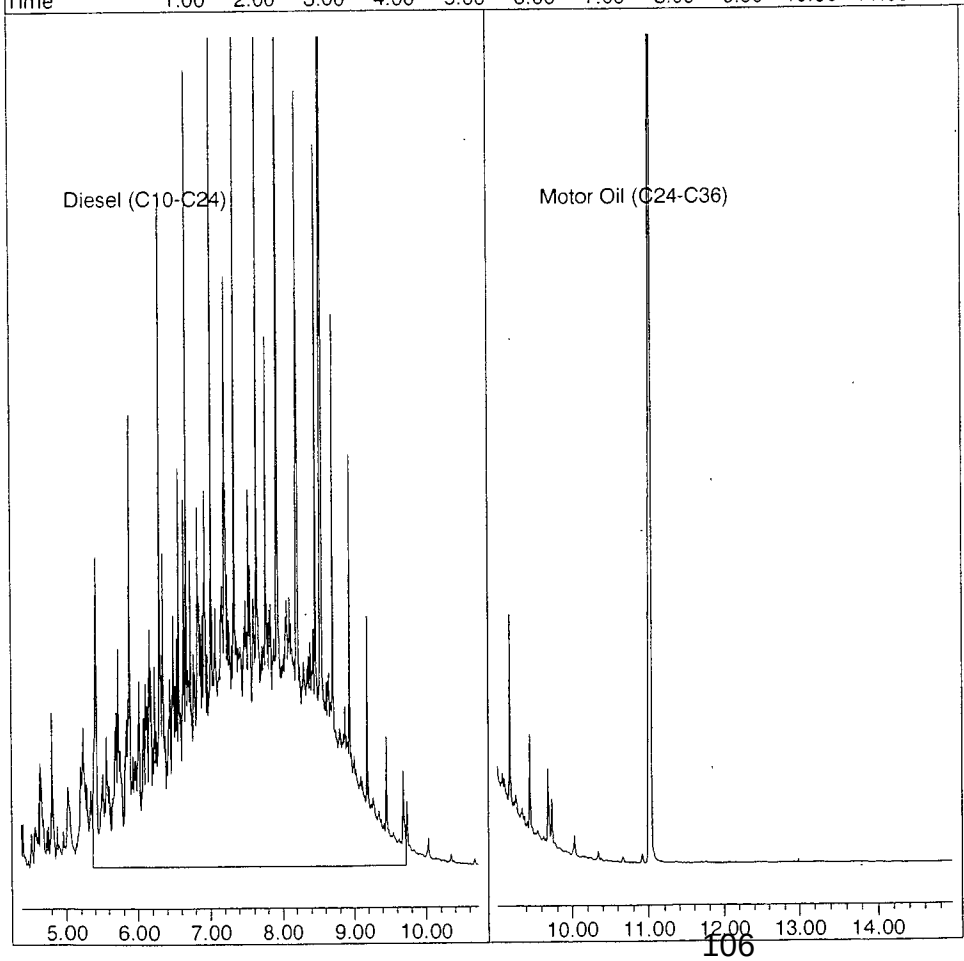
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Not Used(S)	8.54	206547816	55.205 ppb
Surrogate Spike 75.000	Recovery =		73.61%
5) SA Not Used2(S)	11.03	131939008	53.653 ppb
Surrogate Spike 75.000	Recovery =		71.54%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	2558610360	954.615 ppb

Data File: G:\APOLLO\DATA\140707\707008.D
Sample : Diesel 1000 ppm 6/4/14





Quantitation Report (Not Reviewed)

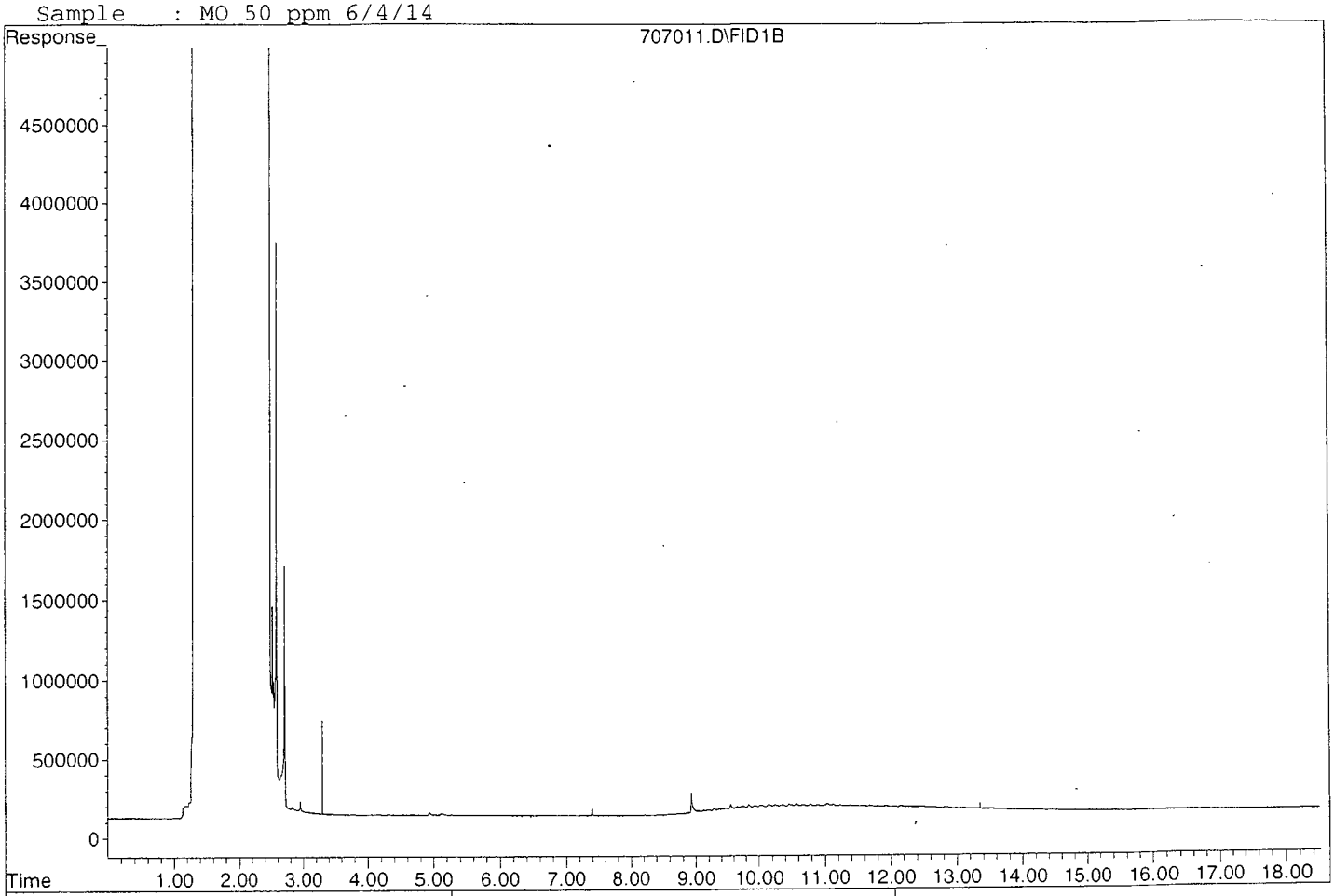
Data File : G:\APOLLO\DATA\140707\707011.D Vial: 11
Acq On : 7-7-14 16:21:09 Operator: MA
Sample : MO 50 ppm 6/4/14 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

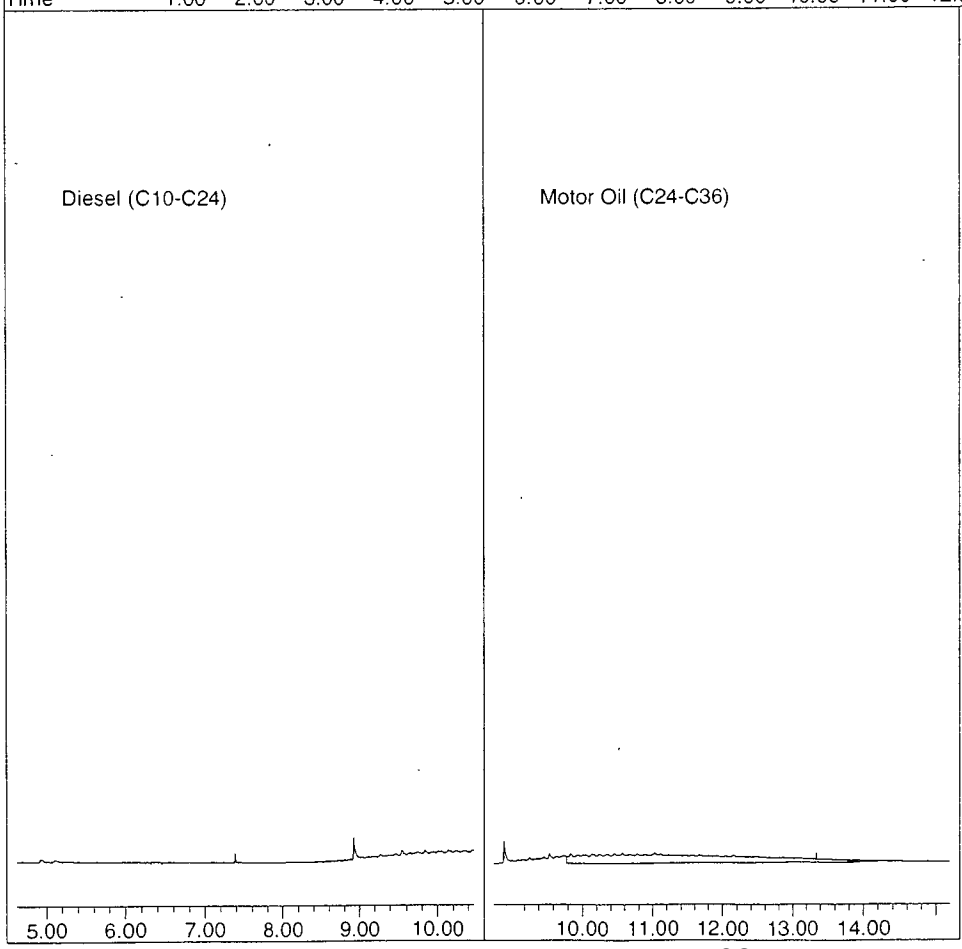
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C36)	11.99	87735469	39.732 ppb

Data File: G:\APOLLO\DATA\140707\707011.D
Sample : MO 50 ppm 6/4/14





Quantitation Report (Not Reviewed)

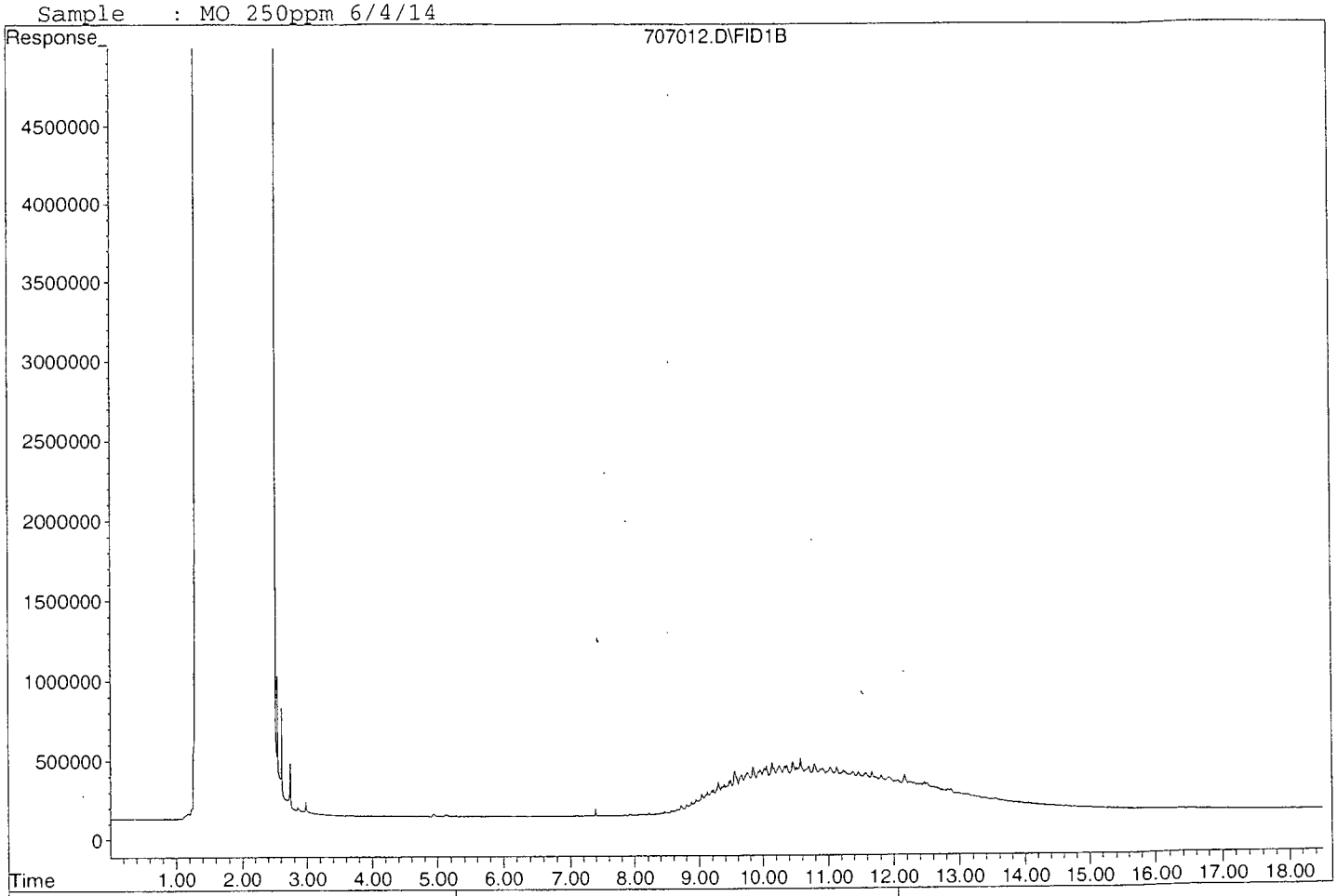
Data File : G:\APOLLO\DATA\140707\707012.D Vial: 12
Acq On : 7-7-14 16:46:09 Operator: MA
Sample : MO 250ppm 6/4/14 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

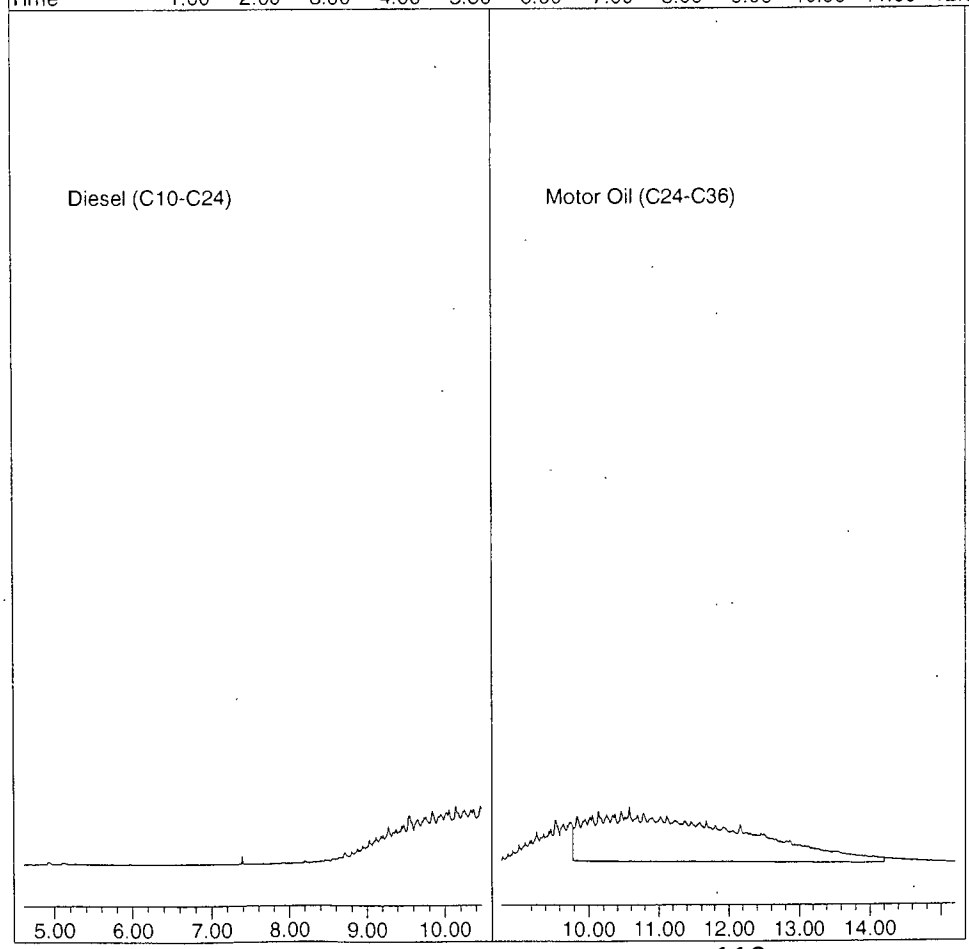
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C36)	11.99	410224343	185.776 ppb

Data File: G:\APOLLO\DATA\140707\707012.D
Sample : MO 250ppm 6/4/14





Quantitation Report (Not Reviewed)

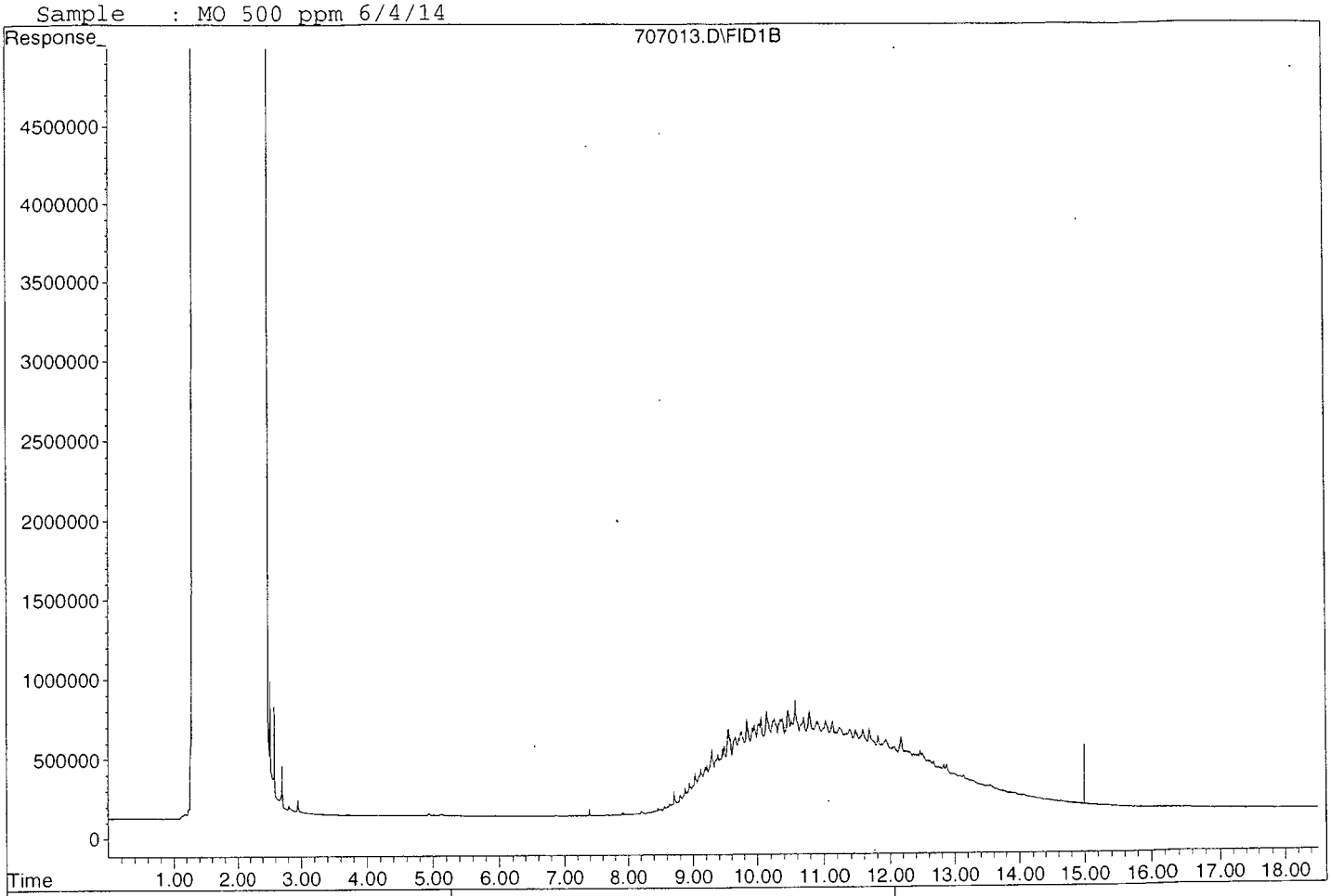
Data File : G:\APOLLO\DATA\140707\707013.D Vial: 13
Acq On : 7-7-14 17:11:16 Operator: MA
Sample : MO 500 ppm 6/4/14 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

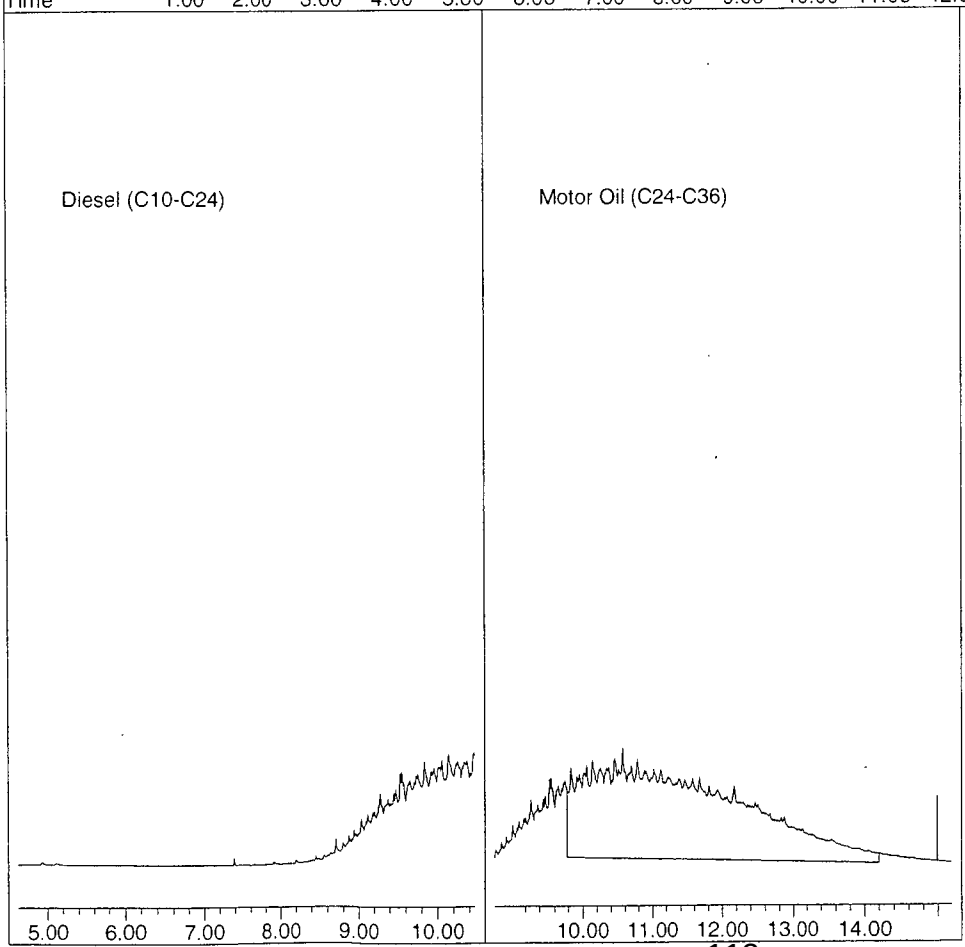
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C36)	11.99	836252059	378.710 ppb

Data File: G:\APOLLO\DATA\140707\707013.D
Sample : MO 500 ppm 6/4/14





Quantitation Report (Not Reviewed)

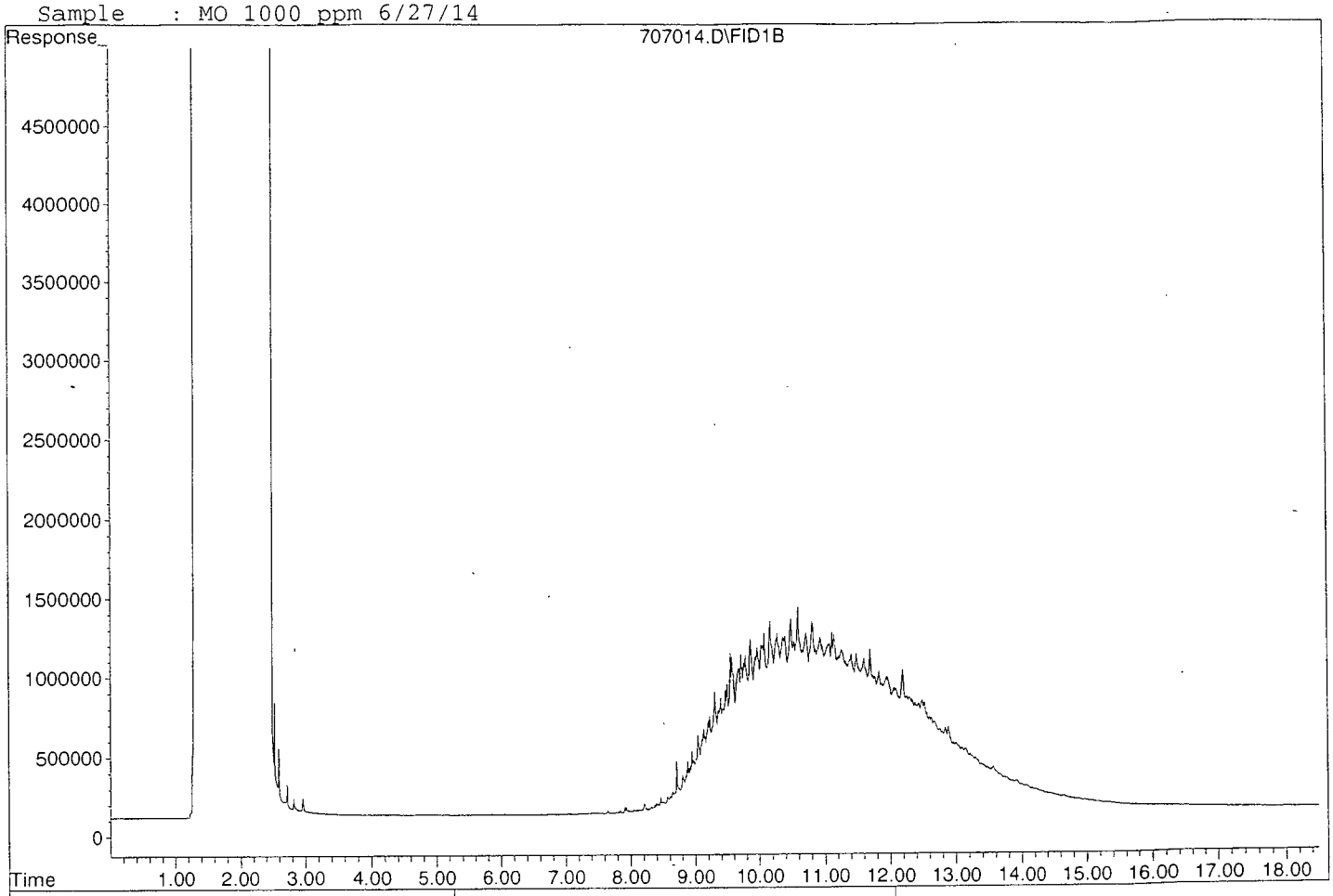
Data File : G:\APOLLO\DATA\140707\707014.D Vial: 14
Acq On : 7-7-14 17:36:01 Operator: MA
Sample : MO 1000 ppm 6/27/14 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

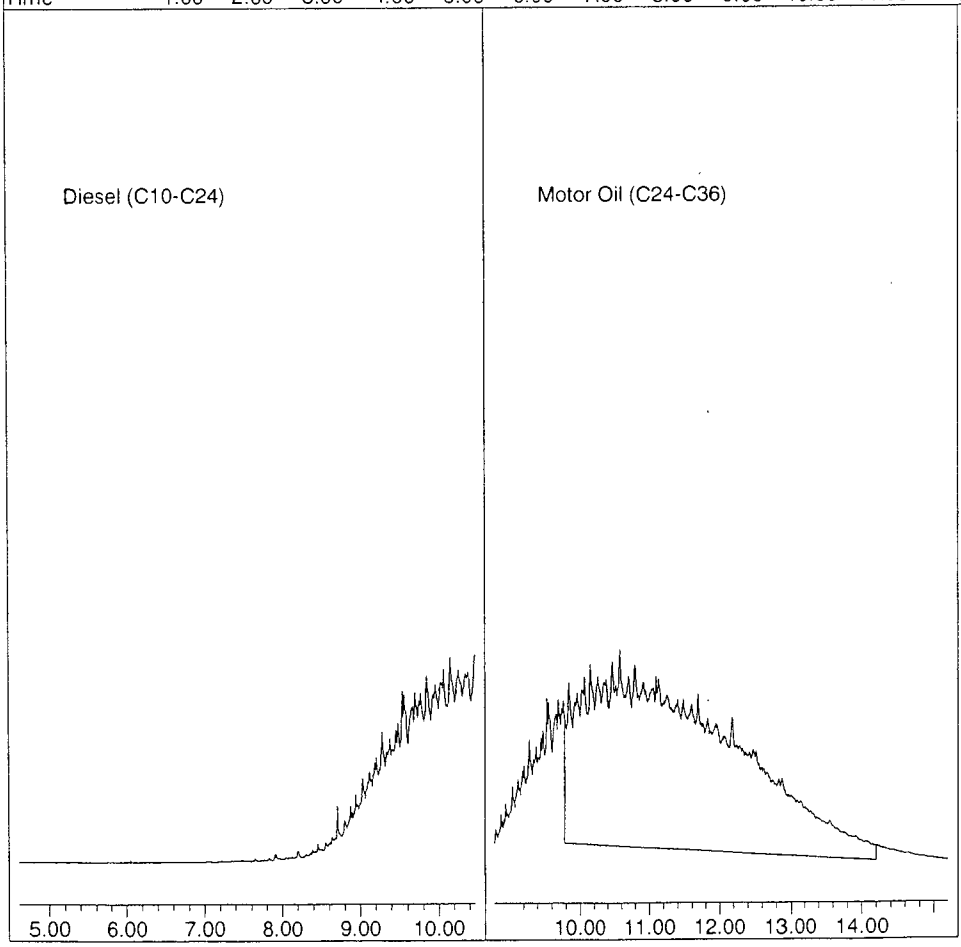
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C36)	11.99	1525444946	690.821 ppb

Data File: G:\APOLLO\DATA\140707\707014.D
Sample : MO 1000 ppm 6/27/14





Quantitation Report (Not Reviewed)

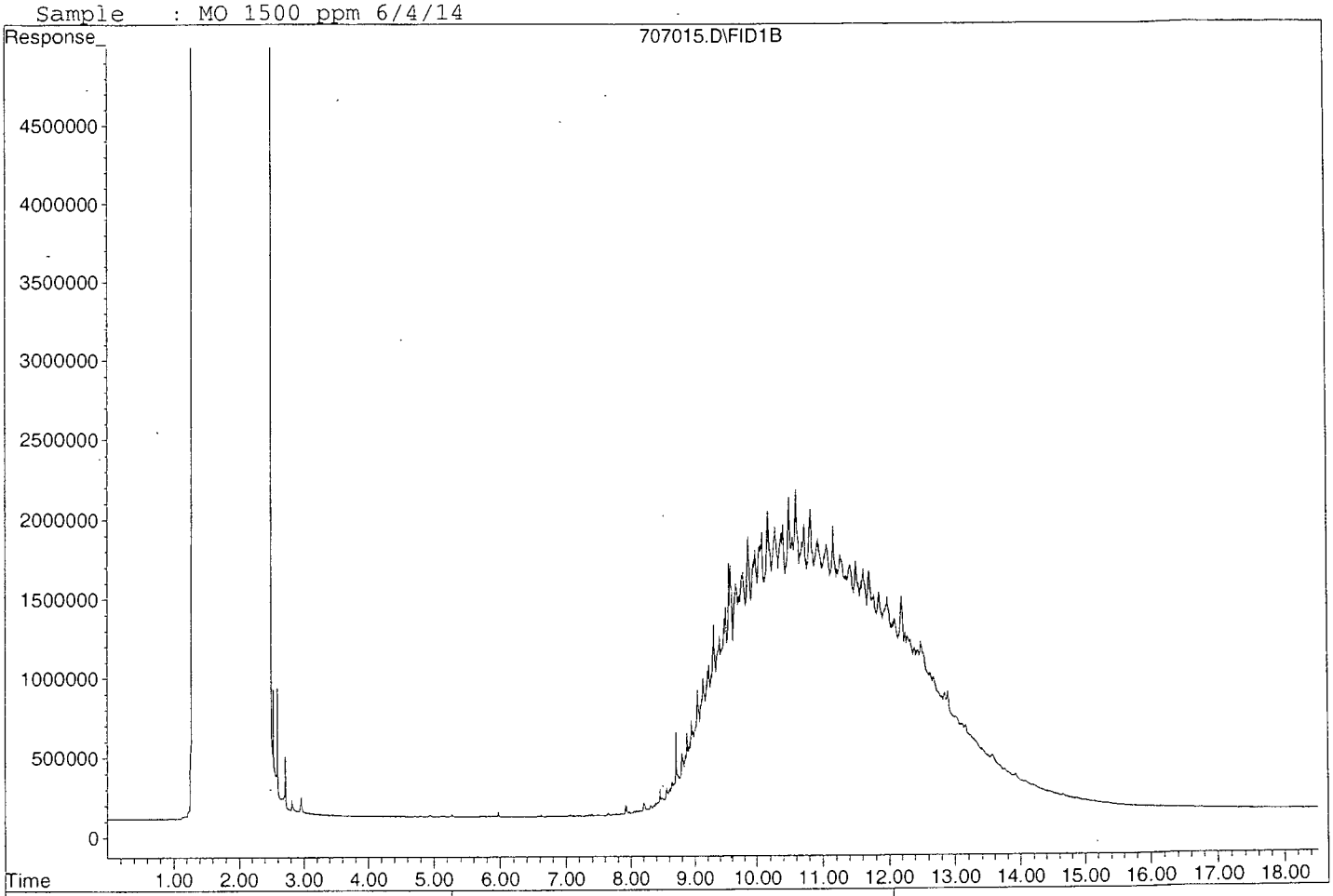
Data File : G:\APOLLO\DATA\140707\707015.D Vial: 15
Acq On : 7-7-14 18:00:31 Operator: MA
Sample : MO 1500 ppm 6/4/14 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

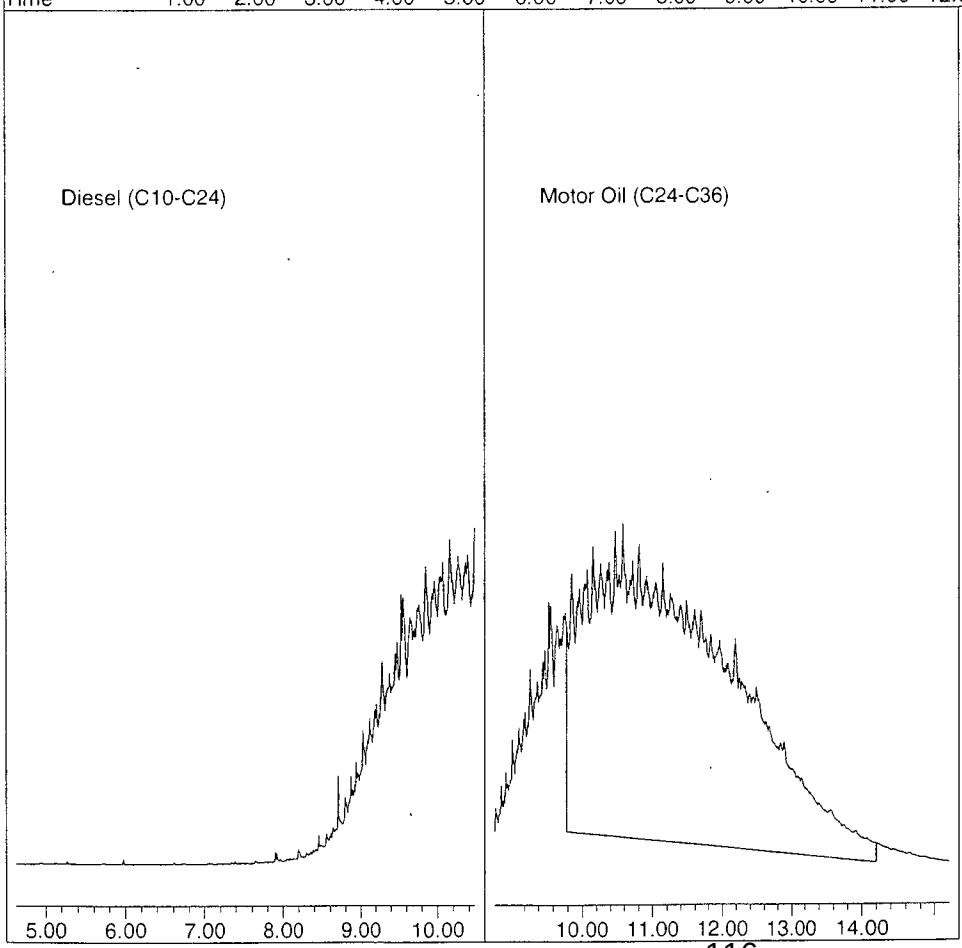
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C36)	11.99	2383709614	1079.499	ppb

Data File: G:\APOLLO\DATA\140707\707015.D
Sample : MO 1500 ppm 6/4/14





Quantitation Report (Not Reviewed)

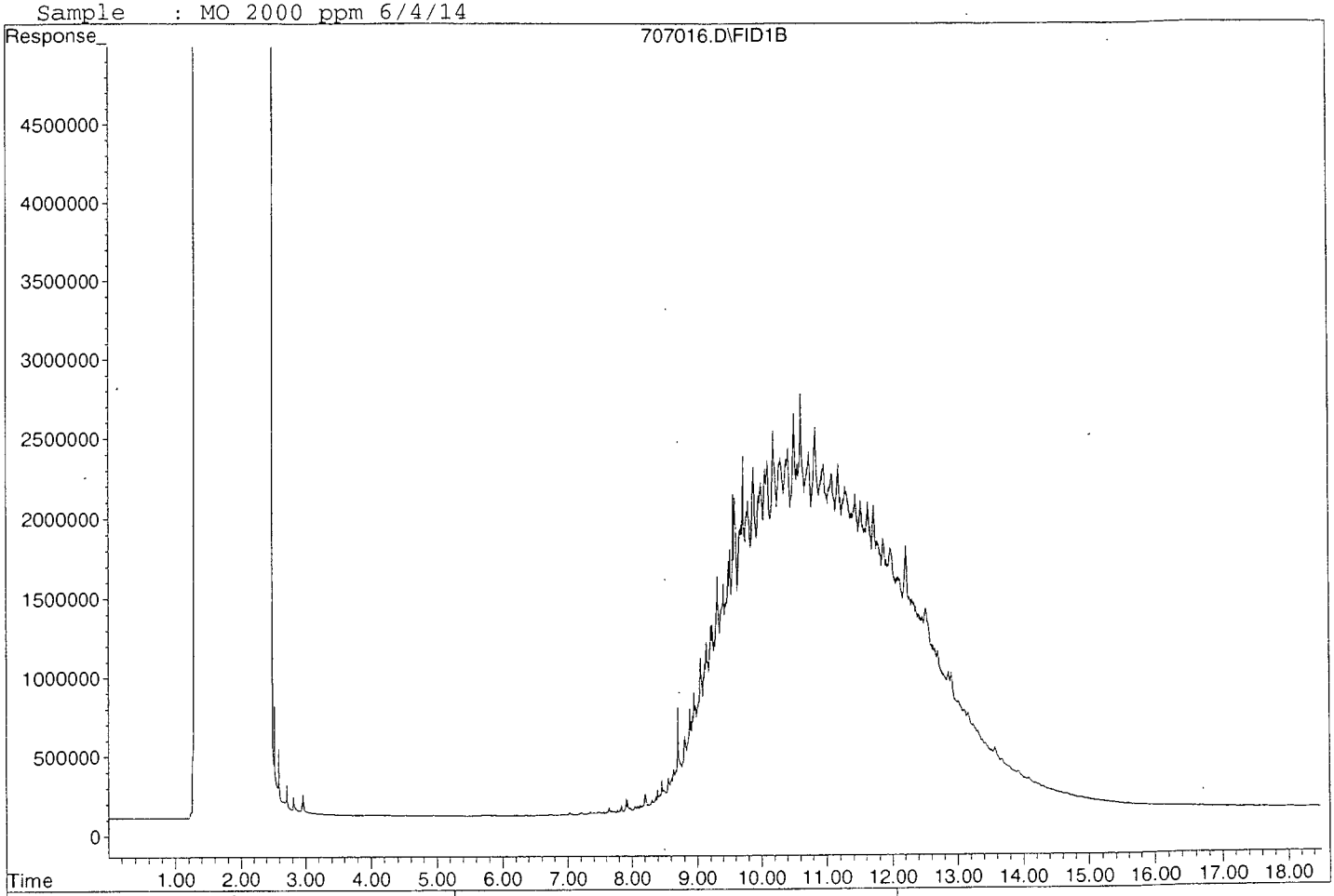
Data File : G:\APOLLO\DATA\140707\707016.D Vial: 16
Acq On : 7-7-14 18:25:13 Operator: MA
Sample : MO 2000 ppm 6/4/14 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

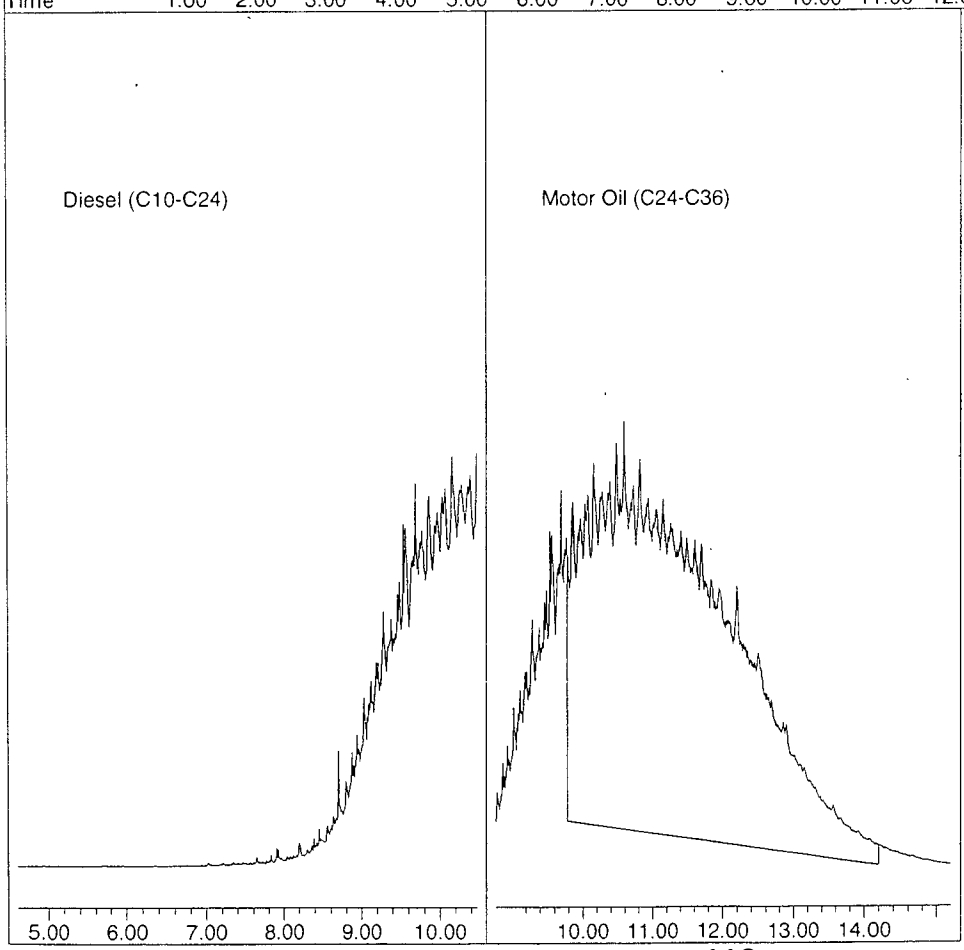
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C36)	11.99	2936129620	1329.671	ppb

Data File: G:\APOLLO\DATA\140707\707016.D
Sample : MO 2000 ppm 6/4/14





Quantitation Report (Not Reviewed)

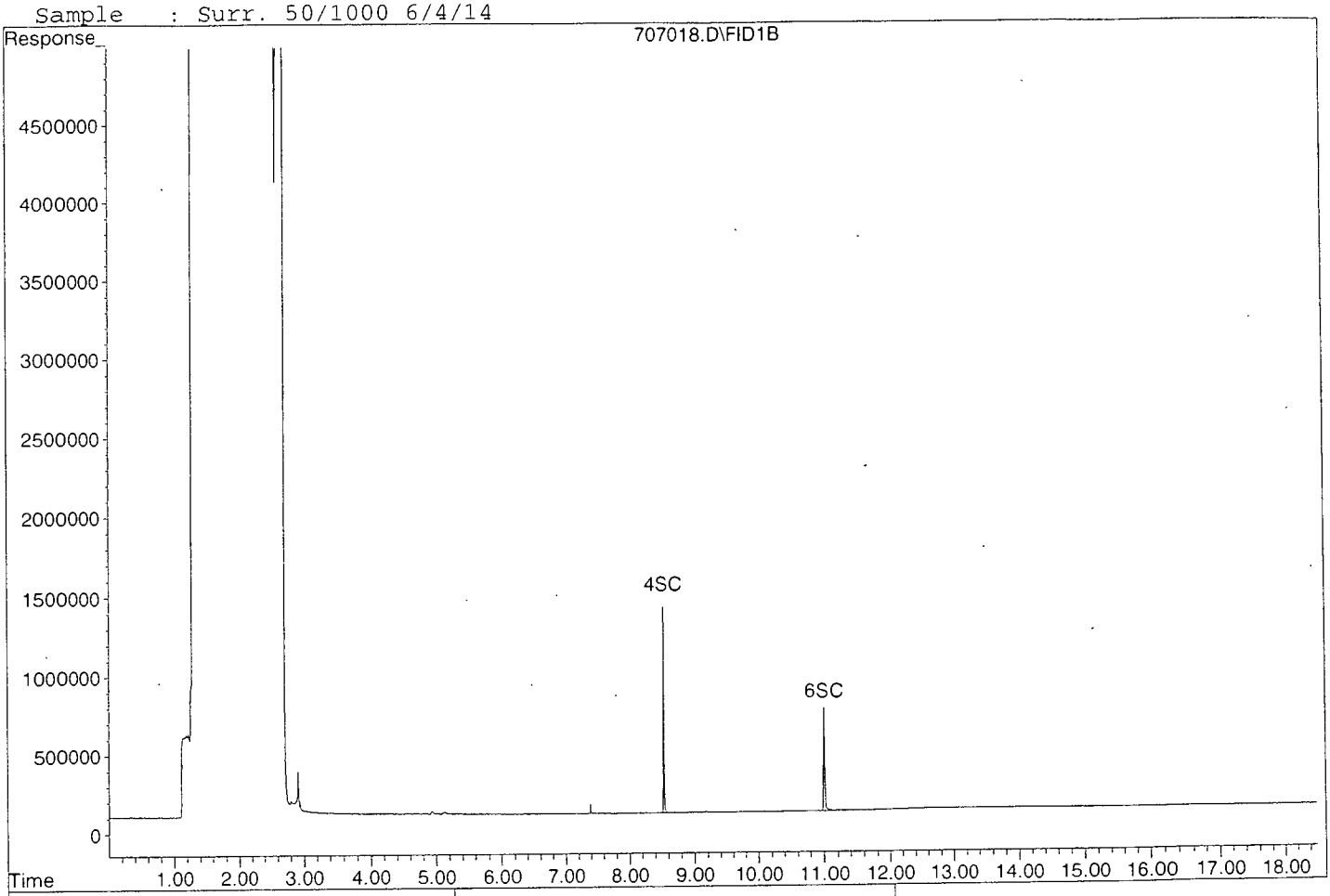
Data File : G:\APOLLO\DATA\140707\707018.D Vial: 18
Acq On : 7-7-14 19:15:08 Operator: MA
Sample : Surr. 50/1000 6/4/14 Inst : Apollo
Misc : Mix(C) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

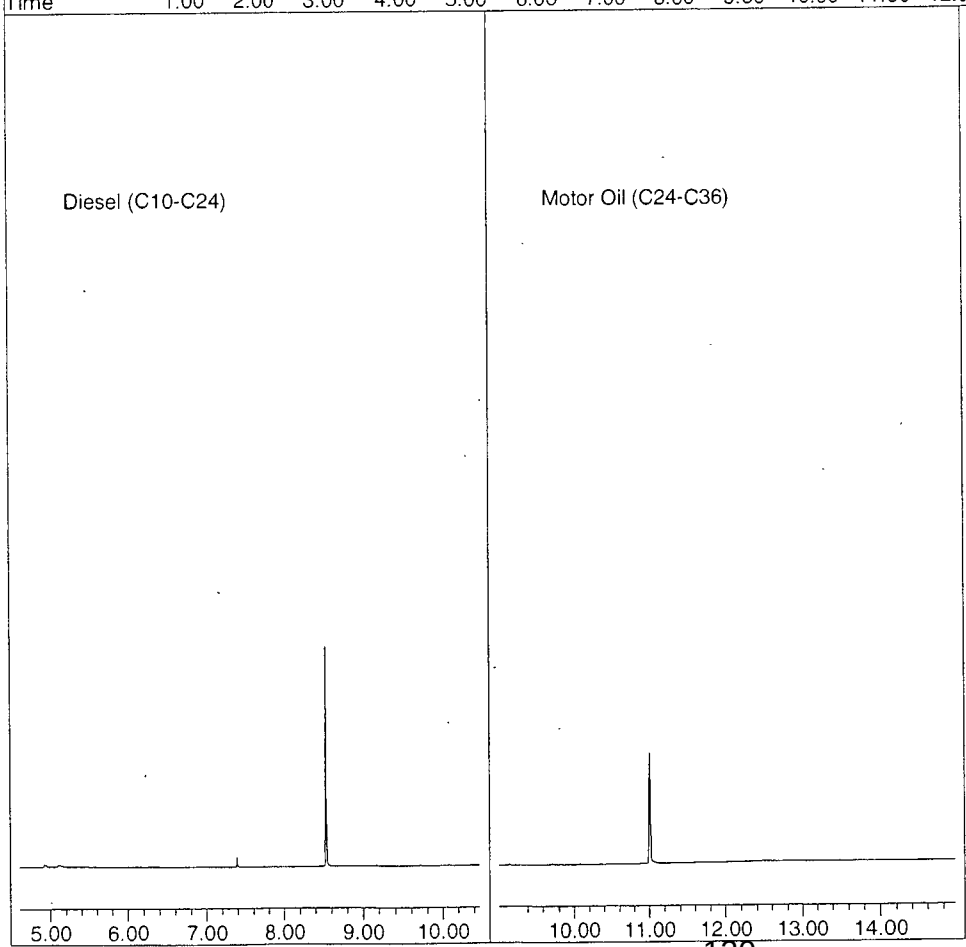
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.53	9551266	3.030 ppb
Surrogate Spike 30.000	Recovery =		10.10%
6) SC Octacosane(S)	11.01	9205487	3.085 ppb
Surrogate Spike 30.000	Recovery =		10.28%
Target Compounds			

Data File: G:\APOLLO\DATA\140707\707018.D
Sample : Surr. 50/1000 6/4/14





Quantitation Report (Not Reviewed)

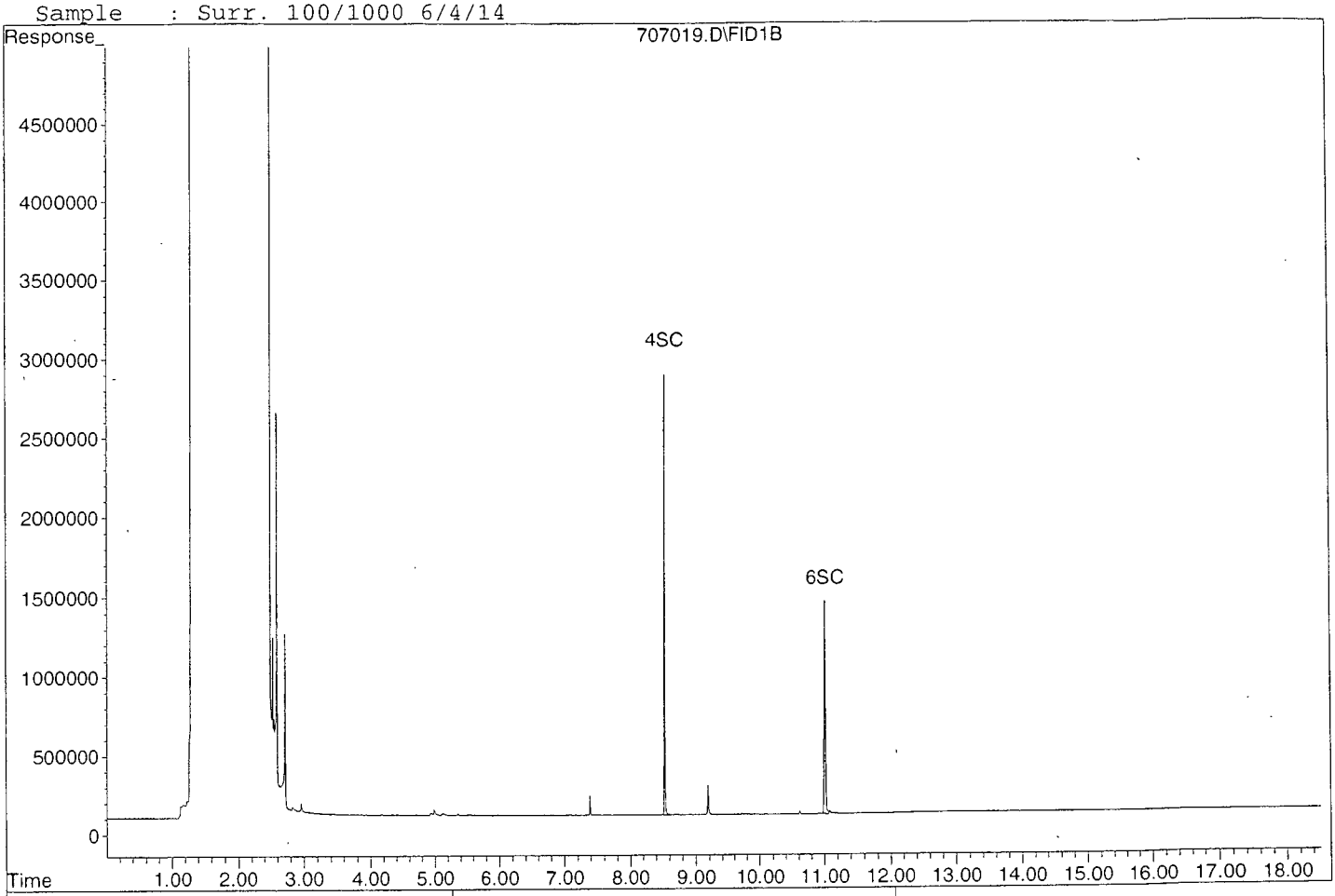
Data File : G:\APOLLO\DATA\140707\707019.D Vial: 19
Acq On : 7-7-14 19:40:00 Operator: MA
Sample : Surr. 100/1000 6/4/14 Inst : Apollo
Misc : Mix(C) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

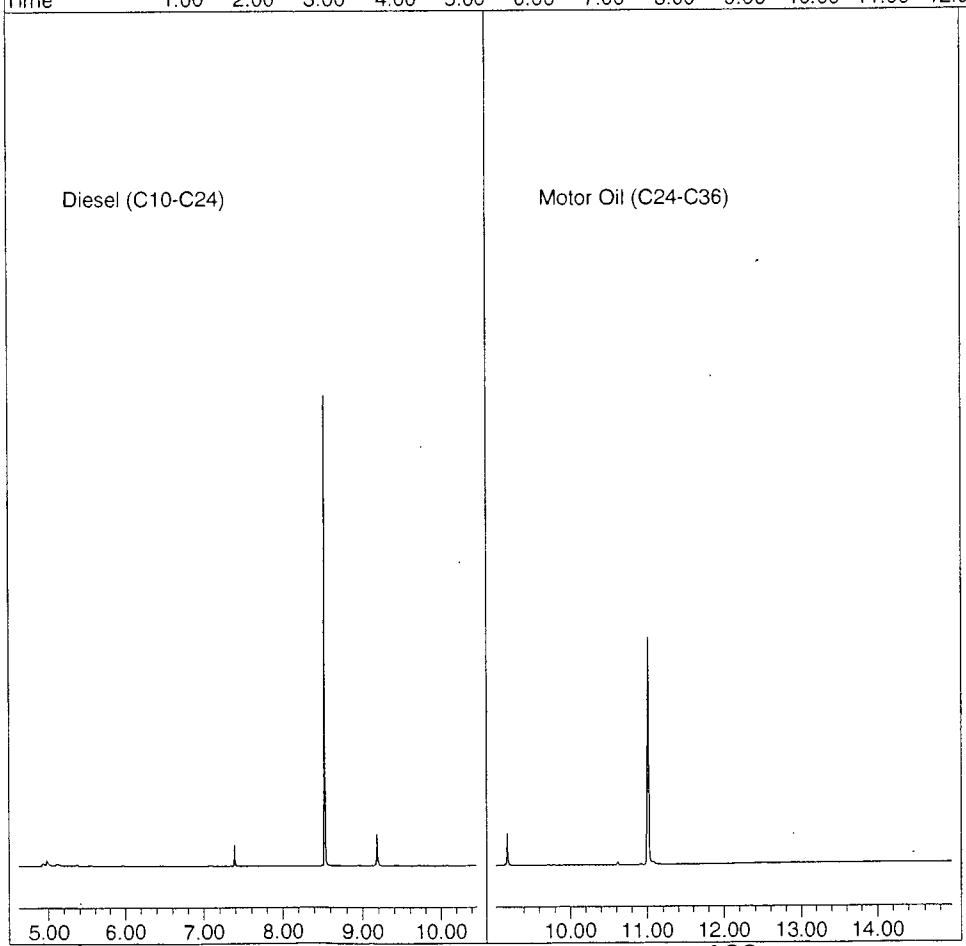
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SC Ortho-Terphenyl(S)	8.53	19226607	6.100	ppb
Surrogate Spike 30.000		Recovery =	20.33%	
6) SC Octacosane(S)	11.01	17721301	5.939	ppb
Surrogate Spike 30.000		Recovery =	19.80%	
Target Compounds				

Data File: G:\APOLLO\DATA\140707\707019.D
Sample : Surr. 100/1000 6/4/14





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\140707\707020.D Vial: 20
Acq On : 7-7-14 20:05:05 Operator: MA
Sample : Surr. 400/1000 6/4/14 Inst : Apollo
Misc : Mix(C) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

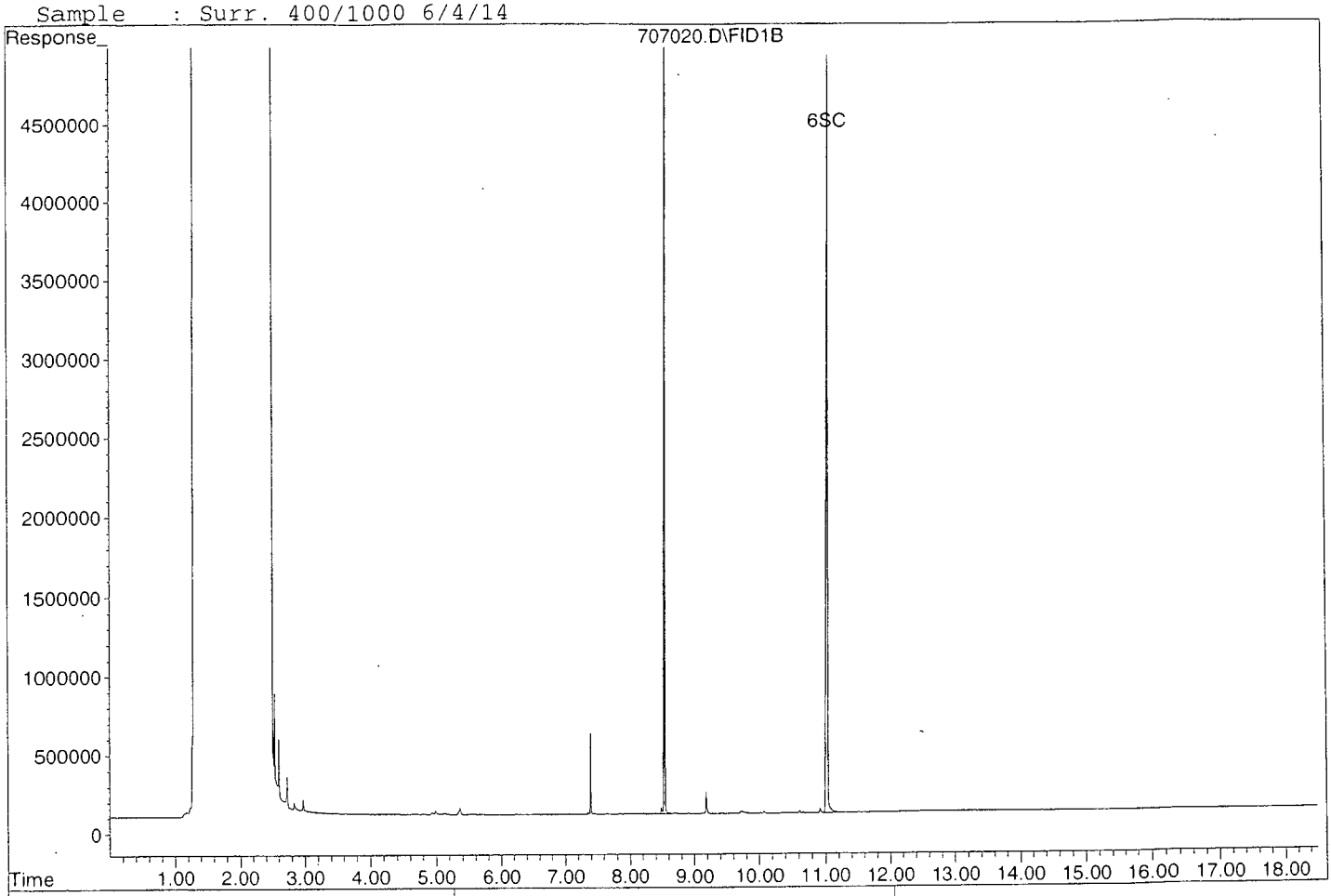
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

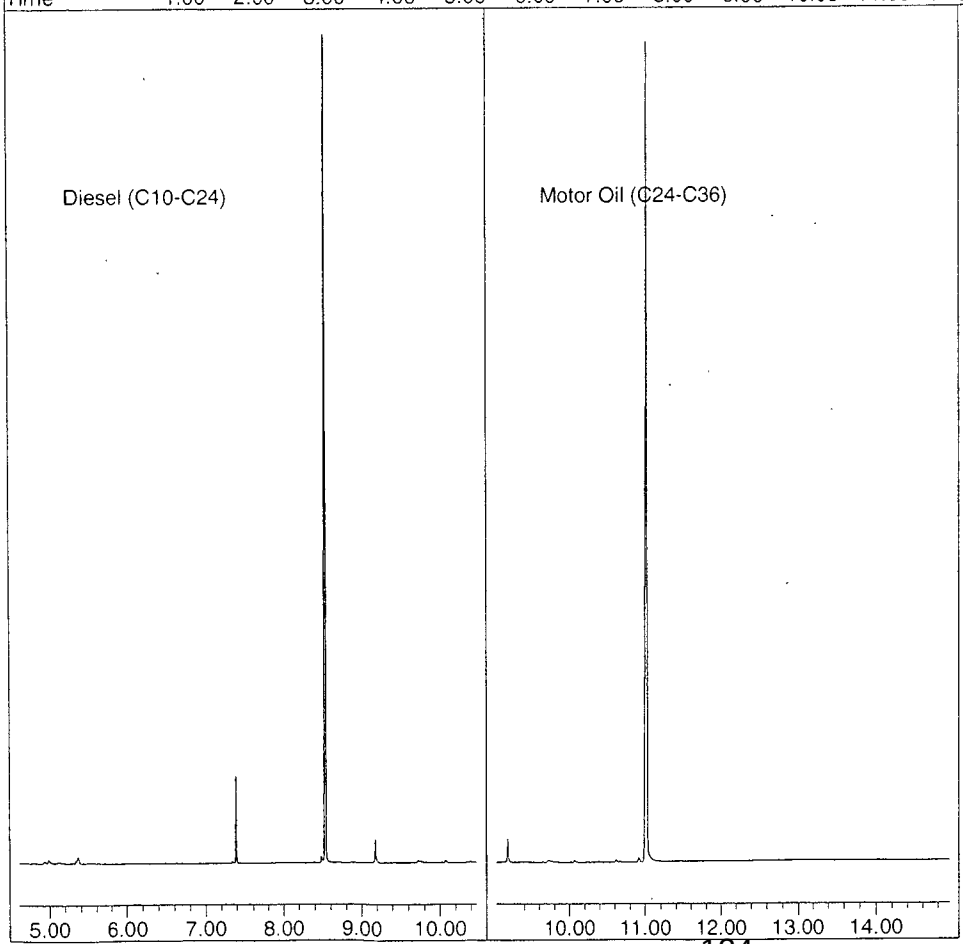
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SC Ortho-Terphenyl(S)	8.53	74741679	23.711	ppb
Surrogate Spike 30.000	Recovery =		79.04%	
6) SC Octacosane(S)	11.02	70872060	23.750	ppb
Surrogate Spike 30.000	Recovery =		79.17%	
Target Compounds				

Quantitation Report

Data File: G:\APOLLO\DATA\140707\707020.D
Sample : Surr. 400/1000 6/4/14





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\140707\707021.D Vial: 21
Acq On : 7-7-14 20:30:22 Operator: MA
Sample : Surr. 600/1000 6/4/14 Inst : Apollo
Misc : Mix(C) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

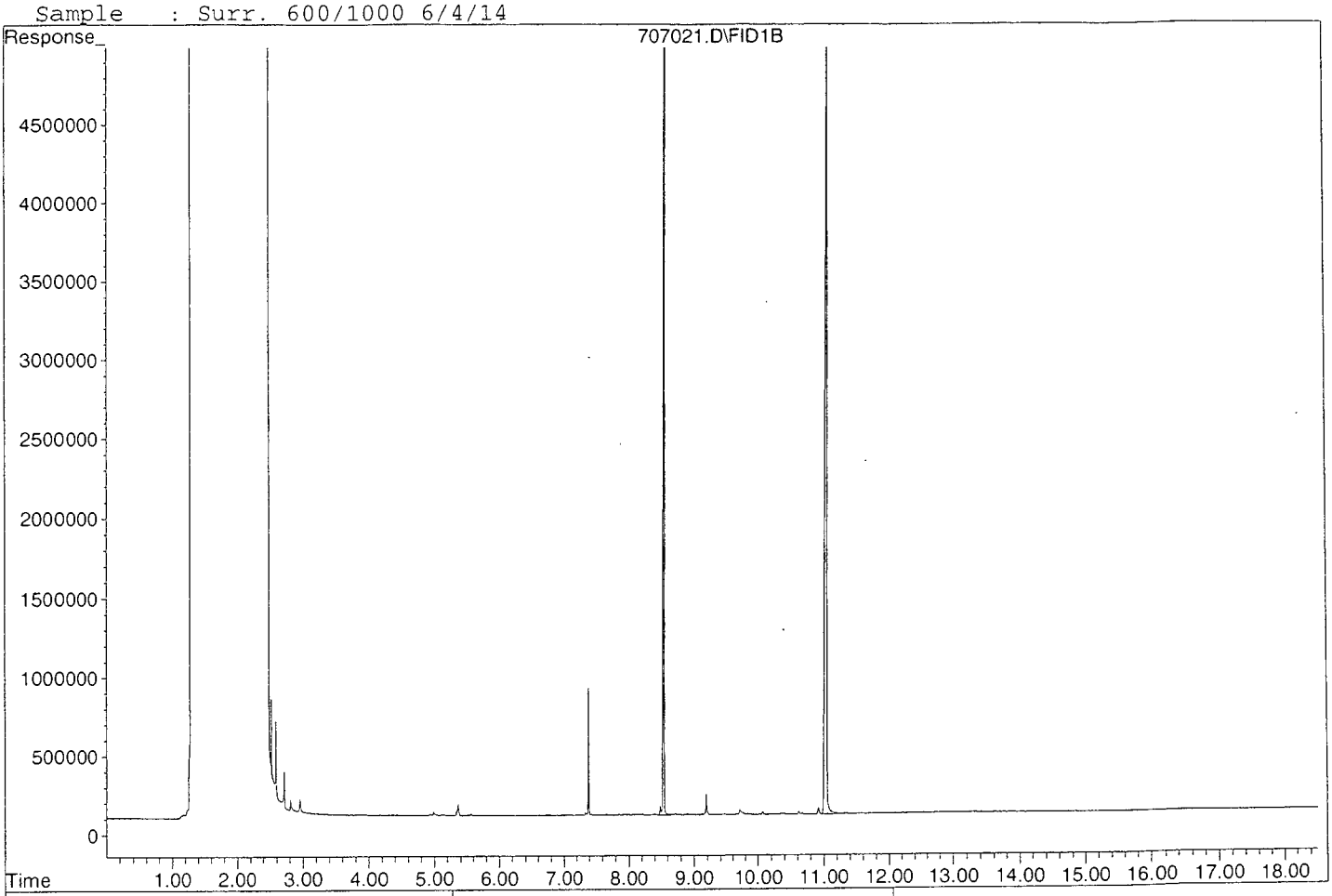
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

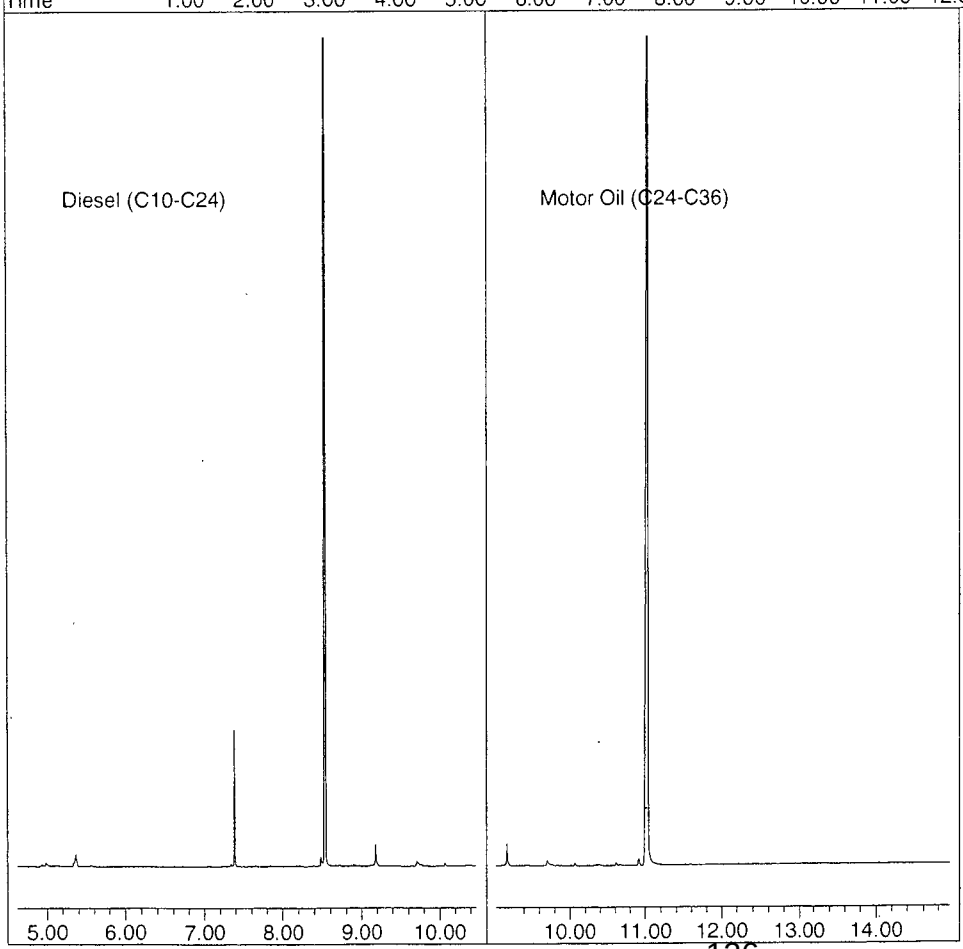
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SC Ortho-Terphenyl(S)	8.54	113854098	36.120	ppb
Surrogate Spike 30.000		Recovery =	120.40%	
6) SC Octacosane(S)	11.03	108406143	36.328	ppb
Surrogate Spike 30.000		Recovery =	121.09%	
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\140707\707021.D
Sample : Surr. 600/1000 6/4/14





Quantitation Report (Not Reviewed)

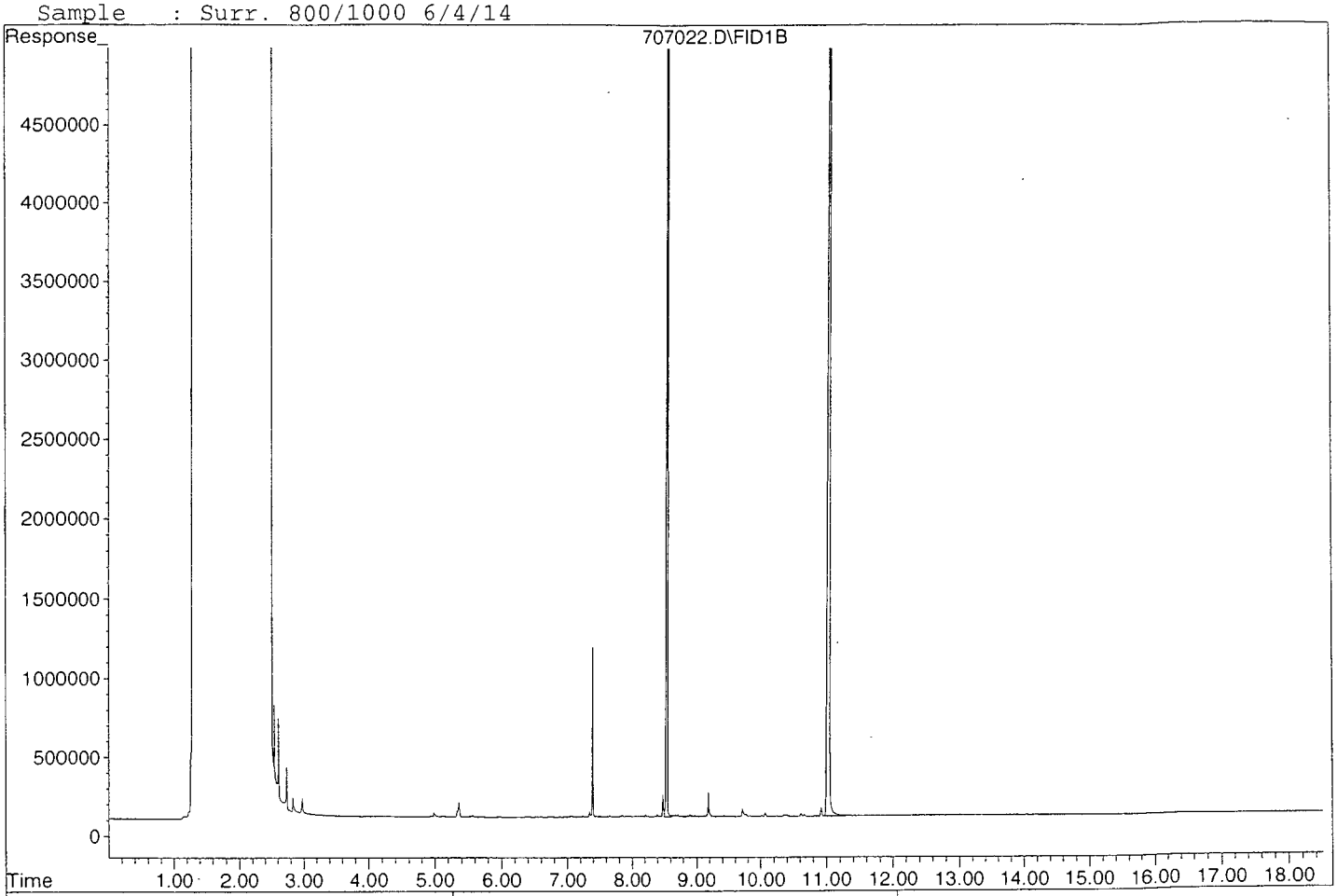
Data File : G:\APOLLO\DATA\140707\707022.D Vial: 22
Acq On : 7-7-14 20:55:33 Operator: MA
Sample : Surr. 800/1000 6/4/14 Inst : Apollo
Misc : Mix(C) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

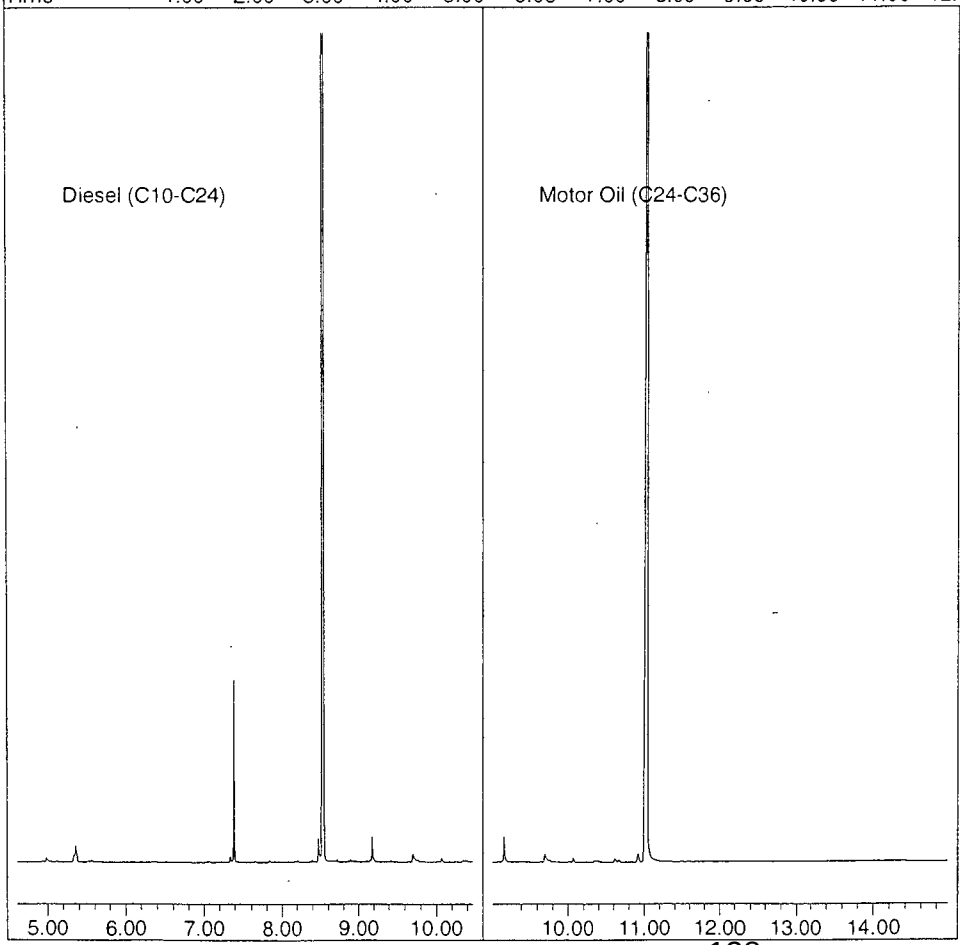
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SC Ortho-Terphenyl(S)	8.54	153584522	48.724	ppb
Surrogate Spike 30.000		Recovery =	162.41%	
6) SC Octacosane(S)	11.03	144463742	48.411	ppb
Surrogate Spike 30.000		Recovery =	161.37%	
Target Compounds				

Data File: G:\APOLLO\DATA\140707\707022.D
Sample : Surr. 800/1000 6/4/14





Quantitation Report (Not Reviewed)

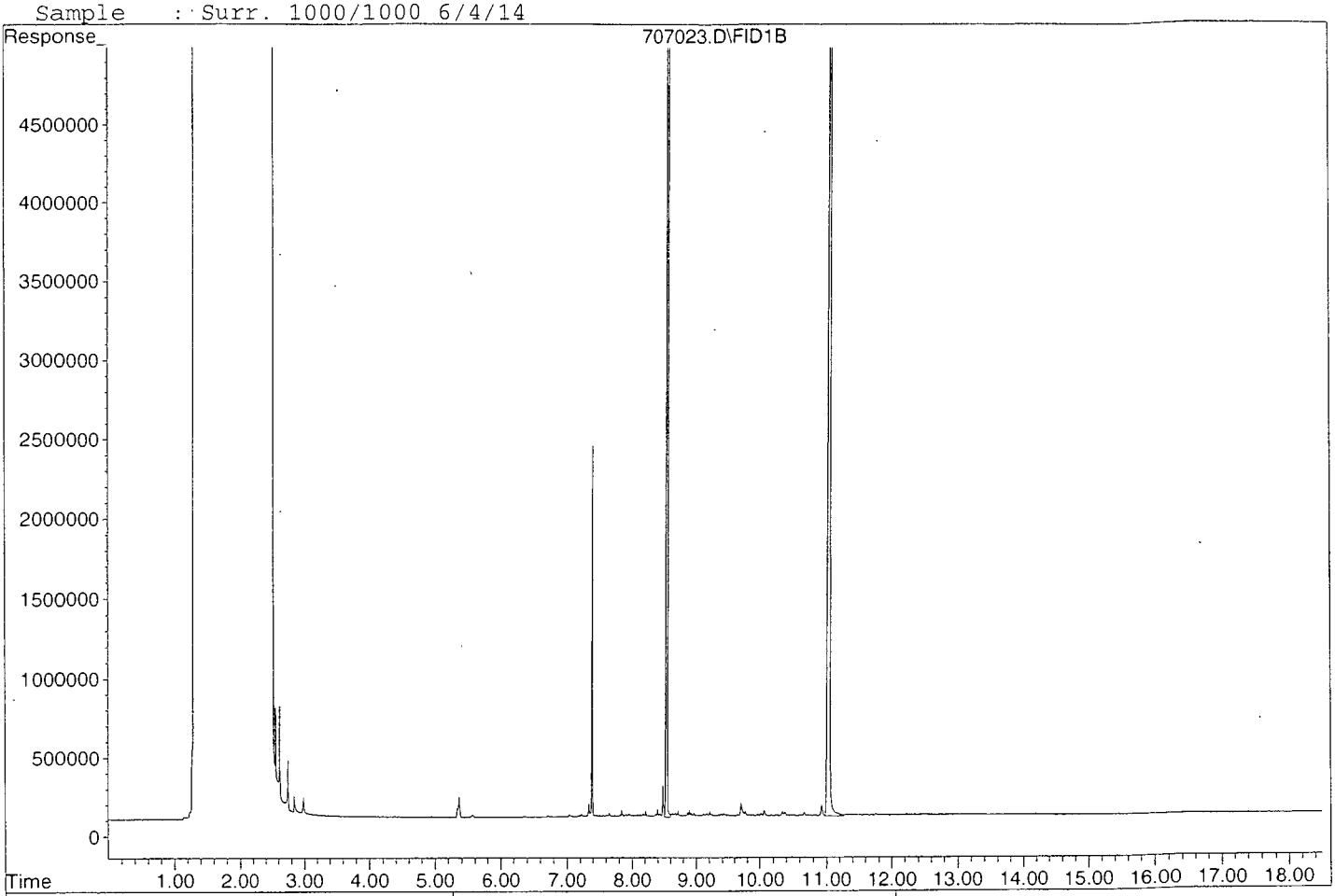
Data File : G:\APOLLO\DATA\140707\707023.D Vial: 23
Acq On : 7-7-14 21:20:46 Operator: MA
Sample : Surr. 1000/1000 6/4/14 Inst : Apollo
Misc : Mix(C) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:22 2014 Quant Results File: CTO707.RES

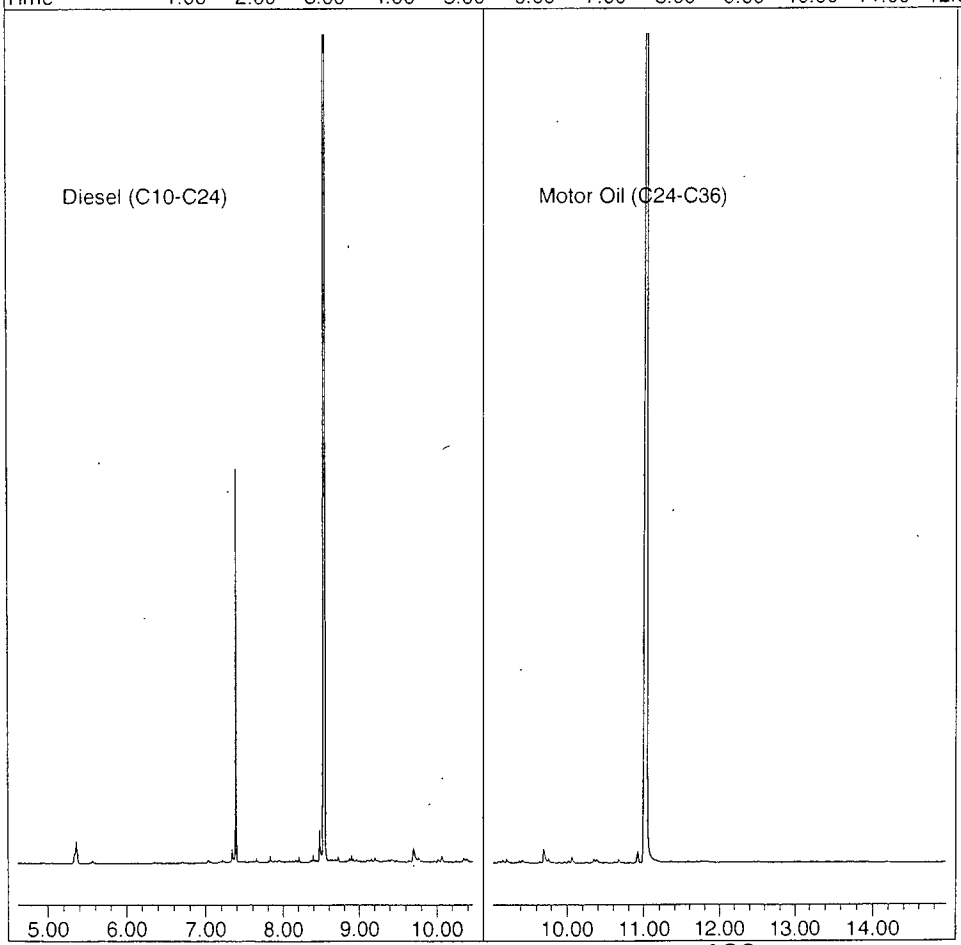
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SC Ortho-Terphenyl(S)	8.54	182887488	58.020	ppb
Surrogate Spike 30.000		Recovery =	193.40%	
6) SC Octacosane(S)	11.03	174522557	58.484	ppb
Surrogate Spike 30.000		Recovery =	194.95%	
Target Compounds				

Data File: G:\APOLLO\DATA\140707\707023.D
Sample : Surr. 1000/1000 6/4/14





TPH Extractables
CTO707

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 74218
Date Analyzed: 7/7/2014
Instrument: Apollo
Initial Cal. Date: 7/7/2014
Data File: 707017,24.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1296370	1558990	20	HATM	
2	HBTM	Motor Oil (C24-C36)	804230	742725	7.6	HBTM	
3							
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39							
40							
41							
		Average			7.6		

Quantitation Report (QT Reviewed)

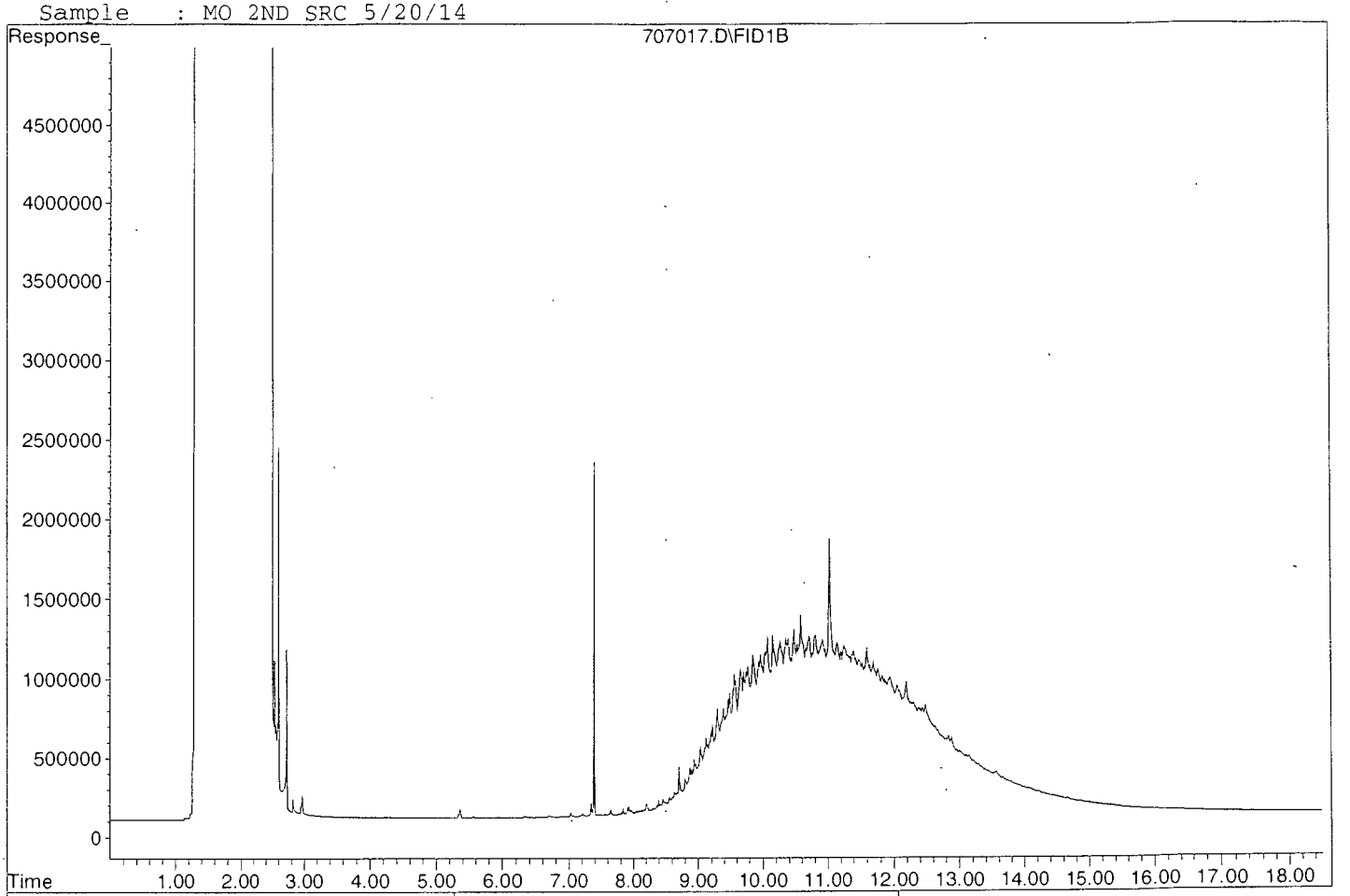
Data File : G:\APOLLO\DATA\140707\707017.D Vial: 17
Acq On : 7-7-14 18:49:56 Operator: MA
Sample : MO 2ND SRC 5/20/14 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:23 2014 Quant Results File: CTO707.RES

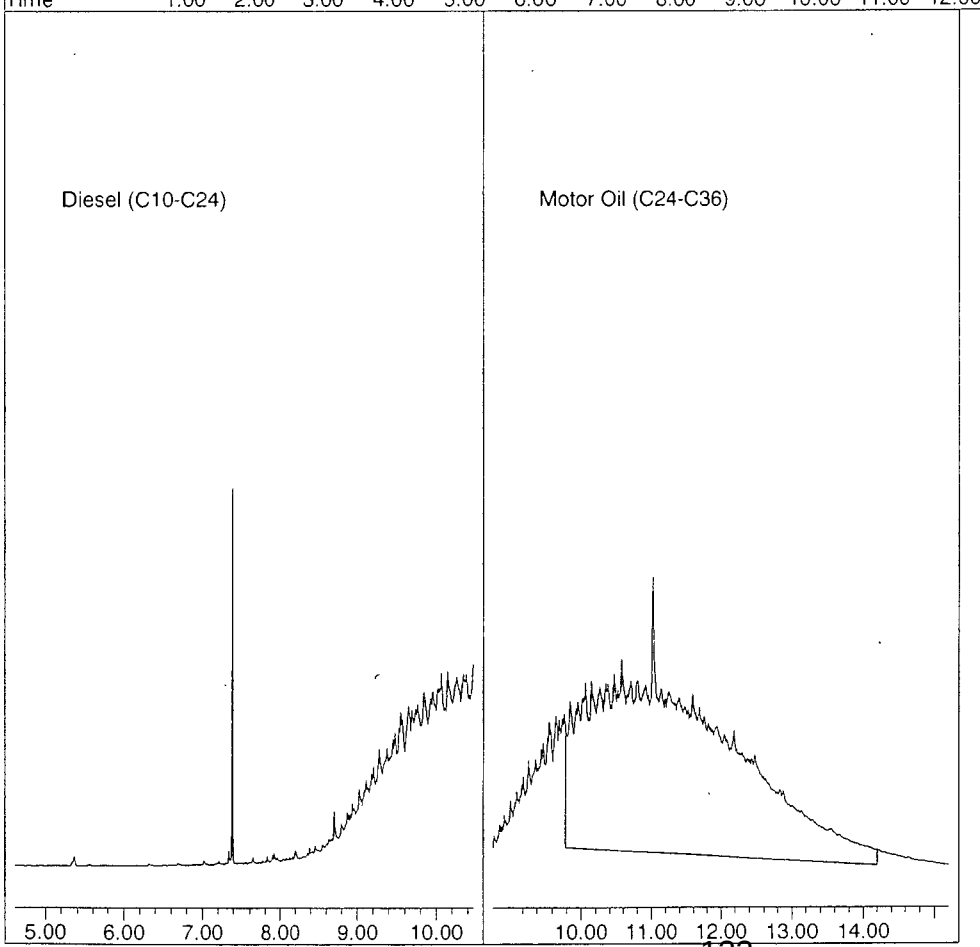
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C36)	11.99	1485449296	923.523 ppb

Data File: G:\APOLLO\DATA\140707\707017.D
Sample : MO 2ND SRC 5/20/14





Quantitation Report (QT Reviewed)

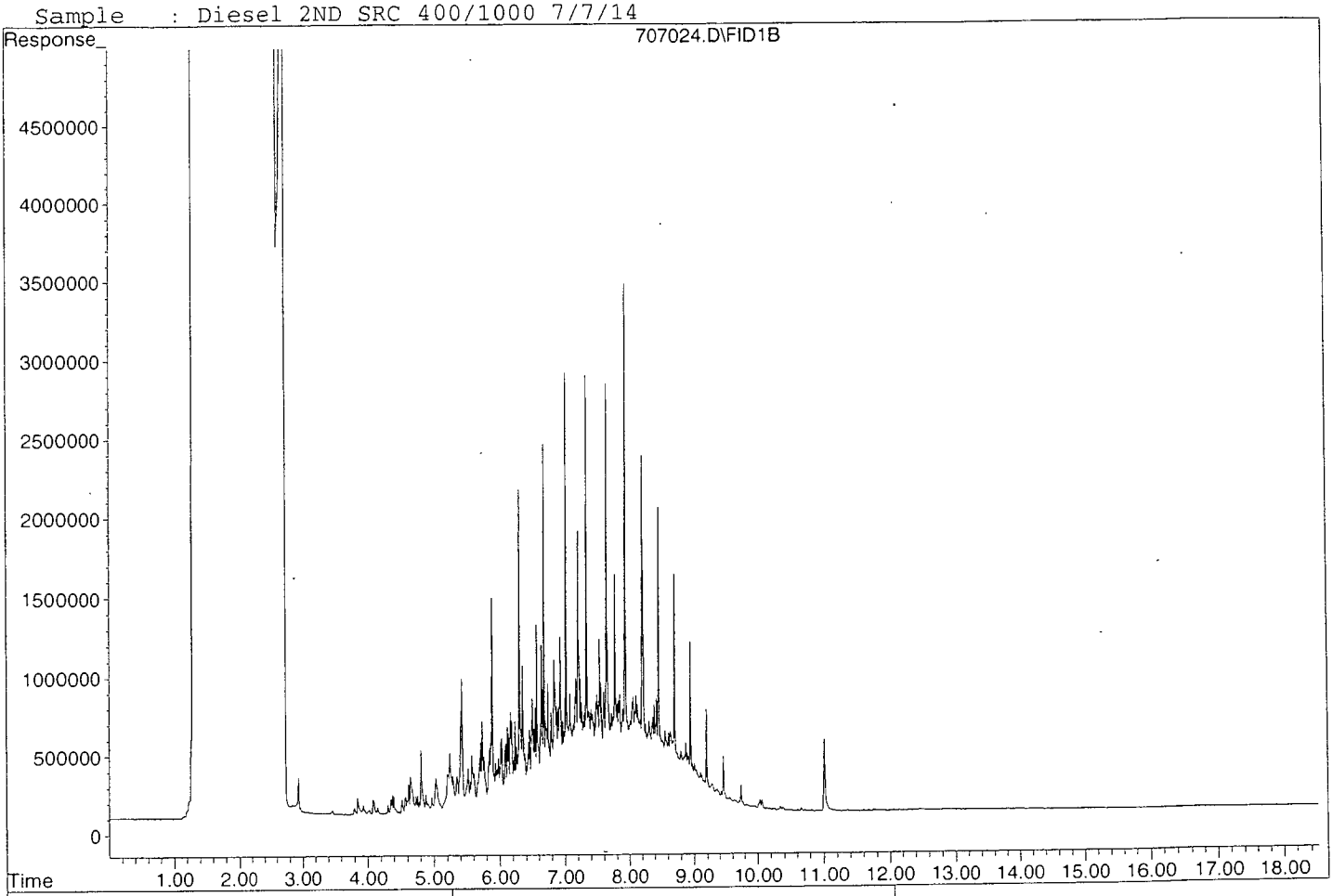
Data File : G:\APOLLO\DATA\140707\707024.D Vial: 24
Acq On : 7-7-14 21:46:00 Operator: MA
Sample : Diesel 2ND SRC 400/1000 7/7/14 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 8 9:24 2014 Quant Results File: CTO707.RES

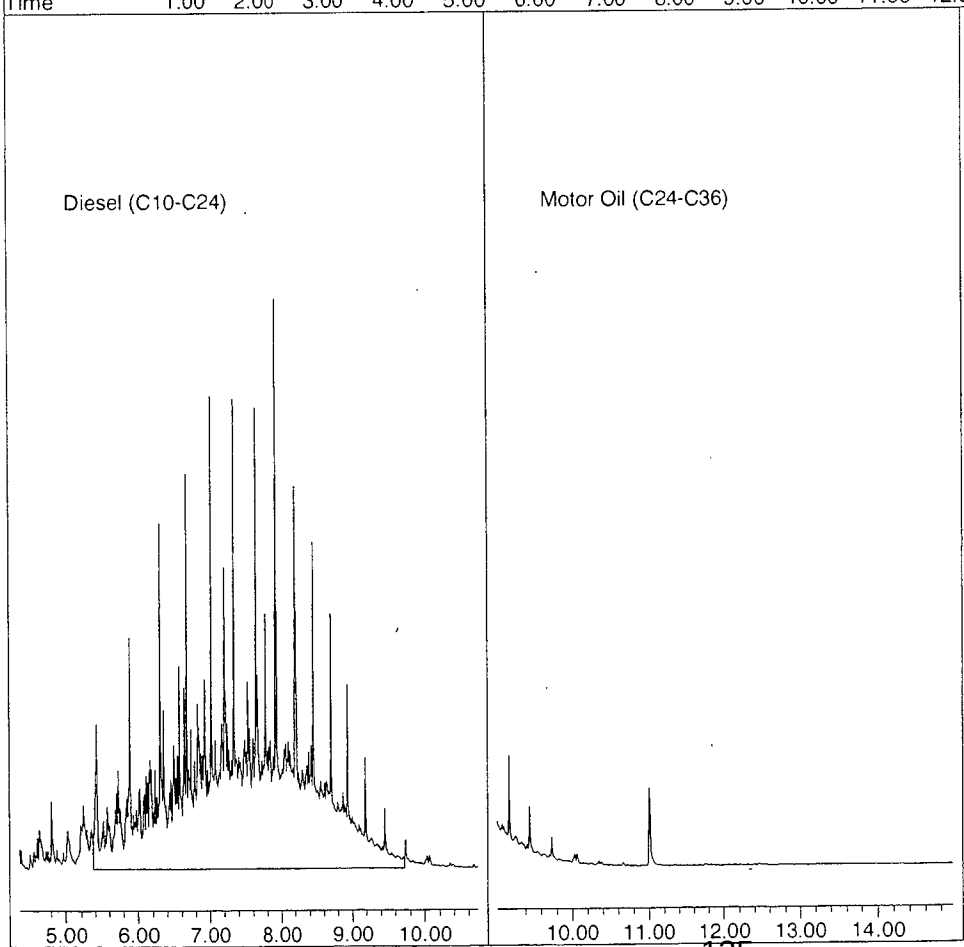
Method : G:\APOLLO\DATA\140707\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jul 17 12:30:27 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	1247190782	481.030 ppb

Data File: G:\APOLLO\DATA\140707\707024.D
Sample : Diesel 2ND SRC 400/1000 7/7/14





TPH Extractables
CTO707

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 74218
Date Analyzed: 9/22/2014
Instrument: Apollo
Initial Cal. Date: 7/7/2014
Data File: 922002,03.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1296370	1230600	5.1	HATM	
2	HBTM	Motor Oil (C24-C36)	804230	718920	11	HBTM	
3							
4							
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40							
		Average			8.1		

Quantitation Report (Not Reviewed)

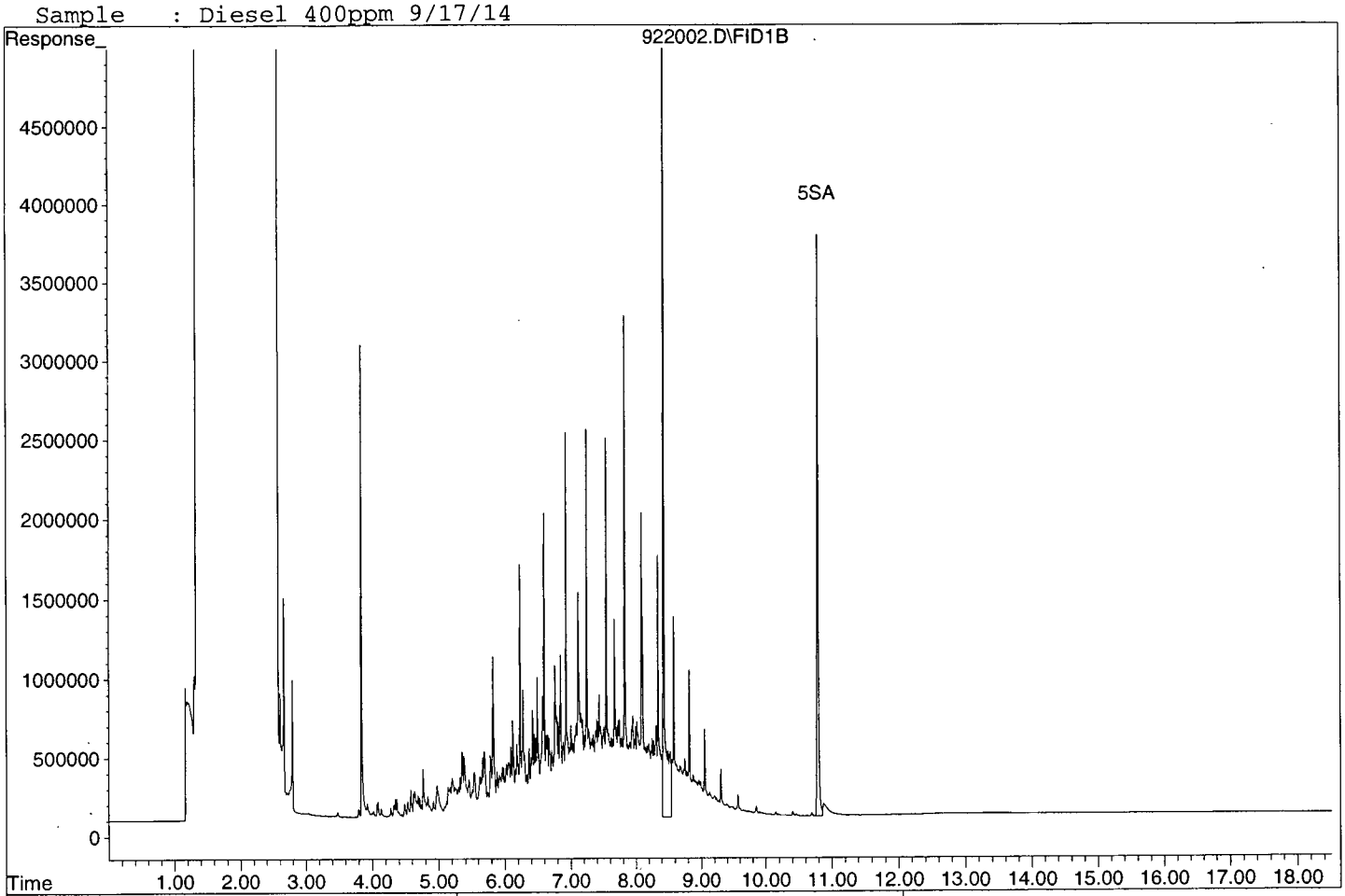
Data File : G:\APOLLO\DATA\140922\922002.D Vial: 2
Acq On : 9-22-14 9:13:23 Operator: lac
Sample : Diesel 400ppm 9/17/14 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 2 13:03 2014 Quant Results File: CTO707.RES

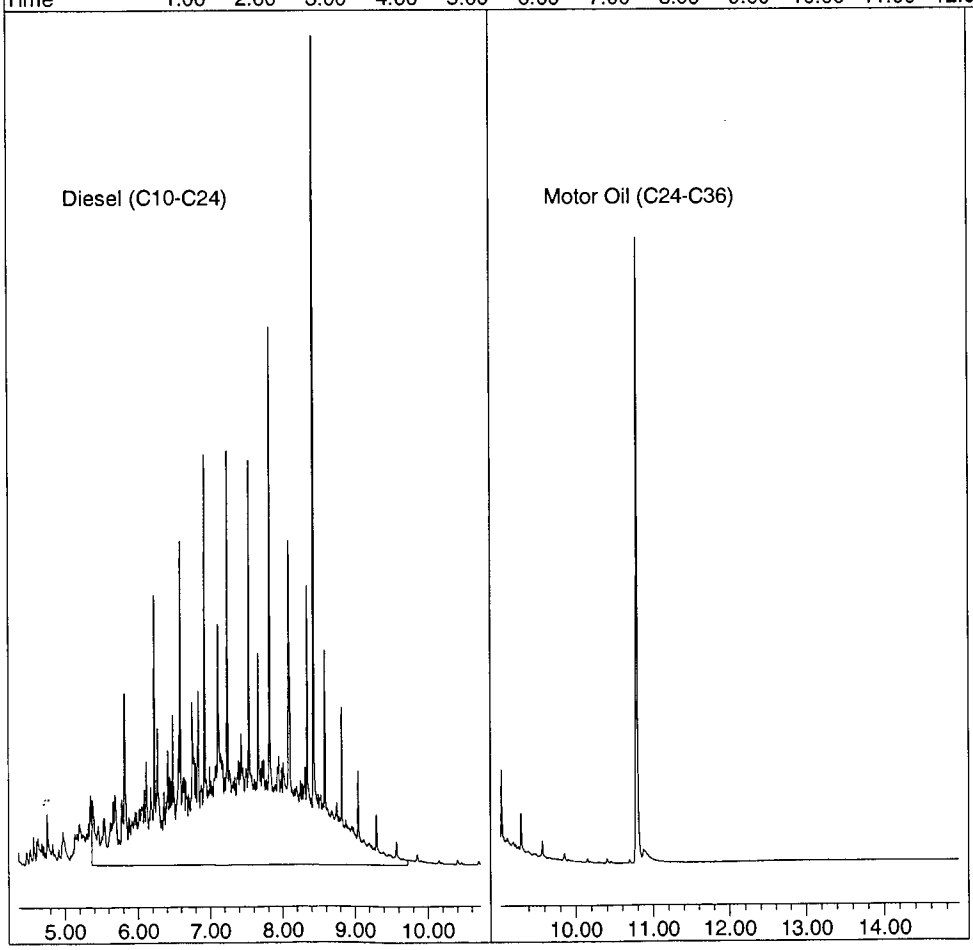
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Not Used(S)	8.43	84404074	22.559 ppb
Surrogate Spike 75.000	Recovery =		30.08%
5) SA Not Used2(S)	10.79	48738706	19.819 ppb
Surrogate Spike 75.000	Recovery =		26.43%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	984479901	379.705 ppb

Data File: G:\APOLLO\DATA\140922\922002.D
Sample : Diesel 400ppm 9/17/14





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\140922\922003.D Vial: 3
Acq On : 9-22-14 9:39:04 Operator: lac
Sample : MO 1000ppm 9/12/14 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 2 13:03 2014 Quant Results File: CTO707.RES

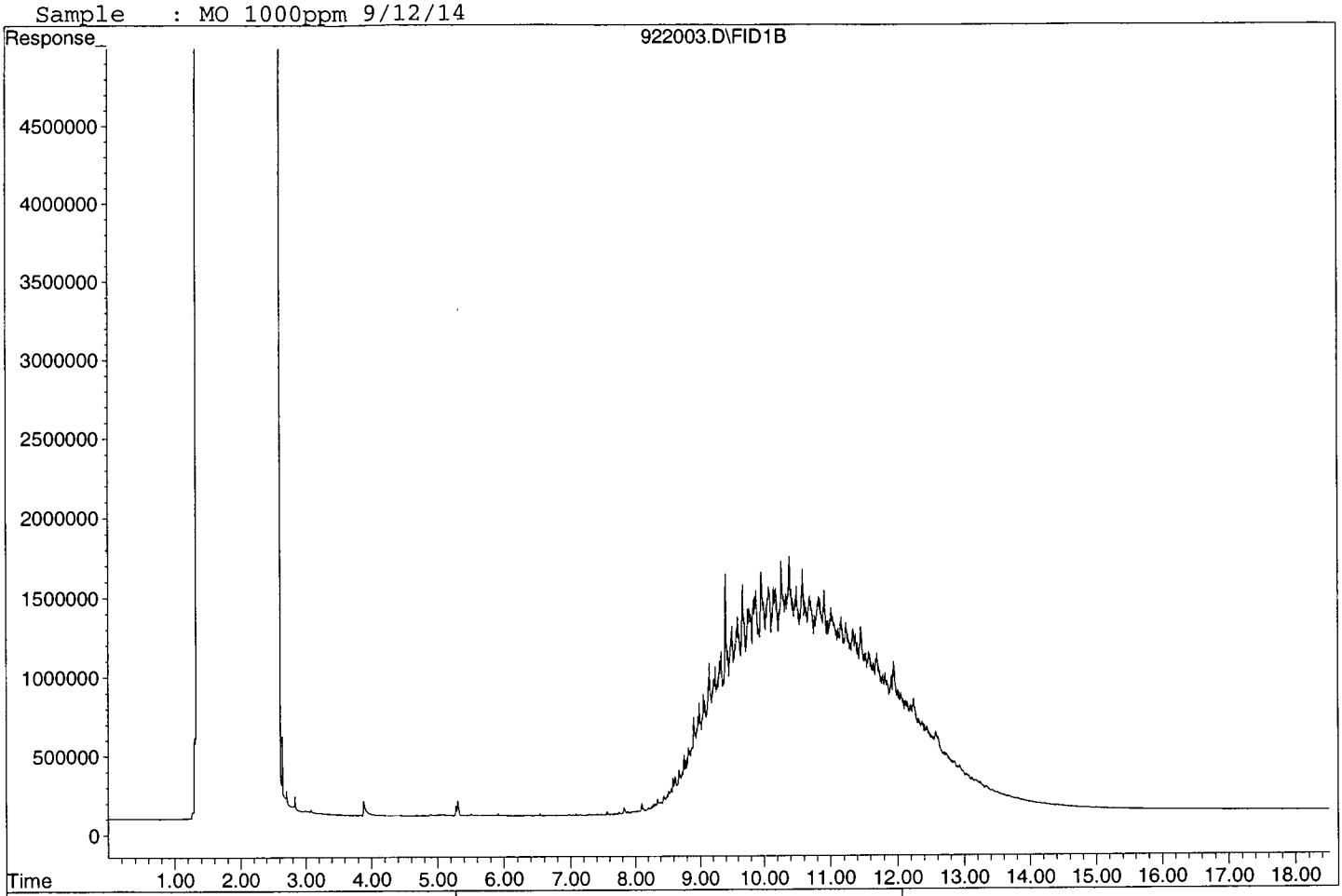
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

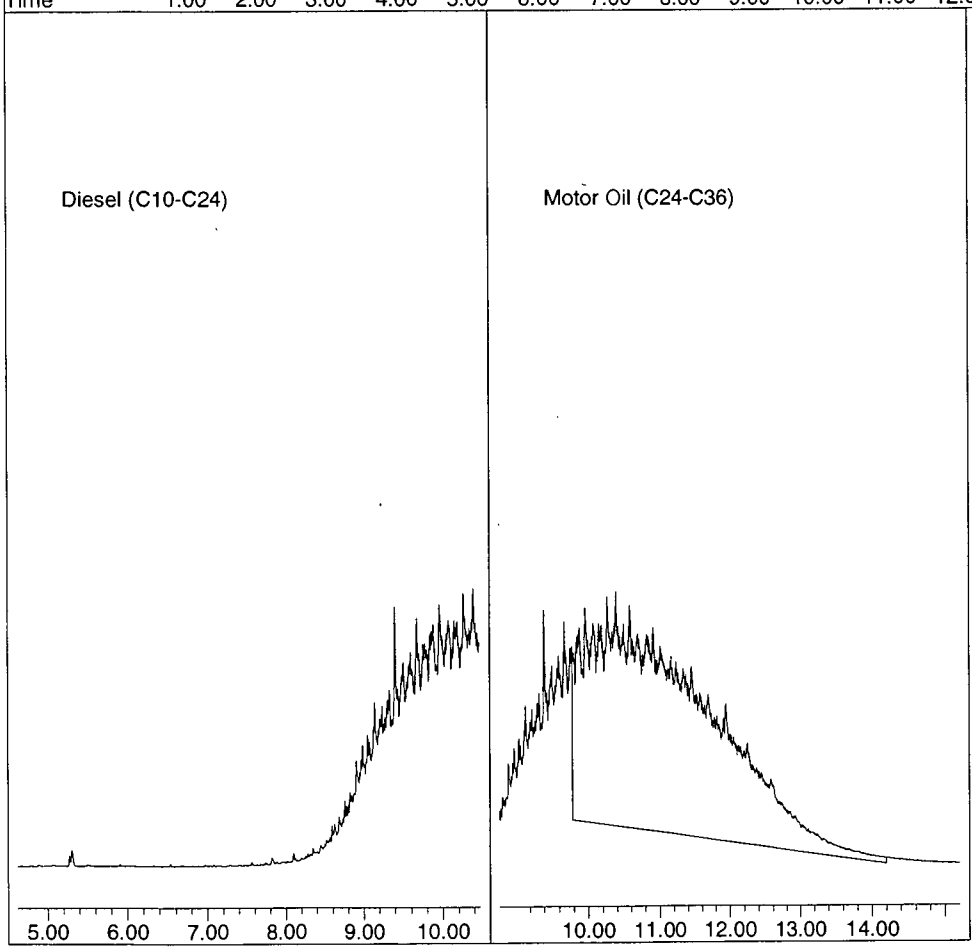
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C36)	11.99	1437840433	893.924 ppb

Quantitation Report

Data File: G:\APOLLO\DATA\140922\922003.D
Sample : MO 1000ppm 9/12/14





TPH Extractables
CTO707

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 74218
Date Analyzed: 9/22/2014
Instrument: Apollo
Initial Cal. Date: 7/7/2014
Data File: 922011,12.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1296370	1199450	7.5	HATM	
2	HBTM	Motor Oil (C24-C36)	804230	879793	9.4	HBTM	
3							
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40							
		Average			8.5		

Quantitation Report (Not Reviewed)

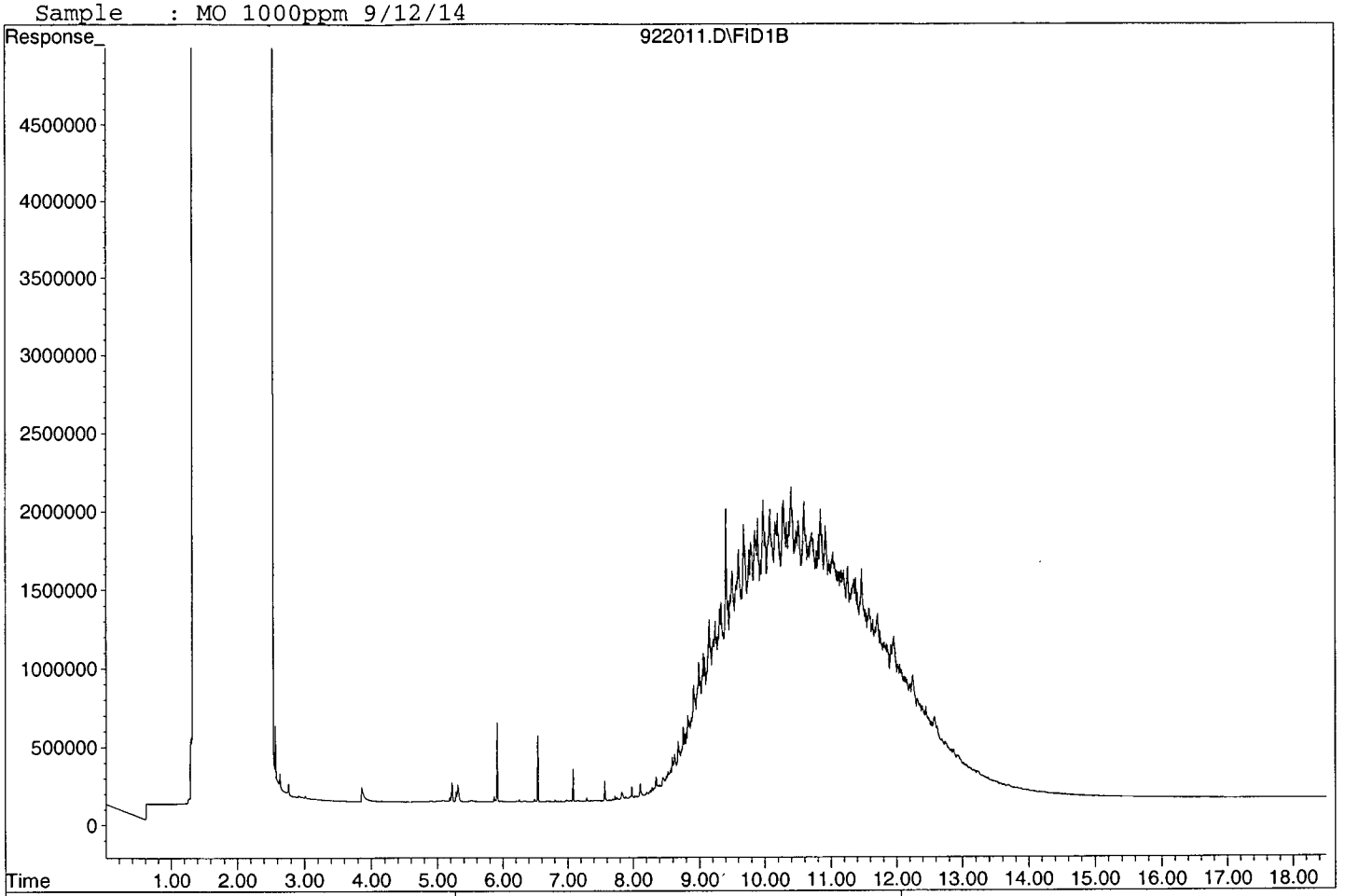
Data File : G:\APOLLO\DATA\140922\922011.D Vial: 11
Acq On : 9-22-14 13:53:01 Operator: lac
Sample : MO 1000ppm 9/12/14 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 22 14:14 2014 Quant Results File: CTO707.RES

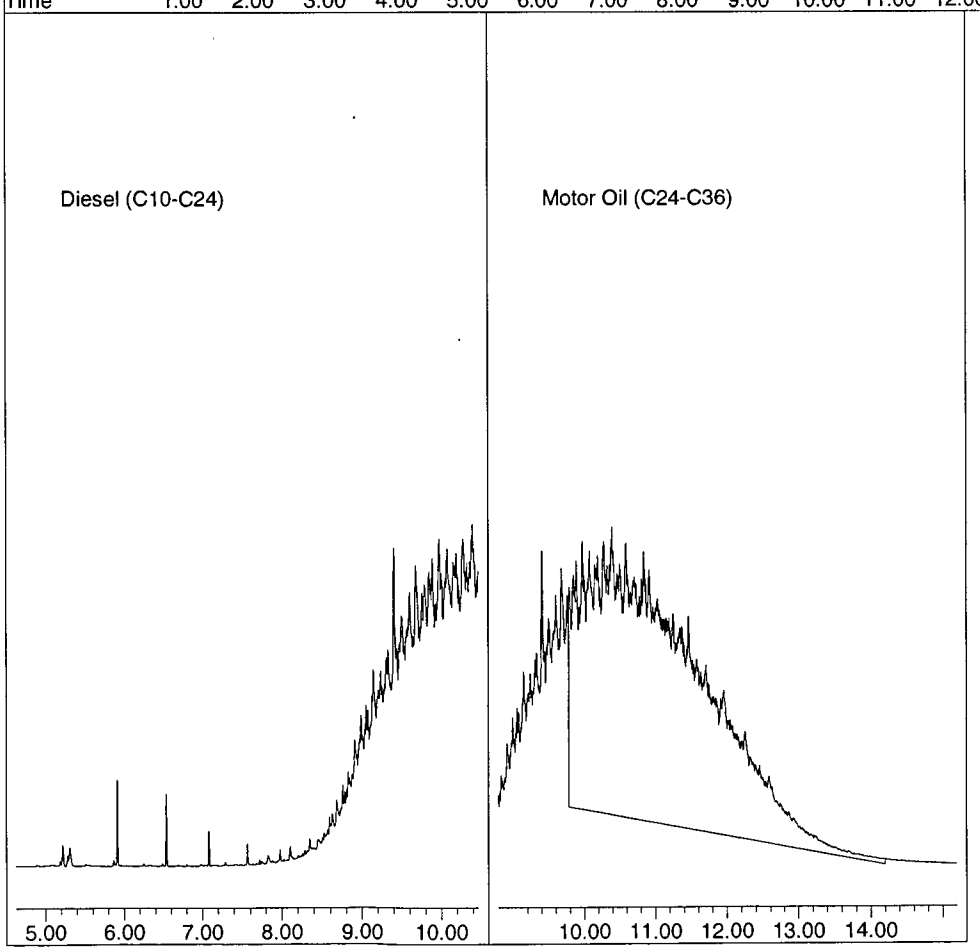
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
2) HBTM Motor Oil (C24-C36)	11.99	1759585473	1093.957	ppb

Data File: G:\APOLLO\DATA\140922\922011.D
Sample : MO 1000ppm 9/12/14





Quantitation Report (Not Reviewed)

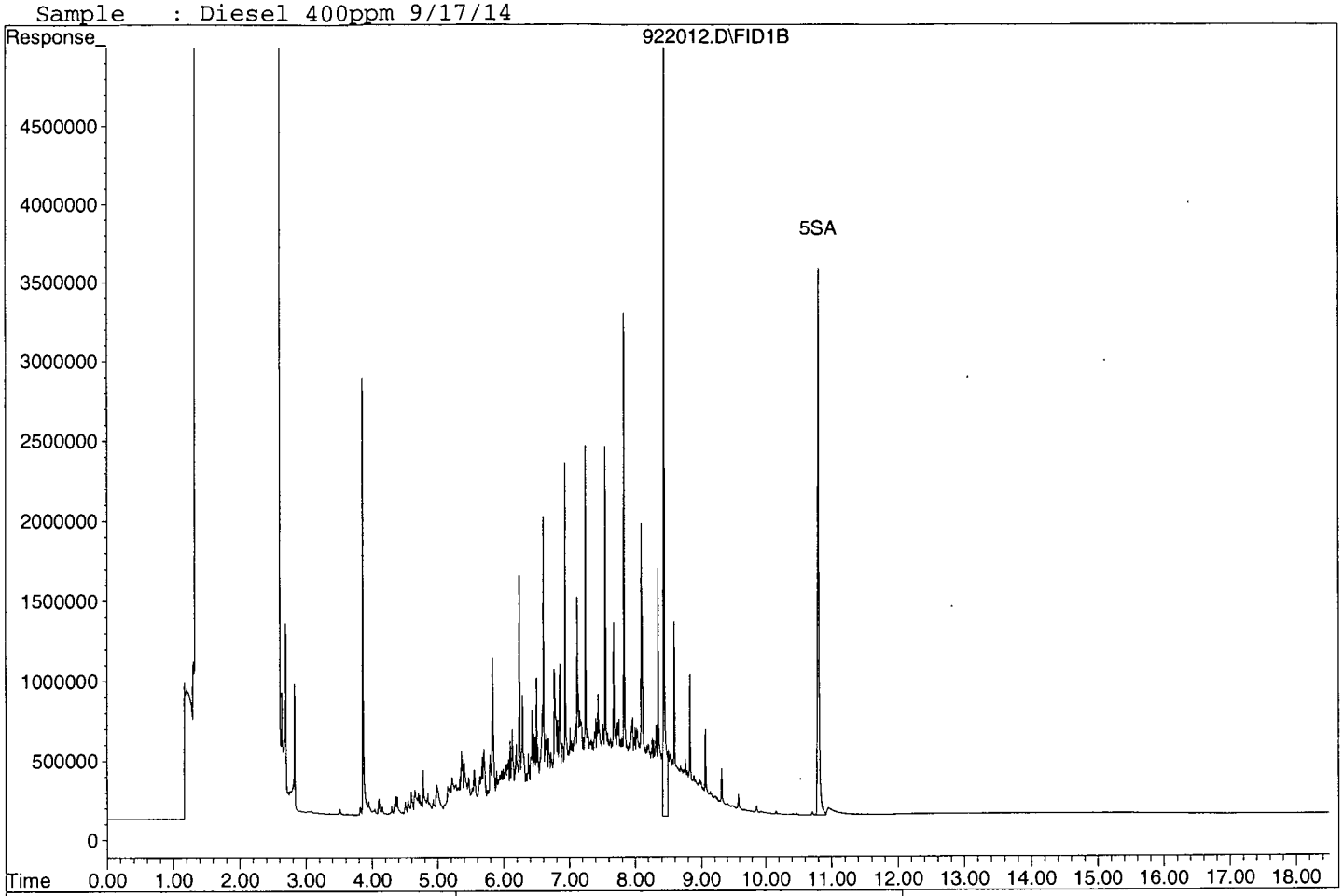
Data File : G:\APOLLO\DATA\140922\922012.D Vial: 12
Acq On : 9-22-14 14:18:56 Operator: lac
Sample : Diesel 400ppm 9/17/14 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 25 14:31 2014 Quant Results File: CTO707.RES

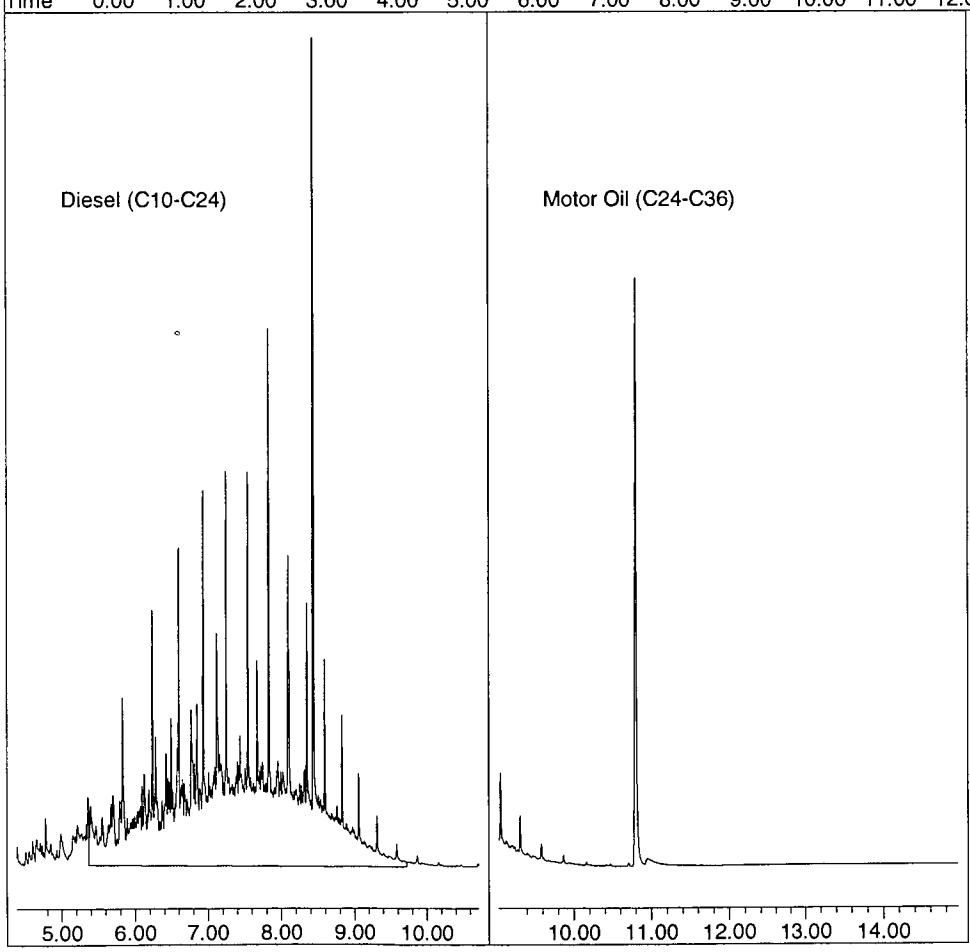
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Not Used(S)	8.44	68470160	18.300 ppb
Surrogate Spike 75.000	Recovery =		24.40%
5) SA Not Used2(S)	10.80	48661186	19.788 ppb
Surrogate Spike 75.000	Recovery =		26.38%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	959562027	370.094 ppb

Data File: G:\APOLLO\DATA\140922\922012.D
Sample : Diesel 400ppm 9/17/14





TPH Extractables
CTO707

Form 7
Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 74218
Date Analyzed: 9/23/2014
Instrument: Apollo
Initial Cal. Date: 7/7/2014
Data File: 922016,17.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1296370	1210300	6.6	HATM	
2	HBTM	Motor Oil (C24-C36)	804230	734364	8.7	HBTM	
3							
4							
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38							
39							
40							
		Average			7.7		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\140922\922016.D Vial: 16
Acq On : 9-23-14 8:51:22 Operator: lac
Sample : Diesel 400ppm 9/17/14 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 25 14:32 2014 Quant Results File: CTO707.RES

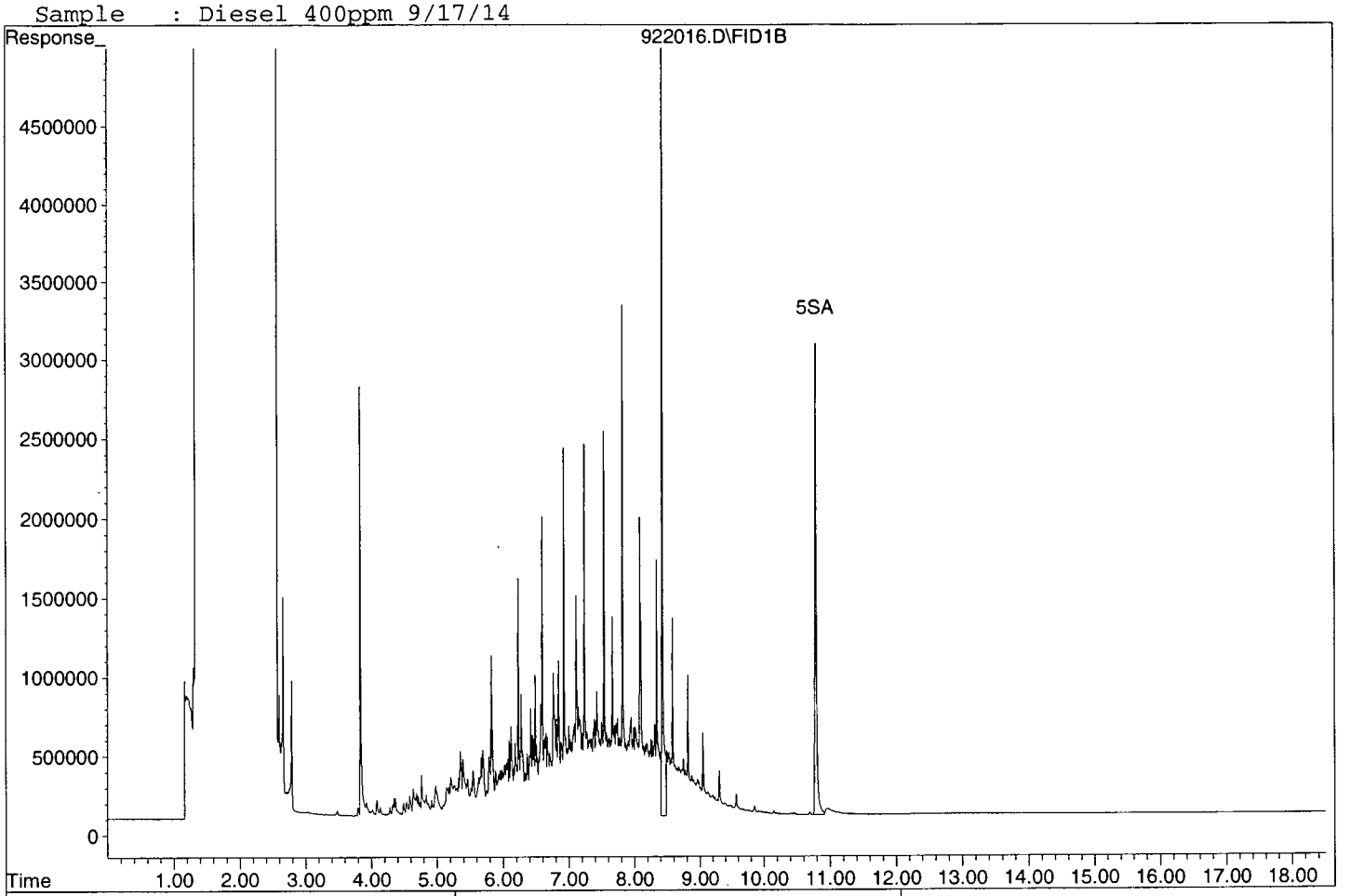
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

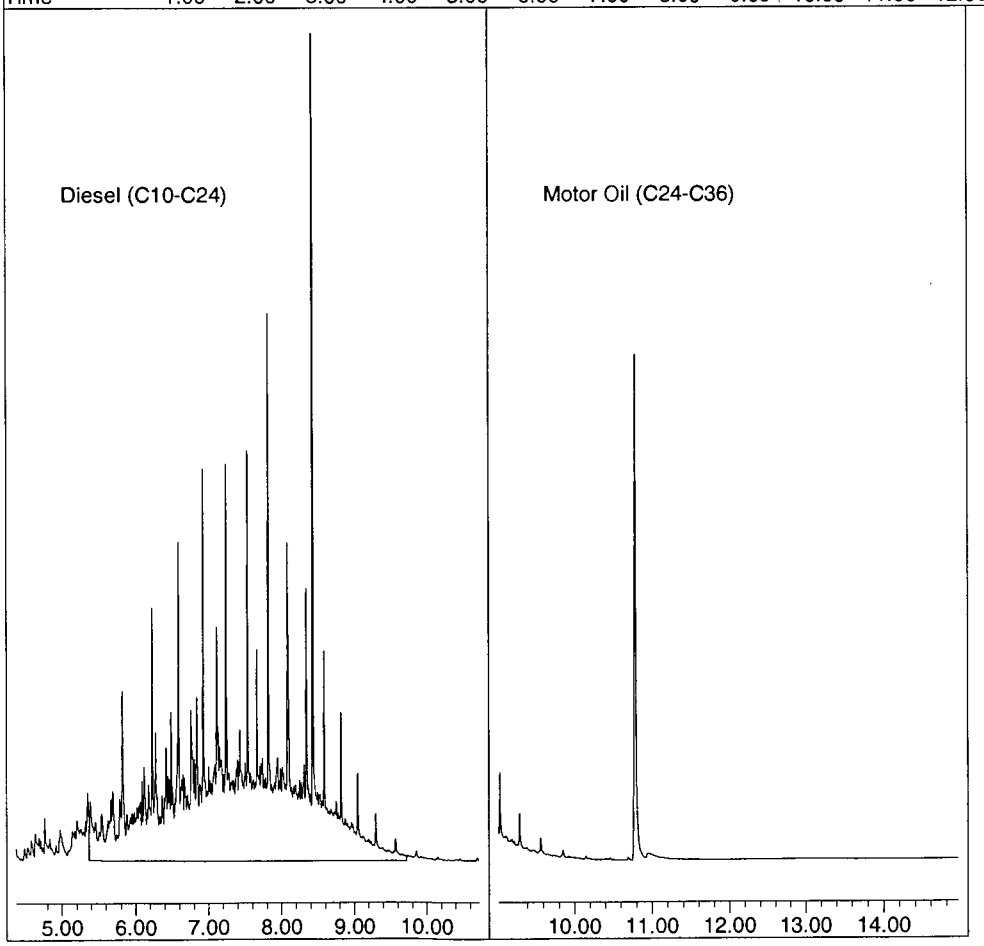
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Not Used(S)	8.43	68401459	18.282 ppb
Surrogate Spike 75.000	Recovery =		24.38%
5) SA Not Used2(S)	10.79	47639463	19.372 ppb
Surrogate Spike 75.000	Recovery =		25.83%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	968242837	373.443 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\140922\922016.D
Sample : Diesel 400ppm 9/17/14





Quantitation Report (Not Reviewed)

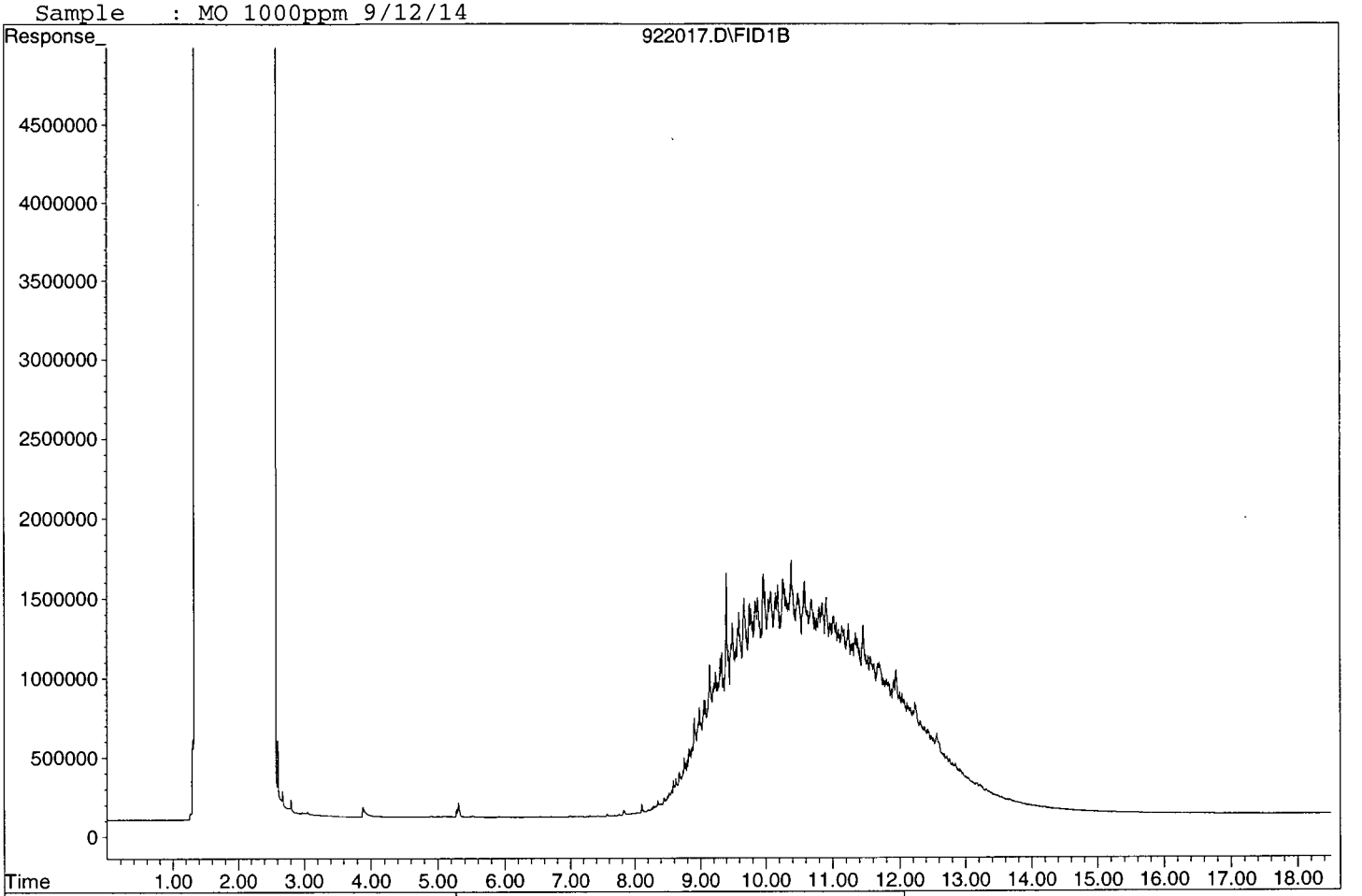
Data File : G:\APOLLO\DATA\140922\922017.D Vial: 17
Acq On : 9-23-14 9:16:51 Operator: lac
Sample : MO 1000ppm 9/12/14 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 25 14:32 2014 Quant Results File: CTO707.RES

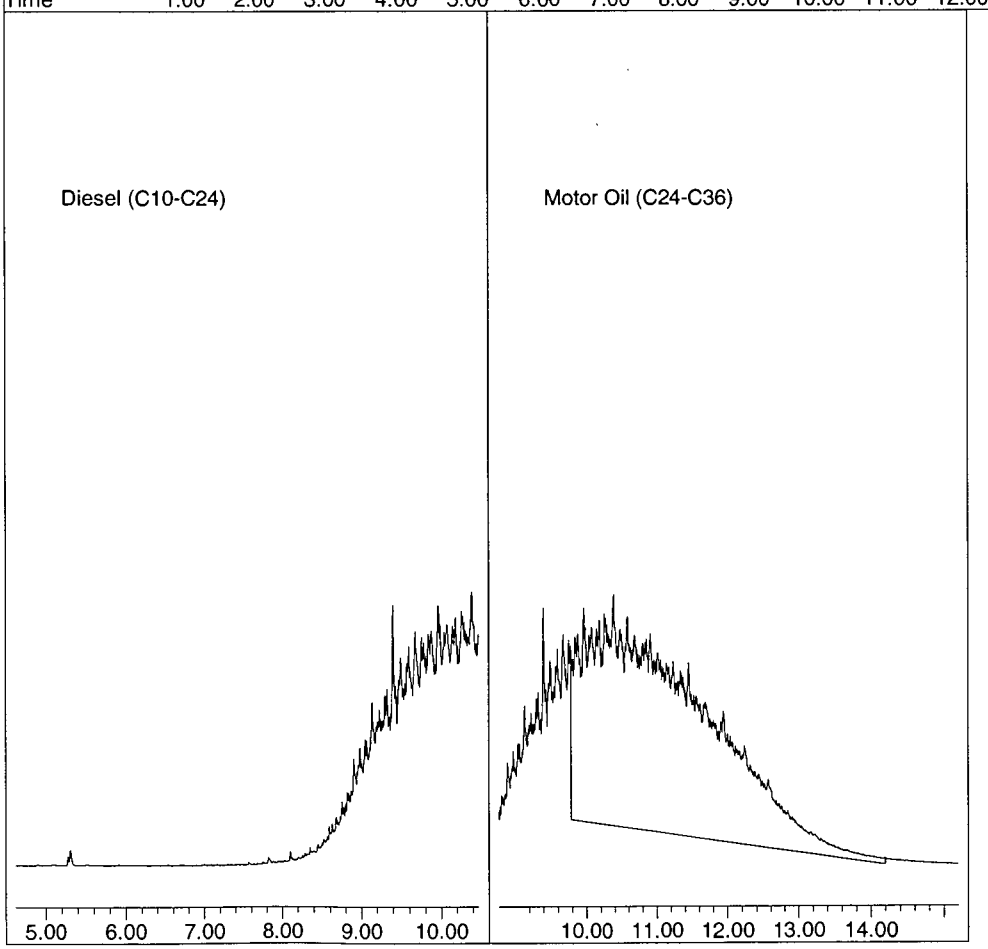
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C36)	11.99	1468728567	913.127 ppb

Data File: G:\APOLLO\DATA\140922\922017.D
Sample : MO 1000ppm 9/12/14





TPH Extractables
CTO707

Form 7
Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 74218
Date Analyzed: 9/23/2014
Instrument: Apollo
Initial Cal. Date: 7/7/2014
Data File: 922032,33.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1296370	1192220	8.0	HATM	
2	HBTM	Motor Oil (C24-C36)	804230	728137	9.5	HBTM	
3							
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36							
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38							
39							
40							
		Average			8.8		

Quantitation Report (Not Reviewed)

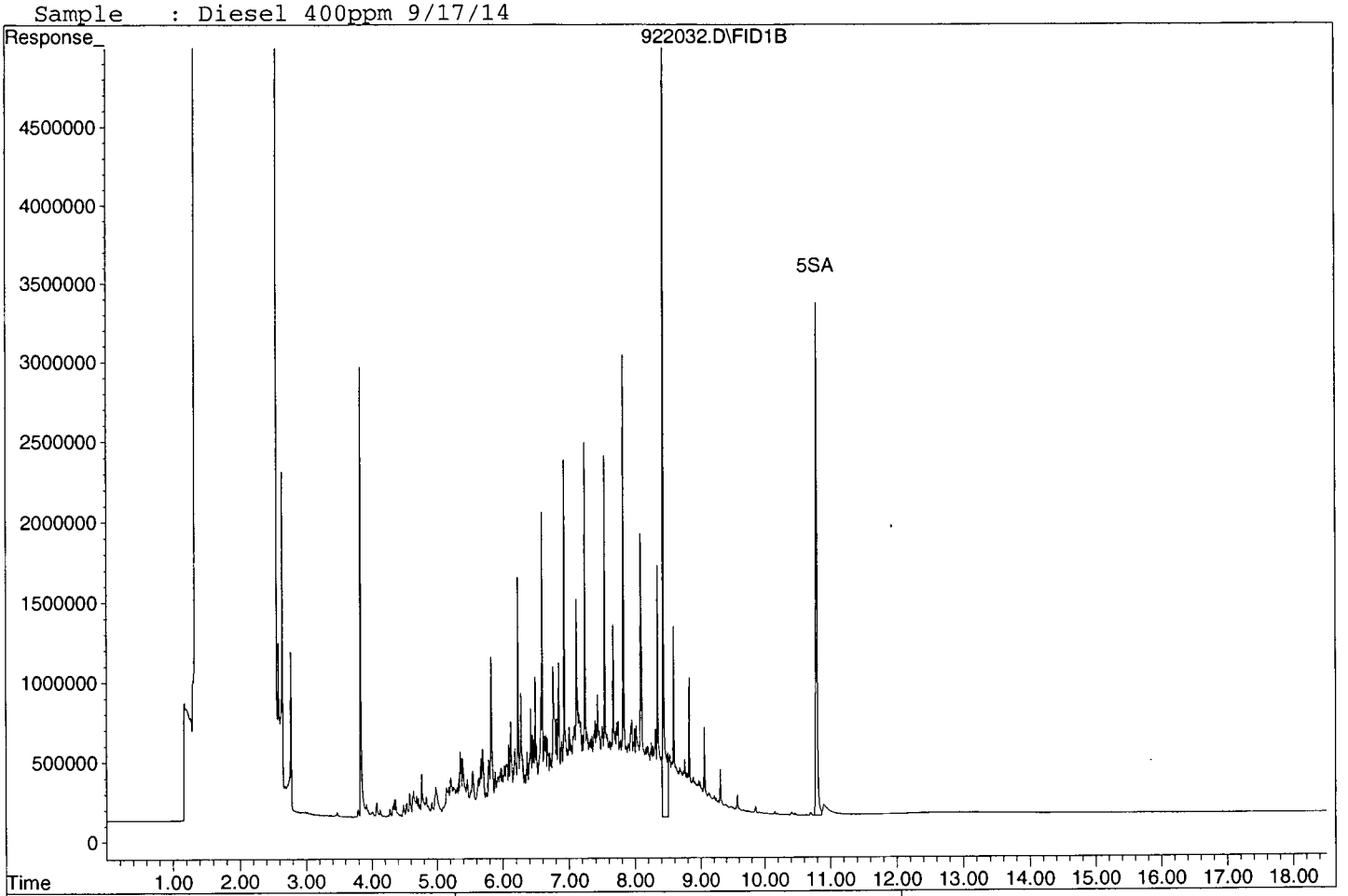
Data File : G:\APOLLO\DATA\140922\922032.D Vial: 32
Acq On : 9-23-14 17:48:47 Operator: lac
Sample : Diesel 400ppm 9/17/14 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 25 14:39 2014 Quant Results File: CTO707.RES

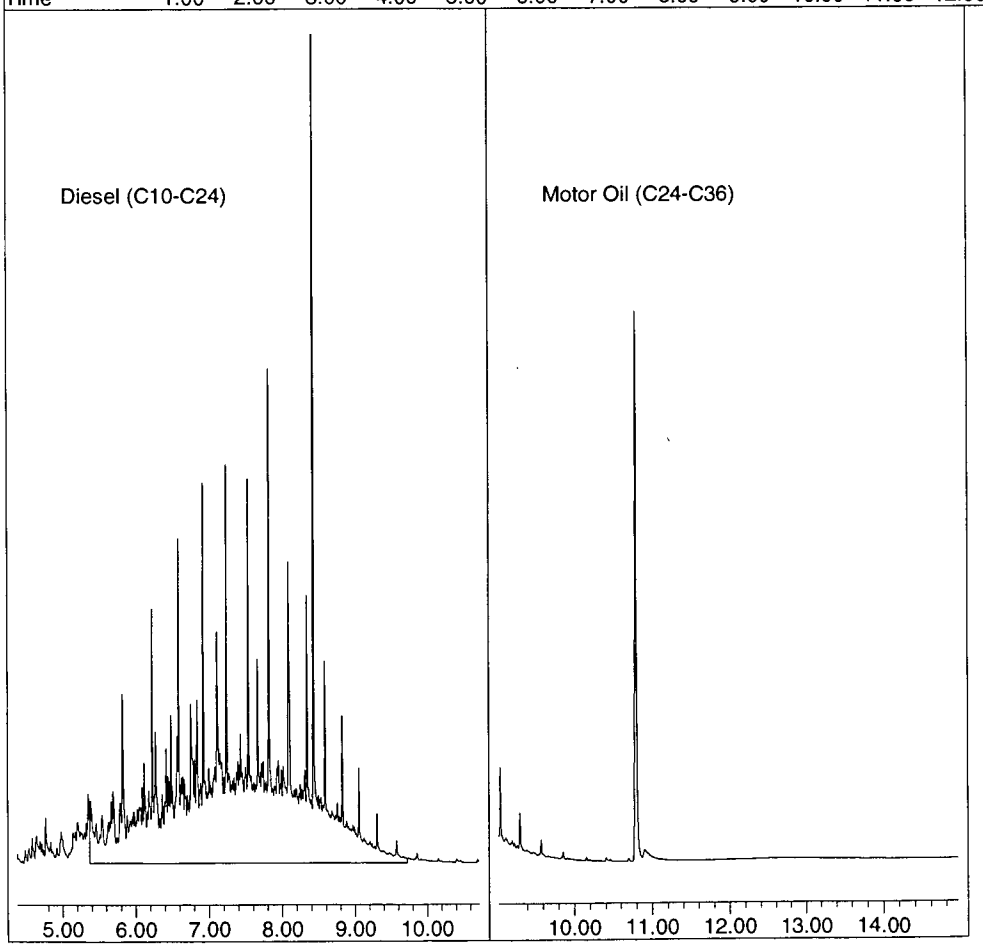
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Not Used(S)	8.43	71473855	19.103 ppb
Surrogate Spike 75.000	Recovery =		25.47%
5) SA Not Used2(S)	10.79	46915845	19.078 ppb
Surrogate Spike 75.000	Recovery =		25.44%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	953773143	367.862 ppb

Data File: G:\APOLLO\DATA\140922\922032.D
Sample : Diesel 400ppm 9/17/14





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\140922\922033.D Vial: 33
Acq On : 9-23-14 18:14:52 Operator: lac
Sample : MO 1000ppm 9/23/14 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 25 14:39 2014 Quant Results File: CTO707.RES

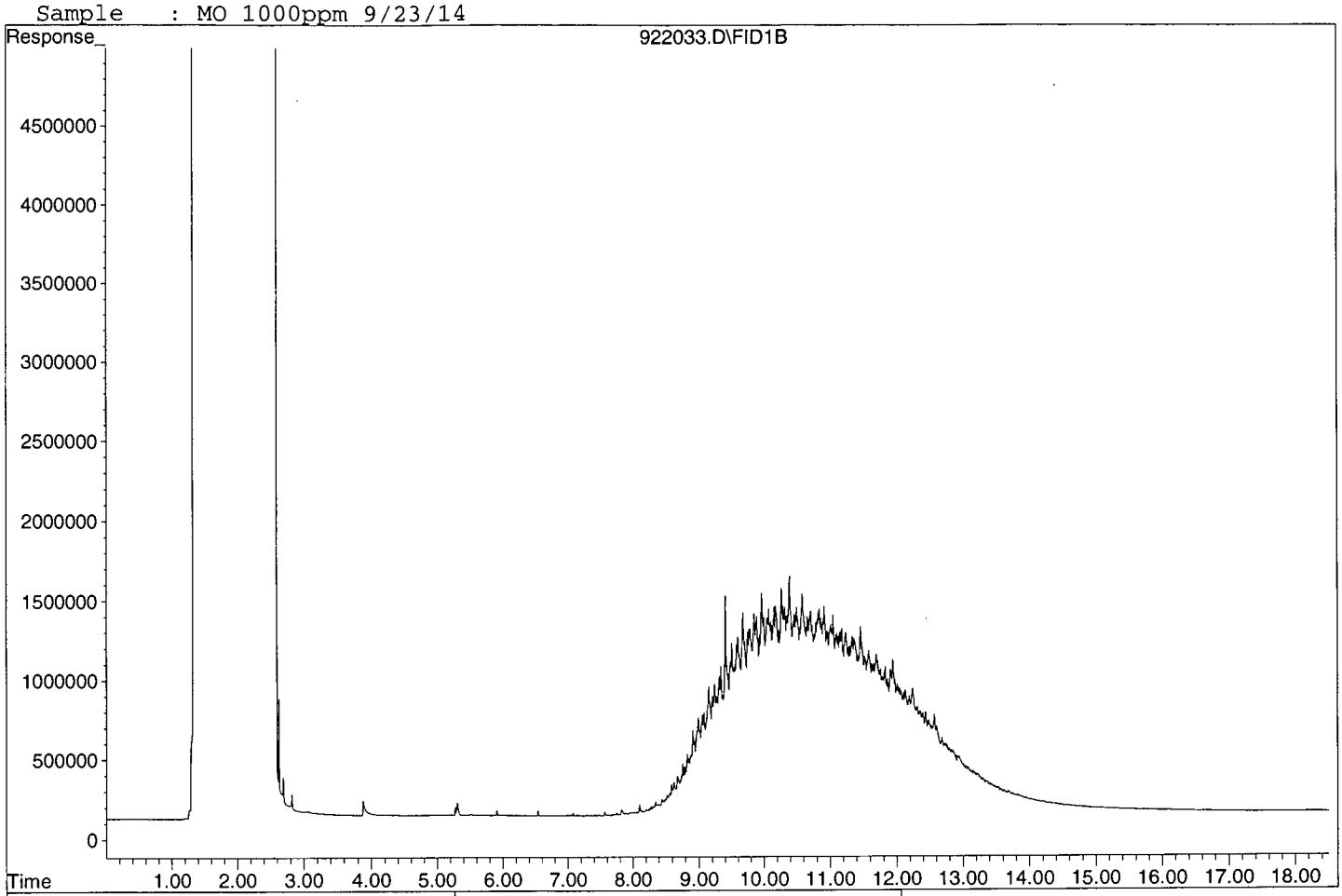
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

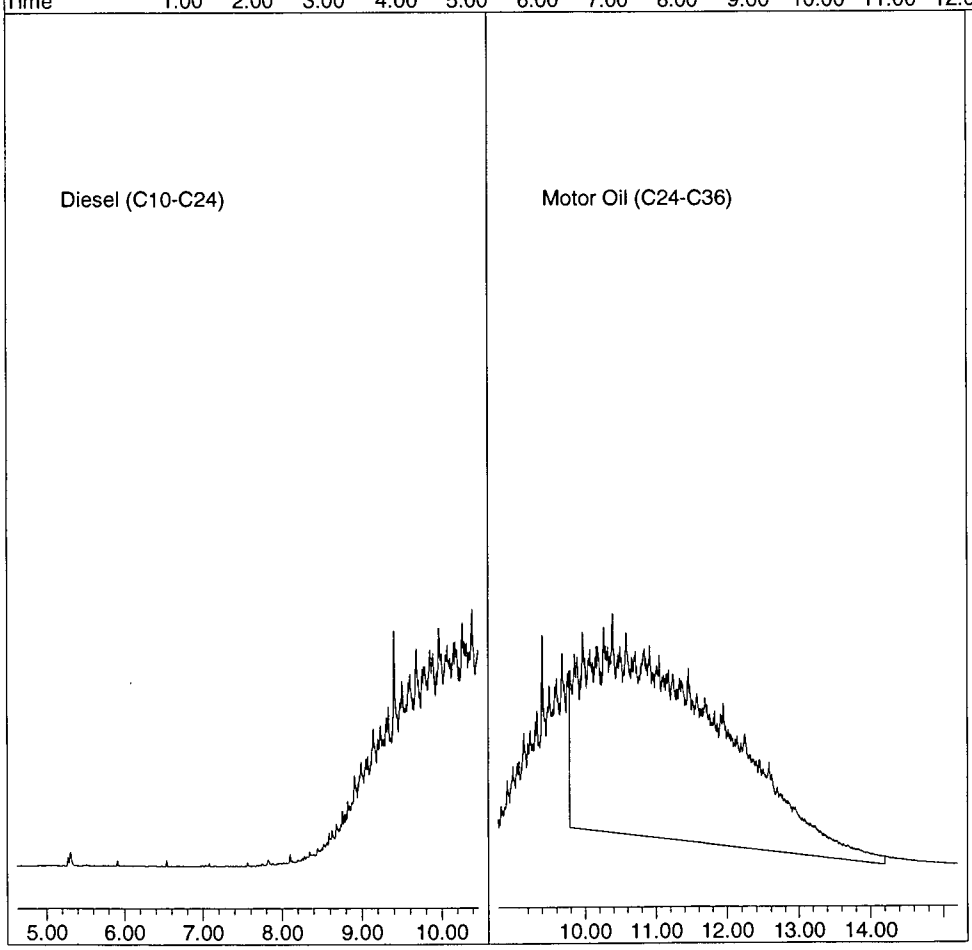
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C36)	11.99	1456274189	905.384 ppb

Quantitation Report

Data File: G:\APOLLO\DATA\140922\922033.D
Sample : MO 1000ppm 9/23/14





TPH Extractables
CTO707

Form 7
Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 74218
Date Analyzed: 9/24/2014
Instrument: Apollo
Initial Cal. Date: 7/7/2014
Data File: 922035,36.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1296370	1200890	7.4	HATM	
2	HBTM	Motor Oil (C24-C36)	804230	739675	8.0	HBTM	
3							
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39							
40							
		Average			7.7		

Quantitation Report (Not Reviewed)

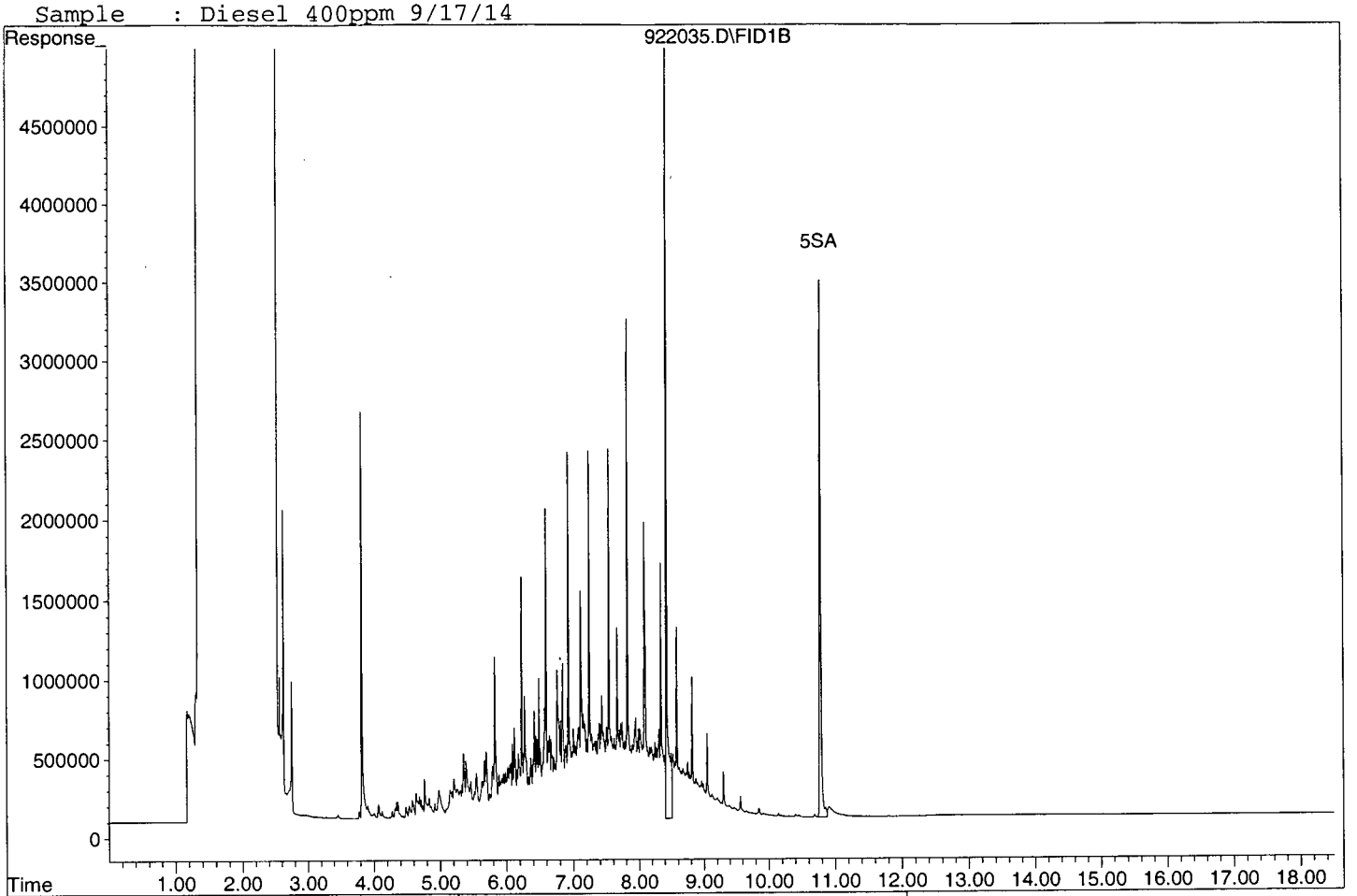
Data File : G:\APOLLO\DATA\140922\922035.D Vial: 35
Acq On : 9-24-14 8:57:02 Operator: lac
Sample : Diesel 400ppm 9/17/14 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 25 14:39 2014 Quant Results File: CTO707.RES

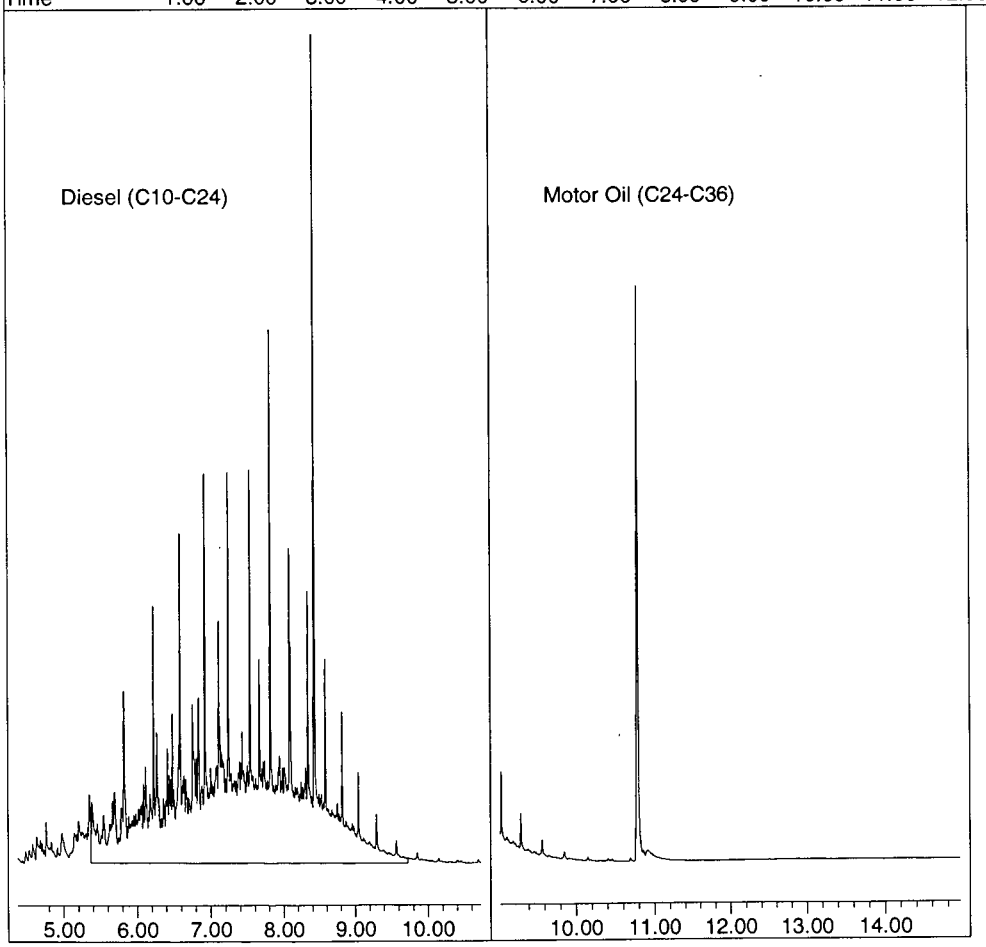
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Not Used(S)	8.43	72909606	19.487 ppb
Surrogate Spike 75.000	Recovery =		25.98%
5) SA Not Used2(S)	10.78	47735117	19.411 ppb
Surrogate Spike 75.000	Recovery =		25.88%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	960710470	370.537 ppb

Data File: G:\APOLLO\DATA\140922\922035.D
Sample : Diesel 400ppm 9/17/14





Quantitation Report (Not Reviewed)

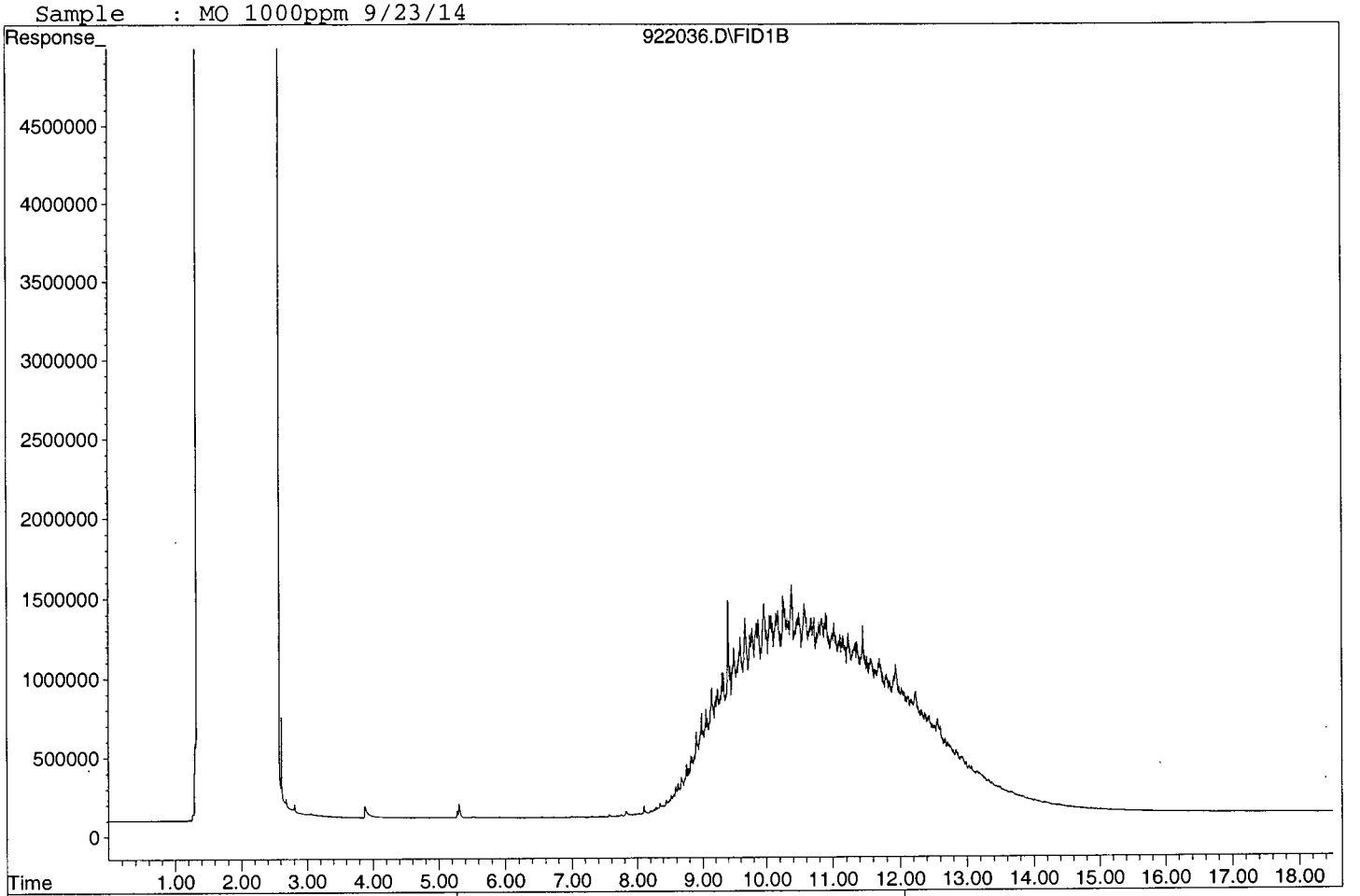
Data File : G:\APOLLO\DATA\140922\922036.D Vial: 36
Acq On : 9-24-14 9:22:29 Operator: lac
Sample : MO 1000ppm 9/23/14 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 25 14:39 2014 Quant Results File: CTO707.RES

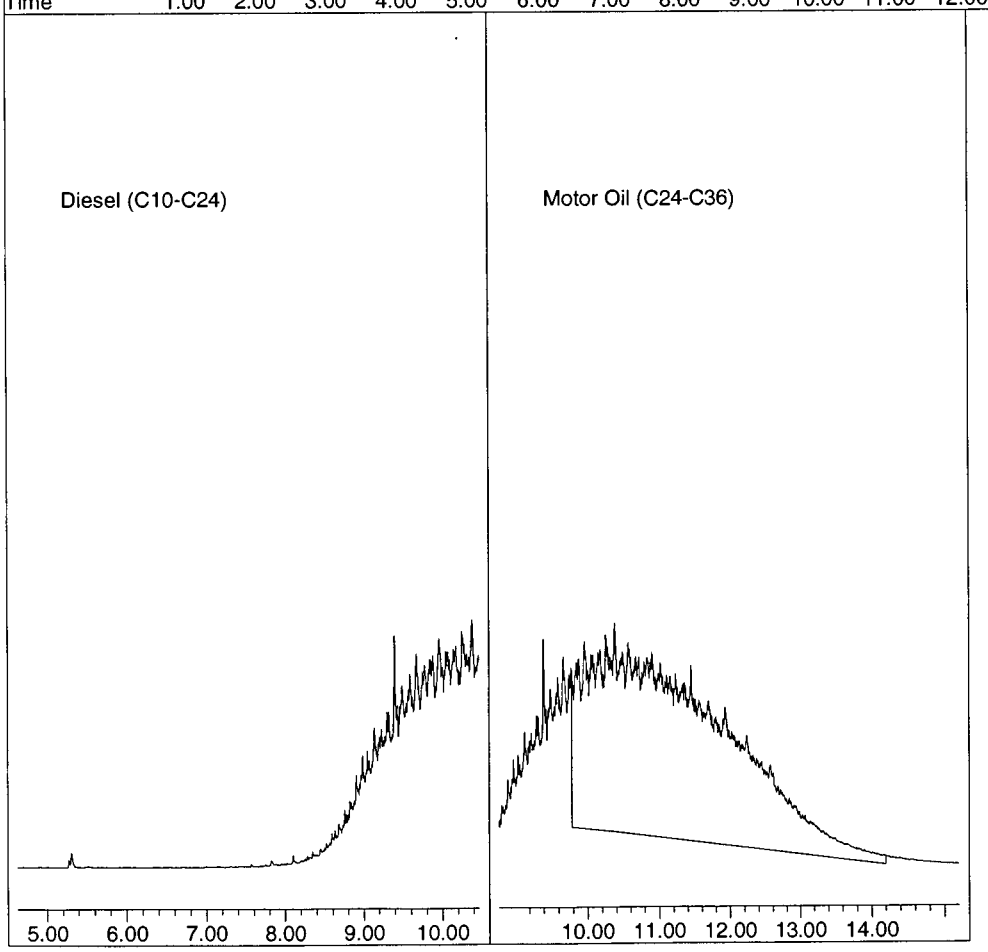
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C36)	11.99	1479350620	919.731 ppb

Data File: G:\APOLLO\DATA\140922\922036.D
Sample : MO 1000ppm 9/23/14





TPH Extractables
CTO707

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 74218
Date Analyzed: 9/24/2014
Instrument: Apollo
Initial Cal. Date: 7/7/2014
Data File: 922047,48.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1296370	1311970	1.2	HATM	
2	HBTM	Motor Oil (C24-C36)	804230	776416	3.5	HBTM	
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		Average			2.4		

Quantitation Report (Not Reviewed)

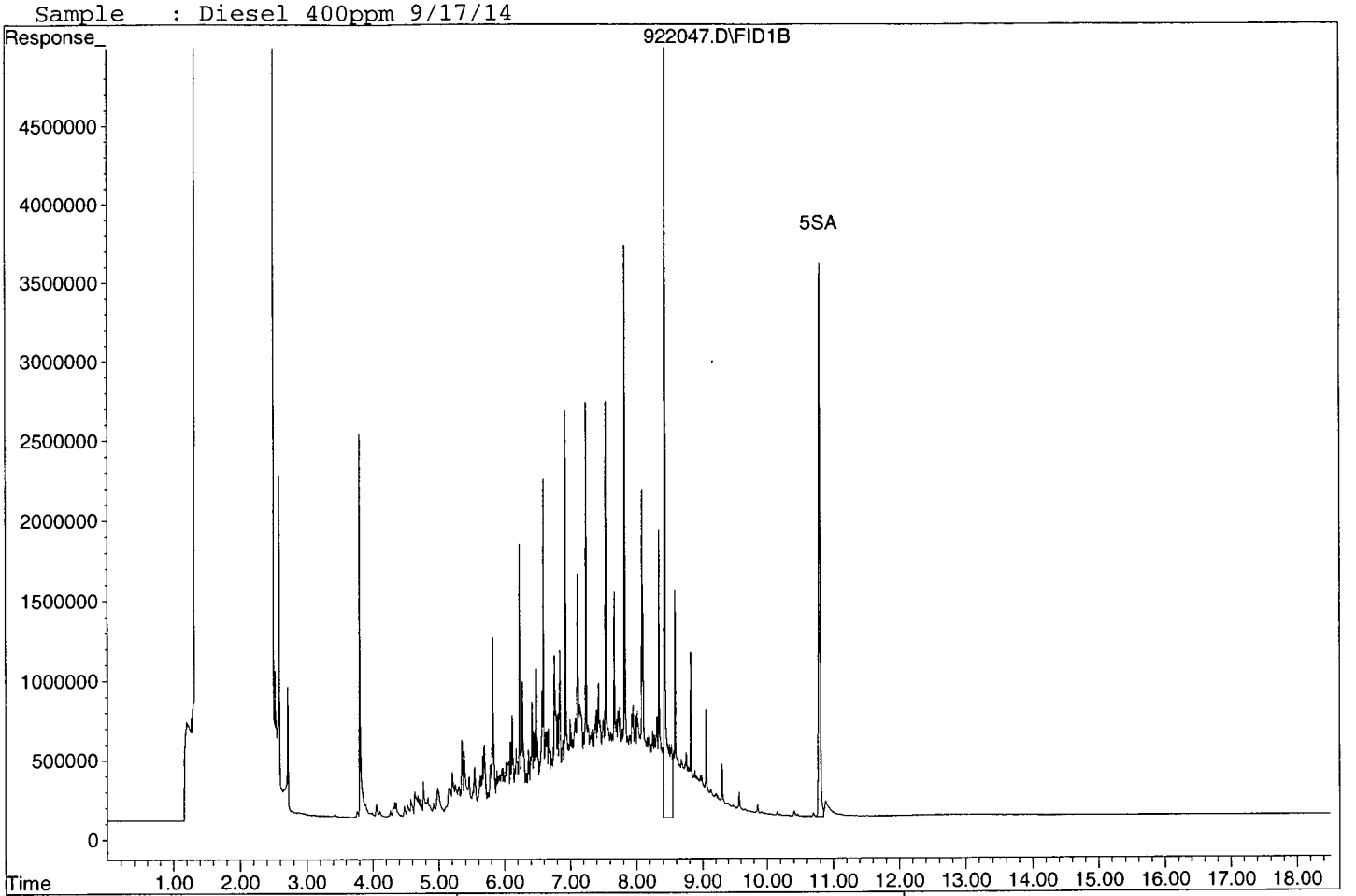
Data File : G:\APOLLO\DATA\140922\922047.D Vial: 47
Acq On : 9-24-14 16:19:40 Operator: lac
Sample : Diesel 400ppm 9/17/14 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 2 13:18 2014 Quant Results File: CTO707.RES

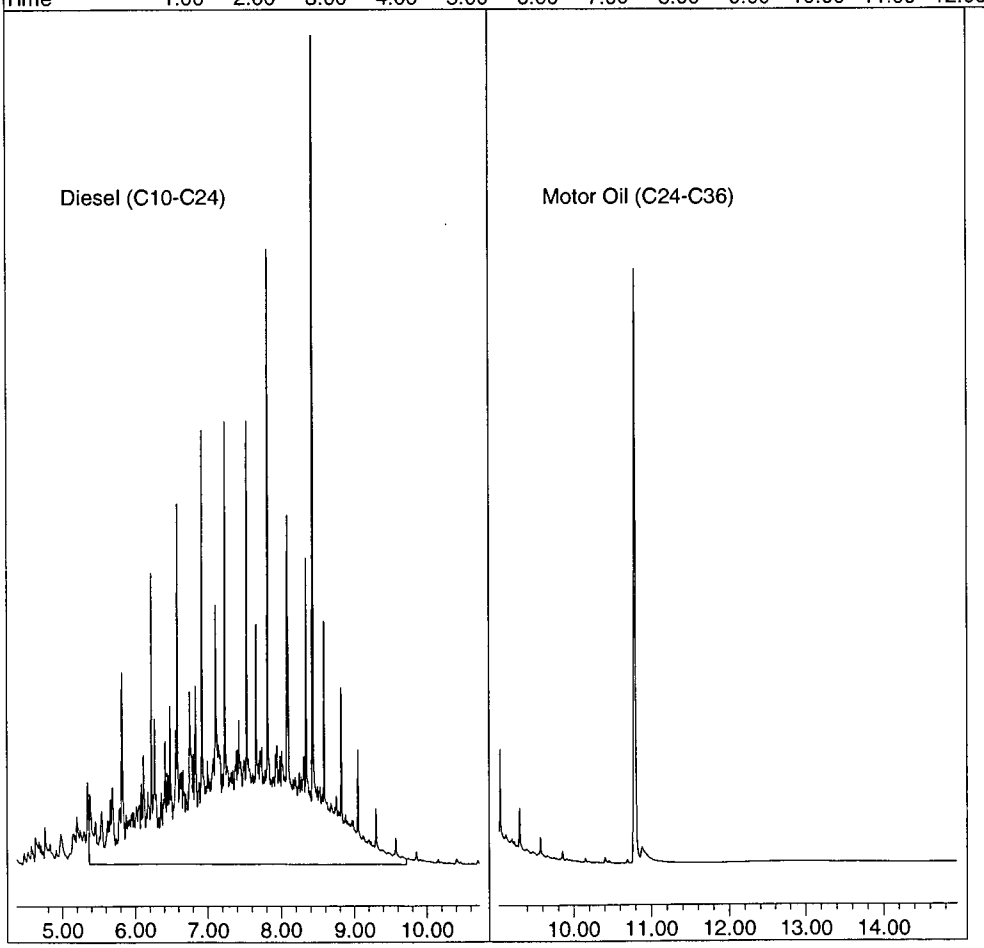
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Not Used(S)	8.43	93427877	24.971 ppb
Surrogate Spike 75.000	Recovery =		33.29%
5) SA Not Used2(S)	10.79	54434118	22.136 ppb
Surrogate Spike 75.000	Recovery =		29.51%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	1049572064	404.810 ppb

Data File: G:\APOLLO\DATA\140922\922047.D
Sample : Diesel 400ppm 9/17/14





Quantitation Report (Not Reviewed)

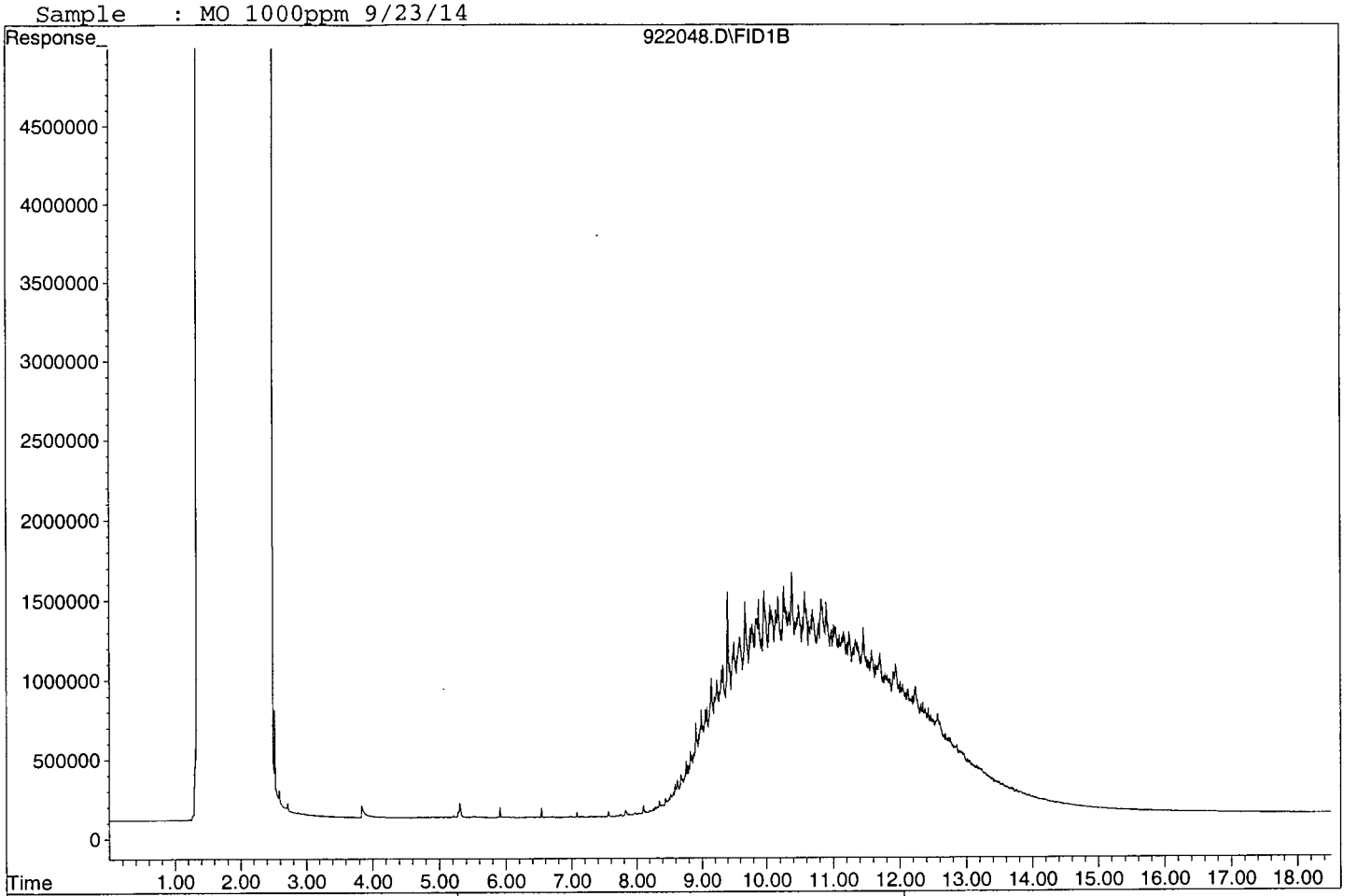
Data File : G:\APOLLO\DATA\140922\922048.D Vial: 48
Acq On : 9-24-14 16:45:17 Operator: lac
Sample : MO 1000ppm 9/23/14 Inst : Apollo
Misc : Mix(B) Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 2 13:19 2014 Quant Results File: CTO707.RES

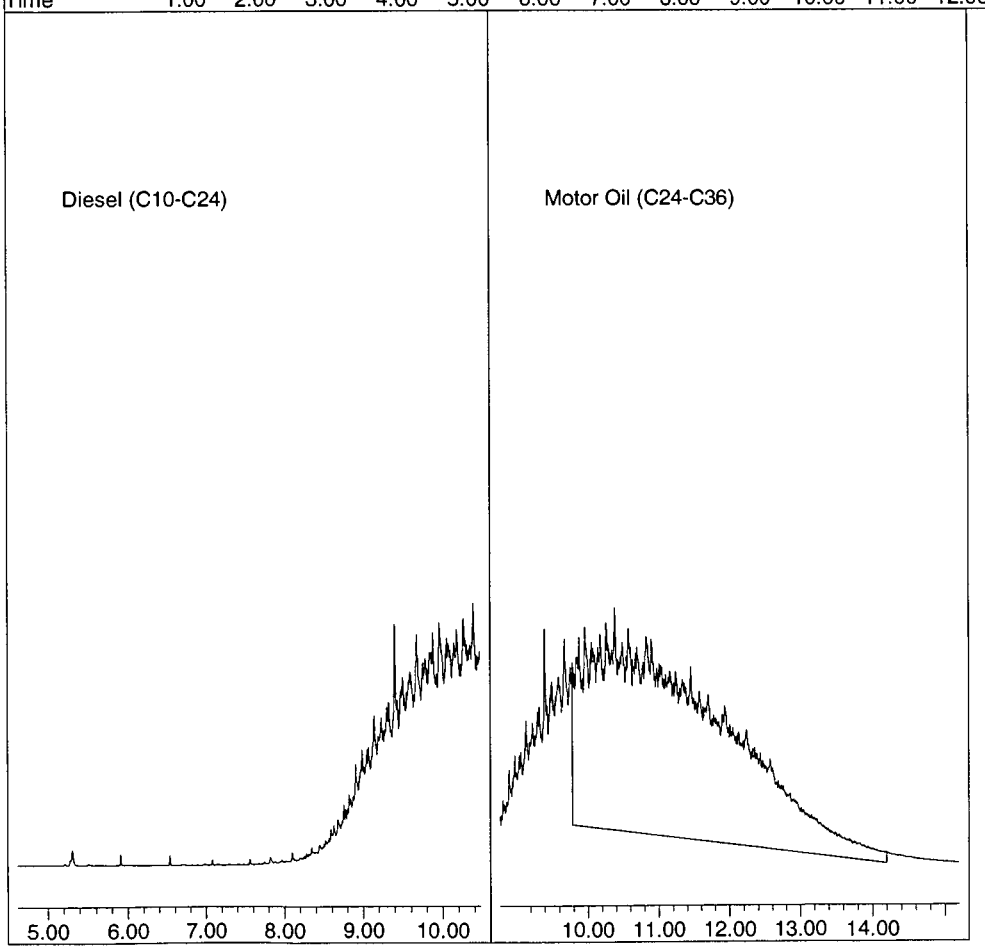
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
2) HBTM Motor Oil (C24-C36)	11.99	1552831362	965.415 ppb

Data File: G:\APOLLO\DATA\140922\922048.D
Sample : MO 1000ppm 9/23/14





EPA 8015 Modified
Total Petroleum Hydrocarbons
Raw Data

Method Blank
TPH-d Water EPA 8015C

Blank Name/QCG: **140909W-02108 - 190197**
Batch ID: #DROWC-140909A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	TPH-DRO (C10-C24)	50.0 U	150	50.0	40.4	ug/L	9/9/2014	9/22/2014
BLANK	TPH-LRO (C24-C36)	500.0 U	500	500.0	106.0	ug/L	9/9/2014	9/22/2014
BLANK	SURROGATE: OCTACOSANE (S)	113	28-142			%	9/9/2014	9/22/2014
BLANK	SURROGATE: ORTHO-TERPHEN	101	57-132			%	9/9/2014	9/22/2014

Quant Method:CTO707.M
Run #:922004
Instrument:Apollo
Sequence:140922
Initials:LA

GC SC-Blank-REG MDLs
Printed: 9/26/2014 1:44:04 PM

Quantitation Report (QT Reviewed)

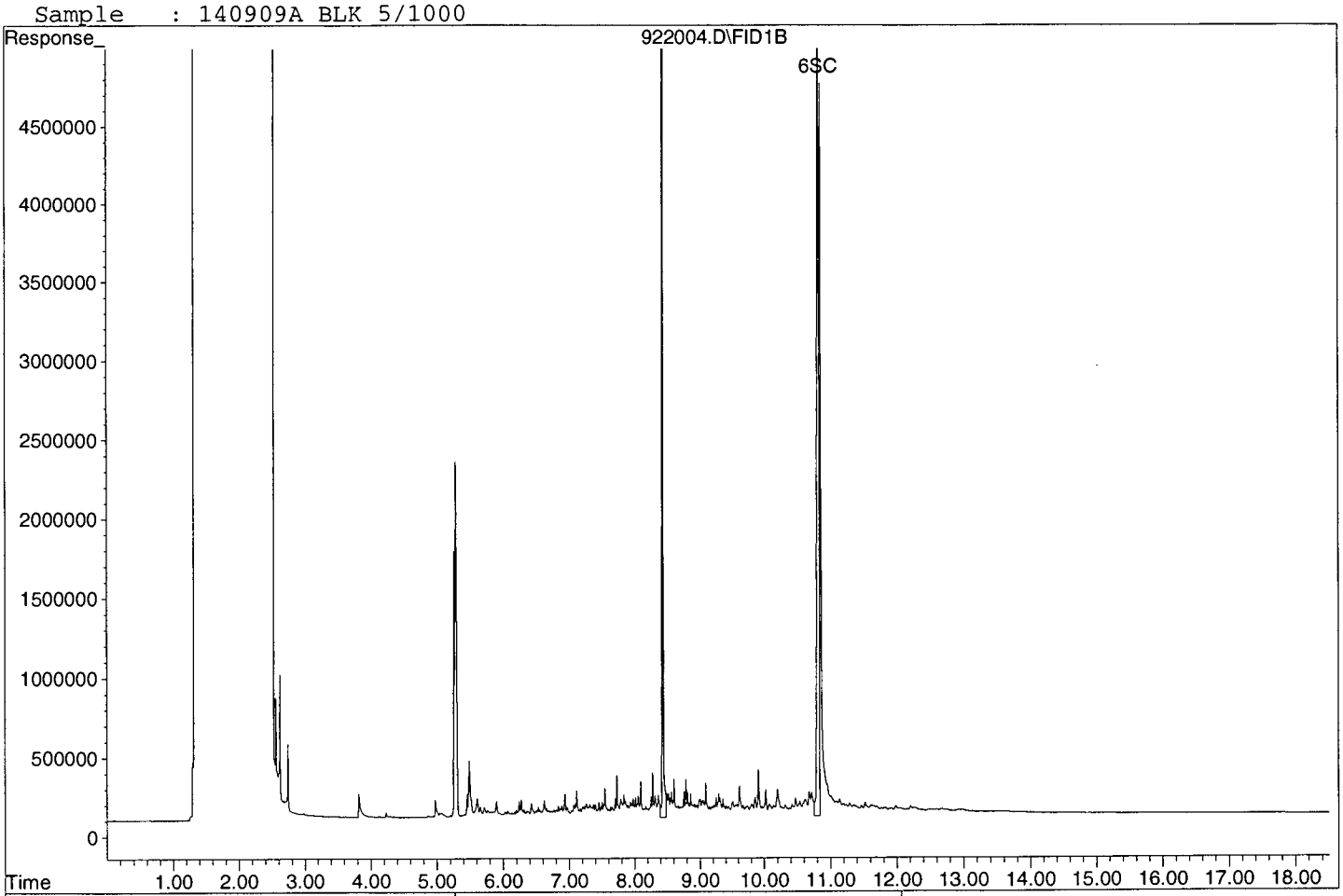
Data File : G:\APOLLO\DATA\140922\922004.D Vial: 4
Acq On : 9-22-14 10:51:49 Operator: lac
Sample : 140909A BLK 5/1000 Inst : Apollo
Misc : Water Multiplr: 5.00
IntFile : events.e
Quant Time: Sep 25 14:30 2014 Quant Results File: CTO707.RES

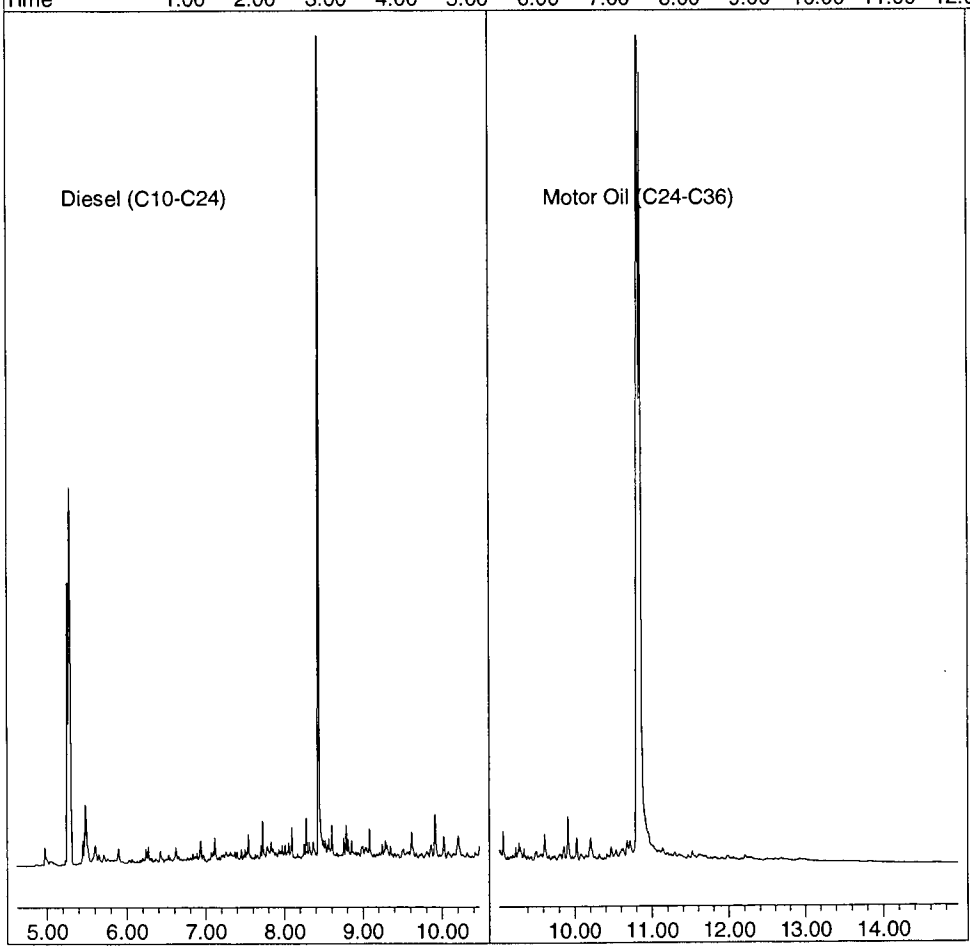
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.44	95060737	150.788 ppb
Surrogate Spike 150.000		Recovery =	100.53%
6) SC Octacosane(S)	10.82	101501260	170.069 ppb
Surrogate Spike 150.000		Recovery =	113.38%
Target Compounds			

Data File: G:\APOLLO\DATA\140922\922004.D
Sample : 140909A BLK 5/1000





Method Blank

TPHE SOIL EPA 8015C IS GROSS

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **140910S-02100 - 190196**
Batch ID: #DROCT-140910A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	TPH-DRO (C10-C24)	1.00 U	5.0	1.00	0.65	mg/kg	9/10/2014	9/23/2014
BLANK	TPH-LRO (C24-C36)	10.0 U	50	10.0	3.5	mg/kg	9/10/2014	9/23/2014
BLANK	SURROGATE: OCTACOSANE (S)	78.9	47-140			%	9/10/2014	9/23/2014
BLANK	SURROGATE: ORTHO-TERPHEN	71.5	51-128			%	9/10/2014	9/23/2014

Quant Method:CTO707.M
Run #:922018
Instrument:Apollo
Sequence:140922
Initials:LA

GC SC-Blank-REG MDLs
Printed: 9/26/2014 1:44:04 PM

Quantitation Report (QT Reviewed)

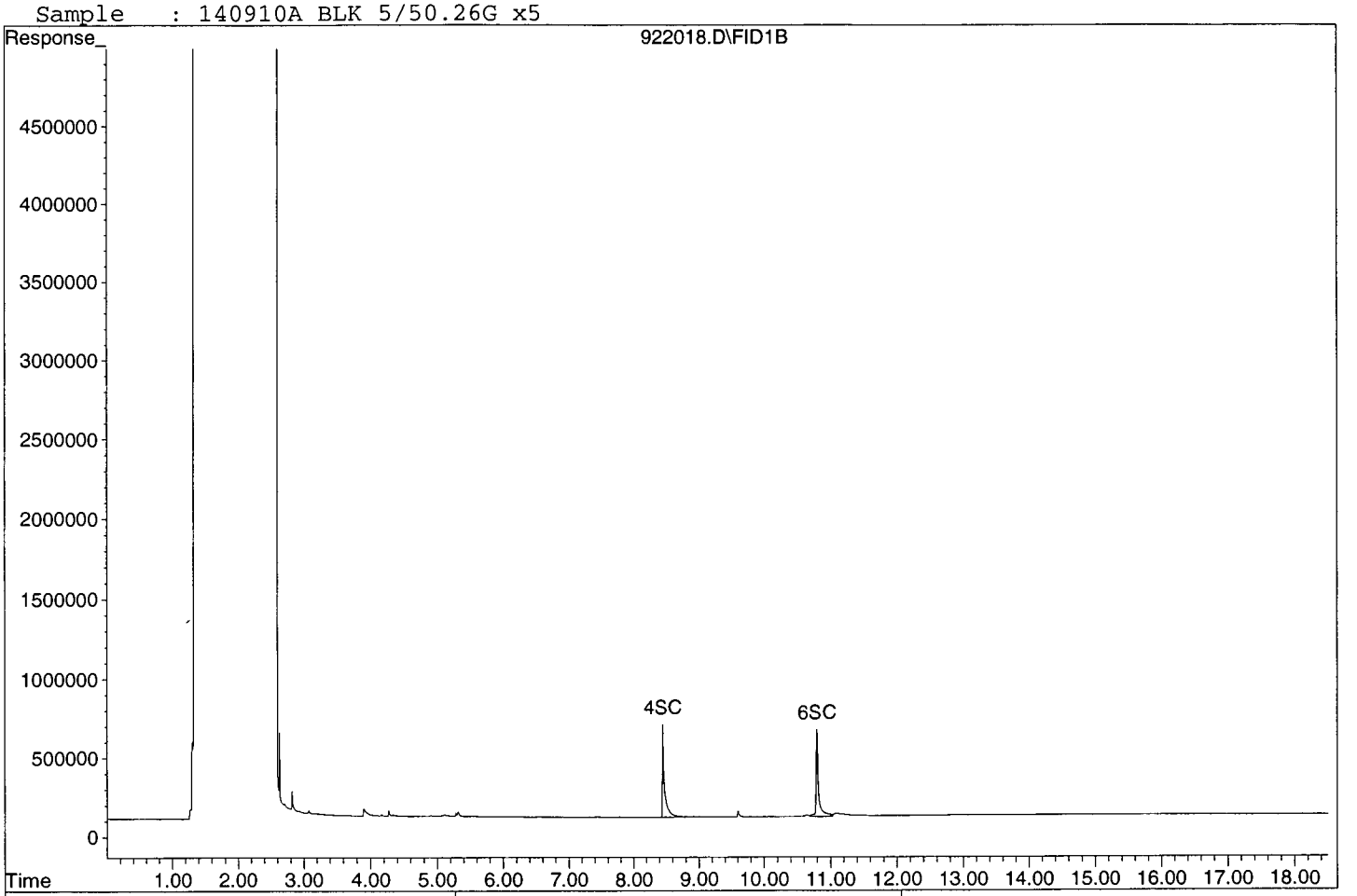
Data File : G:\APOLLO\DATA\140922\922018.D Vial: 18
Acq On : 9-23-14 11:00:40 Operator: lac
Sample : 140910A BLK 5/50.26G x5 Inst : Apollo
Misc : Soi1 Multiplr: 497.41
IntFile : events.e
Quant Time: Sep 25 14:32 2014 Quant Results File: CTO707.RES

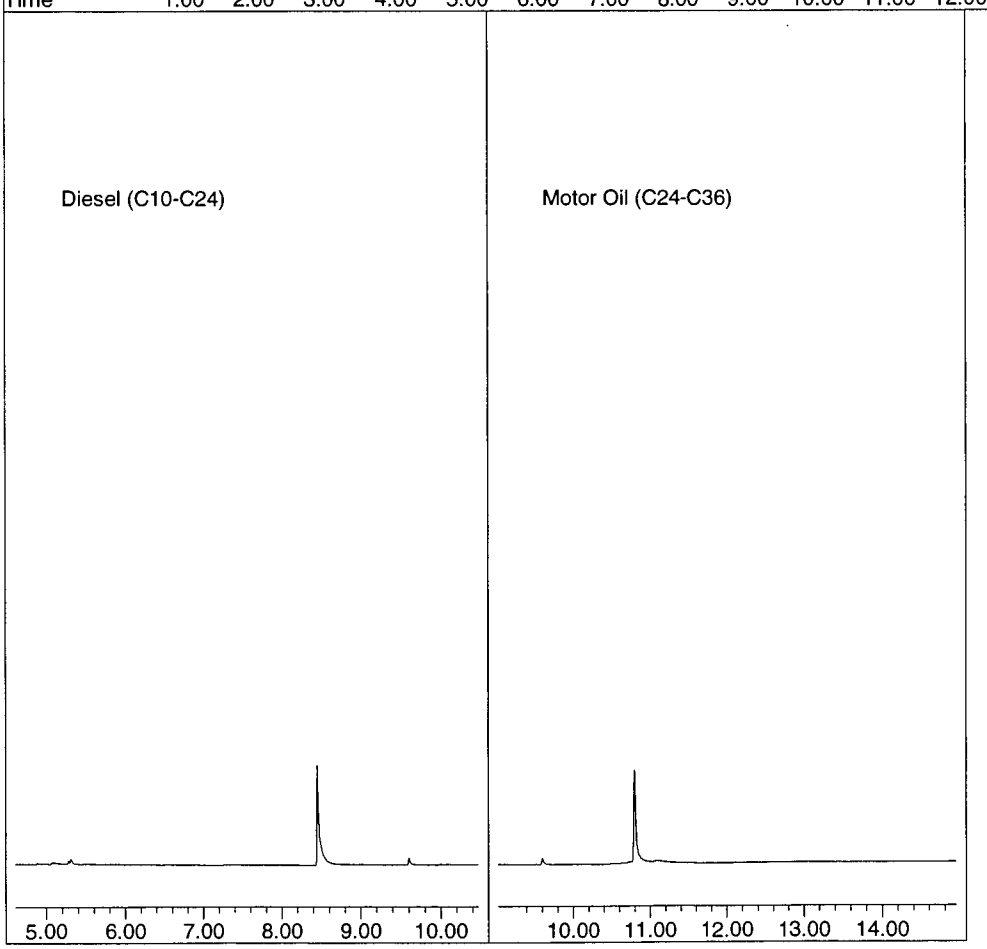
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.45	13519496	2133.399 ppb
Surrogate Spike 2984.481		Recovery	= 71.48%
6) SC Octacosane(S)	10.80	14124817	2354.421 ppb
Surrogate Spike 2984.481		Recovery	= 78.89%
Target Compounds			

Data File: G:\APOLLO\DATA\140922\922018.D
Sample : 140910A BLK 5/50.26G x5





Laboratory Control Spike Recovery
TPH-d Water EPA 8015C

APPL ID: **140909W-02108 LCS - 190451**
Batch ID: #DROWC-140909A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
TPH-DRO (C10-C24)	2000	1230	61.5	61-143
TPH-LRO (C24-C36)	2000	1250	62.5	61-143
SURROGATE: OCTACOSANE (S)	150	96.5	64.3	28-142
SURROGATE: ORTHO-TERPHENYL (S)	150	111	74.0	57-132

Comments: _____

Primary	SPK
Quant Method :	CTO707.M
Extraction Date :	9/9/2014
Analysis Date :	9/22/2014
Instrument :	Apollo
Run :	922005
Initials :	LA

Printed: 10/2/2014 2:25:26 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

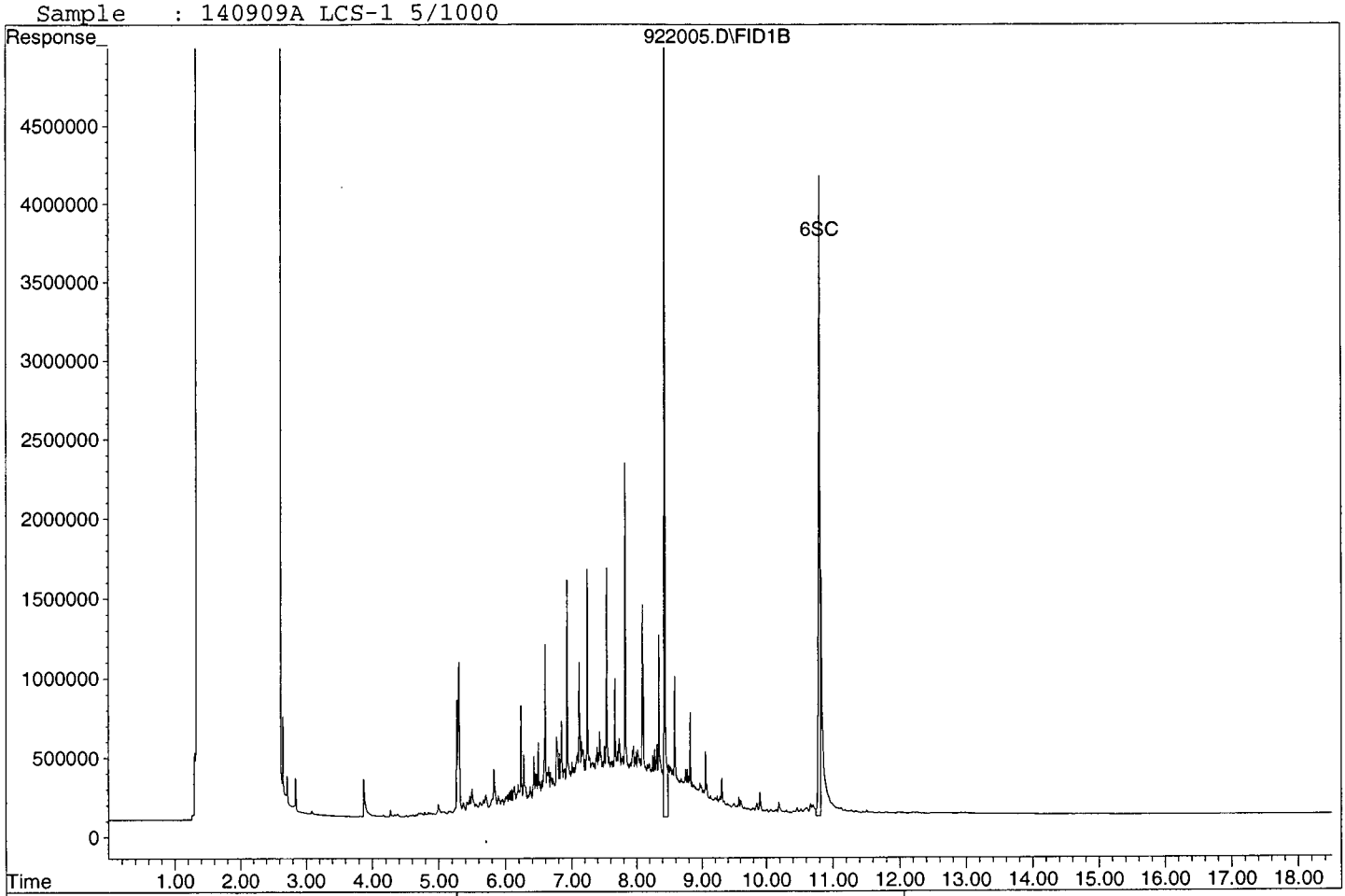
Data File : G:\APOLLO\DATA\140922\922005.D Vial: 5
Acq On : 9-22-14 11:17:21 Operator: lac
Sample : 140909A LCS-1 5/1000 Inst : Apollo
Misc : Water Multiplr: 5.00
IntFile : events.e
Quant Time: Oct 2 14:09 2014 Quant Results File: CTO707.RES

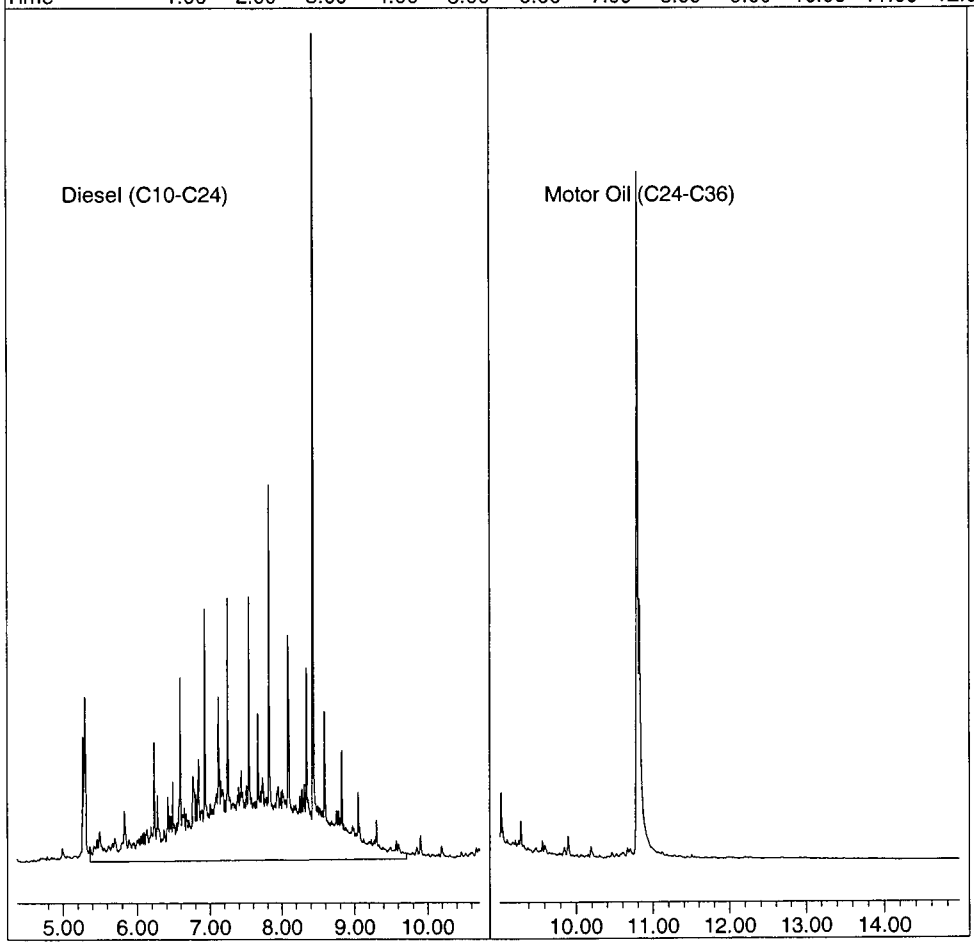
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.43	70168989	111.304 ppb
Surrogate Spike 150.000		Recovery =	74.20%
6) SC Octacosane(S)	10.80	57612438	96.532 ppb
Surrogate Spike 150.000		Recovery =	64.35%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	638722265	1231.747 ppb

Data File: G:\APOLLO\DATA\140922\922005.D
Sample : 140909A LCS-1 5/1000





Quantitation Report (QT Reviewed)

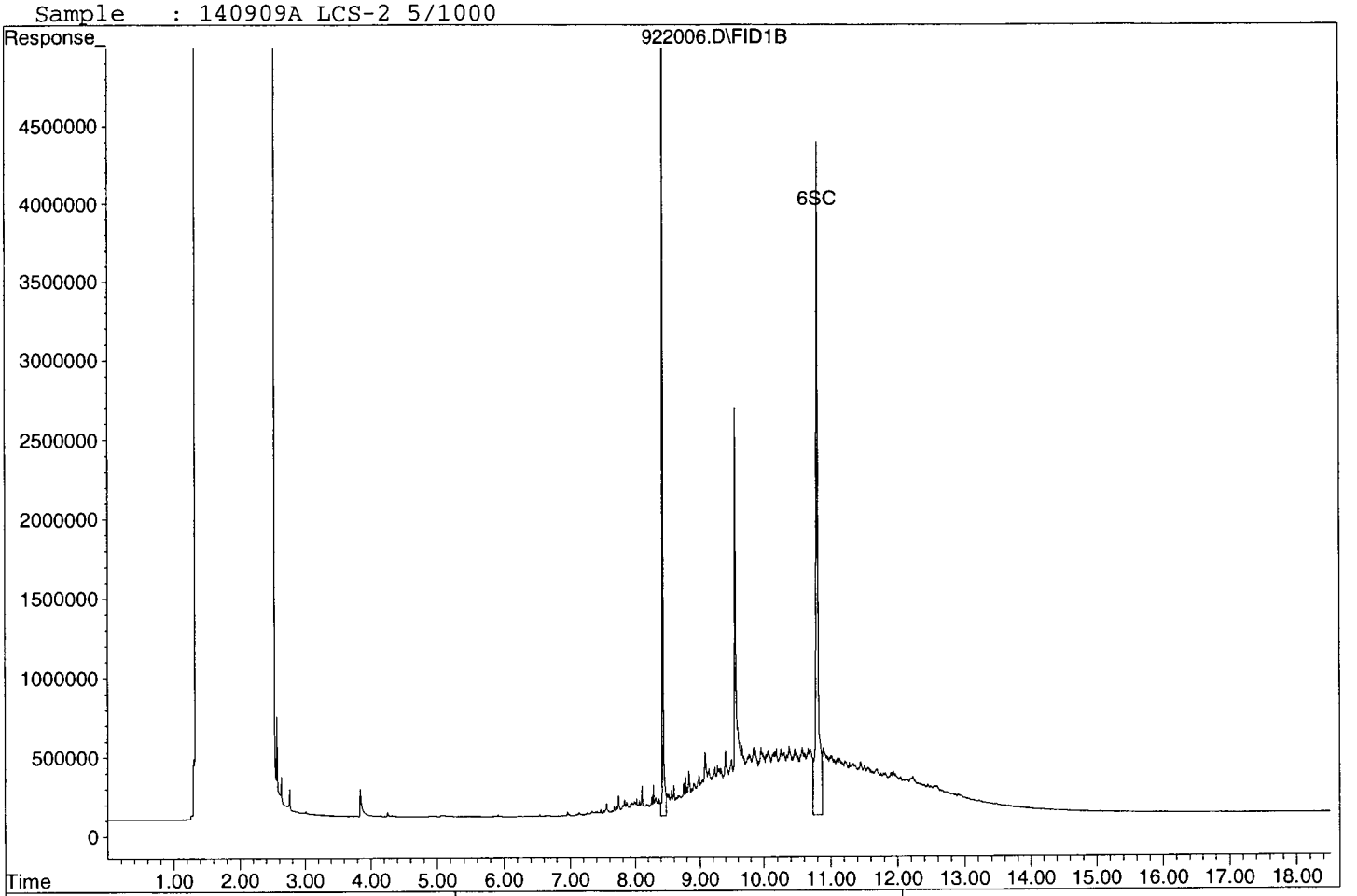
Data File : G:\APOLLO\DATA\140922\922006.D Vial: 6
Acq On : 9-22-14 11:43:11 Operator: lac
Sample : 140909A LCS-2 5/1000 Inst : Apollo
Misc : Water Multiplr: 5.00
IntFile : events.e
Quant Time: Oct 2 14:10 2014 Quant Results File: CTO707.RES

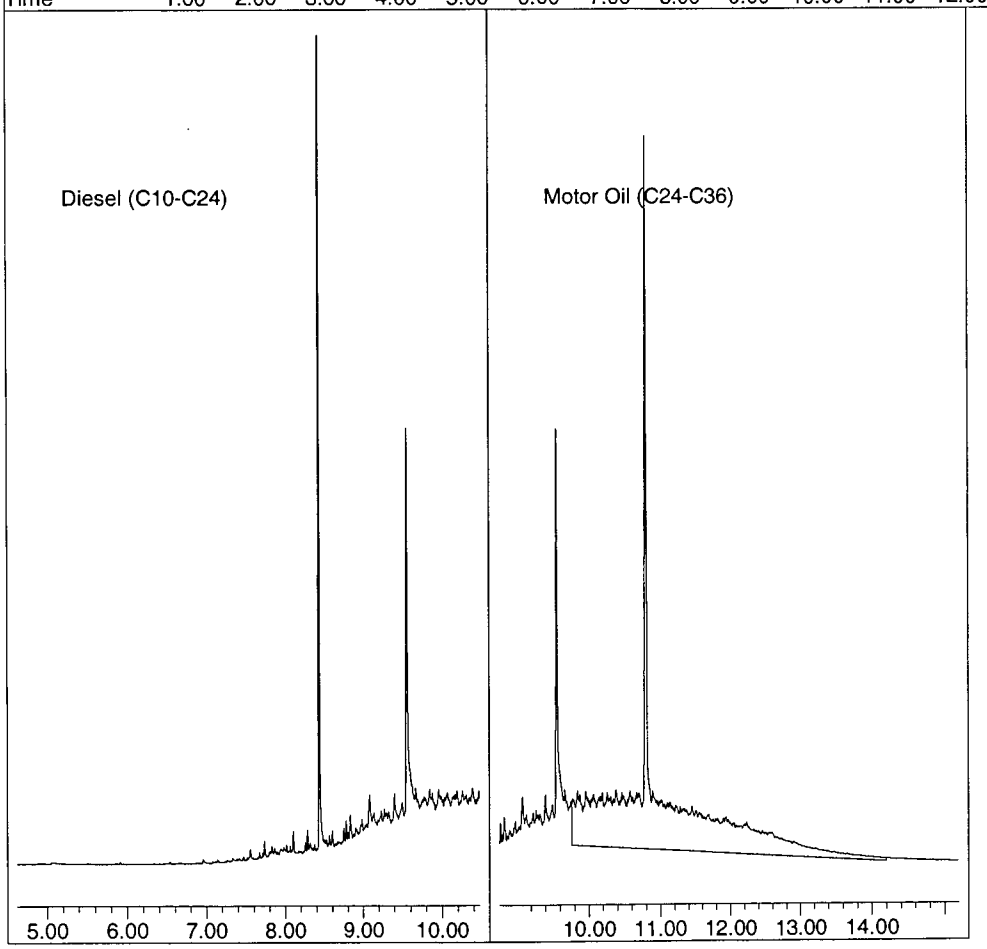
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.43	63885210	101.336 ppb
Surrogate Spike 150.000		Recovery =	67.56%
6) SC Octacosane(S)	10.80	91153505	152.731 ppb
Surrogate Spike 150.000		Recovery =	101.82%
Target Compounds			
2) HBTM Motor Oil (C24-C36)	11.99	403140317	1253.187 ppb

Data File: G:\APOLLO\DATA\140922\922006.D
Sample : 140909A LCS-2 5/1000





Laboratory Control Spike Recovery
TPHE SOIL EPA 8015C IS GROSS

APPL ID: **140910S-02100 LCS - 190196**
Batch ID: #DROCT-140910A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
TPH-DRO (C10-C24)	40.0	28.6	71.5	64-122
TPH-LRO (C24-C36)	40.0	27.1	67.8	50-150
SURROGATE: OCTACOSANE (S)	3.00	2.47	82.3	47-140
SURROGATE: ORTHO-TERPHENYL (S)	3.00	2.76	92.0	51-128

Comments: _____

Primary	SPK
Quant Method :	CTO707.M
Extraction Date :	9/10/2014
Analysis Date :	9/23/2014
Instrument :	Apollo
Run :	922019
Initials :	LA

Printed: 9/26/2014 1:43:57 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\140922\922019.D Vial: 19
Acq On : 9-23-14 11:26:34 Operator: lac
Sample : 140910A LCS-1 5/50.49G x5 Inst : Apollo
Misc : Soil Multiplr: 495.15
IntFile : events.e
Quant Time: Sep 25 14:32 2014 Quant Results File: CTO707.RES

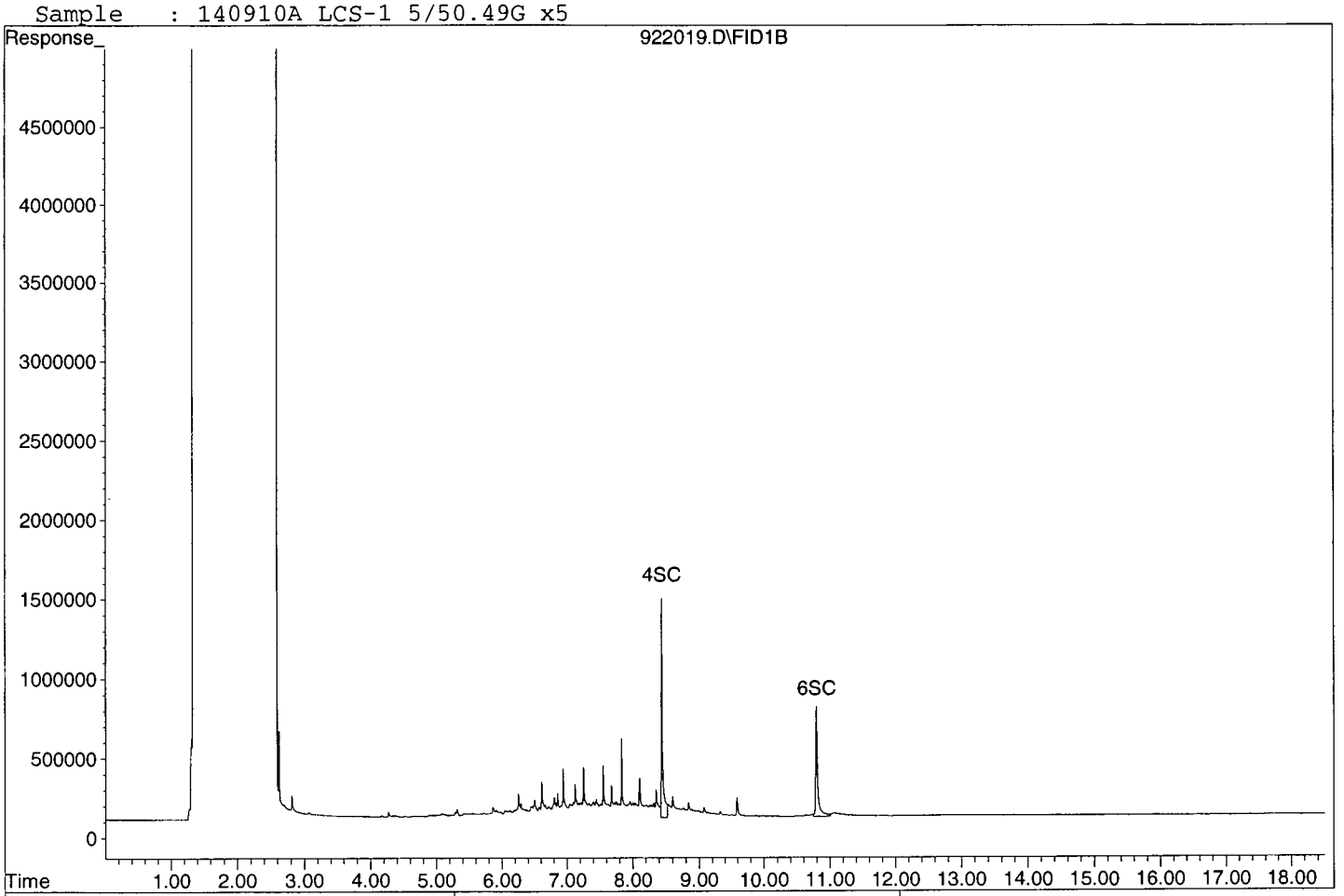
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

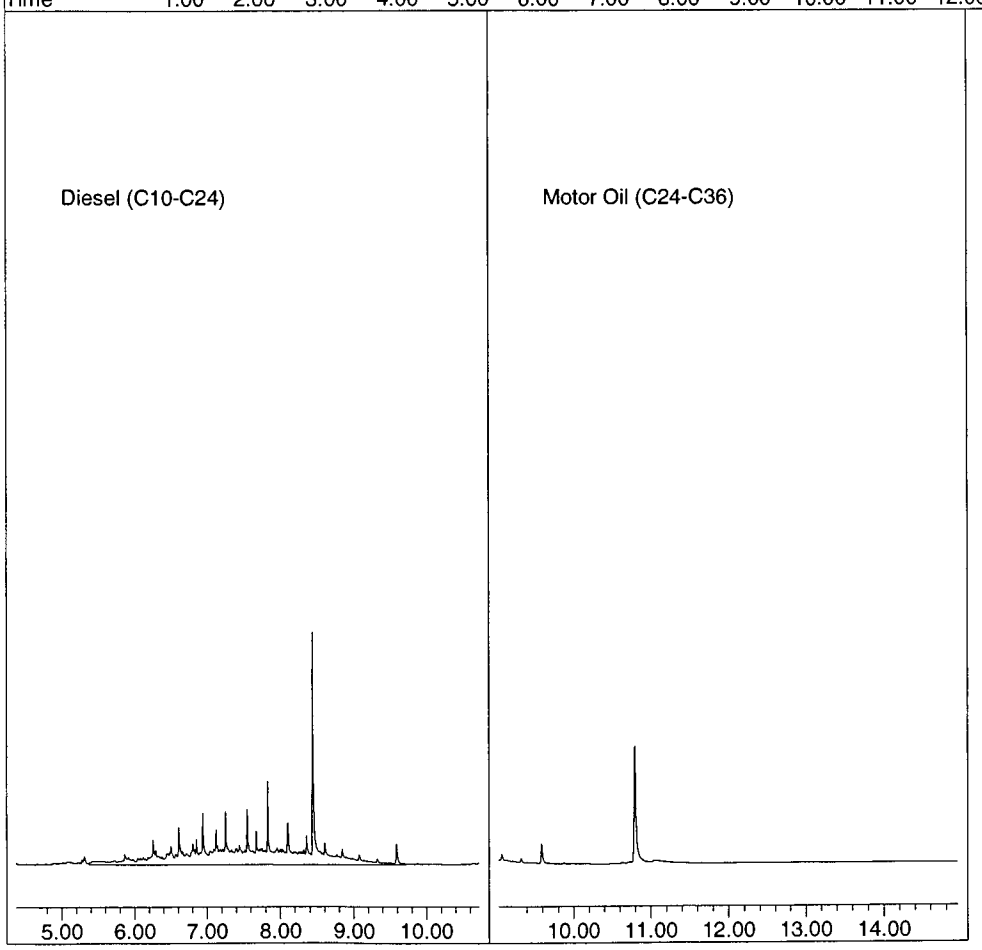
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.44	17601434	2764.888 ppb
Surrogate Spike 2970.885		Recovery	= 93.07%
6) SC Octacosane(S)	10.80	14914959	2474.807 ppb
Surrogate Spike 2970.885		Recovery	= 83.30%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	149639184	28577.212 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\140922\922019.D
Sample : 140910A LCS-1 5/50.49G x5





Quantitation Report (QT Reviewed)

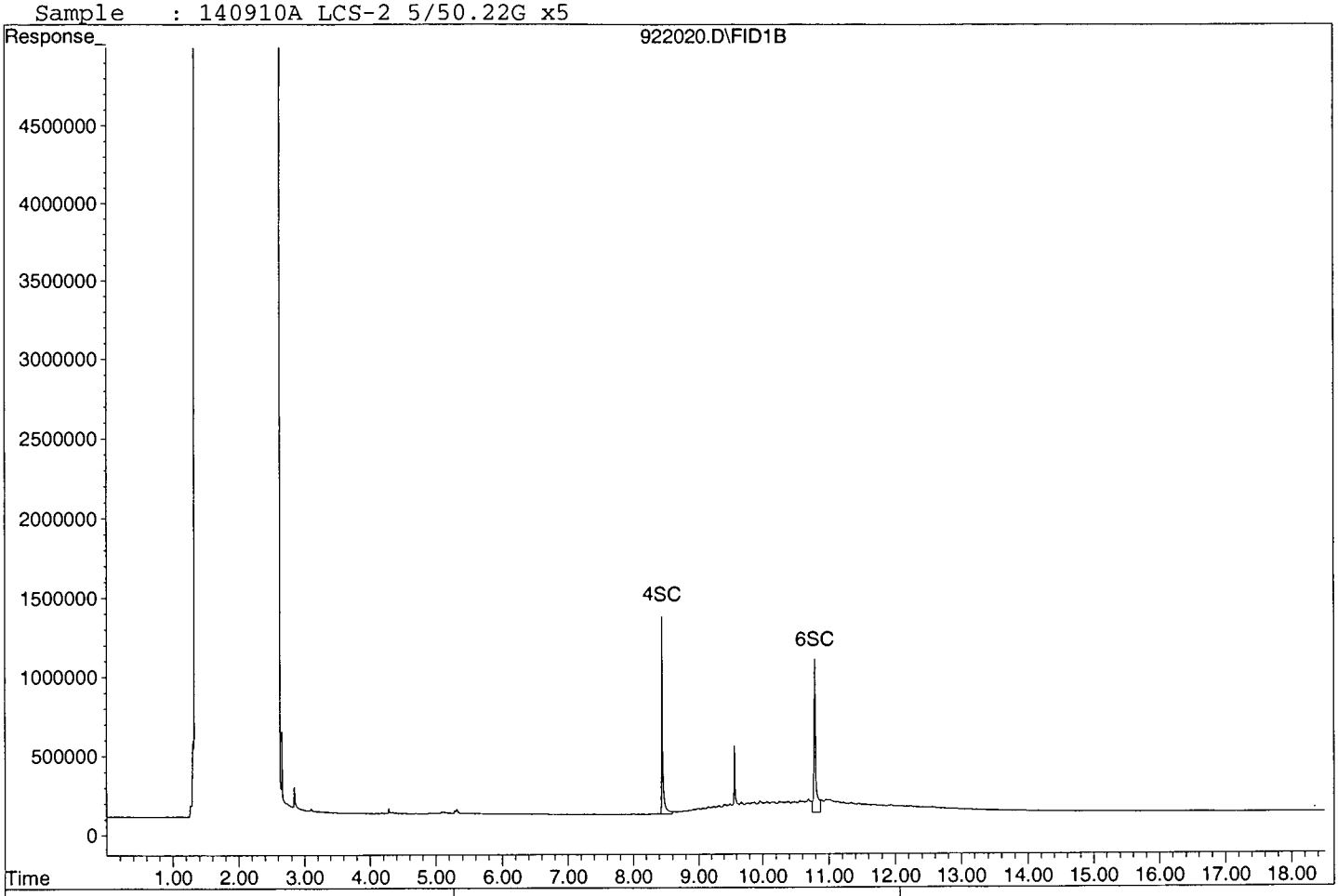
Data File : G:\APOLLO\DATA\140922\922020.D Vial: 20
Acq On : 9-23-14 11:52:28 Operator: lac
Sample : 140910A LCS-2 5/50.22G x5 Inst : Apollo
Misc : Soil Multiplr: 497.81
IntFile : events.e
Quant Time: Sep 25 14:32 2014 Quant Results File: CTO707.RES

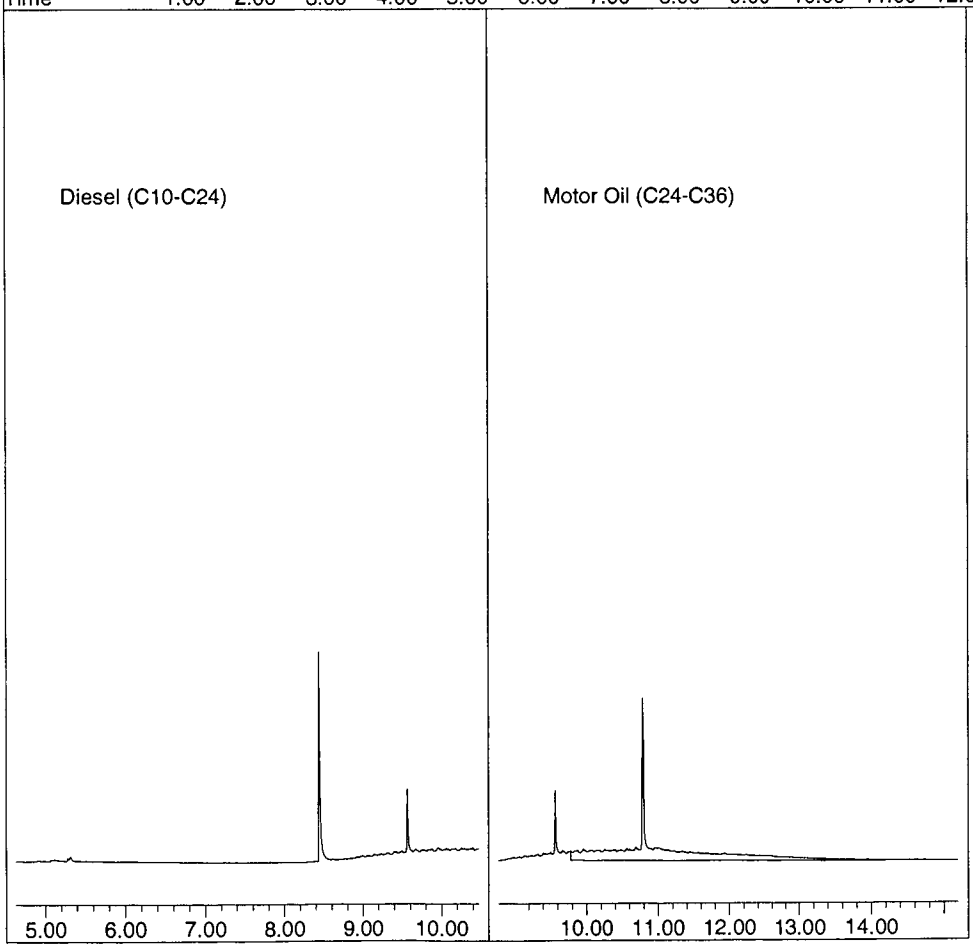
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.44	14313375	2260.477 ppb
Surrogate Spike 2986.858		Recovery	= 75.68%
6) SC Octacosane(S)	10.79	18425578	3073.753 ppb
Surrogate Spike 2986.858		Recovery	= 102.91%
Target Compounds			
2) HBTM Motor Oil (C24-C36)	11.99	87520906	27087.264 ppb

Data File: G:\APOLLO\DATA\140922\922020.D
Sample : 140910A LCS-2 5/50.22G x5





Matrix Spike Recoveries

TPHE SOIL EPA 8015C IS GROSS

APPL ID: **140910S-02100 MS - 190196**
Batch ID: #DROCT-140910A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
TPH-DRO (C10-C24)	40.0	10	23.6	43.2	34.0 #	83.0	64-122	58.7 #	30
TPH-LRO (C24-C36)	40.0	18	43.7	38.1	64.3	50.3	50-150	13.7	30
SURROGATE: OCTACOSANE (S)	3.00	NA	2.75	4.07	91.7	136	47-140		
SURROGATE: ORTHO-TERPHENYL (S)	3.00	NA	2.49	3.22	83.0	107	51-128		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	CTO707.M	CTO707.M
Extraction Date :	9/10/2014	9/10/2014
Analysis Date :	9/23/2014	9/23/2014
Instrument :	Apollo	Apollo
Run :	922022	922023
Initials :	LA	

Printed: 9/26/2014 1:43:54 PM
APPL MSD SCII

Quantitation Report (QT Reviewed)

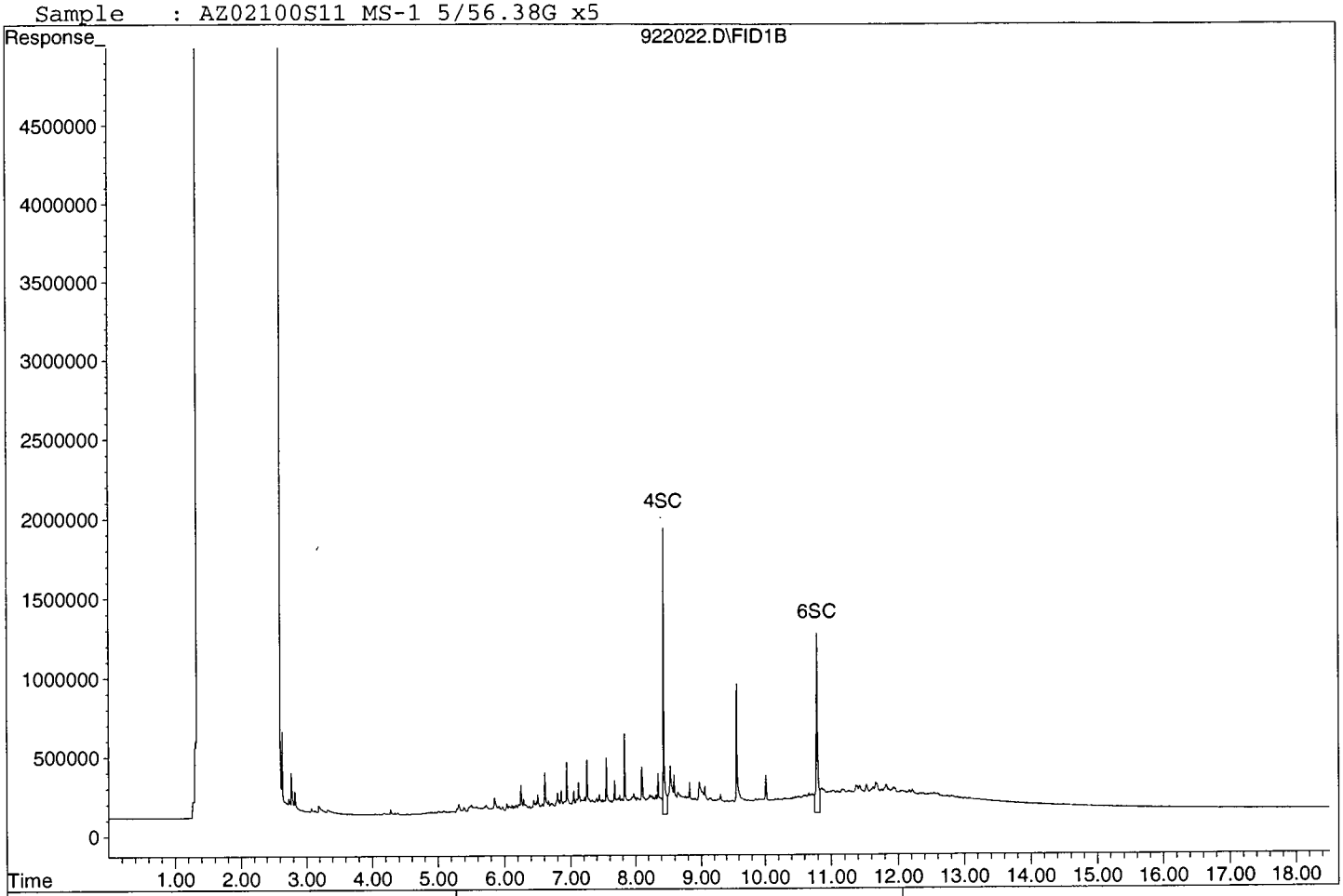
Data File : G:\APOLLO\DATA\140922\922022.D Vial: 22
Acq On : 9-23-14 12:44:25 Operator: lac
Sample : AZ02100S11 MS-1 5/56.38G x5 Inst : Apollo
Misc : Soil Multiplr: 443.42
IntFile : events.e
Quant Time: Sep 25 14:33 2014 Quant Results File: CTO707.RES

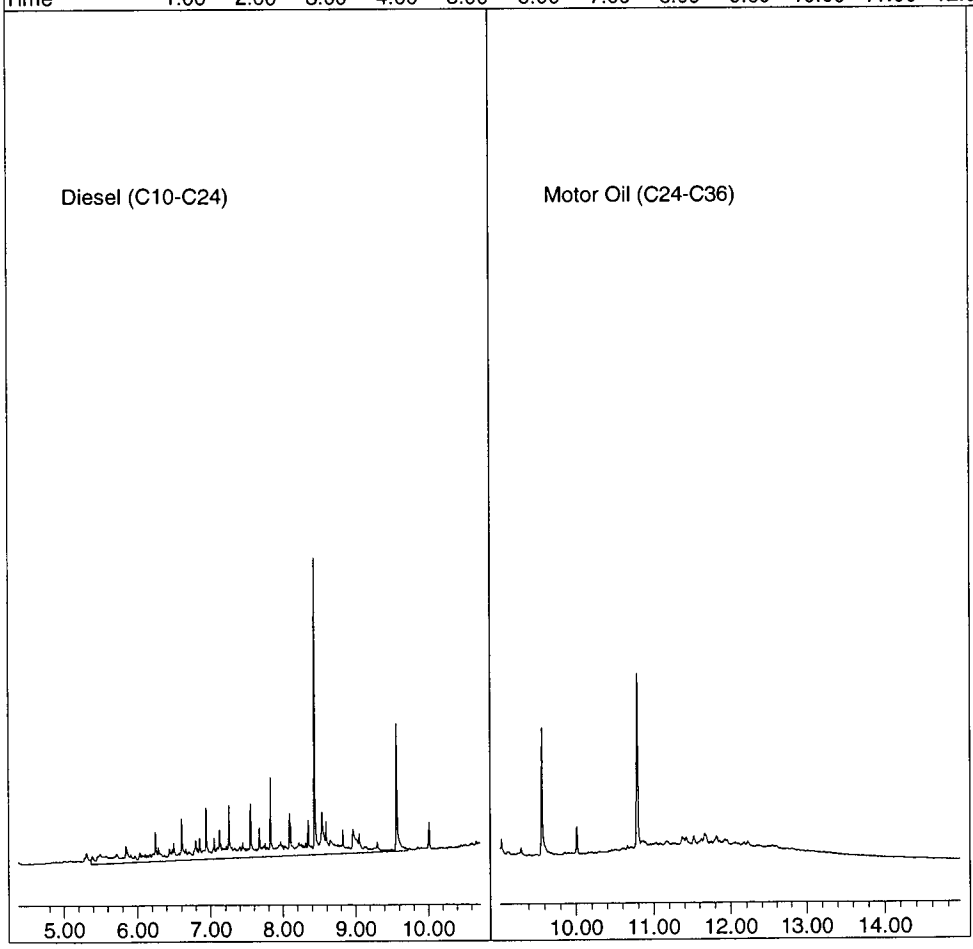
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
4) SC Ortho-Terphenyl(S)	8.43	17689635	2488.448	ppb
Surrogate Spike 2660.518		Recovery	= 93.53%	
6) SC Octacosane(S)	10.79	18479981	2746.003	ppb
Surrogate Spike 2660.518		Recovery	= 103.21%	
Target Compounds				
1) HATM Diesel (C10-C24)	7.55	138215001	23637.958	ppb

Data File: G:\APOLLO\DATA\140922\922022.D
Sample : AZ02100S11 MS-1 5/56.38G x5





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\140922\922023.D Vial: 23
Acq On : 9-23-14 13:10:19 Operator: lac
Sample : AZ02100S11 MSD-1 5/56.39G x5 Inst : Apollo
Misc : Soil Multiplr: 443.34
IntFile : events.e
Quant Time: Sep 25 14:33 2014 Quant Results File: CTO707.RES

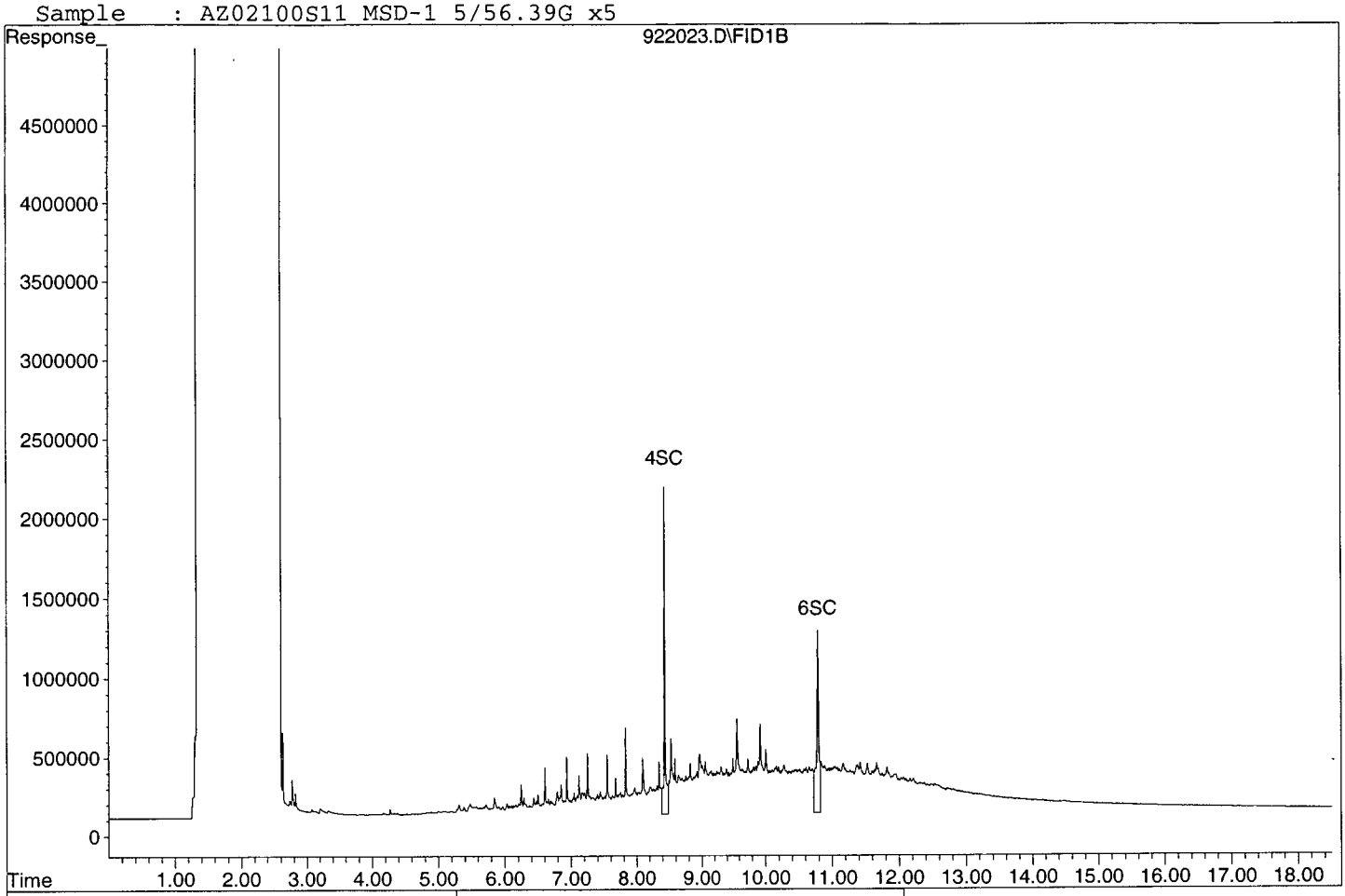
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

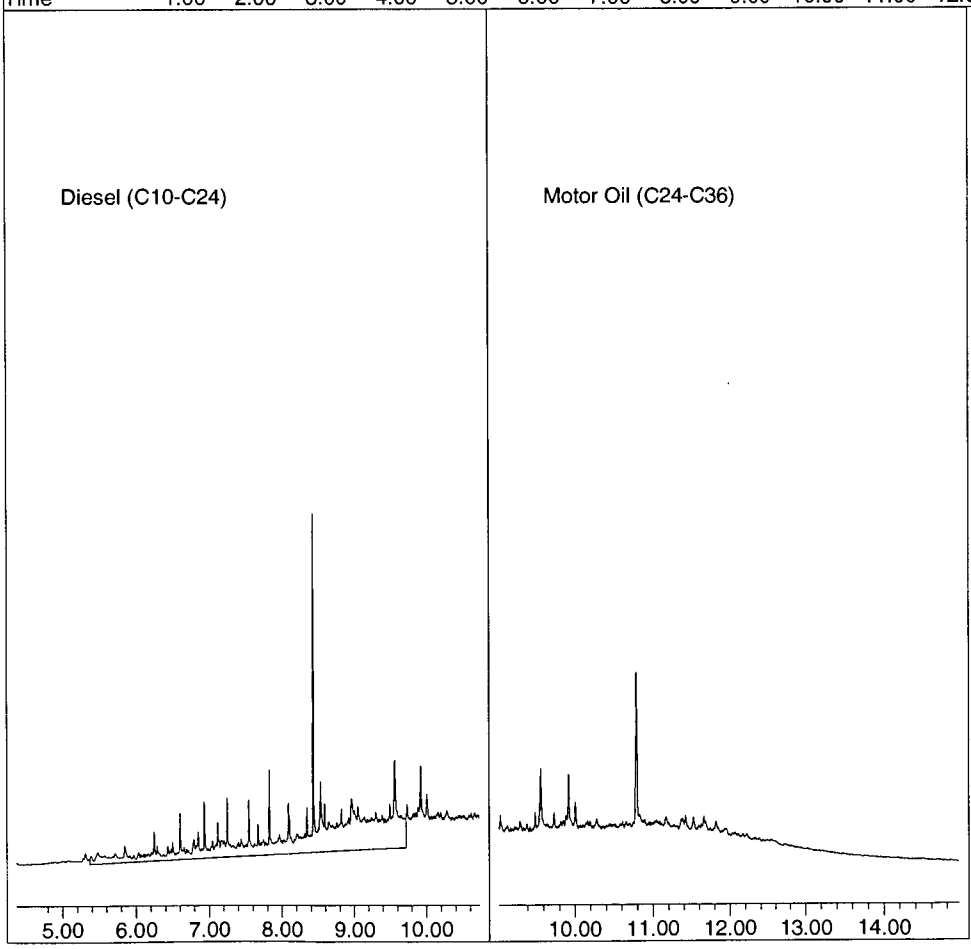
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.43	22889333	3219.330 ppb
Surrogate Spike 2660.046		Recovery	= 121.03%
6) SC Octacosane(S)	10.79	27398764	4070.550 ppb
Surrogate Spike 2660.046		Recovery	= 153.03%
Target Compounds			
1) HATM Diesel (C10-C24)	7.55	252379658	43155.062 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\140922\922023.D
Sample : AZ02100S11 MSD-1 5/56.39G x5





Quantitation Report (QT Reviewed)

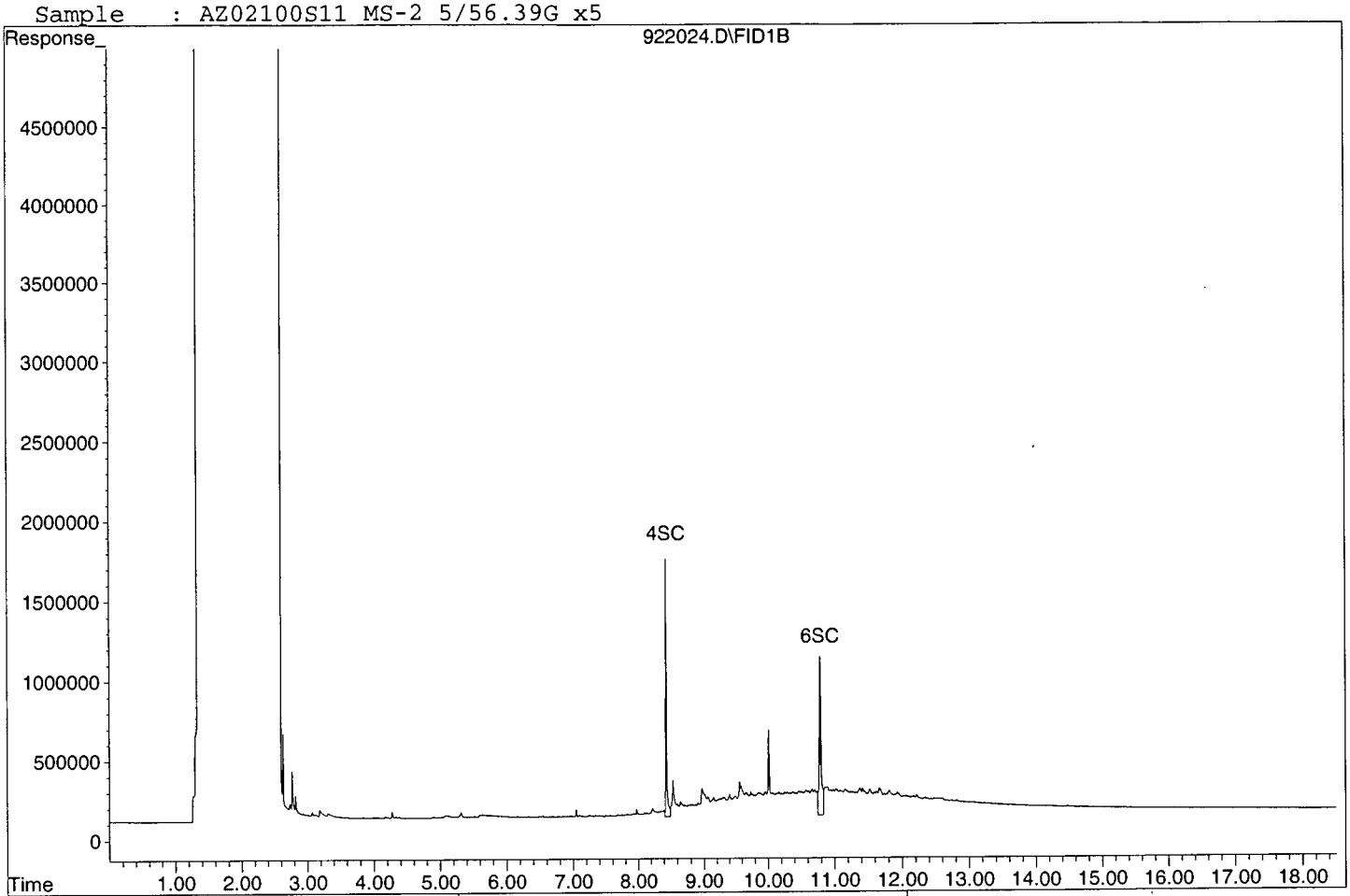
Data File : G:\APOLLO\DATA\140922\922024.D Vial: 24
Acq On : 9-23-14 13:36:12 Operator: lac
Sample : AZ02100S11 MS-2 5/56.39G x5 Inst : Apollo
Misc : Soil Multiplr: 443.34
IntFile : events.e
Quant Time: Sep 25 14:34 2014 Quant Results File: CTO707.RES

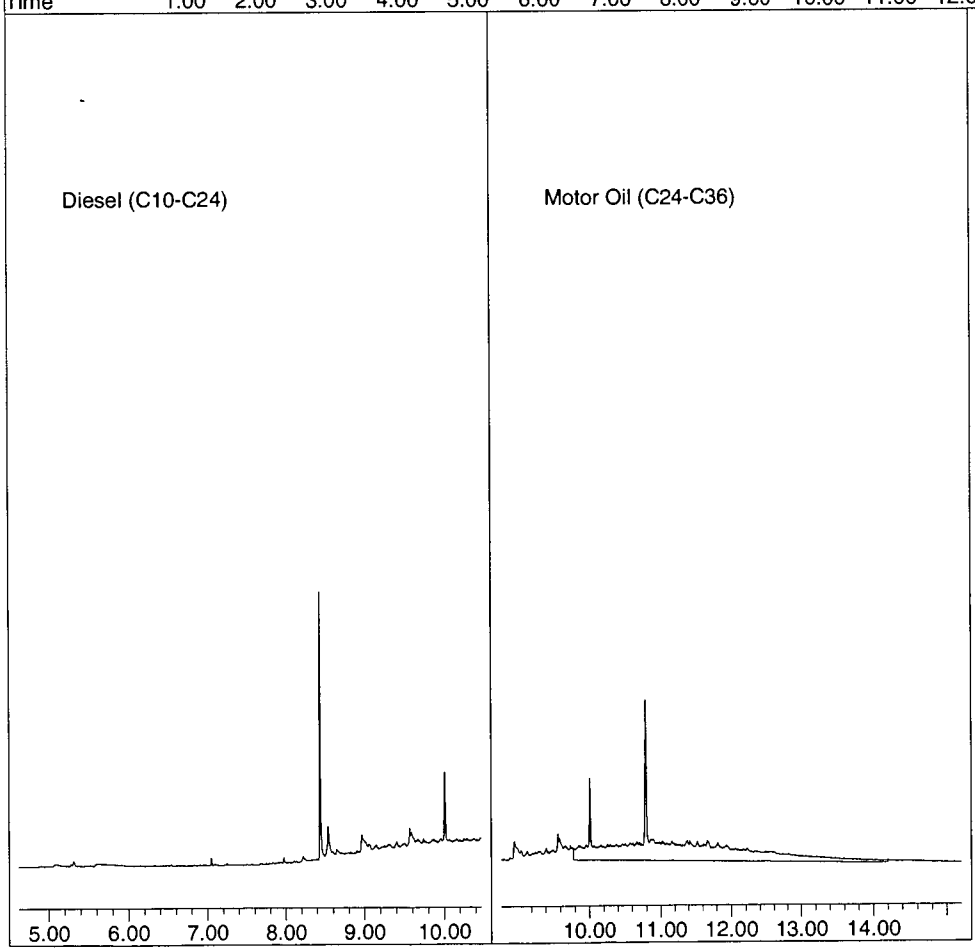
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.43	14473012	2035.594 ppb
Surrogate Spike 2660.046		Recovery	= 76.52%
6) SC Octacosane(S)	10.79	18504533	2749.161 ppb
Surrogate Spike 2660.046		Recovery	= 103.35%
Target Compounds			
2) HBTM Motor Oil (C24-C36)	11.99	158593870	43713.342 ppb

Data File: G:\APOLLO\DATA\140922\922024.D
Sample : AZ02100S11 MS-2 5/56.39G x5





Quantitation Report (QT Reviewed)

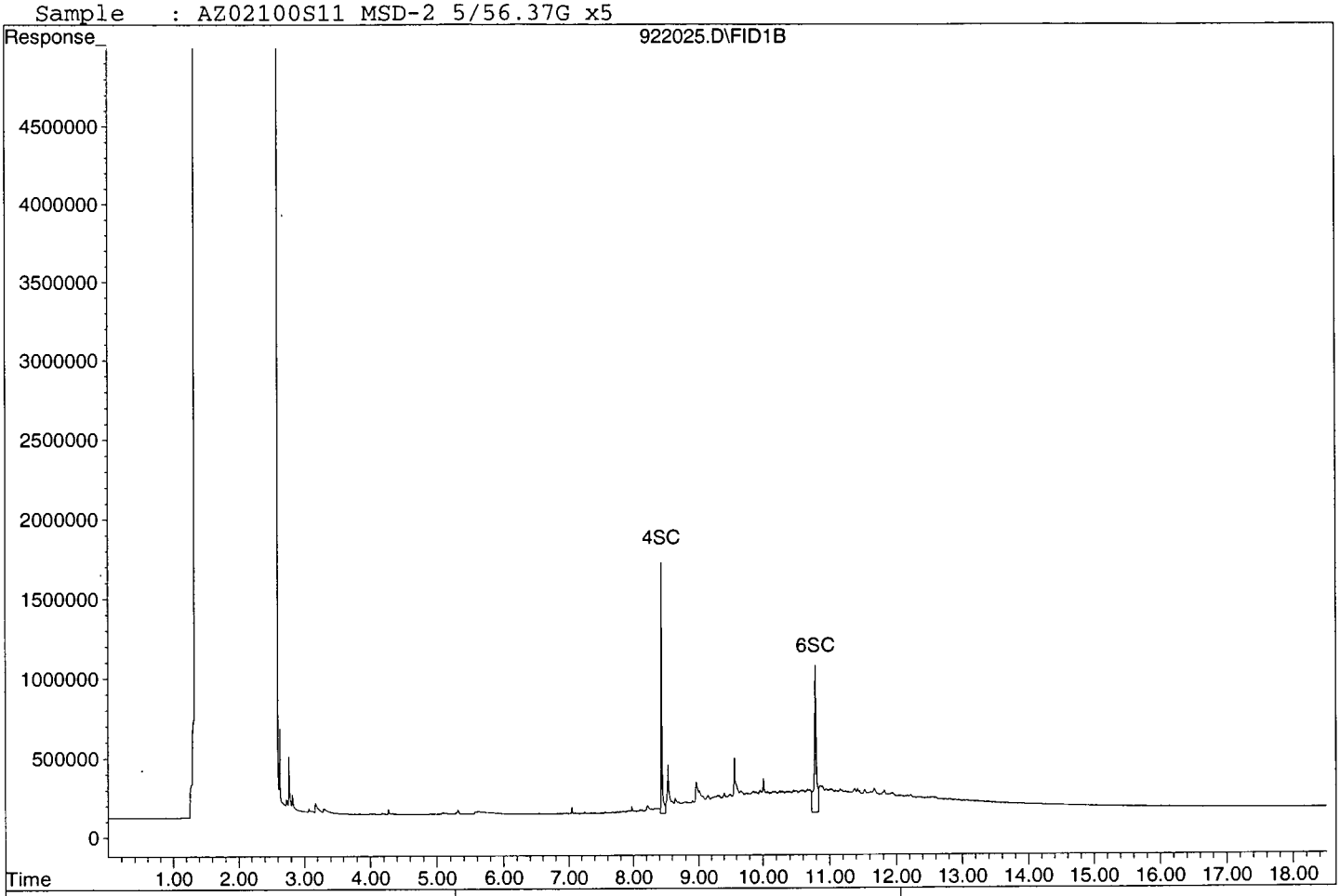
Data File : G:\APOLLO\DATA\140922\922025.D Vial: 25
Acq On : 9-23-14 14:02:15 Operator: lac
Sample : AZ02100S11 MSD-2 5/56.37G x5 Inst : Apollo
Misc : Soil Multiplr: 443.50
IntFile : events.e
Quant Time: Sep 25 14:34 2014 Quant Results File: CTO707.RES

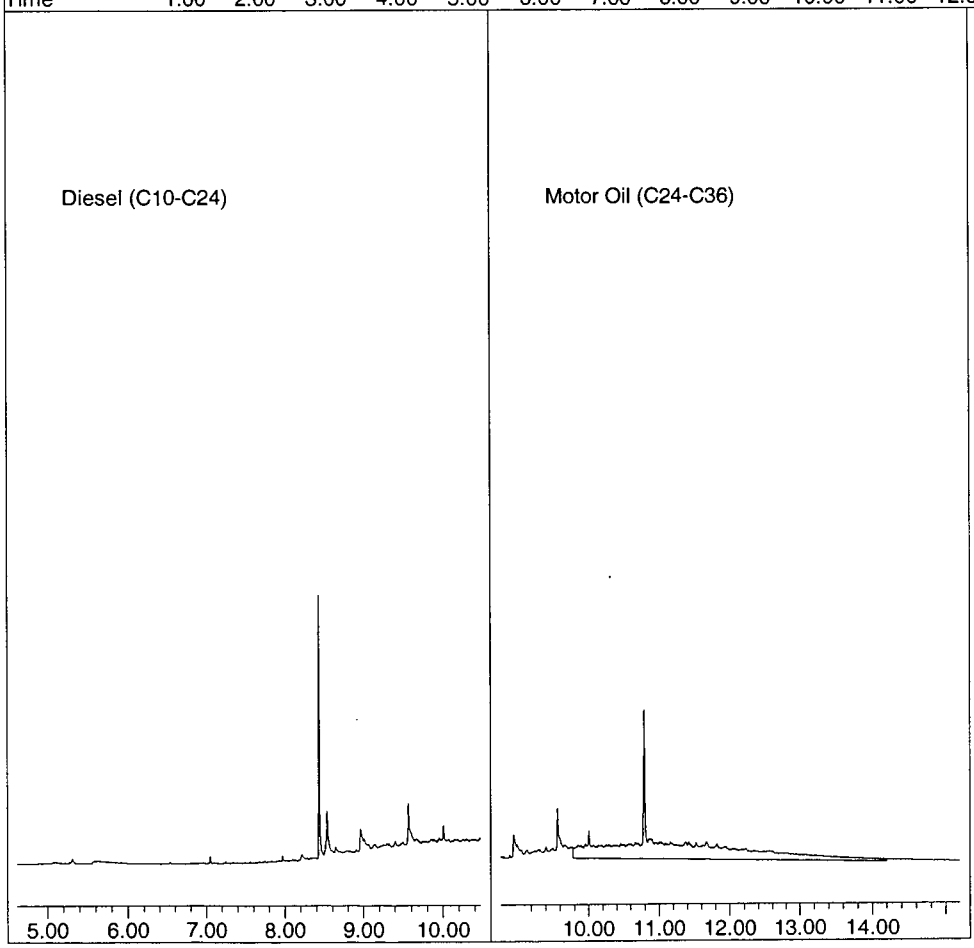
Method : G:\APOLLO\DATA\140922\CTO707.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Fri Sep 19 16:15:19 2014
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.43	13842030	1947.538 ppb
Surrogate Spike 2660.990		Recovery	= 73.19%
6) SC Octacosane(S)	10.79	18651817	2772.024 ppb
Surrogate Spike 2660.990		Recovery	= 104.17%
Target Compounds			
2) HBTM Motor Oil (C24-C36)	11.99	138346231	38145.975 ppb

Data File: G:\APOLLO\DATA\140922\922025.D
Sample : AZ02100S11 MSD-2 5/56.37G x5





STANDARD

054

INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOLVENT LOT #

LOG Book #4

OP/F CURVE													
						1A	1B	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	OP/F STD	5		05/09/14	08/10/14	2	5	10	50	20	50	70	100
VWR	Hexane		0403138			998	995	990	950	80	50	30	NA
					Final VOL.	1000	1000	1000	1000	100	100	100	100

GA 5/15/14
8/10/14

AR 1262 STOCK (20ug/mL)

AR 1262 | 1000 ug/mL | Restek | 200uL | 10mL | 20ug/mL Hexane

CAT: 32409
LOT: A0101379-336|0
OP: 5/15/14
EXP: 5/15/15

#040313B

GA 5/15/14
5/15/15

AR 1262 STD. (1ug/mL)

AR1262STK | 20 ug/mL | AR1262 STK | 500uL | 10mL | 1ug/mL | Hexane

Prep: 5/15/14
EXP: 5/15/15

#040313B

GA 5/15/14
11/15/14

GA 5/16/14

DIESEL CAL STD.						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598 03 LOT#195484-31345 OP:5/3/14 EXP:5/3/15	1mL	50mL	1000ug/mL	MC LOT# 52312
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316 05 LOT#216091-32999 OP.5/9/14 EXP:5/9/15	4160 µL		50ug/mL	

GA 5/10/14
5/3/15

GA 5/16/14

DIESEL CCV 400ug/ml						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
	PREP:	05/16/14				52312
	Exp:	05/03/14				

GA 5/16/14
8/16/14

GA 5/16/14

MOTOR OIL CCV 1000ppm						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MOTOR OIL STD	2000UG/ML	MO STD prep 2/11/14	3000µL exp 2/11/15	5mL	1000 µg/ml	MC 52312

GA 5/16/14
8/16/14

GA 5/17/14

MITC CURVE													
							1	2	3	4	5	6	7
SUPPLIER	ID#	ug/mL	LOT #	DATE	EXP.		mL	mL	mL	mL	mL	mL	mL
	MITC STD	5		04/14/14	08/29/14		0.02	0.125	0.25	1	2.5	3.5	5
VWR	ETHYL ACETATE		~~AE 0?~~ 101714Z				4	25	50	20	50	70	100
							996	975	950	80	50	30	N/A
					Final VOL.		1000	1000	1000	100	100	100	100

GA 5/17/14
8/29/14

STANDARD

	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	DATE/ INITIALS

LOG BOOK #41

055

OP/F CURVE													
						1A	1B	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	OP/F STD	5		05/09/14	08/10/14	2	5	10	50	20	200	70	100
VWR	Hexane		0403138			998	995	990	950	80	200	30	NA
					Final VOL.	1000	1000	1000	1000	100	400	100	100

GA 5/19/14
8/10/14

GA 5/19/14

OPC STANDARD					
THIOBENCARB	5ug/ml	250ug/ml	200ul	O2SI	10ml
CARBOPHENTHION	5	250	CAT:	132083-04	Acetone
DIOXATHION	5	250	LOT:	213419-32817	LOT#
DIPHENAMID	5	250	OP:	10/25/13	090513
IMIDAN	5	250	EXP:	10/25/14	
PHOSALONE	5	250			
PROMETON	5	250			
SIMAZINE	5	250			
METHIDATHION	5	250			
METHYL TRITHION	5	100	500ul	ACCU.	
			CAT:	P-652S	
			LOT:	211071281-29140	
			OP:	02/11/14	
			EXP:	07/22/14	

GA 5/19/14
7/22/14

GA 5/19/14

MOTOR OIL CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MOTOR OIL	50,000 ug/mL	O2SI CAT#116390 02 LOT#1211942-33343 OP:5/19/14 EXP:5/19/15	1mL	25mL	2000ug/mL	MC LOT# ~~51306~~ 52312

GA 5/19/14
5/19/15
GA 5/19/14

GA 5/19/14

MOTOR OIL CCV 1000ppm						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MOTOR OIL STD	2000UG/ML	MO STD prep: 5/19/14	3000µL exp 5/19/15	5mL	1000 µg/ml	MC 52312

GA 5/19/14
5/19/14 ~~5/19/15~~ GA 5/19/14
8/19/14 ~~8/19/15~~ GA 5/19/14

GA 5/20/14

AROCLOR 1254 curve						
Compound	Initial Conc.	Stock Src.	Aliquot	Final Conc.	Solvent	Final Vol
AR 1254	1µg/mL	AR1254	1- 10uL	0.01	Hexane	1 mL
		Prep:4/11/14	2- 50uL	0.05	#040313B	1 mL
		Exp: 10/11/14	3- 100uL	0.10		1 mL
			4- 250uL	0.25		1 mL
			5- 1000uL	1.00		1 mL

GA 5/20/14
10/11/14

INDOXACARB STD.

indoxacarb	100ug/ml	O2SI	100uL	10mL	1ug/mL	Hexane
		Cat#032170-06				#040313B
		Lot# 193215-31231				
		OP: 7/30/13				
		EXP: 7/17/14				

GA 5/20/14
7/17/14

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	LOT 057

Lab Book # 41

OC/OP Water Surrogate

TCMX 5000 ug/mL — 025I — 30uL — 100mL — 1.5ug/mL — Acetone #090513C
DBC — CAT: 130070-02
DECA — LOT: 180787-32844
OP: 9/5/13
EXP: 9/5/14

TPP 1000 ug/mL — 025I
TRP — CAT: 180162-02
LOT: 187462-3057S — 500uL — 5ug/mL
OP: 2/20/14
EXP: 2/20/15

GA 5/22/14
9/5/14

Vel/Fen Curve						1	2	3	4	5	6
SUPPLIER	ID#	(ug/mL)	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
VELPAR STD		10		03/26/14	01/28/15	10	50	20	200	70	100
WA	Hexane		040313B			990	950	80	200	30	n/a
					Final Vol.	1000	1000	100	400	100	100

GA 5/22/14
1/28/15

~~PYRETHROIDS Level~~

Pyrethroids Level 3

PYR/FEN STD 10ug/mL — Pyr/Fen Std — 250uL — 10mL — 0.025 ug/mL Hexane #040313B — GA 5/23/14 — 10/13/14
Prep: 1/23/14
EXP: 10/13/14

~~GA 5/27/14~~

THC SURR CAL STD

STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC	SOLVENT LOT#
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#216091-32999 OP:05/09/14 EXP:05/09/15	1000 µL	10mL	60ug/mL	MC LOT# 52312

GA 5/23/14
11/23/14

~~GA 5/27/14~~

EE SOIL 1 STANDARD 1 µg/mL

Compound	Conc. In Mix	Stock Source	ALIQUOT	Final Vol.	Final Conc.	Solvent Lot
CAPTAN	50 ug/ml	ULTRA	500 ul	10mL	25 ug/ml	Acetone
FOLPET	20 ug/ml	CAT: CUS-5721			1 ug/ml	Lot#
IPRODIONE	100 ug/ml	LOT: CJ-1007-30562			5 ug/ml	090513C
DICOFOL	20 ug/ml	Op: 05/27/14			1 ug/ml	
NORFLURAZON	20 ug/ml	Exp: 11/27/14			1 ug/ml	
PCNB	10 ug/ml				0.5 ug/ml	
PERMETHRIN	200 ug/ml				1 ug/ml	
PERTHANE	200 ug/ml				10ug/ml	
TETRADIFON	20 ug/ml				1 ug/ml	
OXYFLUORFEN	20 ug/ml				1 ug/ml	
OXADIAZON	20 ug/ml				1 ug/ml	
TEBUCONAZOLE	20 ug/ml				1 ug/ml	

GA 5/27/14
11/27/14

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N LOT #	DATE INITIALS

061

Lab Book # 4

		PAC ECO STD			
DIAZINON	5ug/ml	200ug/ml	625ul	O2SI	25ml
DISULFOTON	5	200		CAT:130169-01	HEXANE
MALATHION	5	200		LOT: 219462-33202	LOT#
MOLINATE	5	200		Op: 03/19/14	080613A
PHORATE	5	200		~~Exp:06/16/14~~	
THIOBENCARB	5	200		Exp 12/21/16	
TRIBUTYL PHOSPHATE	5	200		CAT:130169-01	
DEMETON	5	200		LOT: 219462-33203	
DICHLORVOS	5	200		Op. 06/03/14	
EPTC	5	200		~~Exp:06/15/14~~	
PARATHION	5	200		Exp 12/21/14	
AZINPHOS METHYL	5	200			
CHLORPYRIFOS	5	200			
DIMETHOATE	5	200			
METHIDATHION	5	200			
METHYL PARATHION	5	200			
ATRAZINE	5	200			
CYANIZINE	5	200			
TRIPHENYL PHOSPHATE	5	200			
PENDIMETHALIN	5	200			
TRIFLURALIN	5	200			
SIMAZINE	5	200			
PHOSMET	5	1000ug/ml	125ul	ABSOLUTE	
				PART:70798	
				LOT: 110912-31621	
				OP:06/03/14	
				EXP: 11/09/14	

*O2SI extend the expiration date. see certificate of analysis # 219462-33204 MA 6/26/14

GA 6/3/14

Exp. 6/15/14

New Exp. 11/9/14 MA

Technical Chlordane Calibration Curve — 6/3/14

Compound	Initial Conc.	Stock Src.	Aliquot	Final Conc.	Solvent	Final Vol
Technical	10µg/mL	Tech Chld Stk	1A- 25µL	0.025 µg/mL	Hexane	10 mL
Chlordane		Prep: 11/08/13	1- 50uL	0.05µg/mL	Lot#	10 mL
		Exp: 11/08/14	2- 100uL	0.10µg/mL	080613A	10 mL
			3- 250uL	0.25µg/mL		10 mL
			4- 500uL	0.50µg/mL		10 mL
			5- 750uL	0.75µg/mL		10 mL

GA 6/3/14 11/8/14

Technical Chlordane 2nd Src — GA 6/3/14

Compound	Initial Conc.	Stock Src.	Aliquot	Final Conc.	Final Vol.	Solvent
Technical	10µg/mL	Tech Chld 2nd Src Stk	250µL	0.25µg/mL	10mL	Hexane
Chlordane	Prep:	11/08/13				Lot.
	Exp:	11/08/14				080613A

GA 6/3/14 11/8/14

TCH SURROGATE CURVE — GA 6/4/14

STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
THC SURR	60		05/23/14	11/23/14	50	100	400	600	800	1000
MC		52312			950	900	600	400	200	NA
				Final VOL.	1000	1000	1000	1000	1000	1000

GA 6/4/14 11/23/14

DIESEL CURVE — GA 6/4/14

STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
DIESEL	1000		05/16/14	~~05/04/15~~	10	100	400	600	800	1000
MC		52312		5/3/15	990	900	600	400	200	NA
				Final VOL.	1000	1000	1000	1000	1000	1000

GA 6/4/14 5/3/15

MOTOR OIL CURVE — GA 6/4/14

STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL
MOTOR OIL	2000		05/19/14	05/19/15	10	25	125	250	500	750	1000
MC		52312			990	975	875	750	500	250	NA
				Final VOL.	1000	1000	1,000	1000	1000	1000	1000
				ppm	10	50	250	500	1000	1500	2000

GA 6/4/14 12/4/14

110

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N LOT #	
072							

LOG Book #41

Diesel calibration curve levels 2-3

1000ugmL Diesel STD lvl 2 100uL 100ug/mL 1mL ~~Hex~~ MC GA 6/27/14
prep: 5/16/14 lvl 3 400uL 400ug/mL 1mL #52312 ~~GA 6/27/14~~ ~~9/27/14~~ 12/27/14
EXP: 5/3/15

Motor oil calibration curve level 5

Motor oil STD 500uL 1mL MC GA
Prep: 5/19/14 #52312 6/27/14 ~~GA 6/27/14~~ ~~9/27/14~~ 12/27/14
EXP: 5/19/15

HYDRAULIC OIL CURVE										
STD	(µg/mL)	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
HYDRAULIC OIL STD	2000	MC	02/12/14	02/12/15	25	125	25	50	75	100
MC		52312			975	875	75	50	25	NA
				Final VOL.	1000	1000	100	100	100	100
				ppm	50	250	500	500	1500	2000

GA 6/27/14 12/27/14

PAC ECO CURVE					1a	1b	3	2	3	4	5	6
ID#	(µg/mL)	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
PAC ECO CAL STD	5		06/23/14	11/09/14	2	5	10	50	20	100	70	1000
					998	995	990	950	80	100	30	N/A
Hexane		080613A		Final VOL.	1000	1000	1000	1000	100	200	100	N/A

~~GA 6/27/14~~ GA ~~6/27~~ 6/27/14 11/9/14

THC SURROGATE

02SI
CAT: 1103116-05
LOT: 216091-33698
OP: 6/30/14
EXP: 6/30/15

GA 6/30/14 EXP: 6/30/15

HYDRAULIC OIL

ABSOLUTE
CAT 51014
LOT 092112-33295
Ex 6/30/15

6/30/14 MA Ex 6/30/15

STANDARD | INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC

LOG BOOK #41

075

HERBICIDE CALIBRATION CURVE ~~CA 7/3/14~~ CA 7/3/14

COMPOUND	FINAL CONC (ug/ml)	INITIAL CONC (ug/ml)	ALIQUOT (uL)	STOCK SOURCE	FINAL VOL SOLVENT
HERBICIDE CURVE	VARIOUS	VARIOUS	15 µL	HERB STD	1 mL
			50 µL	PREP: 01/28/14	MTBE
			100 µL	EXP: 01/28/15	
			200 µL	CON.: VARIOUS	Lot#
			300 µL		50223
			400 µL		
HERBICIDE 2ND SRC	VARIOUS	VARIOUS	200 µL	HERB STD PREP	1 mL
				PREP: 01/28/14	MTBE
				EXP:01/28/15	Lot# 50223

CA 7/3/14
9/10/14

OPF 100/200 CCV ~~CA 7/3/14~~

SUPPLIER	ID#	[ug/mL]	LOT #	DATE	EXP. DATE	µL
	OPF STD	5		06/24/14	08/10/14	100
VWR	HEXANE		080613A			100
					Final VOL.	200

CA
~~7/2~~ 7/3/14
8/10/14

PAC ECO CURVE ~~CA 7/7/14~~

	ID#	[ug/mL]	LOT #	DATE	EXP. DATE	1a µL	1b µL	1 µL	2 µL	3 µL	4 µL	5 µL	6 µL
	PAC ECO CAL STD	5		06/23/14	11/09/14	2	5	10	50	20	100	70	1000
						998	995	990	950	80	200	30	N/A
	Hexane		080613A		Final VOL.	1000	1000	1000	1000	100	200	100	N/A

CA
7/7/14
11/9/14

PYRAFLUFEN CURVE ~~CA 7/7/14~~

SUPPLIER	ID#	µg/mL	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
PYRAFLUFEN STD		5		06/24/14	06/20/15	5	50	100	150	200	250
	HEXANE		080613A			995	950	900	850	800	750
					Final VOL.	1000	1000	1000	1000	1000	1000

CA
7/7/14
1/7/15

DIESEL 2nd SRC

100ug/mL Diesel 2nd SRC STD 400uL | mL 40ug/mL MC #54024 CA 7/7/14
Prep 8/22/13
EXP 8/22/14
8/22/14

STANDARD 084 | CONC | DATE | ALIQUOT VOLUME | CONC | LOT # | INITIALS

STANDARD PREPARATION BOOK # 41 PAGE #

GA 8/4/14

		OPC STANDARD			
THIOBENCARB	5ug/ml	250ug/ml	200ul	O2SI	10ml
CARBOPHENTHION	5	250	CAT:	132083-04	Acetone
DIOXATHION	5	250	LOT:	213419-32818	LOT#
DIPHENAMID	5	250	OP:	07/09/14	080513C
IMIDAN	5	250	EXP:	07/09/15	
PHOSALONE	5	250			
PROMETON	5	250			
SIMAZINE	5	250			
METHIDATHION	5	250			
METHYL TRITHION	5	100	500ul	ACCU.	
			CAT:	P-652S	
			LOT:	214071368-33894	
			OP:	08/04/14	
			EXP:	08/04/15	

GA 8/4/14 7/9/15

DOHS SPIKE

EDP
TCP
DBCP

1000ug/mL O2SI CAT: 130271-08-SS LOT: 196129-31500 OP: 1/8/14 EXP: 9/24/14

10uL 10mL 1ug/mL Methanol #070913A GA 8/4/14 9/24/14

GA 8/5/14

		619B (TZB) STOCK				
AMETRYNE	200 ug/ml	O2Si	250uL	10mL	5ug/mL	10ml
ARATRON		Cat 130159-01				HEXANE
ATRAZINE		Lot # 178938-31662				LOT#
TERBUTRYNE		Op. 08/05/14				080613A
BLADEX		Exp 09/20/14				
SIMAZINE						
TBP	1000ug/mL	O2Si	50uL			
TPP		Cat 130161-02				
		Lot # 199464-31892				
		Op. 08/05/14				
		Exp 08/05/15				

GA 8/5/14 9/20/14

GA 8/5/14

MOTOR OIL CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	O2SI CAT#116390-02 LOT#211942-33763 OP:08/05/14 EXP:08/05/15	1mL	25mL	2000ug/mL	MC LOT# 54024

GA 8/5/14 8/5/15

GA 8/5/14

MOTOR OIL CCV 1000ppm						
STANDARD	CONC.	DATE	ALIQUOT	VOL	CONC.	/LOT#
MO STD.	2000 µg/mL	MO Std.	3000µL	5mL	1000 µg/ml	MC
	PREP:	08/05/14				54024
	Exp:	08/05/15				

GA 8/5/14 11/5/14

STANDARD
092

INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOLVENT LOT #

QC STANDARD PREPARATION BOOK # 4/ PAGE # 100

DIESEL CAL STD.						
STD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598-03 LOT#195484-31346 OP:7/30/14 EXP:7/30/15	1mL	50mL	1000ug/mL	MC LOT# 54024
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#216091-33703 OP:08/26/14 EXP:08/26/15	4160 µL		50ug/mL	

GA 8/29/14
GA 8/27/14
7/30/15

TIN CALIBRATION CURVE				
CONC IN MIX (ug/ml)	CONC OF STOCK (ug/ml)	ALIQUOT (uL)	STK SRC	FINAL VOL. SOLVENT MC #52312
0.05	1	50 µL	TIN M STD 1ug/ml	1mL
0.1	1	100 µL	PREP 3/12/14	1mL
0.5	1	500 µL	EXP 2/14/15	1mL
1	1	1000 µL		1mL
5	20	250 µL	TIN M STD 20ug/ml	1mL
20	20	1000 uL	PREP:3/11/14	1mL
			EXP:2/14/15	

GA 8/29/14
8/29/14
2/28/14

OP/F CURVE						IA	1B	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	mL	mL	mL	mL	mL	mL	mL	mL
	OP/F STD	5		08/27/14	12/08/14	2	5	10	50	20	100	70	100
VWR	Hexane		080613A			998	995	990	950	80	100	30	NA
					Final VOL	1000	1000	1000	1000	100	200	100	100

GA 8/30/14
12/8/14

OPF 100/200 CCV						
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP DATE	µL
	OPF STD	5		08/27/14	12/08/14	100
VWR	HEXANE		080613A			100
					Final VOL.	200

GA 8/30/14
12/8/14

MOTOR OIL CCV 1000ppm						
STANDARD	CONC.	DATE	ALIQUOT	VOL	CONC.	/LOT#
MO STD	2000 µg/mL	MO Std.	3000µL	5mL	1000 µg/ml	MC
	PREP:	08/05/14				54024
	Exp:	08/05/15				

GA 8/30/14
8/30/14
11/30/14

HERB SPIKE					
Analytes	Initial Conc.	Conc. In Stock	Aliqout	STOCK SOURCE	Final Vol. Solvent
					5mL
Dalapon	12.8ug/mL	320ug/mL	200	Accustandard	MTBE
3,5-Dichlorobenzoic Acid	1.28	32		CAT#: S-8254A-R1	#50223
4-Nitrophenol	3.2	80		LOT#: 212061185-32790	
2,4-DCAA (S)	6.4	160		OP: 04/10/14	
Dicamba	1.28	32		EXP: 04/10/15	
MCPP	1280	32000			
MCPA	1280	32000			
2,4-DP	6.4	160			
2,4-D	6.4	160			
DNOC	2.56	64			
PCP	1.28	32			
2,4,5-TP	1.28	32			
Chloramben	6.4	160			
2,4,5-T	1.28	32			
Dinoseb	3.2	80			
2,4-DB	12.8	320			
Bentazon	6.4	160			
Picloram	1.28	32			
Dacthal	1.28	32			
Acifluorfen	3.2	80			

8/30/14
GA 8/30/14
11/30/14

STANDARD
098

INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOLVENT LOT # | INITIALS

GC STANDARD PREPARATION BOOK # 41 PAGE #

DIESEL SPIKE

Diesel Fuel #2 Composite
(Second Source), 50,000
mg/L, 2 x 5 ml
011998-01-SS
Lot # 207839 | Storage ≤ -10 Degrees C | Expiry 4/28/16
Solv: Methylene Chloride.

Diesel Fuel #2 Composite (SS)
Lot #: 207839 - 32381
Rec. 4/25/13 MFR exp. 4/28/16

9/10/14 MA
Ex 9/10/15

THC Surrogate

9/10/14 KLD
Exp. 9/10/15

CAT NO: 11631G-05
LOT NO: 229803-33706
Open Date: 9/10/14
Expire Date: 9/10/15

HERB SPIKE

Analytes:	Conc. in mix (ug/ml)	Conc. In Stock (ug/ml)	Aliqoute (uL)	Final Vol. STOCK SOURCE (ml)	Final Vol. Solvent (ml)
Dalapon	6.4	320	500		25
3,5 Dichlorobenzoic Acid	0.64	32		Source: Accustandard	MTBE
4-Nitrophenol	1.6	80		Catalog #: S-8254A-R1	Lot #
2,4-DCAA (S)	3.2	160		LOT#: 212061185-01 34005	50223
Dicamba	0.64	32		OPEN: 9/11/14	
MCPP	640	32000		EXP: ~~12/11/14~~ 9/11/15	
MCPA	640	32000		MA 9/11/14	
2,4-DP	3.2	160			
2,4-D	3.2	160			
DNOC	1.28	64			
PCP	0.64	32			
2,4,5-TP	0.64	32			
Chloramben	3.2	160			
2,4,5-T	0.64	32			
Dinoseb	1.6	80			
2,4-DB	6.4	320			
Bentazon	3.2	160			
Picloram	0.64	32			
Dacthal	0.64	32			
Acifluorfen	1.6	80			

9/11/14
ex: 12/11/14
LH

AccuStandard®
S-8254A-R1
Custom Herbicide Standard
Varied conc. in Hexane:Toluene:MtBE
Lot: 212061185-01
Exp: Aug 22, 2016

Custom Herbicide Standard
Lot #: 212061185-01 - 34005
Rec: 9/4/14 MFR exp. 8/22/16

20 comp(s)
HIGHLY FLAMMABLE

FOR LABORATORY USE ONLY
225 H313 H335
302 P338 P352
404 P262 P202
284 P280

Storage: Freeze (<-10° C)
2 Danger

STANDARD | INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOLVENT LOT #

GC STANDARD PREPARATION BOOK # 4 PAGE # 093

THC SURROGATE

9/2/14 KLx
Exp. 9/2/15

CAT NO: 1103/6-05
LOT NO: 21609I-33705
open date 9/02/14
EXP. DATE : 9/02/15

OPC CURVE												
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	1 µL	2 µL	3 µL	4 µL	5 µL	6 µL
	OPC STD	5		08/04/14	07/19/15	10	50	20	100	70	1000
	Hexane		080613A			990	950	80	100	30	NA
					Final VOL.	1000	1000	100	200	100	1000

9/3/14
GA
9/3/14
3/3/14

OP/F CURVE													
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	1A mL	1B mL	1 mL	2 mL	3 mL	4 mL	5 mL	6 mL
	OP/F STD	5		08/27/14	12/08/14	2	5	10	50	20	100	70	100
VWR	Hexane		080613A			998	995	990	950	80	100	30	NA
					Final VOL	1000	1000	1000	1000	100	200	100	100

9/3/14
GA
9/3/14
12/8/14

OP 2ND SOURCE						
PREP:	01/03/13	EXP:	04/27/13			
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL
	OP 2ND SRC	5		08/27/14	12/08/14	100
VWR	HEXANE		080613A			100
					Final VOL.	200

9/3/14
GA
9/3/14
12/8/14

PCB CONGENERS SURROGATE

HX 1000 100 µL 10 µL/mL 10 µg/mL Acetone LH
MA 9/5/14 090513C 9/4/14
Ex 3/4/15

Part #: 70273
Lot #: 041111
Laboratory Use Only - See MSDS
Exp: 041116
Storage 20 °C
Tetrachloro-m-xylene
CAUTION: Sonicat
1000 ug/mL in met
ABSOLUTE STANDAI
Open 9/4/14
Tetrachloro-m-xylene
Lot #: 041111 - 30677 Ex. 9/4/15
Rec: 5/1/12 MFR exp: 04/11/16

MOTOR OIL SPIKE

Motor Oil Composite,
50,000 mg/L, 1 ml
116390-02
Lot # 211942 | Storage ≤ -10 Degrees C | Expiry 7/21/16
Solv: Methylene Chloride
Made in the USA
For R&D use only. Not for human consumption.

9/4/14 MA
Open 9/4/14
Ex 9/4/15

Motor oil composite
Lot #: 211942 - 33970
Rec: 8/22/14 MFR exp. 7/21/16

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#

STANDARD PREPARATION BOOK # 4/ GA 9/12/14 PAGE #

099

MOTOR OIL CCV 1000ppm						
STANDARD	CONC.	DATE	ALIQUOT	VOL	CONC.	/LOT#
MO STD.	2000 µg/mL	MO Std.	3000µL	5mL	1000 µg/ml	MC
	PREP:	08/05/14				54024
	Exp:	08/05/15				

GA 9/12/14 12/12/14

PCB CONG LVL 4

VARIOUS 10ug/mL PCB CONG STK 10uL 10mL 0.01ug/mL GA

Prep: 9/5/14 Hexane 9/12/14

EXP: 4/30/15 #080613A 3/12/15

GA 9/12/14

		FIN PT CURVE			
COMPOUND	INITIAL CONC	FINAL CONC	ALIQUOT	STK SRCE	FINAL VOL.
FOLPET	5 ug/ml	VARIOUS	5 ul	FIN PT Std.	1 ml
IPRODIONE	25 ug/ml		50 ul	Prep: 07/01/14	Hexane
NORFLURAZON	5 ug/ml		100 ul	EXP: 07/01/15	Lot: 080613A
PERTHANE	50 ug/ml		150 ul		
TETRADIFON	5 ug/ml		250 ul		

GA 9/12/14 3/12/15

GA 9/12/14

PAC ECO CURVE												
						1a	1b	1	2	3	4	5	6
	ID#	[ug/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	PAC ECO CAL STD	5		06/23/14	11/09/14	2	5	10	50	20	100	70	1000
						998	995	990	950	80	100	30	N/A
	Hexane		080613A		Final VOL.	1000	1000	1000	1000	100	200	100	1000

GA 9/12/14

~~3/12/15~~ GA 9/15/14

11/9/14

GA 9/15/14

PAC ECO CURVE												
						1a	1b	1	2	3	4	5	6
	ID#	[ug/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	PAC ECO CAL STD	5		06/23/14	11/09/14	2	5	10	50	20	100	70	1000
						998	995	990	950	80	100	30	N/A
	Hexane		080613A		Final VOL.	1000	1000	1000	1000	100	200	100	1000

11/9/14

		OCL-OP Soil Surrogate				
Standard	Initial conc	Source date	Aliquot	Final VOL	Final conc	Solvent LOT#
	ug/ml					
TCMX	5000	O2SI	400ul	100ml	20ug/ml	ACETONE
DBC		cat:130070-02				090513C
DECA		lot: 213973-32853				
		open:07/5/14				
		EX:7/5/15				
TBP	1000	O2SI	500ul		5ug/ml	
TPP		cat:130161-02				
		lot:199464-31892				
		open: 08/5/14				
		EX: 08/5/15				

LH 9/16/14 ex. 12/16/14

INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOLVENT LOT # | DATE / INITIALS

VARIOUS 100

GC STANDARD PREPARATION BOOK # 41 PAGE #

		619A (TZA) STOCK				
PROPAZINE	200 ug/ml	Ø2Si	250uL	10mL	5ug/mL	10ml
PROMETON		Cat 130210-01				HEXANE
PROMETRYN		Lot # 200235-31653				LOT#
SIMETRYN		Op. 1/15/14				080613A
TBZ		Exp 11/29/14				

LH
prep 9-17-14
exp 9-17-15

		619B (TZB) STOCK				
AMETRYNE	200 ug/ml	O2Si	250uL	10mL	5ug/mL	10ml
ARATRON		Cat 130159-01				HEXANE
ATRAZINE		Lot # 178938-31892				LOT#
TERBUTRYNE		Op. 08/05/14				080613A
BLADEX		Exp 10/17/14				
SIMAZINE						
TBP	1000ug/mL	O2Si	50uL			
TPP		Cat 130161-02				
		Lot # 199464-31894				
		Op. 9/16/14				
		Exp 9/16/15				

LH
prep. 9-17-14
exp. 10-17-14

THC SURROGATE 9/17/14 KG

CAT NO: 110316-05 Exp. 9/17/15

LOT NO: 229803-33707

open Date: 9/17/14

Exp. DATE: 9/17/15

DIESEL CCV 400ug/ml						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
	PREP:	08/27/14				54024
	Exp:	07/30/14				

9/17/14
12/17/14
LC

STANDARD | INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOLVENT / LOT# | EXP

GC STANDARD PREPARATION BOOK # 41 PAGE # 103

TNRCC cal 2ND SRC STOCK

LH
Prep 9/22/14
Exp. 5/5/15

STD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT/ LOT#
GASOLINE	20,000 ugm/L	SUPELCO CAT#47516-U LOT #LB82077-30343 OP:5/5/14 EXP.5/5/15	500 µL	10mL	1000µg/mL	PENTANE LOT#K34E30
DIESEL FUEL #2	50,000 ugm/L	O2SI CAT#011589-01-SS LOT#207749-32372 OP:5/5/14 EXP:5/5/15	200 µL			

5ES STOCK

GA 9/22/14

GA
9/22/14
3/22 GA 9/22/14
Ex 9/22/15

Compound	Init. Conc.	Stock Src	Aliquot	Final Vol	Final Conc.	Solvent Lot#
alachlor	100/2000 ug/ml	O2SI	500 uL	10 mL	5/100 ug/ml	Hexane
benfluralin	Cat:	130200-02				Lot:
captan	Lot:	216095-33010				080613A
carbophenothion	Op:	09/22/14				
chlorothalonil	Exp:	09/22/15				
chlorthal(dacthal)						
2,6 dichlorobenzonitrile(dicofol)						
kelthane						
nitrofen						
oxadiazon						
oxyfluorfen						
propachlor						
op DDD						
op DDE						
op DDT						
bis(2-ethylhexyl)phthalate						

5ES CALIBRATION CURVE

GA 9/22/14

GA
9/22/14
Ex 3/22/15

Compound	Conc. In Mix	Conc. Of Stock	Aliquot	stock source	Final Vol.	Solvent Lot#
alachlor	(1) 0.005/0.1	5/100ug/ml	10ul	508 stock	10 mL	Hexane
benfluralin	(2) 0.03/0.6	5/100ug/ml	60ul	prep: 09/22/14	10 mL	080613A
captan	(3) 0.05/1.0	5/100ug/ml	100ul	Exp: 09/22/15	10 mL	
carbophenothio	(4) 0.10/2.0	5/100ug/ml	200ul		10 mL	
chlorothalonil	(5) 0.15/3.0	5/100ug/ml	300ul		10 mL	
chlorthal(dacth	(6) 0.20/4.0	5/100ug/ml	400ul		10 mL	
2,6 dichlorobenzonitrile(dicofol)						
kelthane						
nitrofen						
oxadiazon						
oxyfluorfen						
propachlor						
op DDD						
op DDE						
op DDT						
bis(2-ethylhexyl)phthalate						

MOTOR OIL CCV 1000ppm

MA
9/23/14
Ex 8/5/15

STANDARD	CONC.	DATE	ALIQUOT	VOL	CONC.	/LOT#
MO STD.	2000 µg/mL	MO Std.	3000µL	5mL	1000 µg/ml	MC
	PREP:	08/05/14				54024
	Exp:	08/05/15				

_SEP011

Organic Extraction Worksheet

Method	THC Separatory Funnel Extraction 3510C	Extraction Set	140909A	Extraction Method	SEP011	Units	mL

Spiked ID 1	Diesel Spike Ampule 9-9-14 exp 9-9-15		Surrogate ID 1	THC Surrogate 9-2-14 exp 9-2-15	
Spiked ID 2	Motor Oil Spike Ampule 9-4-14 exp 9-4-15		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	09/09/14 9:15	
Spiked ID 8			Ext. End Time:	09/09/14 13:25	
			GC Requires Extract By:	**09/15/14 0:00**	

pH1			Water Bath Temp Criteria	35,35,35,3
pH2				
pH3				

Spiked By: IC **Date** 09/09/14 **Witnessed By:** DL **Date** 09/09/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	140909A Blk				0.250	1 equip	1000 E-WB1	5	7	09/09/14 9:15	
2	140909A LCS-1		0.040	1	0.250	1 equip	1000 E-WB2	5	7	09/09/14 9:15	
3	140909A LCS-2		0.040	2	0.250	1 equip	1000 E-WB3	5	7	09/09/14 9:15	
4	AZ02108	AZ02108W05			0.250	1 equip	1070 E-WB4	5	7	09/09/14 9:15	74218 RUSH 2 WEEKS
5	AZ02109	AZ02109W07			0.250	1 equip	1050 E-WB1	5	7	09/09/14 9:15	74218 RUSH 2 WEEKS
6	AZ02116	AZ02116W09			0.250	1 equip	1070 E-WB2	5	7	09/09/14 9:15	74218 RUSH 2 WEEKS
7	AZ02134 MS-1	AZ02134W23	0.040	1	0.250	1 equip	1070 E-WB3	5	7	09/09/14 9:15	74228
8	AZ02134 MSD-1	AZ02134W22	0.040	1	0.250	1 equip	1060 E-WB4	5	7	09/09/14 9:15	74228
9	AZ02134	AZ02134W24			0.250	1 equip	1070 E-WB1	5	7	09/09/14 9:15	74228
10	AZ02135	AZ02135W07			0.250	1 equip	1070 E-WB2	5	7	09/09/14 9:15	74228
11	AZ02138	AZ02138W08			0.250	1 equip	1040 E-WB3	5	7	09/09/14 9:15	74228
12	AZ02140	AZ02140W06			0.250	1 equip	1070 E-WB4	5	7	09/09/14 9:15	74226 RUSH 10 DAYS
13	AZ02141	AZ02141W07			0.250	1 equip	1060 E-WB1	5	7	09/09/14 9:15	74226 RUSH 10 DAYS
14	AZ02142	AZ02142W05			0.250	1 equip	1070 E-WB2	5	7	09/09/14 9:15	74222 RUSH 10 DAYS
15	AZ02143	AZ02143W06			0.250	1 equip	1070 E-WB3	5	7	09/09/14 9:15	74222 RUSH 10 DAYS
16	AZ02144	AZ02144W04			0.250	1 equip	1070 E-WB4	5	7	09/09/14 9:15	74222 RUSH 10 DAYS

Solvent and Lot#	
MC	54128
Na2SO4	WE05D
PH Strip	HC413032
Filter Paper	400038

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	LH
Date	9-12-14
Time	8:50am
Refrigerator	Hobart

	Technician's Initials
Scanned By	IC
Sample Preparation	IC
Extraction	IC
Concentration	DL

Modified	09/09/14 4:42:15 PM

Reviewed By: KY **Date** 9/9/14

Organic Extraction Worksheet

Method	THC Separatory Funnel Extraction 3510C	Extraction Set	140909A	Extraction Method	SEP011	Units	mL

Spiked ID 1	Diesel Spike Ampule 9-9-14 exp 9-9-15		Surrogate ID 1	THC Surrogate 9-2-14 exp 9-2-15	
Spiked ID 2	Motor Oil Spike Ampule 9-4-14 exp 9-4-15		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	09/09/14 9:15	
Spiked ID 8			Ext. End Time:	09/09/14 13:25	
			GC Requires Extract By:	**09/15/14 0:00**	

pH1			Water Bath Temp Criteria	35,35,35,3
pH2				
pH3				

Spiked By: IC **Date** 09/09/14 **Witnessed By:** DL **Date** 09/09/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ02145	AZ02145W04			0.250	1	1070	5	7	09/09/14 9:15	74222 RUSH 10 DAYS
						equip	E-WB1				
18	AZ02146	AZ02146W04			0.250	1	1070	5	7	09/09/14 9:15	74222 RUSH 10 DAYS
						equip	E-WB2				
19	AZ02147	AZ02147W04			0.250	1	1000	5	7	09/09/14 9:15	74222 RUSH 10 DAYS
						equip	E-WB3				
20	AZ02148	AZ02148W04			0.250	1	1060	5	7	09/09/14 9:15	74222 RUSH 10 DAYS
						equip	E-WB4				
21	AZ02150	AZ02150W04			0.250	1	1070	5	7	09/09/14 9:15	74222 RUSH 10 DAYS
						equip	E-WB1				

KY 9/9/14

Solvent and Lot#	
MC	54128
Na2SO4	WE05D
PH Strip	HC413032
Filter Paper	400038

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	LH
Date	9-12-14
Time	8:50 am
Refrigerator	Hobart

	Technician's Initials
Scanned By	IC
Sample Preparation	IC
Extraction	IC
Concentration	DL

Modified	09/09/14 4:42:15 PM

Reviewed By: KY **Date** 9/9/14

_SON004GR

Organic Extraction Worksheet

Method	THC Sonication Extraction GR + MIS 3550B	Extraction Set	140910A	Extraction Method	SON004GRMIS	Units	mL

Spiked ID 1	Diesel Spike 9-10-14 EXP 9-10-15		Surrogate ID 1	THC Surrogate 9-2-14 EXP 9-2-15	
Spiked ID 2	Motor Oil Spike 9-4-14 EXP 9-4-15		Surrogate ID 2	THC Surrogate 9-10-14 EXP 9-10-15	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	09/10/14 14:20	
Spiked ID 8			Ext. End Time:	09/19/14 10:55	
			GC Requires Extract By:	**09/19/14 0:00**	

pH1			Water Bath Temp Criteria	80,80,75 °
pH2				
pH3				

Spiked By: KY **Date** 09/10/14 **Witnessed By:** CFM **Date** 09/10/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	140910A Blk				0.250	1 equip	50.26g E-S5 E-WB7	5	NA	09/10/14 14:20	
2	140910A LCS-1		0.040	1	0.250	1 equip	50.49g E-S4 E-WB7	5	NA	09/10/14 14:20	
3	140910A LCS-2		0.040	2	0.250	1 equip	50.225g E-S3.1 E-WB7	5	NA	09/10/14 14:20	
4	AZ02099	AZ02099S11			0.250	1 equip	56.95g E-S2 E-WB7	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
5	AZ02100 MS-1	AZ02100S11	0.040	1	0.250	1 equip	56.38g E-S1.2 E-WB7	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
6	AZ02100 MSD-1	AZ02100S11	0.040	1	0.250	1 equip	56.39g E-S1.1 E-WB7	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
7	AZ02100 MS-2	AZ02100S11	0.040	2	0.250	1 equip	56.39g E-S6 E-WB7	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
8	AZ02100 MSD-2	AZ02100S11	0.040	2	0.250	2 equip	56.37g E-S7 E-WB7	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
9	AZ02100	AZ02100S11			0.250	1 equip	56.37g E-S5 E-WB7	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
10	AZ02101	AZ02101S11			0.250	2 equip	56.52g E-S4 E-WB7	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
11	AZ02102	AZ02102S11			0.250	2 equip	56.19g E-S3.1 E-WB6	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
12	AZ02103	AZ02103S11			0.250	2 equip	59.38g E-S2 E-WB6	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
13	AZ02104	AZ02104S11			0.250	2 equip	58.28g E-S1.2 E-WB6	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
14	AZ02105	AZ02105S11			0.250	2 equip	65.81g E-S1.1 E-WB6	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
15	AZ02106	AZ02106S11			0.250	2 equip	71.28g E-S6 E-WB6	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
16	AZ02107	AZ02107S11			0.250	2 equip	65.28g E-S7 E-WB6	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS

Solvent and Lot#	
MC	54128
Na2SO4	WE05D
Filter Paper	FC010442

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	9/19/14
Time	11:15
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	IC
Concentration	IC

Modified	09/19/14 11:04:21 AM

Reviewed By: Ky **Date** 9/19/14

Organic Extraction Worksheet

Method	THC Sonication Extraction GR + MIS 3550B	Extraction Set	140910A	Extraction Method	SON004GRMIS	Units	mL

Spiked ID 1	Diesel Spike 9-10-14 EXP 9-10-15		Surrogate ID 1	THC Surrogate 9-2-14 EXP 9-2-15	
Spiked ID 2	Motor Oil Spike 9-4-14 EXP 9-4-15		Surrogate ID 2	THC Surrogate 9-10-14 EXP 9-10-15	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	09/10/14 14:20	
Spiked ID 8			Ext. End Time:	09/19/14 10:55	
			GC Requires Extract By:	**09/19/14 0:00**	

pH1			Water Bath Temp Criteria	80,80,75 °
pH2				
pH3				

Spiked By: KY **Date** 09/10/14 **Witnessed By:** CFM **Date** 09/10/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ02110	AZ02110S11			0.250	2 equip	58.22g E-S5 E-WB6	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
18	AZ02111	AZ02111S11			0.250	2 equip	59.59g E-S4 E-WB6	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
19	AZ02112	AZ02112S11			0.250	2 equip	65.10g E-S3.1 E-WB6	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
20	AZ02113	AZ02113S11			0.250	2 equip	57.88g E-S2 E-WB6	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
21	AZ02114	AZ02114S11			0.250	2 equip	59.89g E-S1.2 E-WB5	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS
22	AZ02115	AZ02115S11			0.250	2 equip	67.29g E-S1.1 E-WB5	5	NA	09/10/14 14:20	74218 RUSH 2 WEEKS

KY 9/19/14

Solvent and Lot#	
MC	54128
Na2SO4	WE05D
Filter Paper	FC010442

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	IC
Concentration	IC

Modified	09/19/14 11:04:21 AM

Reviewed By: KY **Date** 9/19/14

Injection Log

Directory: G:\APOLLO\DATA\140707\140922

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	707003.D	1	Diesel 10 ppm 6/4/14	Mix(A)	7-7-14 13:02:59
2	4	707004.D	1	Diesel 100 ppm 6/27/14	Mix(A)	7-7-14 13:27:32
3	5	707005.D	1	Diesel 400 ppm 6/27/14	Mix(A)	7-7-14 13:52:19
4	6	707006.D	1	Diesel 600 ppm 6/4/14	Mix(A)	7-7-14 14:16:58
5	7	707007.D	1	Diesel 800 ppm 6/4/14	Mix(A)	7-7-14 14:41:40
6	8	707008.D	1	Diesel 1000 ppm 6/4/14	Mix(A)	7-7-14 15:06:56
7	11	707011.D	1	MO 50 ppm 6/4/14	Mix(B)	7-7-14 16:21:09
8	12	707012.D	1	MO 250ppm 6/4/14	Mix(B)	7-7-14 16:46:09
9	13	707013.D	1	MO 500 ppm 6/4/14	Mix(B)	7-7-14 17:11:16
10	14	707014.D	1	MO 1000 ppm 6/27/14	Mix(B)	7-7-14 17:36:01
11	15	707015.D	1	MO 1500 ppm 6/4/14	Mix(B)	7-7-14 18:00:31
12	16	707016.D	1	MO 2000 ppm 6/4/14	Mix(B)	7-7-14 18:25:13
13	17	707017.D	1	MO 2ND SRC 5/20/14	Mix(B)	7-7-14 18:49:56
14	18	707018.D	1	Surr. 50/1000 6/4/14	Mix(C)	7-7-14 19:15:08
15	19	707019.D	1	Surr. 100/1000 6/4/14	Mix(C)	7-7-14 19:40:00
16	20	707020.D	1	Surr. 400/1000 6/4/14	Mix(C)	7-7-14 20:05:05
17	21	707021.D	1	Surr. 600/1000 6/4/14	Mix(C)	7-7-14 20:30:22
18	22	707022.D	1	Surr. 800/1000 6/4/14	Mix(C)	7-7-14 20:55:33
19	23	707023.D	1	Surr. 1000/1000 6/4/14	Mix(C)	7-7-14 21:20:46
20	24	707024.D	1	Diesel 2ND SRC 400/1000 7/7/14	Mix(C)	7-7-14 21:46:00
1	2	922002.D	1	Diesel 400ppm 9/17/14	Mix(A)	9-22-14 9:13:23
2	3	922003.D	1	MO 1000ppm 9/12/14	Mix(B)	9-22-14 9:39:04
3	4	922004.D	5	140909A BLK 5/1000	Water	9-22-14 10:51:49
4	5	922005.D	5	140909A LCS-1 5/1000	Water	9-22-14 11:17:21
5	6	922006.D	5	140909A LCS-2 5/1000	Water	9-22-14 11:43:11
6	7	922007.D	4.6729	AZ02108W05 5/1070	Water	9-22-14 12:09:03
7	8	922008.D	4.7619	AZ02109W07 5/1050	Water	9-22-14 12:35:13
8	9	922009.D	4.6729	AZ02116W09 5/1070	Water	9-22-14 13:01:11
9	11	922011.D	1	MO 1000ppm 9/12/14	Mix(B)	9-22-14 13:53:01
10	12	922012.D	1	Diesel 400ppm 9/17/14	Mix(A)	9-22-14 14:18:56
11	16	922016.D	1	Diesel 400ppm 9/17/14	Mix(A)	9-23-14 8:51:22
12	17	922017.D	1	MO 1000ppm 9/12/14	Mix(B)	9-23-14 9:16:51
13	18	922018.D	497.413	140910A BLK 5/50.26G x5	Soil	9-23-14 11:00:40
14	19	922019.D	495.148	140910A LCS-1 5/50.49G x5	Soil	9-23-14 11:26:34
15	20	922020.D	497.81	140910A LCS-2 5/50.22G x5	Soil	9-23-14 11:52:28
16	21	922021.D	438.982	AZ02099S11 5/56.95G x5	Soil	9-23-14 12:18:23
17	22	922022.D	443.42	AZ02100S11 MS-1 5/56.38G x5	Soil	9-23-14 12:44:25
18	23	922023.D	443.341	AZ02100S11 MSD-1 5/56.39G x5	Soil	9-23-14 13:10:19
19	24	922024.D	443.341	AZ02100S11 MS-2 5/56.39G x5	Soil	9-23-14 13:36:12
20	25	922025.D	443.498	AZ02100S11 MSD-2 5/56.37G x5	Soil	9-23-14 14:02:15
21	26	922026.D	443.498	AZ02100S11 5/56.37G x5	Soil	9-23-14 14:28:08
22	27	922027.D	442.321	AZ02101S11 5/56.52G x5	Soil	9-23-14 14:54:07
23	28	922028.D	444.919	AZ02102S11 5/56.19G x5	Soil	9-23-14 15:20:08
24	29	922029.D	421.017	AZ02103S11 5/59.38G x5	Soil	9-23-14 15:46:01
25	30	922030.D	428.964	AZ02104S11 5/58.28G x5	Soil	9-23-14 16:12:00
26	32	922032.D	1	Diesel 400ppm 9/17/14	Mix(A)	9-23-14 17:48:47
27	33	922033.D	1	MO 1000ppm 9/23/14	Mix(B)	9-23-14 18:14:52
28	35	922035.D	1	Diesel 400ppm 9/17/14	Mix(A)	9-24-14 8:57:02
29	36	922036.D	1	MO 1000ppm 9/23/14	Mix(B)	9-24-14 9:22:29
30	37	922037.D	379.881	AZ02105S11 5/65.81G x5	Soil	9-24-14 9:48:23
31	38	922038.D	350.73	AZ02106S11 5/71.28G x5	Soil	9-24-14 10:14:21

32	39	922039.D	382.966	AZ02107S11 5/65.28G x5	Soil	9-24-14 10:40:34
33	40	922040.D	429.406	AZ02110S11 5/58.22G x5	Soil	9-24-14 11:06:27
34	41	922041.D	419.533	AZ02111S11 5/59.59G x5	Soil	9-24-14 11:32:38
35	42	922042.D	384.025	AZ02112S11 5/65.10G x5	Soil	9-24-14 11:58:34
36	43	922043.D	431.928	AZ02113S11 5/57.88G x5	Soil	9-24-14 12:24:30
37	44	922044.D	417.432	AZ02114S11 5/59.89G x5	Soil	9-24-14 12:50:21
38	45	922045.D	371.526	AZ02115S11 5/67.29G x5	Soil	9-24-14 13:16:25
39	47	922047.D	1	Diesel 400ppm 9/17/14	Mix(A)	9-24-14 16:19:40
40	48	922048.D	1	MO 1000ppm 9/23/14	Mix(B)	9-24-14 16:45:17

EPA METHOD 8081A
Organochlorine Pesticides

APPL, INC.

EPA METHOD 8081A
Organochlorine Pesticides
QC Summary

APPL, INC.

Method Blank
EPA 8081A OCL WATER

Blank Name/QCG: **140909W-02108 - 190200**
Batch ID: #81HC0-140909A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	4,4'-DDD	0.010 U	0.05	0.010	0.003	ug/L	09/09/14	09/23/14
BLANK	4,4'-DDE	0.010 U	0.05	0.010	0.004	ug/L	09/09/14	09/23/14
BLANK	4,4'-DDT	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
BLANK	ALDRIN	0.010 U	0.05	0.010	0.009	ug/L	09/09/14	09/23/14
BLANK	CHLORDANE, TECHNICAL	0.04 U	1.0	0.04	0.01	ug/L	09/09/14	09/23/14
BLANK	DIELDRIN	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
BLANK	ENDOSULFAN I	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
BLANK	ENDOSULFAN II	0.010 U	0.05	0.010	0.004	ug/L	09/09/14	09/23/14
BLANK	ENDOSULFAN SULFATE	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
BLANK	ENDRIN	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
BLANK	GAMMA-BHC	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
BLANK	HEPTACHLOR	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
BLANK	HEPTACHLOR EPOXIDE	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
BLANK	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
BLANK	METHOXYCHLOR	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
BLANK	TOXAPHENE	0.40 U	1.0	0.40	0.38	ug/L	09/09/14	09/23/14
BLANK	SURROGATE: DECACHLOROBIP	92.8	30-135			%	09/09/14	09/23/14
BLANK	SURROGATE: TCMX (S)	63.6	25-140			%	09/09/14	09/23/14

Quant Method: OCL0922.M
Run #: 0922099
Instrument: Lucy
Sequence: 140922
Initials: MA

GC SC-Blank-REG MDLs
Printed: 09/29/14 12:38:12 PM

Method Blank
EPA 8081A SOIL - ISM

Blank Name/QCG: **140916S-02100 - 190201**
Batch ID: #81ACT-140916A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/23/14
BLANK	4,4'-DDE	0.004 U	0.05	0.004	0.002	mg/kg	09/16/14	09/23/14
BLANK	4,4'-DDT	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
BLANK	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	CHLORDANE, TECHNICAL	0.050 U	1.00	0.050	0.015	mg/kg	09/16/14	09/23/14
BLANK	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
BLANK	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
BLANK	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/23/14
BLANK	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/23/14
BLANK	SURROGATE: DECACHLOROBIP	83.1	55-130			%	09/16/14	09/23/14
BLANK	SURROGATE: TCMX (S)	84.3	70-125			%	09/16/14	09/23/14

Quant Method: OCL0922.M
Run #: 0922108
Instrument: Lucy
Sequence: 140922
Initials: MA

GC SC-Blank-REG MDLs
Printed: 09/29/14 12:38:13 PM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/23/14

Matrix: WATER Instrument: Lucy

APPL ID.	Client Sample No.	SURROGATE: DECACHLOROBIPHENYL (S)			SURROGATE: TCMX (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140909A-BLK	Blank	30-135	92.8		25-140	63.6	
140909A-LCS	Lab Control Spike	30-135	78.7		25-140	58.7	
AZ02108	EN010	30-135	85.1		25-140	63.5	
AZ02109	EN011	30-135	77.2		25-140	53.8	
AZ02116	EN018	30-135	86.9		25-140	74.5	

Comments: Batch: #81HC0-140909A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/23/14

Matrix: SOIL Instrument: Lucy

APPL ID.	Client Sample No.	SURROGATE: DECACHLOROBIPHENYL (S)			SURROGATE: TCMX (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140916A-BLK	Blank	55-130	83.1		70-125	84.3	
140916A-LCS	Lab Control Spike	55-130	74.5		70-125	81.1	
AZ02099	EN001	55-130	87.9		70-125	103	
AZ02100-MS	Matrix Spike	55-130	83.2		70-125	102	
AZ02100-MSD	Matrix SpikeD	55-130	85.0		70-125	100	
AZ02100	EN002	55-130	82.3		70-125	102	
AZ02101	EN003	55-130	80.3		70-125	105	
AZ02102	EN004	55-130	80.1		70-125	101	
AZ02103	EN005	55-130	77.3		70-125	102	
AZ02104	EN006	55-130	79.7		70-125	100	
AZ02105	EN007	55-130	81.4		70-125	101	
AZ02107	EN009	55-130	76.5		70-125	96.6	
AZ02115	EN017	55-130	73.5		70-125	97.6	
AZ02106	EN008	55-130	84.9		70-125	107	
AZ02110	EN012	55-130	83.5		70-125	103	
AZ02111	EN013	55-130	84.0		70-125	105	
AZ02112	EN014	55-130	83.8		70-125	106	
AZ02113	EN015	55-130	80.9		70-125	103	
AZ02114	EN016	55-130	76.7		70-125	95.5	

Comments: Batch: #81ACT-140916A

Laboratory Control Spike Recovery
EPA 8081A OCL WATER

APPL ID: **140909W-02108 LCS - 190200**
Batch ID: #81HC0-140909A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
4,4'-DDD	0.300	0.271	90.3	25-150
4,4'-DDE	0.300	0.247	82.3	35-140
4,4'-DDT	0.300	0.273	91.0	45-140
ALDRIN	0.300	0.176	58.7	25-140
CHLORDANE, TECHNICAL	4.00	3.28	82.0	40-140
DIELDRIN	0.300	0.232	77.3	60-130
ENDOSULFAN I	0.300	0.249	83.0	50-110
ENDOSULFAN II	0.300	0.240	80.0	30-130
ENDOSULFAN SULFATE	0.300	0.262	87.3	55-135
ENDRIN	0.300	0.240	80.0	55-135
GAMMA-BHC	0.300	0.256	85.3	25-135
HEPTACHLOR	0.300	0.220	73.3	40-130
HEPTACHLOR EPOXIDE	0.300	0.245	81.7	60-130
HEXACHLOROBENZENE	1.00	0.597	59.7	29-146
METHOXYCHLOR	0.300	0.264	88.0	55-150
TOXAPHENE	1.00	0.870	87.0	58-116
SURROGATE: DECACHLOROBIPHENYL	0.300	0.236	78.7	30-135
SURROGATE: TCMX (S)	0.300	0.176	58.7	25-140

Comments: _____

Primary	SPK
Quant Method :	OCL0922.M
Extraction Date :	09/09/14
Analysis Date :	09/23/14
Instrument :	Lucy
Run :	0922100
Initials :	MA

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APPL Standard LCS

Laboratory Control Spike Recovery

EPA 8081A SOIL - ISM

APPL ID: **140916S-02100 LCS - 190201**
Batch ID: #81ACT-140916A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
4,4'-DDD	0.167	0.140	83.8	30-135
4,4'-DDE	0.167	0.128	76.6	70-125
4,4'-DDT	0.167	0.127	76.0	45-140
ALDRIN	0.167	0.126	75.4	45-140
CHLORDANE, TECHNICAL	1.67	1.40	83.8	54-121
DIELDRIN	0.167	0.130	77.8	65-125
ENDOSULFAN I	0.167	0.127	76.0	15-135
ENDOSULFAN II	0.167	0.124	74.3	35-140
ENDOSULFAN SULFATE	0.167	0.127	76.0	60-135
ENDRIN	0.167	0.118	70.7	60-135
GAMMA-BHC	0.167	0.127	76.0	60-125
HEPTACHLOR	0.167	0.141	84.4	50-140
HEPTACHLOR EPOXIDE	0.167	0.126	75.4	65-130
HEXACHLOROBENZENE	0.167	0.142	85.0	45-124
METHOXYCHLOR	0.167	0.123	73.7	55-145
TOXAPHENE	1.67	1.42	85.0	39-147
SURROGATE: DECACHLOROBIPHENYL	0.333	0.248	74.5	55-130
SURROGATE: TCMX (S)	0.333	0.270	81.1	70-125

Comments: _____

Primary	SPK
Quant Method :	OCL0922.M
Extraction Date :	09/16/14
Analysis Date :	09/23/14
Instrument :	Lucy
Run :	0922109
Initials :	MA

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APPL Standard LCS

Matrix Spike Recoveries

EPA 8081A SOIL - ISM

APPL ID: **140916S-02100 MS - 190201**
Batch ID: #81ACT-140916A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
4,4'-DDD	0.167	ND	0.145	0.143	86.8	85.6	30-135	1.4	30
4,4'-DDE	0.167	0.024	0.181	0.179	94.0	92.8	70-125	1.1	30
4,4'-DDT	0.167	ND	0.189	0.185	113	111	45-140	2.1	30
ALDRIN	0.167	ND	0.154	0.155	92.2	92.8	45-140	0.65	30
CHLORDANE, TECHNICAL	1.67	0.31	1.80	1.76	89.2	86.8	54-121	2.2	30
DIELDRIN	0.167	ND	0.142	0.143	85.0	85.6	65-125	0.70	30
ENDOSULFAN I	0.167	ND	0.195	0.196	117	117	15-135	0.51	30
ENDOSULFAN II	0.167	ND	0.139	0.138	83.2	82.6	35-140	0.72	30
ENDOSULFAN SULFATE	0.167	ND	0.138	0.140	82.6	83.8	60-135	1.4	30
ENDRIN	0.167	ND	0.159	0.154	95.2	92.2	60-135	3.2	30
GAMMA-BHC	0.167	ND	0.151	0.151	90.4	90.4	60-125	0.0	30
HEPTACHLOR	0.167	ND	0.194	0.190	116	114	50-140	2.1	30
HEPTACHLOR EPOXIDE	0.167	ND	0.164	0.165	98.2	98.8	65-130	0.61	30
HEXACHLOROBENZENE	0.167	ND	0.152	0.146	91.0	87.4	45-124	4.0	30
METHOXYCHLOR	0.167	ND	0.151	0.152	90.4	91.0	55-145	0.66	30
TOXAPHENE	1.67	ND	1.39	1.28	83.2	76.6	39-147	8.2	30
SURROGATE: DECACHLOROBIPHENYL	0.333	NA	0.277	0.283	83.2	85.0	55-130		
SURROGATE: TCMX (S)	0.333	NA	0.339	0.333	102	100	70-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	OCL0922.M	OCL0922.M
Extraction Date :	09/16/14	09/16/14
Analysis Date :	09/23/14	09/23/14
Instrument :	Lucy	Lucy
Run :	0922114	0922115
Initials :	MA	

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APPL MSD SCII

EPA 8081A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/23/14

Matrix: WATER Instrument: Lucy

Blank ID: 140909A-BLK Time Analyzed: 1606

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140909A-BLK	Blank	0922099	09/23/14 1606
140909A-LCS	Lab Control Spike	0922100	09/23/14 1622
AZ02108	EN010	0922105	09/23/14 1750
AZ02109	EN011	0922106	09/23/14 1806
AZ02116	EN018	0922107	09/23/14 1823

Comments: Batch: #81HC0-140909A

EPA 8081A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/23/14

Matrix: SOIL Instrument: Lucy

Blank ID: 140916A-BLK Time Analyzed: 1839

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140916A-BLK	Blank	0922108	09/23/14 1839
140916A-LCS	Lab Control Spike	0922109	09/23/14 1856
AZ02099	EN001	0922113	09/23/14 2001
140916A-MS	Matrix Spike	0922114	09/23/14 2018
140916A-MSD	Matrix SpikeD	0922115	09/23/14 2034
AZ02100	EN002	0922118	09/23/14 2124
AZ02101	EN003	0922123	09/23/14 2246
AZ02102	EN004	0922124	09/23/14 2302
AZ02103	EN005	0922125	09/23/14 2319
AZ02104	EN006	0922133	09/24/14 0126
AZ02105	EN007	0922134	09/24/14 0142
AZ02107	EN009	0922136	09/24/14 0215
AZ02115	EN017	0922142	09/24/14 1054
AZ02106	EN008	0922151	09/24/14 1344
AZ02110	EN012	0922152	09/24/14 1401
AZ02111	EN013	0922153	09/24/14 1417
AZ02112	EN014	0922154	09/24/14 1433
AZ02113	EN015	0922155	09/24/14 1450
AZ02114	EN016	0922156	09/24/14 1506

Comments: Batch: #81ACT-140916A

EPA METHOD 8081A
Organochlorine Pesticides
Sample Data

APPL, INC.

EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN001
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02099
QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	4,4'-DDE	0.025 J	0.05	0.004	0.002	mg/kg	09/16/14	09/23/14
EPA 8081A	4,4'-DDT	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	CHLORDANE, TECHNICAL	0.37 J	1.00	0.050	0.015	mg/kg	09/16/14	09/23/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/23/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/23/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	87.9	55-130			%	09/16/14	09/23/14
EPA 8081A	SURROGATE: TCMX (S)	103	70-125			%	09/16/14	09/23/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922113
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:21 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922113.D\ECD1A.CH Vial: 13
Signal #2 : G:\LUCY\DATA\140922\0922113.D\ECD2B.CH
Acq On : 9-23-14 20:01:59 Operator: MA
Sample : AZ02099S11 5X1/0.05/30.21G Inst : Lucy
Misc : soil Multiplr: 3310.16
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 9:36 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
1)	S	TCMX	2.89	3.58	45900096	43345255	360.3982	340.9209	
		Surrogate Spike 331.016			Recovery	=	108.88%	102.99%	
22)	S	DBC	6.92	7.93	48249229	21172893	292.8543	377.4602	#
		Surrogate Spike 331.016			Recovery	=	88.47%	114.03%	
23)	S	DECA	9.28	10.58	60343187	16348033	254.7747	291.0308	
		Surrogate Spike 331.016			Recovery	=	76.97%	87.92%	
		Target Compounds							
9)	TM	G-CHLORDANE	5.29	6.01	12601853	9401168	102.1476	89.8424	
11)	TM	A-CHLORDANE	5.38	6.06	11056087	6820737	92.4053	82.5325	
12)	TM	P,P-DDE	5.56	6.20	3179410	2870140	25.6740	25.2302	
		Target Compounds							
2)	TM	A-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
3)	TM	B-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
4)	M	G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d	
5)	TM	D-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
6)	M	HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d	
7)	M	ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
8)	TM	HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d	
10)	TM	A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d	
13)	M	DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
14)	M	ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
15)	TM	B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d	
16)	TM	P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d	
17)	TM	ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d	
18)	M	P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d	
19)	TM	ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d	
20)	TM	ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d	
21)	TM	METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922113.D\ECD1A.CH Vial: 13
Signal #2 : G:\LUCY\DATA\140922\0922113.D\ECD2B.CH
Acq On : 9-23-14 20:01:59 Operator: MA
Sample : AZ02099S11 5X1/0.05/30.21G Inst : Lucy
Misc : soil Multiplr: 3310.16
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:23 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922113.D\ECD1A.CH Vial: 13
Signal #2 : G:\LUCY\DATA\140922\0922113.D\ECD2B.CH
Acq On : 9-23-14 20:01:59 Operator: MA
Sample : AZ02099S11 5X1/0.05/30.21G Inst : Lucy
Misc : soil Multiplr: 3310.16
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:48 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	23986050	14882309	552.7320m	371.8300m#
2) L2AK T. CHLORDANE	4.20	4.93	956460	116660	113.4549	16.0425 #
3) L2AK T. CHLORDANE {2}	4.66	5.29	748446	1070999	172.7150	229.2940 #
4) L2AK T. CHLORDANE {3}	5.29	6.01	11702223	9425071	694.0447	549.2860
5) L2AK T. CHLORDANE {4}	5.38	6.10	9823385	3713781	1002.6632	475.3793 #
6) L2AK T. CHLORDANE {5}	6.34	7.02	755536	555798	190.1430	178.6741
Sum T. CHLORDANE			23986050	14882309	2173.0208	1448.6759
Average T. CHLORDANE					434.604	289.735

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922113.D\ECD1A.CH Vial: 13
Signal #2 : G:\LUCY\DATA\140922\0922113.D\ECD2B.CH
Acq On : 9-23-14 20:01:59 Operator: MA
Sample : AZ02099S11 5X1/0.05/30.21G Inst : Lucy
Misc : soil Multiplr: 3310.16
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

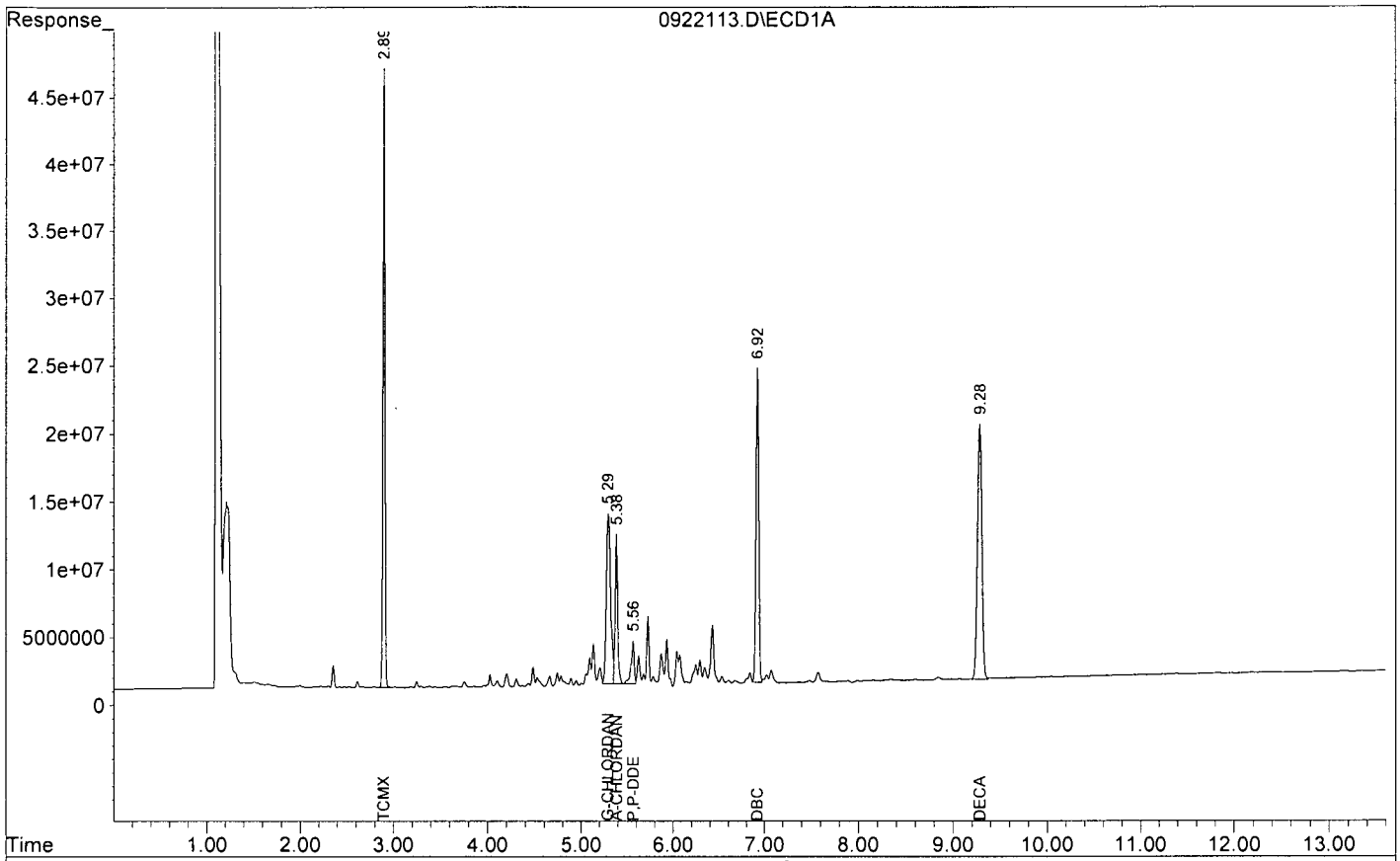
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Target Compounds						
5)	MA	PCNB	3.75	0.00	408062	0	2.5592	N.D. #
9)	MA	DICOFOL	0.00	5.47	0	441584	N.D.	5.6972 #
10)	MA	O,P-DDE	5.29	0.00	12685990	0	140.6098	N.D. #
11)	MA	OXADIAZON	5.38	0.00	11134066	0	222.6138	N.D. #
13)	MA	CAPTAN	5.62	5.87	2166521	749447	46.8269	9.5593 #
14)	MA	O,P-TDE/DDD	5.78	6.32	606227	4340888	6.8717	54.0343 #
15)	MA	NITROFEN	6.07	0.00	2172865	0	11.6994	N.D. #
16)	MA	O,P-DDT	6.07	0.00	2172865	0	11.6994	N.D. #
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.63	232410	150354	425.6453	324.6593
		Target Compounds						
1)	MA	DICHLOBENIL	0.00	0.00	0	0	N.D.	N.D.
2)	MA	BENEFIN	0.00	0.00	0	0	N.D.	N.D.
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D.	N.D.
6)	MA	CHLOROTHALONIL	0.00	0.00	0	0	N.D.	N.D.
7)	MA	ALACHLOR	0.00	0.00	0	0	N.D.	N.D.
8)	MA	DACTHAL	0.00	0.00	0	0	N.D.	N.D.
12)	MA	OXYFLUORFEN	0.00	0.00	0	0	N.D.	N.D.
17)	MA	CARBOPHENOTHION	0.00	0.00	0	0	N.D.	N.D.

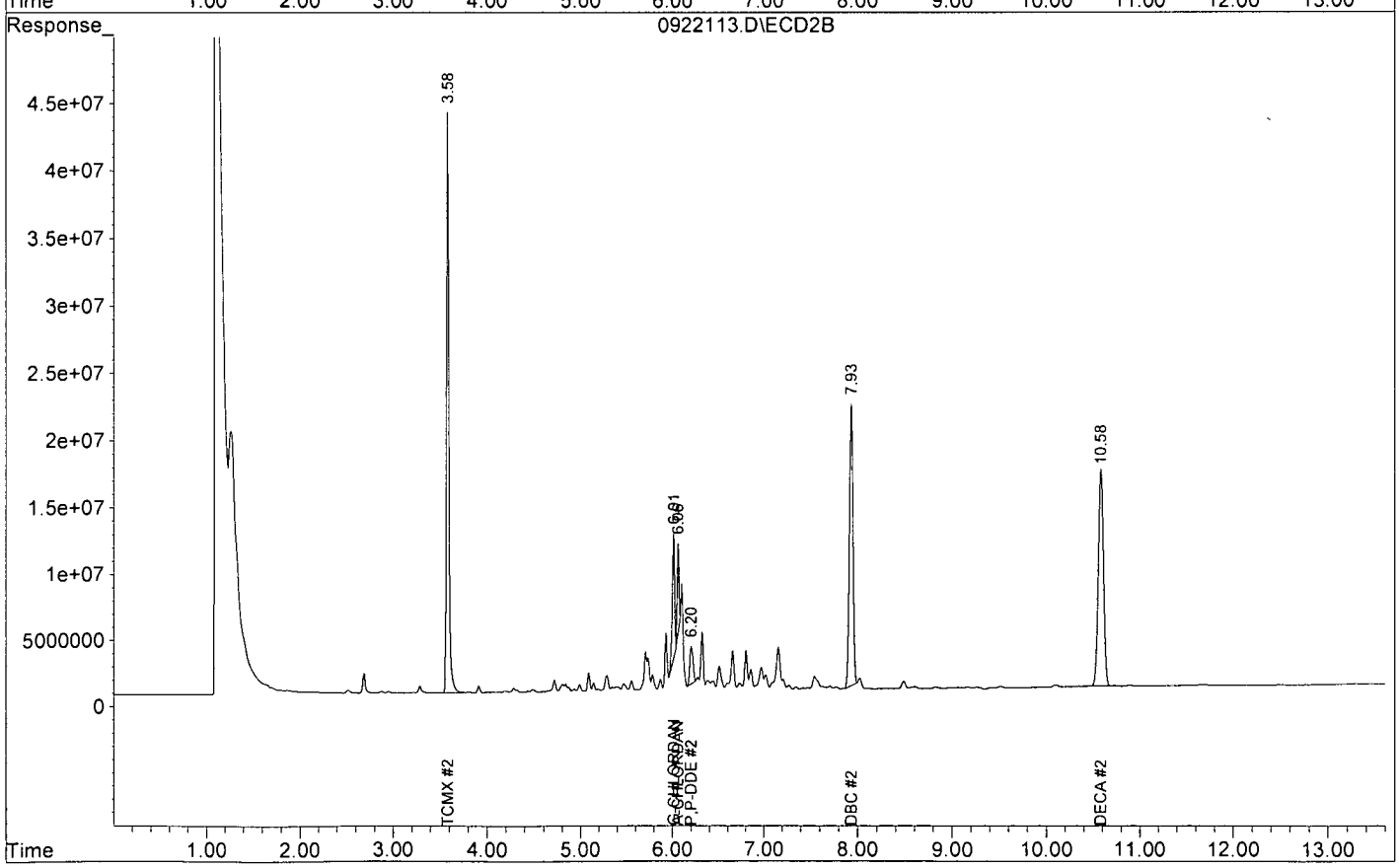
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922113.D
Acq On : 9-23-14 20:01:59
Sample : AZ02099S11 5X1/0.05/30.21G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 13
Operator: MA
Inst : Lucy
Multiplr: 3310.16





EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN002
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02100
QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	4,4'-DDE	0.024 J	0.05	0.004	0.002	mg/kg	09/16/14	09/23/14
EPA 8081A	4,4'-DDT	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	CHLORDANE, TECHNICAL	0.31 J	1.00	0.050	0.015	mg/kg	09/16/14	09/23/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/23/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/23/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	82.3	55-130			%	09/16/14	09/23/14
EPA 8081A	SURROGATE: TCMX (S)	102	70-125			%	09/16/14	09/23/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922118
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:21 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922118.D\ECD1A.CH Vial: 18
Signal #2 : G:\LUCY\DATA\140922\0922118.D\ECD2B.CH
Acq On : 9-23-14 21:24:10 Operator: MA
Sample : AZ02100S11 5X1/0.05/30.51G Inst : Lucy
Misc : soil Multiplr: 3277.61
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 9:38 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
1)	S	TCMX	2.89	3.58	45442856	42893964	353.2994	334.0539	
		Surrogate Spike 327.761			Recovery	=	107.79%	101.92%	
22)	S	DBC	6.92	7.94	41891726	19748177	251.7664	348.5991	#
		Surrogate Spike 327.761			Recovery	=	76.81%	106.36%	
23)	S	DECA	9.28	10.58	50269764	15302354	210.1566	269.7367	#
		Surrogate Spike 327.761			Recovery	=	64.12%	82.30%	
		Target Compounds							
9)	TM	G-CHLORDANE	5.30	6.01	9672723	7405456	77.6338	70.0744	
11)	TM	A-CHLORDANE	5.38	6.06	8170267	5202829	67.6145	62.3364	
12)	TM	P,P-DDE	5.56	6.20	2995171	2708545	23.9484	23.5755	
		Target Compounds							
2)	TM	A-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
3)	TM	B-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
4)	M	G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d	
5)	TM	D-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
6)	M	HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d	
7)	M	ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
8)	TM	HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d	
10)	TM	A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d	
13)	M	DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
14)	M	ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
15)	TM	B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d	
16)	TM	P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d	
17)	TM	ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d	
18)	M	P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d	
19)	TM	ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d	
20)	TM	ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d	
21)	TM	METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922118.D\ECD1A.CH Vial: 18
Signal #2 : G:\LUCY\DATA\140922\0922118.D\ECD2B.CH
Acq On : 9-23-14 21:24:10 Operator: MA
Sample : AZ02100S11 5X1/0.05/30.51G Inst : Lucy
Misc : soil Multiplr: 3277.61
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:23 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922118.D\ECD1A.CH Vial: 18
Signal #2 : G:\LUCY\DATA\140922\0922118.D\ECD2B.CH
Acq On : 9-23-14 21:24:10 Operator: MA
Sample : AZ02100S11 5X1/0.05/30.51G Inst : Lucy
Misc : soil Multiplr: 3277.61
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:48 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	ANM T. CHLORDANE Tot	0.00	0.00	18020152	12636681	411.1712m	312.6190m	
2)	L2AK T. CHLORDANE	4.21	4.93	644510	266164	75.6997	36.2415	#
3)	L2AK T. CHLORDANE {2}	4.66	5.29	553421	705545	126.4543	149.5673	
4)	L2AK T. CHLORDANE {3}	5.30	6.01	8982544	7354386	527.5051	424.3934	
5)	L2AK T. CHLORDANE {4}	5.38	6.10	7234580	3824649	731.1653	484.7567	#
6)	L2AK T. CHLORDANE {5}	6.34	7.02	605097	485937	150.7853	154.6796	
	Sum T. CHLORDANE			18020152	12636681	1611.6097	1249.6386	
	Average T. CHLORDANE					322.322	249.928	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922118.D\ECD1A.CH Vial: 18
Signal #2 : G:\LUCY\DATA\140922\0922118.D\ECD2B.CH
Acq On : 9-23-14 21:24:10 Operator: MA
Sample : AZ02100S11 5X1/0.05/30.51G Inst : Lucy
Misc : soil Multiplr: 3277.61
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
5)	MA PCNB	3.75	0.00	264225	0	1.6408	N.D. #
9)	MA DICOFOL	0.00	5.47	0	395562	N.D.	2.8441 #
10)	MA O,P-DDE	5.30	0.00	9594856	0	105.3023	N.D. #
11)	MA OXADIAZON	5.38	0.00	8170267	0	161.7495	N.D. #
13)	MA CAPTAN	5.62	5.87	1221785	754549	37.0479	9.5297 #
14)	MA O,P-TDE/DDD	5.78	6.32	284127	3378049	3.1890	41.6357 #
15)	MA NITROFEN	6.07	0.00	1875106	0	9.9969	N.D. #
16)	MA O,P-DDT	6.07	0.00	1875106	0	9.9969	N.D. #
18)	MA BIS(2-ETHYLHEXYL	6.60	7.63	200921	178420	364.3566	381.4737
	Target Compounds						
1)	MA DICHLOBENIL	0.00	0.00	0	0	N.D.	N.D.
2)	MA BENEFIN	0.00	0.00	0	0	N.D.	N.D.
3)	MA PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.
4)	MA HEXACHLOROBENZEN	0.00	0.00	0	0	N.D.	N.D.
6)	MA CHLOROTHALONIL	0.00	0.00	0	0	N.D.	N.D.
7)	MA ALACHLOR	0.00	0.00	0	0	N.D.	N.D.
8)	MA DACTHAL	0.00	0.00	0	0	N.D.	N.D.
12)	MA OXYFLUORFEN	0.00	0.00	0	0	N.D.	N.D.
17)	MA CARBOPHENOTHION	0.00	0.00	0	0	N.D.	N.D.

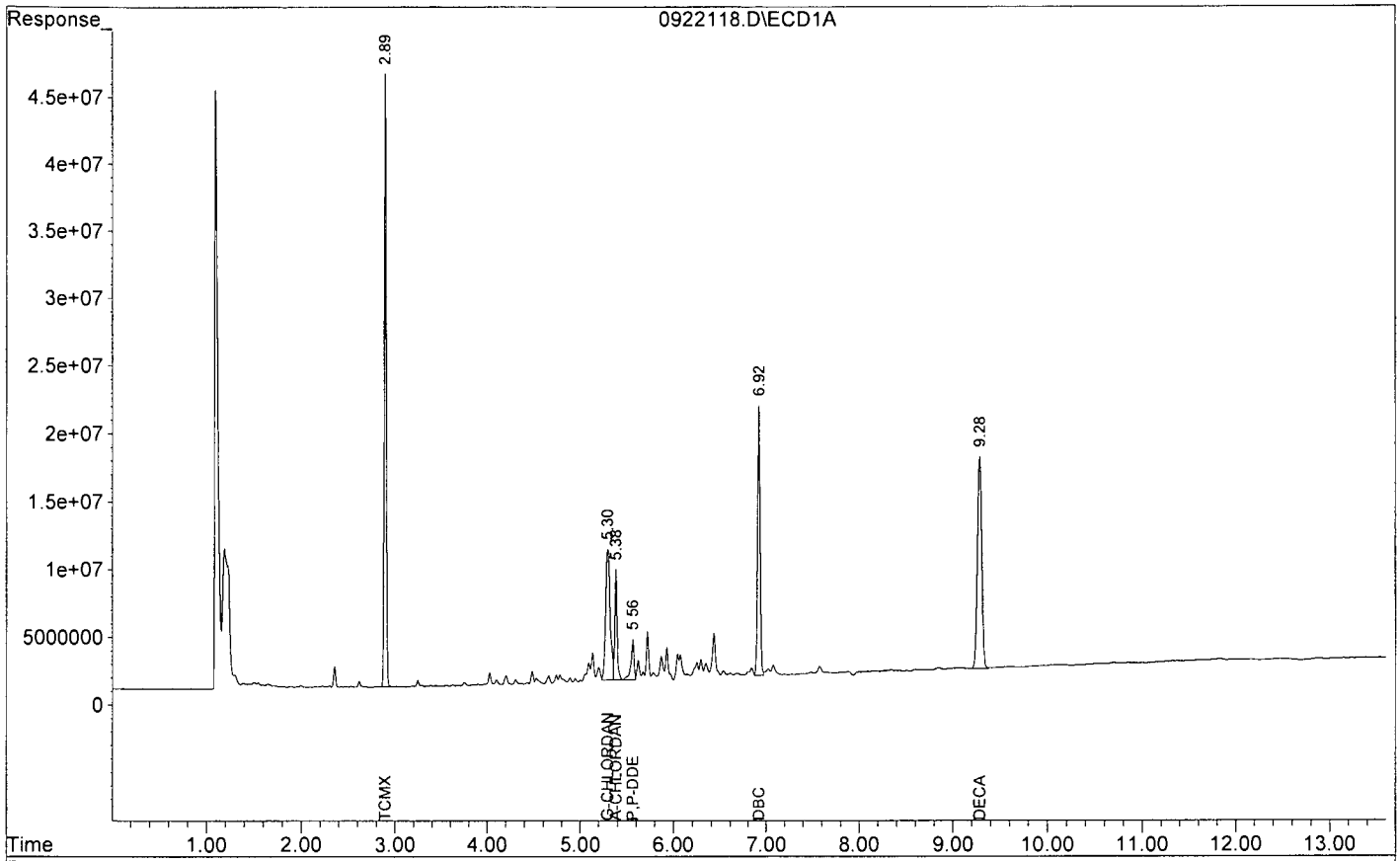
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

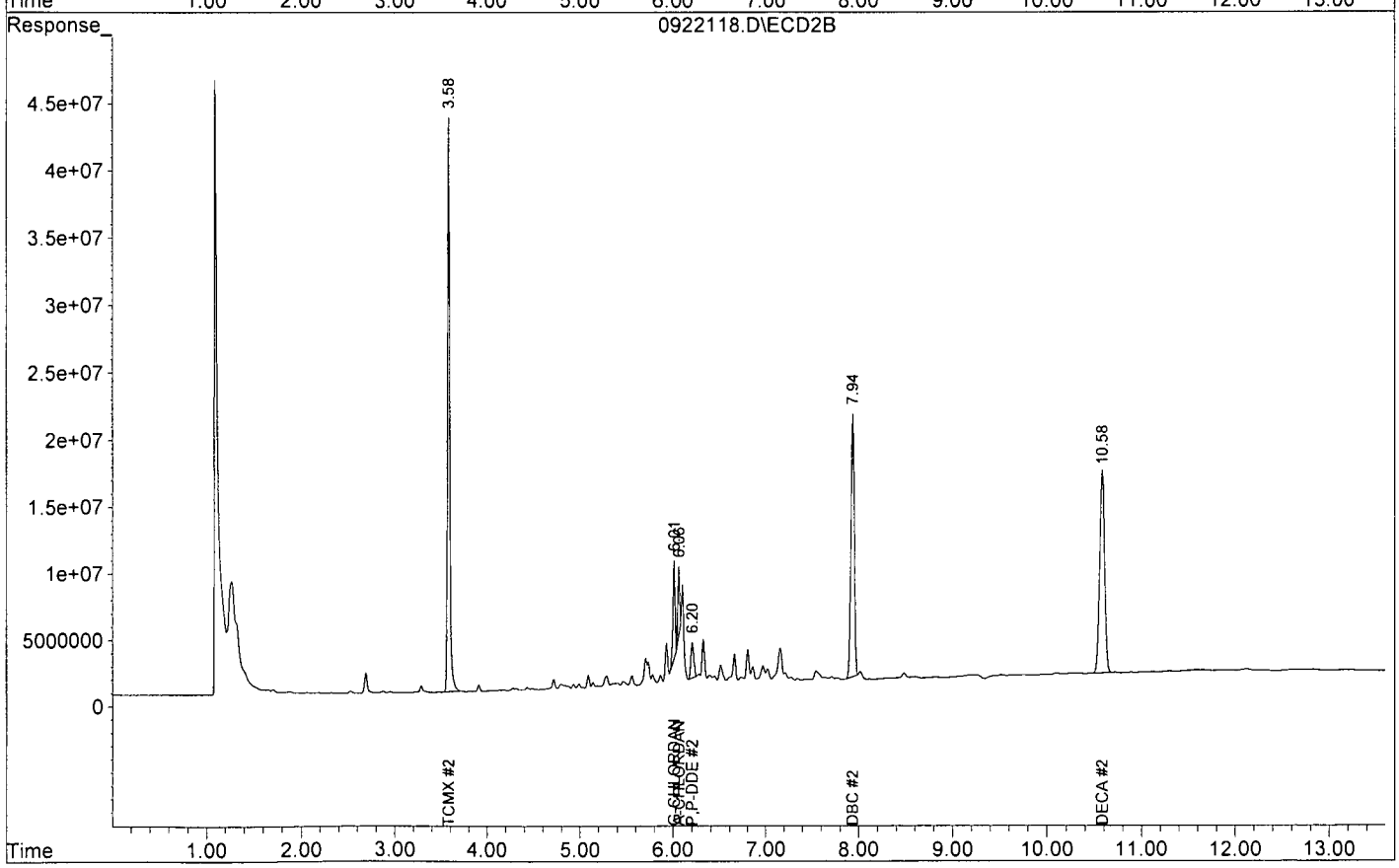
0922118.D 5ES0922.M Thu Sep 25 15:24:53 2014 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922118.D
Acq On : 9-23-14 21:24:10
Sample : AZ02100S11 5X1/0.05/30.51G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 18
Operator: MA
Inst : Lucy
Multiplr: 3277.61





EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN003

Sample Collection Date: 09/02/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02101

QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	4,4'-DDE	0.022 J	0.05	0.004	0.002	mg/kg	09/16/14	09/23/14
EPA 8081A	4,4'-DDT	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	CHLORDANE, TECHNICAL	0.45 J	1.00	0.050	0.015	mg/kg	09/16/14	09/23/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/23/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/23/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	80.3	55-130			%	09/16/14	09/23/14
EPA 8081A	SURROGATE: TCMX (S)	105	70-125			%	09/16/14	09/23/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922123
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:21 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922123.D\ECD1A.CH Vial: 23
Signal #2 : G:\LUCY\DATA\140922\0922123.D\ECD2B.CH
Acq On : 9-23-14 22:46:19 Operator: MA
Sample : AZ02101S11 5X1/0.05/30.26G Inst : Lucy
Misc : soil Multiplr: 3304.69
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 9:52 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
1)	S	TCMX	2.90	3.58	46952352	44343971	368.0514	348.2000	
		Surrogate Spike 330.469			Recovery	=	111.37%	105.37%	
22)	S	DBC	6.92	7.93	41101609	19982800	249.0589	355.6554	#
		Surrogate Spike 330.469			Recovery	=	75.37%	107.62%	
23)	S	DECA	9.28	10.58	49786409	14927484	209.8558	265.3030	#
		Surrogate Spike 330.469			Recovery	=	63.50%	80.28%	
		Target Compounds							
9)	TM	G-CHLORDANE	5.29	6.01	14147984	11324382	114.4907	108.0429	
11)	TM	A-CHLORDANE	5.38	6.06	12653996	8071856	105.5858	97.5100	
12)	TM	P,P-DDE	5.57	6.20	2565155	2535441	20.6796	22.2512	
		Target Compounds							
2)	TM	A-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
3)	TM	B-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
4)	M	G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d	
5)	TM	D-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
6)	M	HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d	
7)	M	ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
8)	TM	HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d	
10)	TM	A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d	
13)	M	DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
14)	M	ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
15)	TM	B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d	
16)	TM	P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d	
17)	TM	ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d	
18)	M	P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d	
19)	TM	ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d	
20)	TM	ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d	
21)	TM	METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922123.D\ECD1A.CH Vial: 23
Signal #2 : G:\LUCY\DATA\140922\0922123.D\ECD2B.CH
Acq On : 9-23-14 22:46:19 Operator: MA
Sample : AZ02101S11 5X1/0.05/30.26G Inst : Lucy
Misc : soil Multiplr: 3304.69
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:23 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922123.D\ECD1A.CH Vial: 23
Signal #2 : G:\LUCY\DATA\140922\0922123.D\ECD2B.CH
Acq On : 9-23-14 22:46:19 Operator: MA
Sample : AZ02101S11 5X1/0.05/30.26G Inst : Lucy
Misc : soil Multiplr: 3304.69
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:48 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	27204547	18122999	625.8633m	452.0498m#
2) L2AK T. CHLORDANE	4.20	4.93	993757	226194	117.6844	31.0536 #
3) L2AK T. CHLORDANE {2}	4.66	5.28	1144124	1420646	263.5874	303.6490
4) L2AK T. CHLORDANE {3}	5.29	6.01	13086956	11254350	774.8895	654.8118
5) L2AK T. CHLORDANE {4}	5.38	6.10	11141298	4522709	1135.3031	577.9691 #
6) L2AK T. CHLORDANE {5}	6.34	7.02	838412	699100	210.6517	224.3706
Sum T. CHLORDANE			27204547	18122999	2502.1161	1791.8541
Average T. CHLORDANE					500.423	358.371

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922123.D\ECD1A.CH Vial: 23
Signal #2 : G:\LUCY\DATA\140922\0922123.D\ECD2B.CH
Acq On : 9-23-14 22:46:19 Operator: MA
Sample : AZ02101S11 5X1/0.05/30.26G Inst : Lucy
Misc : soil Multiplr: 3304.69
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

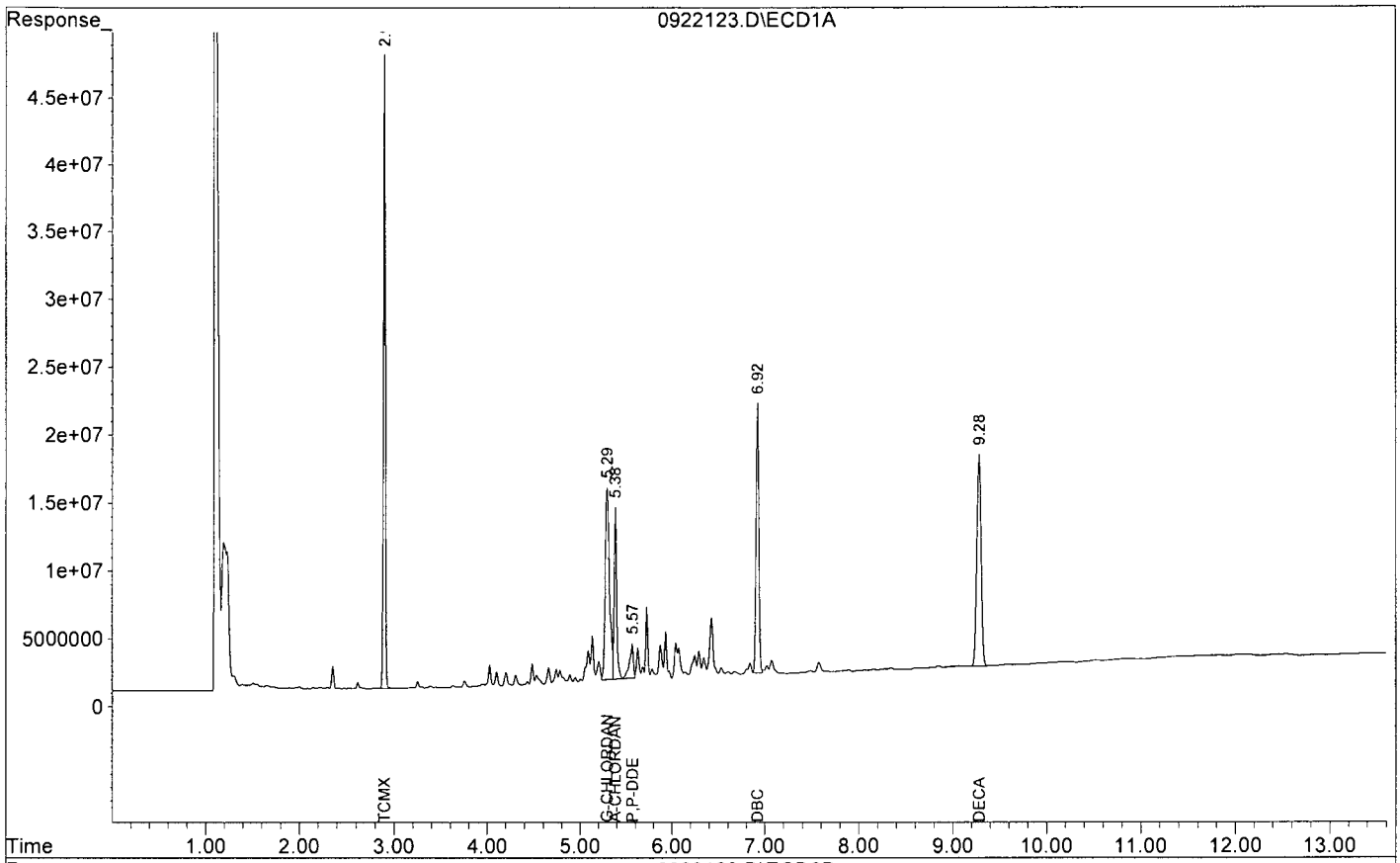
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		Target Compounds							
1)	MA	DICHLOBENIL	2.09	0.00	14335	0	0.2462	N.D.	#
5)	MA	PCNB	3.75	0.00	484544	0	3.0338	N.D.	#
9)	MA	DICOFOL	0.00	5.47	0	452857	N.D.	6.3786	#
10)	MA	O,P-DDE	5.29	0.00	14159368	0	156.6813	N.D.	#
11)	MA	OXADIAZON	5.38	0.00	12681489	0	253.1341	N.D.	#
13)	MA	CAPTAN	5.62	5.87	2267725	852600	47.7560	10.8570	#
14)	MA	O,P-TDE/DDD	5.78	6.32	672988	5046236	7.6158	62.7106	#
15)	MA	NITROFEN	6.07	0.00	2127262	0	11.4349	N.D.	#
16)	MA	O,P-DDT	6.07	0.00	2127262	0	11.4349	N.D.	#
18)	MA	BIS(2-ETHYLHEXYL	6.60	0.00	219258	0	400.8949	N.D.	#
		Target Compounds							
2)	MA	BENEFIN	0.00	0.00	0	0	N.D.	N.D.	
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.	
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D.	N.D.	
6)	MA	CHLOROTHALONIL	0.00	0.00	0	0	N.D.	N.D.	
7)	MA	ALACHLOR	0.00	0.00	0	0	N.D.	N.D.	
8)	MA	DACTHAL	0.00	0.00	0	0	N.D.	N.D.	
12)	MA	OXYFLUORFEN	0.00	0.00	0	0	N.D.	N.D.	
17)	MA	CARBOPHENOTHION	0.00	0.00	0	0	N.D.	N.D.	

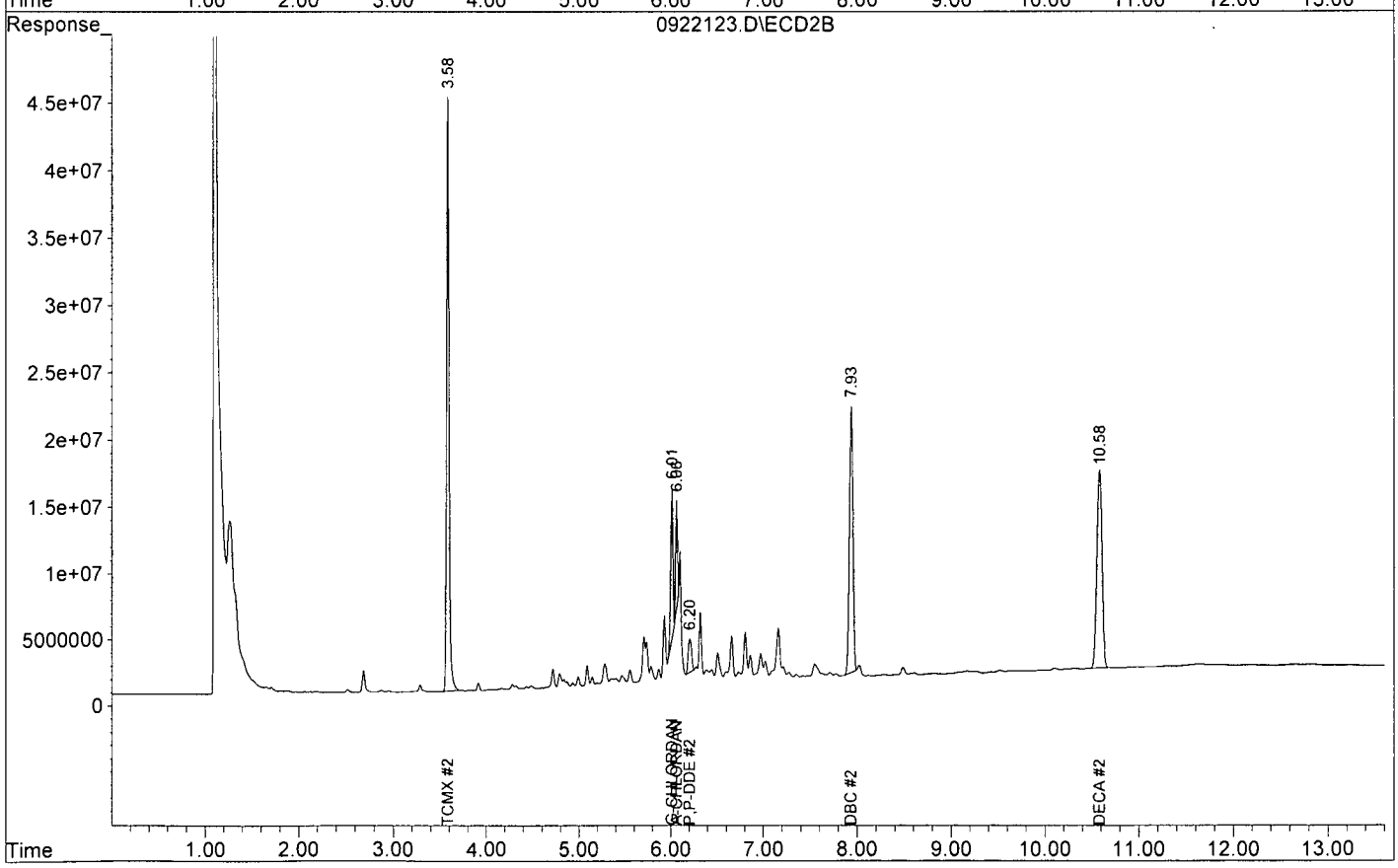
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922123.D
Acq On : 9-23-14 22:46:19
Sample : AZ02101S11 5X1/0.05/30.26G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 23
Operator: MA
Inst : Lucy
Multiplr: 3304.69





EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN004
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02102
QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	4,4'-DDE	0.033 J	0.05	0.004	0.002	mg/kg	09/16/14	09/23/14
EPA 8081A	4,4'-DDT	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	CHLORDANE, TECHNICAL	0.81 J	1.00	0.050	0.015	mg/kg	09/16/14	09/23/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/23/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/23/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	80.1	55-130			%	09/16/14	09/23/14
EPA 8081A	SURROGATE: TCMX (S)	101	70-125			%	09/16/14	09/23/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922124
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:21 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922124.D\ECD1A.CH Vial: 24
Signal #2 : G:\LUCY\DATA\140922\0922124.D\ECD2B.CH
Acq On : 9-23-14 23:02:42 Operator: MA
Sample : AZ02102S11 5X1/0.05/30.08G Inst : Lucy
Misc : soil Multiplr: 3324.47
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 9:53 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
1)	S	TCMX	2.89	3.58	46572147	42445733	367.2556	335.2890
		Surrogate Spike 332.447			Recovery	=	110.47%	100.85%
22)	S	DBC	6.92	7.94	39592962	19141421	241.3528	342.7191 #
		Surrogate Spike 332.447			Recovery	=	72.60%	103.09%
23)	S	DECA	9.28	10.58	48033106	14901544	203.6769	266.4268 #
		Surrogate Spike 332.447			Recovery	=	61.27%	80.14%
		Target Compounds						
9)	TM	G-CHLORDANE	5.29	6.01	27448058	23242376	223.4491	223.0762
11)	TM	A-CHLORDANE	5.38	6.06	28275428	20665024	237.3438	251.1324
12)	TM	P,P-DDE	5.56	6.21	3621891	3736993	29.3734	32.9923
		Target Compounds						
2)	TM	A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM	B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M	G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM	D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M	HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M	ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM	HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM	A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
13)	M	DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
14)	M	ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM	B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
16)	TM	P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM	ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
18)	M	P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM	ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM	ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM	METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922124.D\ECD1A.CH Vial: 24
Signal #2 : G:\LUCY\DATA\140922\0922124.D\ECD2B.CH
Acq On : 9-23-14 23:02:42 Operator: MA
Sample : AZ02102S11 5X1/0.05/30.08G Inst : Lucy
Misc : soil Multiplr: 3324.47
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:23 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922124.D\ECD1A.CH Vial: 24
Signal #2 : G:\LUCY\DATA\140922\0922124.D\ECD2B.CH
Acq On : 9-23-14 23:02:42 Operator: MA
Sample : AZ02102S11 5X1/0.05/30.08G Inst : Lucy
Misc : soil Multiplr: 3324.47
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:48 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	57046790	32375010	1320.2625m	812.3762m#
2) L2AK T. CHLORDANE	4.20	4.93	1702665	337433	202.8424	46.6026 #
3) L2AK T. CHLORDANE {2}	4.66	5.28	2909293	3134707	674.2644	674.0218
4) L2AK T. CHLORDANE {3}	5.29	6.01	25425905	22986457	1514.4979	1345.4240
5) L2AK T. CHLORDANE {4}	5.38	6.10	25294703	4412630	2592.9653	567.2764 #
6) L2AK T. CHLORDANE {5}	6.34	7.02	1714223	1503782	433.2772	485.5150
Sum T. CHLORDANE			57046790	32375010	5417.8472	3118.8397
Average T. CHLORDANE					1083.569	623.768

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922124.D\ECD1A.CH Vial: 24
Signal #2 : G:\LUCY\DATA\140922\0922124.D\ECD2B.CH
Acq On : 9-23-14 23:02:42 Operator: MA
Sample : AZ02102S11 5X1/0.05/30.08G Inst : Lucy
Misc : soil Multiplr: 3324.47
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

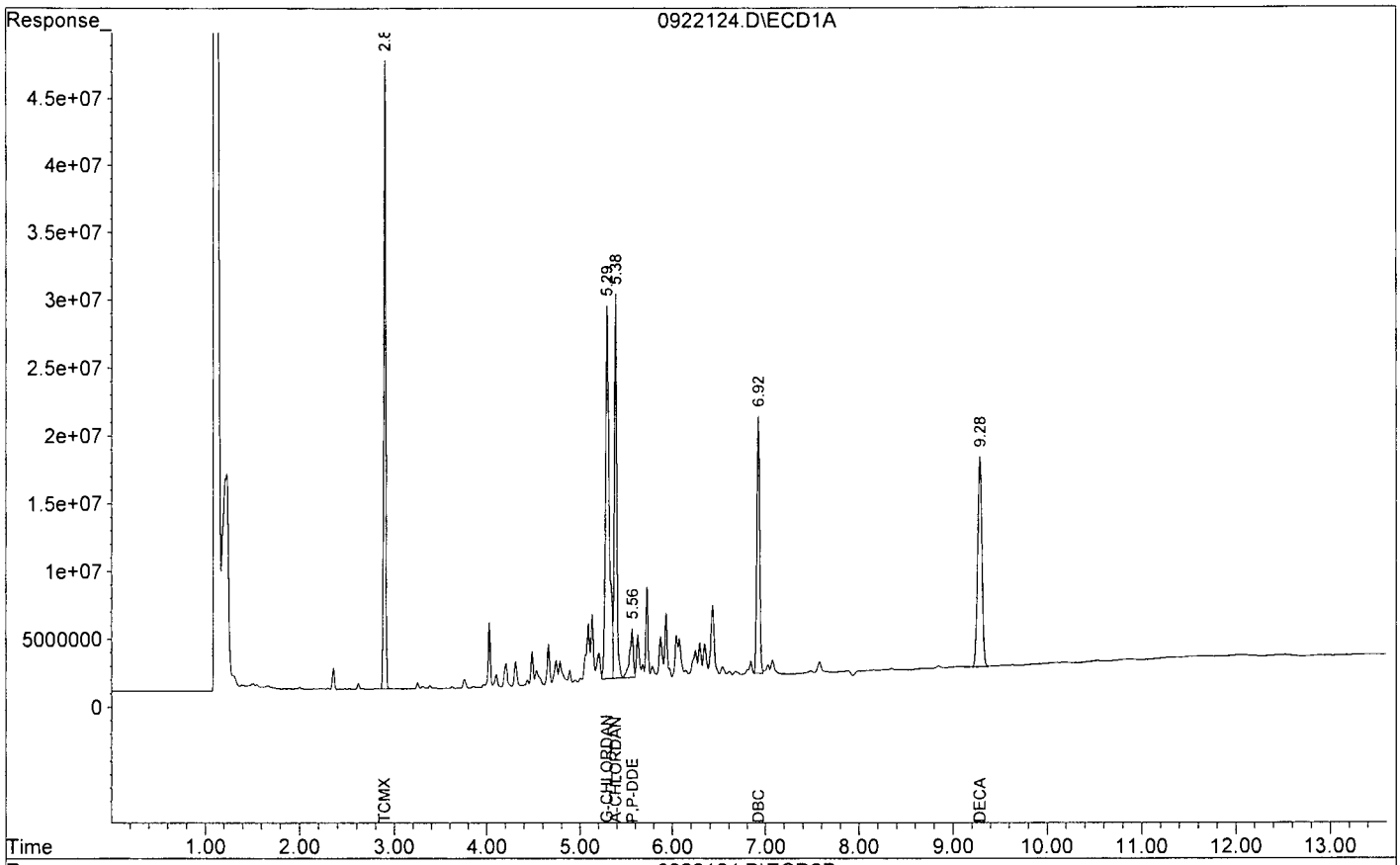
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		Target Compounds							
1)	MA	DICHLOBENIL	2.09	0.00	10697	0	0.1848	N.D.	#
5)	MA	PCNB	3.75	0.00	664371	0	4.1846	N.D.	#
9)	MA	DICOFOL	0.00	5.47	0	741018	N.D.	24.1805	#
10)	MA	O,P-DDE	5.29	0.00	27605467	0	307.2978	N.D.	#
11)	MA	OXADIAZON	5.38	0.00	28435616	0	570.9975	N.D.	#
13)	MA	CAPTAN	5.62	5.87	3274923	1053768	58.1185	13.4990	#
14)	MA	O,P-TDE/DDD	5.78	6.32	915382	7305198	10.4209	91.3264	#
15)	MA	NITROFEN	6.07	0.00	2849731	0	15.4102	N.D.	#
16)	MA	O,P-DDT	6.07	0.00	2849731	0	15.4102	N.D.	#
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.63	301938	265166	555.3720	575.0477	
		Target Compounds							
2)	MA	BENEFIN	0.00	0.00	0	0	N.D.	N.D.	
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.	
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D.	N.D.	
6)	MA	CHLOROTHALONIL	0.00	0.00	0	0	N.D.	N.D.	
7)	MA	ALACHLOR	0.00	0.00	0	0	N.D.	N.D.	
8)	MA	DACTHAL	0.00	0.00	0	0	N.D.	N.D.	
12)	MA	OXYFLUORFEN	0.00	0.00	0	0	N.D.	N.D.	
17)	MA	CARBOPHENOTHION	0.00	0.00	0	0	N.D.	N.D.	

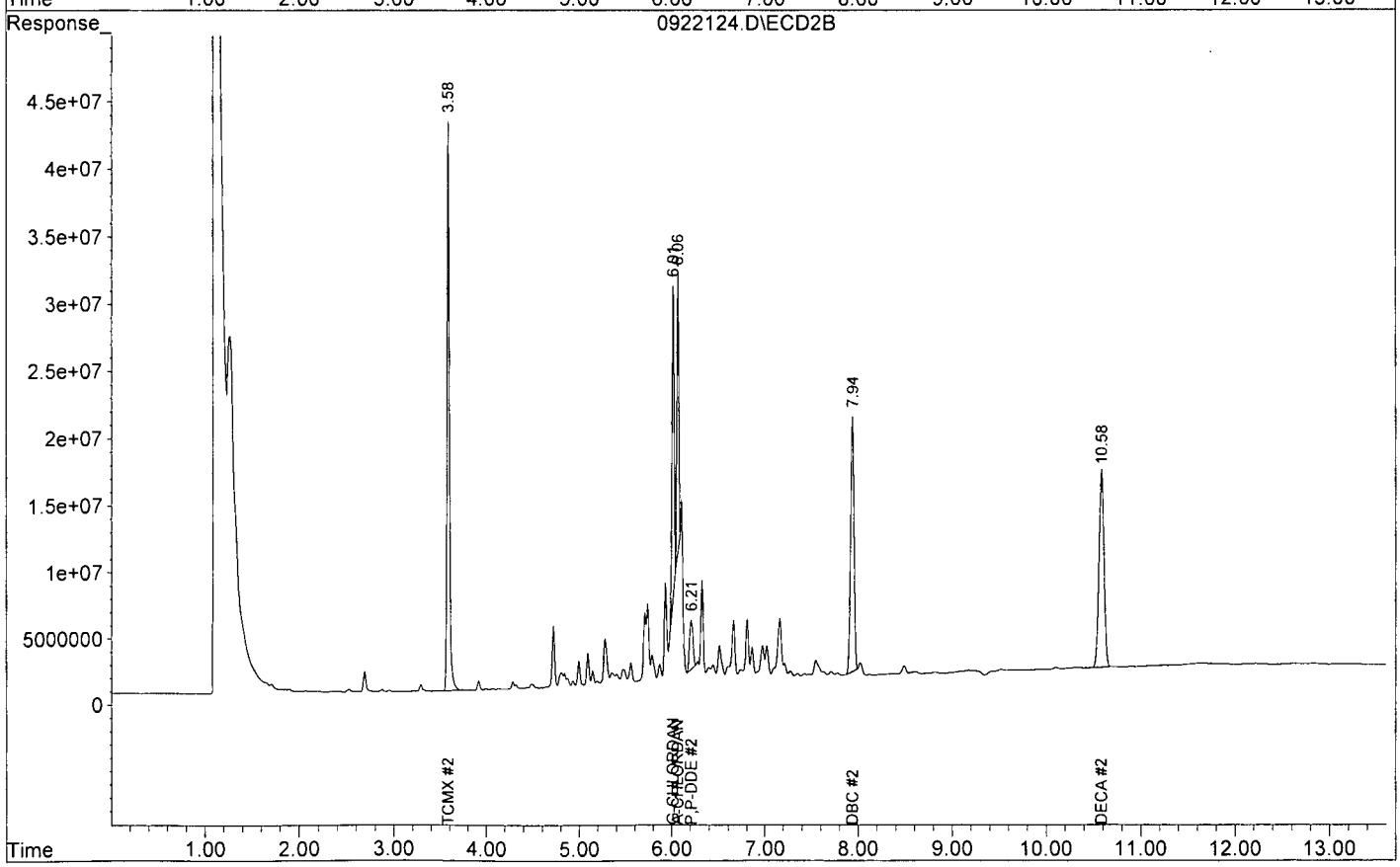
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922124.D
Acq On : 9-23-14 23:02:42
Sample : AZ02102S11 5X1/0.05/30.08G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 24
Operator: MA
Inst : Lucy
Multiplr: 3324.47





EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN005

APPL ID: AZ02103

Sample Collection Date: 09/02/14

QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	4,4'-DDE	0.030 J	0.05	0.004	0.002	mg/kg	09/16/14	09/23/14
EPA 8081A	4,4'-DDT	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	CHLORDANE, TECHNICAL	1.1	1.00	0.050	0.015	mg/kg	09/16/14	09/23/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/23/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/23/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	77.3	55-130			%	09/16/14	09/23/14
EPA 8081A	SURROGATE: TCMX (S)	102	70-125			%	09/16/14	09/23/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922125
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:21 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922125.D\ECD1A.CH Vial: 25
Signal #2 : G:\LUCY\DATA\140922\0922125.D\ECD2B.CH
Acq On : 9-23-14 23:19:08 Operator: MA
Sample : AZ02103S11 5X1/0.05/30.14G Inst : Lucy
Misc : soil Multiplr: 3317.85
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 9:54 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S TCMX	2.89	3.58	46325662	43109123	364.5847	339.8514
	Surrogate Spike 331.785			Recovery	=	109.89%	102.43%
22)	S DBC	6.92	7.93	39104047	18462359	237.8979	329.9028 #
	Surrogate Spike 331.785			Recovery	=	71.70%	99.43%
23)	S DECA	9.28	10.58	47588580	14375335	201.3903	256.5070 #
	Surrogate Spike 331.785			Recovery	=	60.70%	77.31%
	Target Compounds						
9)	TM G-CHLORDANE	5.29	6.01	23585174	20709075	191.6199	198.3663
11)	TM A-CHLORDANE	5.38	6.06	24623711	18409739	206.2799	223.2796
12)	TM P,P-DDE	5.56	6.20	3494067	3453742	28.2804	30.4309
	Target Compounds						
2)	TM A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
13)	M DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
14)	M ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
16)	TM P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
18)	M P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922125.D\ECD1A.CH Vial: 25
Signal #2 : G:\LUCY\DATA\140922\0922125.D\ECD2B.CH
Acq On : 9-23-14 23:19:08 Operator: MA
Sample : AZ02103S11 5X1/0.05/30.14G Inst : Lucy
Misc : soil Multiplr: 3317.85
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:24 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922125.D\ECD1A.CH Vial: 25
Signal #2 : G:\LUCY\DATA\140922\0922125.D\ECD2B.CH
Acq On : 9-23-14 23:19:08 Operator: MA
Sample : AZ02103S11 5X1/0.05/30.14G Inst : Lucy
Misc : soil Multiplr: 3317.85
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:48 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	ANM T. CHLORDANE Tot	0.00	0.00	49944413	43046956	1153.5876m	1078.0137m	
2)	L2AK T. CHLORDANE	4.20	4.93	1042151	252225	123.9068	34.7653	#
3)	L2AK T. CHLORDANE {2}	4.66	5.28	2808074	2882174	649.5101	618.4886	
4)	L2AK T. CHLORDANE {3}	5.29	6.01	22211676	20443463	1320.4080	1194.1975	
5)	L2AK T. CHLORDANE {4}	5.38	6.06	22369500	18097386	2288.5372	2321.9217	
6)	L2AK T. CHLORDANE {5}	6.34	7.02	1513012	1371708	381.6588	441.9916	
	Sum T. CHLORDANE			49944413	43046956	4764.0209	4611.3647	
	Average T. CHLORDANE					952.804	922.273	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922125.D\ECD1A.CH Vial: 25
Signal #2 : G:\LUCY\DATA\140922\0922125.D\ECD2B.CH
Acq On : 9-23-14 23:19:08 Operator: MA
Sample : AZ02103S11 5X1/0.05/30.14G Inst : Lucy
Misc : soil Multiplr: 3317.85
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

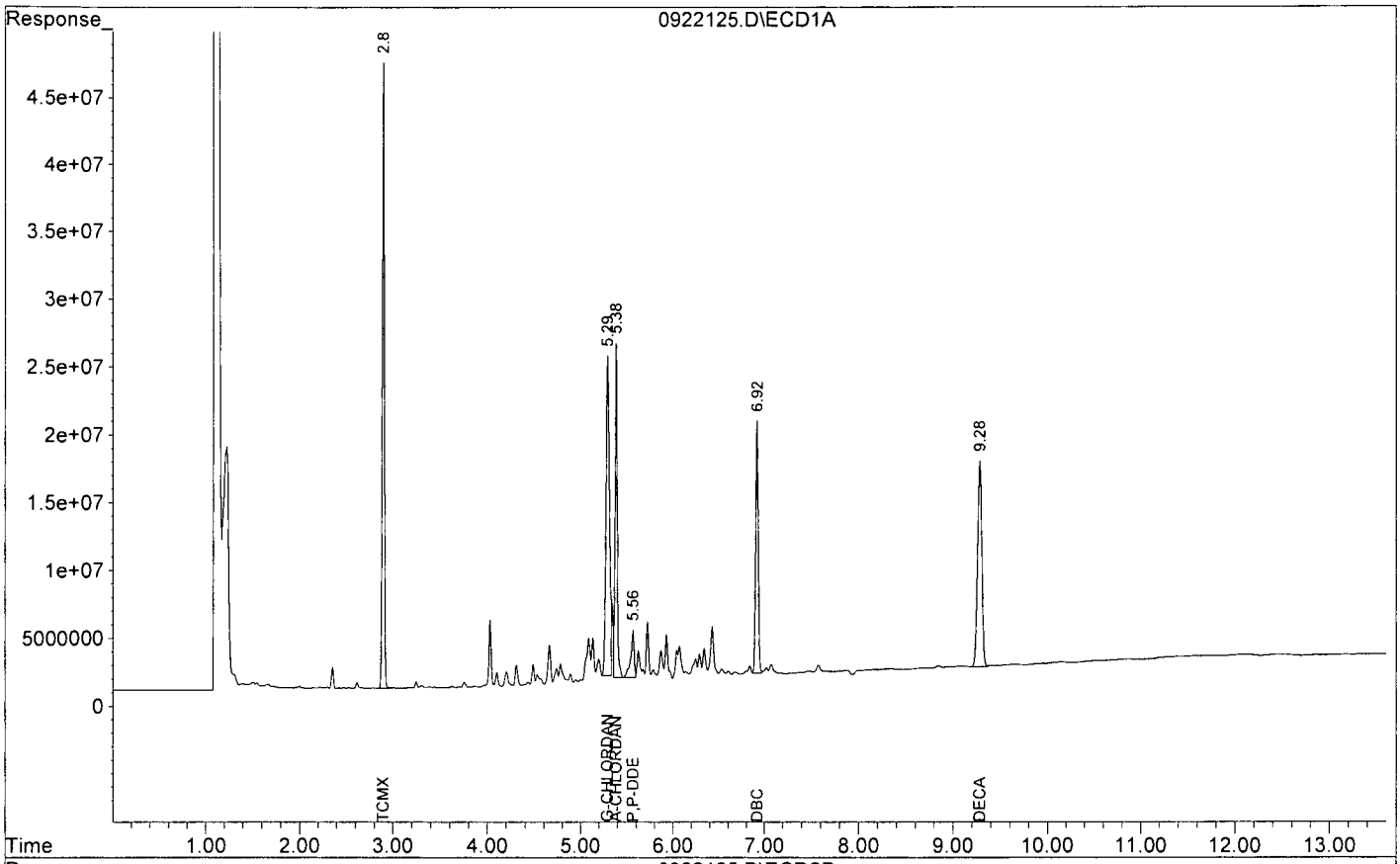
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
2)	MA BENEFIN	2.65	0.00	73359	0	1.4022	N.D. #
5)	MA PCNB	3.75	0.00	360895	0	2.2686	N.D. #
9)	MA DICOFOL	0.00	5.48	0	847175	N.D.	30.6634 #
10)	MA O,P-DDE	5.29	0.00	23705135	0	263.3549	N.D. #
11)	MA OXADIAZON	5.38	0.00	24623711	0	493.4687	N.D. #
13)	MA CAPTAN	5.62	5.87	1776353	987549	43.0399	12.6255 #
14)	MA O,P-TDE/DDD	5.78	6.32	391735	5050068	4.4507	63.0081 #
15)	MA NITROFEN	6.07	0.00	2366727	0	12.7728	N.D. #
16)	MA O,P-DDT	6.07	0.00	2366727	0	12.7728	N.D. #
17)	MA CARBOPHENOTHION	0.00	6.91	0	399635	N.D.	46.5643 #
18)	MA BIS(2-ETHYLHEXYL	6.60	7.63	259601	246167	476.5486	532.7831
	Target Compounds						
1)	MA DICHLOBENIL	0.00	0.00	0	0	N.D.	N.D.
3)	MA PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.
4)	MA HEXACHLOROBENZEN	0.00	0.00	0	0	N.D.	N.D.
6)	MA CHLOROTHALONIL	0.00	0.00	0	0	N.D.	N.D.
7)	MA ALACHLOR	0.00	0.00	0	0	N.D.	N.D.
8)	MA DACTHAL	0.00	0.00	0	0	N.D.	N.D.
12)	MA OXYFLUORFEN	0.00	0.00	0	0	N.D.	N.D.

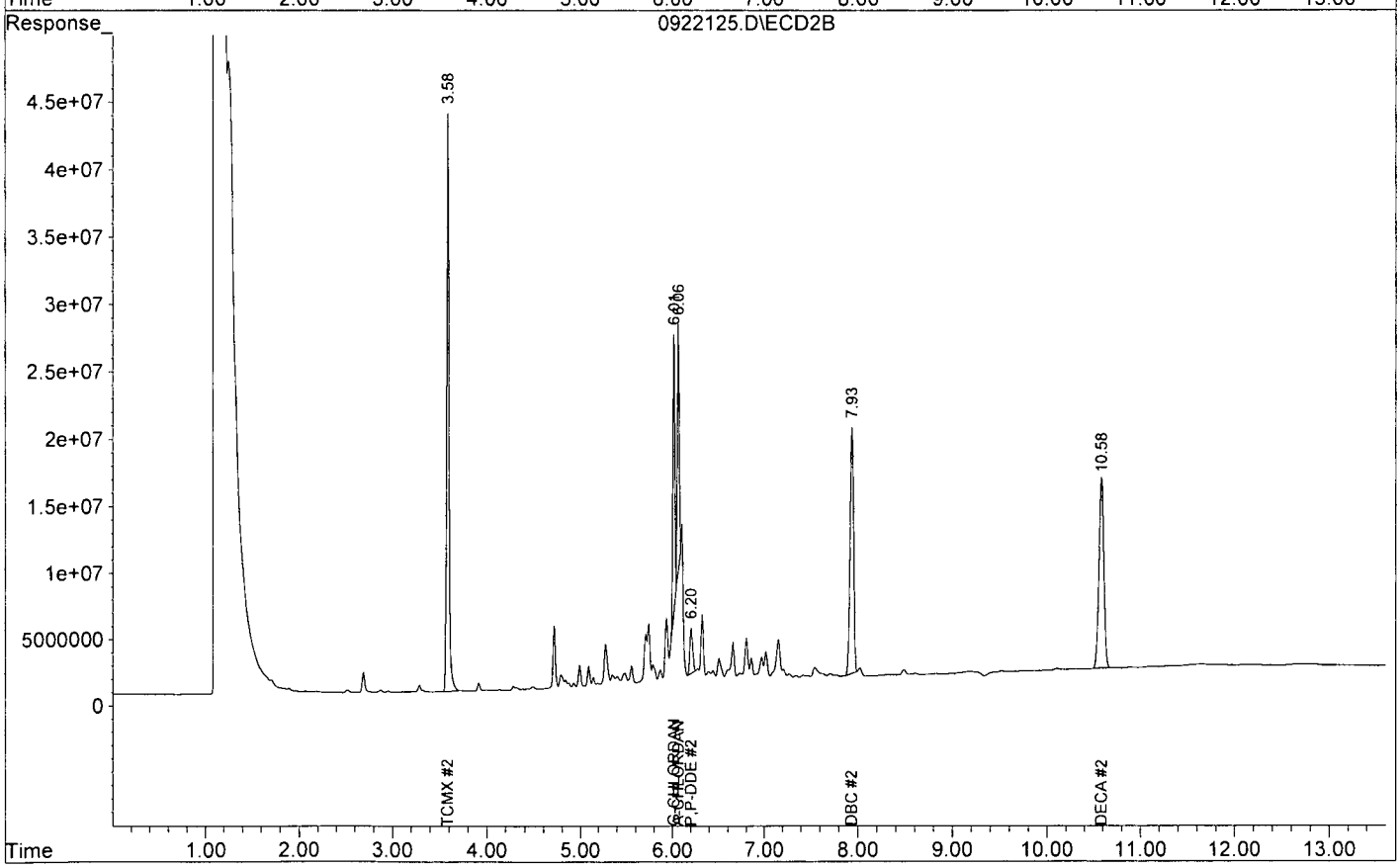
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922125.D
Acq On : 9-23-14 23:19:08
Sample : AZ02103S11 5X1/0.05/30.14G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 25
Operator: MA
Inst : Lucy
Multiplr: 3317.85





EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN006

APPL ID: AZ02104

Sample Collection Date: 09/02/14

QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDE	0.046 J	0.05	0.004	0.002	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDT	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	CHLORDANE, TECHNICAL	0.72 J	1.00	0.050	0.015	mg/kg	09/16/14	09/24/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/24/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/24/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	79.7	55-130			%	09/16/14	09/24/14
EPA 8081A	SURROGATE: TCMX (S)	100	70-125			%	09/16/14	09/24/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922133
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:21 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922133.D\ECD1A.CH Vial: 33
Signal #2 : G:\LUCY\DATA\140922\0922133.D\ECD2B.CH
Acq On : 9-24-14 1:26:23 Operator: MA
Sample : AZ02104S11 5X1/0.05/30.47G Inst : Lucy
Misc : soil Multiplr: 3281.92
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 10:24 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
1)	S	TCMX	2.89	3.58	45725257	42262750	355.9621	329.5705	
		Surrogate Spike 328.192			Recovery	=	108.46%	100.42%	
22)	S	DBC	6.92	7.93	43551700	19984401	262.0866	353.2325	#
		Surrogate Spike 328.192			Recovery	=	79.86%	107.63%	
23)	S	DECA	9.28	10.58	51956003	14811247	217.4915	261.4229	
		Surrogate Spike 328.192			Recovery	=	66.27%	79.66%	
		Target Compounds							
9)	TM	G-CHLORDANE	5.29	6.01	25535493	20374112	205.2185	193.0442	
11)	TM	A-CHLORDANE	5.38	6.06	24707351	17436779	204.7389	209.1888	
12)	TM	P,P-DDE	5.56	6.21	5304018	5263132	42.4649	45.8712	
		Target Compounds							
2)	TM	A-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
3)	TM	B-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
4)	M	G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d	
5)	TM	D-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
6)	M	HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d	
7)	M	ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
8)	TM	HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d	
10)	TM	A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d	
13)	M	DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
14)	M	ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
15)	TM	B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d	
16)	TM	P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d	
17)	TM	ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d	
18)	M	P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d	
19)	TM	ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d	
20)	TM	ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d	
21)	TM	METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922133.D\ECD1A.CH Vial: 33
Signal #2 : G:\LUCY\DATA\140922\0922133.D\ECD2B.CH
Acq On : 9-24-14 1:26:23 Operator: MA
Sample : AZ02104S11 5X1/0.05/30.47G Inst : Lucy
Misc : soil Multiplr: 3281.92
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:21 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922133.D\ECD1A.CH Vial: 33
Signal #2 : G:\LUCY\DATA\140922\0922133.D\ECD2B.CH
Acq On : 9-24-14 1:26:23 Operator: MA
Sample : AZ02104S11 5X1/0.05/30.47G Inst : Lucy
Misc : soil Multiplr: 3281.92
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:48 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	51998976	29020294	1188.0350m	718.8768m#
2) L2AK T. CHLORDANE	4.20	4.93	2427931	503754	285.5429	68.6825 #
3) L2AK T. CHLORDANE {2}	4.66	5.28	2683477	3205404	613.9684	680.4013
4) L2AK T. CHLORDANE {3}	5.29	6.01	23472877	20150992	1380.2696	1164.3644
5) L2AK T. CHLORDANE {4}	5.38	6.10	21807061	4002228	2206.8338	507.9305 #
6) L2AK T. CHLORDANE {5}	6.34	7.02	1607631	1157916	401.1346	369.0627
Sum T. CHLORDANE			51998976	29020294	4887.7492	2790.4414
Average T. CHLORDANE					977.550	558.088

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922133.D\ECD1A.CH Vial: 33
Signal #2 : G:\LUCY\DATA\140922\0922133.D\ECD2B.CH
Acq On : 9-24-14 1:26:23 Operator: MA
Sample : AZ02104S11 5X1/0.05/30.47G Inst : Lucy
Misc : soil Multiplr: 3281.92
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

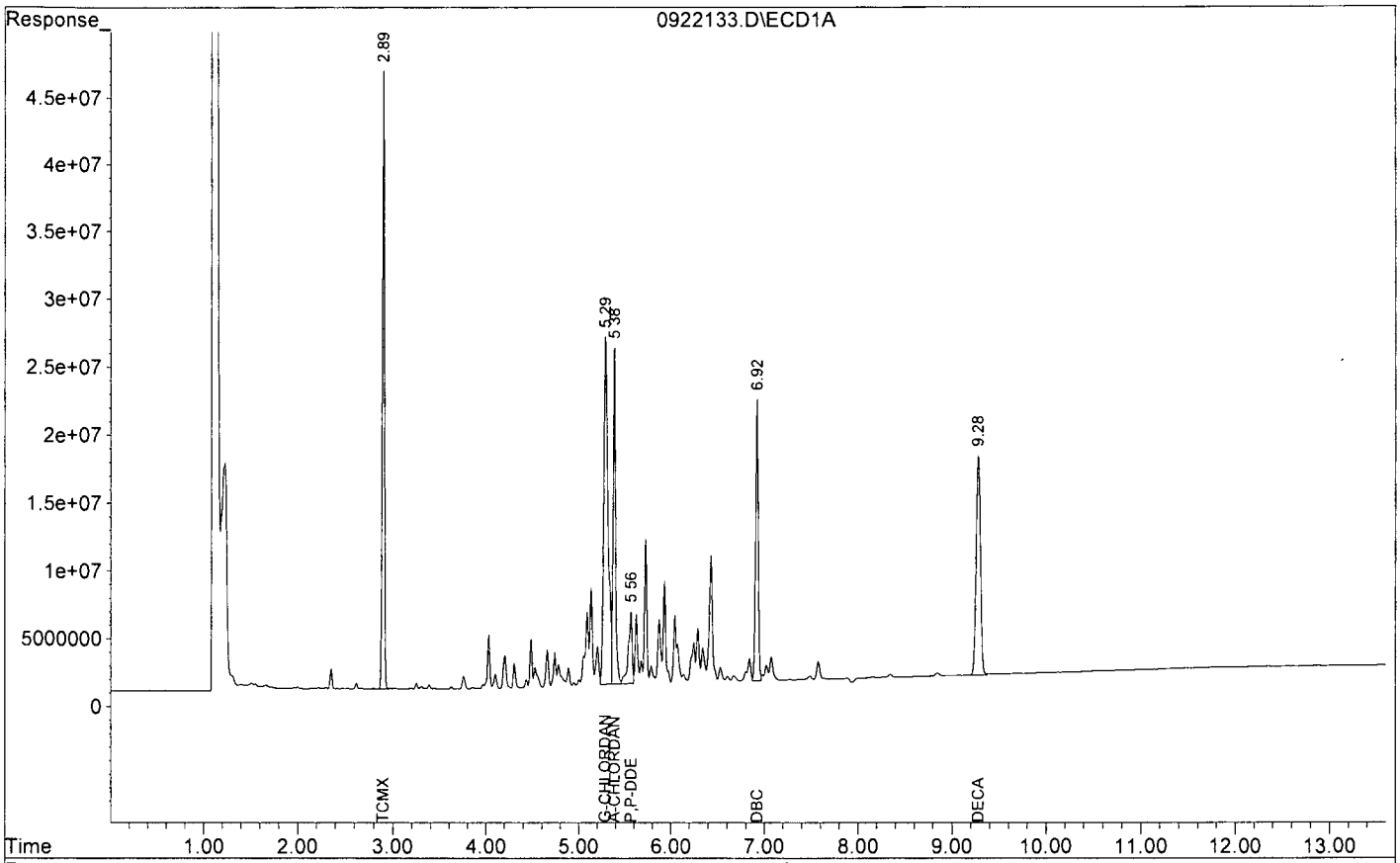
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		Target Compounds							
1)	MA	DICHLOBENIL	2.09	0.00	11847	0	0.2021	N.D.	#
2)	MA	BENEFIN	2.65	0.00	60789	0	1.1493	N.D.	#
5)	MA	PCNB	3.75	0.00	950285	0	5.9089	N.D.	#
9)	MA	DICOFOL	0.00	5.46	0	1079571	N.D.	44.4740	#
10)	MA	O,P-DDE	5.29	0.00	25446907	0	279.6435	N.D.	#
11)	MA	OXADIAZON	5.38	0.00	24594174	0	487.5388	N.D.	#
13)	MA	CAPTAN	5.62	5.87	4918202	1517989	73.6047	19.1969	#
14)	MA	O,P-TDE/DDD	5.78	6.32	1081408	10095866	12.1533	124.5987	#
15)	MA	NITROFEN	6.07	0.00	2564727	0	13.6915	N.D.	#
16)	MA	O,P-DDT	6.07	0.00	2564727	0	13.6915	N.D.	#
18)	MA	BIS(2-ETHYLHEXYL	6.60	0.00	294198	0	534.2091	N.D.	#
		Target Compounds							
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.	
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D.	N.D.	
6)	MA	CHLOROTHALONIL	0.00	0.00	0	0	N.D.	N.D.	
7)	MA	ALACHLOR	0.00	0.00	0	0	N.D.	N.D.	
8)	MA	DACTHAL	0.00	0.00	0	0	N.D.	N.D.	
12)	MA	OXYFLUORFEN	0.00	0.00	0	0	N.D.	N.D.	
17)	MA	CARBOPHENOTHION	0.00	0.00	0	0	N.D.	N.D.	

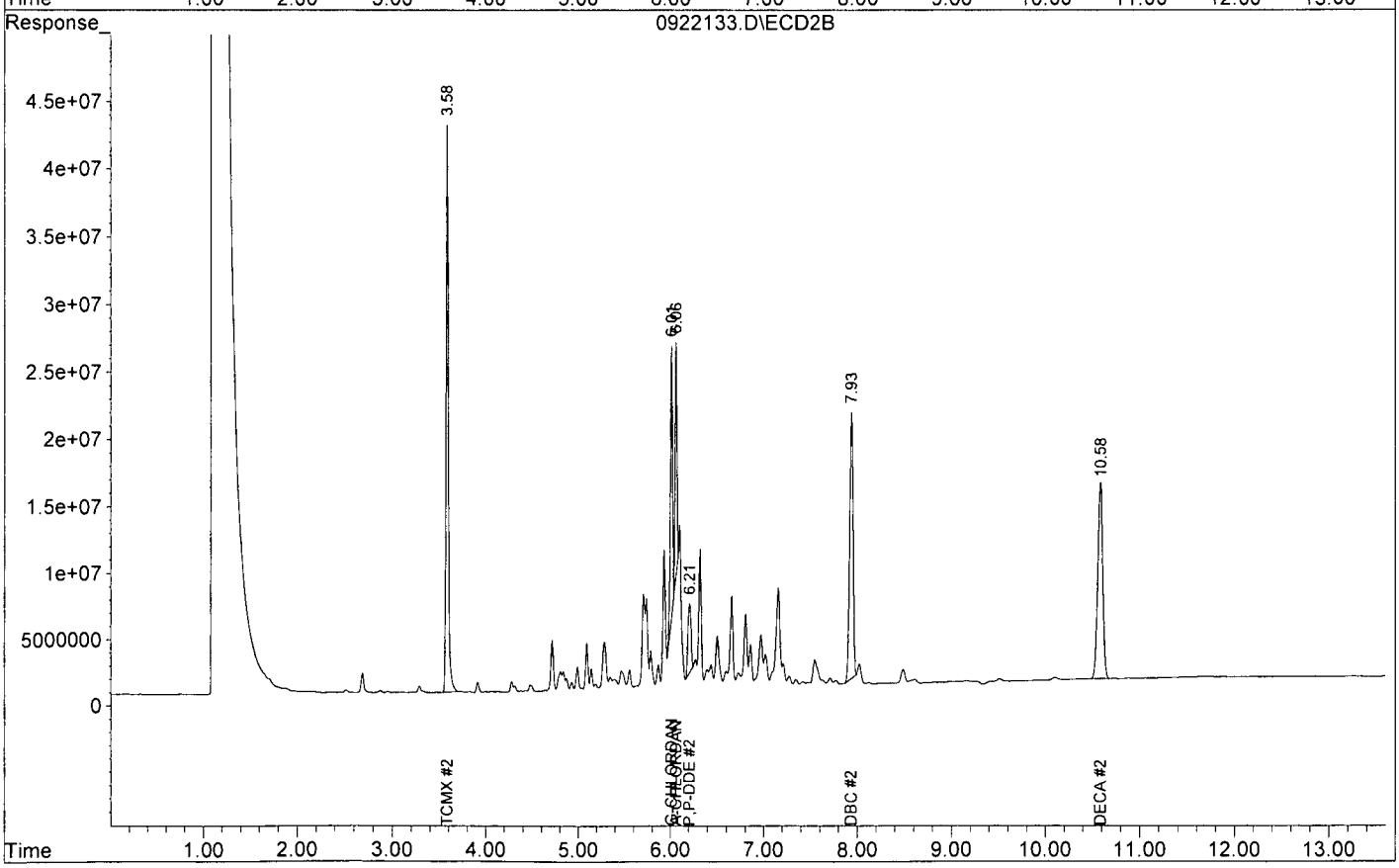
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922133.D
Acq On : 9-24-14 1:26:23
Sample : AZ02104S11 5X1/0.05/30.47G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 33
Operator: MA
Inst : Lucy
Multiplr: 3281.92





EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN007

APPL ID: AZ02105

Sample Collection Date: 09/02/14

QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDE	0.019 J	0.05	0.004	0.002	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDT	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	CHLORDANE, TECHNICAL	0.75 J	1.00	0.050	0.015	mg/kg	09/16/14	09/24/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/24/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/24/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	81.4	55-130			%	09/16/14	09/24/14
EPA 8081A	SURROGATE: TCMX (S)	101	70-125			%	09/16/14	09/24/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922134
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:21 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922134.D\ECD1A.CH Vial: 34
Signal #2 : G:\LUCY\DATA\140922\0922134.D\ECD2B.CH
Acq On : 9-24-14 1:42:46 Operator: MA
Sample : AZ02105S11 5X1/0.05/30.51G Inst : Lucy
Misc : soil Multiplr: 3277.61
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 10:25 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S TCMX	2.89	3.58	45731091	42580617	355.5407	331.6140
	Surrogate Spike 327.761			Recovery	=	108.48%	101.18%
22)	S DBC	6.92	7.93	43714589	19984532	262.7220	352.7717 #
	Surrogate Spike 327.761			Recovery	=	80.16%	107.63%
23)	S DECA	9.28	10.58	52871743	15127798	221.0347	266.6601
	Surrogate Spike 327.761			Recovery	=	67.44%	81.36%
	Target Compounds						
9)	TM G-CHLORDANE	5.29	6.01	17132360	14607255	137.5054	138.2219
11)	TM A-CHLORDANE	5.38	6.06	18206370	13191650	150.6703	158.0525
12)	TM P,P-DDE	5.56	6.20	2427509	2139948	19.4096	18.6264
	Target Compounds						
2)	TM A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
13)	M DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
14)	M ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
16)	TM P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
18)	M P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922134.D\ECD1A.CH Vial: 34
Signal #2 : G:\LUCY\DATA\140922\0922134.D\ECD2B.CH
Acq On : 9-24-14 1:42:46 Operator: MA
Sample : AZ02105S11 5X1/0.05/30.51G Inst : Lucy
Misc : soil Multiplr: 3277.61
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:21 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922134.D\ECD1A.CH Vial: 34
Signal #2 : G:\LUCY\DATA\140922\0922134.D\ECD2B.CH
Acq On : 9-24-14 1:42:46 Operator: MA
Sample : AZ02105S11 5X1/0.05/30.51G Inst : Lucy
Misc : soil Multiplr: 3277.61
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:48 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
Target Compounds							
1) ANM T. CHLORDANE Tot	0.00	0.00	33296669	30134350	759.7409m	745.4950m	
2) L2AK T. CHLORDANE	4.20	4.93	533251	128890	62.6321	17.5500	#
3) L2AK T. CHLORDANE {2}	4.66	5.28	1794684	1828075	410.0778	387.5311	
4) L2AK T. CHLORDANE {3}	5.29	6.01	14547304	14406006	854.2999	831.3164	
5) L2AK T. CHLORDANE {4}	5.38	6.06	15531464	13009681	1569.6944	1648.9193	
6) L2AK T. CHLORDANE {5}	6.34	7.02	889966	761698	221.7725	242.4579	
Sum T. CHLORDANE			33296669	30134350	3118.4768	3127.7747	
Average T. CHLORDANE					623.695	625.555	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922134.D\ECD1A.CH Vial: 34
Signal #2 : G:\LUCY\DATA\140922\0922134.D\ECD2B.CH
Acq On : 9-24-14 1:42:46 Operator: MA
Sample : AZ02105S11 5X1/0.05/30.51G Inst : Lucy
Misc : soil Multiplr: 3277.61
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

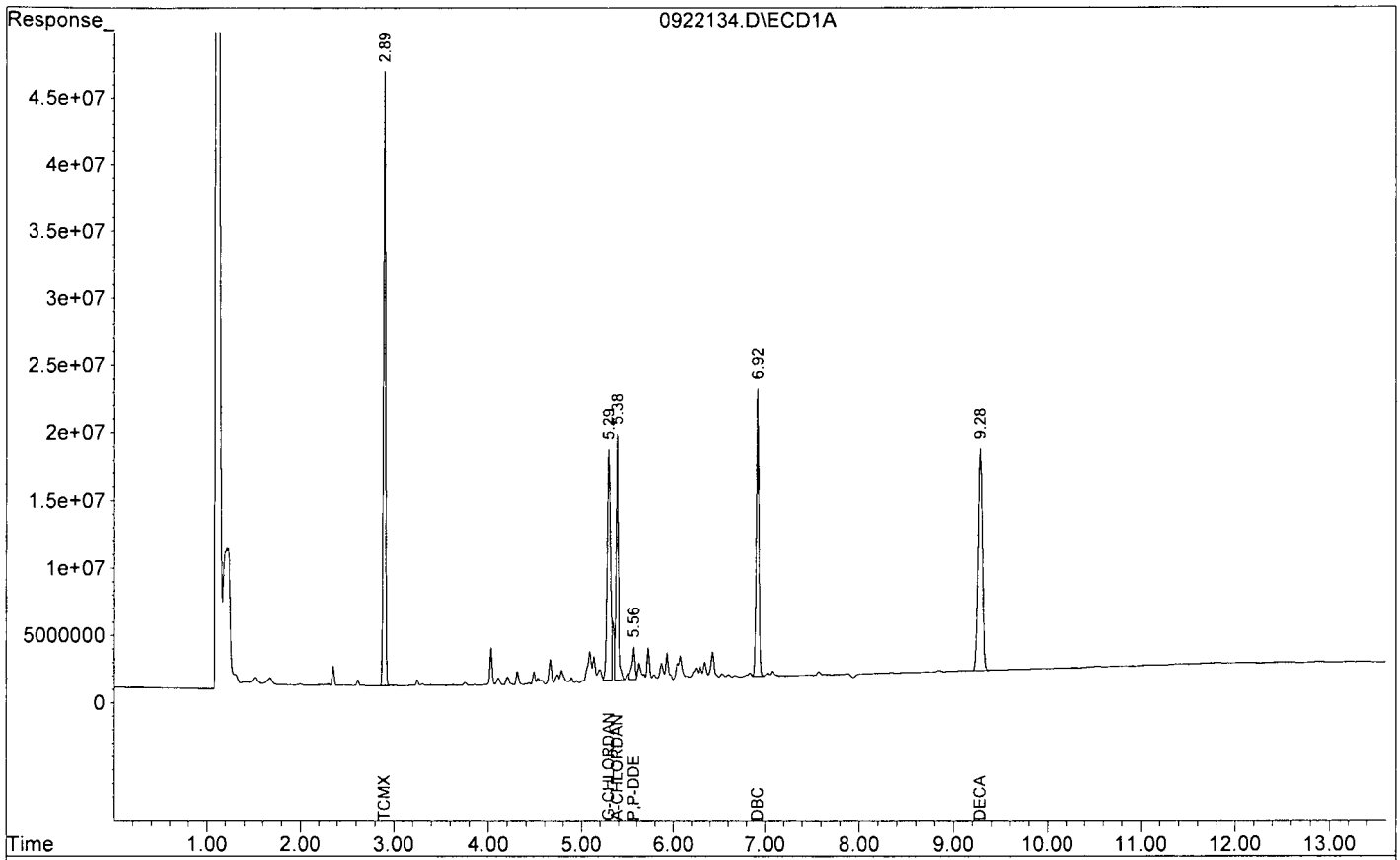
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	MA DICHLOBENIL	2.08	2.36	12829	16126	0.2186	0.3205 #
5)	MA PCNB	3.75	0.00	219299	0	1.3618	N.D. #
9)	MA DICOFOL	0.00	5.48	0	477149	N.D.	7.8027 #
10)	MA O,P-DDE	5.29	0.00	17224424	0	189.0361	N.D. #
11)	MA OXADIAZON	5.38	0.00	18299259	0	362.2769	N.D. #
13)	MA CAPTAN	5.62	5.87	1285962	584529	37.6809	7.3824 #
14)	MA O,P-TDE/DDD	5.78	6.32	403300	2892165	4.5265	35.6470 #
15)	MA NITROFEN	6.07	0.00	1742198	0	9.2883	N.D. #
16)	MA O,P-DDT	6.07	0.00	1742198	0	9.2883	N.D. #
17)	MA CARBOPHENOTHION	0.00	6.91	0	293537	N.D.	44.1545 #
18)	MA BIS(2-ETHYLHEXYL	6.60	7.63	212665	208341	385.6540	445.4473
	Target Compounds						
2)	MA BENEFIN	0.00	0.00	0	0	N.D.	N.D.
3)	MA PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.
4)	MA HEXACHLOROBENZEN	0.00	0.00	0	0	N.D.	N.D.
6)	MA CHLOROTHALONIL	0.00	0.00	0	0	N.D.	N.D.
7)	MA ALACHLOR	0.00	0.00	0	0	N.D.	N.D.
8)	MA DACTHAL	0.00	0.00	0	0	N.D.	N.D.
12)	MA OXYFLUORFEN	0.00	0.00	0	0	N.D.	N.D.

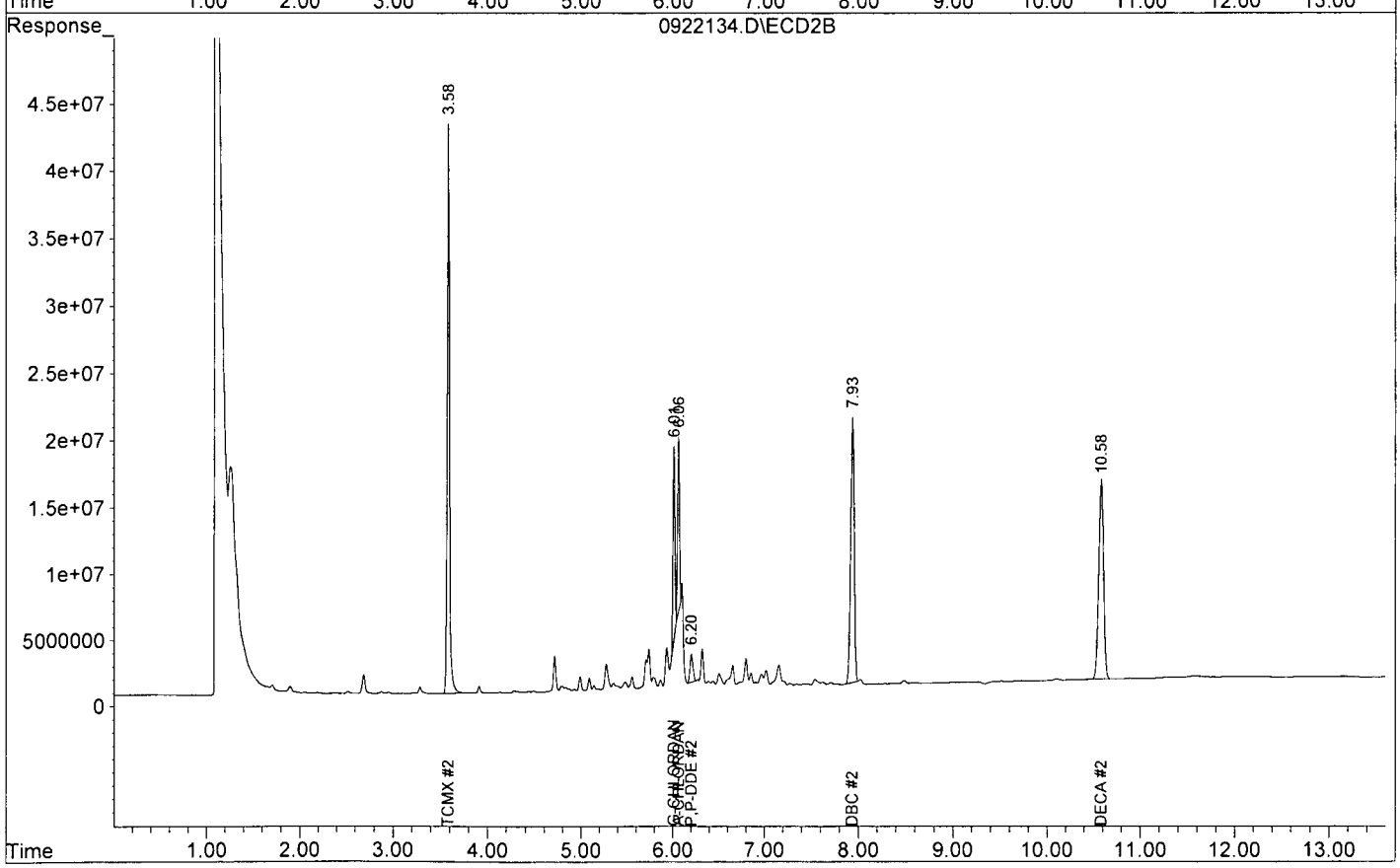
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922134.D
Acq On : 9-24-14 1:42:46
Sample : AZ02105S11 5X1/0.05/30.51G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 34
Operator: MA
Inst : Lucy
Multiplr: 3277.61





EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN008

Sample Collection Date: 09/02/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02106

QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDE	0.021 J	0.05	0.004	0.002	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDT	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	CHLORDANE, TECHNICAL	0.95 J	1.00	0.050	0.015	mg/kg	09/16/14	09/24/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/24/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/24/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	84.9	55-130			%	09/16/14	09/24/14
EPA 8081A	SURROGATE: TCMX (S)	107	70-125			%	09/16/14	09/24/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922151
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:21 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922151.D\ECD1A.CH Vial: 51
Signal #2 : G:\LUCY\DATA\140922\0922151.D\ECD2B.CH
Acq On : 9-24-14 13:44:36 Operator: MA
Sample : AZ02106S11 5X1/0.05/30.38G Inst : Lucy
Misc : soil Multiplr: 3291.64
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 25 18:13 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S TCMX	2.90	3.58	45054658	44920774	351.7807	351.3359
	Surrogate Spike 329.164			Recovery	=	106.87%	106.74%
22)	S DBC	6.93	7.94	48530322	21535028	292.9123	381.7681 #
	Surrogate Spike 329.164			Recovery	=	88.99%	115.98%
23)	S DECA	9.29	10.58	58816449	15785795	246.9392	279.4494
	Surrogate Spike 329.164			Recovery	=	75.02%	84.90%
	Target Compounds						
9)	TM G-CHLORDANE	5.30	6.01	21573569	17873977	173.8917	169.8572
11)	TM A-CHLORDANE	5.39	6.06	21170816	15358987	175.9529	184.8074
12)	TM P,P-DDE	5.58	6.20	2705066	2422548	21.7214	21.1764
	Target Compounds						
2)	TM A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
13)	M DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
14)	M ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
16)	TM P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
18)	M P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
0922151.D OCL0922.M Thu Sep 25 18:13:16 2014

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922151.D\ECD1A.CH Vial: 51
Signal #2 : G:\LUCY\DATA\140922\0922151.D\ECD2B.CH
Acq On : 9-24-14 13:44:36 Operator: MA
Sample : AZ02106S11 5X1/0.05/30.38G Inst : Lucy
Misc : soil Multiplr: 3291.64
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 16:53 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922151.D\ECD1A.CH Vial: 51
Signal #2 : G:\LUCY\DATA\140922\0922151.D\ECD2B.CH
Acq On : 9-24-14 13:44:36 Operator: MA
Sample : AZ02106S11 5X1/0.05/30.38G Inst : Lucy
Misc : soil Multiplr: 3291.64
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 16:53 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	43259342	38309115	991.2862m	951.7863m
2) L2AK T. CHLORDANE	4.22	4.93	1849713	1214657	218.1845	166.0985
3) L2AK T. CHLORDANE {2}	4.67	5.27	2590629	2790953	594.4812	594.1821
4) L2AK T. CHLORDANE {3}	5.30	6.01	18367154	17664079	1083.2387	1023.6894
5) L2AK T. CHLORDANE {4}	5.39	6.06	18766204	15246999	1904.7308	1940.7589
6) L2AK T. CHLORDANE {5}	6.35	7.02	1685642	1392427	421.8458	445.1232
Sum T. CHLORDANE			43259342	38309115	4222.4811	4169.8521
Average T. CHLORDANE					844.496	833.970

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922151.D\ECD1A.CH Vial: 51
Signal #2 : G:\LUCY\DATA\140922\0922151.D\ECD2B.CH
Acq On : 9-24-14 13:44:36 Operator: MA
Sample : AZ02106S11 5X1/0.05/30.38G Inst : Lucy
Misc : soil Multiplr: 3291.64
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 16:54 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

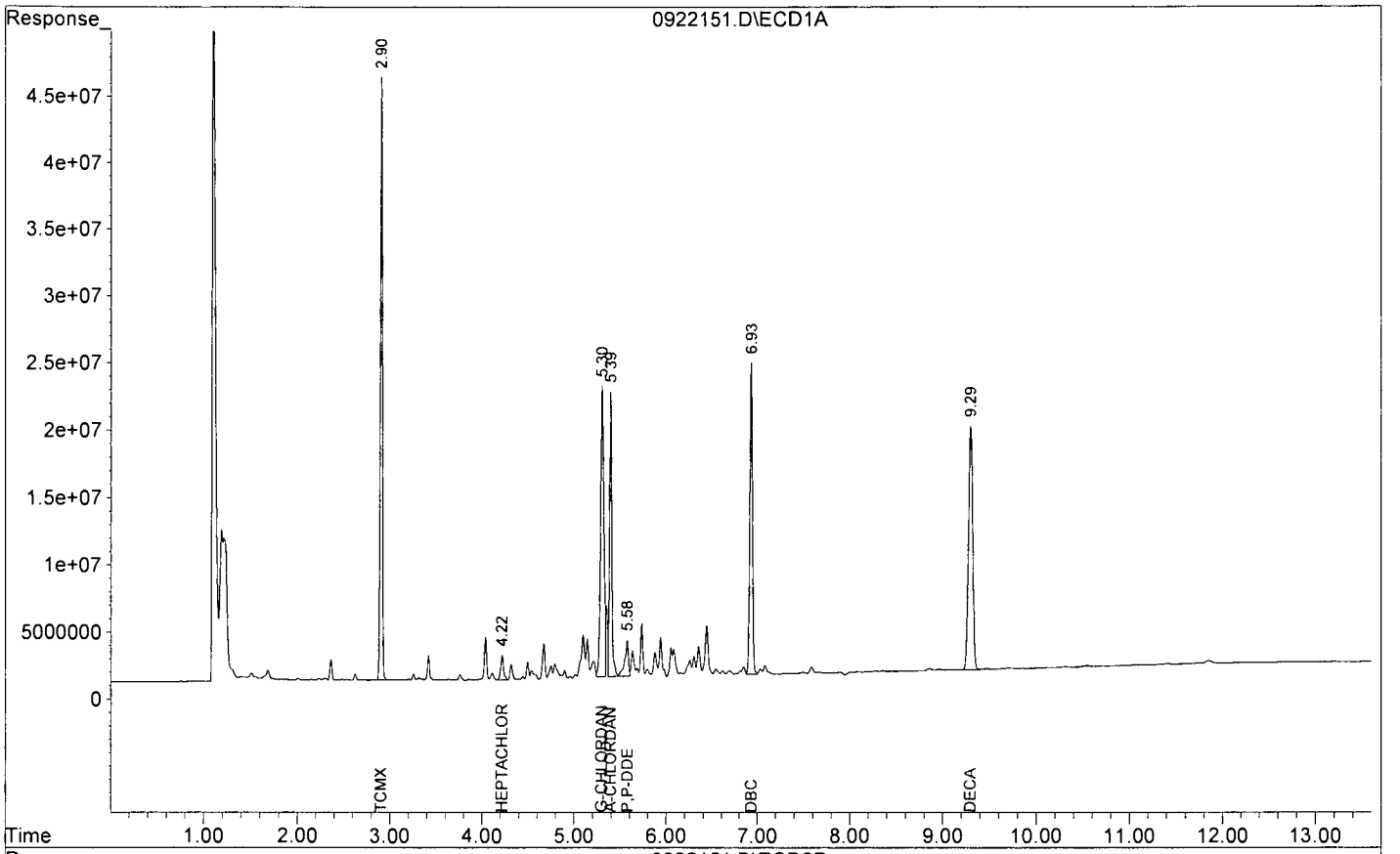
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		Target Compounds							
5)	MA	PCNB	3.76	0.00	422774	0	2.6366	N.D.	#
7)	MA	ALACHLOR	4.22	0.00	1854292	0	97.4047	N.D.	#
8)	MA	DACTHAL	0.00	5.19	0	74273	N.D.	0.5934	#
9)	MA	DICOFOL	0.00	5.48	0	633086	N.D.	17.3539	#
10)	MA	O,P-DDE	5.30	0.00	21317382	0	234.9569	N.D.	#
13)	MA	CAPTAN	5.63	5.87	1619043	790303	41.1416	10.0240	#
14)	MA	O,P-TDE/DDD	5.79	6.32	398596	4077837	4.4929	50.4759	#
15)	MA	NITROFEN	6.05	0.00	2193166	0	11.7426	N.D.	#
16)	MA	O,P-DDT	6.05	0.00	2193166	0	11.7426	N.D.	#
17)	MA	CARBOPHENOTHION	0.00	6.91	0	374293	N.D.	45.7538	#
18)	MA	BIS(2-ETHYLHEXYL	6.61	7.63	290357	285377	528.7965	612.7665	
		Target Compounds							
1)	MA	DICHLOBENIL	0.00	0.00	0	0	N.D.	N.D.	
2)	MA	BENEFIN	0.00	0.00	0	0	N.D.	N.D.	
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.	
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D.	N.D.	
6)	MA	CHLOROTHALONIL	0.00	0.00	0	0	N.D.	N.D.	
11)	MA	OXADIAZON	0.00	0.00	0	0	N.D.	N.D.	
12)	MA	OXYFLUORFEN	0.00	0.00	0	0	N.D.	N.D.	

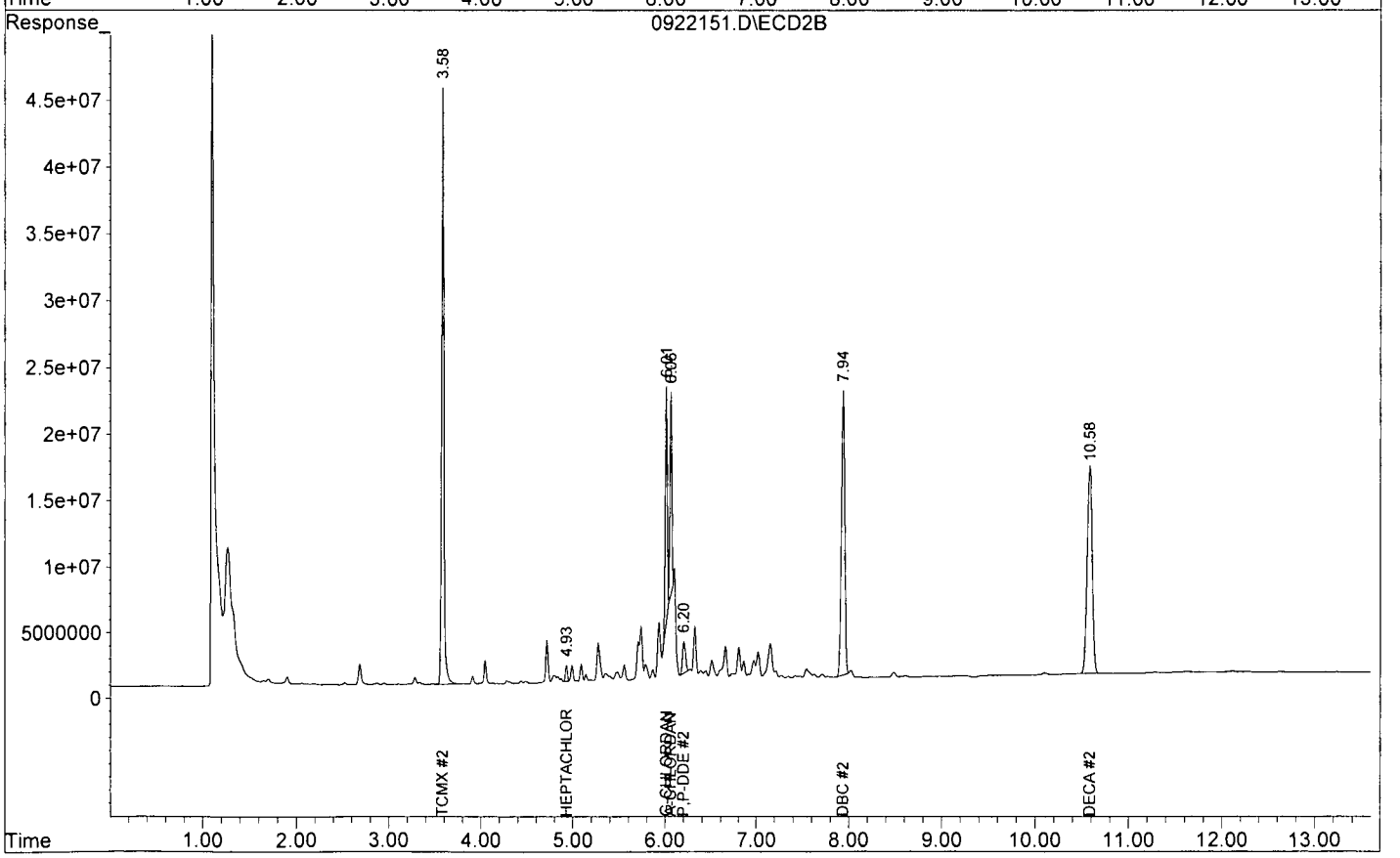
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922151.D
Acq On : 9-24-14 13:44:36
Sample : AZ02106S11 5X1/0.05/30.38G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 51
Operator: MA
Inst : Lucy
Multiplr: 3291.64





EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN009
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02107
QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDE	0.016 J	0.05	0.004	0.002	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDT	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	CHLORDANE, TECHNICAL	0.44 J	1.00	0.050	0.015	mg/kg	09/16/14	09/24/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/24/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/24/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	76.5	55-130			%	09/16/14	09/24/14
EPA 8081A	SURROGATE: TCMX (S)	96.6	70-125			%	09/16/14	09/24/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922136
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:22 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922136.D\ECD1A.CH Vial: 36
Signal #2 : G:\LUCY\DATA\140922\0922136.D\ECD2B.CH
Acq On : 9-24-14 2:15:41 Operator: MA
Sample : AZ02107S11 5X1/0.05/30.65G Inst : Lucy
Misc : soil Multiplr: 3262.64
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 10:58 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S TCMX	2.90	3.58	43754686	40635085	338.6212	315.0168
	Surrogate Spike 326.264			Recovery	=	103.79%	96.55%
22)	S DBC	6.92	7.93	41230642	18334200	246.6617	322.1614 #
	Surrogate Spike 326.264			Recovery	=	75.60%	98.74%
23)	S DECA	9.28	10.58	49500209	14215509	205.9945	249.4345
	Surrogate Spike 326.264			Recovery	=	63.14%	76.45%
	Target Compounds						
9)	TM G-CHLORDANE	5.29	6.01	15200334	12882318	121.4416	121.3428
11)	TM A-CHLORDANE	5.39	6.06	16322386	12060647	134.4621	143.8417
12)	TM P,P-DDE	5.57	6.20	1990367	1847265	15.8416	16.0054
	Target Compounds						
2)	TM A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
13)	M DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
14)	M ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
16)	TM P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
18)	M P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922136.D\ECD1A.CH Vial: 36
Signal #2 : G:\LUCY\DATA\140922\0922136.D\ECD2B.CH
Acq On : 9-24-14 2:15:41 Operator: MA
Sample : AZ02107S11 5X1/0.05/30.65G Inst : Lucy
Misc : soil Multiplr: 3262.64
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:21 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922136.D\ECD1A.CH Vial: 36
Signal #2 : G:\LUCY\DATA\140922\0922136.D\ECD2B.CH
Acq On : 9-24-14 2:15:41 Operator: MA
Sample : AZ02107S11 5X1/0.05/30.65G Inst : Lucy
Misc : soil Multiplr: 3262.64
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:48 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	30673752	17795411	696.6960m	438.2305m#
2) L2AK T. CHLORDANE	4.20	4.93	421987	107995	49.3374	14.6378 #
3) L2AK T. CHLORDANE {2}	4.66	5.28	1792067	1823581	407.6096	384.8127
4) L2AK T. CHLORDANE {3}	5.29	6.01	13062620	12825329	763.6070	736.7209
5) L2AK T. CHLORDANE {4}	5.39	6.10	14605203	2353052	1469.3391	296.8767 #
6) L2AK T. CHLORDANE {5}	6.34	7.02	791875	685454	196.4275	217.1918
Sum T. CHLORDANE			30673752	17795411	2886.3206	1650.2398
Average T. CHLORDANE					577.264	330.048

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922136.D\ECD1A.CH Vial: 36
Signal #2 : G:\LUCY\DATA\140922\0922136.D\ECD2B.CH
Acq On : 9-24-14 2:15:41 Operator: MA
Sample : AZ02107S11 5X1/0.05/30.65G Inst : Lucy
Misc : soil Multiplr: 3262.64
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

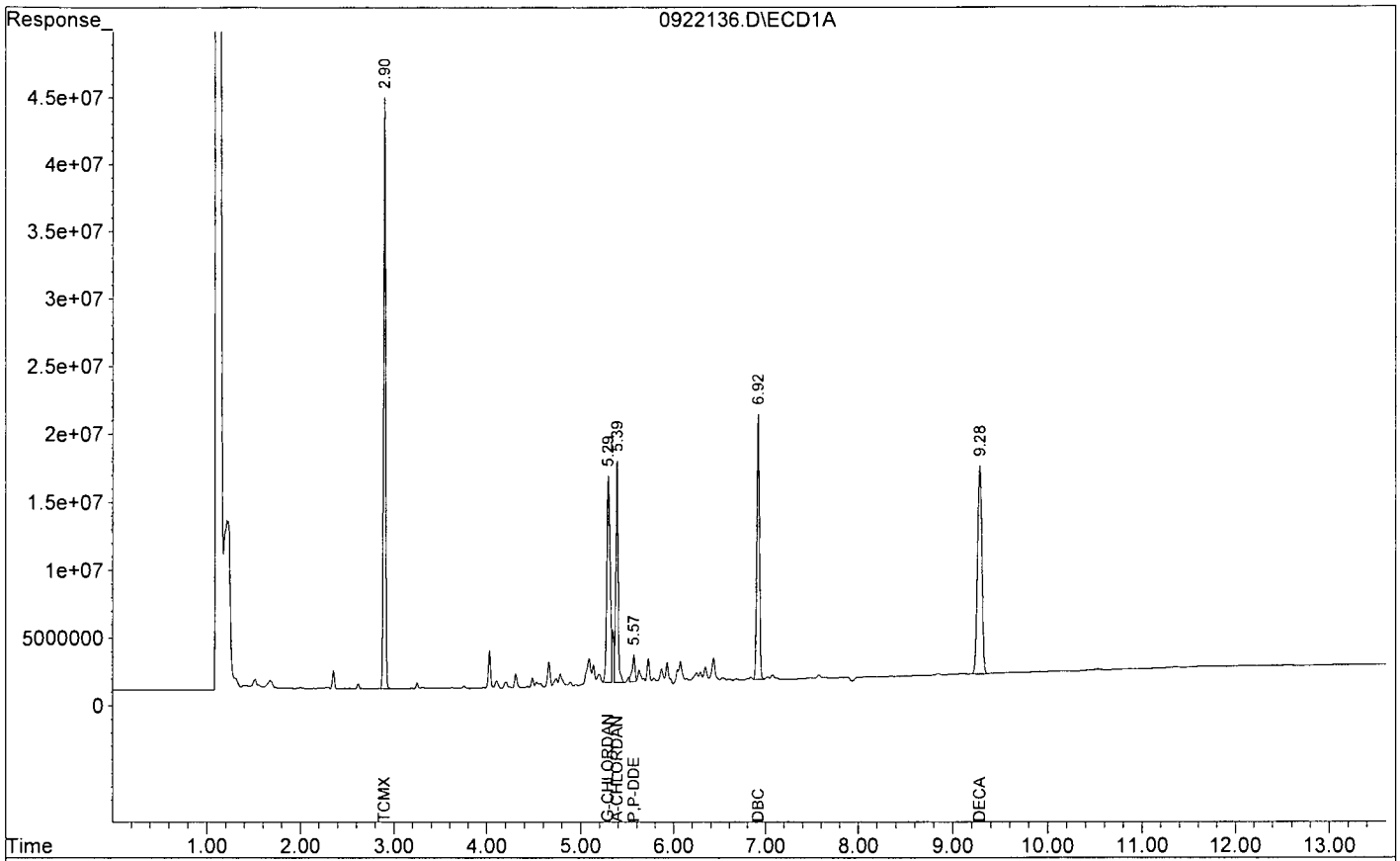
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		Target Compounds							
1)	MA	DICHLOBENIL	2.09	0.00	17397	0	0.2950	N.D.	#
2)	MA	BENEFIN	2.66	0.00	41162	0	0.7737	N.D.	#
5)	MA	PCNB	3.75	0.00	177158	0	1.0951	N.D.	#
10)	MA	O,P-DDE	5.29	0.00	15218790	0	166.2616	N.D.	#
11)	MA	OXADIAZON	5.39	0.00	16322386	0	321.6641	N.D.	#
13)	MA	CAPTAN	5.62	5.86	785135	518887	32.5914	6.5234	#
14)	MA	O,P-TDE/DDD	5.79	6.32	222555	2285310	2.4865	28.0386	#
15)	MA	NITROFEN	6.08	0.00	1657379	0	8.7958	N.D.	#
16)	MA	O,P-DDT	6.08	0.00	1657379	0	8.7958	N.D.	#
17)	MA	CARBOPHENOTHION	0.00	6.91	0	266541	N.D.	43.4855	#
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.62	128936	150194	232.7490	319.6583	#
		Target Compounds							
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.	
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D.	N.D.	
6)	MA	CHLOROTHALONIL	0.00	0.00	0	0	N.D.	N.D.	
7)	MA	ALACHLOR	0.00	0.00	0	0	N.D.	N.D.	
8)	MA	DACTHAL	0.00	0.00	0	0	N.D.	N.D.	
9)	MA	DICOFOL	0.00	0.00	0	0	N.D.	N.D.	
12)	MA	OXYFLUORFEN	0.00	0.00	0	0	N.D.	N.D.	

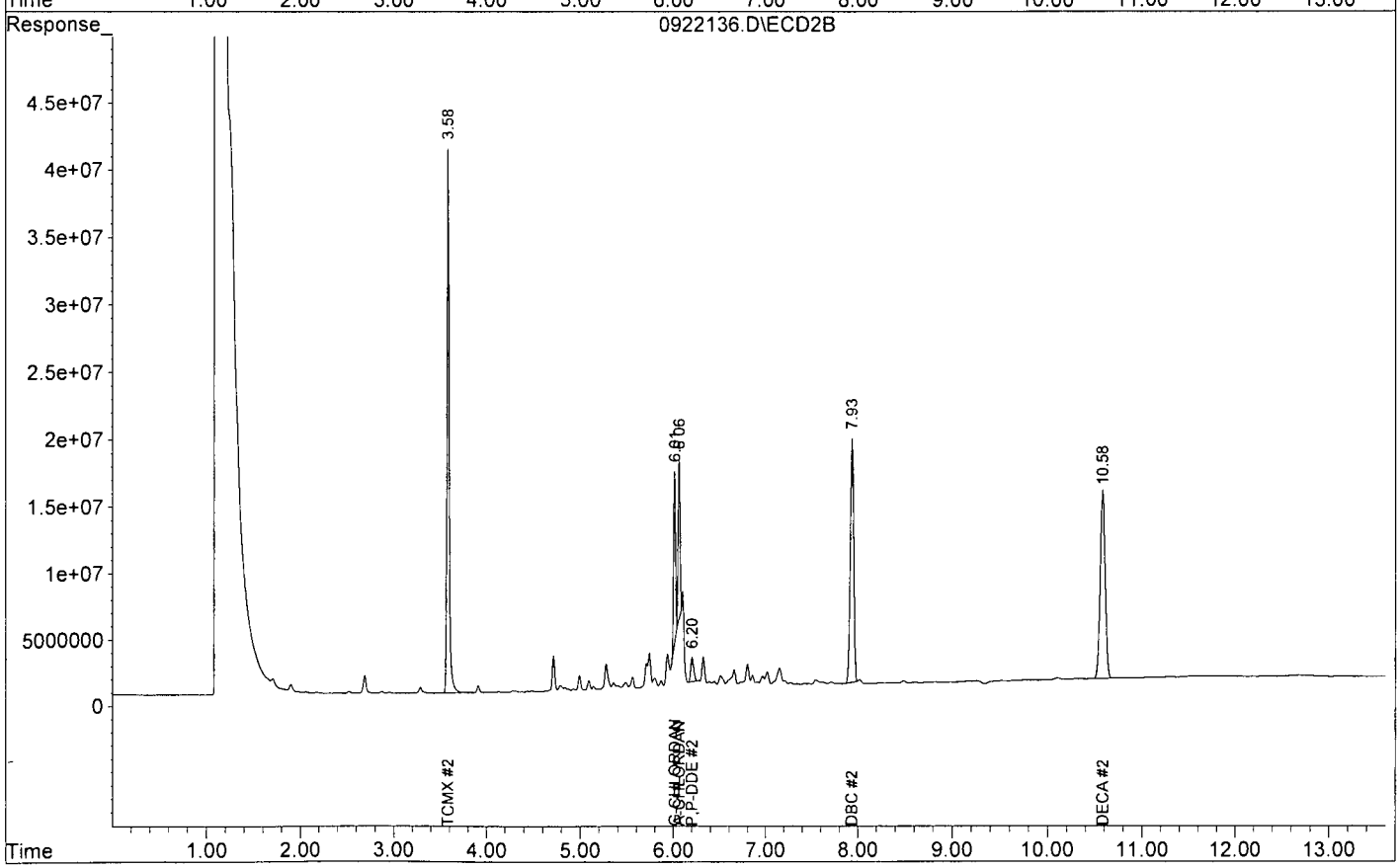
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922136.D
Acq On : 9-24-14 2:15:41
Sample : AZ02107S11 5X1/0.05/30.65G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 36
Operator: MA
Inst : Lucy
Multiplr: 3262.64





EPA 8081A OCL WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN010

APPL ID: AZ02108

Sample Collection Date: 09/02/14

QCG: #81HC0-140909A-190200

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.010 U	0.05	0.010	0.003	ug/L	09/09/14	09/23/14
EPA 8081A	4,4'-DDE	0.010 U	0.05	0.010	0.004	ug/L	09/09/14	09/23/14
EPA 8081A	4,4'-DDT	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
EPA 8081A	ALDRIN	0.010 U	0.05	0.010	0.009	ug/L	09/09/14	09/23/14
EPA 8081A	CHLORDANE, TECHNICAL	0.04 U	1.0	0.04	0.01	ug/L	09/09/14	09/23/14
EPA 8081A	DIELDRIN	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
EPA 8081A	ENDOSULFAN I	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
EPA 8081A	ENDOSULFAN II	0.010 U	0.05	0.010	0.004	ug/L	09/09/14	09/23/14
EPA 8081A	ENDOSULFAN SULFATE	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
EPA 8081A	ENDRIN	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
EPA 8081A	GAMMA-BHC	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
EPA 8081A	HEPTACHLOR	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
EPA 8081A	METHOXYCHLOR	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
EPA 8081A	TOXAPHENE	0.40 U	1.0	0.40	0.38	ug/L	09/09/14	09/23/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	85.1	30-135			%	09/09/14	09/23/14
EPA 8081A	SURROGATE: TCMX (S)	63.5	25-140			%	09/09/14	09/23/14

Quant Method: OCL0922.M
Run #: 0922105
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:22 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922105.D\ECD1A.CH Vial: 5
Acq On : 9-23-14 17:50:32 Operator: MA
Sample : AZ02108W09 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint.p

Data File : G:\LUCY\DATA\140922\0922105.D\ECD2B.CH Vial: 5
Acq On : 9-23-14 17:50:33 Operator: MA
Sample : AZ02108W09 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint2.p
Quant Time: Sep 24 9:27 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
1)	S	TCMX	2.89	3.58	39312633	40082078	0.1865	0.1905
		Surrogate Spike 0.300 Range 25 - 150 Recovery =					62.17%	63.50%
22)	S	DBC	6.92	7.94	57839321	30664342	0.2121	0.3303 #
		Surrogate Spike 0.300 Recovery =					70.70%	110.10%
23)	S	DECA	9.28	10.58	85904607	23746397	0.2191	0.2554
		Surrogate Spike 0.300 Range 25 - 150 Recovery =					73.03%	85.13%
		Target Compounds						
		Target Compounds						
2)	TM	A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM	B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M	G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM	D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M	HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M	ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM	HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
9)	TM	G-CHLORDANE	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM	A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
11)	TM	A-CHLORDANE	0.00	0.00	0	0	N.D. d	N.D. d
12)	TM	P,P-DDE	0.00	0.00	0	0	N.D. d	N.D. d
13)	M	DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
14)	M	ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM	B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
16)	TM	P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM	ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
18)	M	P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM	ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM	ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM	METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922105.D\ECD1A.CH Vial: 5
Acq On : 9-23-14 17:50:32 Operator: MA
Sample : AZ02108W09 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922105.D\ECD2B.CH Vial: 5
Acq On : 9-23-14 17:50:33 Operator: MA
Sample : AZ02108W09 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events2.e
Quant Time: Sep 24 11:22 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922105.D\ECD1A.CH Vial: 5
Acq On : 9-23-14 17:50:32 Operator: MA
Sample : AZ02108W09 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922105.D\ECD2B.CH Vial: 5
Acq On : 9-23-14 17:50:33 Operator: MA
Sample : AZ02108W09 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events2.e
Quant Time: Sep 24 11:55 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum T. CHLORDANE			0	0	N.D.	N.D.
Average T. CHLORDANE					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922105.D\ECD1A.CH Vial: 5
Acq On : 9-23-14 17:50:32 Operator: MA
Sample : AZ02108W09 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint.p

Data File : G:\LUCY\DATA\140922\0922105.D\ECD2B.CH Vial: 5
Acq On : 9-23-14 17:50:33 Operator: MA
Sample : AZ02108W09 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

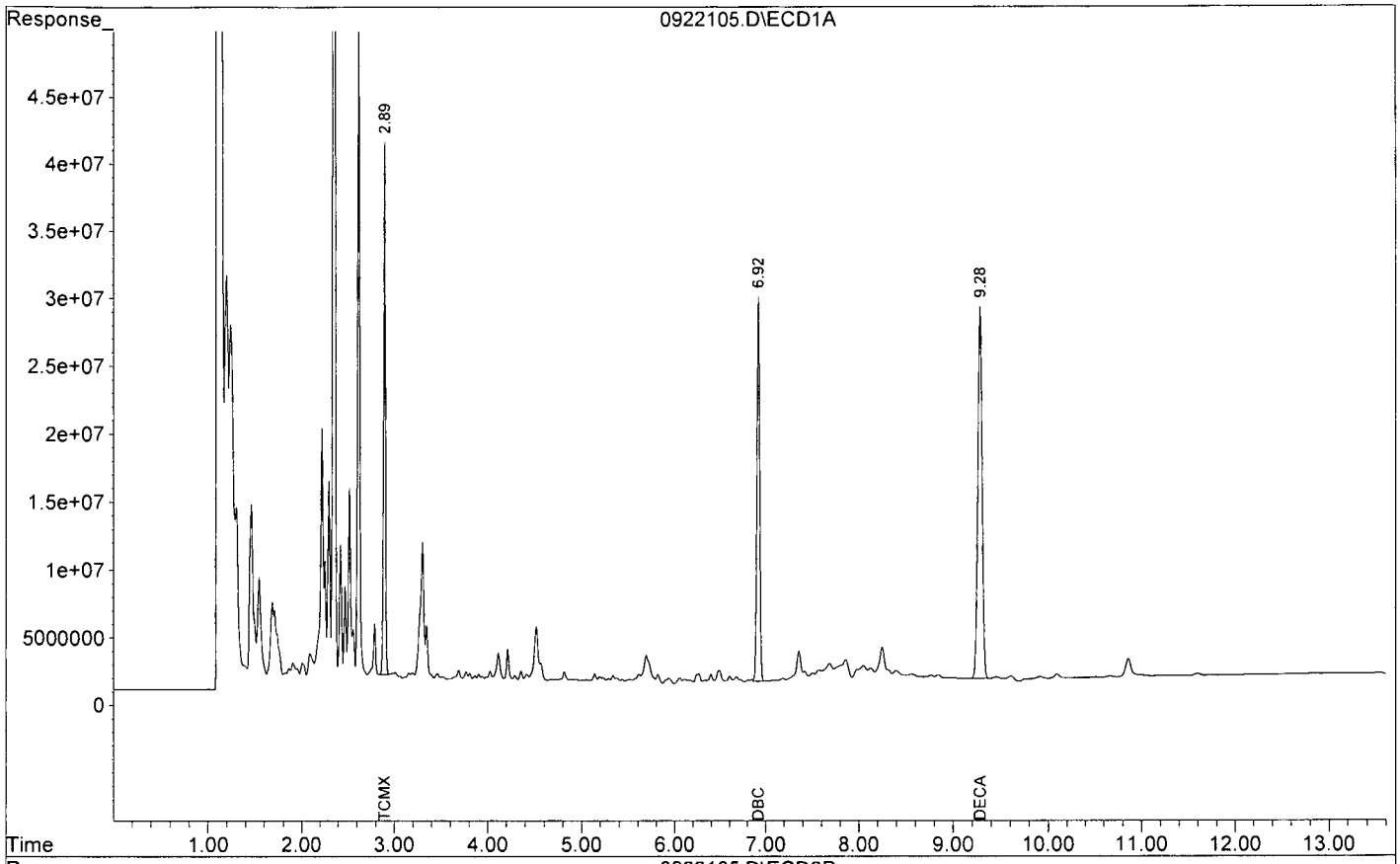
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Target Compounds						
1)	MA	DICHLOBENIL	2.09	0.00	1566582	0	0.0163	N.D. #
6)	MA	CHLOROTHALONIL	4.41	4.95	402784	327599	0.0014	0.0011
7)	MA	ALACHLOR	4.21	4.75	2243393	3141176	0.0716	0.0886
10)	MA	O,P-DDE	5.29	0.00	153841	0	0.0010	N.D. #
11)	MA	OXADIAZON	5.37	5.97	197791	3403614	0.0024	0.0372 #
12)	MA	OXYFLUORFEN	5.51	6.14	114513	129109	0.0006	0.0007
13)	MA	CAPTAN	5.61	5.87	475564	430026	0.0181	0.0033 #
15)	MA	NITROFEN	6.05	0.00	472791	0	0.0015	N.D. #
16)	MA	O,P-DDT	6.05	0.00	472791	0	0.0015	N.D. #
17)	MA	CARBOPHENOTHION	6.39	6.92	527856	997853	0.0058	0.0344 #
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.63	338915	342332	0.3750	0.4466
		Target Compounds						
2)	MA	BENEFIN	0.00	0.00	0	0	N.D.	N.D.
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D.	N.D.
5)	MA	PCNB	0.00	0.00	0	0	N.D.	N.D.
8)	MA	DACTHAL	0.00	0.00	0	0	N.D.	N.D.
9)	MA	DICOFOL	0.00	5.47	0	68153	N.D.	N.D.
14)	MA	O,P-TDE/DDD	0.00	0.00	0	0	N.D.	N.D.

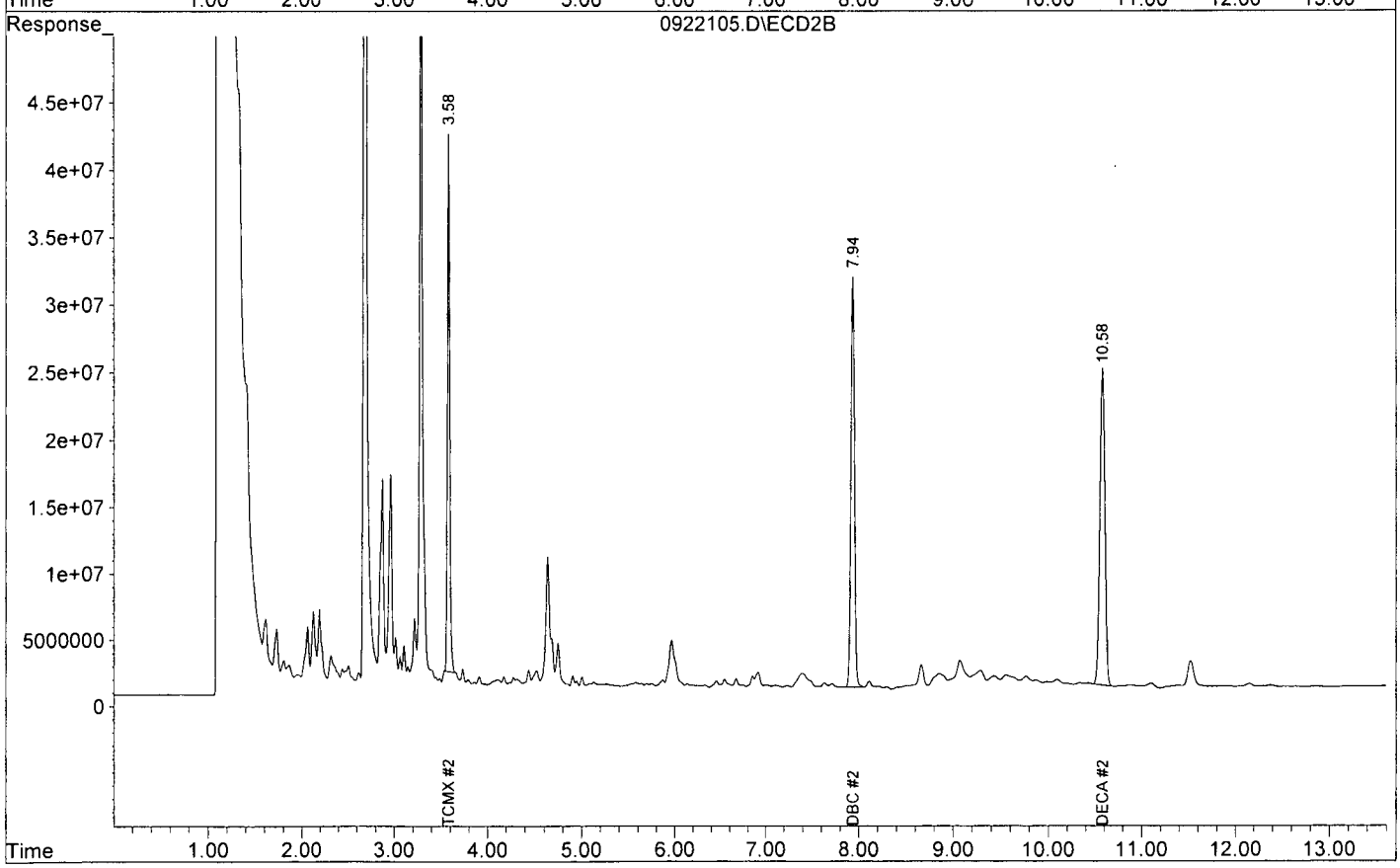
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922105.D
Acq On : 9-23-14 17:50:32
Sample : AZ02108W09 1/500
Misc : water
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 5
Operator: MA
Inst : Lucy
Multiplr: 2.00





EPA 8081A OCL WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN011

APPL ID: AZ02109

Sample Collection Date: 09/02/14

QCG: #81HC0-140909A-190200

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.010 U	0.05	0.010	0.003	ug/L	09/09/14	09/23/14
EPA 8081A	4,4'-DDE	0.010 U	0.05	0.010	0.004	ug/L	09/09/14	09/23/14
EPA 8081A	4,4'-DDT	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
EPA 8081A	ALDRIN	0.010 U	0.05	0.010	0.009	ug/L	09/09/14	09/23/14
EPA 8081A	CHLORDANE, TECHNICAL	0.04 U	1.0	0.04	0.01	ug/L	09/09/14	09/23/14
EPA 8081A	DIELDRIN	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
EPA 8081A	ENDOSULFAN I	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
EPA 8081A	ENDOSULFAN II	0.010 U	0.05	0.010	0.004	ug/L	09/09/14	09/23/14
EPA 8081A	ENDOSULFAN SULFATE	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
EPA 8081A	ENDRIN	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
EPA 8081A	GAMMA-BHC	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
EPA 8081A	HEPTACHLOR	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
EPA 8081A	METHOXYCHLOR	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
EPA 8081A	TOXAPHENE	0.40 U	1.0	0.40	0.38	ug/L	09/09/14	09/23/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	77.2	30-135			%	09/09/14	09/23/14
EPA 8081A	SURROGATE: TCMX (S)	53.8	25-140			%	09/09/14	09/23/14

Quant Method: OCL0922.M
Run #: 0922106
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:22 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922106.D\ECD1A.CH Vial: 6
Acq On : 9-23-14 18:06:56 Operator: MA
Sample : AZ02109W08 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint.p

Data File : G:\LUCY\DATA\140922\0922106.D\ECD2B.CH Vial: 6
Acq On : 9-23-14 18:06:57 Operator: MA
Sample : AZ02109W08 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint2.p
Quant Time: Sep 24 9:27 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S TCMX	2.89	3.58	33179874	33962989	0.1574	0.1614
	Surrogate Spike 0.300	Range 25 - 150		Recovery =		52.47%	53.80%
22)	S DBC	6.92	7.94	50995171	26721154	0.1870	0.2878 #
	Surrogate Spike 0.300			Recovery =		62.33%	95.93%
23)	S DECA	9.28	10.58	77013956	21522671	0.1965	0.2315
	Surrogate Spike 0.300	Range 25 - 150		Recovery =		65.50%	77.17%
	Target Compounds						
	Target Compounds						
2)	TM A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
9)	TM G-CHLORDANE	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
11)	TM A-CHLORDANE	0.00	0.00	0	0	N.D. d	N.D. d
12)	TM P,P-DDE	0.00	0.00	0	0	N.D. d	N.D. d
13)	M DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
14)	M ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
16)	TM P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
18)	M P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922106.D\ECD1A.CH Vial: 6
Acq On : 9-23-14 18:06:56 Operator: MA
Sample : AZ02109W08 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922106.D\ECD2B.CH Vial: 6
Acq On : 9-23-14 18:06:57 Operator: MA
Sample : AZ02109W08 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events2.e
Quant Time: Sep 24 11:22 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922106.D\ECD1A.CH Vial: 6
Acq On : 9-23-14 18:06:56 Operator: MA
Sample : AZ02109W08 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922106.D\ECD2B.CH Vial: 6
Acq On : 9-23-14 18:06:57 Operator: MA
Sample : AZ02109W08 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events2.e
Quant Time: Sep 24 11:56 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum T. CHLORDANE			0	0	N.D.	N.D.
Average T. CHLORDANE					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922106.D\ECD1A.CH Vial: 6
Acq On : 9-23-14 18:06:56 Operator: MA
Sample : AZ02109W08 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint.p

Data File : G:\LUCY\DATA\140922\0922106.D\ECD2B.CH Vial: 6
Acq On : 9-23-14 18:06:57 Operator: MA
Sample : AZ02109W08 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint2.p
Quant Time: Sep 24 12:13 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

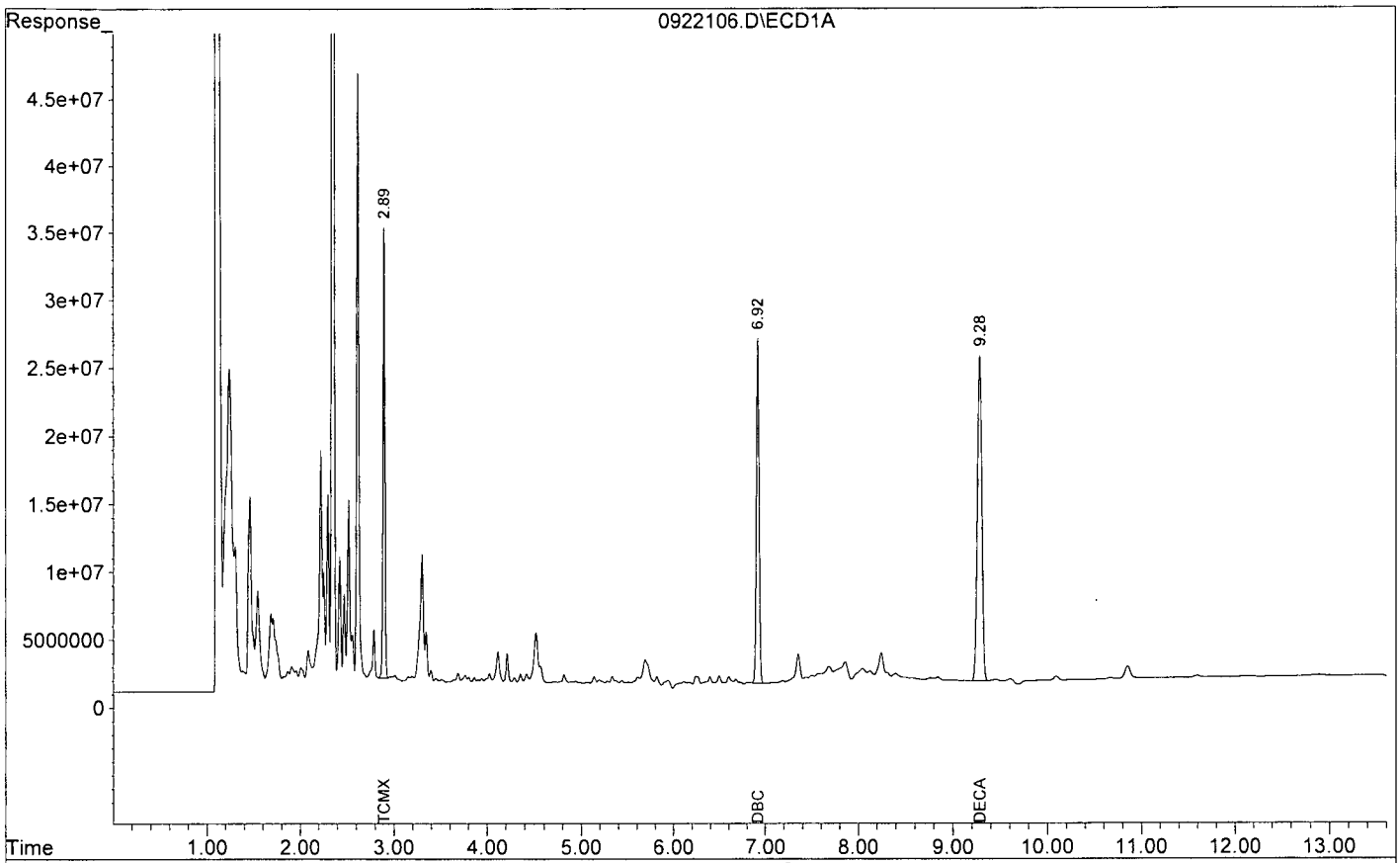
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Target Compounds						
1)	MA	DICHLOBENIL	2.09	0.00	2103562	0	0.0219	N.D. #
2)	MA	BENEFIN	0.00	3.44	0	198699	N.D.	0.0021 #
5)	MA	PCNB	3.76	0.00	479001	0	0.0018	N.D. #
6)	MA	CHLOROTHALONIL	4.42	4.95	621392	391037	0.0021	0.0013 #
7)	MA	ALACHLOR	4.21	4.75	2129216	3033627	0.0680	0.0856 #
10)	MA	O,P-DDE	5.28	0.00	158067	0	0.0011	N.D. #
11)	MA	OXADIAZON	0.00	5.97	0	3139834	N.D.	0.0343 #
12)	MA	OXYFLUORFEN	5.51	6.14	60598	108166	0.0003	0.0005 #
13)	MA	CAPTAN	5.61	5.86	443158	428412	0.0179	0.0033 #
15)	MA	NITROFEN	6.06	0.00	367554	0	0.0012	N.D. #
16)	MA	O,P-DDT	6.06	0.00	367554	0	0.0012	N.D. #
17)	MA	CARBOPHENOTHION	6.39	6.92	487828	1192386	0.0054	0.0365 #
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.63	441562	446852	0.4886	0.5830
		Target Compounds						
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D. d	N.D. d
8)	MA	DACTHAL	0.00	0.00	0	0	N.D.	N.D.
9)	MA	DICOFOL	0.00	0.00	0	0	N.D.	N.D.
14)	MA	O,P-TDE/DDD	0.00	0.00	0	0	N.D.	N.D.

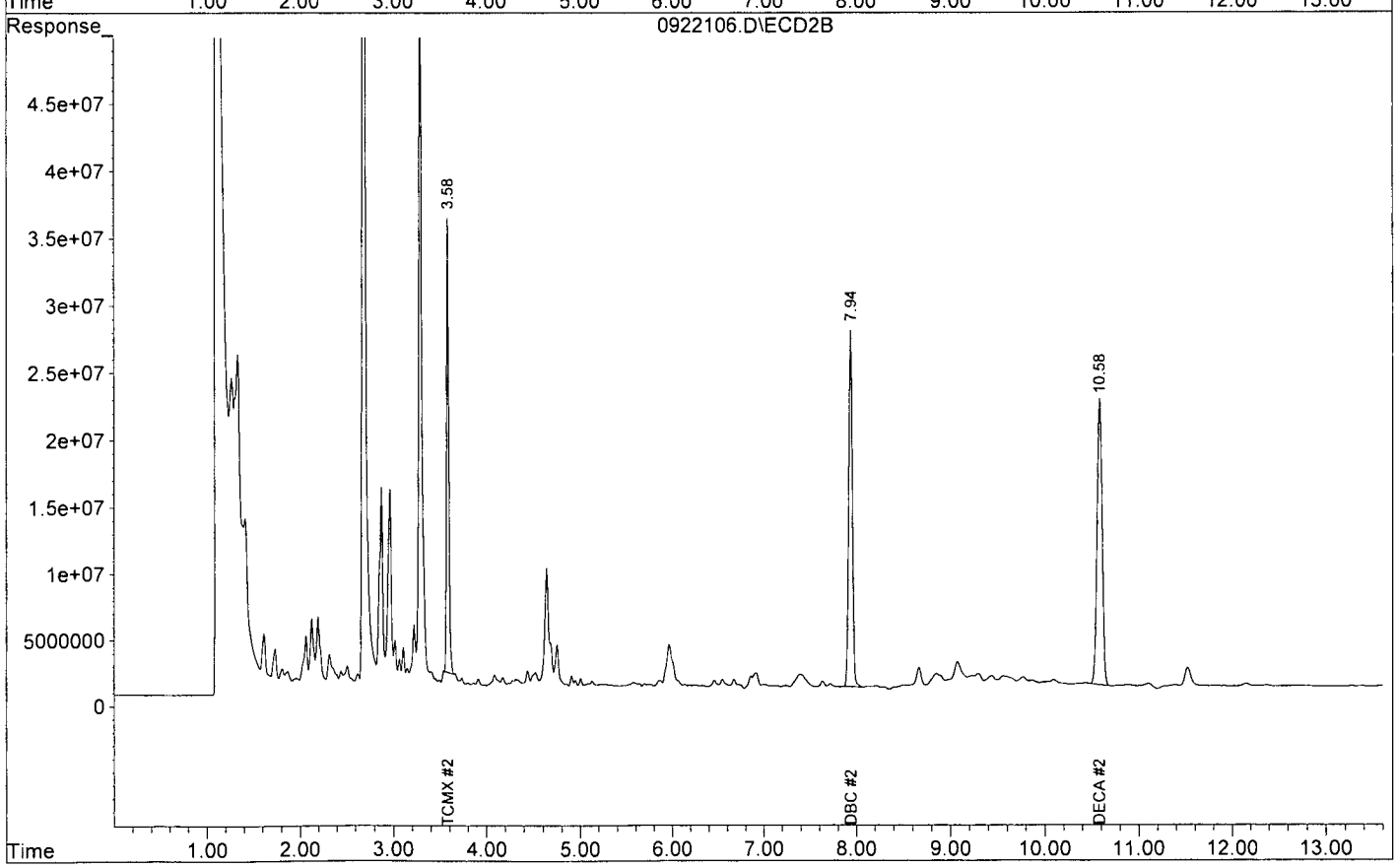
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922106.D
Acq On : 9-23-14 18:06:56
Sample : AZ02109W08 1/500
Misc : water
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 6
Operator: MA
Inst : Lucy
Multiplr: 2.00





EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN012

Sample Collection Date: 09/03/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02110

QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDE	0.060	0.05	0.004	0.002	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDT	0.048 J	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	CHLORDANE, TECHNICAL	0.82 J	1.00	0.050	0.015	mg/kg	09/16/14	09/24/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/24/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/24/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	83.5	55-130			%	09/16/14	09/24/14
EPA 8081A	SURROGATE: TCMX (S)	103	70-125			%	09/16/14	09/24/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922152
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:22 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922152.D\ECD1A.CH Vial: 52
Signal #2 : G:\LUCY\DATA\140922\0922152.D\ECD2B.CH
Acq On : 9-24-14 14:01:06 Operator: MA
Sample : AZ02110S11 5X1/0.05/30.30G Inst : Lucy
Misc : soil Multiplr: 3300.33
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 25 18:13 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S TCMX	2.90	3.58	44590598	43548701	349.0766	341.5039
	Surrogate Spike 330.033			Recovery	=	105.77%	103.48%
22)	S DBC	6.92	7.93	44703503	19990852	270.5273	355.3290 #
	Surrogate Spike 330.033			Recovery	=	81.97%	107.66%
23)	S DECA	9.28	10.58	53904427	15522134	226.9138	275.5074
	Surrogate Spike 330.033			Recovery	=	68.75%	83.48%
	Target Compounds						
9)	TM G-CHLORDANE	5.29	6.01	24338059	20550066	196.6926	195.8038
11)	TM A-CHLORDANE	5.38	6.06	18820561	11683926	156.8327	140.9583
12)	TM P,P-DDE	5.57	6.20	7369054	6847412	59.3289	60.0140
18)	M P,P-DDT	6.43	7.14	5193444	3292349	52.8257	47.6234
	Target Compounds						
2)	TM A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
13)	M DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
14)	M ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
16)	TM P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
0922152.D OCL0922.M Thu Sep 25 18:13:38 2014

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922152.D\ECD1A.CH Vial: 52
Signal #2 : G:\LUCY\DATA\140922\0922152.D\ECD2B.CH
Acq On : 9-24-14 14:01:06 Operator: MA
Sample : AZ02110S11 5X1/0.05/30.30G Inst : Lucy
Misc : soil Multiplr: 3300.33
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 16:53 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922152.D\ECD1A.CH Vial: 52
Signal #2 : G:\LUCY\DATA\140922\0922152.D\ECD2B.CH
Acq On : 9-24-14 14:01:06 Operator: MA
Sample : AZ02110S11 5X1/0.05/30.30G Inst : Lucy
Misc : soil Multiplr: 3300.33
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 16:53 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	ANM T. CHLORDANE Tot	0.00	0.00	44754700	33015887	1028.2600m	822.4423m	
2)	L2AK T. CHLORDANE	4.21	4.93	895884	844675	105.9538	115.8103	
3)	L2AK T. CHLORDANE {2}	4.66	5.27	2552267	2668780	587.2244	569.6722	
4)	L2AK T. CHLORDANE {3}	5.29	6.01	22644466	20351423	1339.0276	1182.5434	
5)	L2AK T. CHLORDANE {4}	5.38	6.10	16555703	7242173	1684.8061	924.2751	#
6)	L2AK T. CHLORDANE {5}	6.34	7.02	2106380	1908836	528.5308	611.8170	
	Sum T. CHLORDANE			44754700	33015887	4245.5428	3404.1180	
	Average T. CHLORDANE					849.109	680.824	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922152.D\ECD1A.CH Vial: 52
Signal #2 : G:\LUCY\DATA\140922\0922152.D\ECD2B.CH
Acq On : 9-24-14 14:01:06 Operator: MA
Sample : AZ02110S11 5X1/0.05/30.30G Inst : Lucy
Misc : soil Multiplr: 3300.33
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 16:55 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

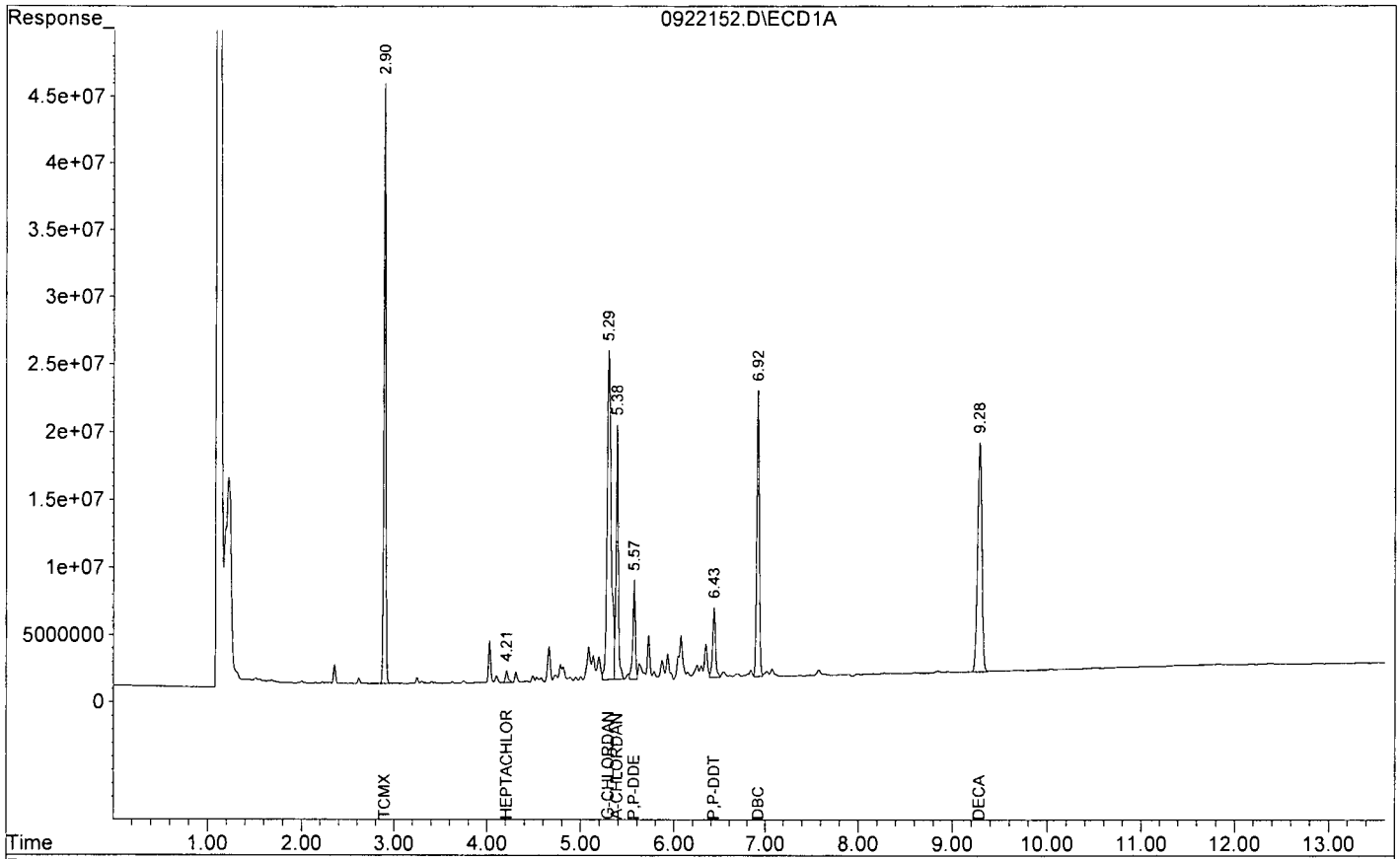
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Target Compounds						
5)	MA	PCNB	3.75	0.00	185151	0	1.1577	N.D. #
6)	MA	CHLOROTHALONIL	4.42	0.00	105518	0	0.5997	N.D. #
7)	MA	ALACHLOR	4.21	0.00	905432	0	47.6873	N.D. #
9)	MA	DICOFOL	0.00	5.48	0	382157	N.D.	2.0435 #
10)	MA	O,P-DDE	5.29	0.00	24378031	0	269.4004	N.D. #
11)	MA	OXADIAZON	5.38	0.00	18857872	0	375.9235	N.D. #
12)	MA	OXYFLUORFEN	5.51	0.00	441212	0	4.0572	N.D. #
13)	MA	CAPTAN	5.63	5.86	1196311	676878	37.0517	8.6080 #
14)	MA	O,P-TDE/DDD	5.78	6.32	575671	3167664	6.5059	39.3132 #
15)	MA	NITROFEN	6.07	0.00	3190745	0	17.1290	N.D. #
16)	MA	O,P-DDT	6.07	0.00	3190745	0	17.1290	N.D. #
18)	MA	BIS(2-ETHYLHEXYL	6.60	0.00	139379	0	254.5064	N.D. #
		Target Compounds						
1)	MA	DICHLOBENIL	0.00	0.00	0	0	N.D.	N.D.
2)	MA	BENEFIN	0.00	0.00	0	0	N.D.	N.D.
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D. d	N.D. d
8)	MA	DACTHAL	0.00	0.00	0	0	N.D.	N.D.
17)	MA	CARBOPHENOTHION	0.00	0.00	0	0	N.D.	N.D.

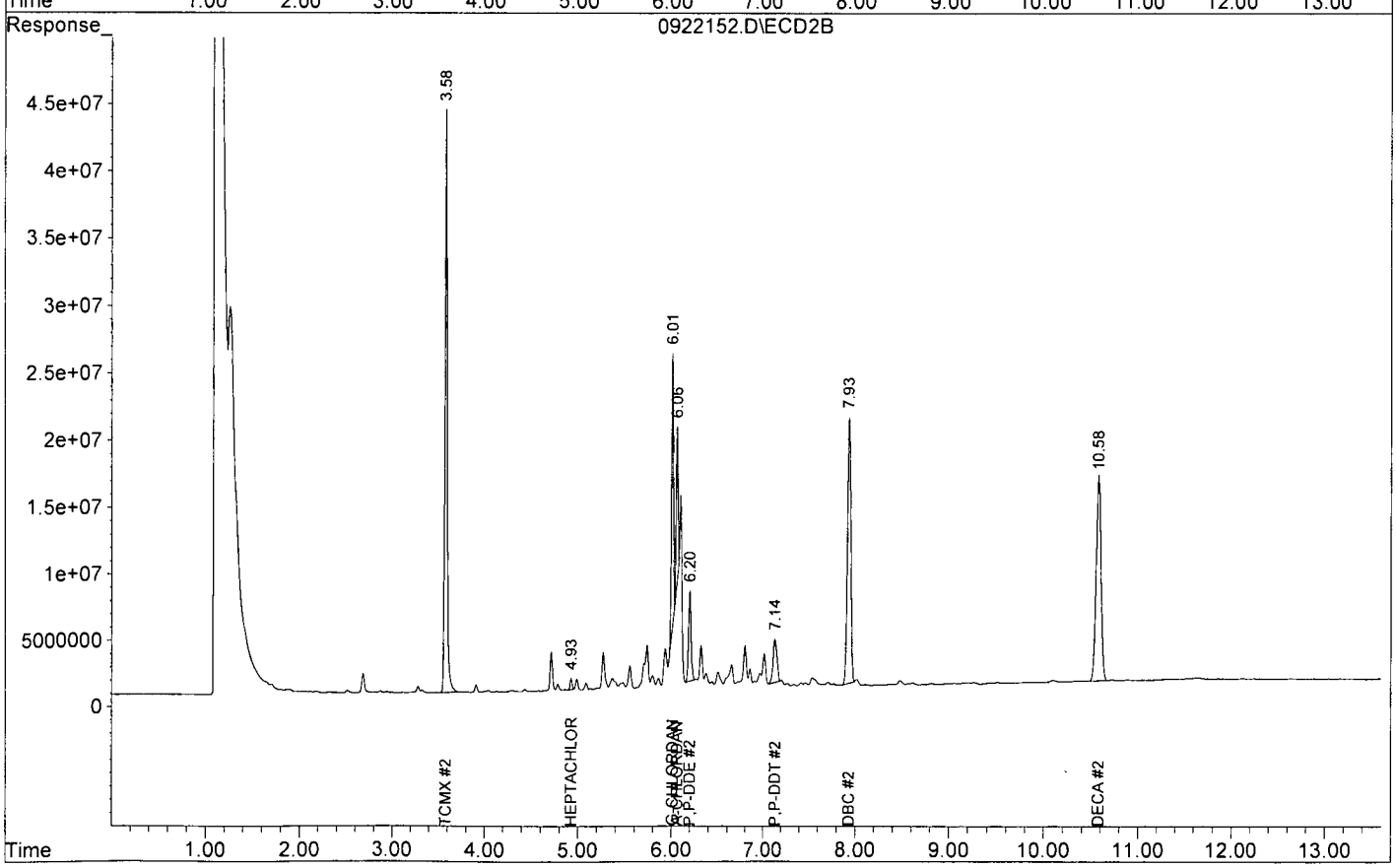
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922152.D
Acq On : 9-24-14 14:01:06
Sample : AZ02110S11 5X1/0.05/30.30G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 52
Operator: MA
Inst : Lucy
Multiplr: 3300.33





EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN013
Sample Collection Date: 09/03/14

ARF: 74218
APPL ID: AZ02111
QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDE	0.046 J	0.05	0.004	0.002	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDT	0.032 J	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	CHLORDANE, TECHNICAL	1.3	1.00	0.050	0.015	mg/kg	09/16/14	09/24/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/24/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/24/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	84.0	55-130			%	09/16/14	09/24/14
EPA 8081A	SURROGATE: TCMX (S)	105	70-125			%	09/16/14	09/24/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922153
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:22 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922153.D\ECD1A.CH Vial: 53
Signal #2 : G:\LUCY\DATA\140922\0922153.D\ECD2B.CH
Acq On : 9-24-14 14:17:31 Operator: MA
Sample : AZ02111S11 5X1/0.05/30.28G Inst : Lucy
Misc : soil Multiplr: 3302.51
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 16:41 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
1)	S	TCMX	2.89	3.58	46164984	44226868	361.6403	347.0511
		Surrogate Spike 330.251				Recovery =	109.50%	105.09%
22)	S	DBC	6.92	7.94	43985745	20183846	266.3595	358.9964 #
		Surrogate Spike 330.251				Recovery =	80.65%	108.70%
23)	S	DECA	9.28	10.58	53391626	15616764	224.9035	277.3701
		Surrogate Spike 330.251				Recovery =	68.10%	83.99%
		Target Compounds						
9)	TM	G-CHLORDANE	5.29	6.01	42649624	37643848	344.9086	358.9125
11)	TM	A-CHLORDANE	5.38	6.06	27437077	17903815	228.7855	216.1396
12)	TM	P,P-DDE	5.57	6.20	5412508	5188094	43.6054	45.5009
18)	M	P,P-DDT	6.43	7.14	3320961	2182899	33.8019	31.5962
		Target Compounds						
2)	TM	A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM	B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M	G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM	D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M	HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M	ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM	HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM	A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
13)	M	DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
14)	M	ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM	B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
16)	TM	P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM	ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM	ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM	ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM	METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922153.D\ECD1A.CH Vial: 53
Signal #2 : G:\LUCY\DATA\140922\0922153.D\ECD2B.CH
Acq On : 9-24-14 14:17:31 Operator: MA
Sample : AZ02111S11 5X1/0.05/30.28G Inst : Lucy
Misc : soil Multiplr: 3302.51
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 16:52 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922153.D\ECD1A.CH Vial: 53
Signal #2 : G:\LUCY\DATA\140922\0922153.D\ECD2B.CH
Acq On : 9-24-14 14:17:31 Operator: MA
Sample : AZ02111S11 5X1/0.05/30.28G Inst : Lucy
Misc : soil Multiplr: 3302.51
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 16:53 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
Target Compounds							
1) ANM T. CHLORDANE Tot	0.00	0.00	64742264	53574744	1488.4660m	1335.4552m	
2) L2AK T. CHLORDANE	4.20	4.93	278153	385320	32.9182	52.8647	#
3) L2AK T. CHLORDANE {2}	4.66	5.27	3156956	3042237	726.8306	649.8184	
4) L2AK T. CHLORDANE {3}	5.29	6.01	36937624	37229720	2185.6627	2164.7057	
5) L2AK T. CHLORDANE {4}	5.38	6.10	22760466	11350669	2317.7694	1449.5746	#
6) L2AK T. CHLORDANE {5}	6.34	7.02	1609065	1566796	404.0117	502.5187	
Sum T. CHLORDANE			64742264	53574744	5667.1927	4819.4822	
Average T. CHLORDANE					1133.439	963.896	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922153.D\ECD1A.CH Vial: 53
Signal #2 : G:\LUCY\DATA\140922\0922153.D\ECD2B.CH
Acq On : 9-24-14 14:17:31 Operator: MA
Sample : AZ02111S11 5X1/0.05/30.28G Inst : Lucy
Misc : soil Multiplr: 3302.51
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 16:55 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

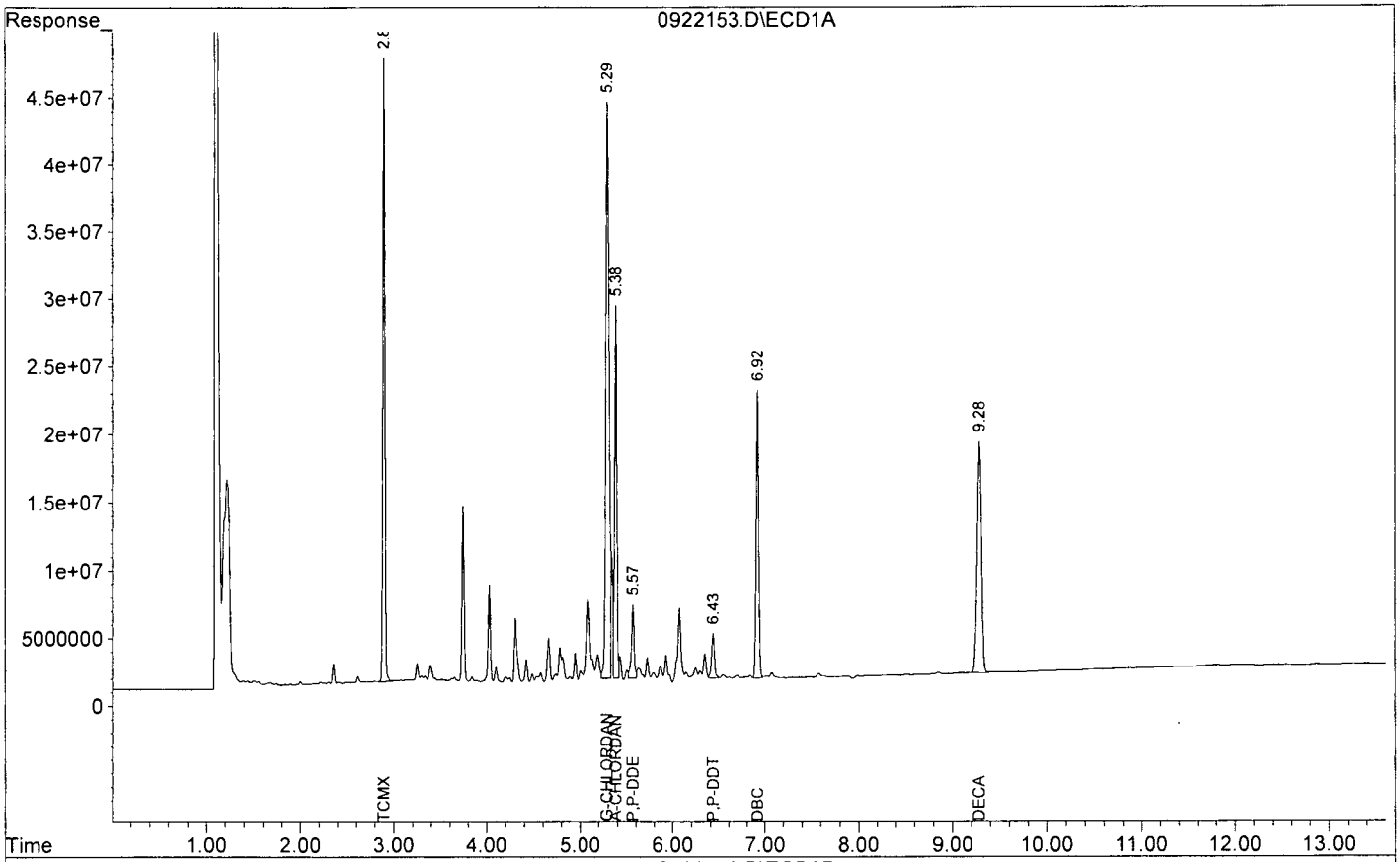
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
2)	MA BENEFIN	0.00	3.44	0	40458	N.D.	0.6952 #
5)	MA PCNB	3.75	0.00	12928371	0	80.8934	N.D. #
6)	MA CHLOROTHALONIL	4.42	0.00	1645933	0	9.3608	N.D. #
9)	MA DICOFOL	0.00	5.48	0	985002	N.D.	38.9619 #
10)	MA O,P-DDE	5.29	0.00	42452631	0	469.4517	N.D. #
11)	MA OXADIAZON	5.38	0.00	27234453	0	543.2656	N.D. #
12)	MA OXYFLUORFEN	5.50	0.00	733111	0	6.7458	N.D. #
13)	MA CAPTAN	5.62	5.86	513394	1776836	30.2889	22.6113 #
14)	MA O,P-TDE/DDD	5.79	6.32	362623	2916243	4.1009	36.2168 #
15)	MA NITROFEN	6.07	6.62	5498826	1483889	29.5390	11.0356 #
16)	MA O,P-DDT	6.07	6.62	5498826	1483889	29.5390	11.0356 #
18)	MA BIS(2-ETHYLHEXYL	6.60	7.63	84095	129969	153.6591	279.9934 #
	Target Compounds						
1)	MA DICHLOBENIL	0.00	0.00	0	0	N.D.	N.D.
3)	MA PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.
4)	MA HEXACHLOROBENZEN	0.00	0.00	0	0	N.D. d	N.D. d
7)	MA ALACHLOR	0.00	0.00	0	0	N.D.	N.D.
8)	MA DACTHAL	0.00	0.00	0	0	N.D.	N.D.
17)	MA CARBOPHENOTHION	0.00	0.00	0	0	N.D.	N.D.

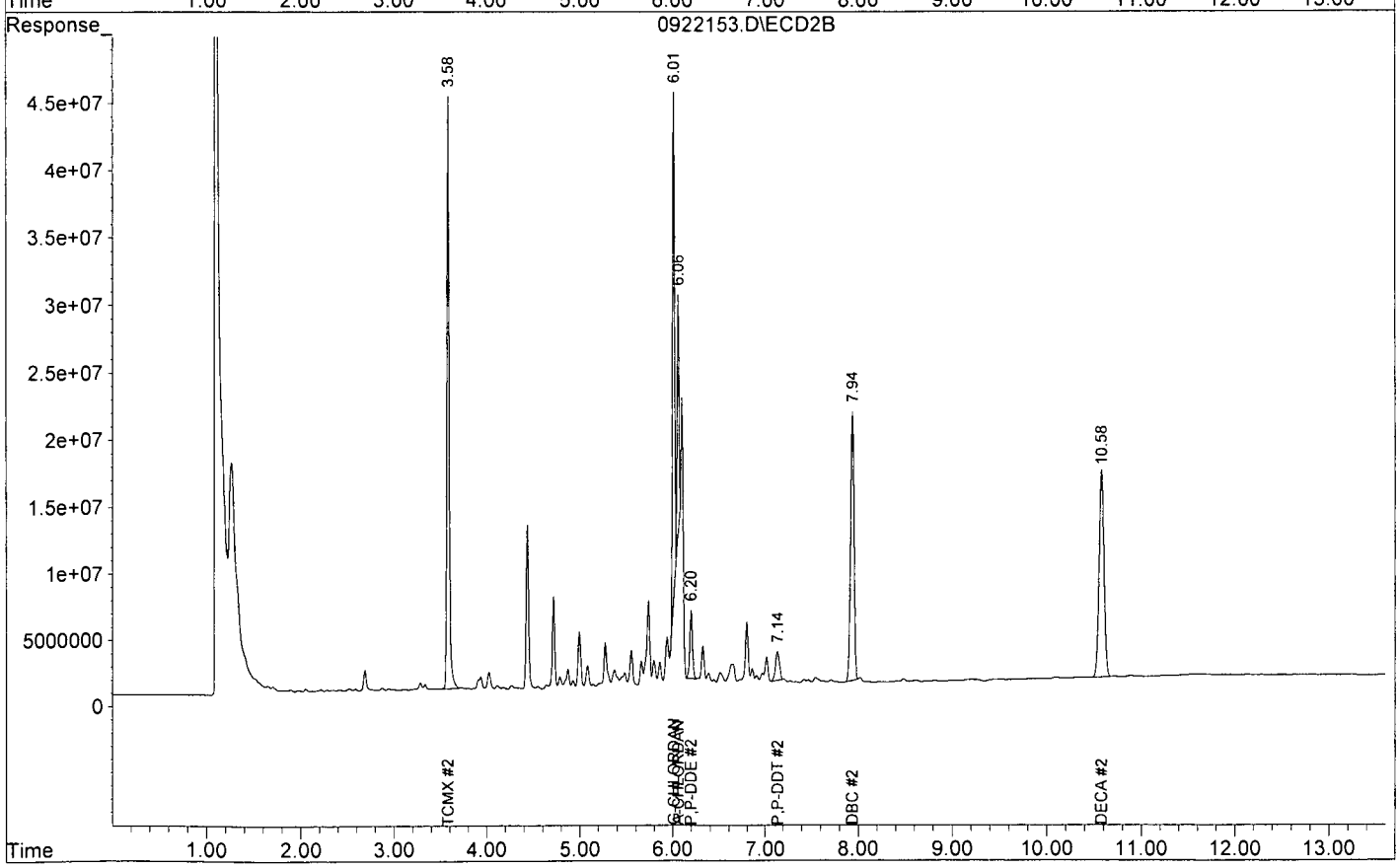
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922153.D
Acq On : 9-24-14 14:17:31
Sample : AZ02111S11 5X1/0.05/30.28G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 53
Operator: MA
Inst : Lucy
Multiplr: 3302.51





EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN014
Sample Collection Date: 09/03/14

ARF: 74218
APPL ID: AZ02112
QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.018 J	0.050	0.0040	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDE	0.066	0.05	0.004	0.002	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDT	0.15	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	CHLORDANE, TECHNICAL	0.19 J	1.00	0.050	0.015	mg/kg	09/16/14	09/24/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDRIN	0.042 J	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/24/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/24/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	83.8	55-130			%	09/16/14	09/24/14
EPA 8081A	SURROGATE: TCMX (S)	106	70-125			%	09/16/14	09/24/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922154
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:22 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922154.D\ECD1A.CH Vial: 54
Signal #2 : G:\LUCY\DATA\140922\0922154.D\ECD2B.CH
Acq On : 9-24-14 14:33:56 Operator: MA
Sample : AZ02112S11 5X1/0.05/30.81G Inst : Lucy
Misc : soil Multiplr: 3245.70
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 16:47 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S TCMX	2.89	3.58	46777122	44687480	360.1321	344.6333
	Surrogate Spike 324.570			Recovery	=	110.96%	106.18%
22)	S DBC	6.92	7.93	44516810	20084828	264.9382	351.0900 #
	Surrogate Spike 324.570			Recovery	=	81.63%	108.17%
23)	S DECA	9.28	10.58	52989573	15573229	219.3703	271.8388
	Surrogate Spike 324.570			Recovery	=	67.59%	83.75%
	Target Compounds						
9)	TM G-CHLORDANE	5.29	6.01	7445005	5588044	59.1722	52.3623
11)	TM A-CHLORDANE	5.38	6.06	5061961	3080862	41.4833	36.5532
12)	TM P,P-DDE	5.57	6.20	8093369	7624887	64.0818	65.7219
14)	M ENDRIN	6.04	6.65	4290481	3950204	40.8903	42.4651
16)	TM P,P-DDD	6.14	6.77	1922664	530649	17.5372	18.0258
18)	M P,P-DDT	6.42	7.14	13476091	10614528	134.8047	150.9962
	Target Compounds						
2)	TM A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
13)	M DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922154.D\ECD1A.CH Vial: 54
Signal #2 : G:\LUCY\DATA\140922\0922154.D\ECD2B.CH
Acq On : 9-24-14 14:33:56 Operator: MA
Sample : AZ02112S11 5X1/0.05/30.81G Inst : Lucy
Misc : soil Multiplr: 3245.70
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 16:52 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922154.D\ECD1A.CH Vial: 54
Signal #2 : G:\LUCY\DATA\140922\0922154.D\ECD2B.CH
Acq On : 9-24-14 14:33:56 Operator: MA
Sample : AZ02112S11 5X1/0.05/30.81G Inst : Lucy
Misc : soil Multiplr: 3245.70
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 16:53 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	12915742	7892388	291.8331m	193.3489m#
2) L2AK T. CHLORDANE	4.20	4.92	984974	34009	114.5620	4.5857 #
3) L2AK T. CHLORDANE {2}	4.66	5.29	476373	948317	107.7895	199.0750 #
4) L2AK T. CHLORDANE {3}	5.29	6.01	7002151	5580764	407.2019	318.9091
5) L2AK T. CHLORDANE {4}	5.38	6.10	4248579	1204923	425.2036	151.2316 #
6) L2AK T. CHLORDANE {5}	6.35	7.03	203665	124374	50.2575	39.2043
Sum T. CHLORDANE			12915742	7892388	1105.0145	713.0056
Average T. CHLORDANE					221.003	142.601

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922154.D\ECD1A.CH Vial: 54
Signal #2 : G:\LUCY\DATA\140922\0922154.D\ECD2B.CH
Acq On : 9-24-14 14:33:56 Operator: MA
Sample : AZ02112S11 5X1/0.05/30.81G Inst : Lucy
Misc : soil Multiplr: 3245.70
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 16:54 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

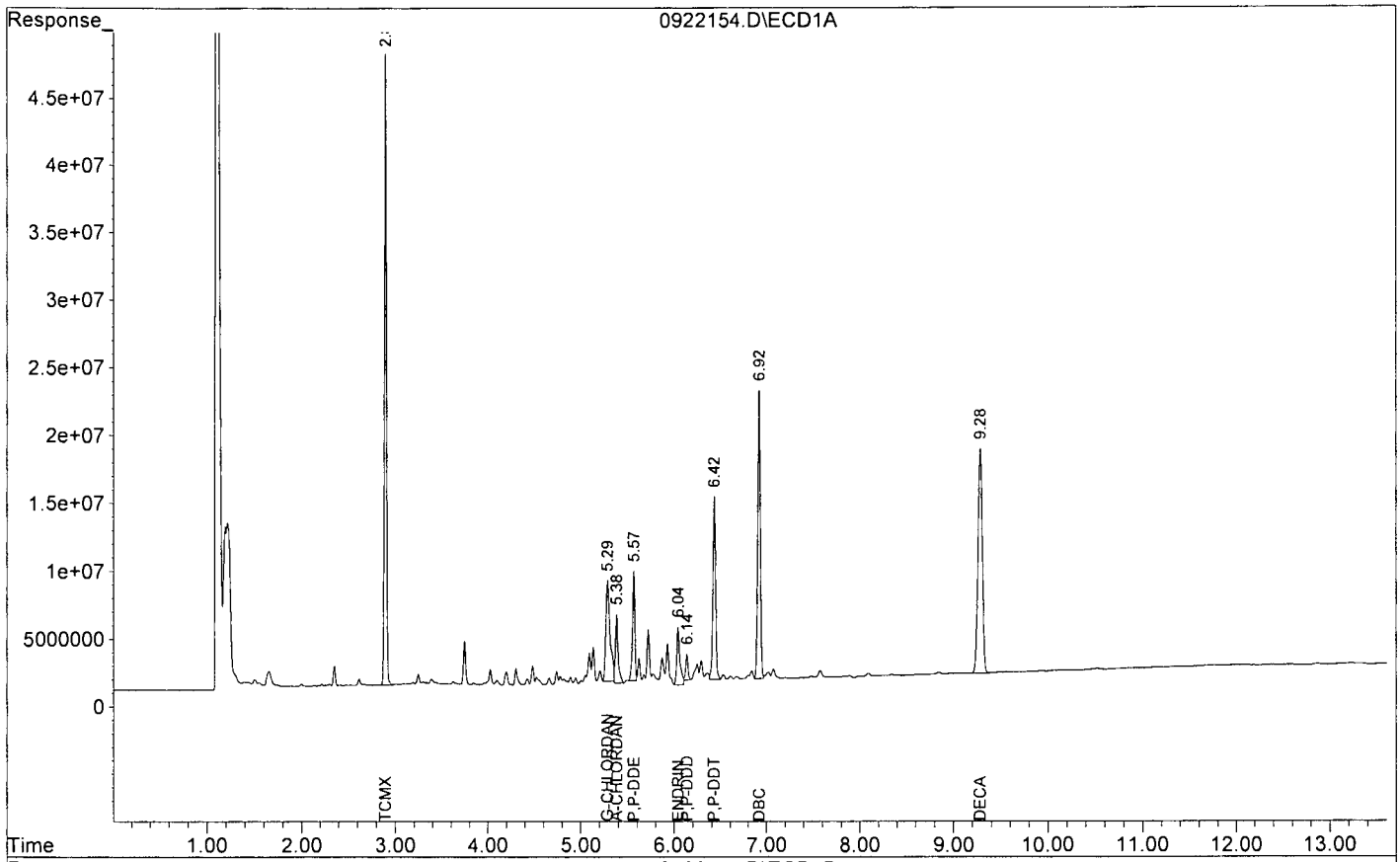
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		Target Compounds							
1)	MA	DICHLOBENIL	2.09	2.36	18857	90690	0.3181	1.7851	#
5)	MA	PCNB	3.75	0.00	3239984	0	19.9240	N.D.	#
6)	MA	CHLOROTHALONIL	4.42	0.00	447681	0	2.5023	N.D.	#
8)	MA	DACTHAL	0.00	5.19	0	122821	N.D.	0.9675	#
9)	MA	DICOFOL	0.00	5.47	0	461868	N.D.	6.8070	#
10)	MA	O,P-DDE	5.29	0.00	7488925	0	81.3898	N.D.	#
11)	MA	OXADIAZON	5.38	0.00	5061961	0	99.2377	N.D.	#
12)	MA	OXYFLUORFEN	5.50	0.00	207507	0	1.8765	N.D.	#
13)	MA	CAPTAN	5.62	5.87	1718553	781939	41.5394	9.7795	#
14)	MA	O,P-TDE/DDD	5.77	6.32	511033	3856369	5.6798	47.0684	#
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.63	220052	212287	395.1643	449.4646	
		Target Compounds							
2)	MA	BENEFIN	0.00	0.00	0	0	N.D.	N.D.	
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.	
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D.	N.D.	
7)	MA	ALACHLOR	0.00	0.00	0	0	N.D.	N.D.	
15)	MA	NITROFEN	0.00	0.00	0	0	N.D.	N.D.	
16)	MA	O,P-DDT	0.00	0.00	0	0	N.D.	N.D.	
17)	MA	CARBOPHENOTHION	0.00	0.00	0	0	N.D.	N.D.	

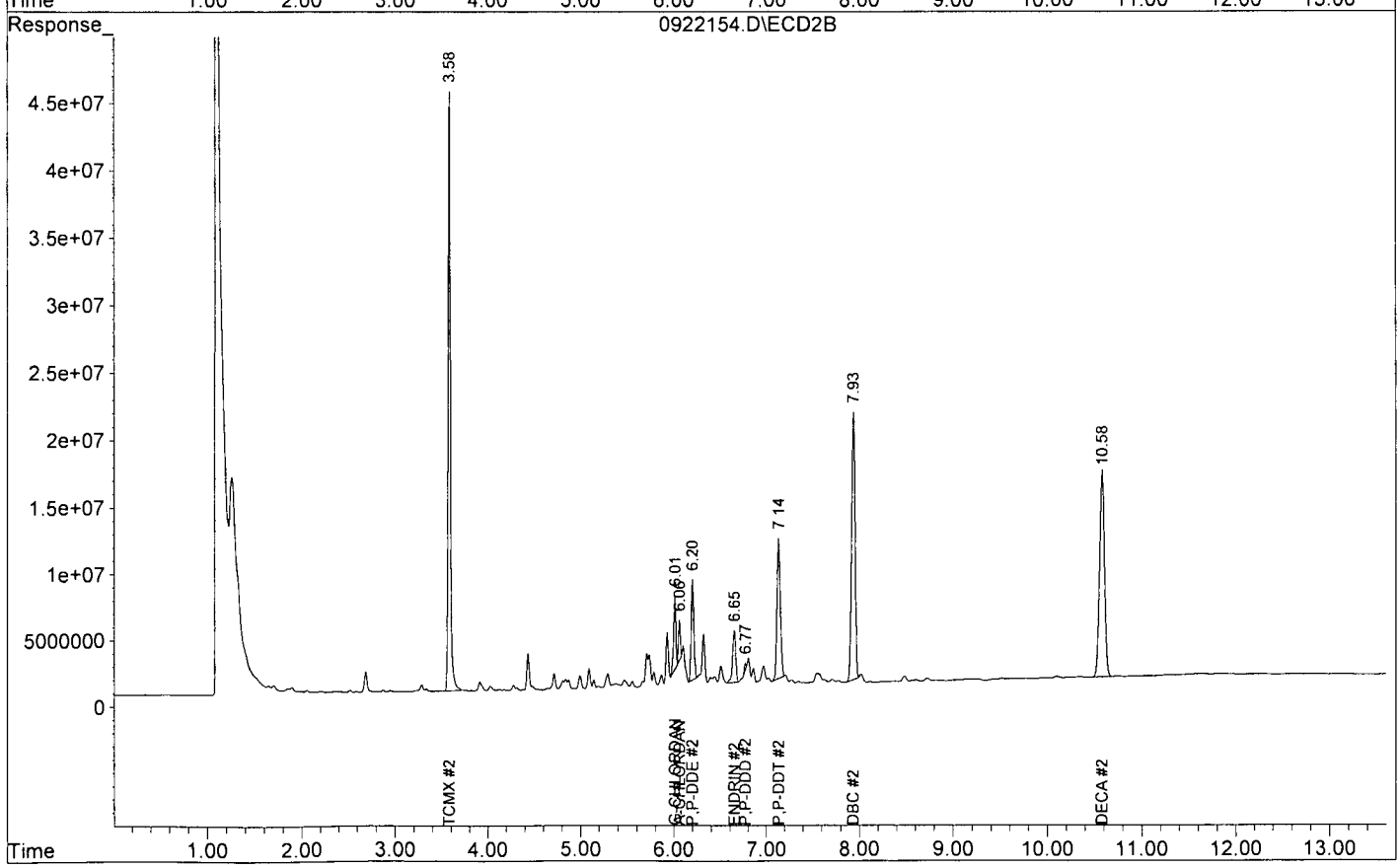
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922154.D
Acq On : 9-24-14 14:33:56
Sample : AZ02112S11 5X1/0.05/30.81G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 54
Operator: MA
Inst : Lucy
Multiplr: 3245.70





EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN015

APPL ID: AZ02113

Sample Collection Date: 09/03/14

QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDE	0.041 J	0.05	0.004	0.002	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDT	0.020 J	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	CHLORDANE, TECHNICAL	1.2	1.00	0.050	0.015	mg/kg	09/16/14	09/24/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/24/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/24/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	80.9	55-130			%	09/16/14	09/24/14
EPA 8081A	SURROGATE: TCMX (S)	103	70-125			%	09/16/14	09/24/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922155
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:22 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922155.D\ECD1A.CH Vial: 55
Signal #2 : G:\LUCY\DATA\140922\0922155.D\ECD2B.CH
Acq On : 9-24-14 14:50:21 Operator: MA
Sample : AZ02113S11 5X1/0.05/30.16G Inst : Lucy
Misc : soil Multiplr: 3315.65
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 16:48 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
1)	S	TCMX	2.89	3.58	43002539	43190385	338.2072	340.2662
		Surrogate Spike 331.565			Recovery	=	102.00%	102.62%
22)	S	DBC	6.92	7.93	42779971	19160964	260.0886	342.1591 #
		Surrogate Spike 331.565			Recovery	=	78.44%	103.20%
23)	S	DECA	9.28	10.58	51572097	15036199	218.1034	268.1213
		Surrogate Spike 331.565			Recovery	=	65.78%	80.87%
		Target Compounds						
9)	TM	G-CHLORDANE	5.29	6.01	36781930	30529144	298.6400	292.2360
11)	TM	A-CHLORDANE	5.38	6.06	28210102	18442778	236.1674	223.5319
12)	TM	P,P-DDE	5.56	6.20	5072838	4602125	41.0315	40.5224
18)	M	P,P-DDT	6.42	7.14	2233972	1351632	22.8286	19.6419
		Target Compounds						
2)	TM	A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM	B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M	G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM	D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M	HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M	ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM	HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM	A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
13)	M	DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
14)	M	ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM	B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
16)	TM	P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM	ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM	ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM	ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM	METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922155.D\ECD1A.CH Vial: 55
Signal #2 : G:\LUCY\DATA\140922\0922155.D\ECD2B.CH
Acq On : 9-24-14 14:50:21 Operator: MA
Sample : AZ02113S11 5X1/0.05/30.16G Inst : Lucy
Misc : soil Multiplr: 3315.65
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 16:52 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922155.D\ECD1A.CH Vial: 55
Signal #2 : G:\LUCY\DATA\140922\0922155.D\ECD2B.CH
Acq On : 9-24-14 14:50:21 Operator: MA
Sample : AZ02113S11 5X1/0.05/30.16G Inst : Lucy
Misc : soil Multiplr: 3315.65
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 16:53 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
Target Compounds							
1) ANM T. CHLORDANE Tot	0.00	0.00	65241917	47360198	1505.9213m	1185.2427m	
2) L2AK T. CHLORDANE	4.21	4.93	315424	260210	37.4776	35.8420	
3) L2AK T. CHLORDANE {2}	4.66	5.27	2483634	2642018	574.0858	566.5775	
4) L2AK T. CHLORDANE {3}	5.29	6.01	34456247	30348655	2046.9475	1771.6302	
5) L2AK T. CHLORDANE {4}	5.38	6.10	25143488	11393791	2570.6274	1460.8711	#
6) L2AK T. CHLORDANE {5}	6.34	7.02	2843124	2715524	716.7055	874.4155	
Sum T. CHLORDANE			65241917	47360198	5945.8437	4709.3363	
Average T. CHLORDANE					1189.169	941.867	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922155.D\ECD1A.CH Vial: 55
Signal #2 : G:\LUCY\DATA\140922\0922155.D\ECD2B.CH
Acq On : 9-24-14 14:50:21 Operator: MA
Sample : AZ02113S11 5X1/0.05/30.16G Inst : Lucy
Misc : soil Multiplr: 3315.65
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 16:54 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

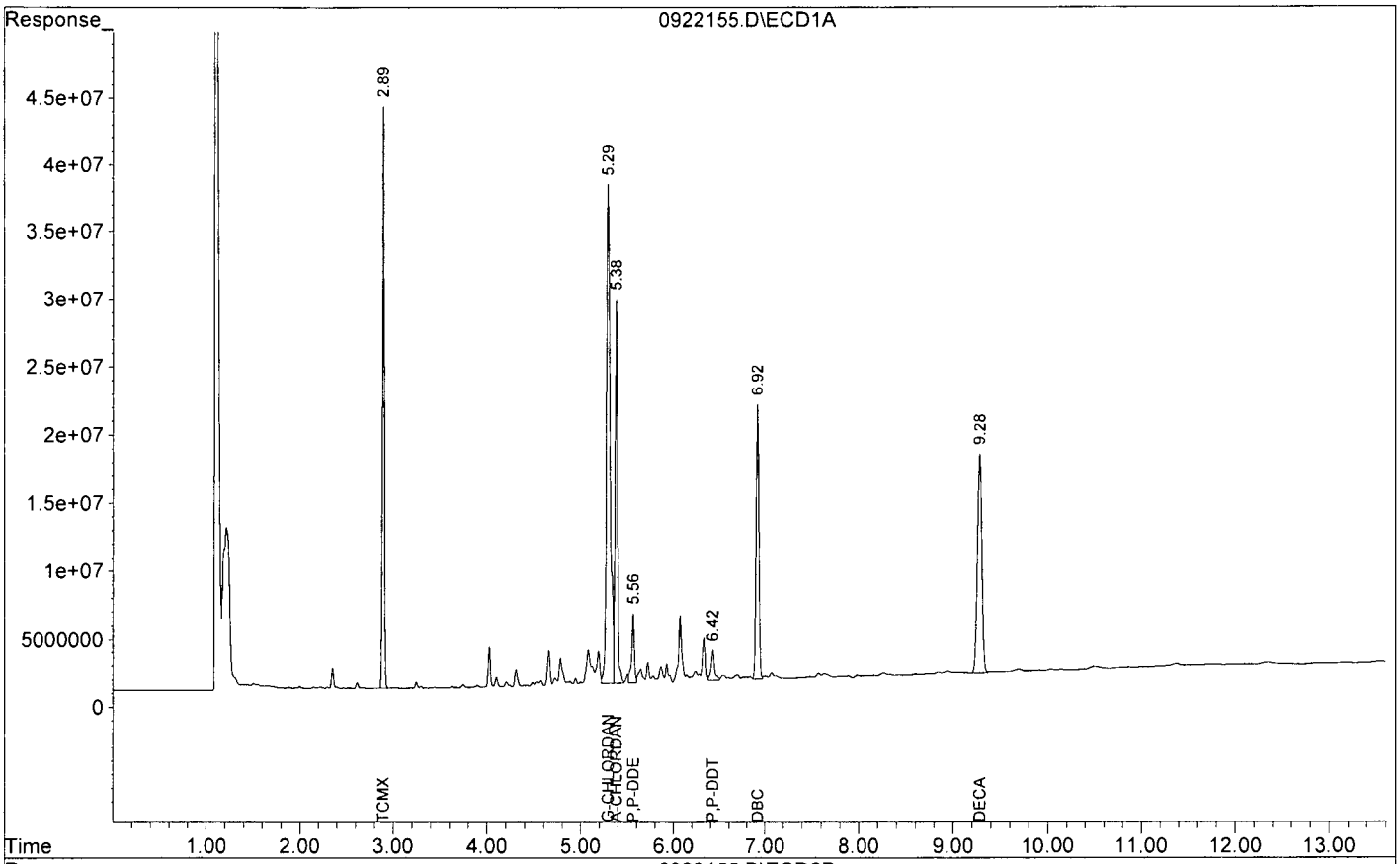
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Target Compounds						
1)	MA	DICHLOBENIL	2.09	0.00	9738	0	0.1678	N.D. #
2)	MA	BENEFIN	0.00	3.44	0	27632	N.D.	0.4767 #
5)	MA	PCNB	3.74	0.00	245336	0	1.5412	N.D. #
6)	MA	CHLOROTHALONIL	4.42	4.93	82392	305764	0.4704	1.7149 #
7)	MA	ALACHLOR	4.21	0.00	381857	0	20.2050	N.D. #
9)	MA	DICOFOL	0.00	5.48	0	660243	N.D.	19.1502 #
10)	MA	O,P-DDE	5.29	0.00	36399077	0	404.1115	N.D. #
11)	MA	OXADIAZON	5.38	0.00	28101807	0	562.7977	N.D. #
12)	MA	OXYFLUORFEN	5.50	0.00	528321	0	4.8807	N.D. #
13)	MA	CAPTAN	0.00	5.86	0	994276	N.D.	12.7031 #
14)	MA	O,P-TDE/DDD	5.78	6.32	266535	2423519	3.0262	30.2174 #
15)	MA	NITROFEN	6.07	6.62	4913915	1105199	26.5020	8.2520 #
16)	MA	O,P-DDT	6.07	6.62	4913915	1105199	26.5020	8.2520 #
17)	MA	CARBOPHENOTHION	0.00	6.91	0	476184	N.D.	47.8800 #
18)	MA	BIS(2-ETHYLHEXYL	6.60	0.00	62265	0	114.2238	N.D. #
		Target Compounds						
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D. d	N.D. d
8)	MA	DACTHAL	0.00	0.00	0	0	N.D.	N.D.

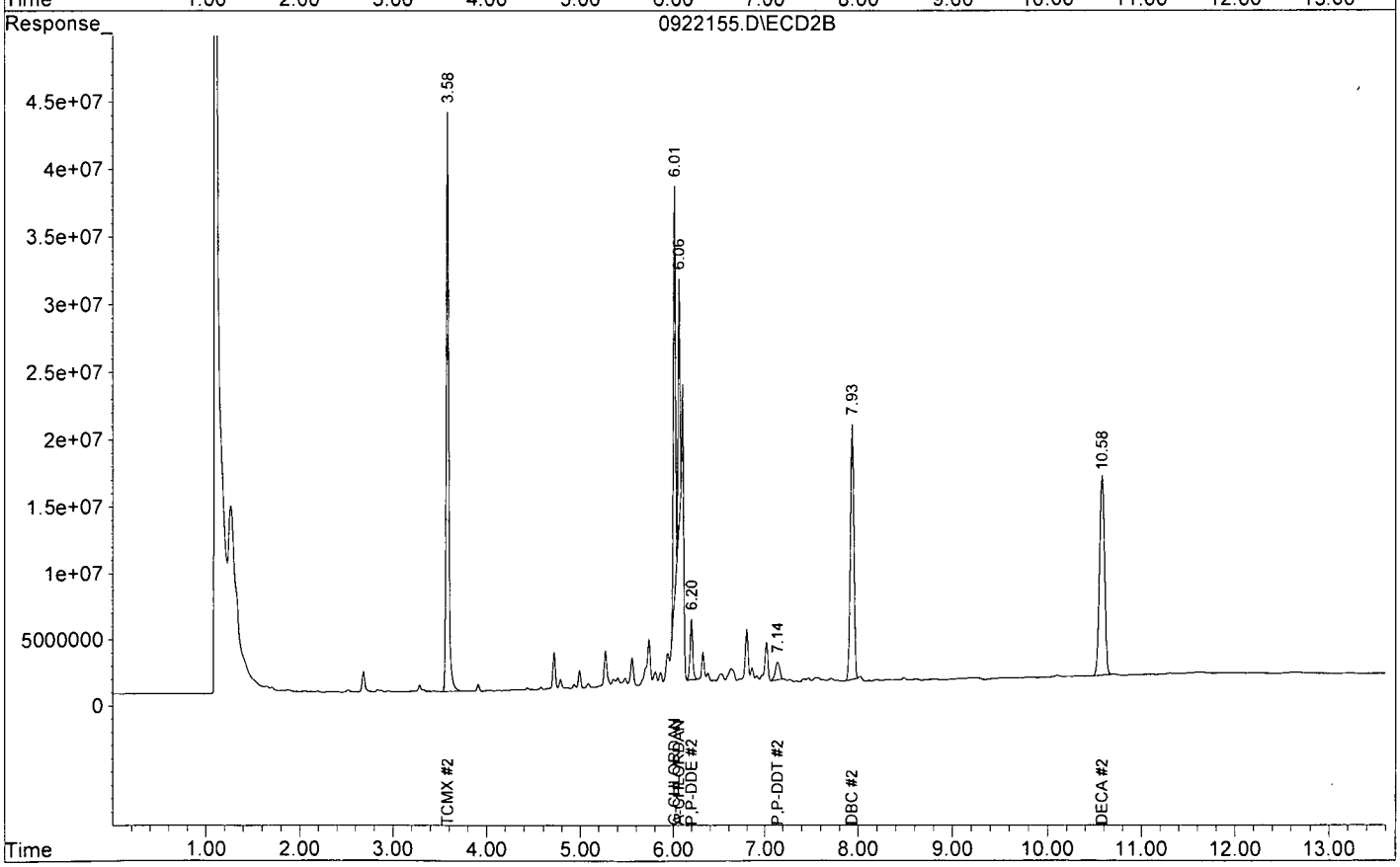
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922155.D
Acq On : 9-24-14 14:50:21
Sample : AZ02113S11 5X1/0.05/30.16G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 55
Operator: MA
Inst : Lucy
Multiplr: 3315.65





EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN016

Sample Collection Date: 09/03/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02114

QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDE	0.057	0.05	0.004	0.002	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDT	0.018 J	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	CHLORDANE, TECHNICAL	0.72 J	1.00	0.050	0.015	mg/kg	09/16/14	09/24/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/24/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/24/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	76.7	55-130			%	09/16/14	09/24/14
EPA 8081A	SURROGATE: TCMX (S)	95.5	70-125			%	09/16/14	09/24/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922156
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:22 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922156.D\ECD1A.CH Vial: 56
Signal #2 : G:\LUCY\DATA\140922\0922156.D\ECD2B.CH
Acq On : 9-24-14 15:06:55 Operator: MA
Sample : AZ02114S11 5X1/0.05/30.04G Inst : Lucy
Misc : soil Multiplr: 3328.89
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 16:49 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
1)	S	TCMX	2.89	3.58	42483416	40208372	335.4586	318.0380
		Surrogate Spike 499.334 Range 25 - 150 Recovery =					67.18%	63.69%
22)	S	DBC	6.92	7.93	39766283	18071214	242.7318	323.9879 #
		Surrogate Spike 499.334 Recovery =					48.61%	64.88%
23)	S	DECA	9.28	10.58	48009473	14259548	203.8475	255.2876 #
		Surrogate Spike 499.334 Range 25 - 150 Recovery =					40.82%	51.13%
		Target Compounds						
9)	TM	G-CHLORDANE	5.29	6.01	22455678	19682455	183.0503	189.1599
11)	TM	A-CHLORDANE	5.38	6.06	16963539	10747728	142.5813	130.7858
12)	TM	P,P-DDE	5.56	6.20	6524897	6427429	52.9871	56.8205
18)	M	P,P-DDT	6.42	7.14	1915089	1231669	19.6481	17.9701
		Target Compounds						
2)	TM	A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM	B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M	G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM	D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M	HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M	ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM	HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM	A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
13)	M	DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
14)	M	ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM	B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
16)	TM	P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM	ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM	ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM	ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM	METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922156.D\ECD1A.CH Vial: 56
Signal #2 : G:\LUCY\DATA\140922\0922156.D\ECD2B.CH
Acq On : 9-24-14 15:06:55 Operator: MA
Sample : AZ02114S11 5X1/0.05/30.04G Inst : Lucy
Misc : soil Multiplr: 3328.89
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 16:52 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922156.D\ECD1A.CH Vial: 56
Signal #2 : G:\LUCY\DATA\140922\0922156.D\ECD2B.CH
Acq On : 9-24-14 15:06:55 Operator: MA
Sample : AZ02114S11 5X1/0.05/30.04G Inst : Lucy
Misc : soil Multiplr: 3328.89
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 16:53 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	ANM T. CHLORDANE Tot	0.00	0.00	36067044	28518729	835.8280m	716.5636m	
2)	L2AK T. CHLORDANE	4.21	4.93	200009	200772	23.8592	27.7653	
3)	L2AK T. CHLORDANE {2}	4.66	5.27	1521626	1456540	353.1246	313.6005	
4)	L2AK T. CHLORDANE {3}	5.29	6.01	19152632	19331778	1142.3468	1133.0164	
5)	L2AK T. CHLORDANE {4}	5.38	6.10	14481909	6862330	1486.5181	883.3769	#
6)	L2AK T. CHLORDANE {5}	6.34	7.02	710868	667310	179.9139	215.7359	
	Sum T. CHLORDANE			36067044	28518729	3185.7626	2573.4950	
Average	T. CHLORDANE					637.153	514.699	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922156.D\ECD1A.CH Vial: 56
Signal #2 : G:\LUCY\DATA\140922\0922156.D\ECD2B.CH
Acq On : 9-24-14 15:06:55 Operator: MA
Sample : AZ02114S11 5X1/0.05/30.04G Inst : Lucy
Misc : soil Multiplr: 3328.89
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 16:54 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

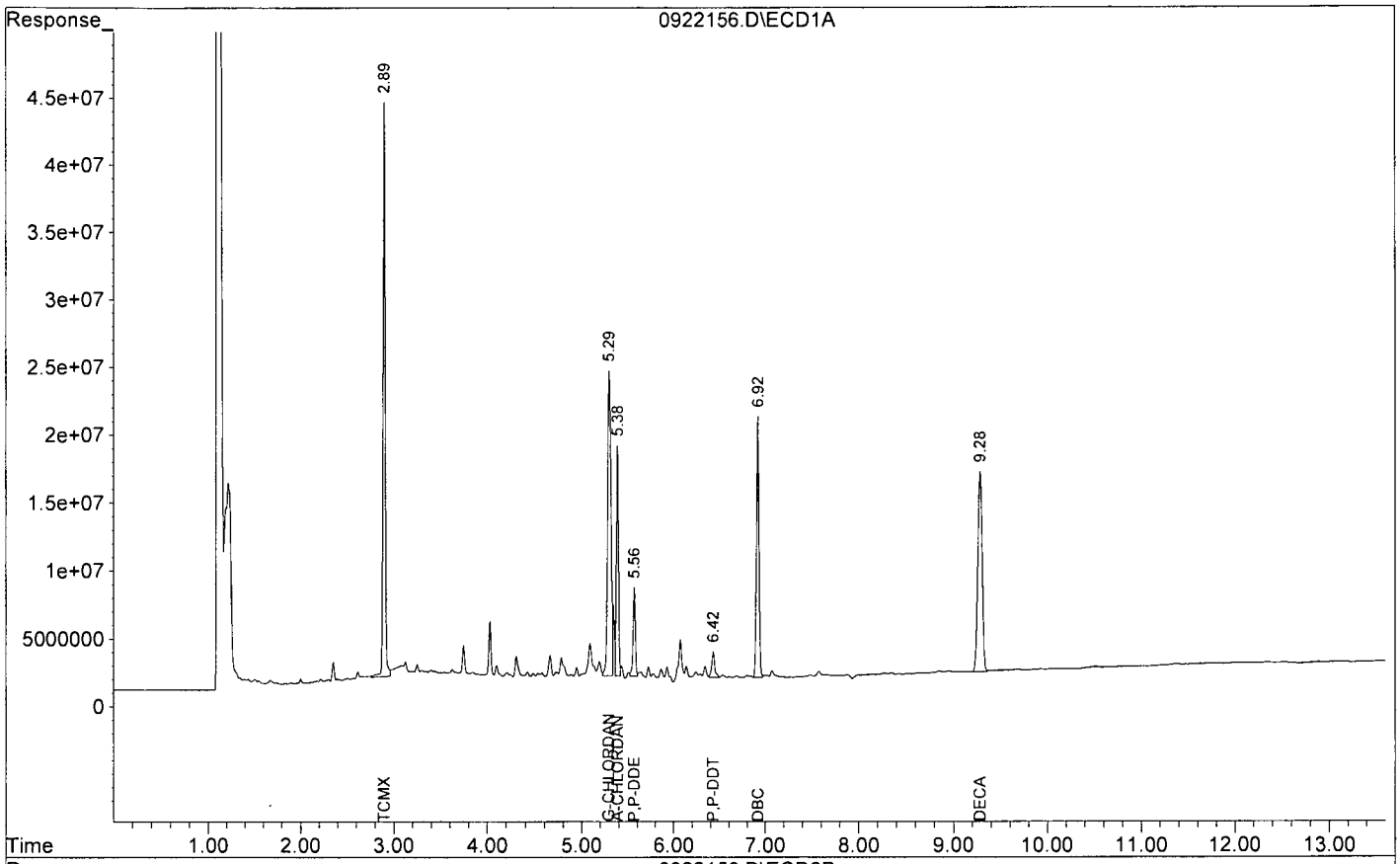
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Target Compounds						
2)	MA	BENEFIN	0.00	3.44	0	48081	N.D.	0.8328 #
5)	MA	PCNB	3.74	0.00	2112267	0	13.3221	N.D. #
6)	MA	CHLOROTHALONIL	4.42	0.00	342614	0	1.9641	N.D. #
7)	MA	ALACHLOR	4.21	0.00	264954	0	14.0754	N.D. #
10)	MA	O,P-DDE	5.29	5.86	22295359	707821	248.5170	8.0555 #
11)	MA	OXADIAZON	5.38	0.00	16839249	0	338.5880	N.D. #
12)	MA	OXYFLUORFEN	5.50	0.00	450059	0	4.1743	N.D. #
13)	MA	CAPTAN	5.62	5.86	224050	707821	27.6322	9.0794 #
14)	MA	O,P-TDE/DDD	5.77	6.32	301290	1511644	3.4345	18.9231 #
15)	MA	NITROFEN	6.07	6.63	3151577	752254	17.0651	5.6391 #
16)	MA	O,P-DDT	6.07	6.63	3151577	752254	17.0651	5.6391 #
17)	MA	CARBOPHENOTHION	0.00	6.91	0	204823	N.D.	43.2784 #
		Target Compounds						
1)	MA	DICHLOBENIL	0.00	0.00	0	0	N.D.	N.D.
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D. d	N.D. d
8)	MA	DACTHAL	0.00	0.00	0	0	N.D.	N.D.
9)	MA	DICOFOL	0.00	0.00	0	0	N.D.	N.D.
18)	MA	BIS(2-ETHYLHEXYL	0.00	0.00	0	0	N.D.	N.D.

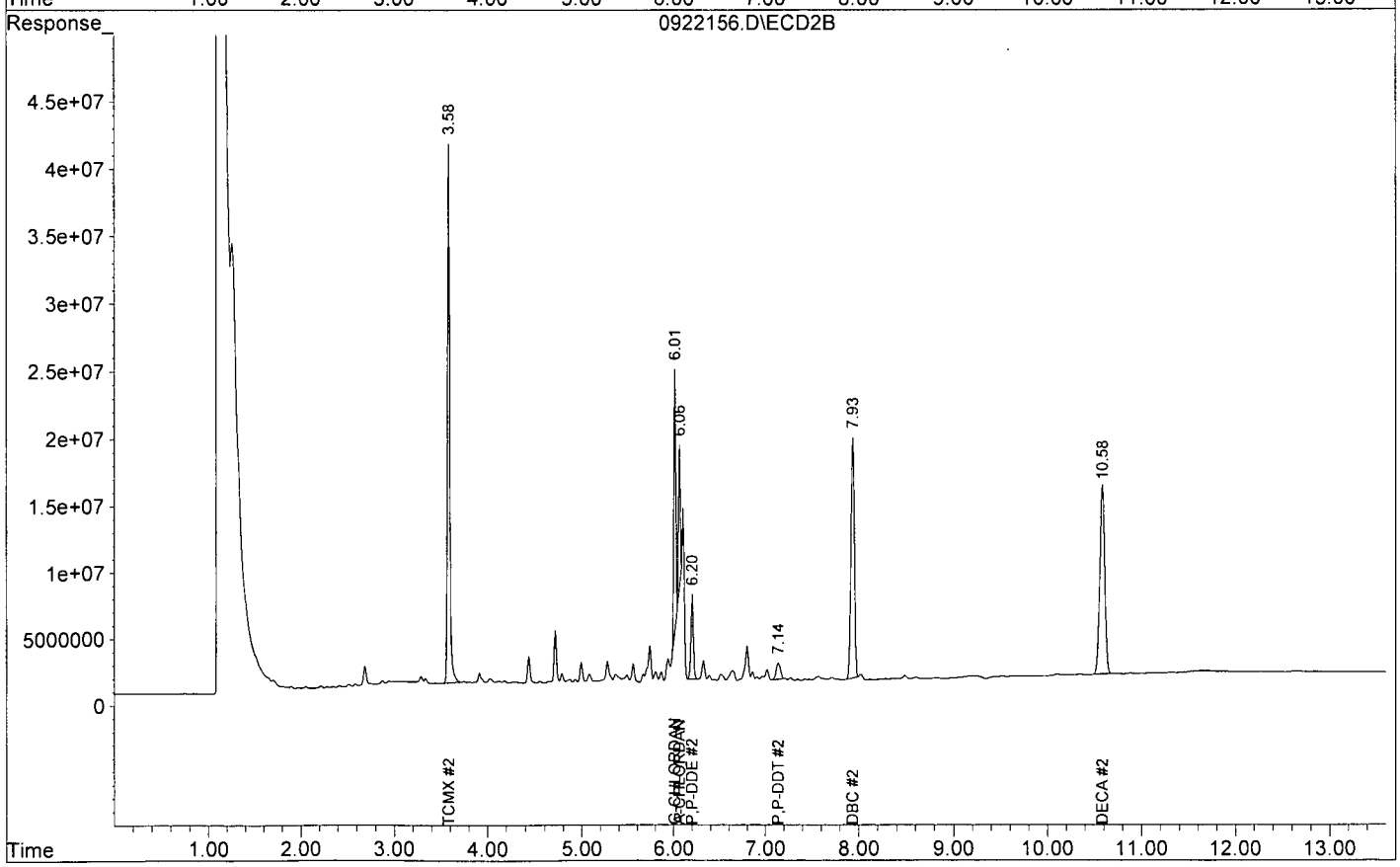
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922156.D
Acq On : 9-24-14 15:06:55
Sample : AZ02114S11 5X1/0.05/30.04G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 56
Operator: MA
Inst : Lucy
Multiplr: 3328.89





EPA 8081A SOIL - ISM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN017

APPL ID: AZ02115

Sample Collection Date: 09/03/14

QCG: #81ACT-140916A-190201

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDE	0.025 J	0.05	0.004	0.002	mg/kg	09/16/14	09/24/14
EPA 8081A	4,4'-DDT	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	CHLORDANE, TECHNICAL	0.16 J	1.00	0.050	0.015	mg/kg	09/16/14	09/24/14
EPA 8081A	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/24/14
EPA 8081A	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/24/14
EPA 8081A	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/24/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	73.5	55-130			%	09/16/14	09/24/14
EPA 8081A	SURROGATE: TCMX (S)	97.6	70-125			%	09/16/14	09/24/14

J = Estimated value.

Quant Method: OCL0922.M
Run #: 0922142
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:22 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922142.D\ECD1A.CH Vial: 42
Signal #2 : G:\LUCY\DATA\140922\0922142.D\ECD2B.CH
Acq On : 9-24-14 10:54:11 Operator: MA
Sample : AZ02115S11 5X1/0.05/30.34G Inst : Lucy
Misc : soil Multiplr: 3295.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 11:10 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
1)	S TCMX	2.90	3.58	46095263	41083246	360.3802	321.7454	
	Surrogate Spike 329.598			Recovery	=	109.34%	97.62%	
22)	S DBC	6.92	7.93	38684596	17798136	233.7948	315.9374	#
	Surrogate Spike 329.598			Recovery	=	70.93%	95.86%	
23)	S DECA	9.28	10.58	46937631	13656777	197.3262	242.0791	
	Surrogate Spike 329.598			Recovery	=	59.87%	73.45%	
	Target Compounds							
9)	TM G-CHLORDANE	5.29	6.01	5889129	4519197	47.5314	43.0028	
11)	TM A-CHLORDANE	5.38	6.06	4093307	2072583	34.0648	24.9713	#
12)	TM P,P-DDE	5.57	6.20	3146006	2805305	25.2954	24.5546	
	Target Compounds							
2)	TM A-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
3)	TM B-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
4)	M G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d	
5)	TM D-BHC	0.00	0.00	0	0	N.D. d	N.D. d	
6)	M HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d	
7)	M ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
8)	TM HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d	
10)	TM A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d	
13)	M DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
14)	M ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d	
15)	TM B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d	
16)	TM P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d	
17)	TM ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d	
18)	M P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d	
19)	TM ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d	
20)	TM ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d	
21)	TM METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922142.D\ECD1A.CH Vial: 42
Signal #2 : G:\LUCY\DATA\140922\0922142.D\ECD2B.CH
Acq On : 9-24-14 10:54:11 Operator: MA
Sample : AZ02115S11 5X1/0.05/30.34G Inst : Lucy
Misc : soil Multiplr: 3295.98
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:19 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922142.D\ECD1A.CH Vial: 42
Signal #2 : G:\LUCY\DATA\140922\0922142.D\ECD2B.CH
Acq On : 9-24-14 10:54:11 Operator: MA
Sample : AZ02115S11 5X1/0.05/30.34G Inst : Lucy
Misc : soil Multiplr: 3295.98
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:48 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	9410125	6492633	215.9170m	161.5216m#
2) L2AK T. CHLORDANE	4.21	4.93	523073	112365	61.7809	15.3856 #
3) L2AK T. CHLORDANE {2}	4.66	5.29	321060	448555	73.7720	95.6213 #
4) L2AK T. CHLORDANE {3}	5.29	6.01	5449283	4515747	321.8059	262.0470
5) L2AK T. CHLORDANE {4}	5.38	6.10	3022470	1355445	307.1790	172.7593 #
6) L2AK T. CHLORDANE {5}	6.35	7.03	94238	60521	23.6150	19.3727
Sum T. CHLORDANE			9410125	6492633	788.1528	565.1859
Average T. CHLORDANE					157.631	113.037

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922142.D\ECD1A.CH Vial: 42
Signal #2 : G:\LUCY\DATA\140922\0922142.D\ECD2B.CH
Acq On : 9-24-14 10:54:11 Operator: MA
Sample : AZ02115S11 5X1/0.05/30.34G Inst : Lucy
Misc : soil Multiplr: 3295.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 12:03 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

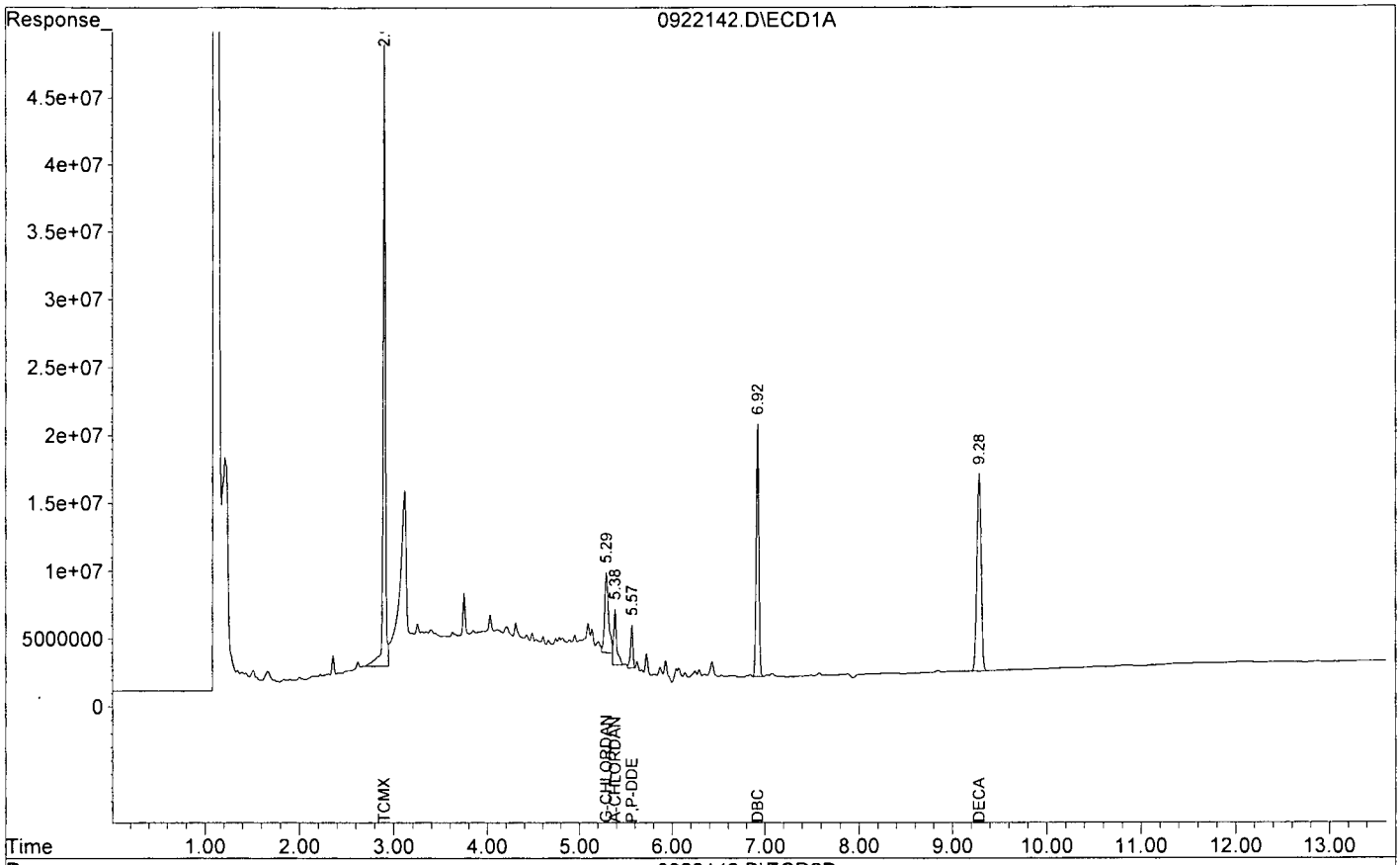
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Target Compounds						
1)	MA	DICHLOBENIL	0.00	2.36	0	76145	N.D.	1.5220 #
2)	MA	BENEFIN	0.00	3.44	0	30559	N.D.	0.5241 #
5)	MA	PCNB	3.75	0.00	3077395	0	19.2173	N.D. #
6)	MA	CHLOROTHALONIL	4.42	0.00	409929	0	2.3267	N.D. #
7)	MA	ALACHLOR	4.21	0.00	684125	0	35.9840	N.D. #
9)	MA	DICOFOL	0.00	5.46	0	502846	N.D.	9.4170 #
10)	MA	O,P-DDE	5.29	0.00	5996746	0	66.1824	N.D. #
11)	MA	OXADIAZON	5.38	0.00	4093307	0	81.4907	N.D. #
13)	MA	CAPTAN	5.62	5.86	733929	425383	32.4165	5.4026 #
14)	MA	O,P-TDE/DDD	0.00	6.32	0	1437279	N.D.	17.8143 #
15)	MA	NITROFEN	6.07	0.00	628342	0	3.3687	N.D. #
16)	MA	O,P-DDT	6.07	0.00	628342	0	3.3687	N.D. #
18)	MA	BIS(2-ETHYLHEXYL	6.60	0.00	61303	0	111.7919	N.D. #
		Target Compounds						
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D. d	N.D. d
8)	MA	DACTHAL	0.00	0.00	0	0	N.D.	N.D.
12)	MA	OXYFLUORFEN	0.00	0.00	0	0	N.D.	N.D.
17)	MA	CARBOPHENOTHION	0.00	0.00	0	0	N.D.	N.D.

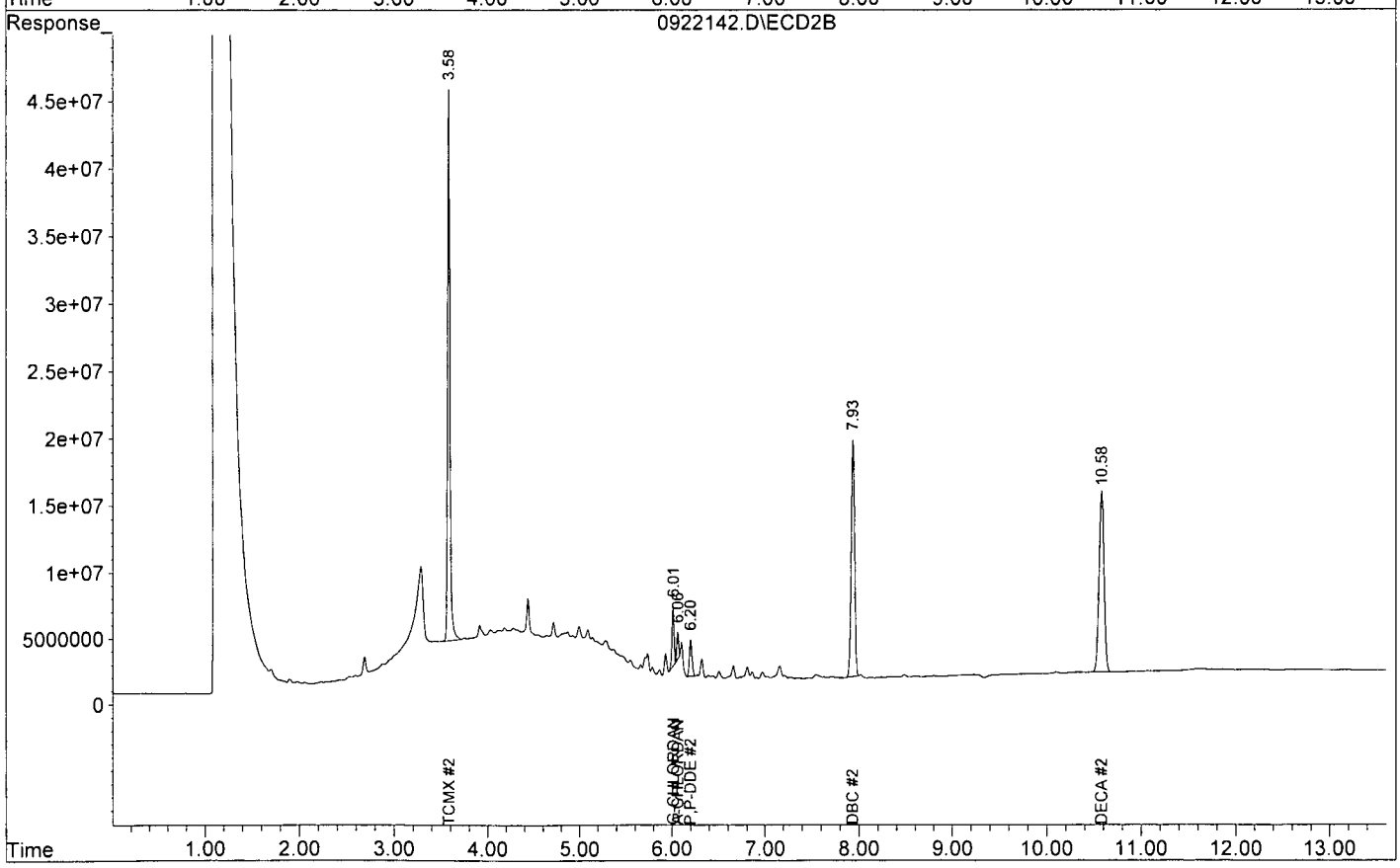
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922142.D
Acq On : 9-24-14 10:54:11
Sample : AZ02115S11 5X1/0.05/30.34G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 42
Operator: MA
Inst : Lucy
Multiplr: 3295.98





EPA 8081A OCL WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN018
Sample Collection Date: 09/03/14

ARF: 74218
APPL ID: AZ02116
QCG: #81HC0-140909A-190200

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8081A	4,4'-DDD	0.010 U	0.05	0.010	0.003	ug/L	09/09/14	09/23/14
EPA 8081A	4,4'-DDE	0.010 U	0.05	0.010	0.004	ug/L	09/09/14	09/23/14
EPA 8081A	4,4'-DDT	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
EPA 8081A	ALDRIN	0.010 U	0.05	0.010	0.009	ug/L	09/09/14	09/23/14
EPA 8081A	CHLORDANE, TECHNICAL	0.04 U	1.0	0.04	0.01	ug/L	09/09/14	09/23/14
EPA 8081A	DIELDRIN	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
EPA 8081A	ENDOSULFAN I	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
EPA 8081A	ENDOSULFAN II	0.010 U	0.05	0.010	0.004	ug/L	09/09/14	09/23/14
EPA 8081A	ENDOSULFAN SULFATE	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
EPA 8081A	ENDRIN	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
EPA 8081A	GAMMA-BHC	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
EPA 8081A	HEPTACHLOR	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
EPA 8081A	HEPTACHLOR EPOXIDE	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
EPA 8081A	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
EPA 8081A	METHOXYCHLOR	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
EPA 8081A	TOXAPHENE	0.40 U	1.0	0.40	0.38	ug/L	09/09/14	09/23/14
EPA 8081A	SURROGATE: DECACHLOROBIPHEN	86.9	30-135			%	09/09/14	09/23/14
EPA 8081A	SURROGATE: TCMX (S)	74.5	25-140			%	09/09/14	09/23/14

Quant Method: OCL0922.M
Run #: 0922107
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 12:38:22 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922107.D\ECD1A.CH Vial: 7
Acq On : 9-23-14 18:23:26 Operator: MA
Sample : AZ02116W04 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint.p

Data File : G:\LUCY\DATA\140922\0922107.D\ECD2B.CH Vial: 7
Acq On : 9-23-14 18:23:25 Operator: MA
Sample : AZ02116W04 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint2.p
Quant Time: Sep 24 9:28 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
1)	S	TCMX	2.89	3.58	46293200	47049760	0.2196	0.2236
		Surrogate Spike 0.300 Range 25 - 150 Recovery =					73.20%	74.53%
22)	S	DBC	6.92	7.94	58608617	32297987	0.2149	0.3479 #
		Surrogate Spike 0.300 Recovery =					71.63%	115.97%
23)	S	DECA	9.28	10.58	88063728	24250106	0.2246	0.2608
		Surrogate Spike 0.300 Range 25 - 150 Recovery =					74.87%	86.93%
		Target Compounds						
		Target Compounds						
2)	TM	A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM	B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M	G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM	D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M	HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M	ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM	HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
9)	TM	G-CHLORDANE	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM	A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
11)	TM	A-CHLORDANE	0.00	0.00	0	0	N.D. d	N.D. d
12)	TM	P,P-DDE	0.00	0.00	0	0	N.D. d	N.D. d
13)	M	DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
14)	M	ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM	B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
16)	TM	P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM	ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
18)	M	P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM	ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM	ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM	METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922107.D\ECD1A.CH Vial: 7
Acq On : 9-23-14 18:23:26 Operator: MA
Sample : AZ02116W04 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922107.D\ECD2B.CH Vial: 7
Acq On : 9-23-14 18:23:25 Operator: MA
Sample : AZ02116W04 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events2.e
Quant Time: Sep 24 11:22 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922107.D\ECD1A.CH Vial: 7
Acq On : 9-23-14 18:23:26 Operator: MA
Sample : AZ02116W04 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922107.D\ECD2B.CH Vial: 7
Acq On : 9-23-14 18:23:25 Operator: MA
Sample : AZ02116W04 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events2.e
Quant Time: Sep 24 11:56 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum T. CHLORDANE			0	0	N.D.	N.D.
Average T. CHLORDANE					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922107.D\ECD1A.CH Vial: 7
Acq On : 9-23-14 18:23:26 Operator: MA
Sample : AZ02116W04 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint.p

Data File : G:\LUCY\DATA\140922\0922107.D\ECD2B.CH Vial: 7
Acq On : 9-23-14 18:23:25 Operator: MA
Sample : AZ02116W04 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint2.p
Quant Time: Sep 24 12:13 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

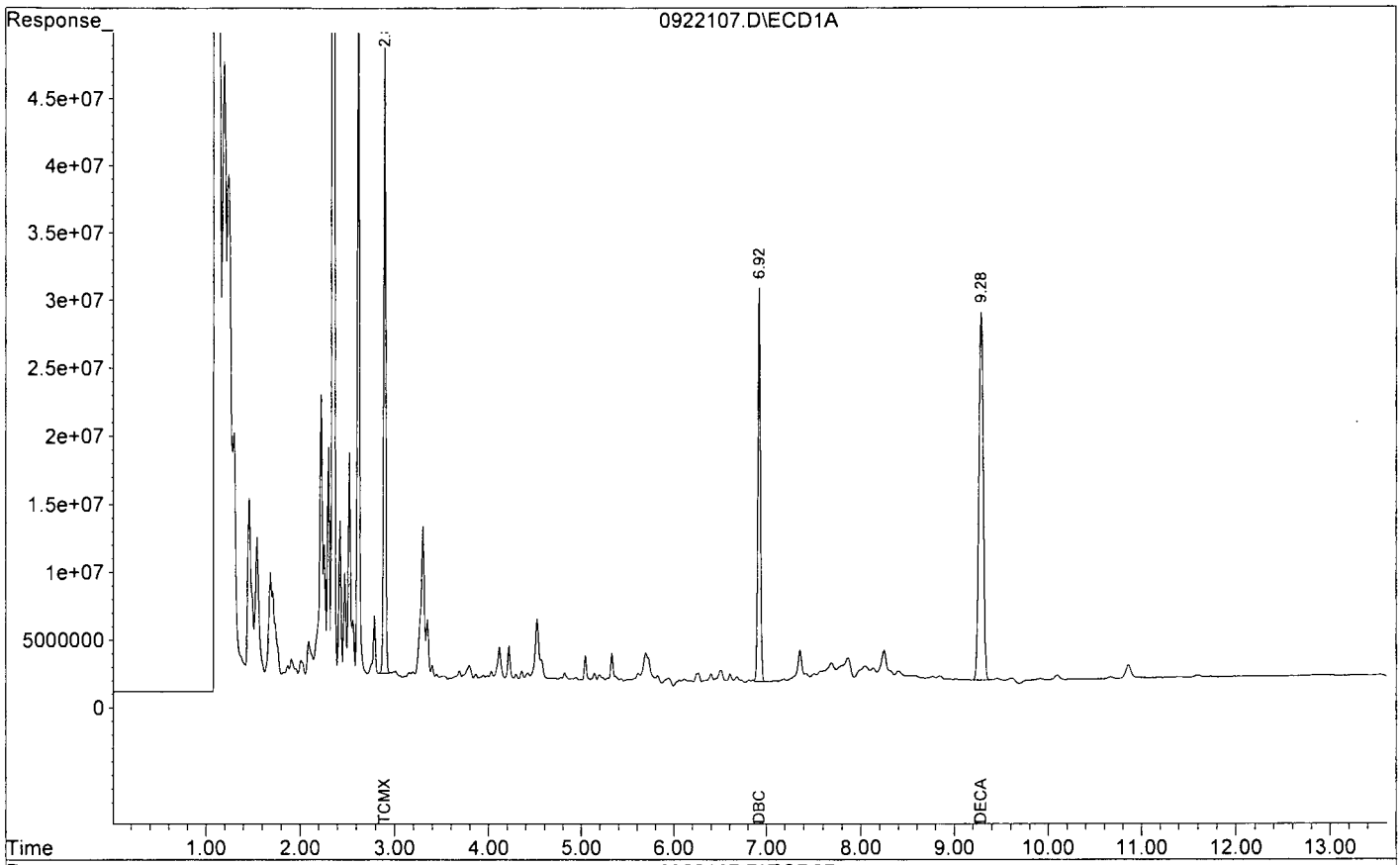
Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

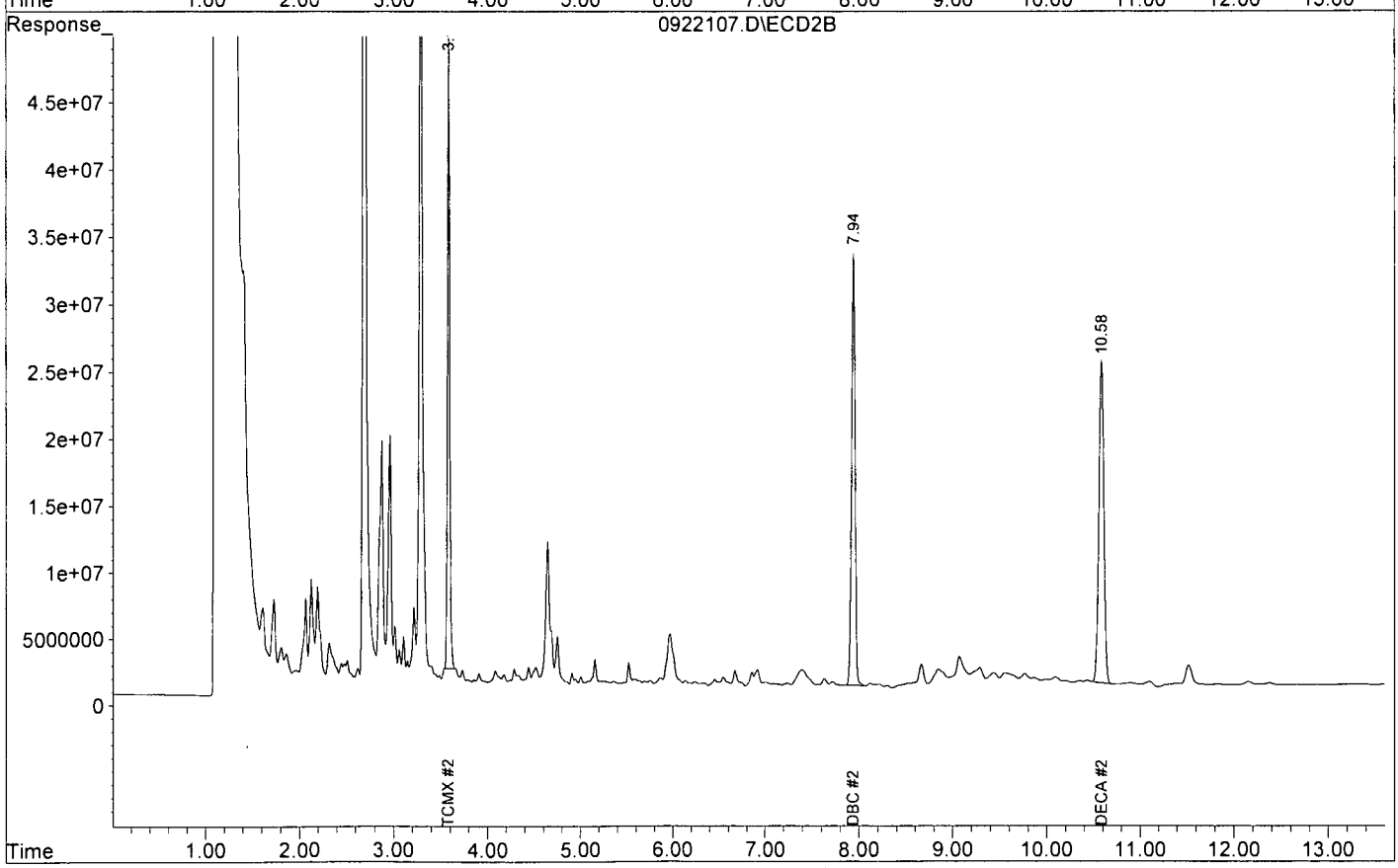
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Target Compounds						
1)	MA	DICHLOBENIL	2.09	0.00	2454934	0	0.0255	N.D. #
5)	MA	PCNB	0.00	4.34	0	331455	N.D.	0.0012 #
6)	MA	CHLOROTHALONIL	4.41	4.95	346294	294162	0.0012	0.0010
7)	MA	ALACHLOR	4.22	4.75	2425261	3451885	0.0774	0.0974 #
8)	MA	DACTHAL	0.00	5.16	0	1713738	N.D.	0.0083 #
10)	MA	O,P-DDE	5.28	0.00	145615	0	0.0010	N.D. #
11)	MA	OXADIAZON	5.37	5.97	258018	3766073	0.0031	0.0411 #
12)	MA	OXYFLUORFEN	5.51	6.14	110346	269832	0.0006	0.0014 #
13)	MA	CAPTAN	5.61	5.87	501184	464118	0.0183	0.0036 #
15)	MA	NITROFEN	6.06	0.00	426737	0	0.0014	N.D. #
16)	MA	O,P-DDT	6.06	0.00	426737	0	0.0014	N.D. #
17)	MA	CARBOPHENOTHION	6.40	6.92	525754	1136262	0.0058	0.0359 #
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.63	479512	475828	0.5306	0.6208
		Target Compounds						
2)	MA	BENEFIN	0.00	0.00	0	0	N.D.	N.D.
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D. d	N.D. d
9)	MA	DICOFOL	0.00	5.47	0	83463	N.D.	N.D.
14)	MA	O,P-TDE/DDD	0.00	0.00	0	0	N.D.	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : G:\LUCY\DATA\140922\0922107.D
Acq On : 9-23-14 18:23:26
Sample : AZ02116W04 1/500
Misc : water
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 7
Operator: MA
Inst : Lucy
Multiplr: 2.00





EPA METHOD 8081A
Organochlorine Pesticides
Calibration Data

APPL, INC.

Data File Name:	**0922002.D**
Data File Path:	**G:\LUCY\DATA\140922**
Operator:	**MA**
Date Acquired:	**22 Sep 2014 09:13**
Method File:	**OCL0922.M**
Sample Name:	**OCL DEG CHK 8/19/14**
Vial Number:	**2**
Instrument Name:	**Lucy**

#	Name	Ret Time	Target Response
1)	P,P-DDT	6.43	158790000
2)	P,P-DDD	6.14	1191020
3)	P,P-DDE	5.57	717557

Breakdown **1.19**

#	Name	Ret Time	Target Response
1)	P,P-DDT #2	7.14	142502000
2)	P,P-DDD #2	6.77	355008
3)	P,P-DDE #2	6.20	823844

Breakdown **0.82**

#	Name	Ret Time	Target Response
1)	ENDRIN	6.04	160866000
2)	ENDRIN ALDEHYDE	6.55	1163390
3)	ENDRIN KETONE	7.55	2270150

Breakdown **2.1**

#	Name	Ret Time	Target Response
1)	ENDRIN #2	6.63	155182000
2)	ENDRIN ALDEHYDE #2	7.07	1926150
3)	ENDRIN KETONE #2	8.04	2803080

Breakdown **3.0**

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922002.D\ECD1A.CH Vial: 2
Signal #2 : G:\LUCY\DATA\140922\0922002.D\ECD2B.CH
Acq On : 9-22-14 9:13:38 Operator: MA
Sample : OCL DEG CHK 8/19/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 23 13:40 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

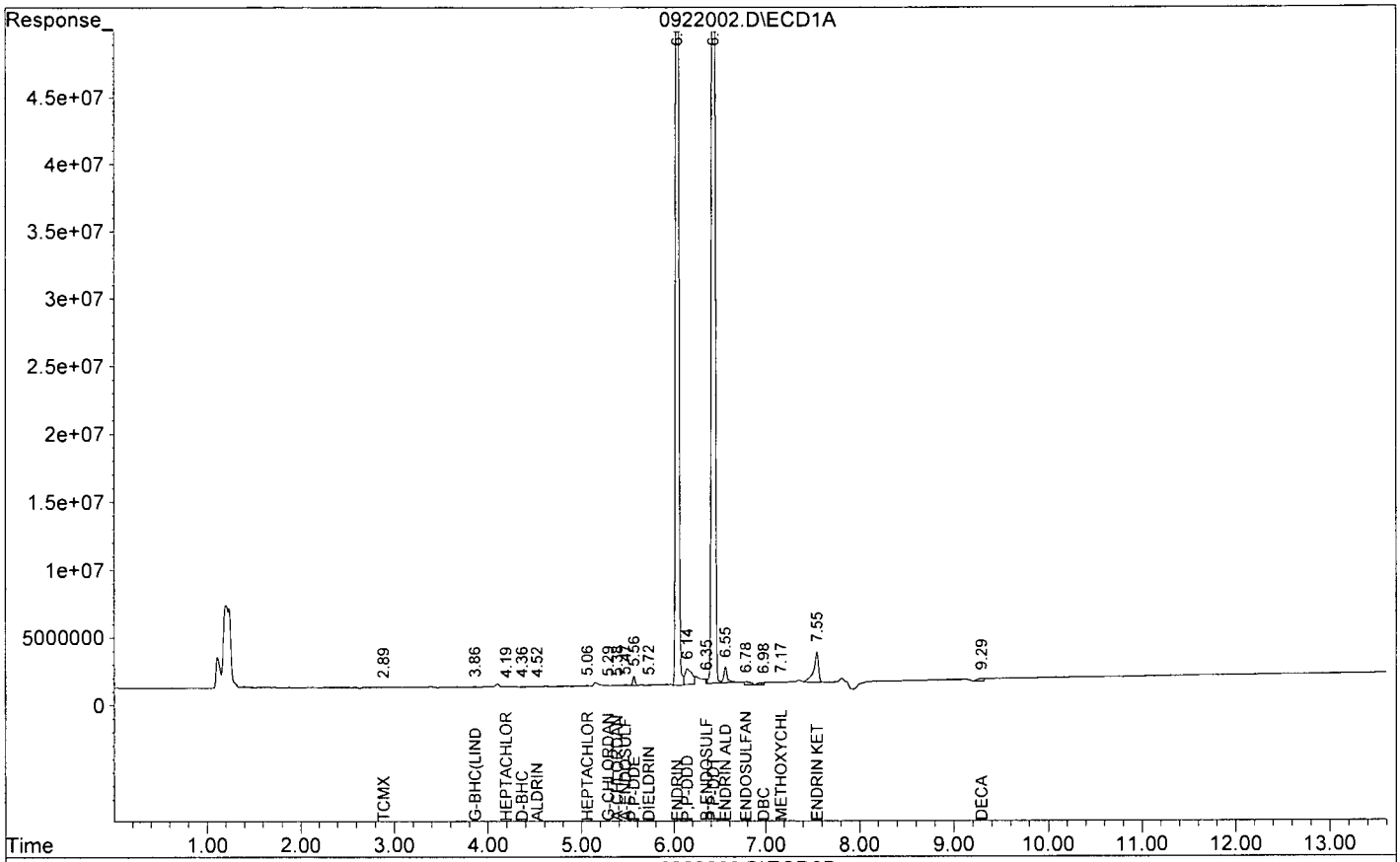
Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

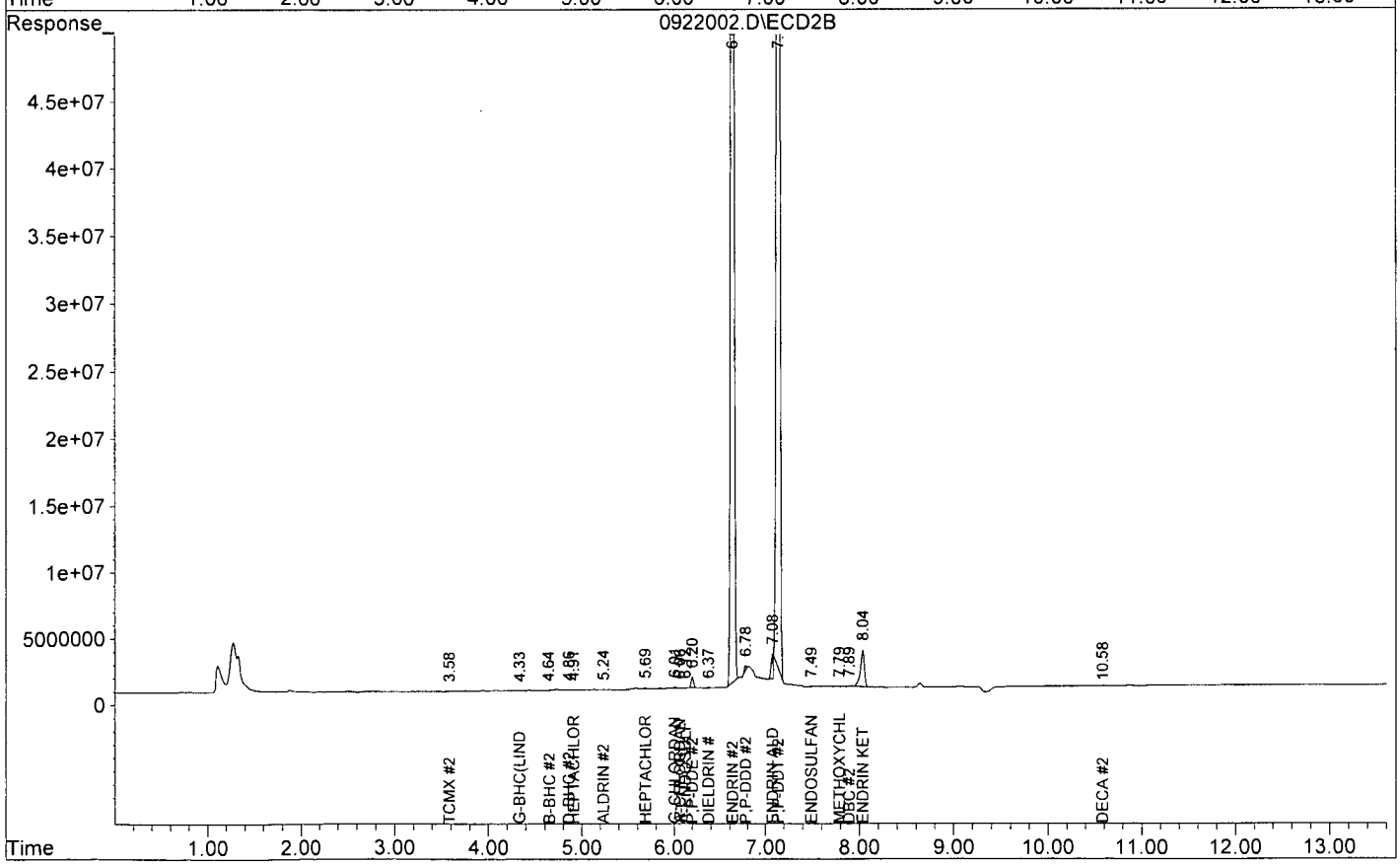
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
1)	S	TCMX	2.89	3.58	7507	9140	0.0000	0.0000	
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					0.00%#	0.00%#	
22)	S	DBC	6.98f	7.89f	683605	2860	0.0013	0.0000	#
		Surrogate Spike 0.150 Recovery =					0.87%	0.00%	
23)	S	DECA	9.29	10.58	864391	25397	0.0011	0.0001	#
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					0.73%#	0.07%#	
		Target Compounds							
4)	M	G-BHC(LINDANE)	3.86	4.33	73354	24580	0.0002	0.0000	#
5)	TM	D-BHC	4.36	4.86	54221	11364	0.0001	0.0000	#
6)	M	HEPTACHLOR	4.19	4.91	28897	31521	0.0001	0.0001	#
7)	M	ALDRIN	4.52	5.24	20631	15776	0.0001	0.0000	
8)	TM	HEPTACHLOR EPOXI	5.06	5.69	84969	86985	0.0002	0.0002	
9)	TM	G-CHLORDANE	5.29	6.01	15496	96939	0.0000	0.0003	#
10)	TM	A-ENDOSULFAN	5.47	6.12	119881	15275	0.0003	0.0001	#
11)	TM	A-CHLORDANE	5.38	6.06	26299	10115	0.0001	0.0000	#
12)	TM	P,P-DDE	5.56	6.20	717557	823844	0.0018	0.0022	
13)	M	DIELDRIN	5.72	6.37	75839	44586	0.0002	0.0001	#
14)	M	ENDRIN	6.04	6.63	160.9E6	155.2E6	0.4724	0.5140	
15)	TM	B-ENDOSULFAN	6.35f	0.00	330528	0	0.0010	N.D.	#
16)	TM	P,P-DDD	6.14	6.78	1191018	355008	0.0033	0.0049	#
17)	TM	ENDRIN ALDEHYDE	6.55	7.08	1163389	1926150	0.0042	0.0091	m#
18)	M	P,P-DDT	6.42	7.14	158.8E6	142.5E6	0.4894	0.6246	#
19)	TM	ENDOSULFAN SULFA	6.78	7.49f	215113	30800	0.0007	0.0006	
20)	TM	ENDRIN KETONE	7.55	8.04	2270151	2803079	0.0075	0.0103	#
21)	TM	METHOXYCHLOR	7.17f	7.79f	14008	30625	0.0001	0.0002	#
		Target Compounds							
2)	TM	A-BHC	3.49	3.96	58732	2789	N.D.	N.D.	
3)	TM	B-BHC	4.11	4.64	218471	1593	N.D.	0.0000	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922002.D Vial: 2
Acq On : 9-22-14 9:13:38 Operator: MA
Sample : OCL DEG CHK 8/19/14 Inst : Lucy
Misc : water Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

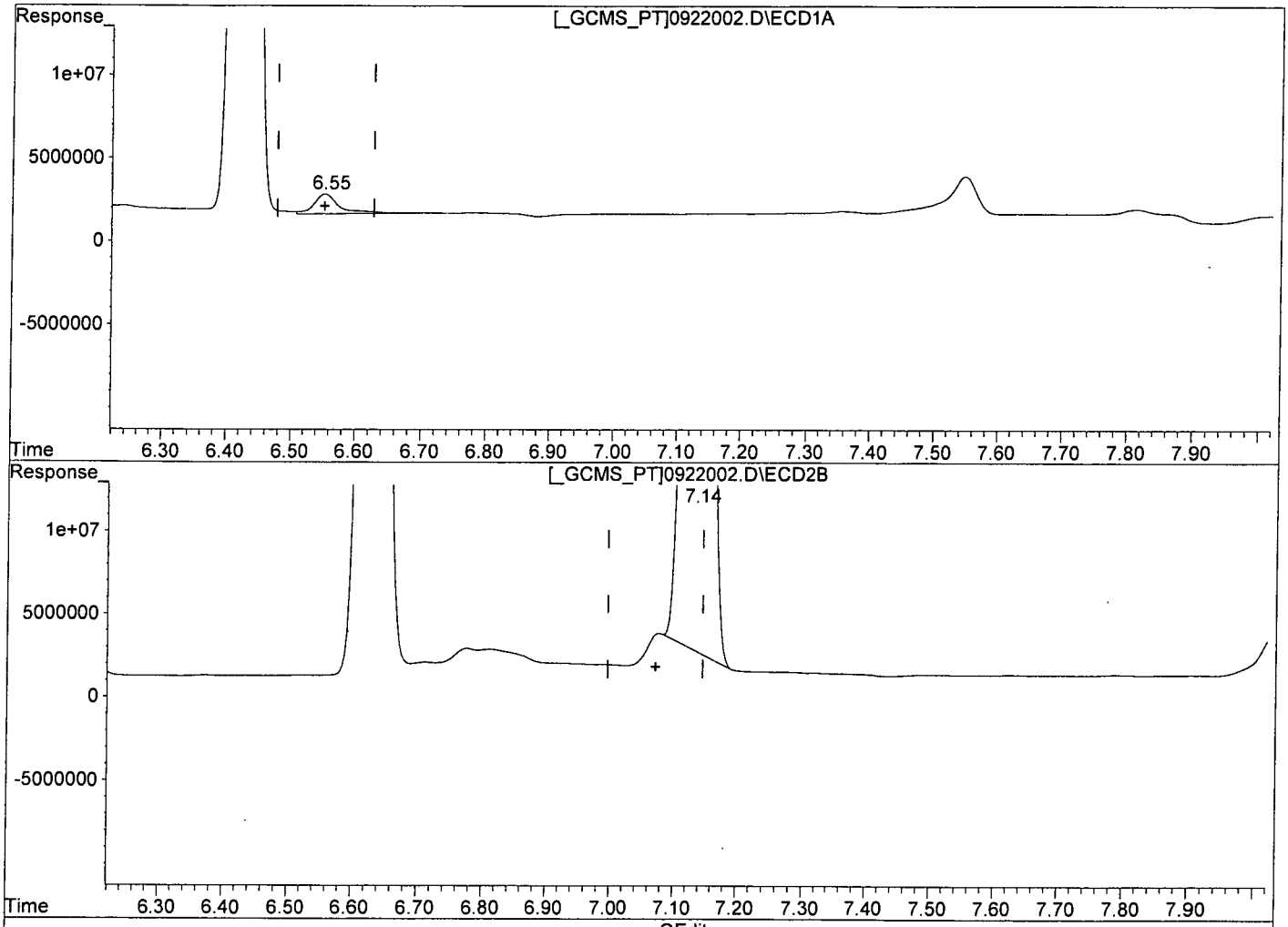




Quantitation Report

Signal #1 : G:\LUCY\DATA\140922\0922002.D\ECD1A.CH Vial: 2
Signal #2 : G:\LUCY\DATA\140922\0922002.D\ECD2B.CH
Acq On : 9-22-14 9:13:38 Operator: MA
Sample : OCL DEG CHK 8/19/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 23 13:39 2014 Quant Results File: OCL0922.RES

Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration



QEdit

(17) ENDRIN ALDEHYDE (TM)

6.55min 0.004ppb

response 1163389

(17) ENDRIN ALDEHYDE #2 (TM)

7.14min 0.670ppb

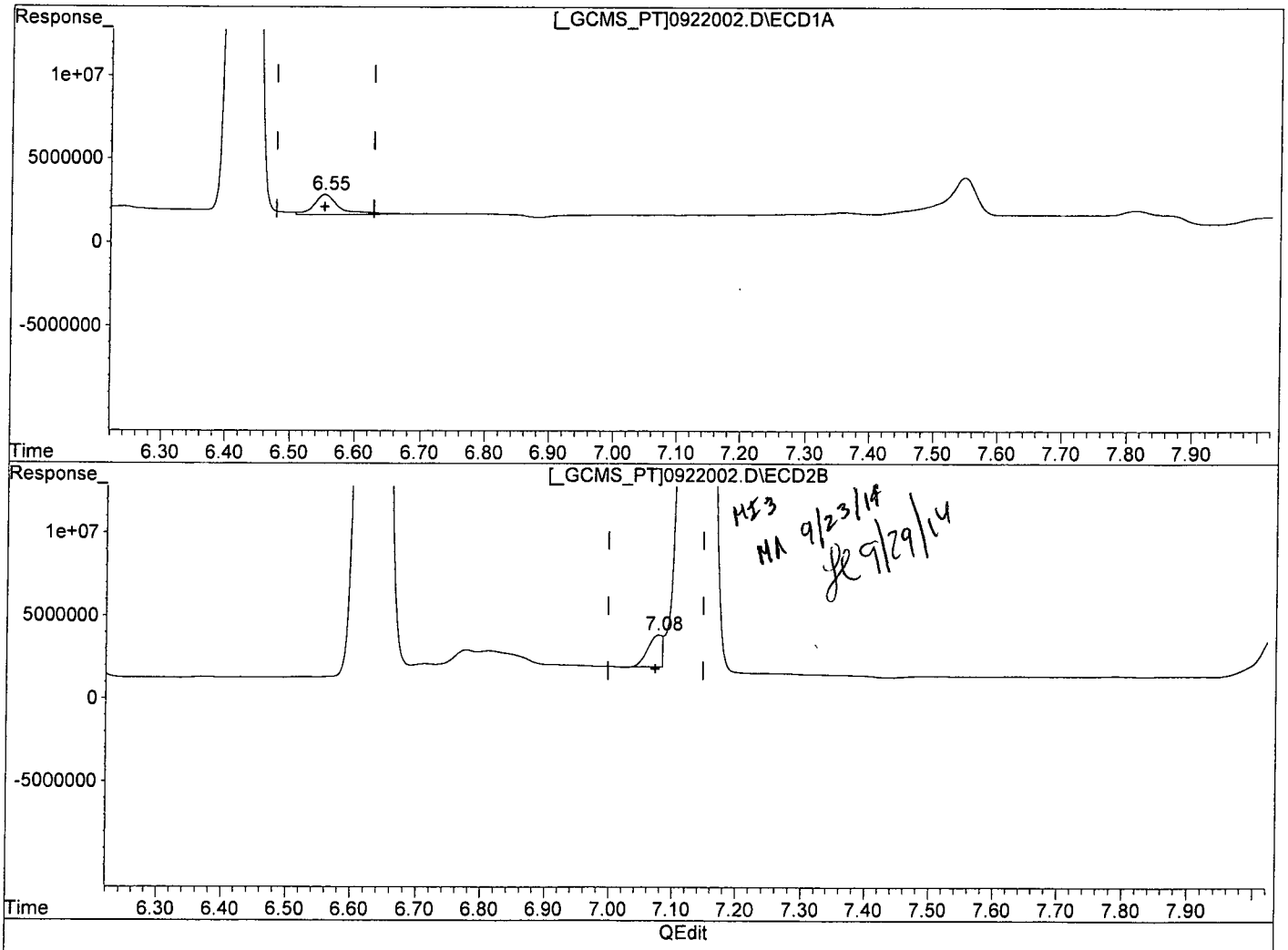
response 142502401

(+) = Expected Retention Time
0922002.D OCL0922.M Tue Sep 23 13:39:59 2014

Quantitation Report

Signal #1 : G:\LUCY\DATA\140922\0922002.D\ECD1A.CH Vial: 2
Signal #2 : G:\LUCY\DATA\140922\0922002.D\ECD2B.CH
Acq On : 9-22-14 9:13:38 Operator: MA
Sample : OCL DEG CHK 8/19/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 23 13:39 2014 Quant Results File: OCL0922.RES

Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration



MI3
MA 9/23/14
JL 9/29/14

(17) ENDRIN ALDEHYDE (TM)

6.55min 0.004ppb

response 1163389

(17) ENDRIN ALDEHYDE #2 (TM)

7.08min 0.009ppb m

response 1926150

(+) = Expected Retention Time
0922002.D OCL0922.M Tue Sep 23 13:40:11 2014

Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No. 74218
Case No: Initial Cal. Date: 09/22/14
Matrix: Water Instrument: Lucy Initials: MA

			0922005 D	0922006 D	0922007.D	0922008 D	0922009 D	0922010 D	0922004 D	0922003.D						
		Compound	1	2	3	4	5	6	1A	1B			Avg	%RSD		
1	S	TCMX	200838800	224333010	229184840	217322297	206759260	214060192	197174500	196647000			210789987	5.9	S	
2	TML	A-BHC	210454500	288586640	303995460	295923567	279079673	284078070	200305833	181386000			255476218	19	TML	0.999
3	TML	B-BHC	141919200	118780320	123053335	116771077	113576168	117472262	158881667	333263000			152964628	49	TML	0.999
4	M	G-BHC(LINDANE)	214878700	263681000	279909770	266459800	250824448	260724920	205356667	207289500			243640601	12	M	
5	TM	D-BHC	206957900	269002380	282198620	272557920	255937143	263080228	199229667	206672000			244454482	14	TM	
6	M	HEPTACHLOR	175893300	208626170	222436020	216237213	207181735	209757718	166872000	165628500			196579082	12	M	
7	M	ALDRIN	179381300	223781160	231369955	225510083	213976963	217952812	174251500	178179500			205550409	12	M	
8	TM	HEPTACHLOR EPOXIDE	189289500	211217380	212787920	206183287	193927923	195378184	183158333	184931500			197109253	5.9	TM	
9	TM	G-CHLORDANE	183456000	219410700	223341160	221591867	209355430	211314422	182936833	182079000			204185677	9.0	TM	
10	TM	A-ENDOSULFAN	159069300	189194250	192907370	186436947	180373648	181644860	160197500	156081500			175738172	8.5	TM	
11	TM	A-CHLORDANE	185425700	207208590	216640265	209663323	198387385	200143252	180461333	186282500			198026544	6.5	TM	
12	TM	P,P-DDE	178170600	222509510	233562585	221954370	213686798	213337982	172810000	183661500			204961668	11	TM	
13	M	DIELDRIN	168381200	209985690	219270985	213030777	202988260	199865782	163131000	169280000			193241712	12	M	
14	M	ENDRIN	144151700	160351130	168187510	165018460	160257253	166286660	158253333	239736500			170280318	17	M	
15	TM	B-ENDOSULFAN	161728900	173026790	182298320	171985787	169222380	170820294	169608333	171323500			171251788	3.3	TM	
16	TM	P,P-DDD	167170700	180157010	194148760	185897300	176857960	177866058	179182500	162069000			177918661	5.6	TM	
17	TM	ENDRIN ALDEHYDE	131053700	142204730	148010670	141261417	137292458	138808240	130060667	140155000			138605860	4.2	TM	
18	M	P,P-DDT	131714700	173557800	185180990	178499583	171471933	182457038	135674167	139302000			162232276	14	M	
19	TM	ENDOSULFAN SULFATE	145936500	149290240	151000300	150950260	142069290	144749866	154884167	215434000			156789328	15	TM	
20	TM	ENDRIN KETONE	134295500	164798760	162508635	160453453	153796888	154814276	133745833	138718000			150391418	8.6	TM	
21	TM	METHOXYCHLOR	66372900	71891890	74205510	74889773	70251225	71612874	64058500	61193000			69309459	7.1	TM	
22	S	DBC	274063900	261135290	270670475	270341370	259722395	272704716	300141833				272682854	4.9	S	
23	S	DECA	463208300	367906670	361728685	348603407	334433225	345561156	522589667				392004444	18	S	
24		Signal #2														
25																
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7.8522521

Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 09/22/14
Matrix: Water Instrument: Lucy Initials: MA

			0922005 D	0922006 D	0922007 D	0922008.D	0922009.D	0922010 D	0922004 D	0922003.D						
		Compound	1	2	3	4	5	6	1A	1B			Avg	%RSD		
36	S	TCMX #2	193329300	224540030	230496500	222232490	210982330	215181002	195276000	191399500			210429644	7.3	S	
37	TML	A-BHC #2	213871200	304274580	320803655	304050967	294383680	298231512	201008000	167901500			263065637	22	TML	0.999
38	TM	B-BHC #2	110559700	120513990	126230150	122523407	118882145	123092002	105936500	94945000			115335362	9 3	TM	
39	M	G-BHC(LINDANE) #2	354296400	459834070	486112045	474953547	460432850	475938054	344225667	320589500			422047767	16	M	
40	TM	D-BHC #2	202271800	267540270	274145830	271266183	259990888	260048010	191725167	168458500			236930831	18	TM	
41	M	HEPTACHLOR #2	136300900	161413870	169752660	173426893	173692623	181696988	129557000	127073000			156614242	14	M	
42	M	ALDRIN #2	180785600	228985580	237624015	233433080	225830595	224539824	177027333	157679000			208238128	15	M	
43	TM	HEPTACHLOR EPOXIDE #2	189261500	209765640	218244640	215037490	206912370	201977452	189950500	186225500			202171887	6.1	TM	
44	TM	G-CHLORDANE #2	155402100	178853270	192778795	184630737	175370358	185567976	160597333	152309000			173188696	8.8	TM	
45	TM	A-ENDOSULFAN #2	121462000	145090260	141062490	138628107	137777453	139340332	125236333	115941500			133067309	8.0	TM	
46	TM	A-CHLORDANE #2	129505600	143750380	139624030	143189180	136528760	142219830	134757833	124671500			136780889	5.0	TM	
47	TM	P,P-DDE #2	157917300	204181330	215718025	214853790	204173280	210649056	156870167	141868000			188278868	16	TM	
48	M	DIELDRIN #2	156273200	185249130	199921205	194432517	186811853	196257708	156099500	147430000			177809389	12	M	
49	M	ENDRIN #2	133577800	152081550	160953365	163765637	160312918	163337570	133894500	139766000			150961167	8.8	M	
50	TM	B-ENDOSULFAN #2	140912500	150747460	161669305	155999570	153410018	154093426	145641333	146272500			151093264	4.4	TM	
51	TML	P,P-DDD #2	73676500	123786680	128522615	130897290	129826753	141691614	69787833	46555500			105593098	34	TML	0.997
52	TM	ENDRIN ALDEHYDE #2	106986300	105003720	111221985	107202773	103463973	107775774	105974333	103477000			106388232	2.4	TM	
53	M	P,P-DDT #2	95751700	119844350	130788295	129796410	128384100	129007174	88578667	90496500			114080899	17	M	
54	TML	ENDOSULFAN SULFATE #2	106504400	119638830	128723925	125386900	124291533	127486332	98601500	74406500			113129990	17	TML	1.000
55	TM	ENDRIN KETONE #2	128514500	137525820	141968630	141478237	138874863	143178246	124982000	130883000			135925662	5.1	TM	
56	TM	METHOXYCHLOR #2	67551900	66496700	67095360	65264153	65843645	67318322	63472500	61231000			65534198	3.3	TM	
57	S	DBC #2	78073000	95209240	100295375	100922790	99014063	105480346	70874500				92838473	14	S	
58	S	DECA #2	108439400	89203290	86125430	84907037	84011385	84473932	113633500				92970568	13	S	
59																
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7.9270495

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922003.D\ECD1A.CH Vial: 3
Signal #2 : G:\LUCY\DATA\140922\0922003.D\ECD2B.CH
Acq On : 9-22-14 9:50:12 Operator: MA
Sample : OCL 1B 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 22 12:55 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 17 08:30:22 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
1)	S TCMX	2.90	3.58	393294	382799	0.0011	0.0009	
	Surrogate Spike 0.150 Range 25 - 150 Recovery =					0.73%#	0.60%#	
22)	S DBC	6.93	7.93	931258	106162	0.0019	0.0006	#
	Surrogate Spike 0.150 Recovery =					1.27%	0.40%	
23)	S DECA	9.29	10.58	1530675	240998	0.0023	0.0013	#
	Surrogate Spike 0.150 Range 25 - 150 Recovery =					1.53%#	0.87%#	
	Target Compounds							
2)	TM A-BHC	3.49	3.99	362772	335803	0.0010	0.0010	
3)	TM B-BHC	4.08	4.61	666526	189890	0.0031	0.0008	#
4)	M G-BHC(LINDANE)	3.86	4.33	414579	641179	0.0010	0.0008	
5)	TM D-BHC	4.38	4.87	413344	336917	0.0010	0.0008	#
6)	M HEPTACHLOR	4.21	4.93	331257	254146	0.0009	0.0006	#
7)	M ALDRIN	4.53	5.26	356359	315358	0.0010	0.0008	
8)	TM HEPTACHLOR EPOXI	5.07	5.70	369863	372451	0.0011	0.0010	
9)	TM G-CHLORDANE	5.29	6.01	364158	304618	0.0010	0.0009	
10)	TM A-ENDOSULFAN	5.45	6.10	312163	231883	0.0010	0.0009	
11)	TM A-CHLORDANE	5.39	6.06	372565	249343	0.0011	0.0009	
12)	TM P,P-DDE	5.57	6.20	367323	283736	0.0010	0.0008	
13)	M DIELDRIN	5.73	6.37	338560	294860	0.0010	0.0009	
14)	M ENDRIN	6.04	6.63	479473	279532	0.0015	0.0010	#
15)	TM B-ENDOSULFAN	6.31	6.94	342647	292545	0.0012	0.0010	
16)	TM P,P-DDD	6.14	6.75	324138	93111	0.0011	0.0047	#
17)	TM ENDRIN ALDEHYDE	6.56	7.07	280310	206954	0.0012	0.0010	
18)	M P,P-DDT	6.43	7.13	278604	180993	0.0010	0.0008	
19)	TM ENDOSULFAN SULFA	6.79	7.43	430868	148813	0.0018	0.0014	
20)	TM ENDRIN KETONE	7.56	8.03	277436	261766	0.0011	0.0010	
21)	TM METHOXYCHLOR	7.22	7.71	122386	122462	0.0010	0.0010	

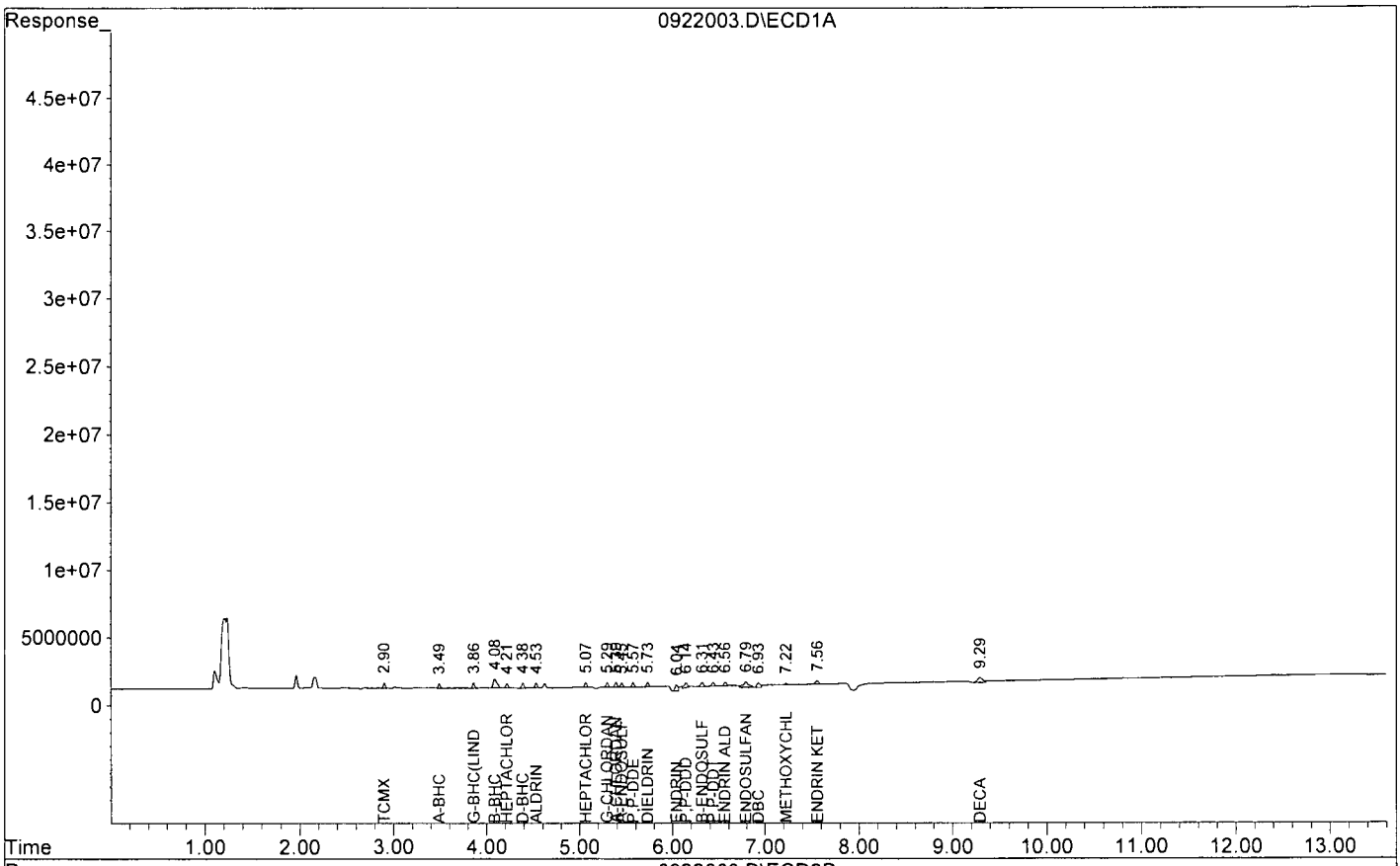
Target Compounds

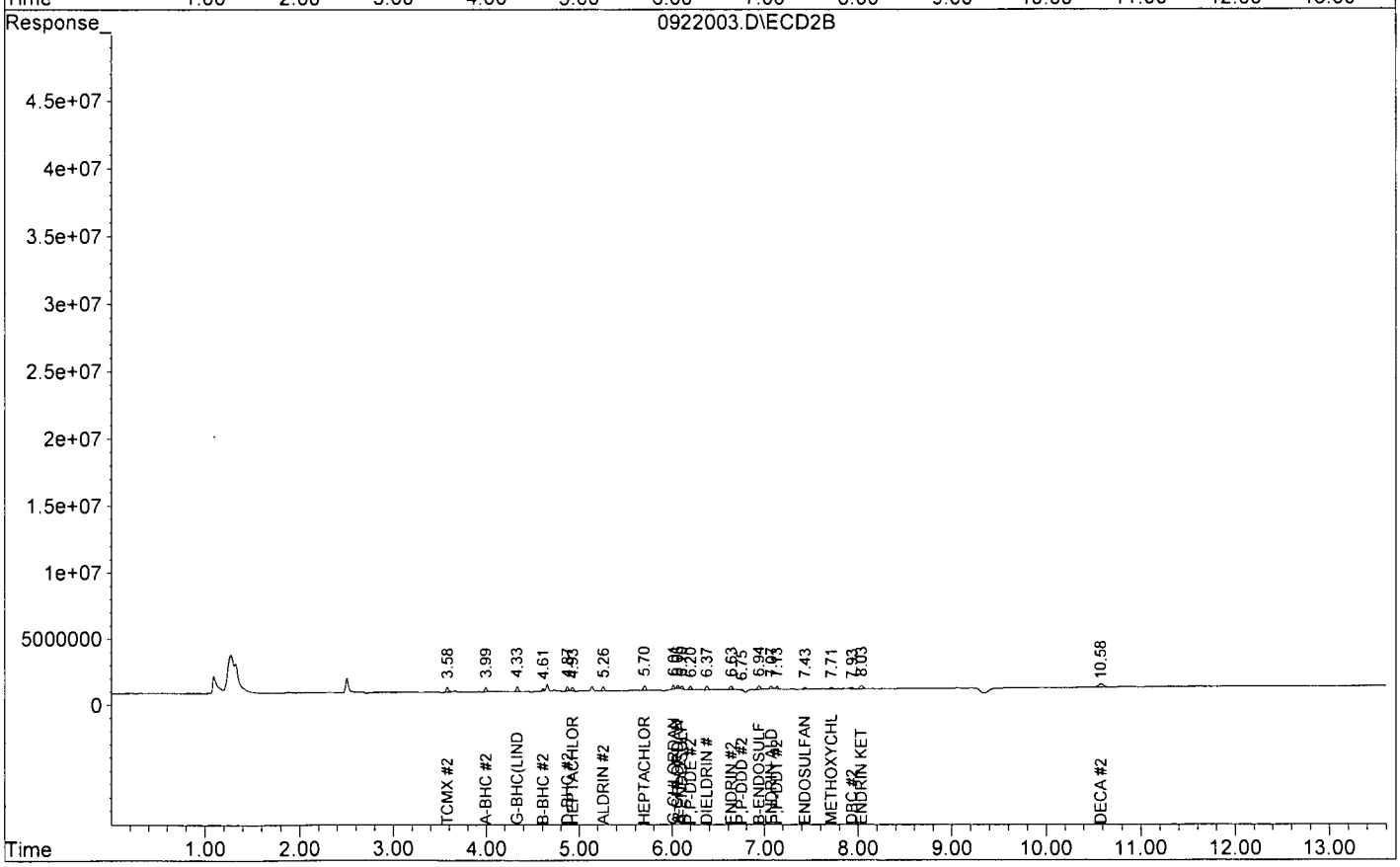
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922003.D
Acq On : 9-22-14 9:50:12
Sample : OCL 1B 7/16/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 3
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922004.D\ECD1A.CH Vial: 4
Signal #2 : G:\LUCY\DATA\140922\0922004.D\ECD2B.CH
Acq On : 9-22-14 10:06:43 Operator: MA
Sample : OCL 1A 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 22 12:55 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 17 08:30:22 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

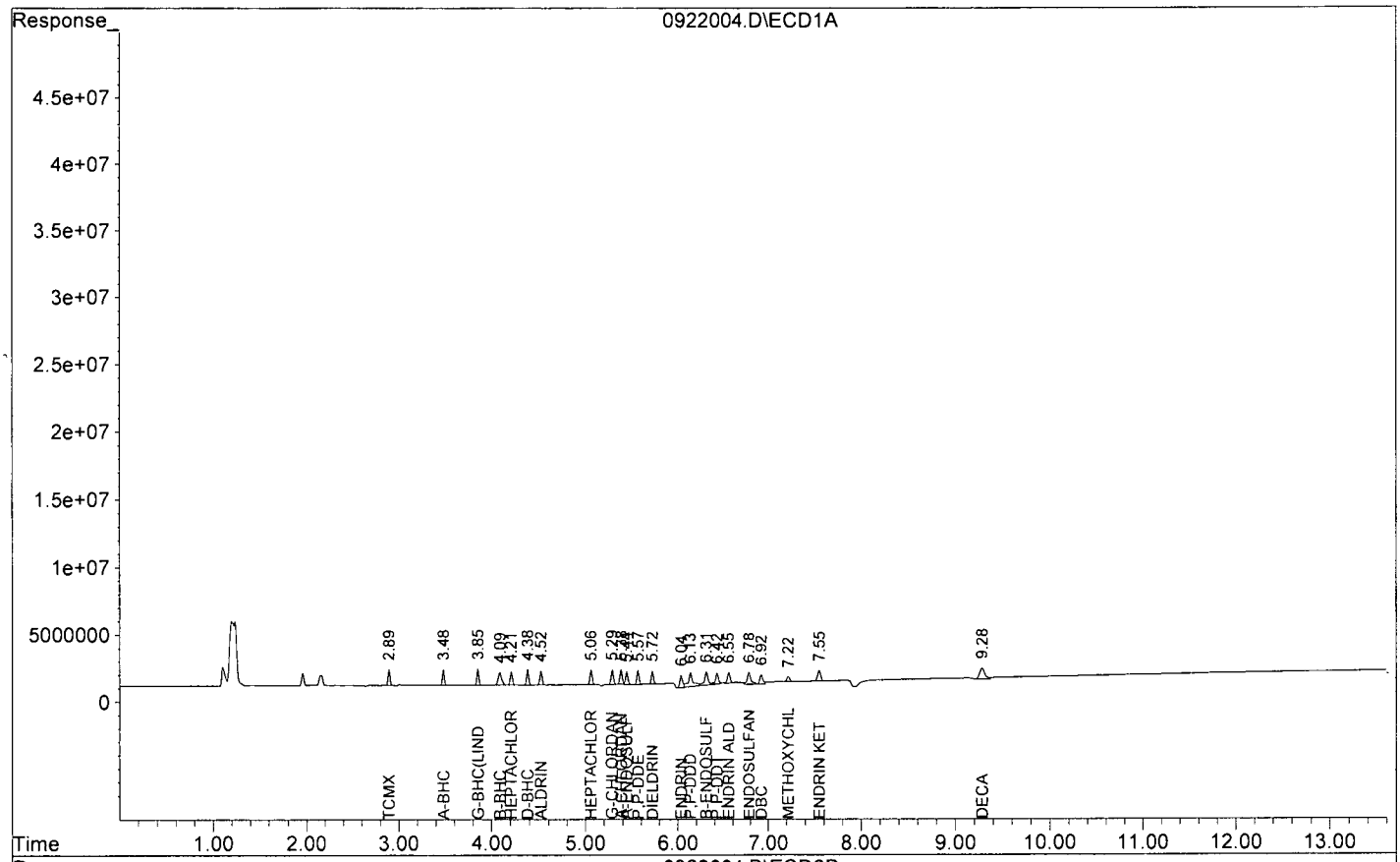
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
1)	S	TCMX	2.89	3.58	1183047	1171656	0.0032	0.0029	
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					2.13%#	1.93%#	
22)	S	DBC	6.92	7.93	1800851	425247	0.0036	0.0025	#
		Surrogate Spike 0.150 Recovery =					2.40%	1.67%	
23)	S	DECA	9.28	10.58	3135538	681801	0.0047	0.0037	
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					3.13%#	2.47%#	
		Target Compounds							
2)	TM	A-BHC	3.48	3.99	1201835	1206048	0.0026	0.0025	
3)	TM	B-BHC	4.09	4.61	953290	635619	0.0044	0.0028	#
4)	M	G-BHC(LINDANE)	3.85	4.33	1232140	2065354	0.0029	0.0025	
5)	TM	D-BHC	4.38	4.87	1195378	1150351	0.0029	0.0026	
6)	M	HEPTACHLOR	4.21	4.93	1001232	777342	0.0027	0.0020	#
7)	M	ALDRIN	4.52	5.26	1045509	1062164	0.0030	0.0026	
8)	TM	HEPTACHLOR EPOXI	5.06	5.70	1098950	1139703	0.0032	0.0029	
9)	TM	G-CHLORDANE	5.29	6.01	1097621	963584	0.0029	0.0029	
10)	TM	A-ENDOSULFAN	5.44	6.10	961185	751418	0.0032	0.0030	
11)	TM	A-CHLORDANE	5.38	6.06	1082768	808547	0.0031	0.0031	
12)	TM	P,P-DDE	5.57	6.20	1036860	941221	0.0030	0.0026	
13)	M	DIELDRIN	5.72	6.37	978786	936597	0.0029	0.0027	
14)	M	ENDRIN	6.04	6.63	949520	803367	0.0031	0.0029	
15)	TM	B-ENDOSULFAN	6.31	6.94	1017650	873848	0.0034	0.0031	
16)	TM	P,P-DDD	6.13	6.76	1075095	418727	0.0037	0.0059	#
17)	TM	ENDRIN ALDEHYDE	6.55	7.07	780364	635846	0.0033	0.0031	
18)	M	P,P-DDT	6.42	7.13	814045	531472	0.0029	0.0024	
19)	TM	ENDOSULFAN SULFA	6.78	7.43	929305	591609	0.0038	0.0034	
20)	TM	ENDRIN KETONE	7.55	8.03	802475	749892	0.0032	0.0030	
21)	TM	METHOXYCHLOR	7.22	7.71	384351	380835	0.0032	0.0030	

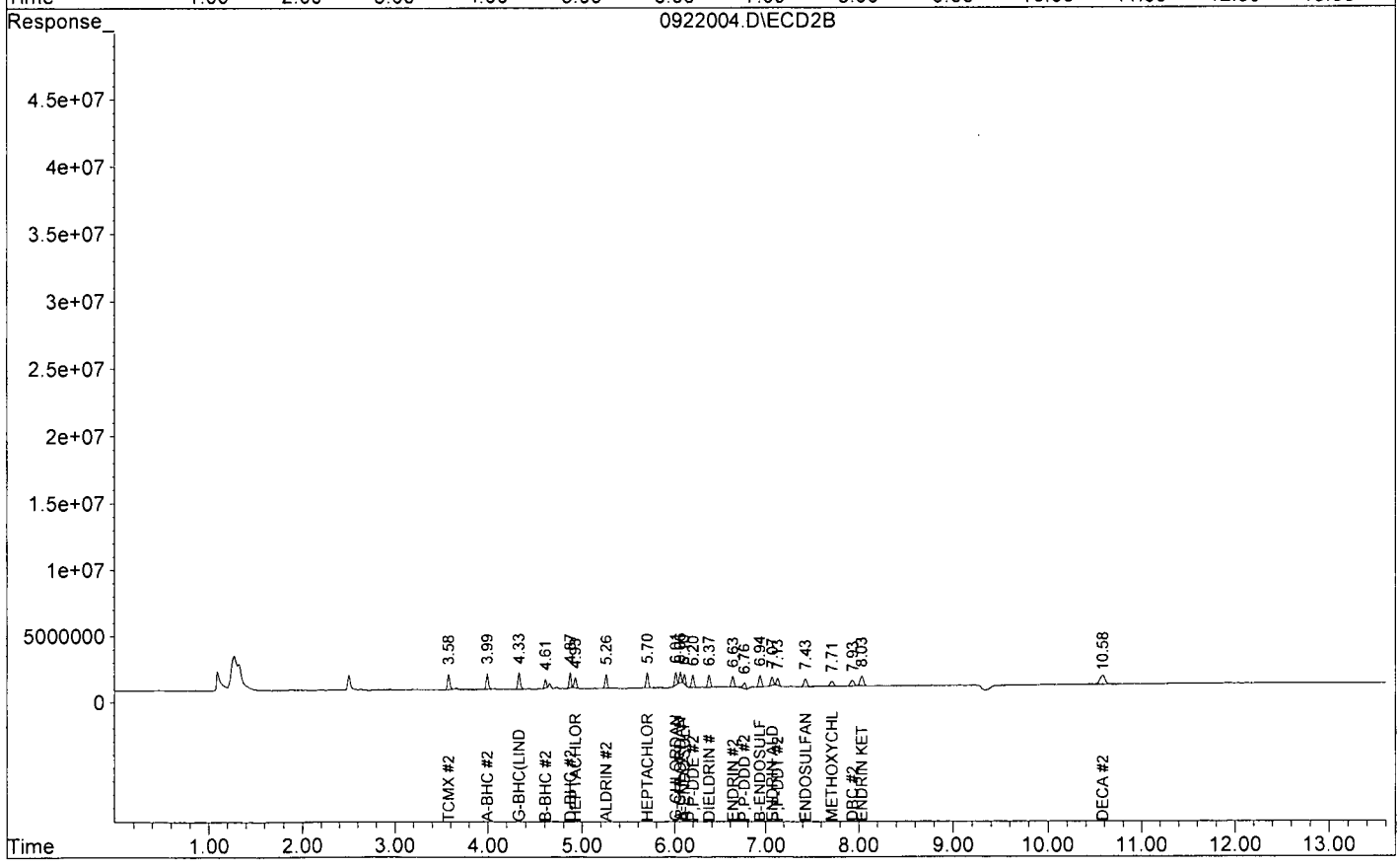
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922004.D Vial: 4
Acq On : 9-22-14 10:06:43 Operator: MA
Sample : OCL 1A 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140922\OCL0922.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922005.D\ECD1A.CH Vial: 5
Signal #2 : G:\LUCY\DATA\140922\0922005.D\ECD2B.CH
Acq On : 9-22-14 10:23:08 Operator: MA
Sample : OCL 1 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 22 12:55 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 17 08:30:22 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

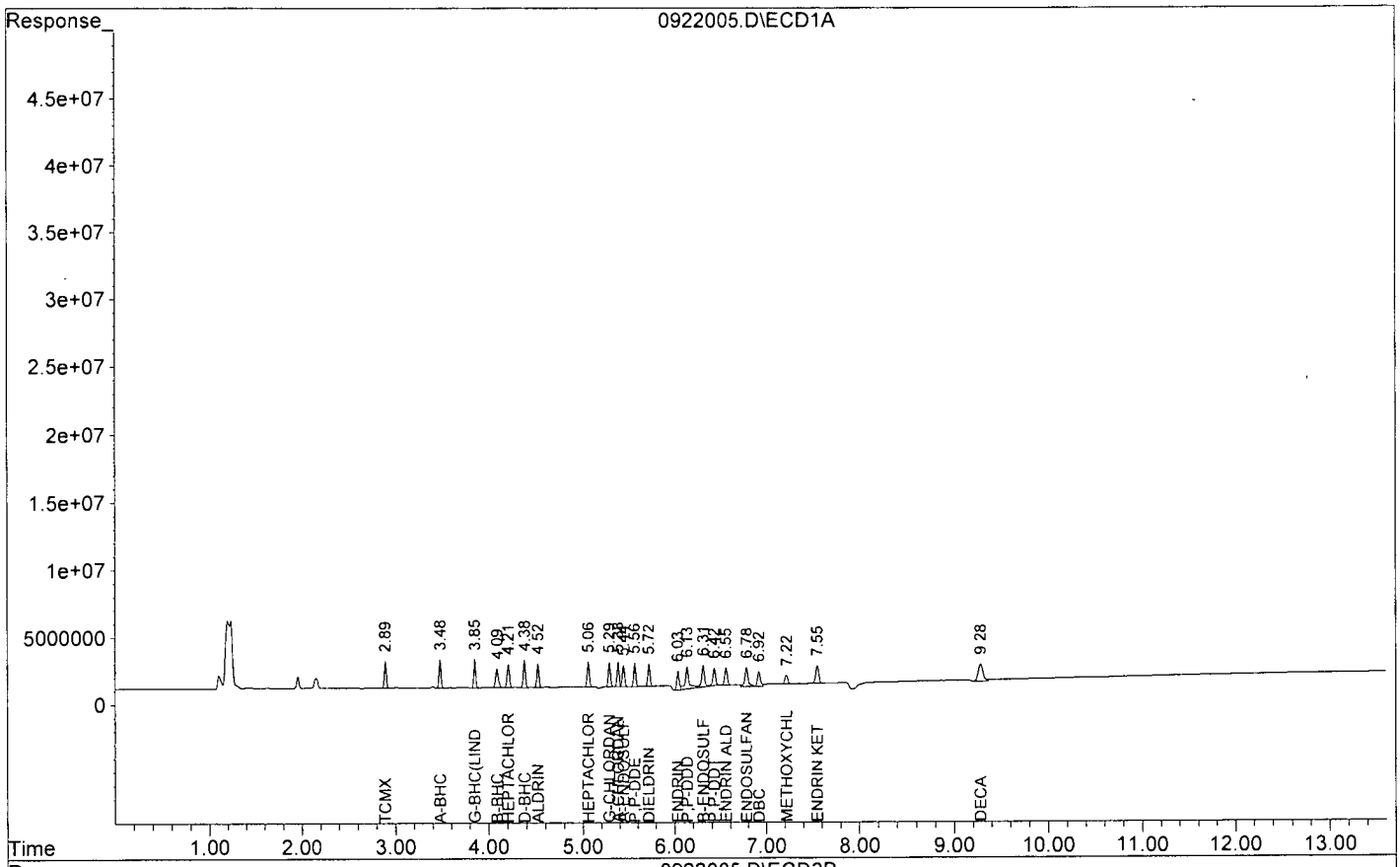
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
1)	S	TCMX	2.89	3.58	2008388	1933293	0.0054	0.0047	
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					3.60%#	3.13%#	
22)	S	DBC	6.92	7.93	2740639	780730	0.0055	0.0046	
		Surrogate Spike 0.150 Recovery =					3.67%	3.07%	
23)	S	DECA	9.28	10.58	4632083	1084394	0.0070	0.0059	
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					4.67%#	3.93%#	
		Target Compounds							
2)	TM	A-BHC	3.48	3.99	2104545	2138712	0.0044	0.0040	
3)	TM	B-BHC	4.09	4.61	1419192	1105597	0.0065	0.0048	#
4)	M	G-BHC(LINDANE)	3.85	4.33	2148787	3542964	0.0051	0.0043	
5)	TM	D-BHC	4.38	4.87	2069579	2022718	0.0051	0.0045	
6)	M	HEPTACHLOR	4.21	4.93	1758933	1363009	0.0048	0.0034	#
7)	M	ALDRIN	4.52	5.26	1793813	1807856	0.0051	0.0045	
8)	TM	HEPTACHLOR EPOXI	5.06	5.70	1892895	1892615	0.0056	0.0048	
9)	TM	G-CHLORDANE	5.29	6.01	1834560	1554021	0.0049	0.0046	
10)	TM	A-ENDOSULFAN	5.44	6.10	1590693	1214620	0.0053	0.0048	
11)	TM	A-CHLORDANE	5.38	6.06	1854257	1295056	0.0054	0.0049	
12)	TM	P,P-DDE	5.56	6.20	1781706	1579173	0.0051	0.0044	
13)	M	DIELDRIN	5.72	6.37	1683812	1562732	0.0051	0.0046	
14)	M	ENDRIN	6.03	6.63	1441517	1335778	0.0046	0.0047	
15)	TM	B-ENDOSULFAN	6.31	6.94	1617289	1409125	0.0054	0.0049	
16)	TM	P,P-DDD	6.13	6.76	1671707	736765	0.0057	0.0071	
17)	TM	ENDRIN ALDEHYDE	6.55	7.07	1310537	1069863	0.0055	0.0052	
18)	M	P,P-DDT	6.42	7.13	1317147	957517	0.0046	0.0044	
19)	TM	ENDOSULFAN SULFA	6.78	7.43	1459365	1065044	0.0060	0.0054	
20)	TM	ENDRIN KETONE	7.55	8.03	1342955	1285145	0.0054	0.0051	
21)	TM	METHOXYCHLOR	7.22	7.71	663729	675519	0.0054	0.0053	

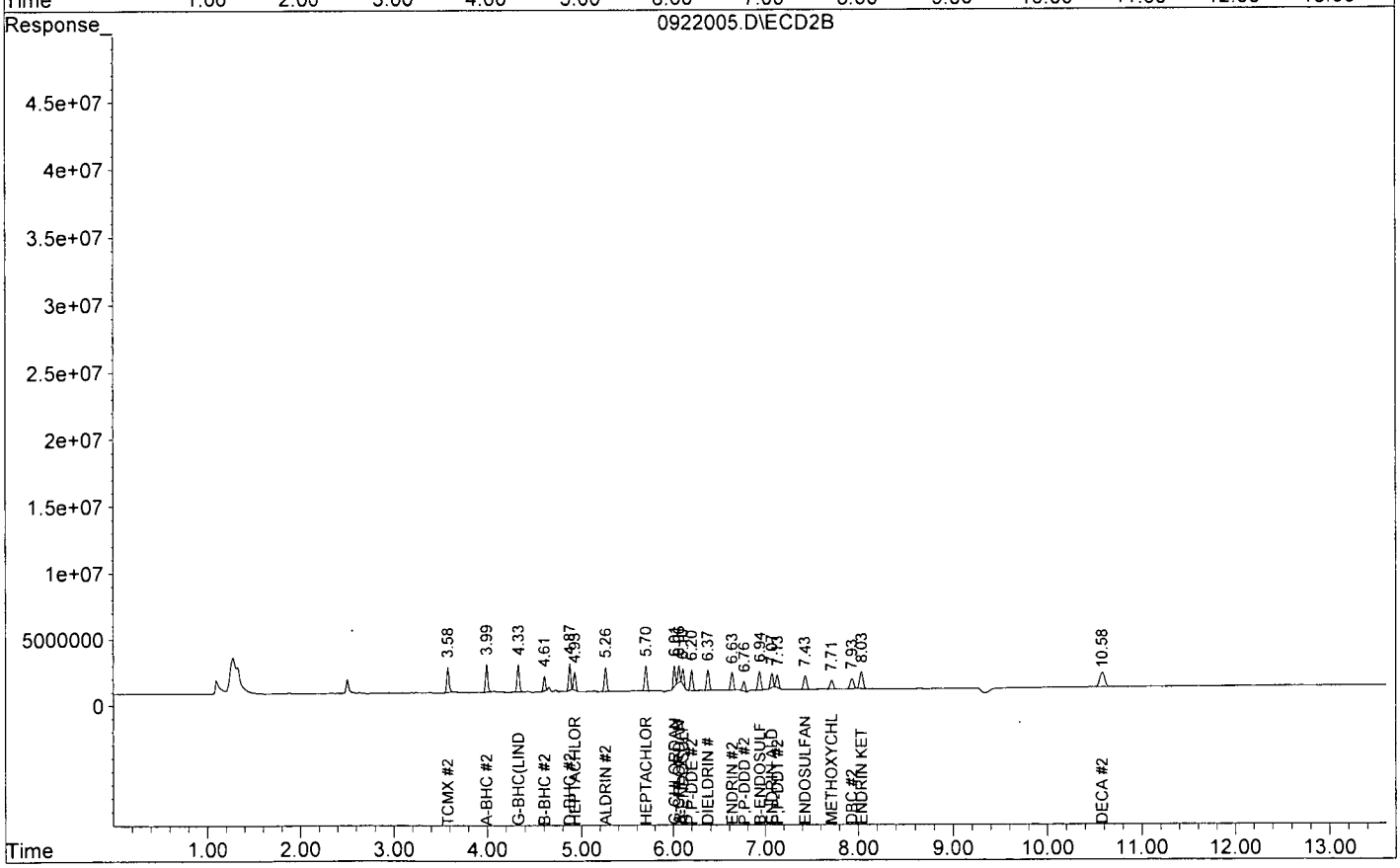
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922005.D Vial: 5
Acq On : 9-22-14 10:23:08 Operator: MA
Sample : OCL 1 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140922\OCL0922.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922006.D\ECD1A.CH Vial: 6
Signal #2 : G:\LUCY\DATA\140922\0922006.D\ECD2B.CH
Acq On : 9-22-14 10:39:34 Operator: MA
Sample : OCL 2 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 22 12:55 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 17 08:30:22 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

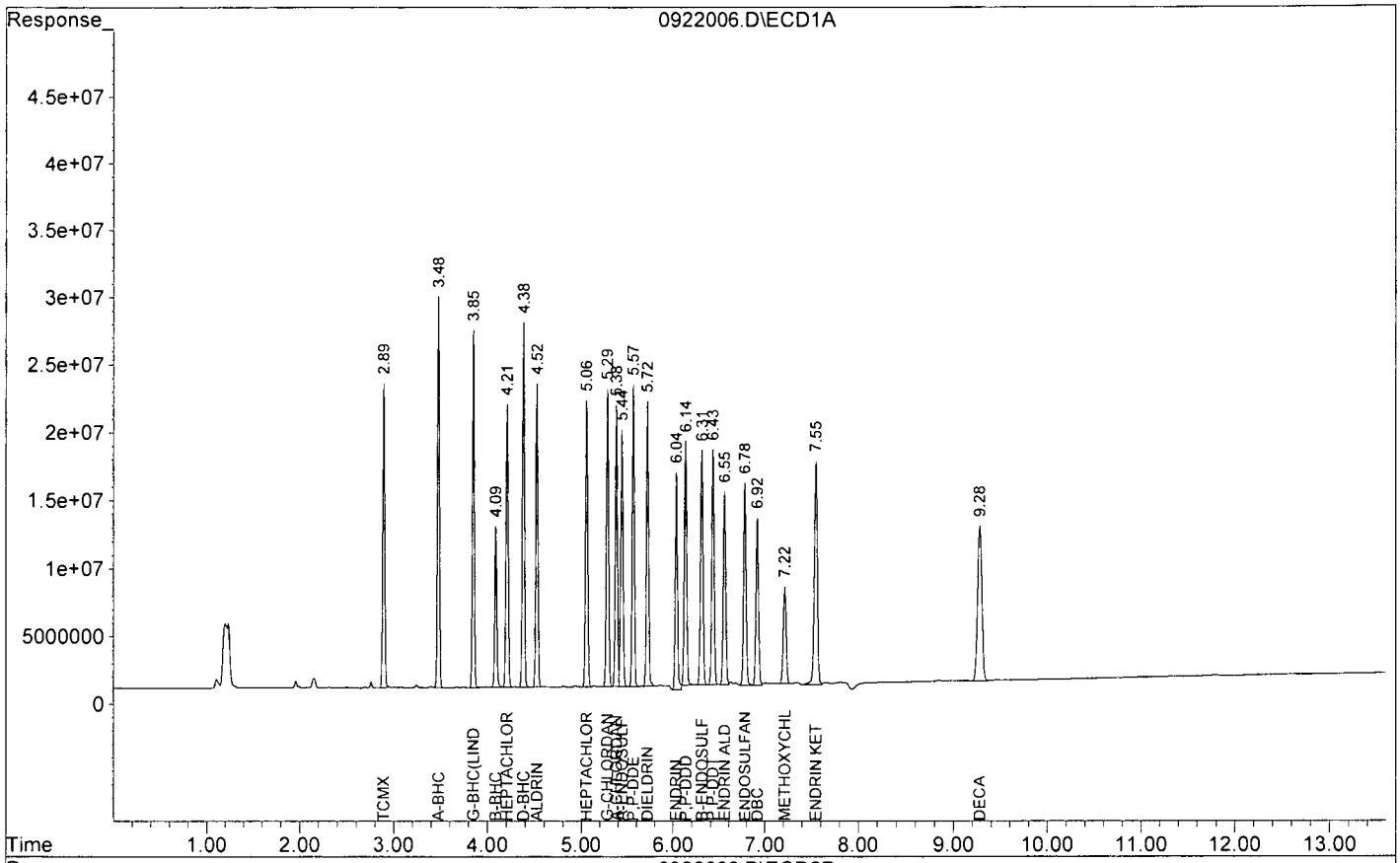
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
1)	S	TCMX	2.89	3.58	22433301	22454003	0.0602	0.0547	
		Surrogate Spike 0.150 Range 25 - 150 Recovery = 40.13% 36.47%							
22)	S	DBC	6.92	7.93	26113529	9520924	0.0525	0.0560	
		Surrogate Spike 0.150 Recovery = 35.00% 37.33%							
23)	S	DECA	9.28	10.58	36790667	8920329	0.0556	0.0484	
		Surrogate Spike 0.150 Range 25 - 150 Recovery = 37.07% 32.27%							
		Target Compounds							
2)	TM	A-BHC	3.48	3.99	28858664	30427458	0.0566	0.0514	
3)	TM	B-BHC	4.09	4.60	11878032	12051399	0.0544	0.0524	
4)	M	G-BHC(LINDANE)	3.85	4.33	26368100	45983407	0.0622	0.0562	
5)	TM	D-BHC	4.38	4.87	26900238	26754027	0.0658	0.0602	
6)	M	HEPTACHLOR	4.21	4.93	20862617	16141387	0.0569	0.0406	#
7)	M	ALDRIN	4.52	5.26	22378116	22898558	0.0634	0.0570	
8)	TM	HEPTACHLOR EPOXI	5.06	5.70	21121738	20976564	0.0624	0.0537	
9)	TM	G-CHLORDANE	5.29	6.01	21941070	17885327	0.0586	0.0533	
10)	TM	A-ENDOSULFAN	5.44	6.10	18919425	14509026	0.0625	0.0575	
11)	TM	A-CHLORDANE	5.38	6.06	20720859	14375038	0.0602	0.0546	
12)	TM	P,P-DDE	5.57	6.20	22250951	20418133	0.0634	0.0572	
13)	M	DIELDRIN	5.72	6.37	20998569	18524913	0.0633	0.0544	
14)	M	ENDRIN	6.04	6.63	16035113	15208155	0.0516	0.0540	
15)	TM	B-ENDOSULFAN	6.31	6.94	17302679	15074746	0.0582	0.0527	
16)	TM	P,P-DDD	6.14	6.76	18015701	12378668	0.0615	0.0500	
17)	TM	ENDRIN ALDEHYDE	6.55	7.07	14220473	10500372	0.0601	0.0506	
18)	M	P,P-DDT	6.43	7.13	17355780	11984435	0.0613	0.0548	
19)	TM	ENDOSULFAN SULFA	6.78	7.43	14929024	11963883	0.0617	0.0534	
20)	TM	ENDRIN KETONE	7.55	8.03	16479876	13752582	0.0657	0.0550	
21)	TM	METHOXYCHLOR	7.22	7.71	7189189	6649670	0.0590	0.0522	

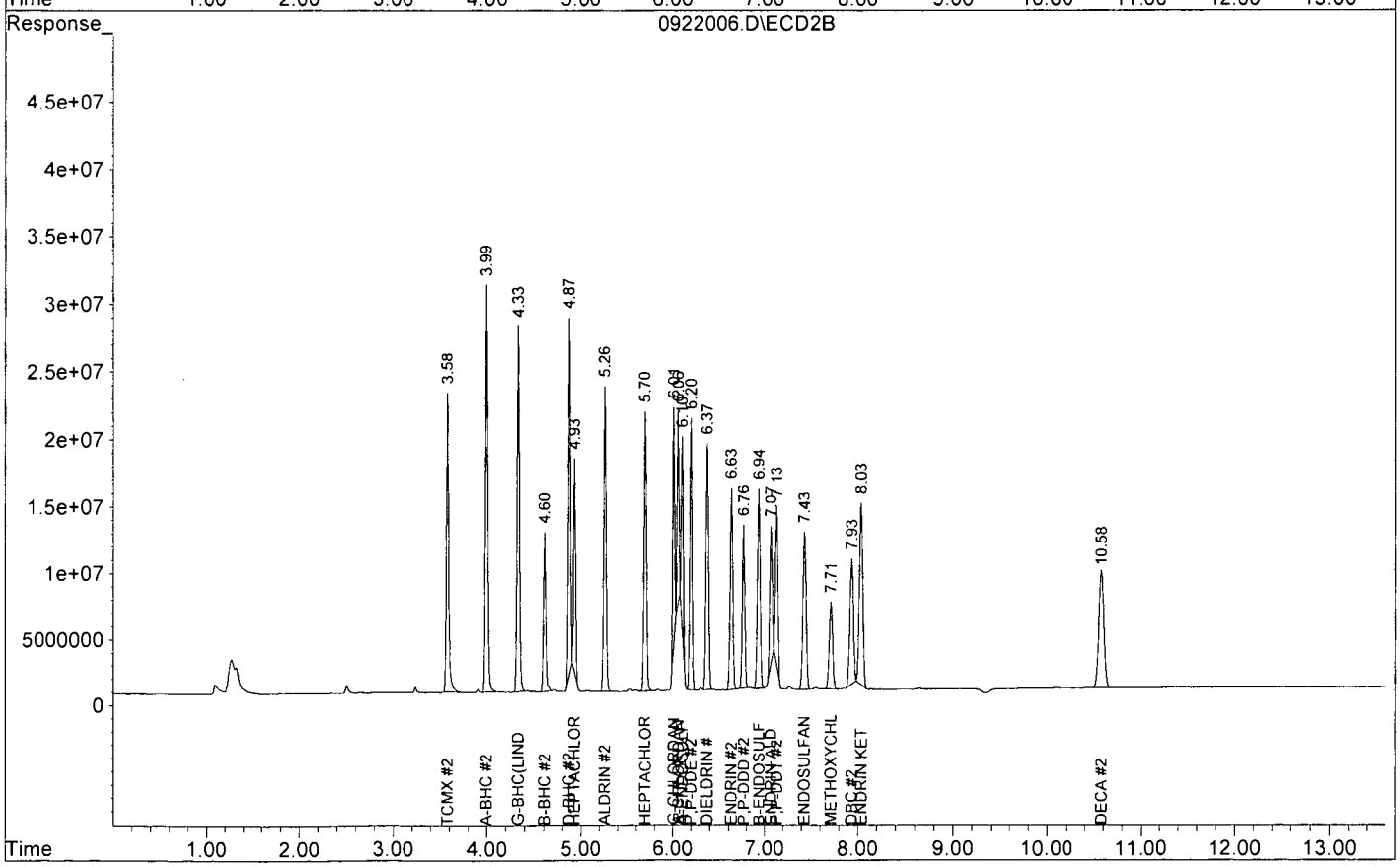
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922006.D Vial: 6
Acq On : 9-22-14 10:39:34 Operator: MA
Sample : OCL 2 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140922\OCL0922.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922007.D\ECD1A.CH Vial: 7
Signal #2 : G:\LUCY\DATA\140922\0922007.D\ECD2B.CH
Acq On : 9-22-14 10:55:59 Operator: MA
Sample : OCL 3 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 22 12:55 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 17 08:30:22 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
1)	S	TCMX	2.89	3.58	45836968	46099300	0.1230	0.1122	
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					82.00%	74.80%	
22)	S	DBC	6.92	7.93	54134095	20059075	0.1089	0.1180	
		Surrogate Spike 0.150 Recovery =					72.60%	78.67%	
23)	S	DECA	9.28	10.58	72345737	17225086	0.1092	0.0934	
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					72.80%	62.27%	
		Target Compounds							
2)	TM	A-BHC	3.48	4.00	60799092	64160731	0.1188	0.1079	
3)	TM	B-BHC	4.09	4.61	24610667	25246030	0.1128	0.1098	
4)	M	G-BHC(LINDANE)	3.85	4.33	55981954	97222409	0.1321	0.1187	
5)	TM	D-BHC	4.38	4.87	56439724	54829166	0.1381	0.1233	
6)	M	HEPTACHLOR	4.21	4.93	44487204	33950532	0.1213	0.0855	#
7)	M	ALDRIN	4.52	5.26	46273991	47524803	0.1310	0.1183	
8)	TM	HEPTACHLOR EPOXI	5.06	5.70	42557584	43648928	0.1258	0.1118	
9)	TM	G-CHLORDANE	5.29	6.01	44668232	38555759	0.1193	0.1149	
10)	TM	A-ENDOSULFAN	5.44	6.11	38581474	28212498	0.1275	0.1118	
11)	TM	A-CHLORDANE	5.38	6.06	43328053	27924806	0.1259	0.1061	
12)	TM	P,P-DDE	5.57	6.20	46712517	43143605	0.1331	0.1208	
13)	M	DIELDRIN	5.72	6.37	43854197	39984241	0.1322	0.1174	
14)	M	ENDRIN	6.04	6.63	33637502	32190673	0.1082	0.1144	
15)	TM	B-ENDOSULFAN	6.31	6.94	36459664	32333861	0.1225	0.1131	
16)	TM	P,P-DDD	6.14	6.77	38829752	25704523	0.1325	0.0991	#
17)	TM	ENDRIN ALDEHYDE	6.55	7.07	29602134	22244397	0.1250	0.1073	
18)	M	P,P-DDT	6.43	7.14	37036198	26157659	0.1307	0.1197	
19)	TM	ENDOSULFAN SULFA	6.78	7.43	30200060	25744785	0.1248	0.1141	
20)	TM	ENDRIN KETONE	7.55	8.04	32501727	28393726	0.1297	0.1136	
21)	TM	METHOXYCHLOR	7.22	7.72	14841102	13419072	0.1219	0.1052	

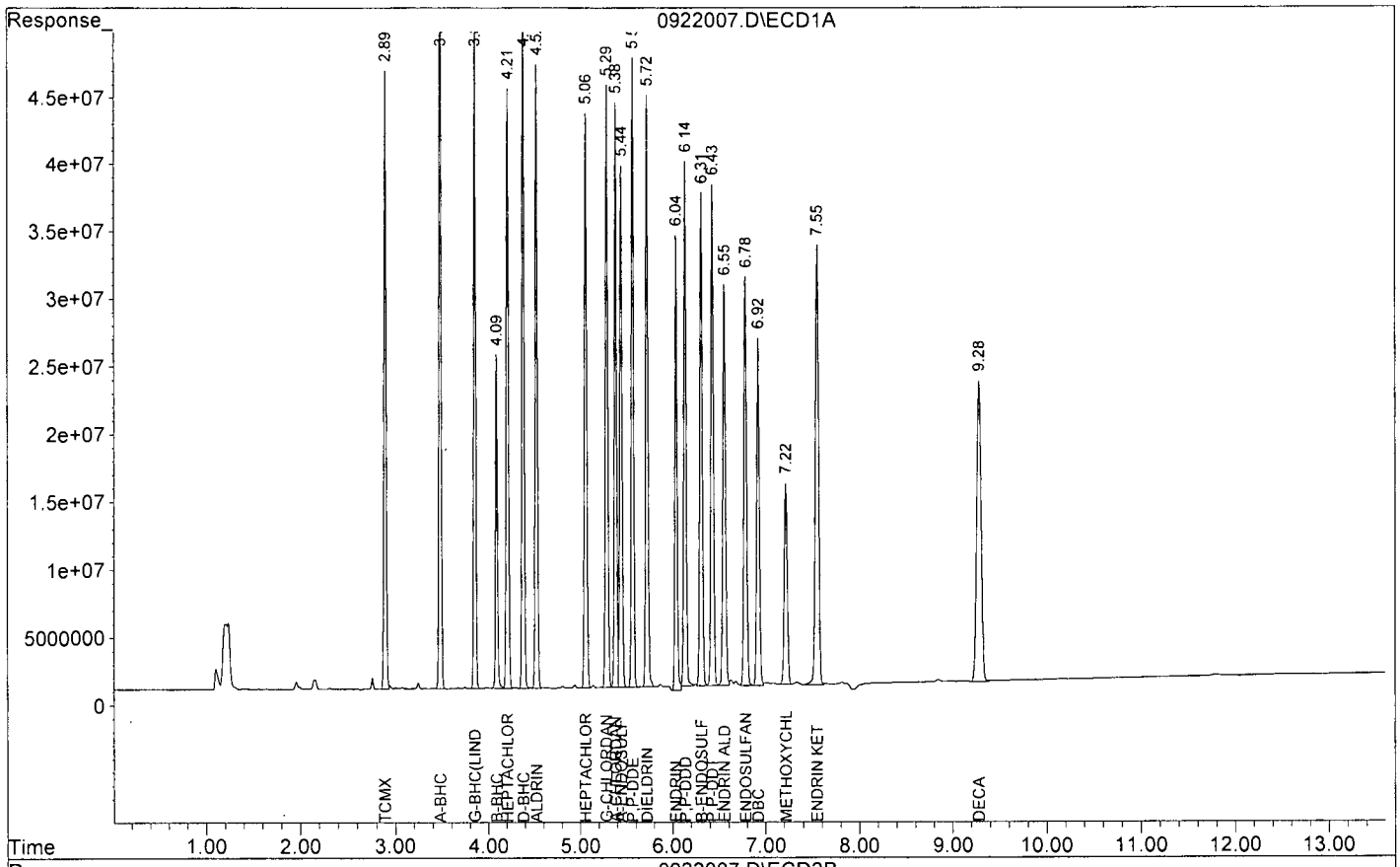
Target Compounds

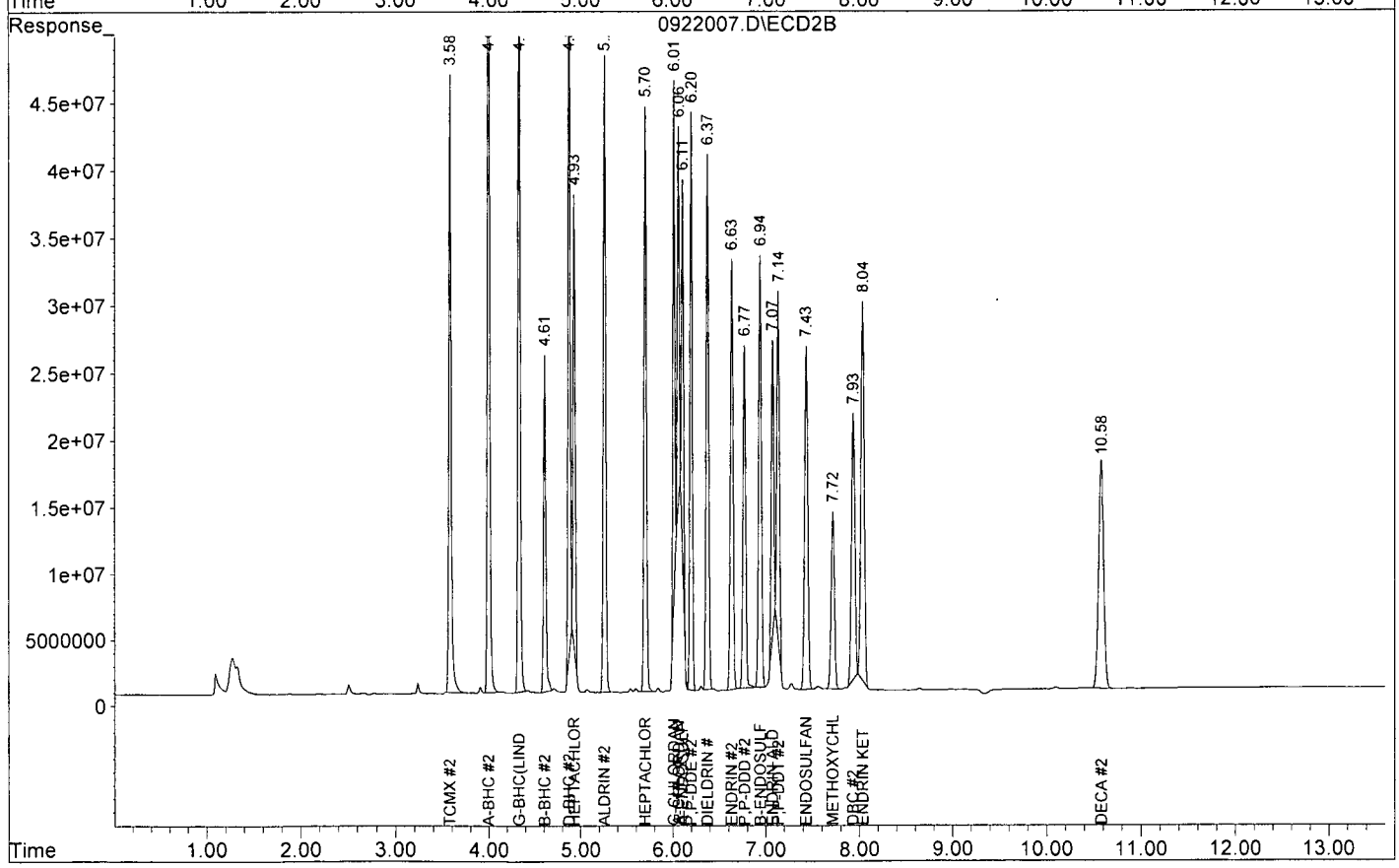
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922007.D
Acq On : 9-22-14 10:55:59
Sample : OCL 3 7/16/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 7
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922008.D\ECD1A.CH Vial: 8
Signal #2 : G:\LUCY\DATA\140922\0922008.D\ECD2B.CH
Acq On : 9-22-14 11:12:31 Operator: MA
Sample : OCL 4 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 22 12:55 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 17 08:30:22 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
1)	S	TCMX	2.89	3.58	65196689	66669747	0.1750	0.1623	
		Surrogate Spike 0.150 Range 25 - 150 Recovery = 116.67% 108.20%							
22)	S	DBC	6.92	7.93	81102411	30276837	0.1632	0.1781	
		Surrogate Spike 0.150 Recovery = 108.80% 118.73%							
23)	S	DECA	9.28	10.58	104.6E6	25472111	0.1579	0.1381	
		Surrogate Spike 0.150 Range 25 - 150 Recovery = 105.27% 92.07%							
		Target Compounds							
2)	TM	A-BHC	3.48	4.00	88777070	91215290	0.1734	0.1531	
3)	TM	B-BHC	4.09	4.61	35031323	36757022	0.1606	0.1598	
4)	M	G-BHC(LINDANE)	3.85	4.33	79937940	142.5E6	0.1886	0.1740	
5)	TM	D-BHC	4.38	4.87	81767376	81379855	0.2001	0.1830	
6)	M	HEPTACHLOR	4.21	4.93	64871164	52028068	0.1769	0.1310	#
7)	M	ALDRIN	4.52	5.26	67653025	70029924	0.1916	0.1744	
8)	TM	HEPTACHLOR EPOXI	5.06	5.70	61854986	64511247	0.1828	0.1653	
9)	TM	G-CHLORDANE	5.29	6.01	66477560	55389221	0.1775	0.1650	
10)	TM	A-ENDOSULFAN	5.44	6.11	55931084	41588432	0.1848	0.1648	
11)	TM	A-CHLORDANE	5.38	6.06	62898997	42956754	0.1828	0.1633	
12)	TM	P,P-DDE	5.57	6.20	66586311	64456137	0.1897	0.1805	
13)	M	DIELDRIN	5.72	6.37	63909233	58329755	0.1926	0.1712	
14)	M	ENDRIN	6.04	6.63	49505538	49129691	0.1593	0.1745	
15)	TM	B-ENDOSULFAN	6.31	6.94	51595736	46799871	0.1734	0.1637	
16)	TM	P,P-DDD	6.14	6.77	55769190	39269187	0.1902	0.1490	
17)	TM	ENDRIN ALDEHYDE	6.55	7.07	42378425	32160832	0.1790	0.1551	
18)	M	P,P-DDT	6.43	7.13	53549875	38938923	0.1890	0.1782	
19)	TM	ENDOSULFAN SULFA	6.78	7.44	45285078	37616070	0.1872	0.1663	
20)	TM	ENDRIN KETONE	7.55	8.04	48136036	42443471	0.1920	0.1698	
21)	TM	METHOXYCHLOR	7.22	7.72	22466932	19579246	0.1845	0.1536	

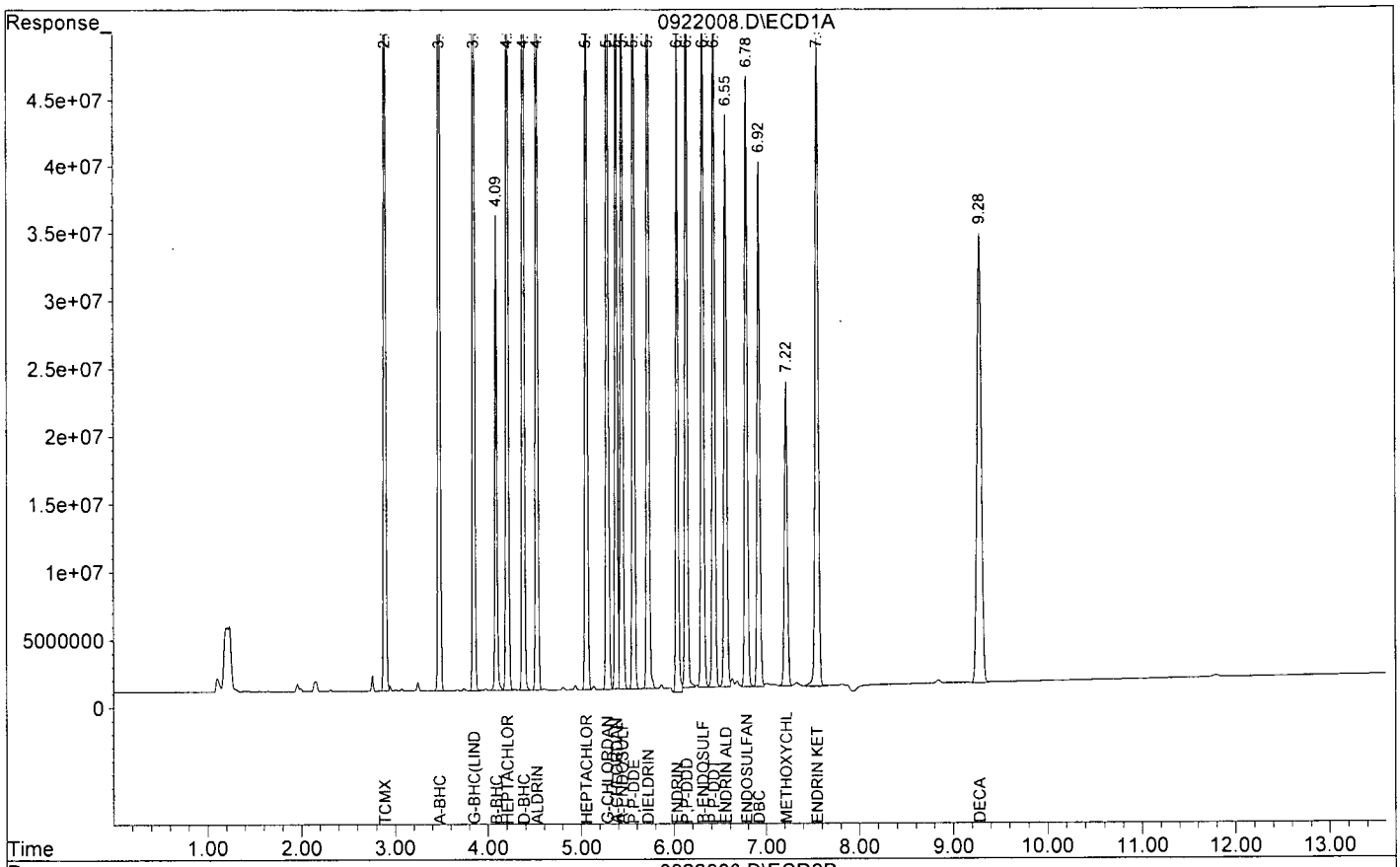
Target Compounds

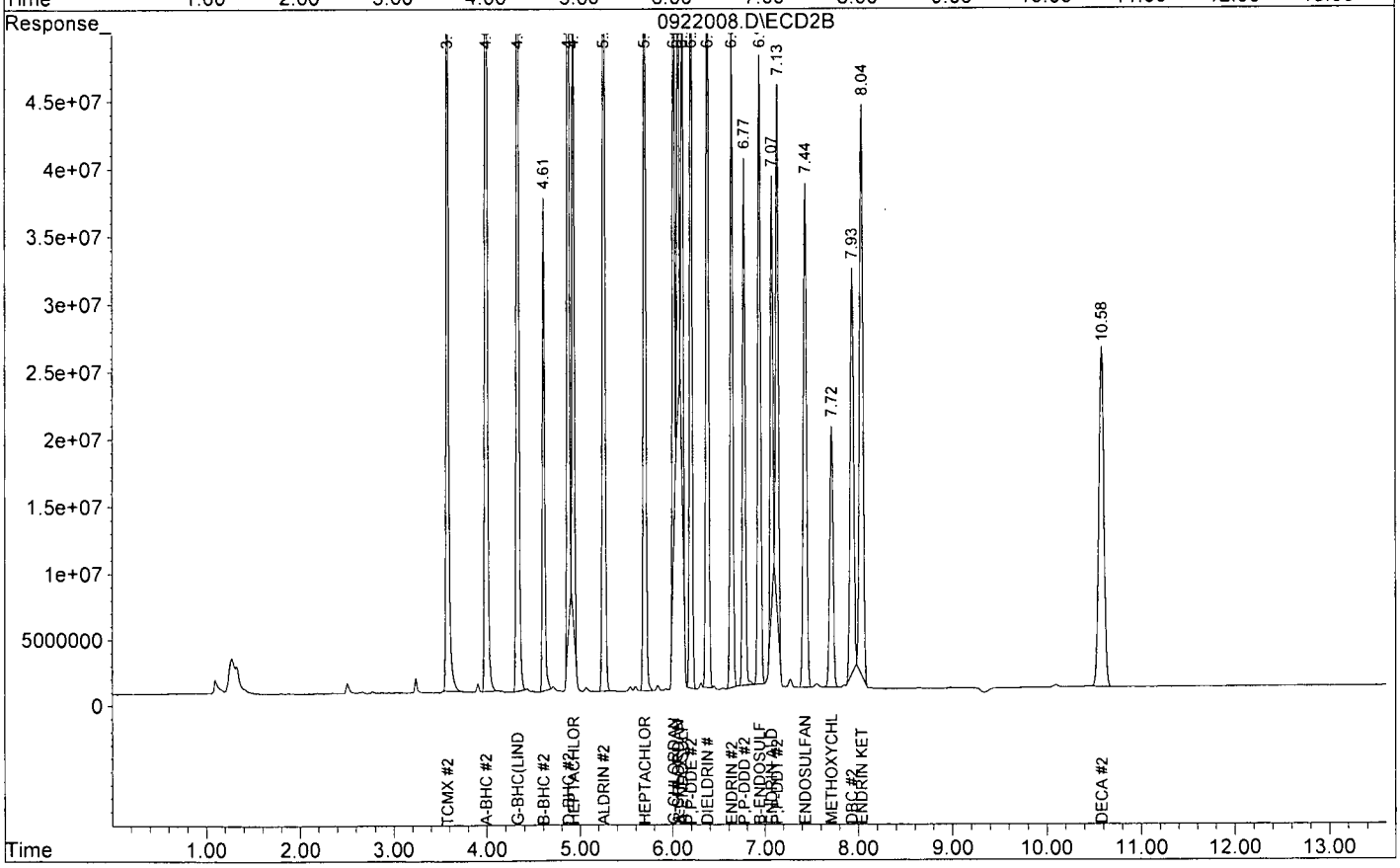
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922008.D
Acq On : 9-22-14 11:12:31
Sample : OCL 4 7/16/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 8
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922009.D\ECD1A.CH Vial: 9
Signal #2 : G:\LUCY\DATA\140922\0922009.D\ECD2B.CH
Acq On : 9-22-14 11:28:56 Operator: MA
Sample : OCL 5 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 22 12:55 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 17 08:30:22 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
1)	S	TCMX	2.89	3.58	82703704	84392932	0.2220	0.2055
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					148.00%	137.00%
22)	S	DBC	6.92	7.93	103.9E6	39605625	0.2090	0.2329
		Surrogate Spike 0.150 Recovery =					139.33%	155.27%
23)	S	DECA	9.28	10.58	133.8E6	33604554	0.2020	0.1822
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					134.67%	121.47%
		Target Compounds						
2)	TM	A-BHC	3.48	4.00	111.6E6	117.8E6	0.2180	0.1976
3)	TM	B-BHC	4.09	4.61	45430467	47552858	0.2082	0.2068
4)	M	G-BHC(LINDANE)	3.85	4.33	100.3E6	184.2E6	0.2367	0.2249
5)	TM	D-BHC	4.38	4.87	102.4E6	104.0E6	0.2505	0.2339
6)	M	HEPTACHLOR	4.21	4.93	82872694	69477049	0.2259	0.1749
7)	M	ALDRIN	4.52	5.26	85590785	90332238	0.2424	0.2249
8)	TM	HEPTACHLOR EPOXI	5.06	5.70	77571169	82764948	0.2293	0.2120
9)	TM	G-CHLORDANE	5.29	6.01	83742172	70148143	0.2237	0.2090
10)	TM	A-ENDOSULFAN	5.44	6.11	72149459	55110981	0.2384	0.2184
11)	TM	A-CHLORDANE	5.38	6.06	79354954	54611504	0.2306	0.2076
12)	TM	P,P-DDE	5.57	6.20	85474719	81669312	0.2435	0.2287
13)	M	DIELDRIN	5.72	6.37	81195304	74724741	0.2447	0.2193
14)	M	ENDRIN	6.04	6.63	64102901	64125167	0.2062	0.2278
15)	TM	B-ENDOSULFAN	6.31	6.94	67688952	61364007	0.2275	0.2146
16)	TM	P,P-DDD	6.14	6.77	70743184	51930701	0.2413	0.1957
17)	TM	ENDRIN ALDEHYDE	6.55	7.07	54916983	41385589	0.2319	0.1996
18)	M	P,P-DDT	6.43	7.14	68588773	51353640	0.2421	0.2350
19)	TM	ENDOSULFAN SULFA	6.78	7.43	56827716	49716613	0.2349	0.2195
20)	TM	ENDRIN KETONE	7.55	8.03	61518755	55549945	0.2454	0.2223
21)	TM	METHOXYCHLOR	7.22	7.72	28100490	26337458	0.2307	0.2066

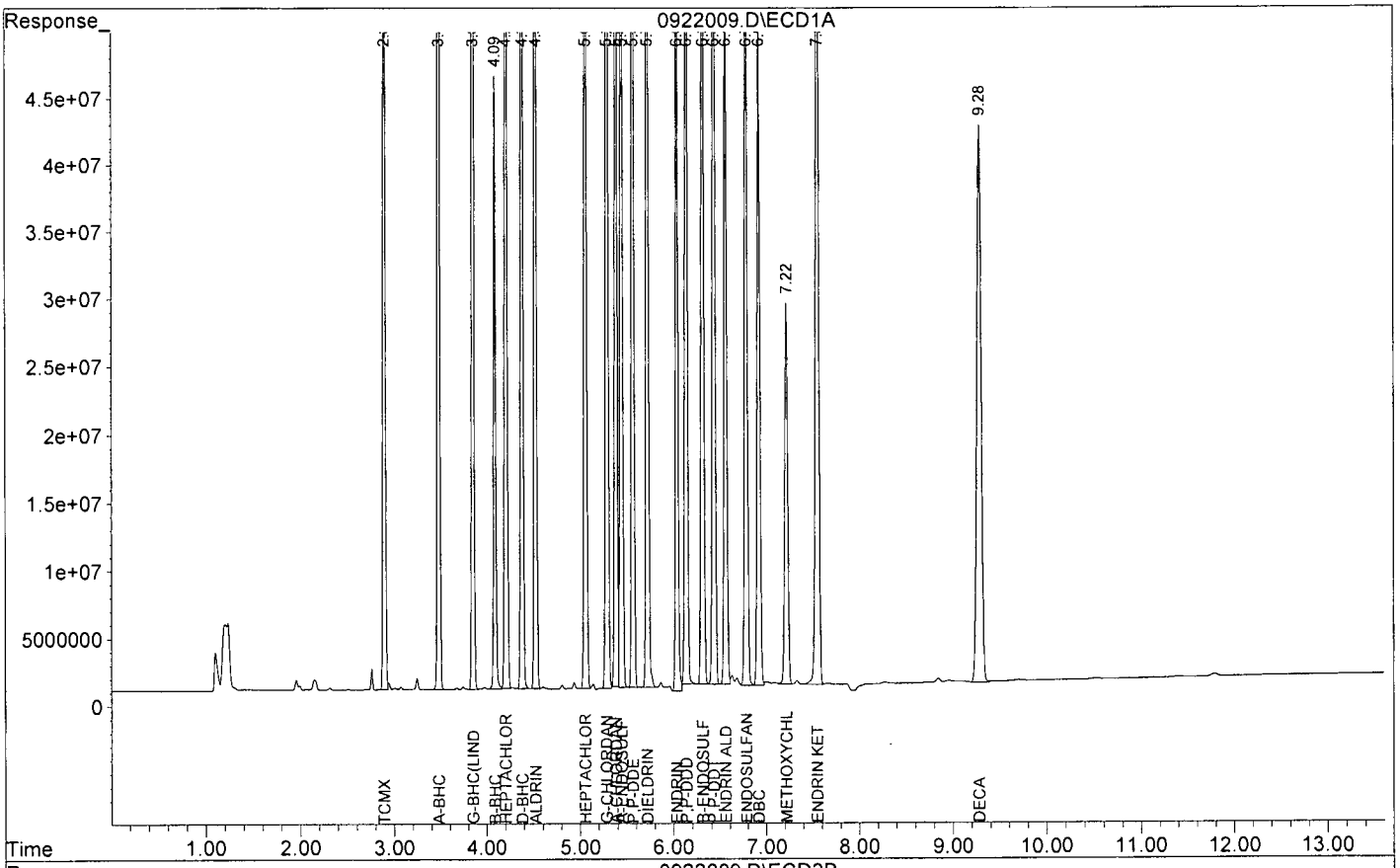
Target Compounds

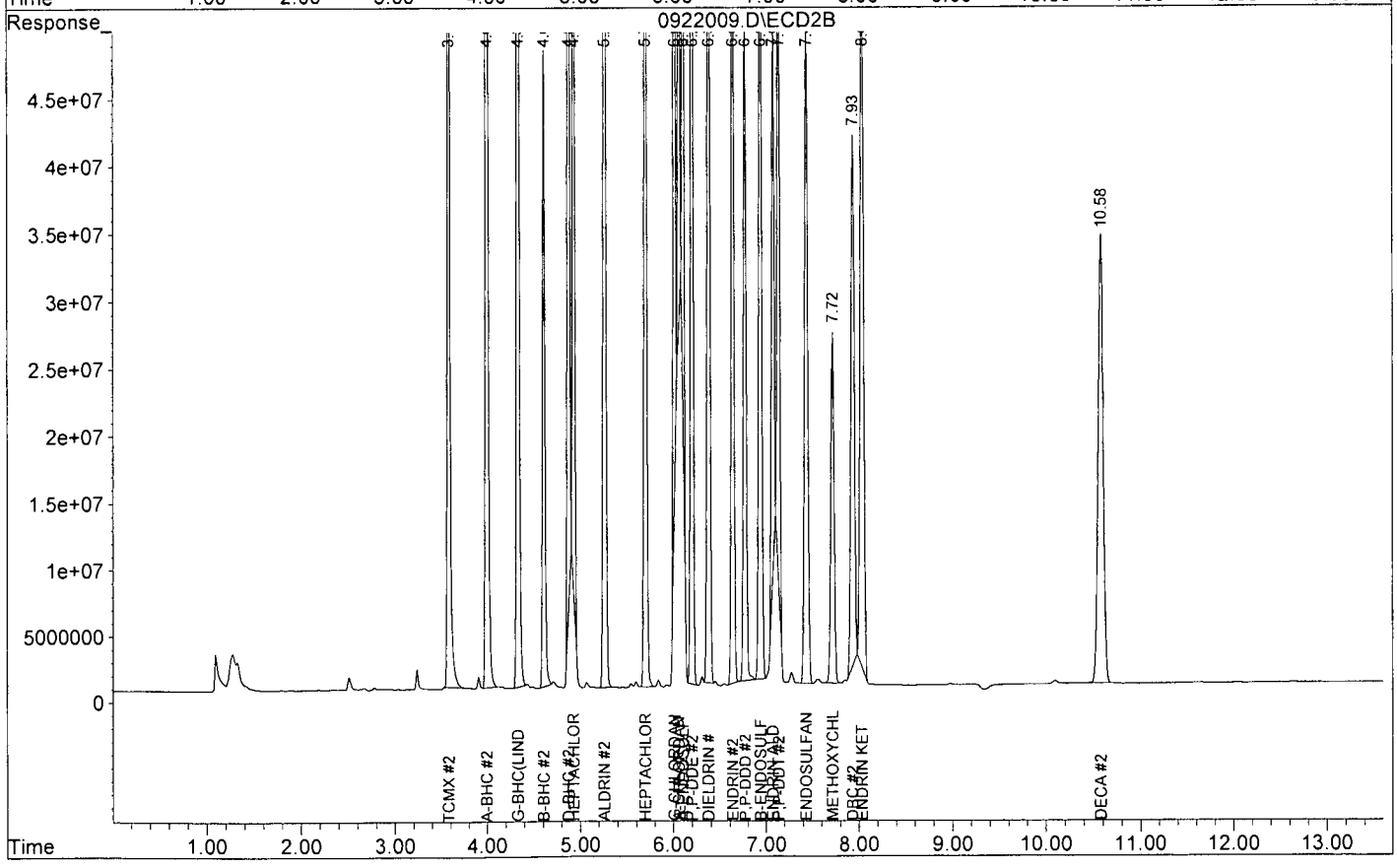
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922009.D
Acq On : 9-22-14 11:28:56
Sample : OCL 5 7/16/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 9
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922010.D\ECD1A.CH Vial: 10
Signal #2 : G:\LUCY\DATA\140922\0922010.D\ECD2B.CH
Acq On : 9-22-14 11:45:22 Operator: MA
Sample : OCL 6 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 22 12:55 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 17 08:30:22 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
1)	S	TCMX	2.89	3.58	107.0E6	107.6E6	0.2873	0.2619
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					191.53%#	174.60%#
22)	S	DBC	6.92	7.93	136.4E6	52740173	0.2743	0.3102
		Surrogate Spike 0.150 Recovery =					182.87%	206.80%
23)	S	DECA	9.28	10.58	172.8E6	42236966	0.2609	0.2290
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					173.93%#	152.67%#
		Target Compounds						
2)	TM	A-BHC	3.48	3.99	142.0E6	149.1E6	0.2773	0.2501
3)	TM	B-BHC	4.09	4.60	58736131	61546001	0.2692	0.2676
4)	M	G-BHC(LINDANE)	3.85	4.33	130.4E6	238.0E6	0.3076	0.2906
5)	TM	D-BHC	4.38	4.87	131.5E6	130.0E6	0.3219	0.2925
6)	M	HEPTACHLOR	4.21	4.93	104.9E6	90848494	0.2859	0.2288
7)	M	ALDRIN	4.52	5.26	109.0E6	112.3E6	0.3086	0.2796
8)	TM	HEPTACHLOR EPOXI	5.06	5.70	97689092	101.0E6	0.2887	0.2587
9)	TM	G-CHLORDANE	5.29	6.01	105.7E6	92783988	0.2822	0.2765
10)	TM	A-ENDOSULFAN	5.44	6.10	90822430	69670166	0.3001	0.2761
11)	TM	A-CHLORDANE	5.38	6.06	100.1E6	71109915	0.2909	0.2703
12)	TM	P,P-DDE	5.56	6.20	106.7E6	105.3E6	0.3039	0.2949
13)	M	DIELDRIN	5.72	6.37	99932891	98128854	0.3012	0.2880
14)	M	ENDRIN	6.04	6.63	83143330	81668785	0.2675	0.2901
15)	TM	B-ENDOSULFAN	6.31	6.94	85410147	77046713	0.2871	0.2694
16)	TM	P,P-DDD	6.13	6.77	88933029	70845807	0.3034	0.2654
17)	TM	ENDRIN ALDEHYDE	6.55	7.07	69404120	53887887	0.2931	0.2599
18)	M	P,P-DDT	6.42	7.13	91228519	64503587	0.3220	0.2952
19)	TM	ENDOSULFAN SULFA	6.78	7.43	72374933	63743166	0.2992	0.2813
20)	TM	ENDRIN KETONE	7.55	8.03	77407138	71589123	0.3088	0.2865
21)	TM	METHOXYCHLOR	7.22	7.71	35806437	33659161	0.2940	0.2640

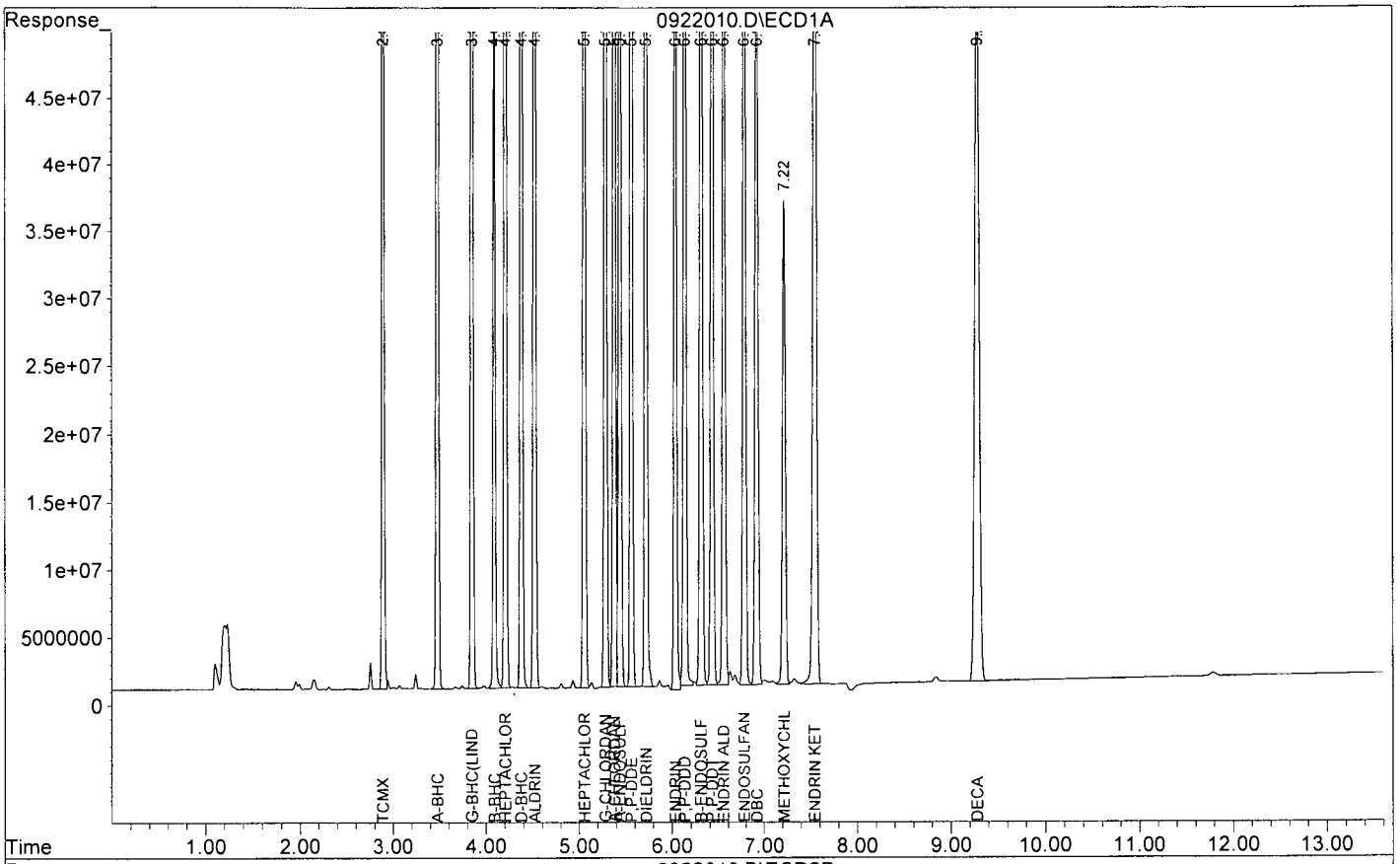
Target Compounds

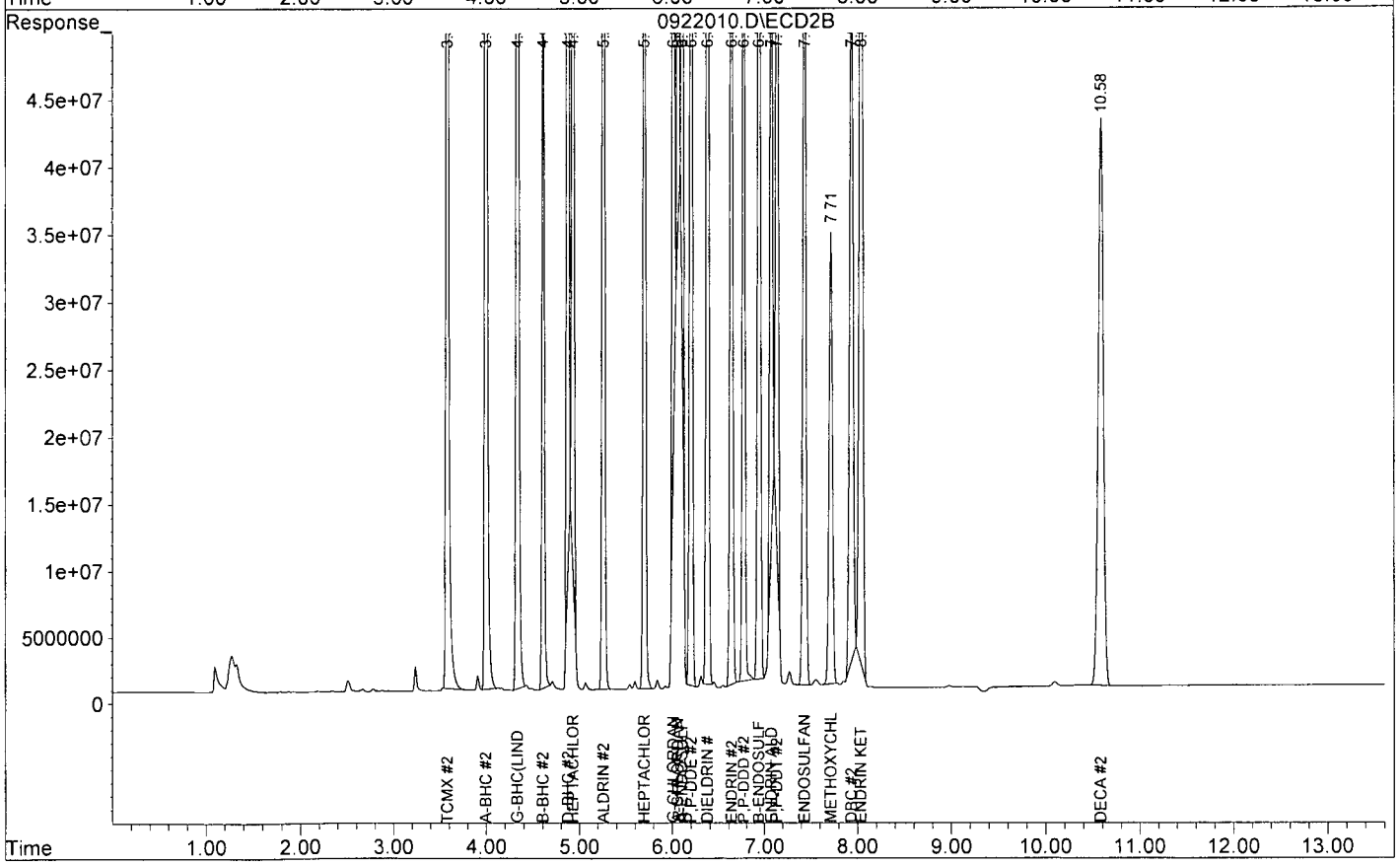
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922010.D
Acq On : 9-22-14 11:45:22
Sample : OCL 6 7/16/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 10
Operator: MA
Inst : Lucy
Multiplr: 1.00





Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/22/14
Instrument: Lucy
Initial Cal. Date: 09/22/14
Data File: 0922011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TML	A-BHC	255476000	277768000	8.7	TML	3.2
2	TML	B-BHC	152965000	118170000	23	TML	0.47
3	M	G-BHC(LINDANE)	243641000	264823000	8.7	M	
4	TM	D-BHC	244454000	260263000	6.5	TM	
5	M	HEPTACHLOR	196579000	213842000	8.8	M	
6	M	ALDRIN	205550000	224742000	9.3	M	
7	TM	HEPTACHLOR EPOXIDE	197109000	209764000	6.4	TM	
8	TM	G-CHLORDANE	204186000	201674000	1.2	TM	
9	TM	A-ENDOSULFAN	175738000	208852000	19	TM	
10	TM	A-CHLORDANE	198027000	185996000	6.1	TM	
11	TM	P,P-DDE	204962000	218981000	6.8	TM	
12	M	DIELDRIN	193242000	207363000	7.3	M	
13	M	ENDRIN	170280000	153350000	9.9	M	
14	TM	B-ENDOSULFAN	171252000	194683000	14	TM	
15	TM	P,P-DDD	177919000	177929000	0.01	TM	
16	TM	ENDRIN ALDEHYDE	138606000	135477000	2.3	TM	
17	M	P,P-DDT	162232000	179407000	11	M	
18	TM	ENDOSULFAN SULFATE	156789000	163107000	4.0	TM	
19	TM	ENDRIN KETONE	150391000	159701000	6.2	TM	
20	TM	METHOXYCHLOR	69309500	69758500	0.65	TM	
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.0		

Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 14218
Date Analyzed: 09/22/14
Instrument: Lucy
Cal. Date: 09/22/14
Data File: 0922011.D

		Compound	MEAN	CCRF	%D		%Drift
41	TML	A-BHC	263066000	282553000	7.4	TML	6.0
42	TM	B-BHC	115335000	122051000	5.8	TM	
43	M	G-BHC(LINDANE)	422048000	458472000	8.6	M	
44	TM	D-BHC	236931000	258337000	9.0	TM	
45	M	HEPTACHLOR	156614000	167400000	6.9	M	
46	M	ALDRIN	208238000	226033000	8.5	M	
47	TM	HEPTACHLOR EPOXIDE	202172000	209346000	3.5	TM	
48	TM	G-CHLORDANE	173189000	168234000	2.9	TM	
49	TM	A-ENDOSULFAN	133067000	157698000	19	TM	
50	TM	A-CHLORDANE	136781000	124773000	8.8	TM	
51	TM	P,P-DDE	188279000	202078000	7.3	TM	
52	M	DIELDRIN	177809000	186947000	5.1	M	
53	M	ENDRIN	150961000	145002000	3.9	M	
54	TM	B-ENDOSULFAN	151093000	164784000	9.1	TM	
55	TML	P,P-DDD	105593000	122571000	16	TML	7.5
56	TM	ENDRIN ALDEHYDE	106388000	100914000	5.1	TM	
57	M	P,P-DDT	114081000	122625000	7.5	M	
58	TML	ENDOSULFAN SULFATE	113130000	134171000	19	TML	6.8
59	TM	ENDRIN KETONE	135926000	144072000	6.0	TM	
60	TM	METHOXYCHLOR	65534200	60468400	7.7	TM	
61							
62							
63							
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			8.4		

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922011.D\ECD1A.CH Vial: 11
Signal #2 : G:\LUCY\DATA\140922\0922011.D\ECD2B.CH
Acq On : 9-22-14 12:01:45 Operator: MA
Sample : OCL 2ND SRC 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 22 12:59 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 12:57:48 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

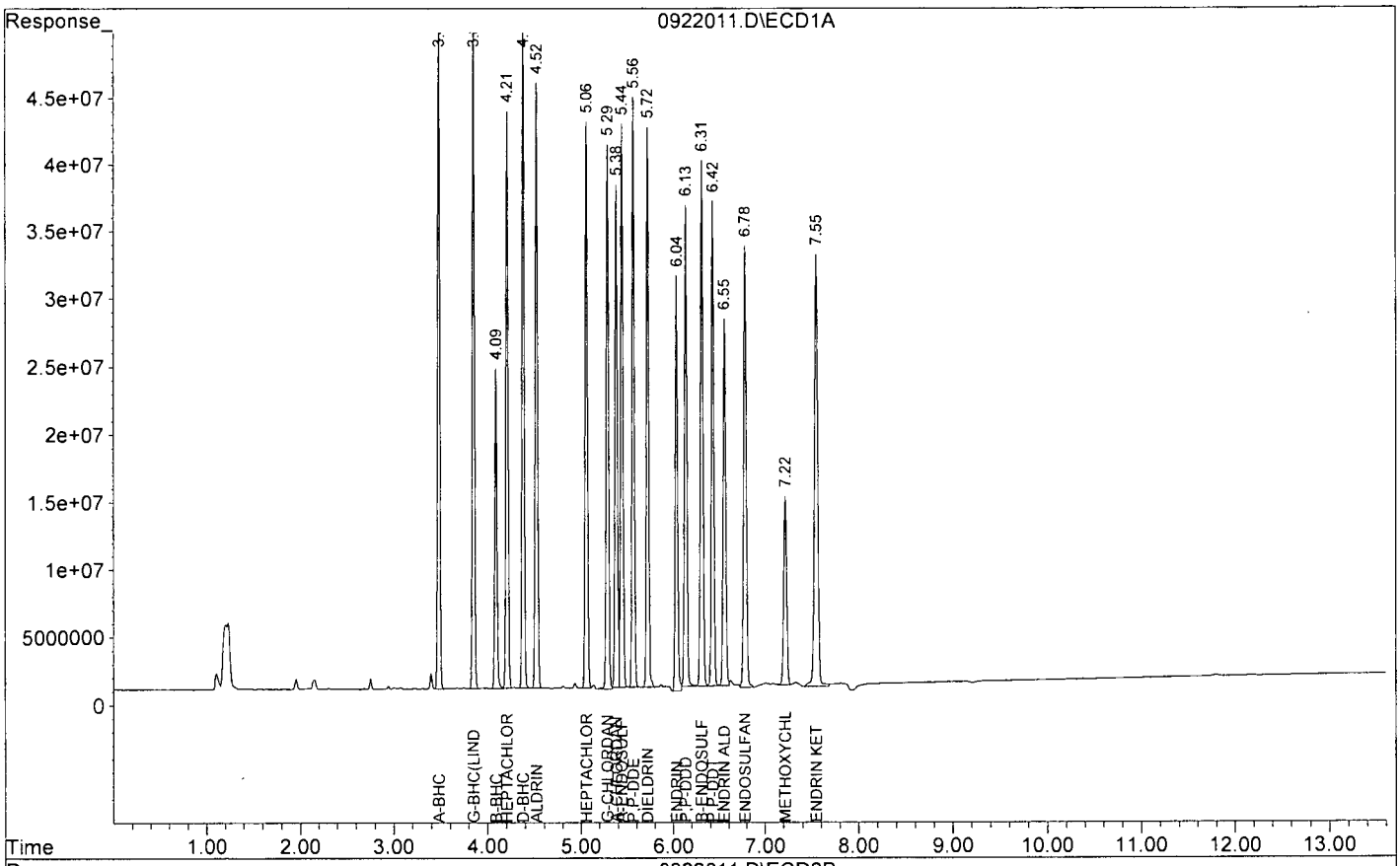
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S TCMX	0.00	0.00	0	0	N.D. d	N.D. d
	Surrogate Spike 0.150 Range 25 - 150 Recovery =					0.00%#	0.00%#
22)	S DBC	0.00	0.00	0	0	N.D. d	N.D. d
	Surrogate Spike 0.150 Recovery =					0.00%	0.00%
23)	S DECA	0.00	0.00	0	0	N.D. d	N.D. d
	Surrogate Spike 0.150 Range 25 - 150 Recovery =					0.00%#	0.00%#
	Target Compounds						
2)	TM A-BHC	3.48	3.99	55553539	56510652	0.0968	0.0940
3)	TM B-BHC	4.09	4.61	23633934	24410221	0.1005	0.1058
4)	M G-BHC(LINDANE)	3.85	4.33	52964601	91694452	0.1087	0.1086
5)	TM D-BHC	4.38	4.87	52052613	51667499	0.1065	0.1090
6)	M HEPTACHLOR	4.21	4.93	42768323	33479930	0.1088	0.1069
7)	M ALDRIN	4.52	5.26	44948422	45206533	0.1093	0.1085
8)	TM HEPTACHLOR EPOXI	5.06	5.70	41952724	41869275	0.1064	0.1035
9)	TM G-CHLORDANE	5.29	6.01	40334880	33646765	0.0988	0.0971
10)	TM A-ENDOSULFAN	5.44	6.10	41770408	31539506	0.1188	0.1185
11)	TM A-CHLORDANE	5.38	6.06	37199102	24954531	0.0939	0.0912
12)	TM P,P-DDE	5.56	6.20	43796291	40415521	0.1068	0.1073
13)	M DIELDRIN	5.72	6.37	41472691	37389445	0.1073	0.1051
14)	M ENDRIN	6.04	6.63	30669972	29000372	0.0901	0.0961
15)	TM B-ENDOSULFAN	6.31	6.94	38936538	32956767	0.1137	0.1091
16)	TM P,P-DDD	6.13	6.77	35585820	24514287	0.1000	0.0925
17)	TM ENDRIN ALDEHYDE	6.55	7.07	27095489	20182759	0.0977	0.0949
18)	M P,P-DDT	6.42	7.13	35881426	24524993	0.1106	0.1075
19)	TM ENDOSULFAN SULFA	6.78	7.43	32621385	26834150	0.1040	0.1068
20)	TM ENDRIN KETONE	7.55	8.03	31940230	28814463	0.1062	0.1060
21)	TM METHOXYCHLOR	7.22	7.71	13951691	12093674	0.1006	0.0923

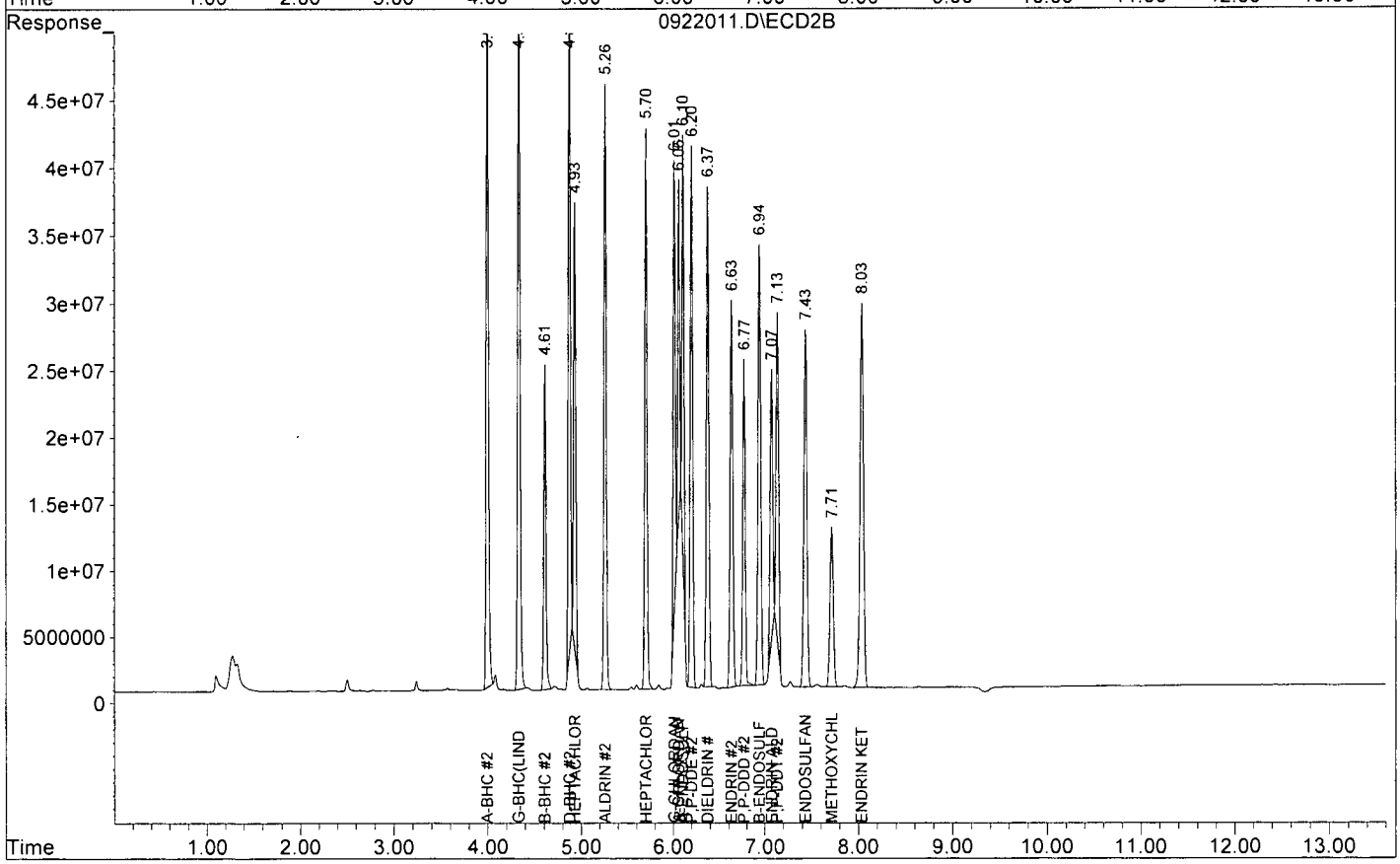
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922011.D Vial: 11
Acq On : 9-22-14 12:01:45 Operator: MA
Sample : OCL 2ND SRC 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140922\OCL0922.M





TOXAPHENE
METHOD 608/8081

Form 6
Initial Calibration

Lab Name: APPL, Inc
Case No:
Matrix: Water

SDG No: 79218
Initial Cal. Date: 09/22/14
Instrument: Lucy

Initials: MA

			0922014 D	0922015 D	0922016 D	0922017 D	0922018.D	0922019.D	0922013 D	0922020 D						
		Compound	1	2	3	4	5	6	1A	1B			Avg	%RSD		
1	ANM	Toxaphene Total	7933570	7601458	8177548	8669689	8903969	8944817	8114030	9830304			8521923	8.3	ANM	
2	L2AK	Toxaphene	782670	765727	803907	846925	873458	882264	757325	903317			826949	6.9	L2AK	
3	L2AK	Toxaphene {2}	2290519	2191848	2470401	2551821	2735624	2681579	2375084	2782628			2509938	8.6	L2AK	
4	L2AK	Toxaphene {3}	1733521	1633557	1747603	1908266	1879164	1978414	1914221	2245155			1879988	9.9	L2AK	
5	L2AK	Toxaphene {4}	771396	705324	749274	759360	765211	764062	819721	976965			788914	10	L2AK	
6	L2AK	Toxaphene {5}	2355465	2305002	2406363	2603317	2650512	2638498	2247680	2922238			2516134	9.0	L2AK	
7		Signal #2														
8	ANM	Toxaphene Total #2	7768895	7562494	7787688	8130194	8174896	8356411	7834190	9587101			8150234	7.8	ANM	
9	L2AK	Toxaphene #2	688978	609830	651292	645889	619478	661446	732506	886564			686998	13	L2AK	
10	L2AK	Toxaphene {2} #2	1332064	1253840	1303910	1329262	1332465	1333695	1316444	1691053			1361592	10.0	L2AK	
11	L2AK	Toxaphene {3} #2	2091673	1955010	2071367	2184588	2267874	2292970	2130239	2652726			2205806	9.6	L2AK	
12	L2AK	Toxaphene {4} #2	1451972	1553727	1599210	1691481	1659500	1733141	1467072	1826452			1622819	8.0	L2AK	
13	L2AK	Toxaphene {5} #2	2204209	2190088	2161909	2278974	2295579	2335159	2187932	2530305			2273019	5 3	L2AK	
14																
15																
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3.0527911

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922013.D\ECD1A.CH Vial: 13
Signal #2 : G:\LUCY\DATA\140922\0922013.D\ECD2B.CH
Acq On : 9-22-14 12:34:41 Operator: MA
Sample : TOX 1A 4/4/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 22 13:57 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Sat Sep 20 13:30:44 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

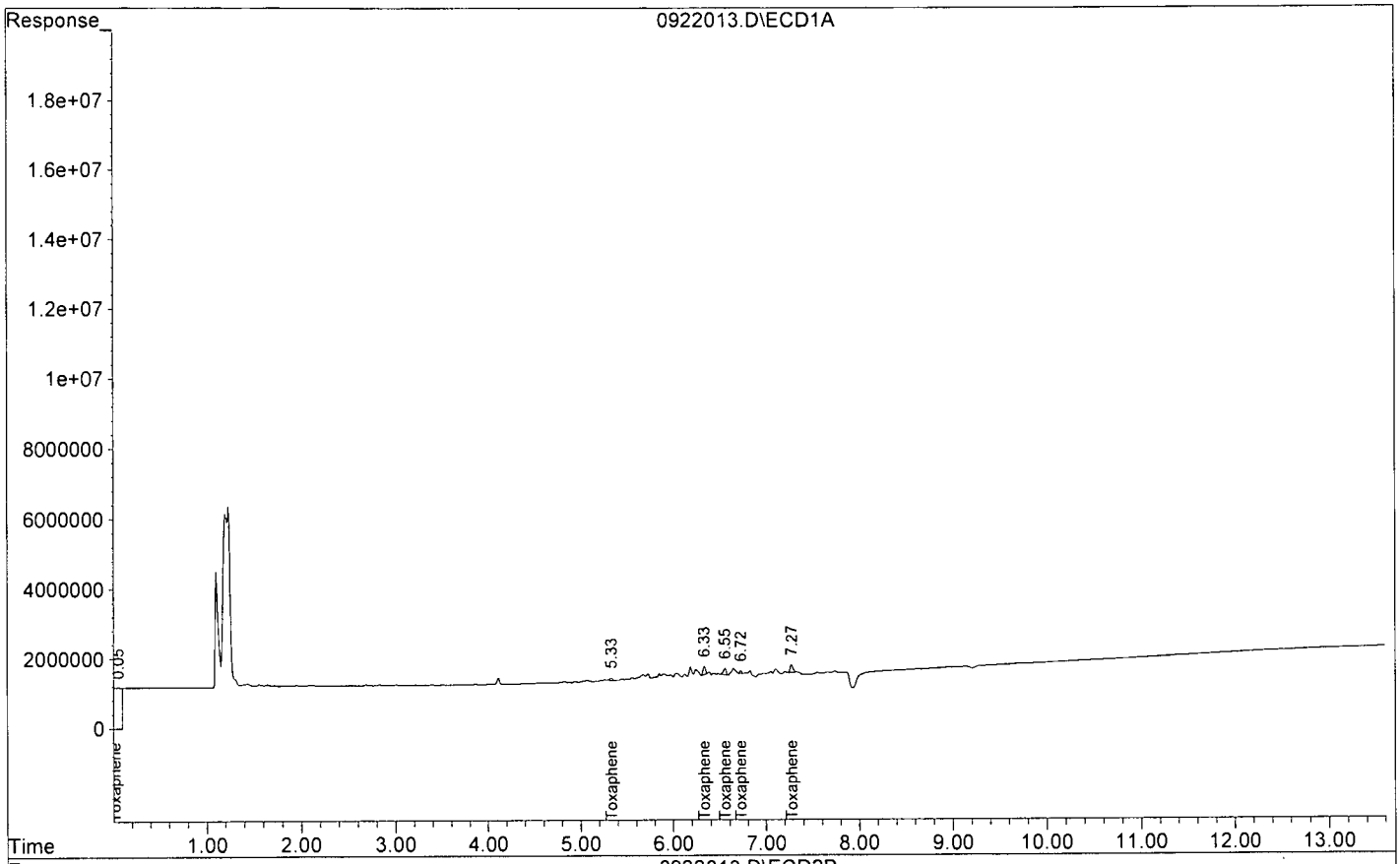
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	ANM Toxaphene Total	0.00	0.00	811403	783419	0.0631m	0.0613m	
2)	L2AK Toxaphene	5.33	6.55	75733	73251	0.0577	0.0633	
3)	L2AK Toxaphene {2}	6.33	7.01	237508	131644	0.0622	0.0606	
4)	L2AK Toxaphene {3}	6.55	7.31	191422	213024	0.0682	0.0615	
5)	L2AK Toxaphene {4}	6.72	7.41	81972	146707	0.0759	0.0552	#
6)	L2AK Toxaphene {5}	7.27	8.07	224768	218793	0.0586	0.0659	
	Sum Toxaphene			811403	783419	0.3227	0.3065	
	Average Toxaphene					0.065	0.061	

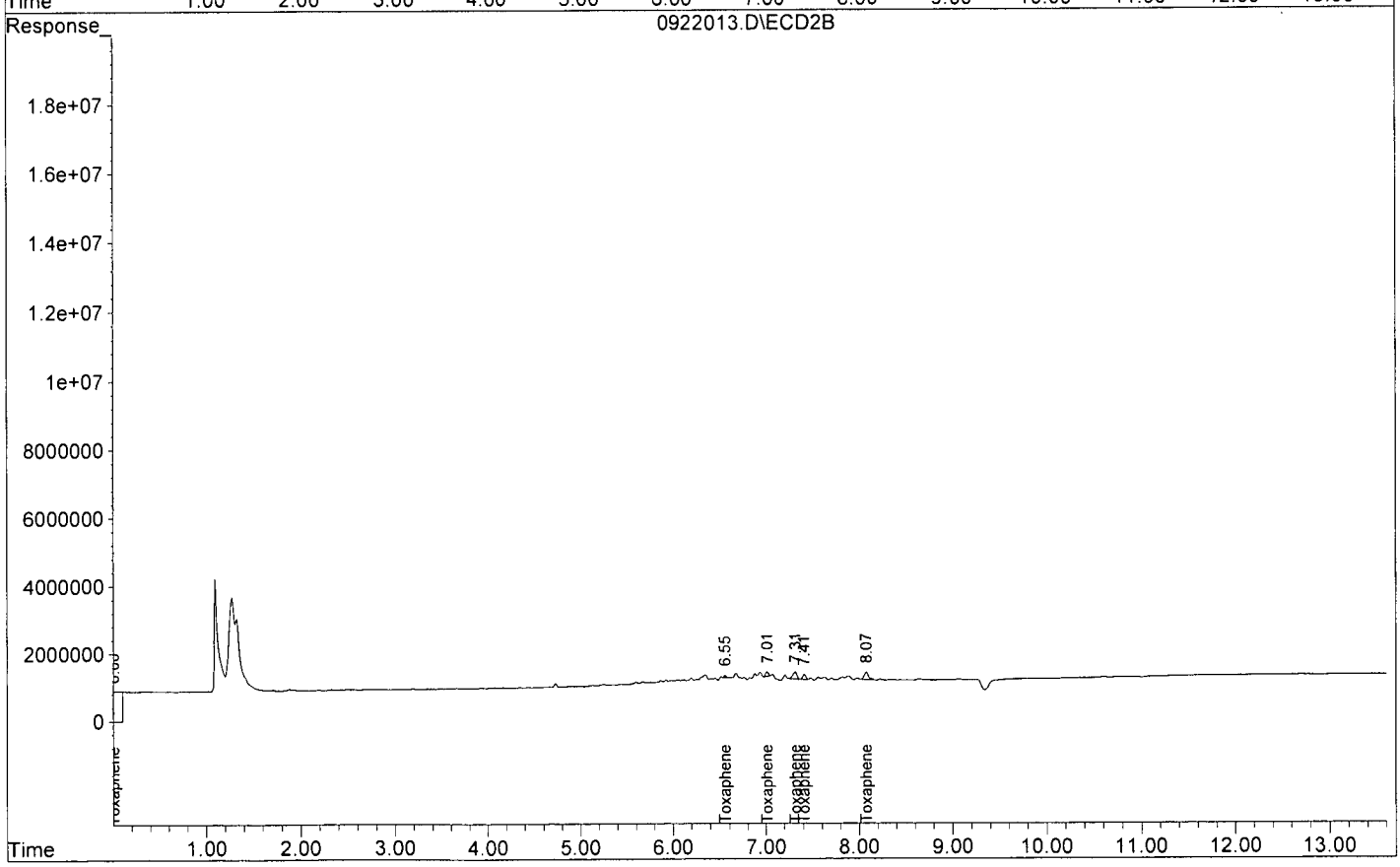
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922013.D
Acq On : 9-22-14 12:34:41
Sample : TOX 1A 4/4/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 13
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922014.D\ECD1A.CH Vial: 14
Signal #2 : G:\LUCY\DATA\140922\0922014.D\ECD2B.CH
Acq On : 9-22-14 12:51:04 Operator: MA
Sample : TOX 1 4/4/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 22 13:57 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Sat Sep 20 13:30:44 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

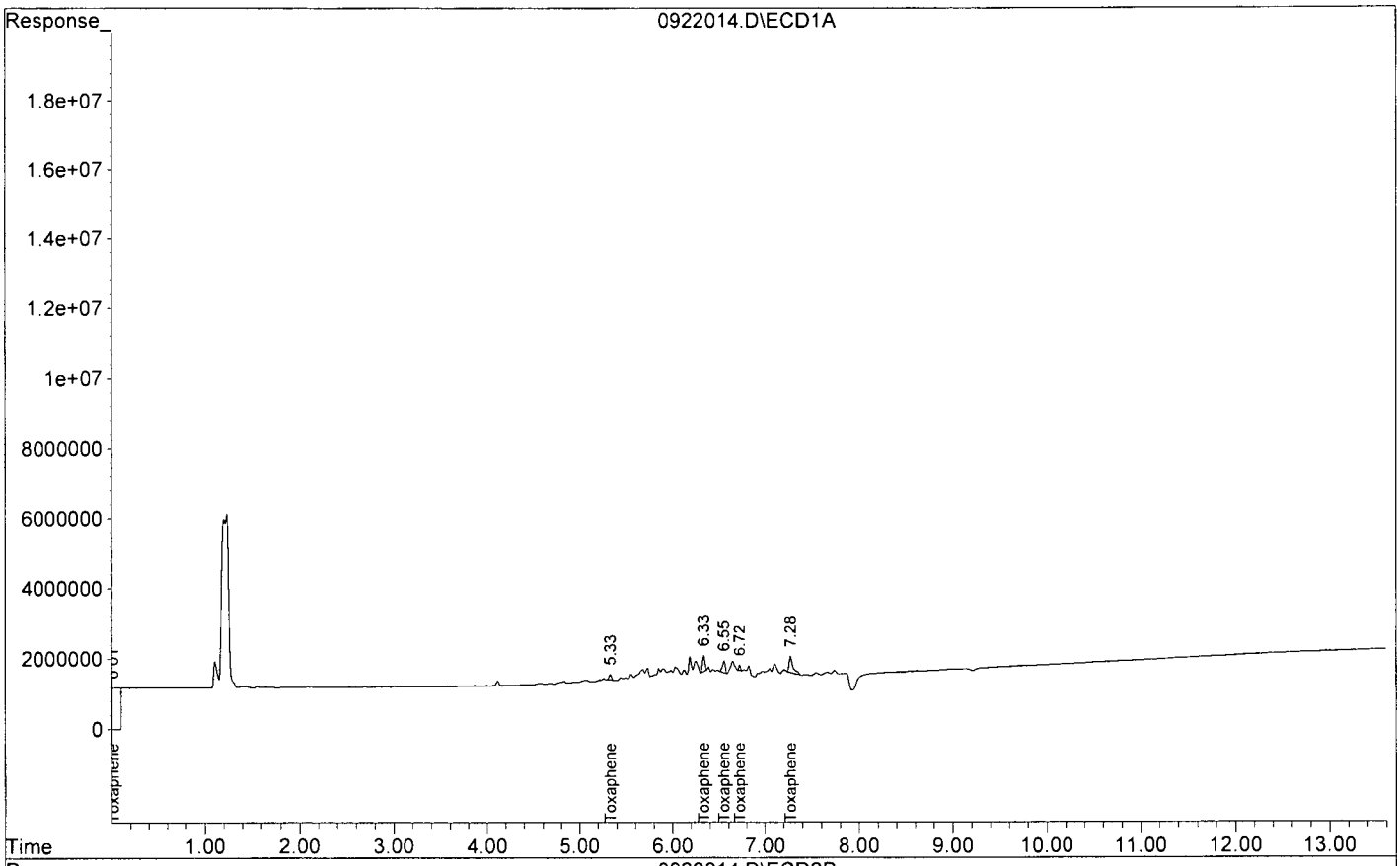
Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

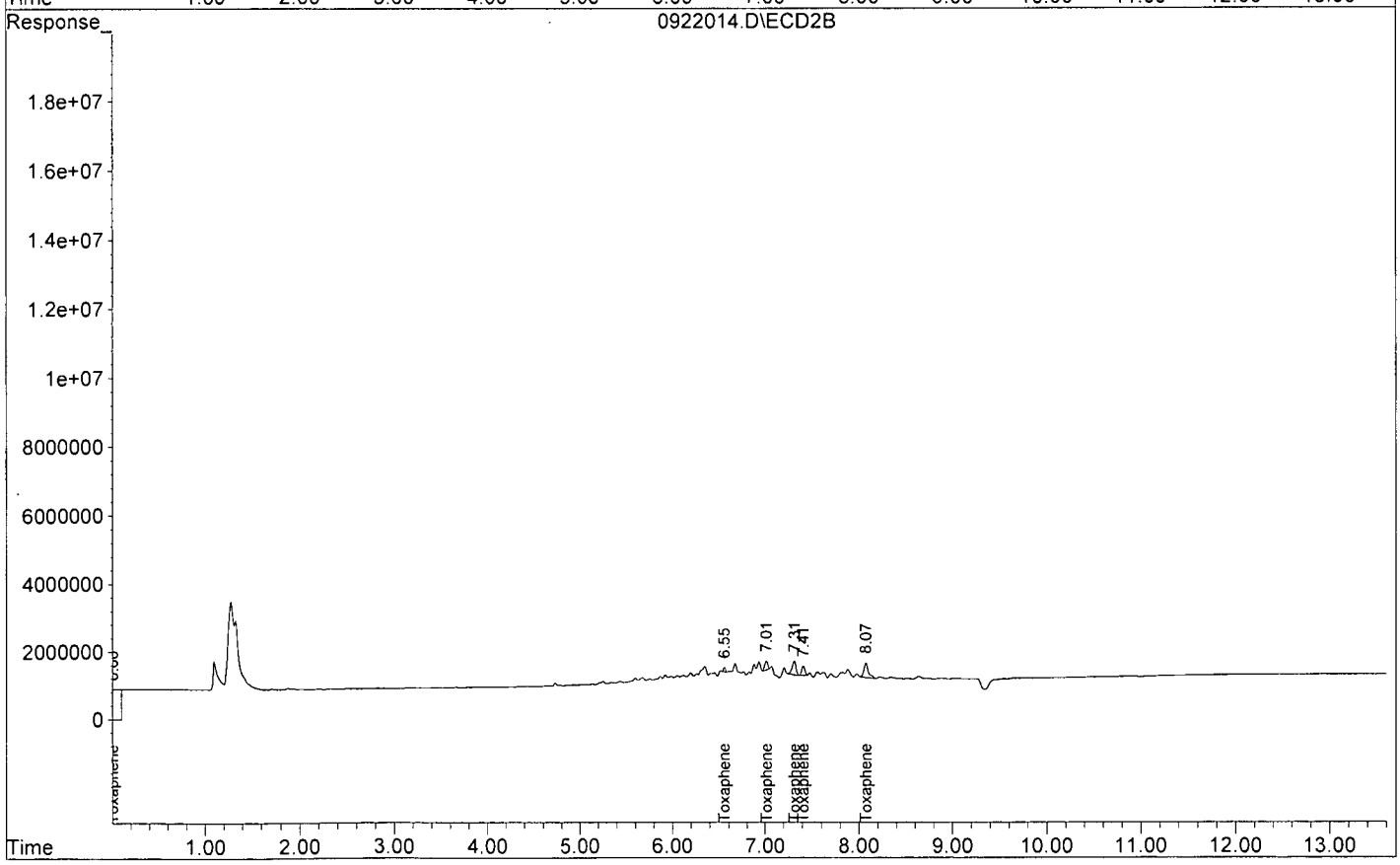
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	1586714	1553779	0.1235m	0.1217m
2) L2AK Toxaphene	5.33	6.55	156534	137796	0.1192	0.1190
3) L2AK Toxaphene {2}	6.33	7.02	458104	266413	0.1200	0.1226
4) L2AK Toxaphene {3}	6.55	7.32	346704	418335	0.1236	0.1208
5) L2AK Toxaphene {4}	6.72	7.41	154279	290394	0.1429	0.1093
6) L2AK Toxaphene {5}	7.28	8.07	471093	440842	0.1228	0.1328
Sum Toxaphene			1586714	1553779	0.6286	0.6045
Average Toxaphene					0.126	0.121

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922014.D Vial: 14
Acq On : 9-22-14 12:51:04 Operator: MA
Sample : TOX 1 4/4/14 Inst : Lucy
Misc : water Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140922\TOX0922.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922015.D\ECD1A.CH Vial: 15
Signal #2 : G:\LUCY\DATA\140922\0922015.D\ECD2B.CH
Acq On : 9-22-14 13:07:28 Operator: MA
Sample : TOX 2 4/4/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 22 13:57 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Sat Sep 20 13:30:44 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

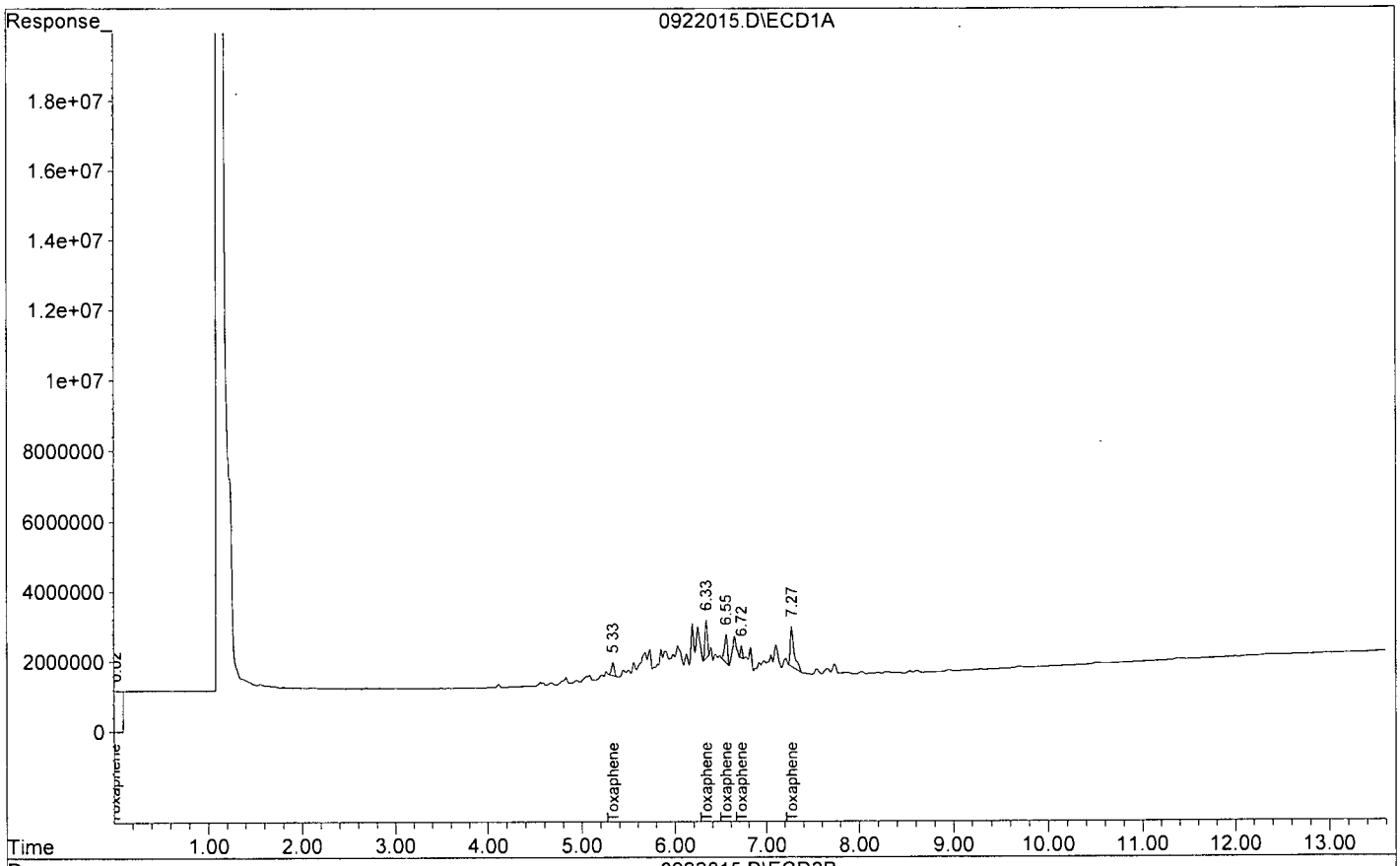
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	3800729	3781247	0.2958m	0.2961m
2) L2AK Toxaphene	5.33	6.55	382864	304915	0.2916	0.2633
3) L2AK Toxaphene {2}	6.33	7.02	1095924	626920	0.2871	0.2885
4) L2AK Toxaphene {3}	6.55	7.32	816779	977505	0.2911	0.2822
5) L2AK Toxaphene {4}	6.72	7.41	352662	776864	0.3267	0.2924
6) L2AK Toxaphene {5}	7.28	8.07	1152501	1095044	0.3005	0.3299
Sum Toxaphene			3800729	3781247	1.4971	1.4564
Average Toxaphene					0.299	0.291

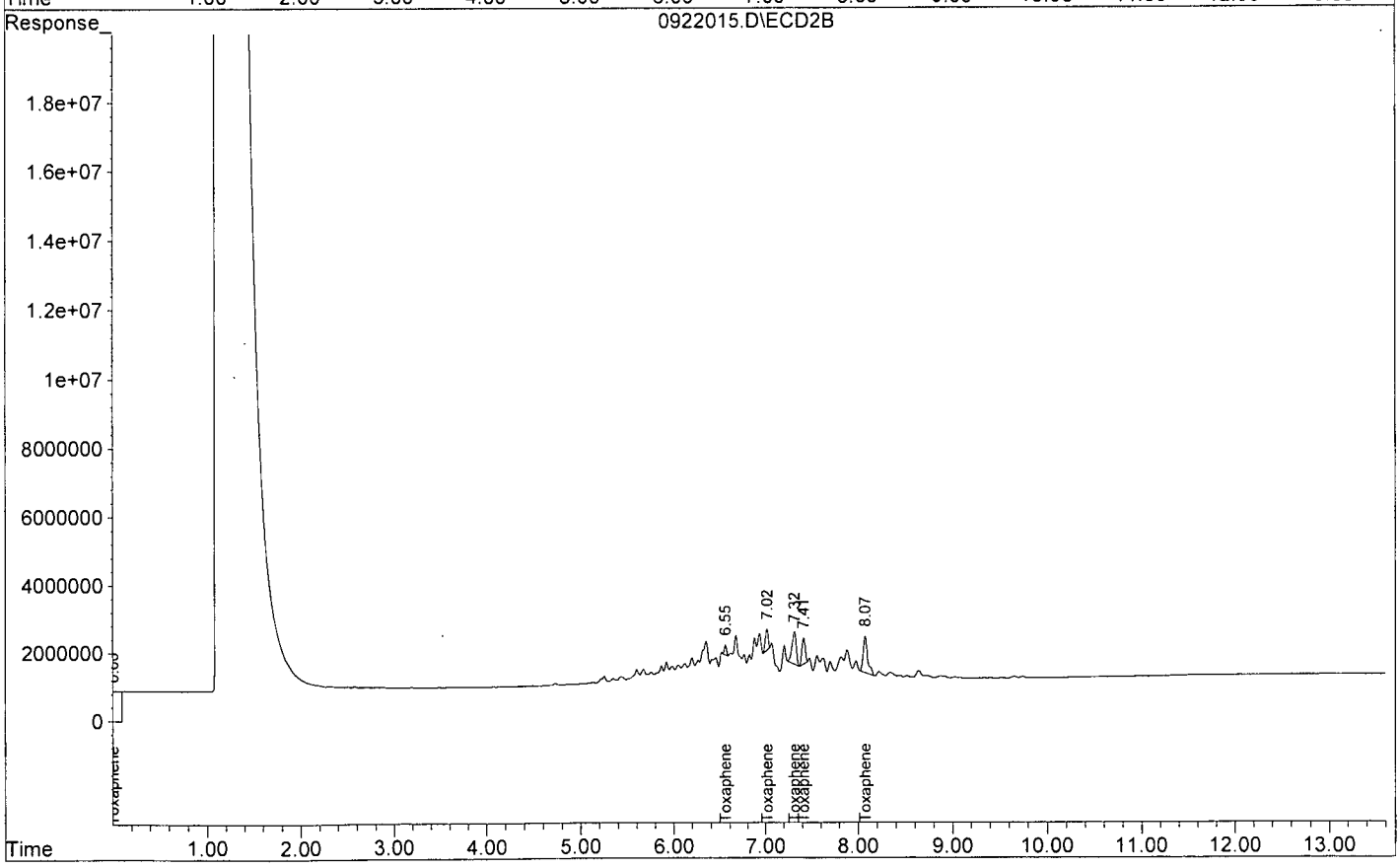
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922015.D
Acq On : 9-22-14 13:07:28
Sample : TOX 2 4/4/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 15
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922016.D\ECD1A.CH Vial: 16
Signal #2 : G:\LUCY\DATA\140922\0922016.D\ECD2B.CH
Acq On : 9-22-14 13:24:00 Operator: MA
Sample : TOX 3 4/4/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 22 13:57 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Sat Sep 20 13:30:44 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

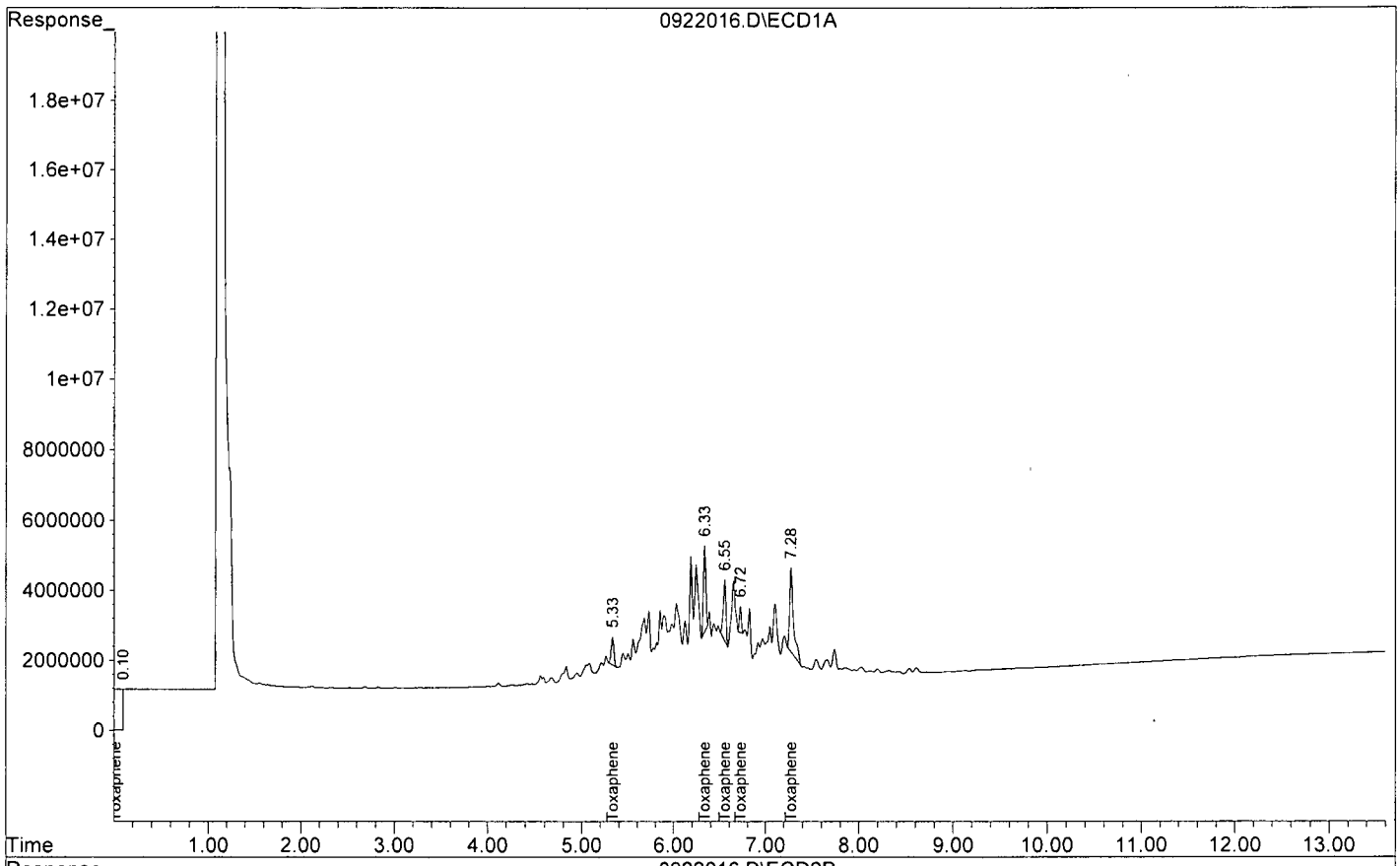
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	8177548	7787688	0.6364m	0.6098m
2) L2AK Toxaphene	5.33	6.55	803907	651292	0.6122	0.5625
3) L2AK Toxaphene {2}	6.33	7.02	2470401	1303910	0.6472	0.6001
4) L2AK Toxaphene {3}	6.55	7.32	1747603	2071367	0.6229	0.5979
5) L2AK Toxaphene {4}	6.72	7.41	749274	1599210	0.6942	0.6020
6) L2AK Toxaphene {5}	7.28	8.07	2406363	2161909	0.6275	0.6513
Sum Toxaphene			8177548	7787688	3.2041	3.0138
Average Toxaphene					0.641	0.603

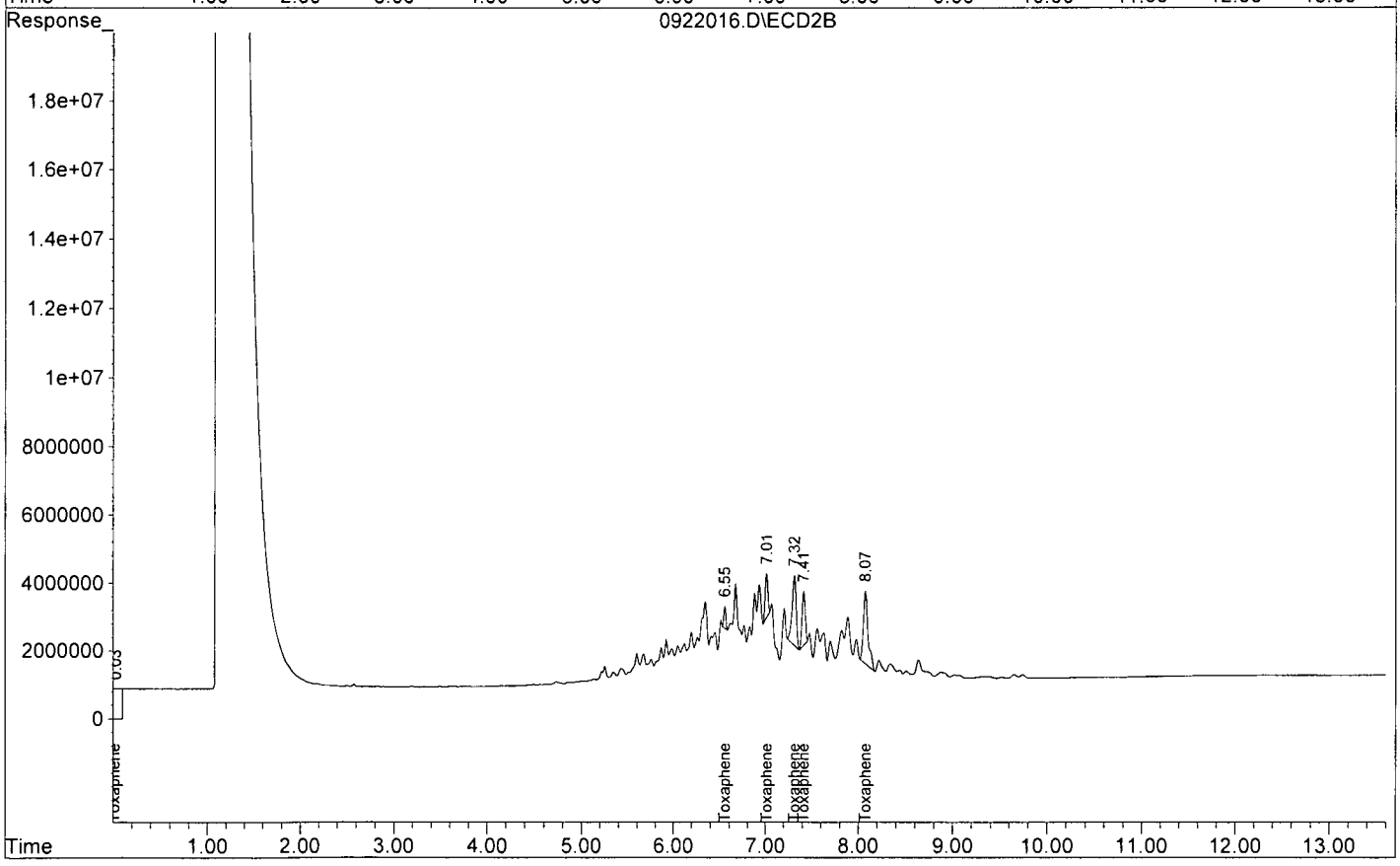
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922016.D
Acq On : 9-22-14 13:24:00
Sample : TOX 3 4/4/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 16
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922017.D\ECD1A.CH Vial: 17
Signal #2 : G:\LUCY\DATA\140922\0922017.D\ECD2B.CH
Acq On : 9-22-14 13:40:24 Operator: MA
Sample : TOX 4 4/4/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 22 14:55 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Sat Sep 20 13:30:44 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

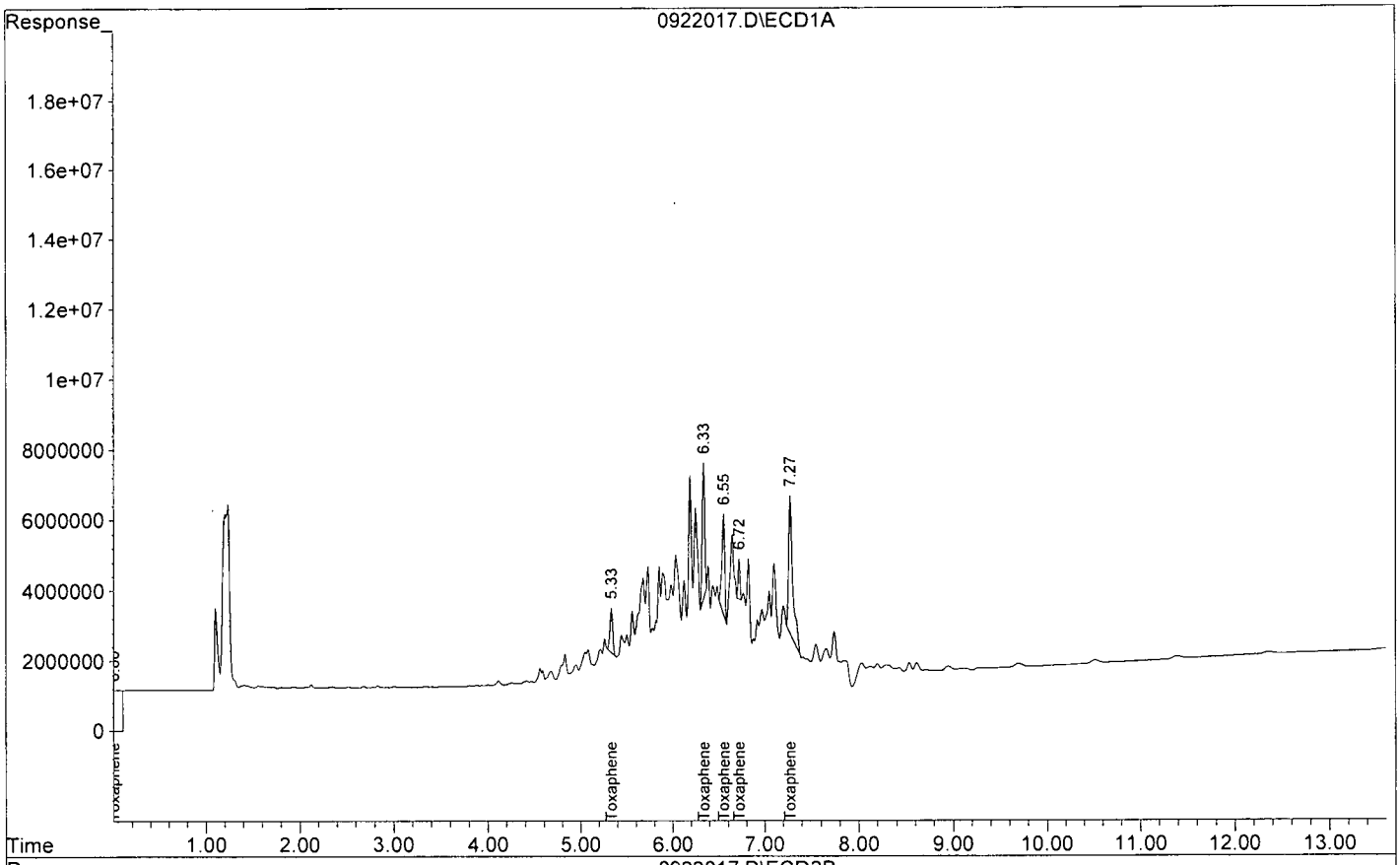
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	13004534	12195291	1.0121m	0.9549m
2) L2AK Toxaphene	5.33	6.55	1270388	968834	0.9675	0.8368
3) L2AK Toxaphene {2}	6.34	7.02	3827732	1993893	1.0029	0.9177
4) L2AK Toxaphene {3}	6.55	7.32	2862399	3276882	1.0203	0.9459
5) L2AK Toxaphene {4}	6.72	7.41	1139039	2537221	1.0553	0.9550
6) L2AK Toxaphene {5}	7.28	8.07	3904976	3418462	1.0183	1.0298
Sum Toxaphene			13004534	12195291	5.0643	4.6852
Average Toxaphene					1.013	0.937

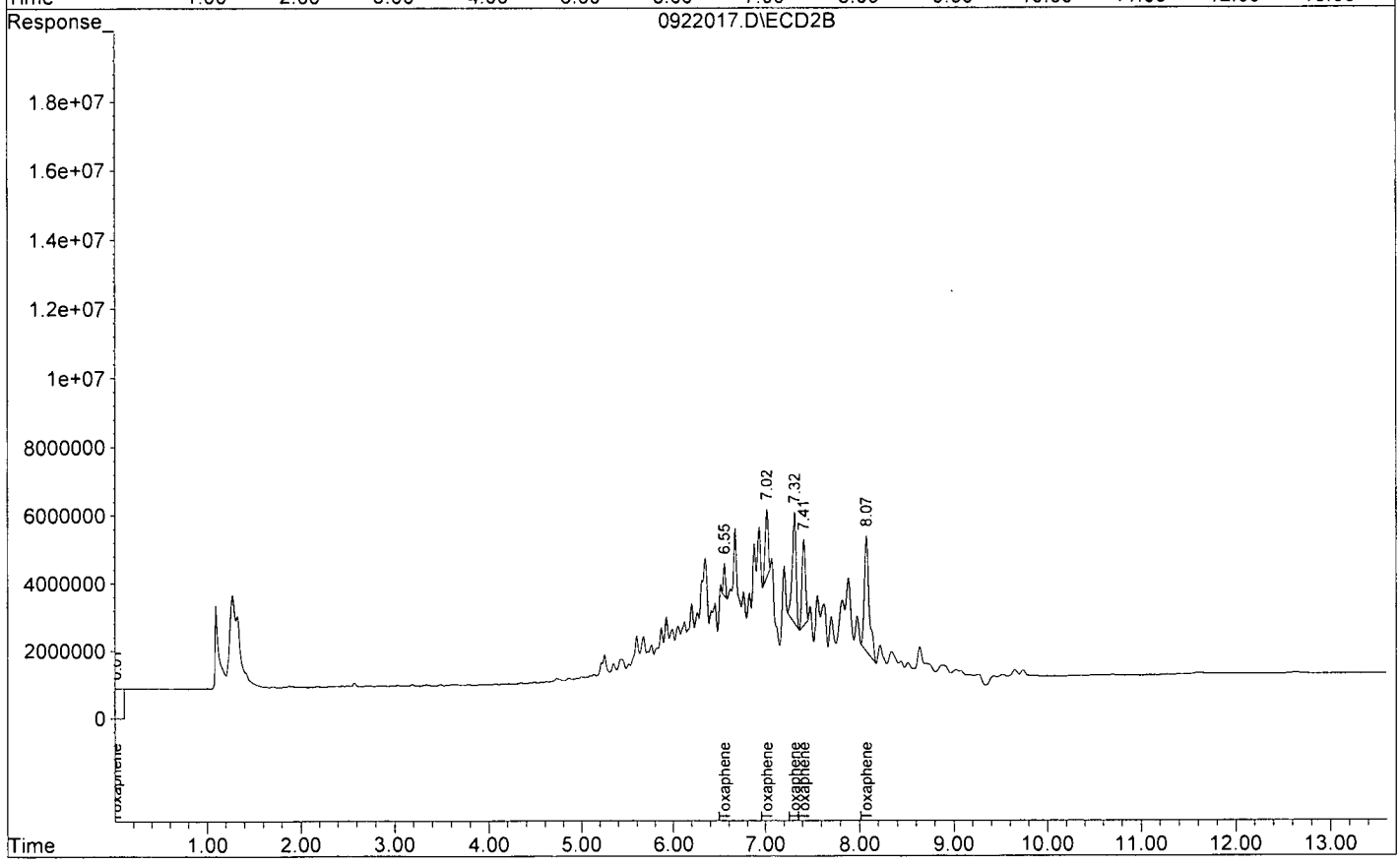
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922017.D
Acq On : 9-22-14 13:40:24
Sample : TOX 4 4/4/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 17
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922018.D\ECD1A.CH Vial: 18
Signal #2 : G:\LUCY\DATA\140922\0922018.D\ECD2B.CH
Acq On : 9-22-14 13:56:46 Operator: MA
Sample : TOX 5 4/4/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 22 14:55 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Sat Sep 20 13:30:44 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

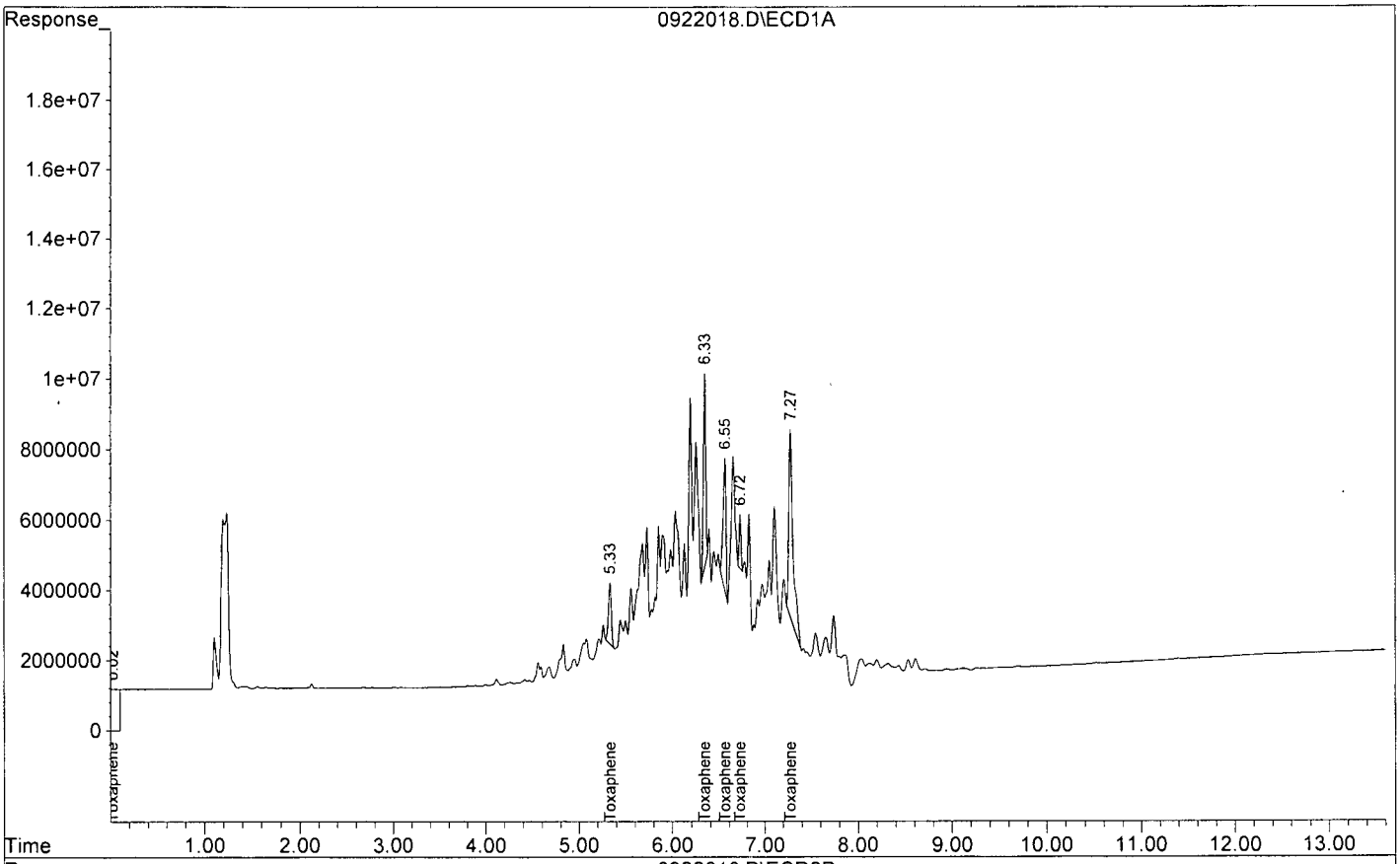
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	17807938	16349792	1.3859m	1.2802m
2) L2AK Toxaphene	5.33	6.55	1746916	1238955	1.3304	1.0700
3) L2AK Toxaphene {2}	6.33	7.02	5471248	2664931	1.4335	1.2265
4) L2AK Toxaphene {3}	6.55	7.32	3758328	4535748	1.3397	1.3093
5) L2AK Toxaphene {4}	6.72	7.42	1530423	3319000	1.4179	1.2493
6) L2AK Toxaphene {5}	7.28	8.08	5301023	4591158	1.3823	1.3831
Sum Toxaphene			17807938	16349792	6.9038	6.2383
Average Toxaphene					1.381	1.248

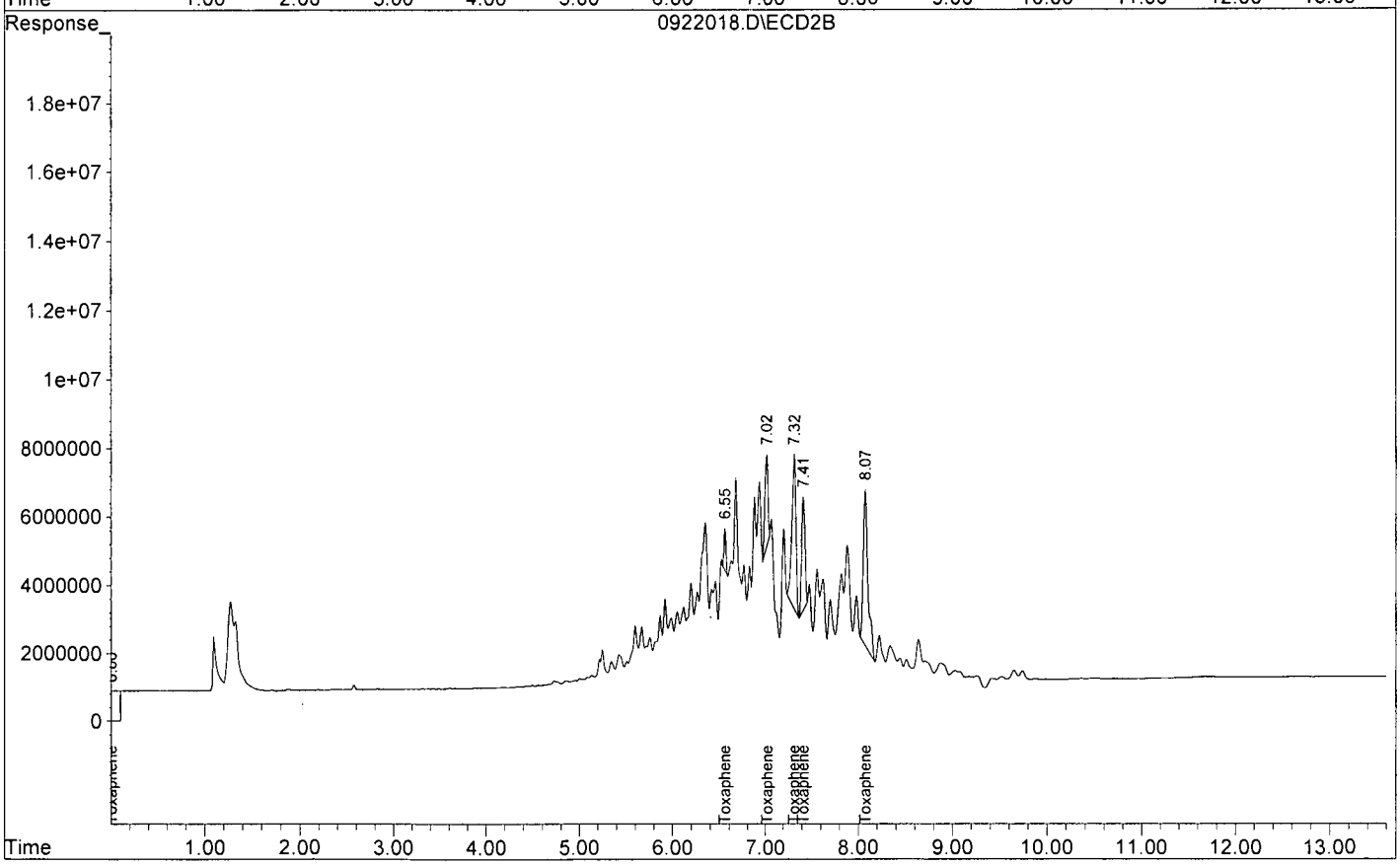
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922018.D
Acq On : 9-22-14 13:56:46
Sample : TOX 5 4/4/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 18
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922019.D\ECD1A.CH Vial: 19
Signal #2 : G:\LUCY\DATA\140922\0922019.D\ECD2B.CH
Acq On : 9-22-14 14:13:10 Operator: MA
Sample : TOX 6 4/4/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 22 14:55 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Sat Sep 20 13:30:44 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

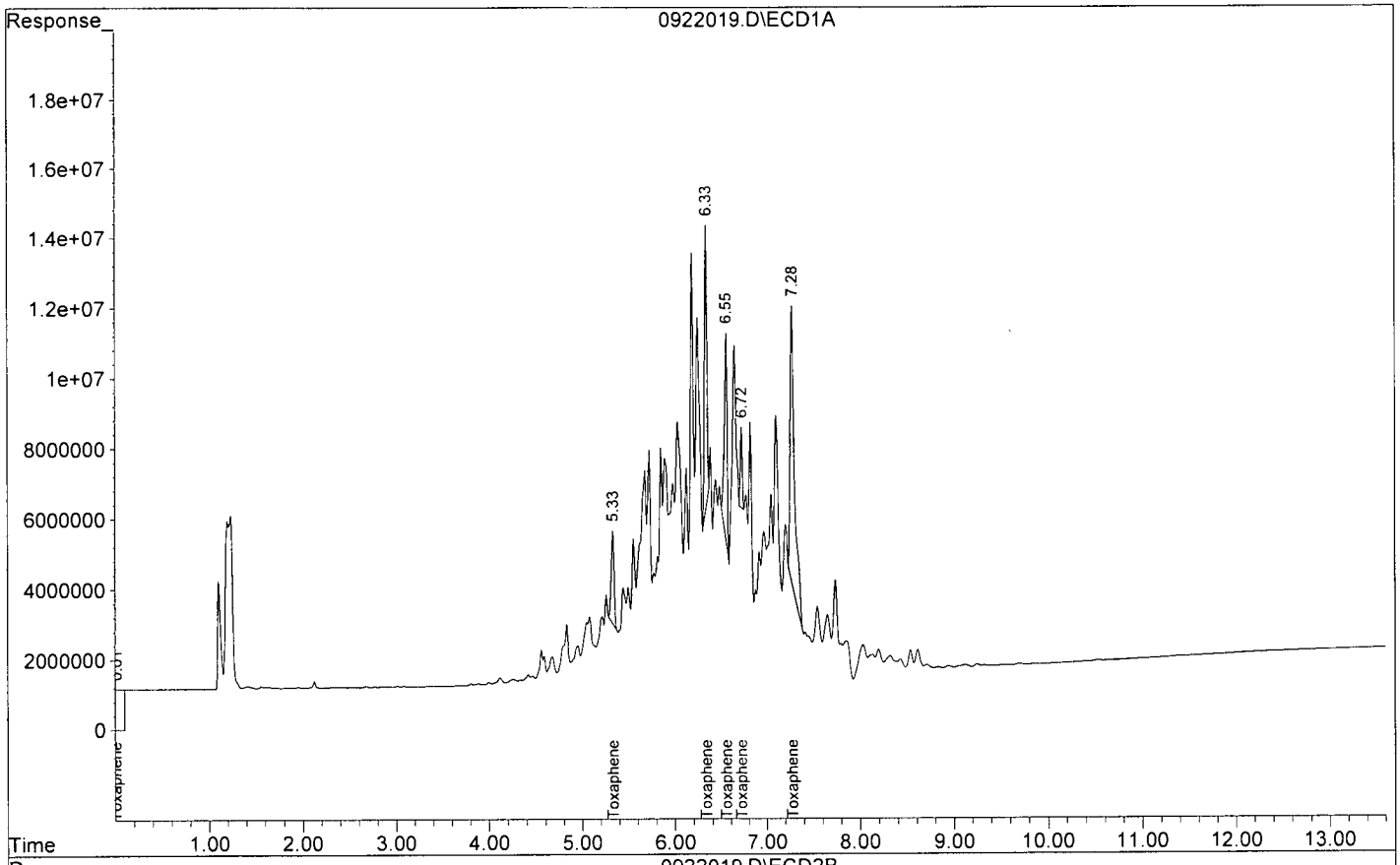
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	26834451	25069232	2.0884m	1.9630m
2) L2AK Toxaphene	5.33	6.55	2646793	1984337	2.0157	1.7138
3) L2AK Toxaphene {2}	6.33	7.02	8044738	4001086	2.1077	1.8415
4) L2AK Toxaphene {3}	6.55	7.32	5935242	6878910	2.1156	1.9857
5) L2AK Toxaphene {4}	6.72	7.41	2292185	5199422	2.1237	1.9571
6) L2AK Toxaphene {5}	7.28	8.08	7915493	7005477	2.0641	2.1104
Sum Toxaphene			26834451	25069232	10.4269	9.6085
Average Toxaphene					2.085	1.922

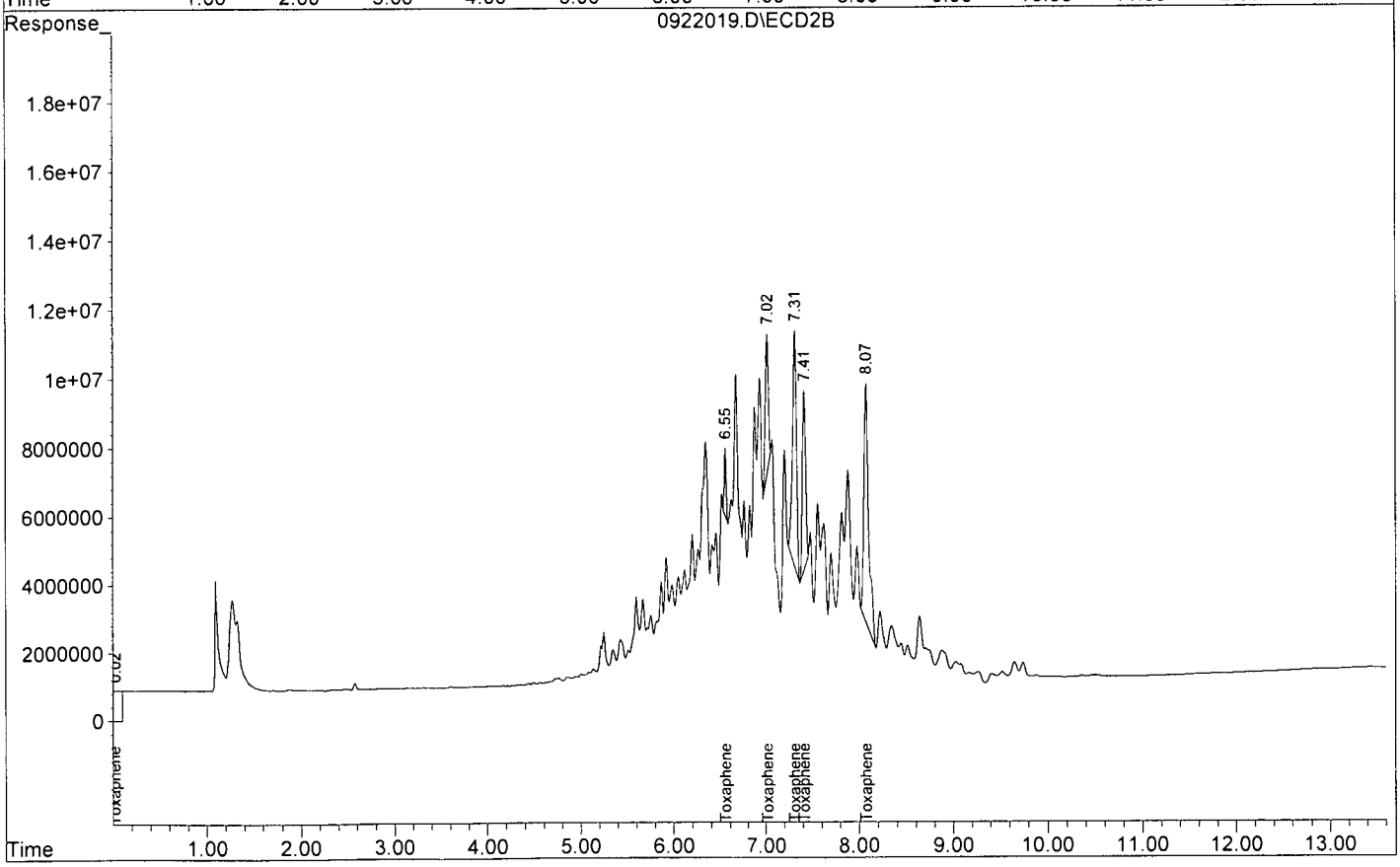
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922019.D
Acq On : 9-22-14 14:13:10
Sample : TOX 6 4/4/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 19
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922020.D\ECD1A.CH Vial: 20
Acq On : 9-22-14 15:07:40 Operator: MA
Sample : TOX 1B 4/4/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922020.D\ECD2B.CH Vial: 20
Acq On : 9-22-14 15:07:40 Operator: MA
Sample : TOX 2ND SRC 11/22/13 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile : events2.e
Quant Time: Sep 22 15:22 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

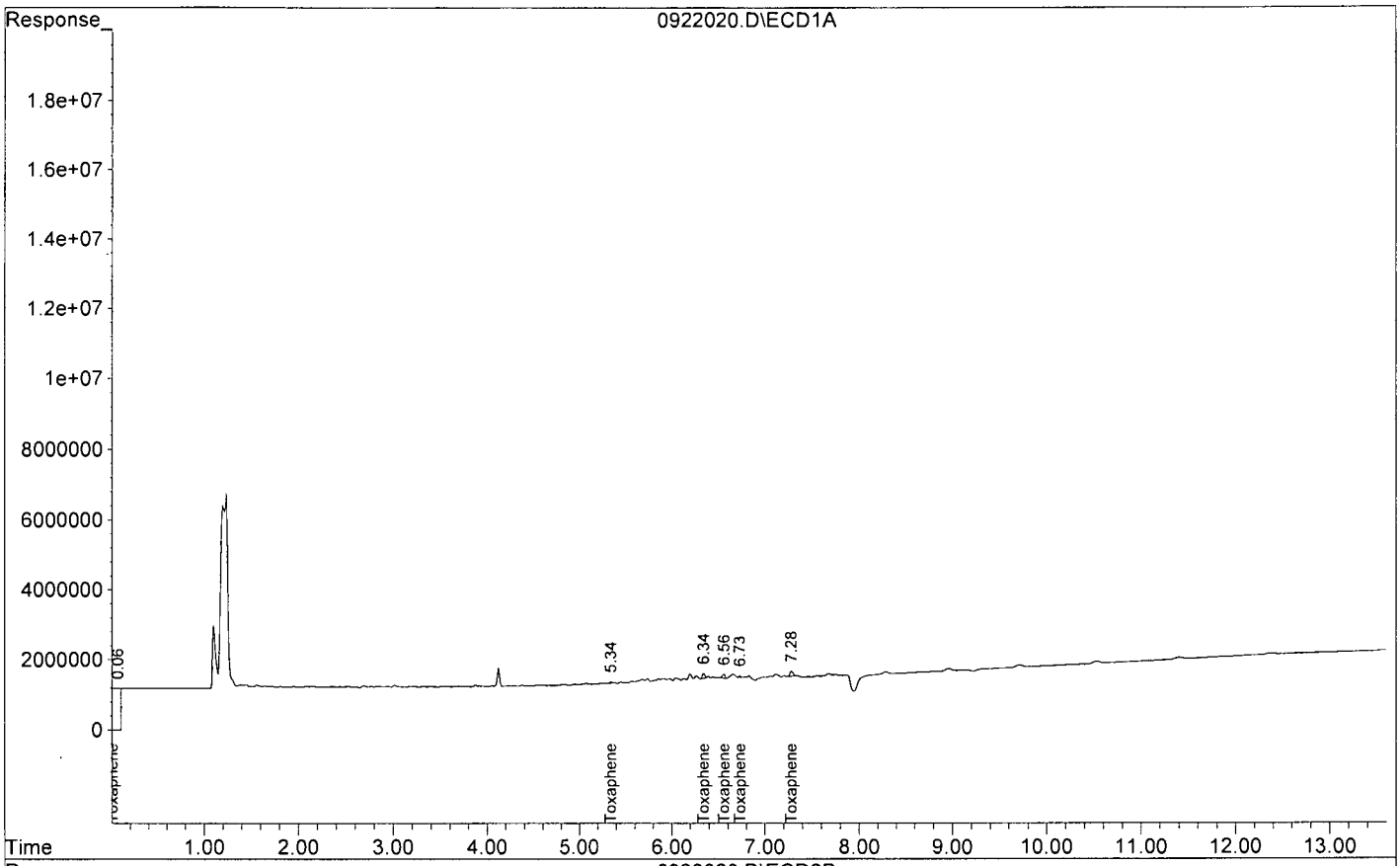
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	491515	479355	0.0295m	0.0302m
2) L2AK Toxaphene	5.34	6.55	45166	44328	0.0259	0.0301
3) L2AK Toxaphene {2}	6.34	7.02	139131	84553	0.0261	0.0298
4) L2AK Toxaphene {3}	6.56	7.32	112258	132636	0.0280	0.0284
5) L2AK Toxaphene {4}	6.73	7.41	48848	91323	0.0291	0.0268
6) L2AK Toxaphene {5}	7.28	8.08	146112	126515	0.0269	0.0261
Sum Toxaphene			491515	479355	0.1359	0.1413
Average Toxaphene					0.027	0.028

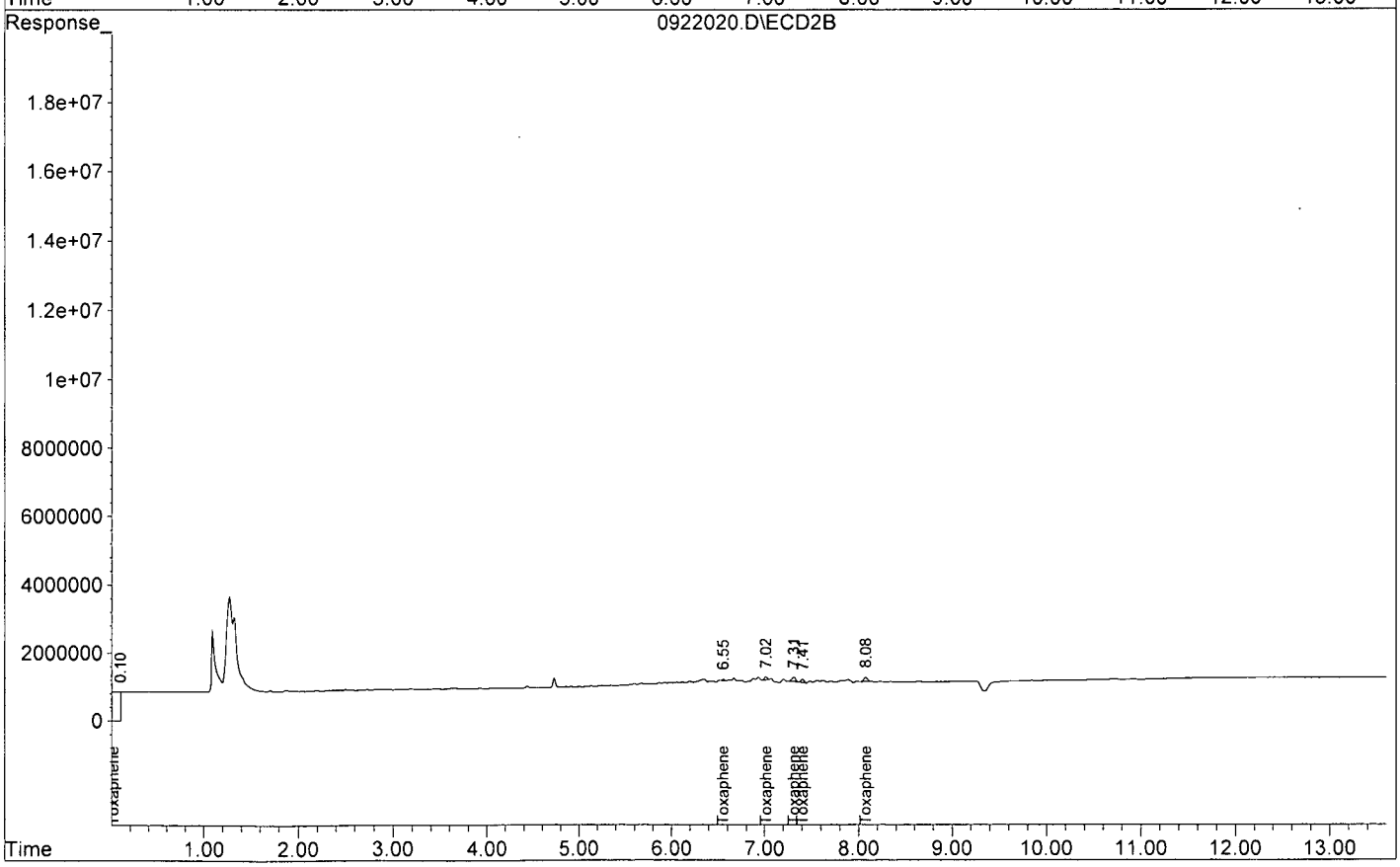
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922020.D
Acq On : 9-22-14 15:07:40
Sample : TOX 1B 4/4/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 20
Operator: MA
Inst : Lucy
Multiplr: 1.00





TOXAPHENE
METHOD 608/8081

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 14218
Date Analyzed: 09/22/14
Instrument: Lucy
Initial Cal. Date: 09/22/14
Data File: 0922021.D

		Compound	MEAN	CCRF	%D		%Drift
1	ANM	Toxaphene Total	8521920	8273780	2.9	ANM	
2	L2AK	Toxaphene	826949	808287	2.3	L2AK	
3	L2AK	Toxaphene {2}	2509940	2438190	2.9	L2AK	
4	L2AK	Toxaphene {3}	1879990	1759270	6.4	L2AK	
5	L2AK	Toxaphene {4}	788914	742082	5.9	L2AK	
6	L2AK	Toxaphene {5}	2516130	2525940	0.39	L2AK	
7	signal #2						
8	ANM	Toxaphene Total	8150230	7455890	8.5	ANM	
9	L2AK	Toxaphene	686998	615035	10	L2AK	
10	L2AK	Toxaphene {2}	1361590	1237200	9.1	L2AK	
11	L2AK	Toxaphene {3}	2205810	2062810	6.5	L2AK	
12	L2AK	Toxaphene {4}	1622820	1449930	11	L2AK	
13	L2AK	Toxaphene {5}	2273020	2090920	8.0	L2AK	
14							
15							
16							
17							
18							
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39							
40							
		Average			#REF!		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922021.D\ECD1A.CH Vial: 21
Signal #2 : G:\LUCY\DATA\140922\0922021.D\ECD2B.CH
Acq On : 9-22-14 15:24:04 Operator: MA
Sample : TOX 2ND SRC 11/22/13 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 22 15:50 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

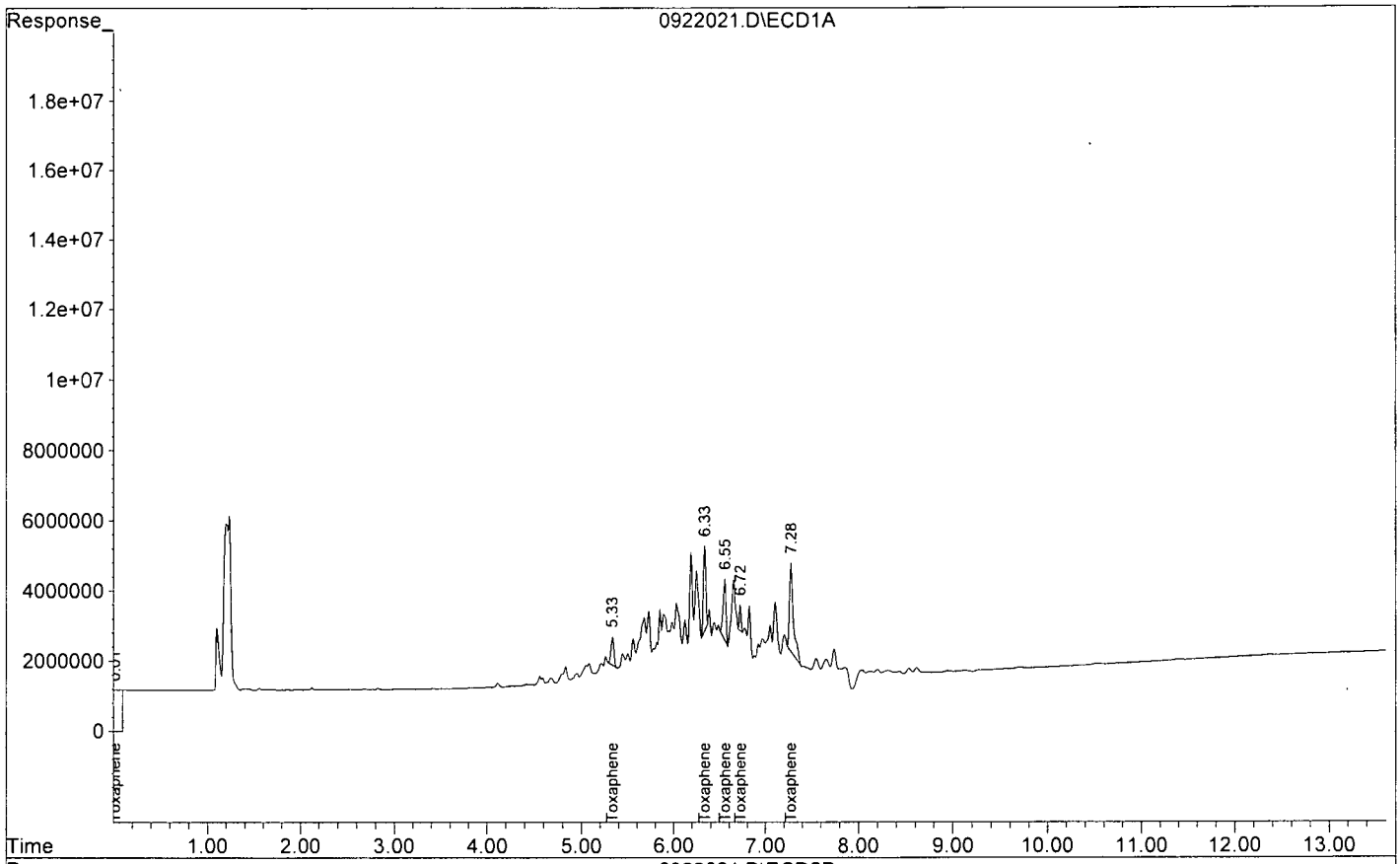
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	8273778	7455887	0.4854m	0.4574m
2) L2AK Toxaphene	5.33	6.55	808287	615035	0.4887	0.4476
3) L2AK Toxaphene {2}	6.33	7.02	2438191	1237197	0.4857	0.4543
4) L2AK Toxaphene {3}	6.55	7.32	1759273	2062807	0.4679	0.4676
5) L2AK Toxaphene {4}	6.72	7.41	742082	1449926	0.4703	0.4467
6) L2AK Toxaphene {5}	7.28	8.07	2525945	2090922	0.5019	0.4599
Sum Toxaphene			8273778	7455887	2.4146	2.2762
Average Toxaphene					0.483	0.455

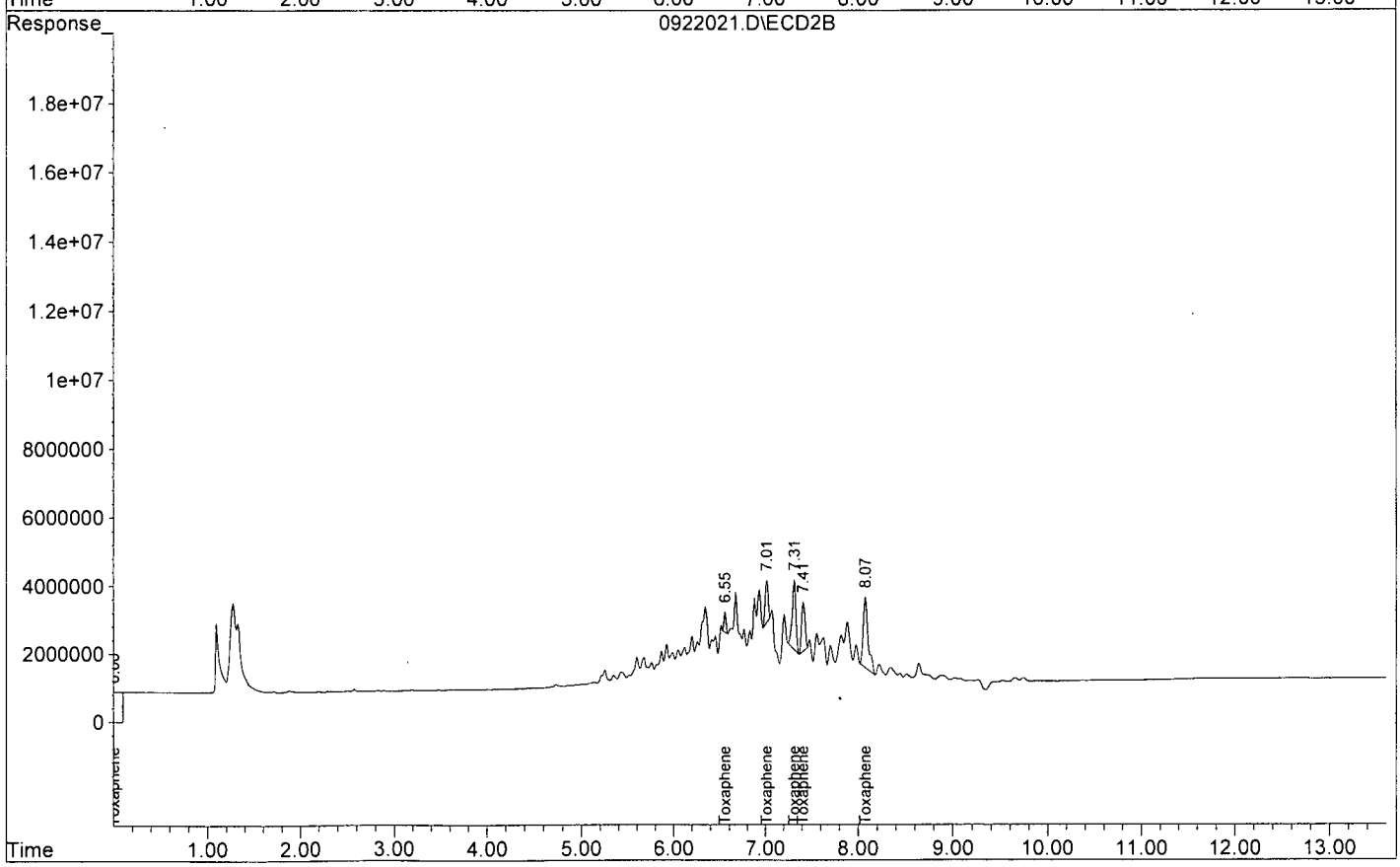
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922021.D
Acq On : 9-22-14 15:24:04
Sample : TOX 2ND SRC 11/22/13
Misc : water
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 21
Operator: MA
Inst : Lucy
Multiplr: 1.00





ORGANOCHLORINE PESTICIDES
TECHNICAL CHLORDANE

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 74218
Case No: Initial Cal. Date: 09/23/14
Matrix: Water Instrument: Lucy Initials: MA

			0922076 D	0922077 D	0922078.D	0922079 D	0922080.D	0922075 D								
		Compound	1	2	3	4	5	1A					Avg	%RSD		
1	ANM	T. CHLORDANE Total	134693409	141164111	153837678	141763436	144882816	145533673					143645854	4.4	ANM	
2	L2AK	T. CHLORDANE	25767782	26958510	29509877	28318472	28788665	28090756					27905677	4.8	L2AK	
3	L2AK	T. CHLORDANE {2}	14568673	14610984	15253078	13537098	13343758	14752220					14344302	5.2	L2AK	
4	L2AK	T. CHLORDANE {3}	51574527	55417234	60997350	54826422	55799898	56258379					55812301	5.4	L2AK	
5	L2AK	T. CHLORDANE {4}	30423516	31541010	34280091	31736730	32668224	33934063					32430606	4.6	L2AK	
6	L2AK	T. CHLORDANE {5}	12358911	12636373	13797282	13344714	14282272	12498256					13152968	5.9	L2AK	
7		Signal #2														
8	ANM	T. CHLORDANE Total #2	124928442	129667060	138752972	127913530	133991325	139671672					132487500	4.5	ANM	
9	L2AK	T. CHLORDANE #2	22810672	23262845	25077256	22929915	24602488	25744774					24071325	5.1	L2AK	
10	L2AK	T. CHLORDANE {2} #2	16372073	15656510	15527513	13834553	13758083	17618898					15461272	9.6	L2AK	
11	L2AK	T. CHLORDANE {3} #2	51580999	55559098	60811487	56938775	59209983	56689228					56798262	5.6	L2AK	
12	L2AK	T. CHLORDANE {4} #2	24388189	24867646	26774257	24041090	25795468	29292100					25859792	7.6	L2AK	
13	L2AK	T. CHLORDANE {5} #2	9776508	10320961	10562459	10169198	10625303	10326671					10296850	3.0	L2AK	
14																
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1.8789978

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922075.D\ECD1A.CH Vial: 75
Signal #2 : G:\LUCY\DATA\140922\0922075.D\ECD2B.CH
Acq On : 9-23-14 7:26:45 Operator: MA
Sample : TCH 1A 6/3/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 10:19 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:19:35 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

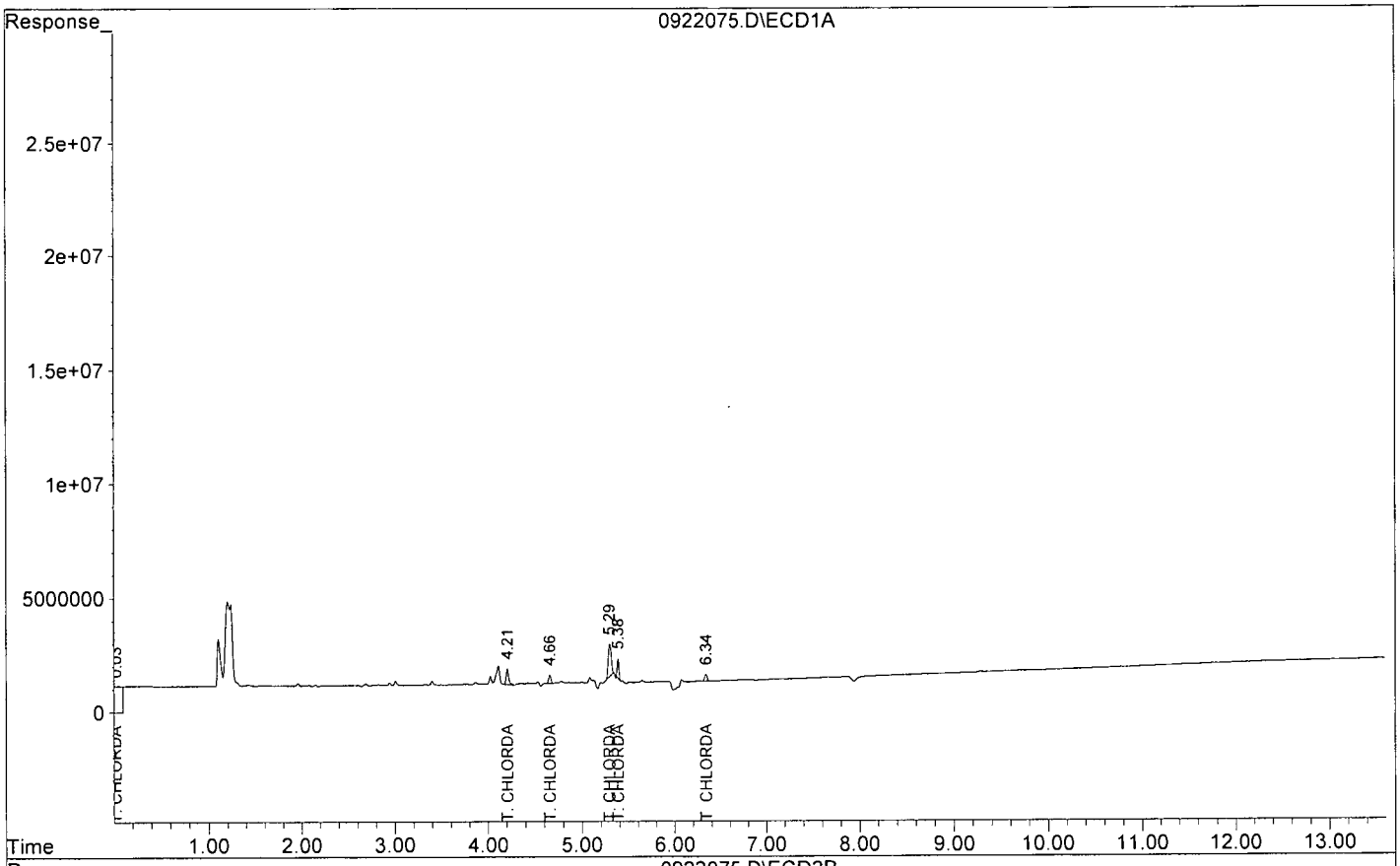
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
Target Compounds							
1) ANM T. CHLORDANE Tot	0.00	0.00	3638342	3491792	0.0199m	0.0228m	
2) L2AK T. CHLORDANE	4.21	4.93	702269	643619	0.0186	0.0189	
3) L2AK T. CHLORDANE {2}	4.66	5.27	368805	440472	0.0197	0.0254	#
4) L2AK T. CHLORDANE {3}	5.29	6.01	1406459	1417231	0.0207	0.0229	
5) L2AK T. CHLORDANE {4}	5.38	6.10	848352	732303	0.0208	0.0263	#
6) L2AK T. CHLORDANE {5}	6.34	7.02	312456	258167	0.0181	0.0212	
Sum T. CHLORDANE			3638342	3491792	0.0979	0.1147	
Average T. CHLORDANE					0.020	0.023	

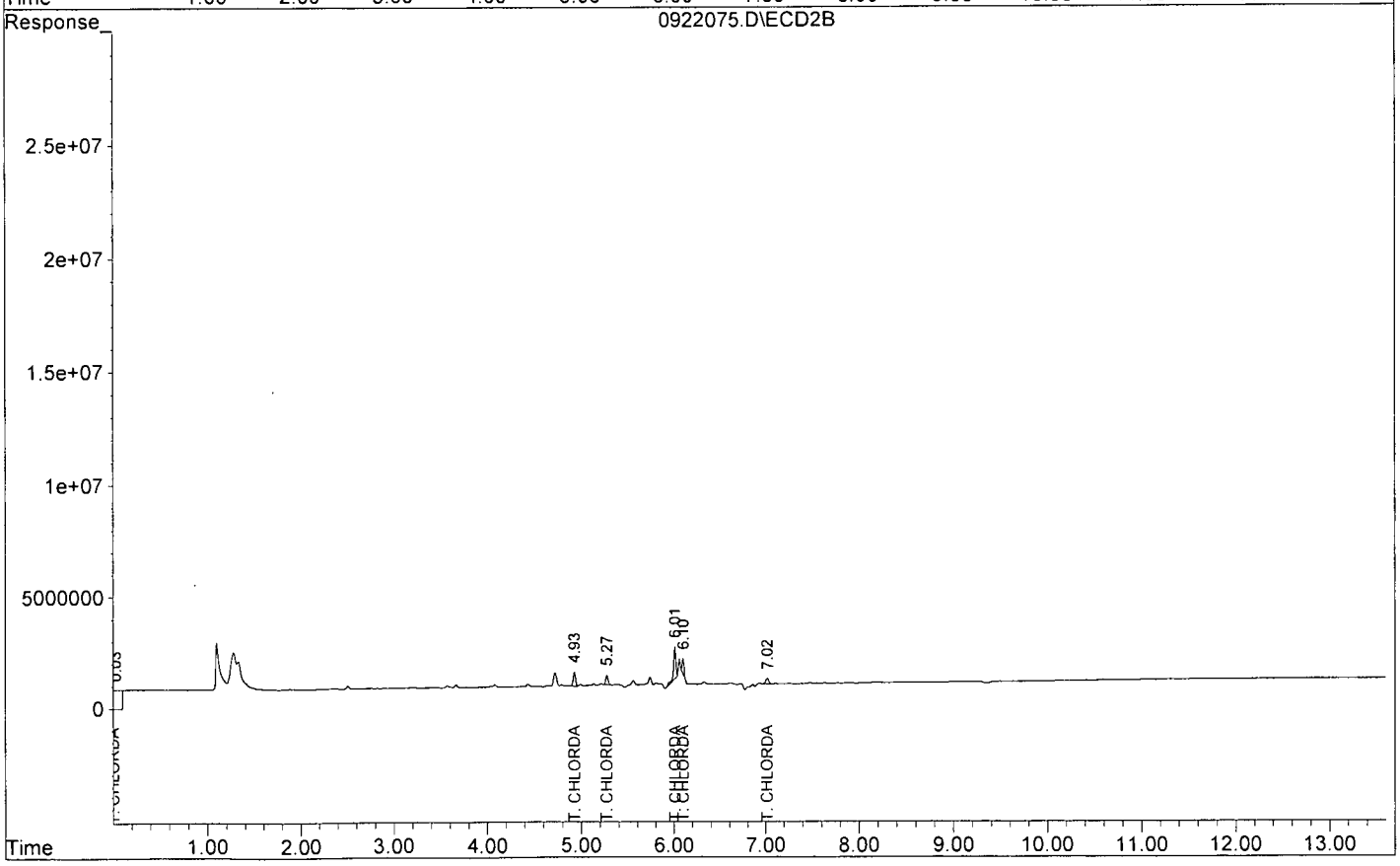
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922075.D
Acq On : 9-23-14 7:26:45
Sample : TCH 1A 6/3/14
Misc : soil
Quant Method : G:\LUCY\DATA\140922\TCH0922.M

Vial: 75
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922076.D\ECD1A.CH Vial: 76
Signal #2 : G:\LUCY\DATA\140922\0922076.D\ECD2B.CH
Acq On : 9-23-14 7:43:17 Operator: MA
Sample : TCH 1 6/3/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 10:19 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:19:35 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

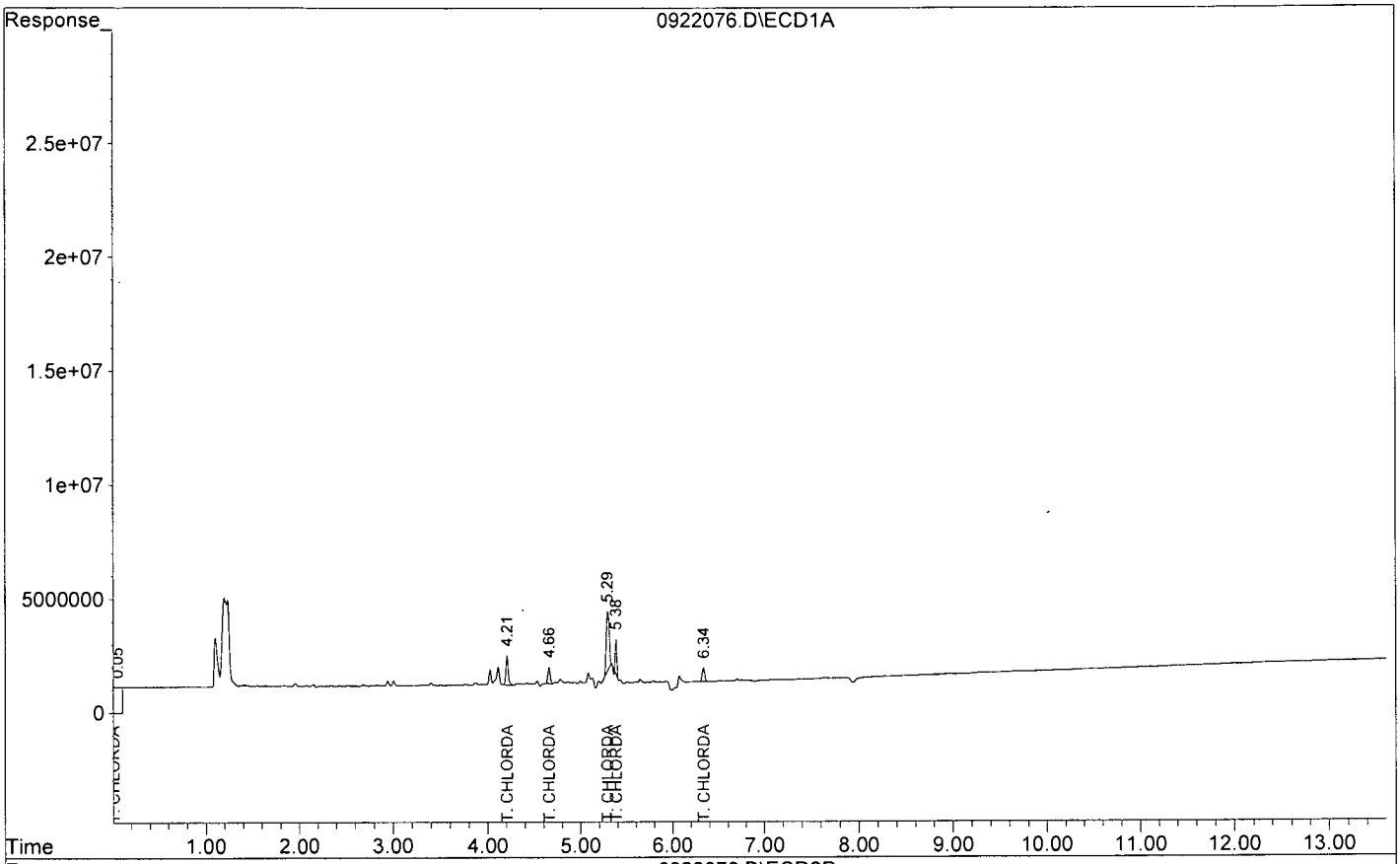
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	6734670	6246422	0.0369m	0.0407m
2) L2AK T. CHLORDANE	4.21	4.93	1288389	1140534	0.0342	0.0335
3) L2AK T. CHLORDANE {2}	4.66	5.27	728434	818604	0.0390	0.0473
4) L2AK T. CHLORDANE {3}	5.30	6.01	2578726	2579050	0.0380	0.0416
5) L2AK T. CHLORDANE {4}	5.38	6.10	1521176	1219409	0.0373	0.0437
6) L2AK T. CHLORDANE {5}	6.34	7.02	617946	488825	0.0357	0.0401
Sum T. CHLORDANE			6734670	6246422	0.1841	0.2062
Average T. CHLORDANE					0.037	0.041

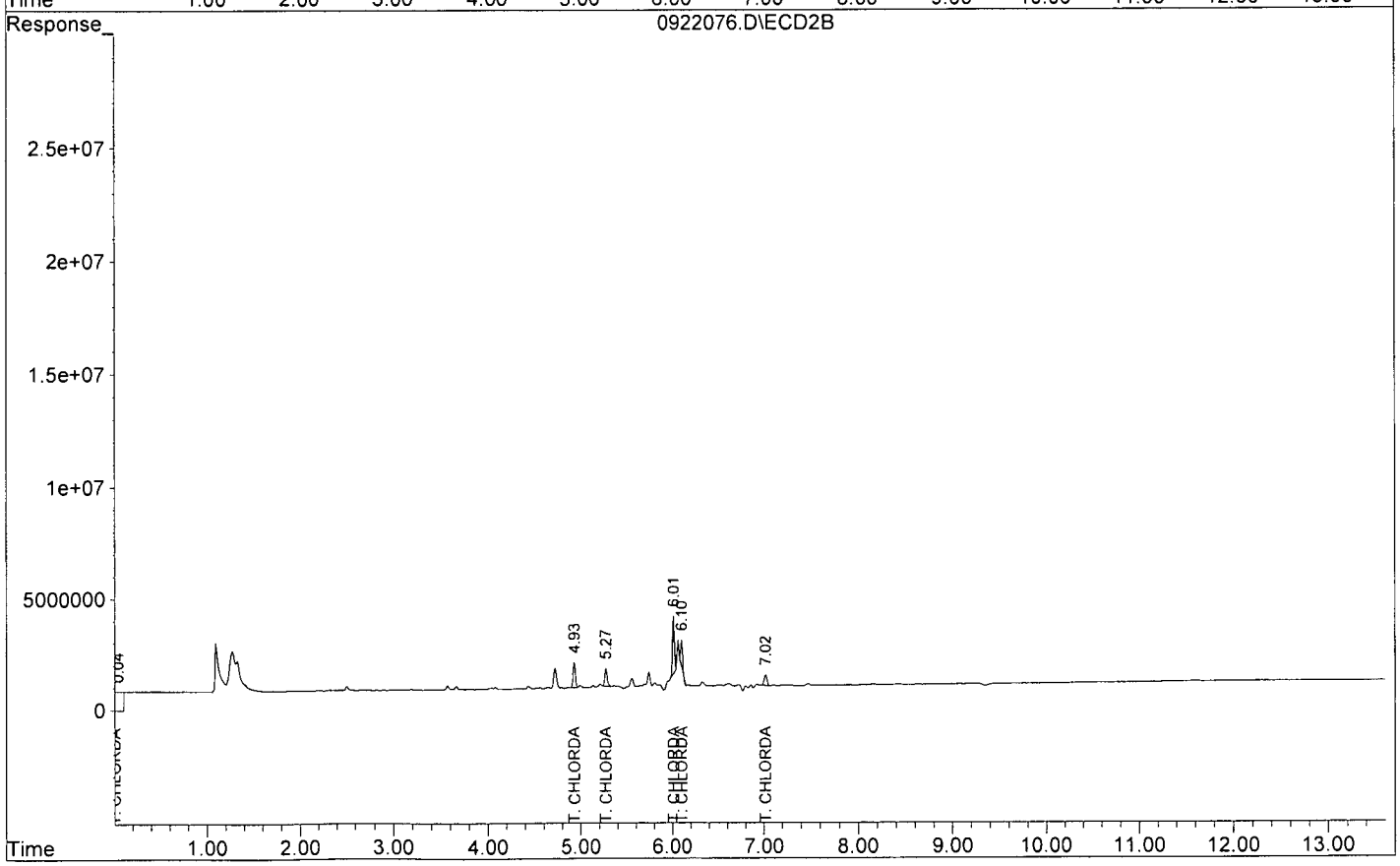
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922076.D
Acq On : 9-23-14 7:43:17
Sample : TCH 1 6/3/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\TCH0922.M

Vial: 76
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922077.D\ECD1A.CH Vial: 77
Signal #2 : G:\LUCY\DATA\140922\0922077.D\ECD2B.CH
Acq On : 9-23-14 7:59:43 Operator: MA
Sample : TCH 2 6/3/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 10:20 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:19:35 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

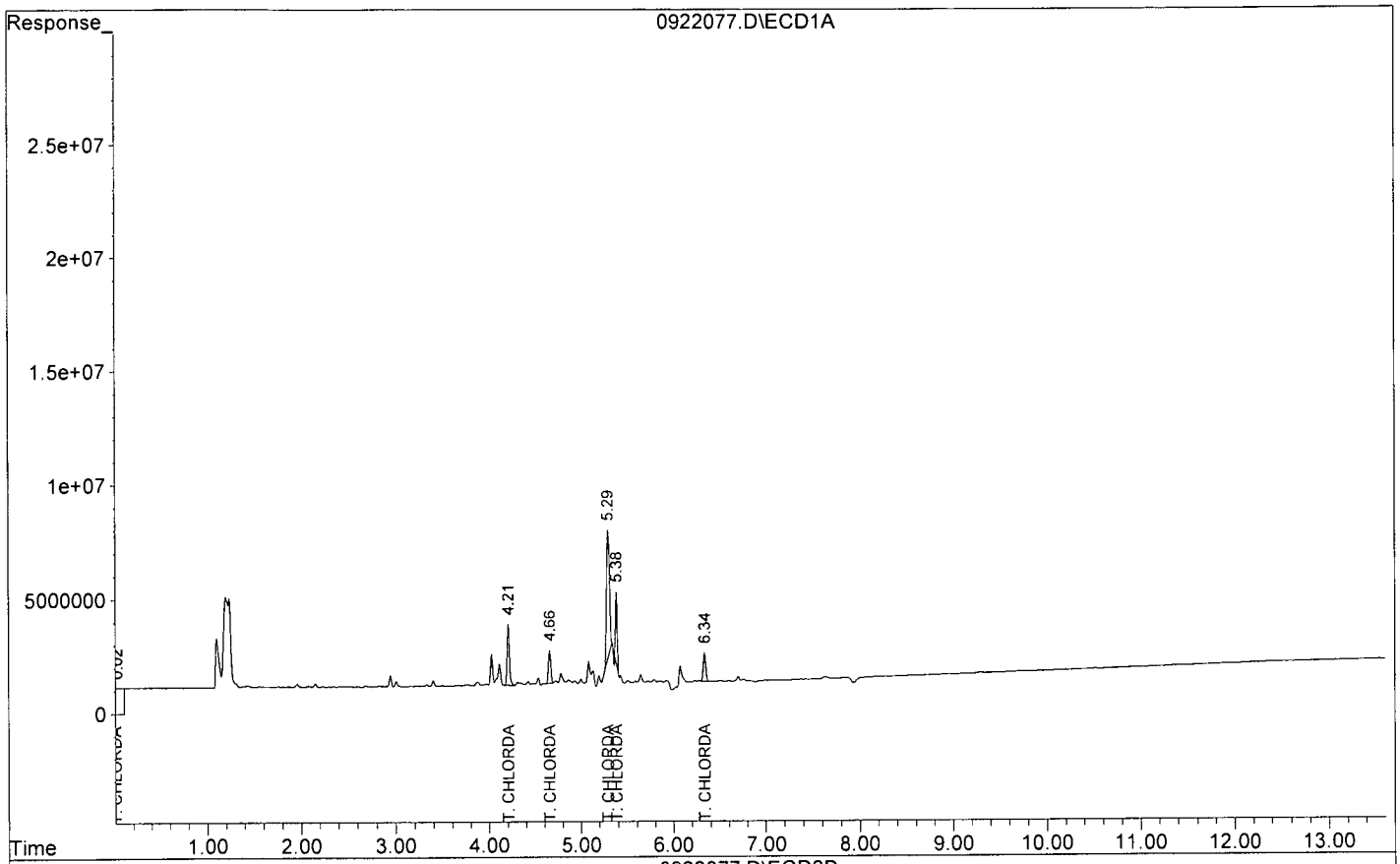
Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

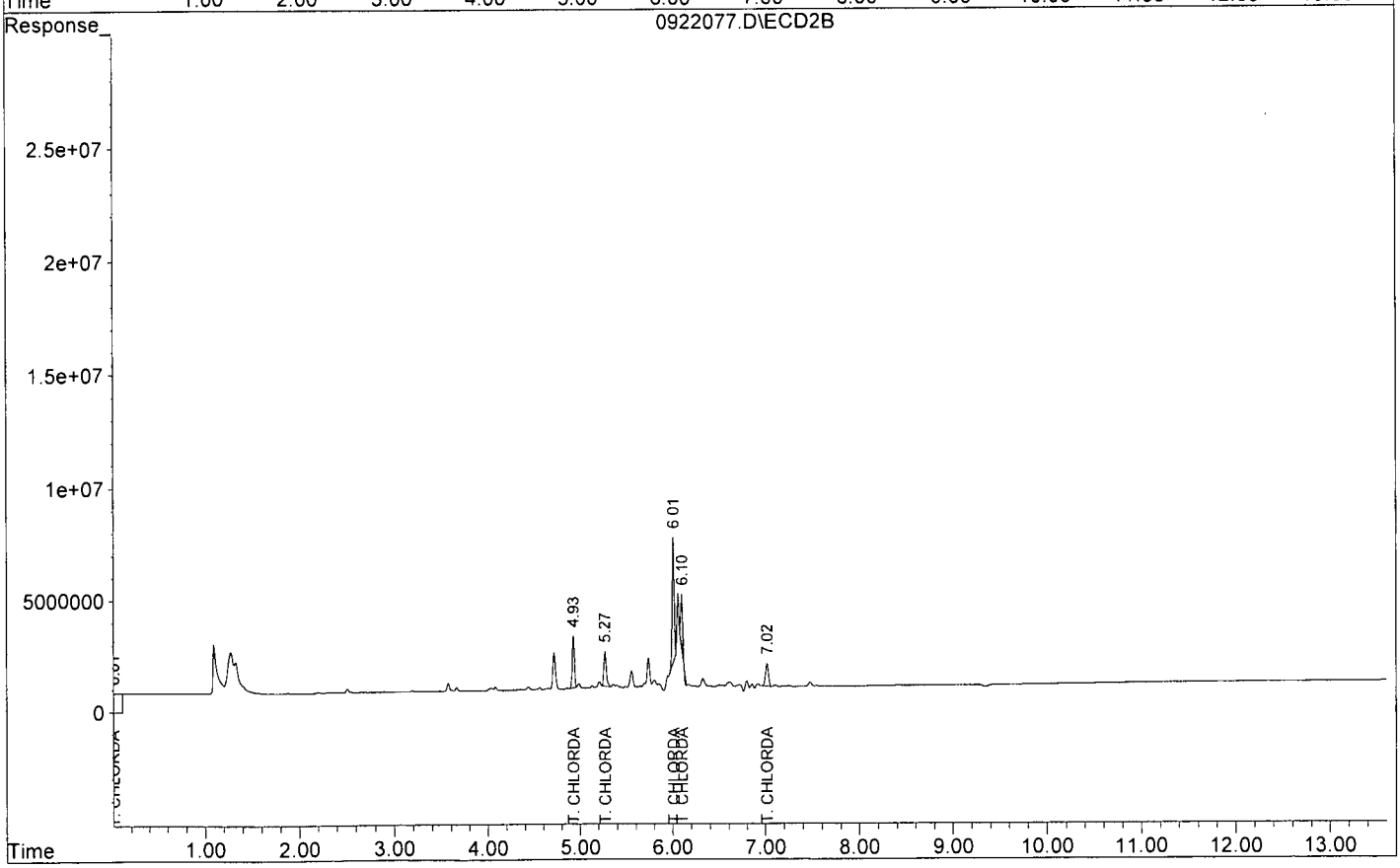
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	ANM T. CHLORDANE Tot	0.00	0.00	14116411	12966706	0.0774m	0.0846m
2)	L2AK T. CHLORDANE	4.21	4.93	2695851	2326285	0.0715	0.0684
3)	L2AK T. CHLORDANE {2}	4.66	5.27	1461098	1565651	0.0782	0.0904
4)	L2AK T. CHLORDANE {3}	5.29	6.01	5541723	5555910	0.0816	0.0897
5)	L2AK T. CHLORDANE {4}	5.38	6.10	3154101	2486765	0.0773	0.0892
6)	L2AK T. CHLORDANE {5}	6.34	7.02	1263637	1032096	0.0730	0.0846
	Sum T. CHLORDANE			14116411	12966706	0.3816	0.4223
	Average T. CHLORDANE					0.076	0.084

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : G:\LUCY\DATA\140922\0922077.D
Acq On : 9-23-14 7:59:43
Sample : TCH 2 6/3/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\TCH0922.M

Vial: 77
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922078.D\ECD1A.CH Vial: 78
Signal #2 : G:\LUCY\DATA\140922\0922078.D\ECD2B.CH
Acq On : 9-23-14 8:16:09 Operator: MA
Sample : TCH 3 6/3/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 10:20 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:19:35 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

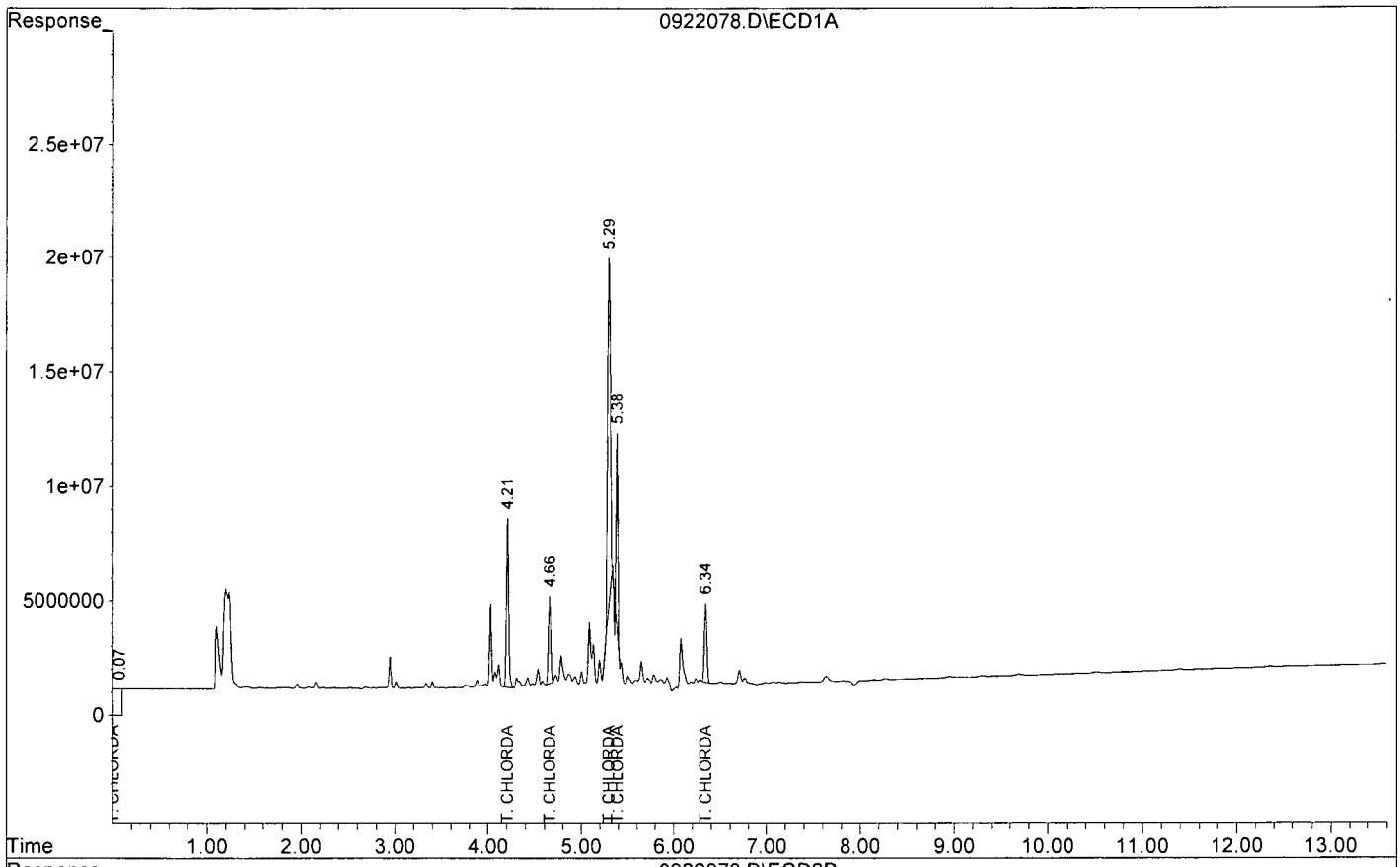
Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

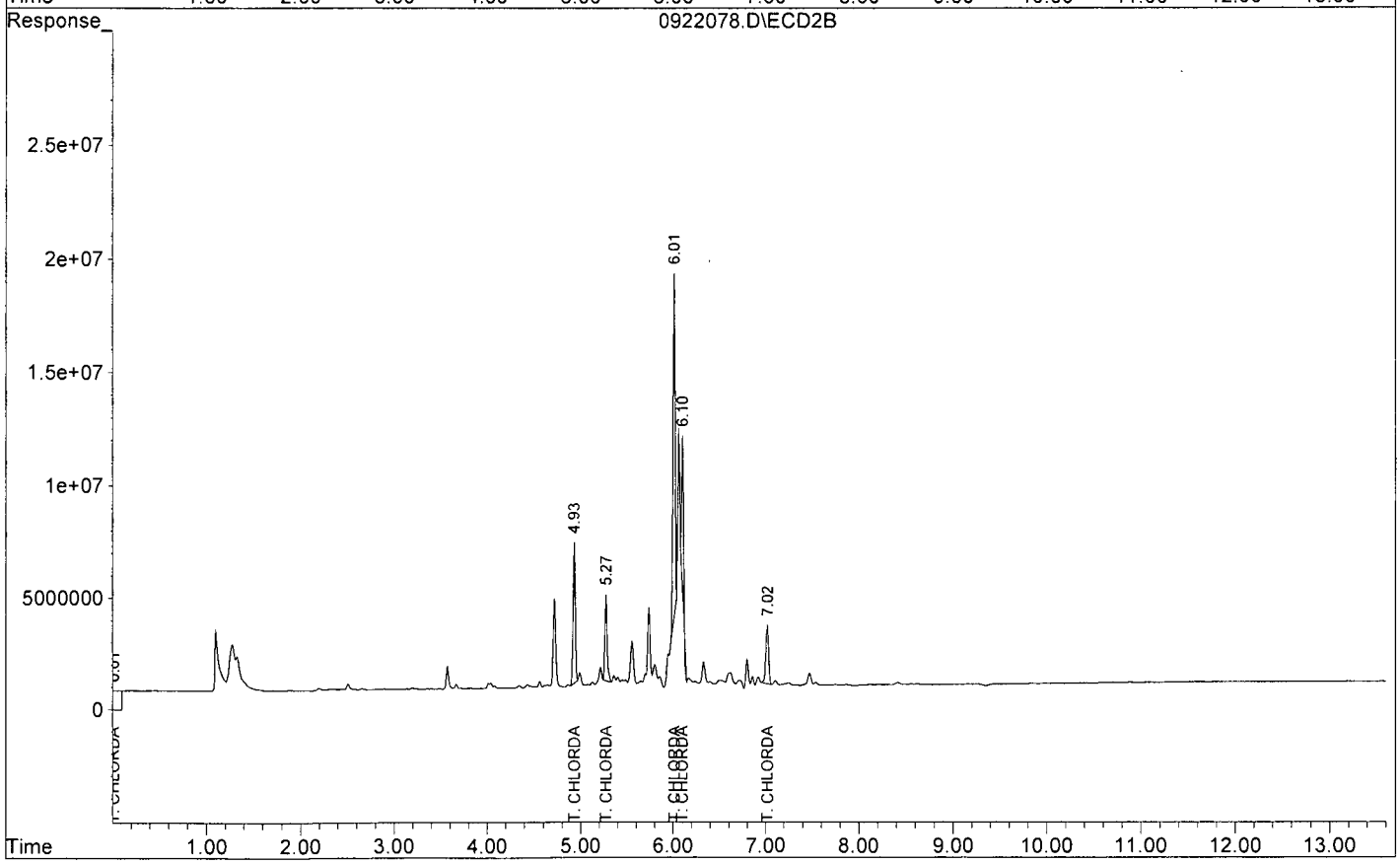
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	38459419	34688243	0.2108m	0.2262m
2) L2AK T. CHLORDANE	4.21	4.93	7377469	6269314	0.1956	0.1843
3) L2AK T. CHLORDANE {2}	4.66	5.27	3813270	3881878	0.2041	0.2241
4) L2AK T. CHLORDANE {3}	5.29	6.01	15249337	15202872	0.2245	0.2455
5) L2AK T. CHLORDANE {4}	5.38	6.10	8570023	6693564	0.2099	0.2401
6) L2AK T. CHLORDANE {5}	6.34	7.02	3449320	2640615	0.1994	0.2164
Sum T. CHLORDANE			38459419	34688243	1.0335	1.1104
Average T. CHLORDANE					0.207	0.222

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922078.D Vial: 78
Acq On : 9-23-14 8:16:09 Operator: MA
Sample : TCH 3 6/3/14 Inst : Lucy
Misc : water Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140922\TCH0922.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922079.D\ECD1A.CH Vial: 79
Signal #2 : G:\LUCY\DATA\140922\0922079.D\ECD2B.CH
Acq On : 9-23-14 8:32:34 Operator: MA
Sample : TCH 4 6/3/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 10:20 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:19:35 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

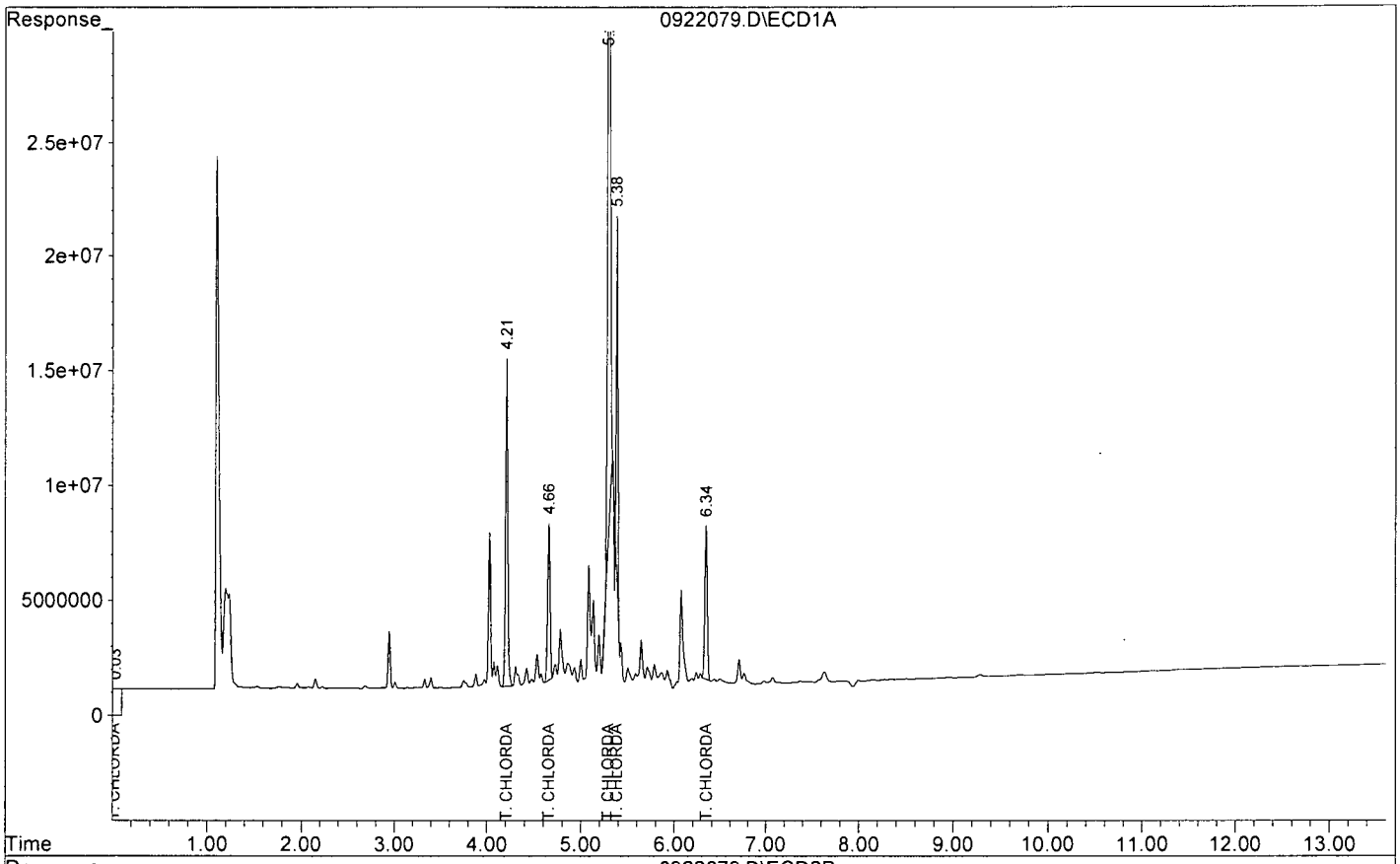
Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

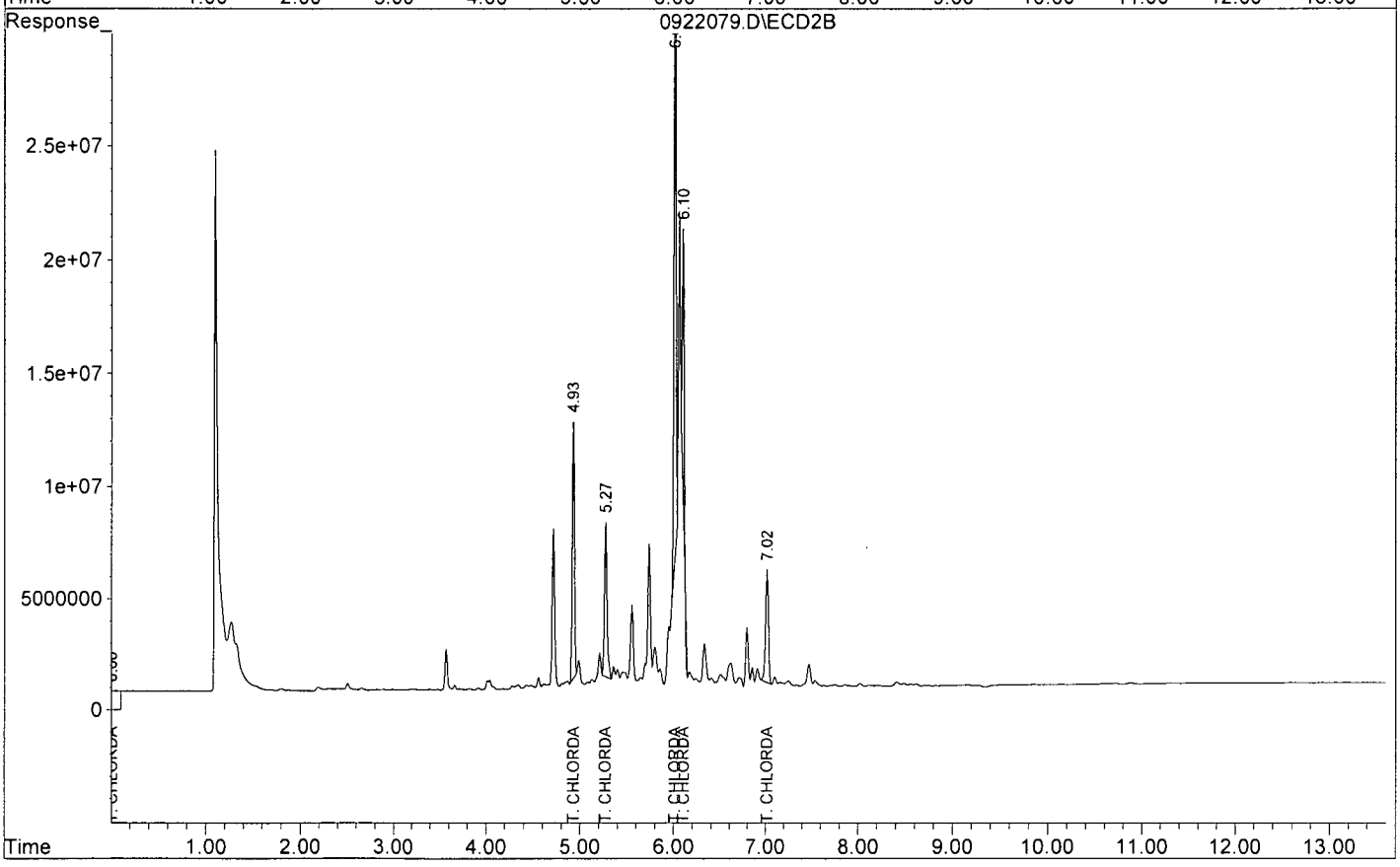
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	70881718	63956765	0.3885m	0.4171m
2) L2AK T. CHLORDANE	4.21	4.93	14159236	11464957	0.3754	0.3371
3) L2AK T. CHLORDANE {2}	4.66	5.27	6768549	6917276	0.3622	0.3993
4) L2AK T. CHLORDANE {3}	5.29	6.01	27413211	28469387	0.4036	0.4597
5) L2AK T. CHLORDANE {4}	5.38	6.10	15868365	12020545	0.3887	0.4312
6) L2AK T. CHLORDANE {5}	6.34	7.02	6672357	5084599	0.3857	0.4166
Sum T. CHLORDANE			70881718	63956765	1.9156	2.0439
Average T. CHLORDANE					0.383	0.409

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922079.D Vial: 79
Acq On : 9-23-14 8:32:34 Operator: MA
Sample : TCH 4 6/3/14 Inst : Lucy
Misc : water Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140922\TCH0922.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922080.D\ECD1A.CH Vial: 80
Signal #2 : G:\LUCY\DATA\140922\0922080.D\ECD2B.CH
Acq On : 9-23-14 8:49:08 Operator: MA
Sample : TCH 5 6/3/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 10:20 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:19:35 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

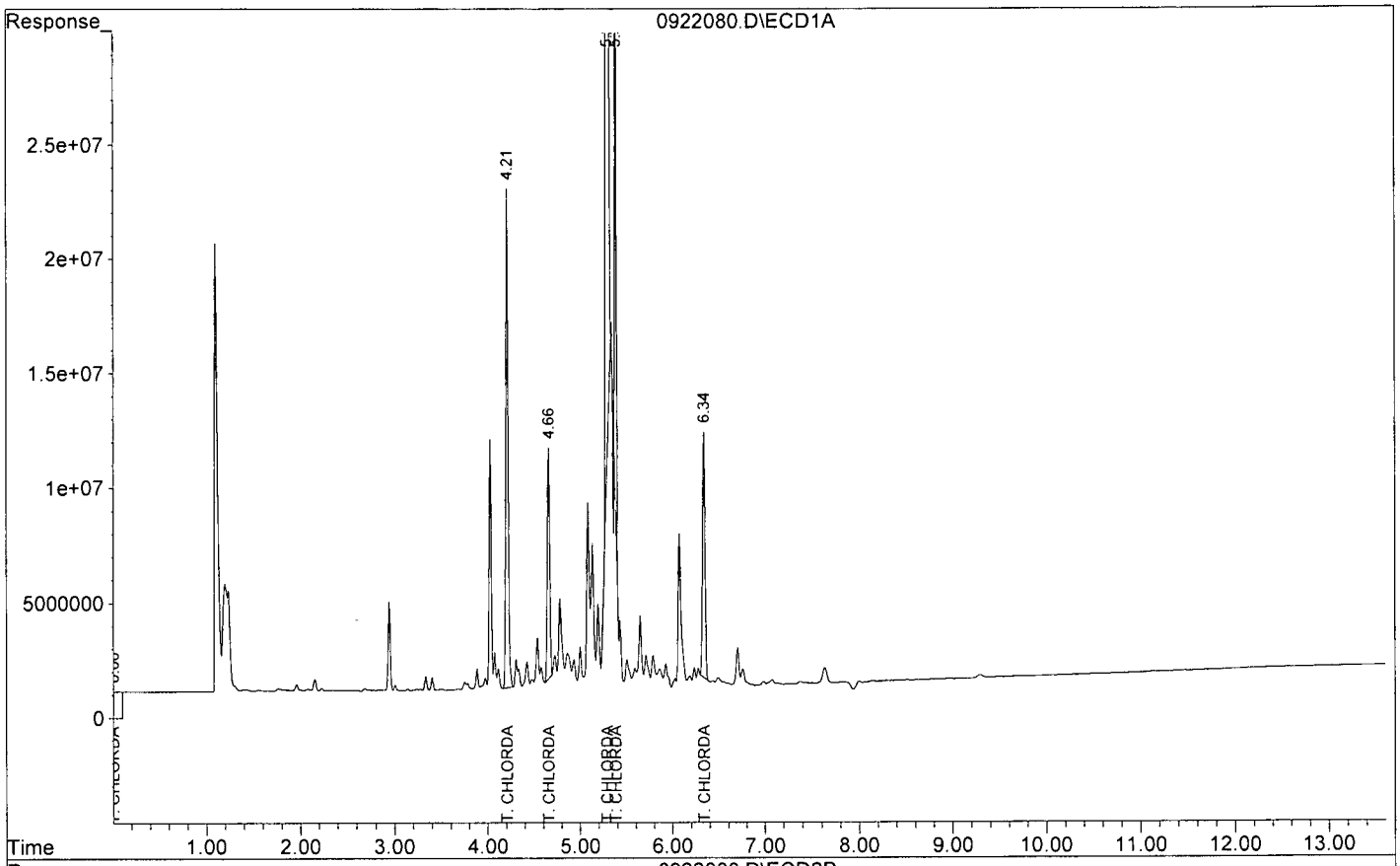
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	108.7E6	100.5E6	0.5956m	0.6553m
2) L2AK T. CHLORDANE	4.21	4.93	21591499	18451866	0.5725	0.5425
3) L2AK T. CHLORDANE {2}	4.66	5.27	10007818	10318562	0.5356	0.5956
4) L2AK T. CHLORDANE {3}	5.29	6.01	41849923	44407487	0.6161	0.7170
5) L2AK T. CHLORDANE {4}	5.38	6.10	24501168	19346601	0.6001	0.6940
6) L2AK T. CHLORDANE {5}	6.34	7.02	10711704	7968977	0.6192	0.6530
Sum T. CHLORDANE			108.7E6	100.5E6	2.9435	3.2022
Average T. CHLORDANE					0.589	0.640

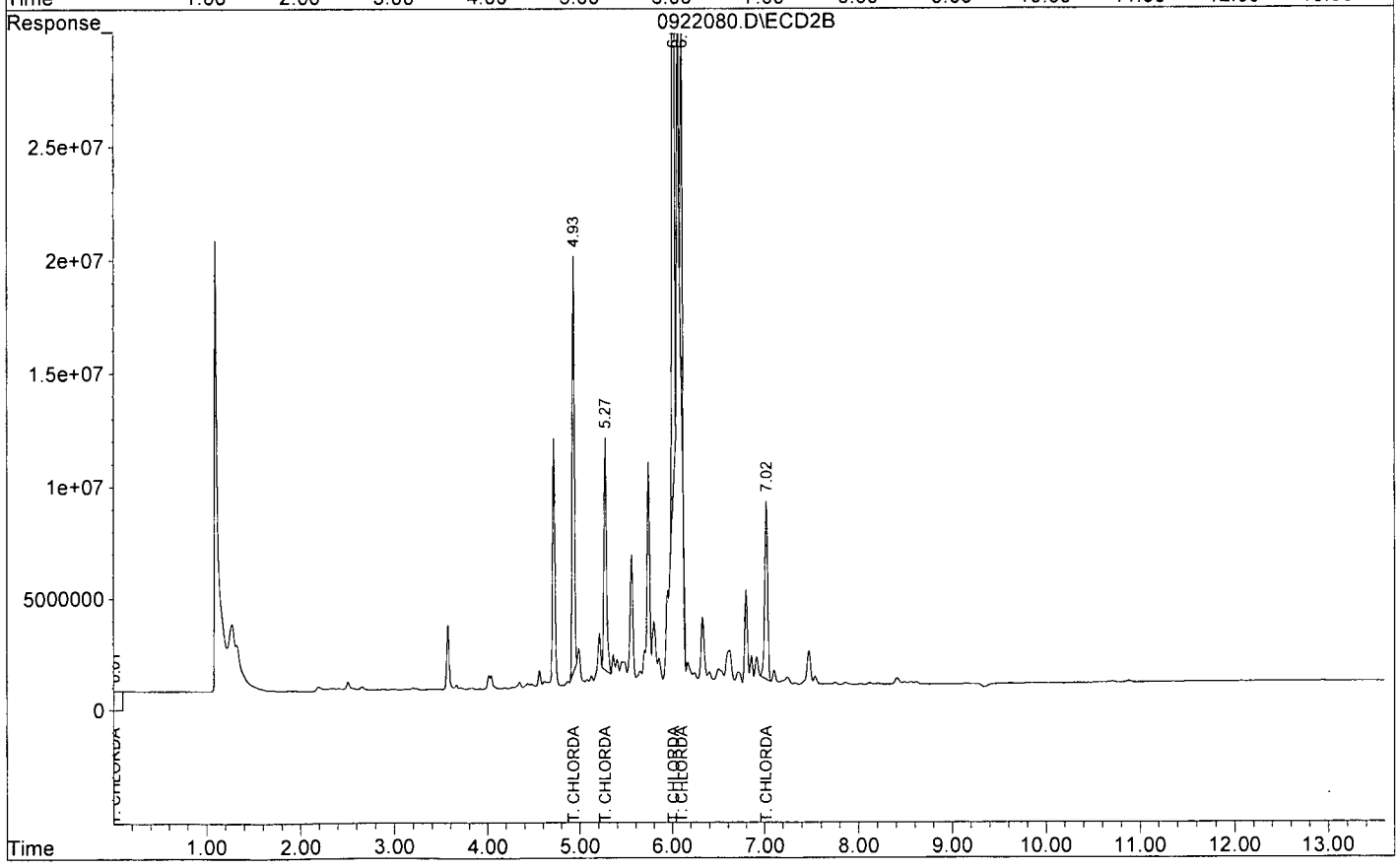
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922080.D
Acq On : 9-23-14 8:49:08
Sample : TCH 5 6/3/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\TCH0922.M

Vial: 80
Operator: MA
Inst : Lucy
Multiplr: 1.00





ORGANOCHLORINE PESTICIDES
TECHNICAL CHLORDANE

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/23/14
Instrument: Lucy
Initial Cal. Date: 09/23/14
Data File: 0922081.D

		Compound	MEAN	CCRF	%D		%Drift
1	ANM	T. CHLORDANE Total	143646000	138216000	3.8	ANM	
2	L2AK	T. CHLORDANE	27905700	26624600	4.6	L2AK	
3	L2AK	T. CHLORDANE {2}	14344300	13942300	2.8	L2AK	
4	L2AK	T. CHLORDANE {3}	55812300	54502200	2.3	L2AK	
5	L2AK	T. CHLORDANE {4}	32430600	30330600	6.5	L2AK	
6	L2AK	T. CHLORDANE {5}	13153000	12816100	2.6	L2AK	
7	signal #2						
8	ANM	T. CHLORDANE Total	132487000	126344000	4.6	ANM	
9	L2AK	T. CHLORDANE	24071300	22848700	5.1	L2AK	
10	L2AK	T. CHLORDANE {2}	15461300	14240000	7.9	L2AK	
11	L2AK	T. CHLORDANE {3}	56798300	54972900	3.2	L2AK	
12	L2AK	T. CHLORDANE {4}	25859800	24295800	6.0	L2AK	
13	L2AK	T. CHLORDANE {5}	10296900	9986950	3.0	L2AK	
14							
15							
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40							
		Average			#REF!		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922081.D\ECD1A.CH Vial: 81
Signal #2 : G:\LUCY\DATA\140922\0922081.D\ECD2B.CH
Acq On : 9-23-14 9:05:35 Operator: MA
Sample : TCH 2nd Source 6/3/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 10:22 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

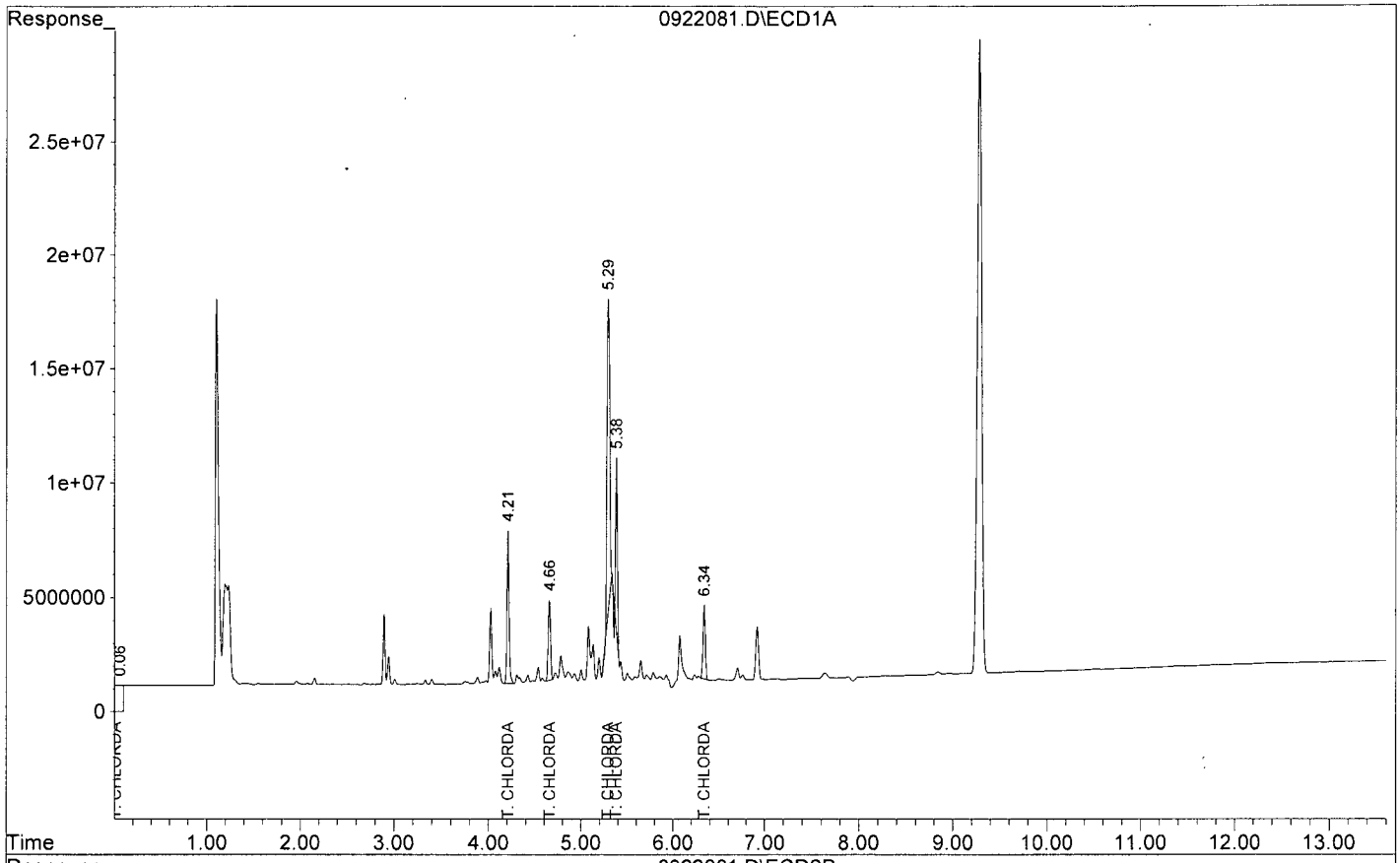
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	34553962	31586077	0.2405m	0.2384m
2) L2AK T. CHLORDANE	4.21	4.93	6656150	5712170	0.2385	0.2373
3) L2AK T. CHLORDANE {2}	4.66	5.27	3485584	3559996	0.2430	0.2303
4) L2AK T. CHLORDANE {3}	5.29	6.01	13625553	13743215	0.2441	0.2420
5) L2AK T. CHLORDANE {4}	5.38	6.10	7582644	6073958	0.2338	0.2349
6) L2AK T. CHLORDANE {5}	6.34	7.02	3204031	2496738	0.2436	0.2425
Sum T. CHLORDANE			34553962	31586077	1.2031	1.1869
Average T. CHLORDANE					0.241	0.237

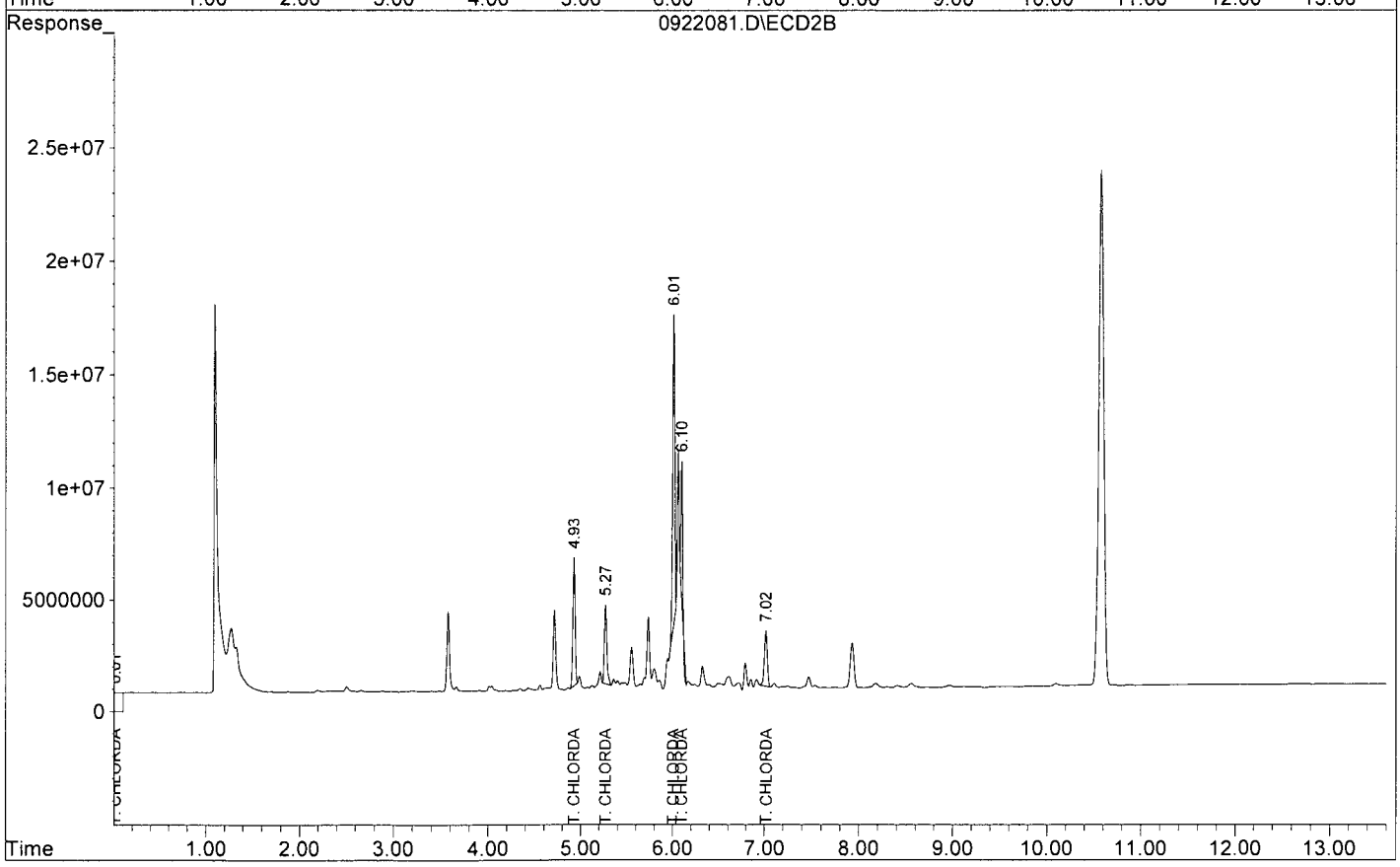
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922081.D
Acq On : 9-23-14 9:05:35
Sample : TCH 2nd Source 6/3/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\TCH0922.M

Vial: 81
Operator: MA
Inst : Lucy
Multiplr: 1.00





Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 74218
Case No: Initial Cal. Date: 09/23/14
Matrix: Water Instrument: Lucy Initials: MA

			0922083.D	0922084.D	0922085.D	0922086 D	0922087.D	0922088 D								
		Compound	1	2	3	4	5	6					Avg	%RSD		
1	MA	DICHLOBENIL	118859400	95542467	92882980	88412705	89606303	91855598					96193242	12	MA	
2	MA	BENEFIN	105682100	88211017	86521770	82076335	78480640	79779068					86791822	12	MA	
3	M	PROPACHLOR	21649100	17426200	15929080	14648370	13959027	14024615					16272732	18	M	
4	M	HEXACHLOROBENZENE	355520600	311549617	305149500	301392765	295910067	297579568					311183686	7.2	M	
5	MA	PCNB	277200000	259212850	261825810	259861195	261101477	264217620					263903159	2.6	MA	
6	M	CHLOROTHALONIL	305470800	285172200	284775480	289525170	290124213	287005153					290345503	2.7	M	
7	MA	ALACHLOR	42117600	32886333	30714010	28553500	26744410	26972743					31331433	18	MA	
8	MA	DACTHAL	234183900	214120917	216922970	208513700	207915043	211217035					215478928	4.5	MA	
9	MAL	DICOFOL	63106400	46970817	44917270	39774005	38705987	38188548					45277171	21	MAL	0.999
10	MA	O,P-DDE	153749800	147851050	151415410	146347525	145959997	150616503					149323381	2.1	MA	
11	MA	OXADIAZON	109271600	86829950	82240700	75206885	72036590	71088775					82779083	17	MA	
12	MA	OXYFLUORFEN	202936600	181551183	180385810	176054170	168616307	167177155					179453538	7.2	MA	
13	MAL	CAPTAN	78159400	113867100	131926140	150190125	156276103	162108158					132087838	24	MAL	0.998
14	MA	O,P-TDE/DDD	147984900	140393750	146667870	148430445	145549773	147050720					146012910	2.0	MA	
15	MA	NITROFEN	301327900	306075417	315942880	312098490	303878817	305009968					307388912	1.8	MA	
16	MA	O,P-DDT	301327900	306075417	315942880	312098490	303878817	305009968					307388912	1.8	MA	
17	MA	CARBOPHENOTHION	66810800	80980683	88685300	97145220	103462800	109107173					91031996	17	MA	
18	MA	BIS(2-ETHYLHEXYL)PHTHALATI	1113655	872848	855540	845401	840037	894740					903703	12	MA	
19	T	Signal #2											0	0	T	
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35																

5.2184212

508
5ES0922

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 74218
Case No: Initial Cal. Date: 09/23/14
Matrix: Water Instrument: Lucy Initials: MA

0922083 D 0922084 D 0922085.D 0922086 D 0922087.D 0922088 D

		Compound	1	2	3	4	5	6					Avg	%RSD		
36	MA	DICHLOBENIL #2	105015900	80588717	78320030	76454070	76525260	77788570					82448758	14	MA	
37	MA	BENEFIN #2	117053700	95453967	93634250	90910095	89155100	90377980					96097515	11	MA	
38	MAL	PROPACHLOR #2	26642500	19089117	17798770	16149980	15277873	15422955					18396866	23	MAL	0.999
39	MA	HEXACHLOROBENZENE #2	301621100	259095467	255812490	255198570	250423120	256270600					263070224	7.3	MA	
40	MA	PCNB #2	302934200	267591317	267994230	265440120	262547810	268231290					272456494	5.5	MA	
41	MA	CHLOROTHALONIL #2	332906000	291311683	284139320	284265150	290023463	290872870					295586414	6.3	MA	
42	MA	ALACHLOR #2	48676700	36155267	34226090	32098920	30674157	30885593					35452788	19	MA	
43	MA	DACTHAL #2	239054400	203869833	202646780	196445125	196554033	197470058					206006705	8.0	MA	
44	MAL	DICOFOL #2	47076700	33358733	31651620	28929230	28157133	27685505					32809820	22	MAL	1.000
45	MA	O,P-DDE #2	154644900	138166733	142045230	144622195	147779793	150246905					146250959	4.0	MA	
46	MA	OXADIAZON #2	118295800	90960300	88193240	84350120	83249970	84502388					91591970	15	MA	
47	MA	OXYFLUORFEN #2	218568100	198125033	192618500	192887560	190803830	187665173					196778033	5.7	MA	
48	MAL	CAPTAN #2	72324000	90992833	104336050	124416635	137832453	152448558					113725088	26	MAL	0 991
49	MA	O,P-TDE/DDD #2	141018200	126621017	127852550	132645865	131682473	137952245					132962058	4.2	MA	
50	MA	NITROFEN #2	225495600	217226233	217714040	220357950	223245317	228171028					222035028	2.0	MA	
51	MA	O,P-DDT #2	225495600	217226233	217714040	220357950	223245317	228171028					222035028	2.0	MA	
52	MAL	CARBOPHENOTHION #2	38339400	54915650	63372330	75571805	84449373	92244288					68148808	29	MAL	0.992
53	MA	BIS(2-ETHYLHEXYL)PHTHALATI	771320	721238	735096	757760	780479	833045					766489	5.1	MA	
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5.9946232

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922083.D\ECD1A.CH Vial: 83
Signal #2 : G:\LUCY\DATA\140922\0922083.D\ECD2B.CH
Acq On : 9-23-14 9:38:28 Operator: MA
Sample : 5ES 1 9/22/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 27 14:56 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Thu Sep 25 08:24:05 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	MA DICHLOBENIL	2.08	2.37	1188594	1050159	0.0062	0.0064
2)	MA BENEFIN	2.65	3.44	1056821	1170537	0.0061	0.0061
3)	MA PROPACHLOR	2.97	3.39	216491	266425	0.0067	0.0017 #
4)	MA HEXACHLOROBENZEN	3.40	4.08	3555206	3016211	0.0057	0.0057
5)	MA PCNB	3.75	4.33	2772000	3029342	0.0053	0.0056
6)	MA CHLOROTHALONIL	4.41	4.95	3054708	3329060	0.0053	0.0056
7)	MA ALACHLOR	4.22	4.76	421176	486767	0.0067	0.0069
8)	MA DACTHAL	4.62	5.17	2341839	2390544	0.0054	0.0058
9)	MA DICOFOL	4.93	5.47	631064	470767	0.0014	0.0023 #
10)	MA O,P-DDE	5.27	5.84	1537498	1546449	0.0051	0.0053
11)	MA OXADIAZON	5.36	5.98	1092716	1182958	0.0066	0.0065
12)	MA OXYFLUORFEN	5.50	6.14	2029366	2185681	0.0057	0.0056
13)	MA CAPTAN	5.61	5.86	781594	723240	0.0100	0.0028m#
14)	MA O,P-TDE/DDD	5.77	6.30	1479849	1410182	0.0051	0.0053
15)	MA NITROFEN	6.05	6.63	3013279	2254956	0.0049	0.0051
16)	MA O,P-DDT	6.05	6.63	3013279	2254956	0.0049	0.0051
17)	MA CARBOPHENOTHION	6.37	6.93	668108	383394	0.0037	0.0139 #
18)	MA BIS(2-ETHYLHEXYL	6.60	7.63	222731	154264	0.1232	0.1006

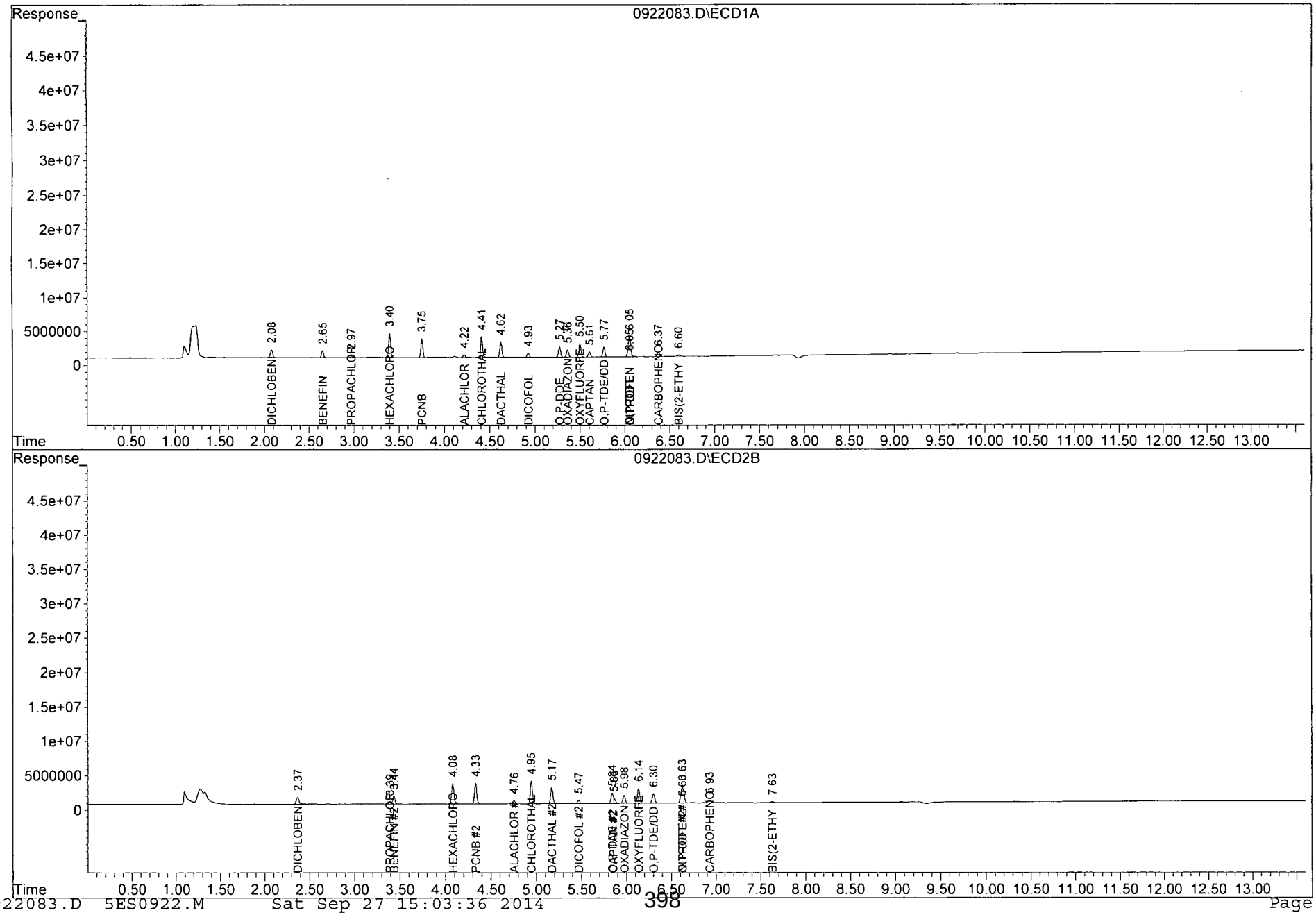
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922083.D
Acq On : 9-23-14 9:38:28
Sample : 5ES 1 9/22/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\5ES0922.M

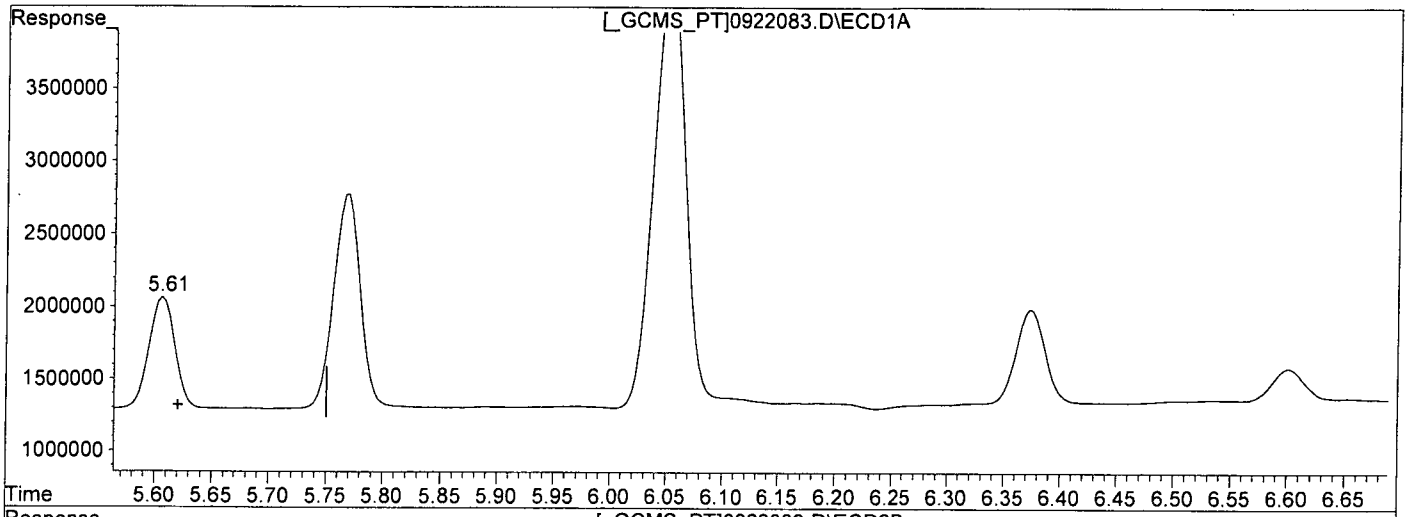
Vial: 83
Operator: MA
Inst : Lucy
Multiplr: 1.00

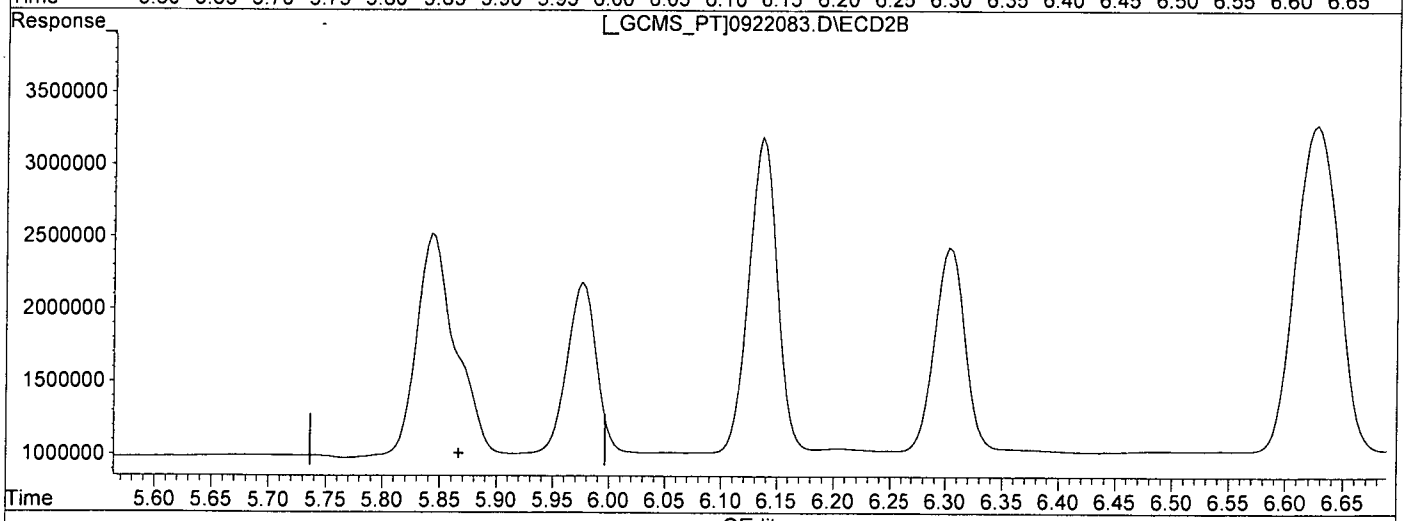


Quantitation Report

Signal #1 : G:\LUCY\DATA\140922\0922083.D\ECD1A.CH Vial: 83
Signal #2 : G:\LUCY\DATA\140922\0922083.D\ECD2B.CH
Acq On : 9-23-14 9:38:28 Operator: MA
Sample : 5ES 1 9/22/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 27 14:44 2014 Quant Results File: 5ES0922.RES

Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Sat Sep 27 14:45:48 2014
Response via : Multiple Level Calibration





QEdit

(13) CAPTAN (MA)

5.61min 0.010ppb

response 781594

(13) CAPTAN #2 (MA)

0.00min 0.000ppb

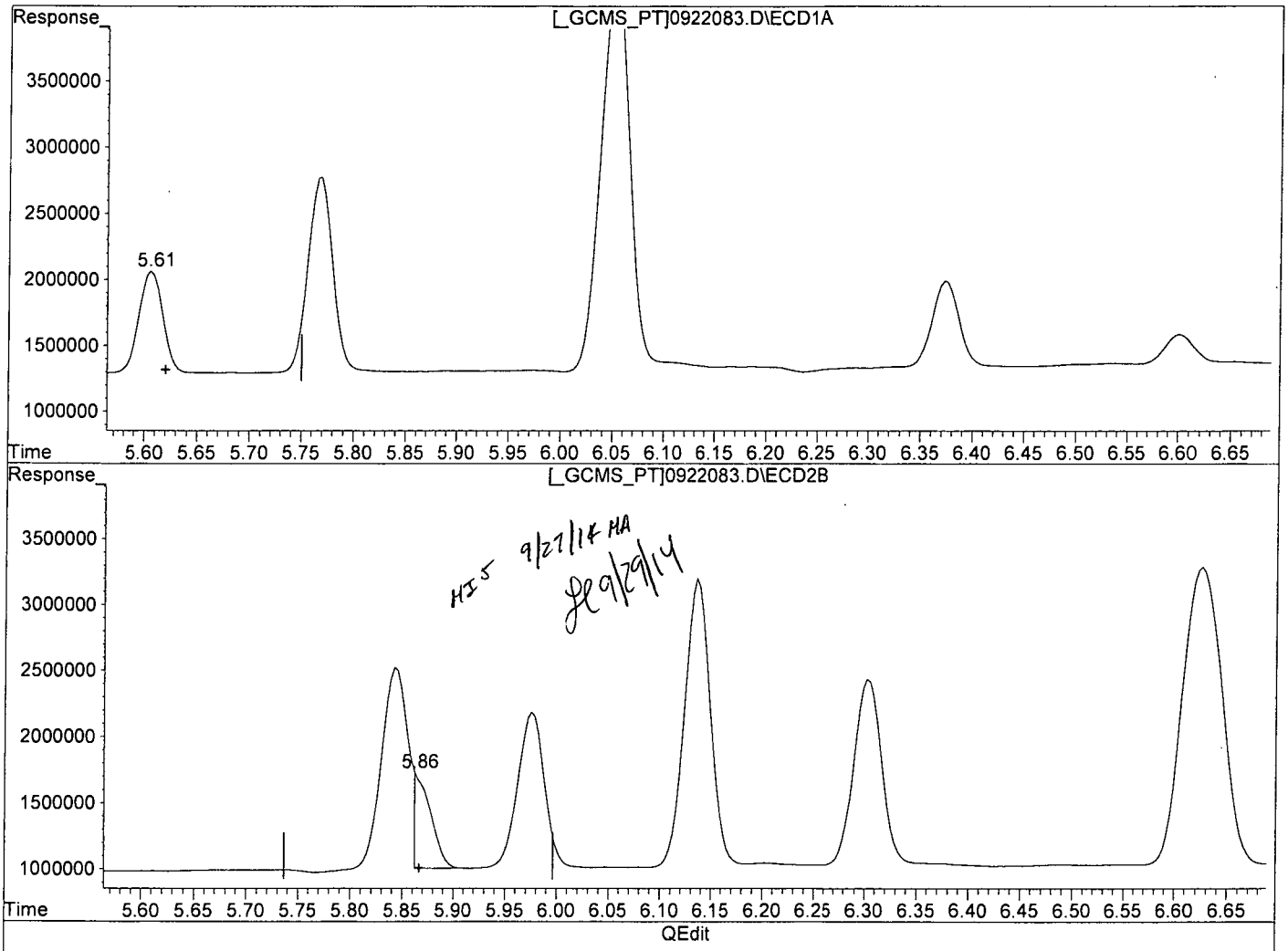
response 0

(+) = Expected Retention Time
0922083.D 5ES0922.M Sat Sep 27 14:56:24 2014

Quantitation Report

Signal #1 : G:\LUCY\DATA\140922\0922083.D\ECD1A.CH Vial: 83
Signal #2 : G:\LUCY\DATA\140922\0922083.D\ECD2B.CH
Acq On : 9-23-14 9:38:28 Operator: MA
Sample : 5ES 1 9/22/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 27 14:44 2014 Quant Results File: 5ES0922.RES

Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Sat Sep 27 14:45:48 2014
Response via : Multiple Level Calibration



(13) CAPTAN (MA)

5.61min 0.010ppb

response 781594

(13) CAPTAN #2 (MA)

5.86min 0.003ppb m

response 723240

(+) = Expected Retention Time
0922083.D 5ES0922.M Sat Sep 27 14:56:42 2014

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922084.D\ECD1A.CH Vial: 84
Signal #2 : G:\LUCY\DATA\140922\0922084.D\ECD2B.CH
Acq On : 9-23-14 9:55:01 Operator: MA
Sample : 5ES 2 9/22/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 27 14:55 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Thu Sep 25 08:24:05 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Target Compounds						
1)	MA	DICHLOBENIL	2.08	2.37	5732548	4835323	0.0298	0.0293
2)	MA	BENEFIN	2.65	3.44	5292661	5727238	0.0305	0.0298
3)	MA	PROPACHLOR	2.97	3.39	1045572	1145347	0.0321	0.0313
4)	MA	HEXACHLOROBENZEN	3.40	4.08	18692977	15545728	0.0300	0.0295
5)	MA	PCNB	3.75	4.33	15552771	16055479	0.0295	0.0295
6)	MA	CHLOROTHALONIL	4.41	4.95	17110332	17478701	0.0295	0.0296
7)	MA	ALACHLOR	4.22	4.76	1973180	2169316	0.0315	0.0306
8)	MA	DACTHAL	4.62	5.17	12847255	12232190	0.0298	0.0297
9)	MA	DICOFOL	4.92	5.47	2818249	2001524	0.0309	0.0306
10)	MA	O,P-DDE	5.27	5.84	8871063	8290004	0.0297	0.0283
11)	MA	OXADIAZON	5.36	5.98	5209797	5457618	0.0315	0.0298
12)	MA	OXYFLUORFEN	5.50	6.14	10893071	11887502	0.0304	0.0302
13)	MA	CAPTAN	5.61	5.86	6832026	5459570	0.0282	0.0210m#
14)	MA	O,P-TDE/DDD	5.77	6.30	8423625	7597261	0.0288	0.0286
15)	MA	NITROFEN	6.05	6.63	18364525	13033574	0.0299	0.0294
16)	MA	O,P-DDT	6.05	6.63	18364525	13033574	0.0299	0.0294
17)	MA	CARBOPHENOTHION	6.37	6.93	4858841	3294939	0.0267	0.0294
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.63	1047417	865485	0.5795	0.5646

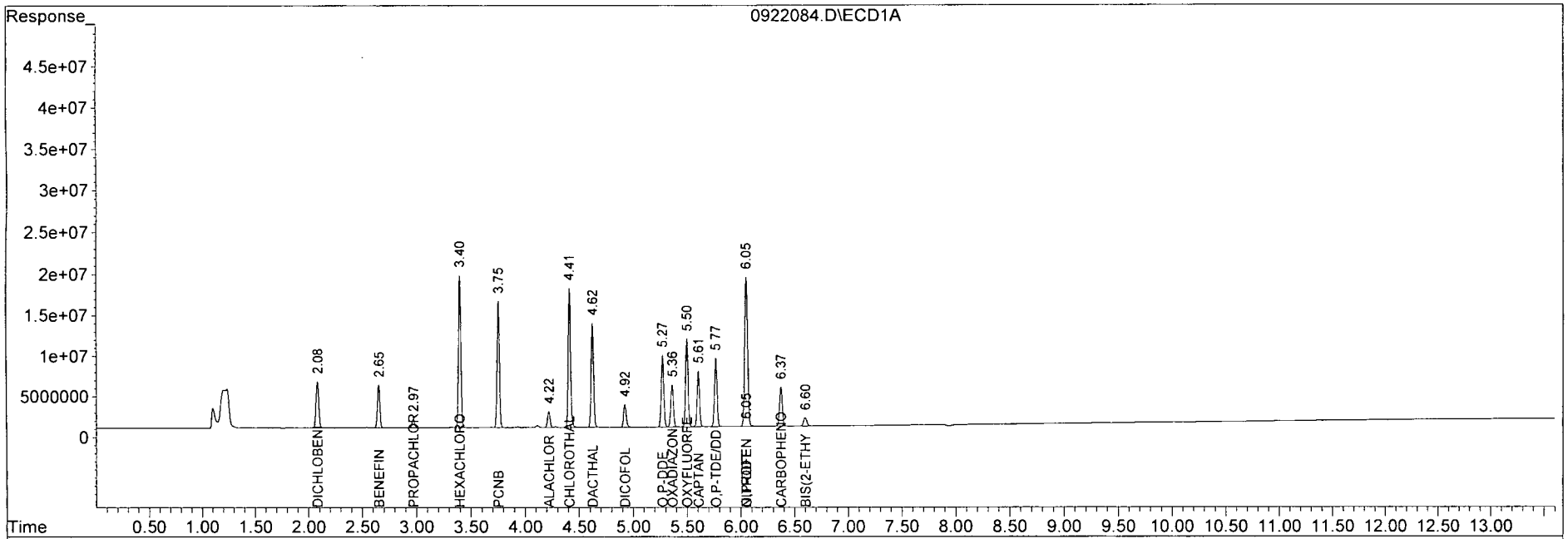
Target Compounds

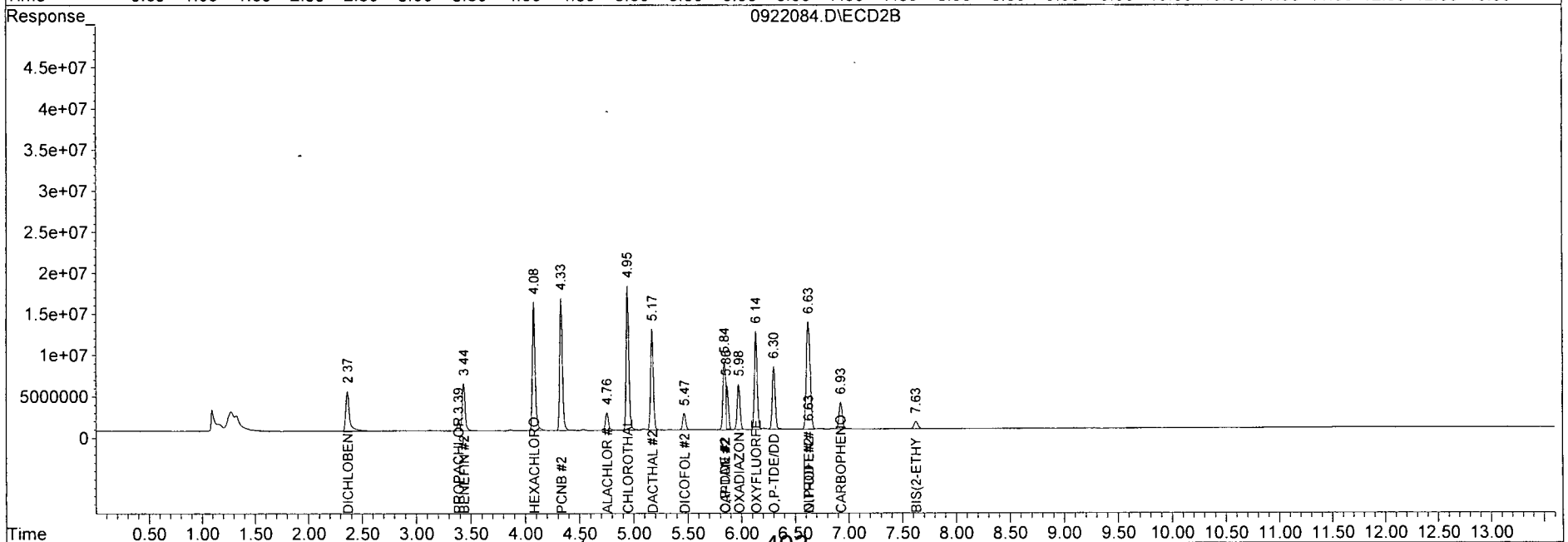
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922084.D
Acq On : 9-23-14 9:55:01
Sample : 5ES 2 9/22/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\5ES0922.M

Vial: 84
Operator: MA
Inst : Lucy
Multiplr: 1.00

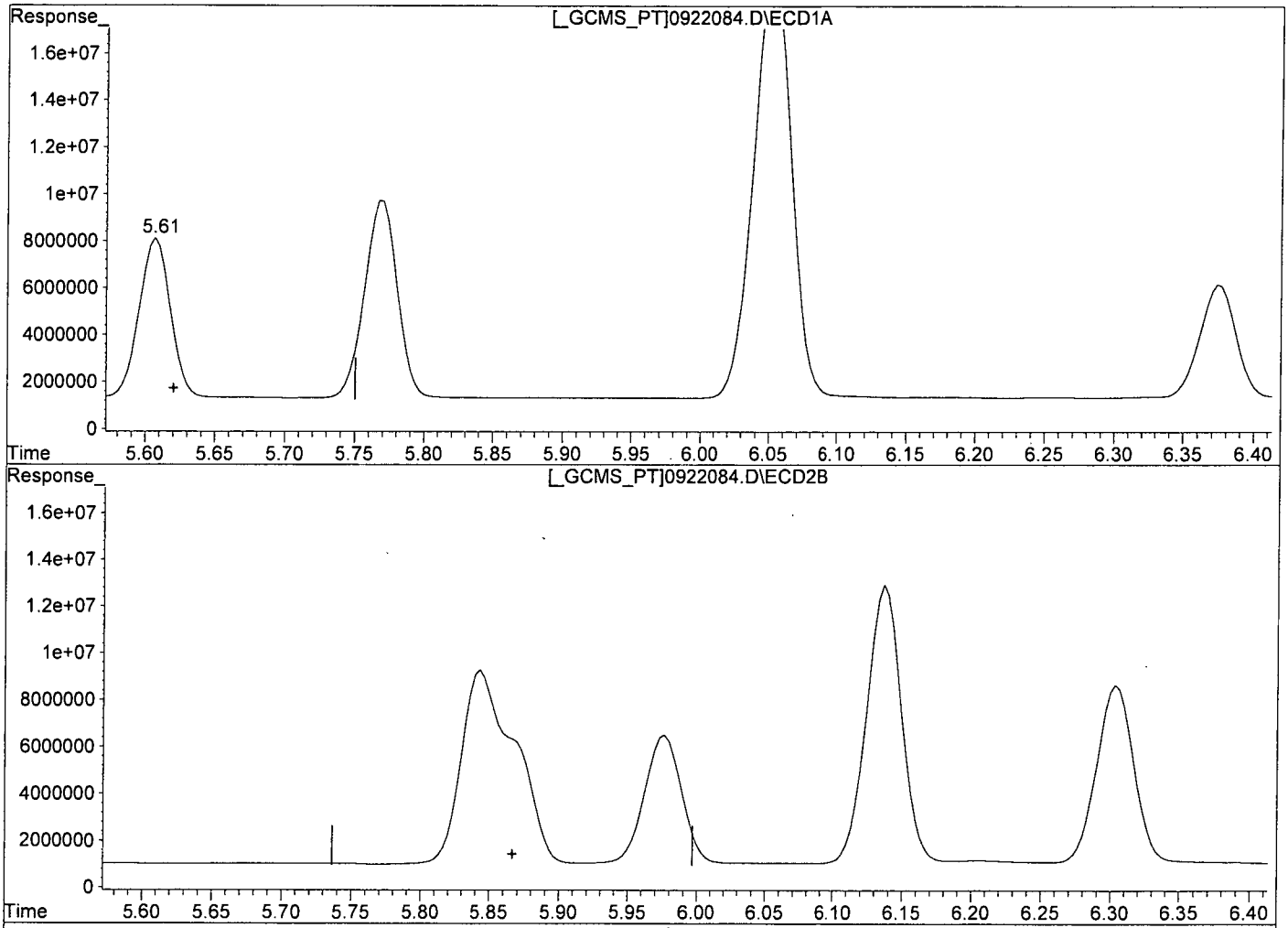




Quantitation Report

Signal #1 : G:\LUCY\DATA\140922\0922084.D\ECD1A.CH Vial: 84
Signal #2 : G:\LUCY\DATA\140922\0922084.D\ECD2B.CH
Acq On : 9-23-14 9:55:01 Operator: MA
Sample : 5ES 2 9/22/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 27 14:44 2014 Quant Results File: 5ES0922.RES

Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Sat Sep 27 14:45:48 2014
Response via : Multiple Level Calibration



(13) CAPTAN (MA)

5.61min 0.028ppb

response 6832026

(13) CAPTAN #2 (MA)

0.00min 0.000ppb

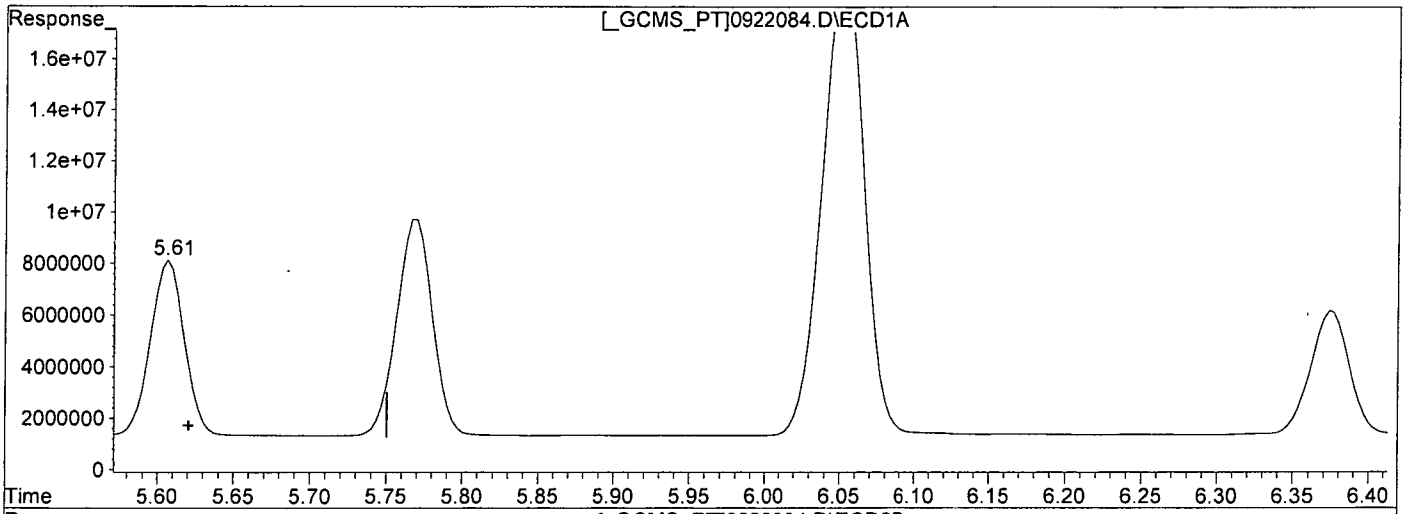
response 0

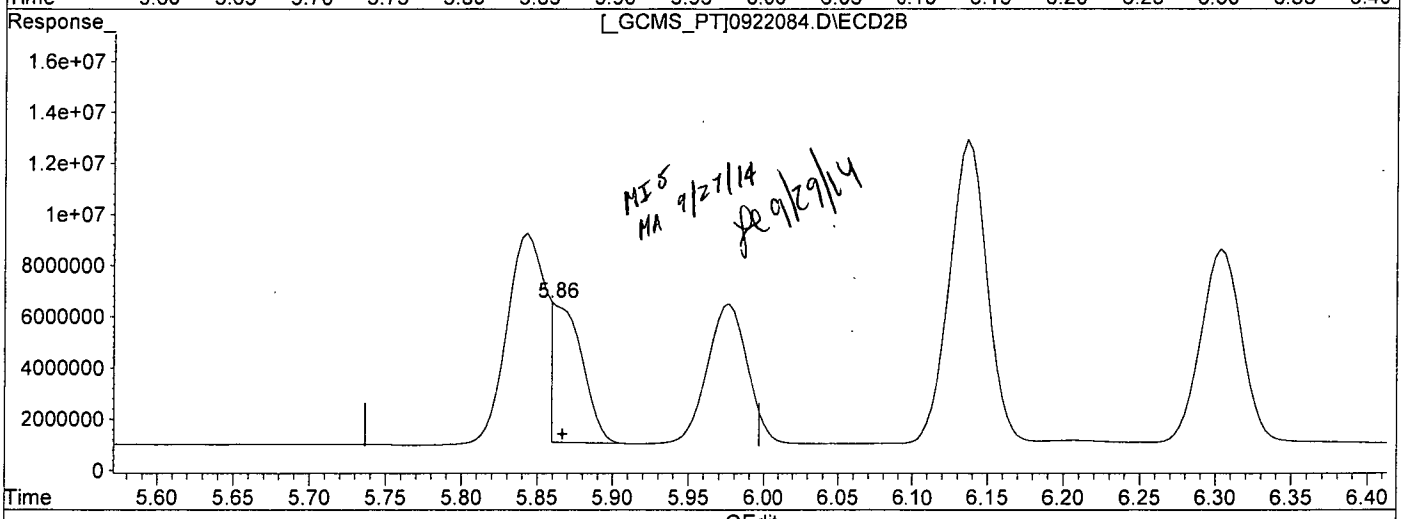
(+) = Expected Retention Time
0922084.D 5ES0922.M Sat Sep 27 14:55:39 2014

Quantitation Report

Signal #1 : G:\LUCY\DATA\140922\0922084.D\ECD1A.CH Vial: 84
Signal #2 : G:\LUCY\DATA\140922\0922084.D\ECD2B.CH
Acq On : 9-23-14 9:55:01 Operator: MA
Sample : 5ES 2 9/22/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 27 14:44 2014 Quant Results File: 5ES0922.RES

Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Sat Sep 27 14:45:48 2014
Response via : Multiple Level Calibration





QEdit

(13) CAPTAN (MA)

5.61min 0.028ppb

response 6832026

(13) CAPTAN #2 (MA)

5.86min 0.021ppb m

response 5459570

(+) = Expected Retention Time
0922084.D 5ES0922.M Sat Sep 27 14:55:52 2014

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922085.D\ECD1A.CH Vial: 85
Signal #2 : G:\LUCY\DATA\140922\0922085.D\ECD2B.CH
Acq On : 9-23-14 10:11:28 Operator: MA
Sample : 5ES 3 9/22/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 27 14:44 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Thu Sep 25 08:24:05 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Target Compounds						
1)	MA	DICHLOBENIL	2.08	2.36	9288298	7832003	0.0483	0.0475
2)	MA	BENEFIN	2.65	3.43	8652177	9363425	0.0498	0.0487
3)	MA	PROPACHLOR	2.97	3.39	1592908	1779877	0.0489	0.0527
4)	MA	HEXACHLOROBENZEN	3.40	4.08	30514950	25581249	0.0490	0.0486
5)	MA	PCNB	3.75	4.33	26182581	26799423	0.0496	0.0492
6)	MA	CHLOROTHALONIL	4.41	4.95	28477548	28413932	0.0490	0.0481
7)	MA	ALACHLOR	4.22	4.75	3071401	3422609	0.0490	0.0483
8)	MA	DACTHAL	4.63	5.17	21692297	20264678	0.0503	0.0492
9)	MA	DICOFOL	4.93	5.47	4491727	3165162	0.0535	0.0522
10)	MA	O,P-DDE	5.28	5.84	15141541	14204523	0.0507	0.0486
11)	MA	OXADIAZON	5.36	5.97	8224070	8819324	0.0497	0.0481
12)	MA	OXYFLUORFEN	5.50	6.14	18038581	19261850	0.0503	0.0489
13)	MA	CAPTAN	5.61	5.87	13192614	10433605	0.0473	0.0402
14)	MA	O,P-TDE/DDD	5.77	6.30	14666787	12785255	0.0502	0.0481
15)	MA	NITROFEN	6.05	6.62	31594288	21771404	0.0514	0.0490
16)	MA	O,P-DDT	6.05	6.62	31594288	21771404	0.0514	0.0490
17)	MA	CARBOPHENOTHION	6.37	6.93	8868530	6337233	0.0487	0.0455
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.63	1711080	1470192	0.9467	0.9590

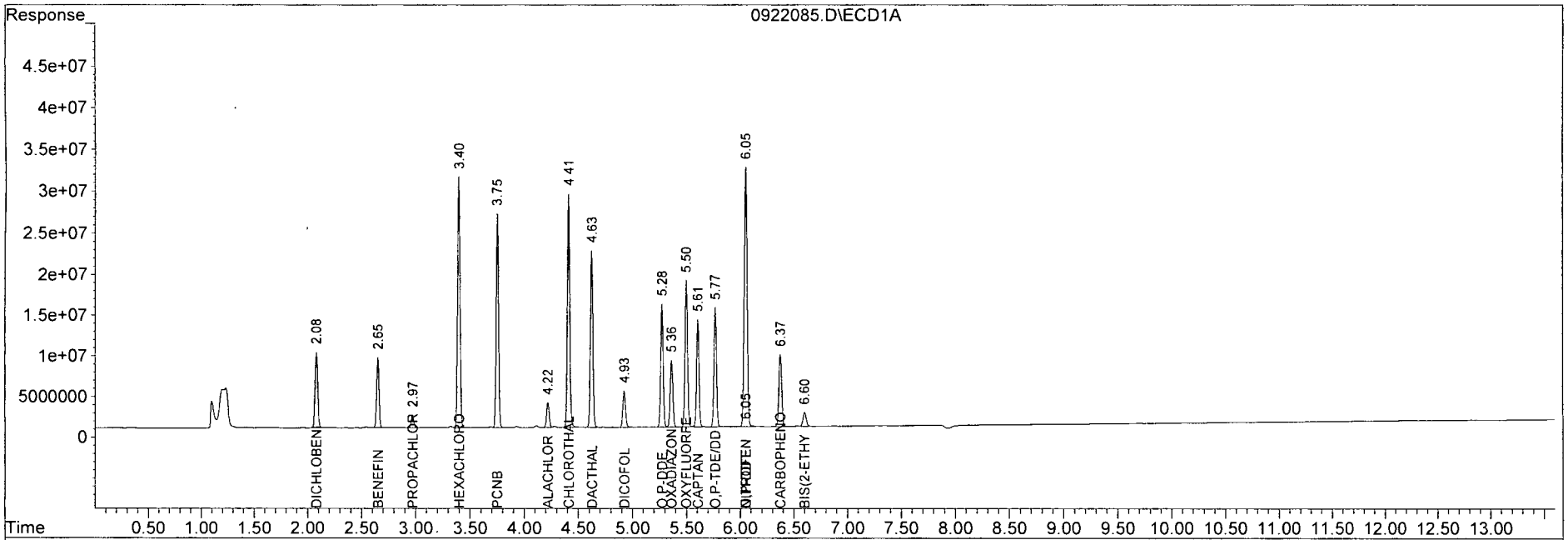
Target Compounds

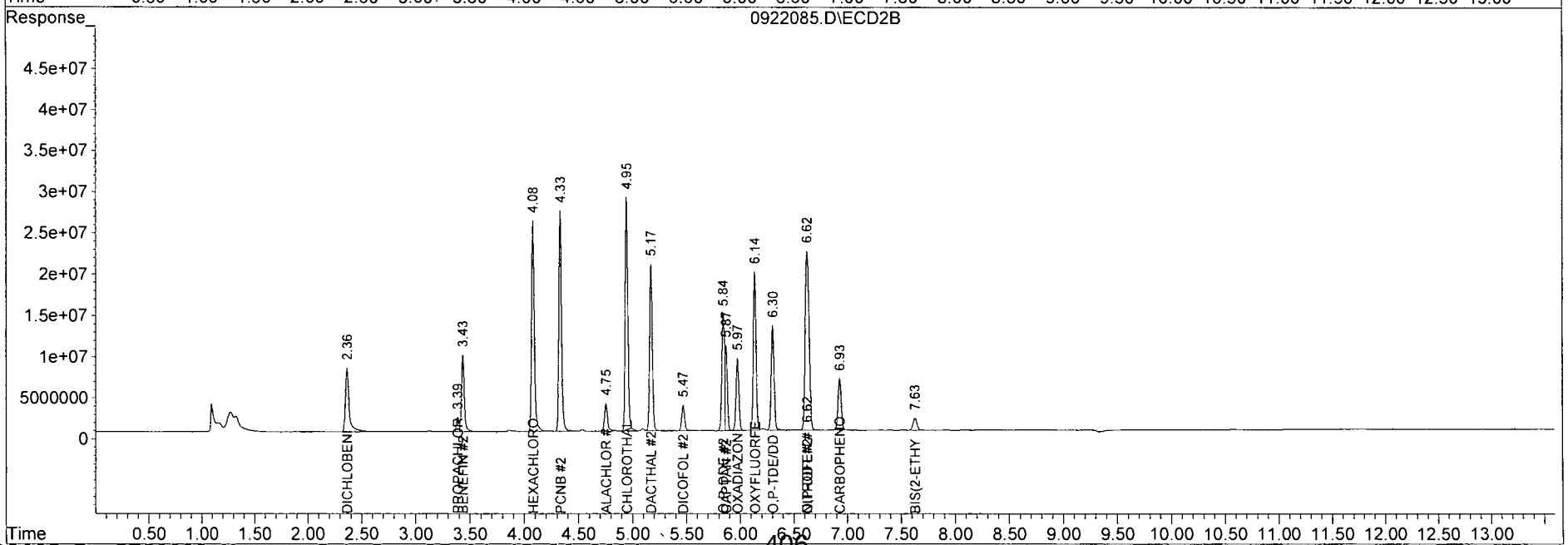
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922085.D
Acq On : 9-23-14 10:11:28
Sample : 5ES 3 9/22/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\5ES0922.M

Vial: 85
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922086.D\ECD1A.CH Vial: 86
Signal #2 : G:\LUCY\DATA\140922\0922086.D\ECD2B.CH
Acq On : 9-23-14 10:27:53 Operator: MA
Sample : 5ES 4 9/22/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 27 14:44 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Thu Sep 25 08:24:05 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds								
1)	MA	DICHLOBENIL	2.08	2.36	17682541	15290814	0.0919	0.0927
2)	MA	BENEFIN	2.65	3.43	16415267	18182019	0.0946	0.0946
3)	MA	PROPACHLOR	2.97	3.39	2929674	3229996	0.0900	0.1016
4)	MA	HEXACHLOROBENZEN	3.40	4.08	60278553	51039714	0.0969	0.0970
5)	MA	PCNB	3.75	4.33	51972239	53088024	0.0985	0.0974
6)	MA	CHLOROTHALONIL	4.41	4.95	57905034	56853030	0.0997	0.0962
7)	MA	ALACHLOR	4.22	4.75	5710700	6419784	0.0911	0.0905
8)	MA	DACTHAL	4.62	5.17	41702740	39289025	0.0968	0.0954
9)	MA	DICOFOL	4.92	5.47	7954801	5785846	0.1003	0.1008
10)	MA	O,P-DDE	5.27	5.84	29269505	28924439	0.0980	0.0989
11)	MA	OXADIAZON	5.36	5.97	15041377	16870024	0.0909	0.0921
12)	MA	OXYFLUORFEN	5.50	6.14	35210834	38577512	0.0981	0.0980
13)	MA	CAPTAN	5.61	5.87	30038025	24883327	0.0980	0.0959
14)	MA	O,P-TDE/DDD	5.77	6.30	29686089	26529173	0.1017	0.0998
15)	MA	NITROFEN	6.05	6.62	62419698	44071590	0.1015	0.0992
16)	MA	O,P-DDT	6.05	6.62	62419698	44071590	0.1015	0.0992
17)	MA	CARBOPHENOTHION	6.37	6.93	19429044	15114361	0.1067	0.0921
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.63	3381604	3031038	1.8710	1.9772

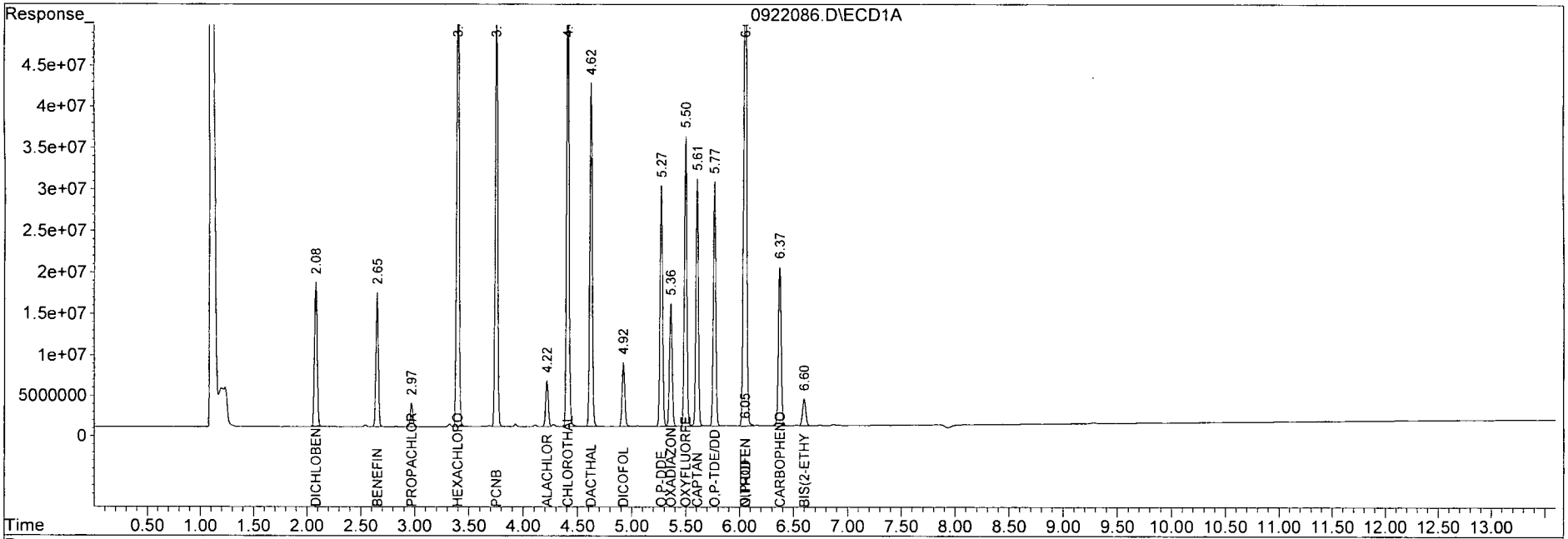
Target Compounds

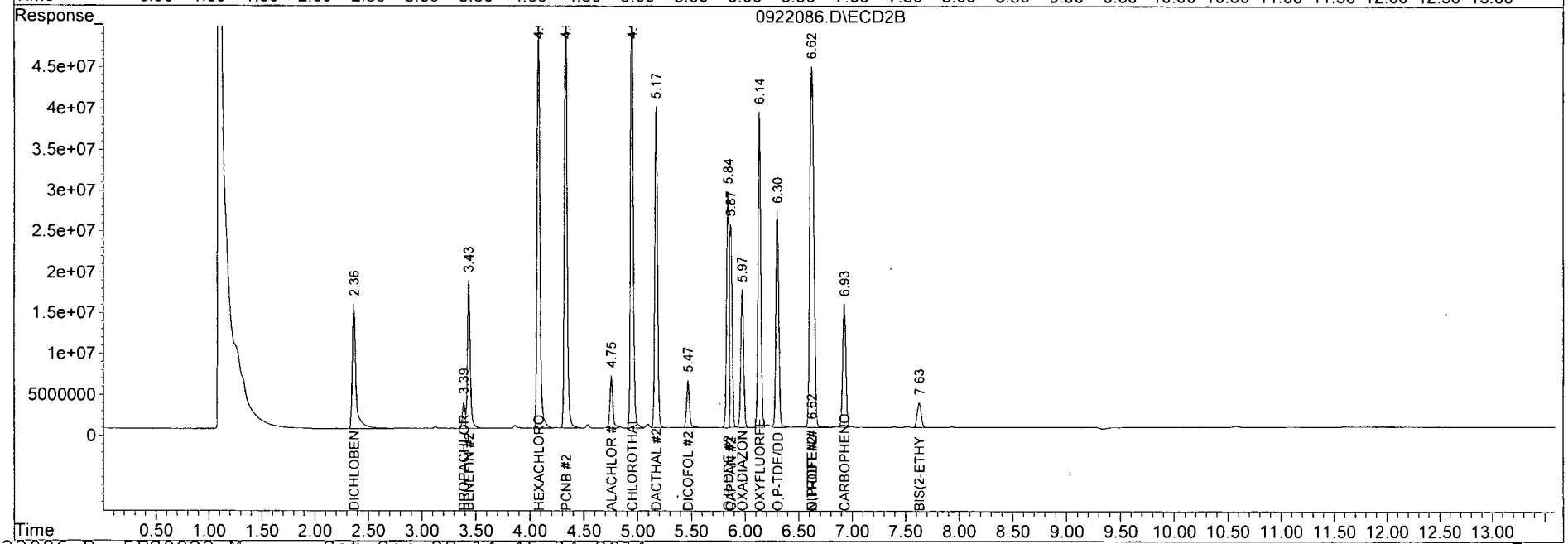
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922086.D
Acq On : 9-23-14 10:27:53
Sample : 5ES 4 9/22/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\5ES0922.M

Vial: 86
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922087.D\ECD1A.CH Vial: 87
Signal #2 : G:\LUCY\DATA\140922\0922087.D\ECD2B.CH
Acq On : 9-23-14 10:44:20 Operator: MA
Sample : 5ES 5 9/22/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 27 14:44 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Thu Sep 25 08:24:05 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	MA DICHLOBENIL	2.08	2.37	26881891	22957578	0.1397	0.1392
2)	MA BENEFIN	2.65	3.44	23544192	26746530	0.1356	0.1392
3)	MA PROPACHLOR	2.97	3.39	4187708	4583362	0.1287	0.1471
4)	MA HEXACHLOROBENZEN	3.40	4.08	88773020	75126936	0.1426	0.1428
5)	MA PCNB	3.75	4.33	78330443	78764343	0.1484	0.1445
6)	MA CHLOROTHALONIL	4.41	4.95	87037264	87007039	0.1499	0.1472
7)	MA ALACHLOR	4.22	4.76	8023323	9202247	0.1280	0.1298
8)	MA DACTHAL	4.62	5.17	62374513	58966210	0.1447	0.1431
9)	MA DICOFOL	4.92	5.47	11611796	8447140	0.1497	0.1502
10)	MA O,P-DDE	5.27	5.84	43787999	44333938	0.1466	0.1516
11)	MA OXADIAZON	5.36	5.98	21610977	24974991	0.1305	0.1363
12)	MA OXYFLUORFEN	5.50	6.14	50584892	57241149	0.1409	0.1454
13)	MA CAPTAN	5.61	5.87	46882831	41349736	0.1487	0.1593
14)	MA O,P-TDE/DDD	5.77	6.30	43664932	39504742	0.1495	0.1486
15)	MA NITROFEN	6.05	6.62	91163645	66973595	0.1483	0.1508
16)	MA O,P-DDT	6.05	6.62	91163645	66973595	0.1483	0.1508
17)	MA CARBOPHENOTHION	6.37	6.93	31038840	25334812	0.1705	0.1463
18)	MA BIS(2-ETHYLHEXYL	6.60	7.63	5040222	4682873	2.7886	3.0548

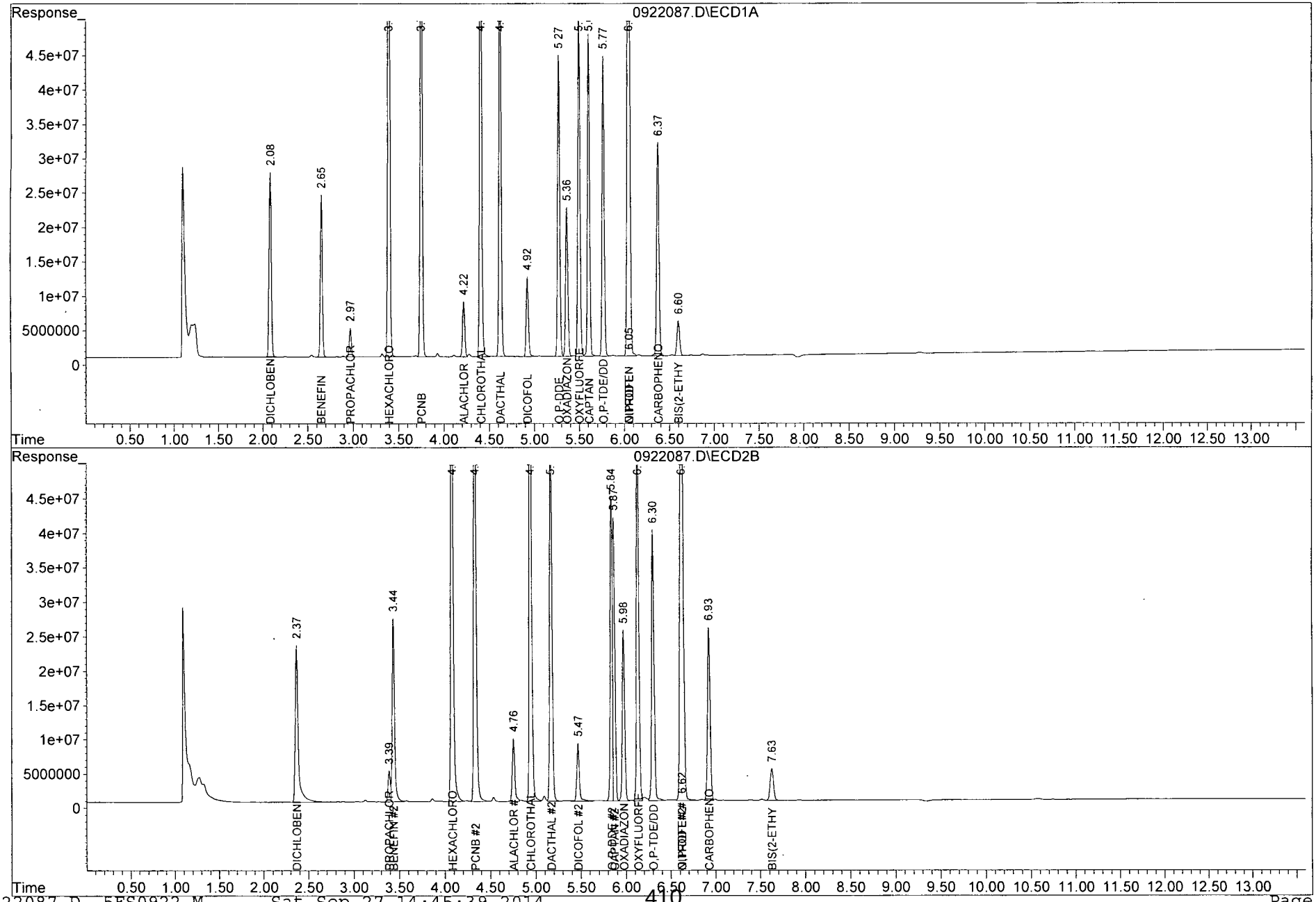
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922087.D
Acq On : 9-23-14 10:44:20
Sample : 5ES 5 9/22/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\5ES0922.M

Vial: 87
Operator: MA
Inst : Lucy
Multiplr: 1.00



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922088.D\ECD1A.CH Vial: 88
Signal #2 : G:\LUCY\DATA\140922\0922088.D\ECD2B.CH
Acq On : 9-23-14 11:00:53 Operator: MA
Sample : 5ES 6 9/22/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 27 14:45 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Thu Sep 25 08:24:05 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1) MA	DICHLOBENIL	2.08	2.36	36742239	31115428	0.1910	0.1887
2) MA	BENEFIN	2.65	3.43	31911627	36151192	0.1838	0.1881
3) MA	PROPACHLOR	2.97	3.39	5609846	6169182	0.1724	0.2006
4) MA	HEXACHLOROBENZEN	3.40	4.08	119.0E6	102.5E6	0.1913	0.1948
5) MA	PCNB	3.75	4.33	105.7E6	107.3E6	0.2002	0.1969
6) MA	CHLOROTHALONIL	4.41	4.95	114.8E6	116.3E6	0.1977	0.1968
7) MA	ALACHLOR	4.22	4.76	10789097	12354237	0.1722	0.1742
8) MA	DACTHAL	4.62	5.17	84486814	78988023	0.1960	0.1917
9) MA	DICOFOL	4.92	5.47	15275419	11074202	0.1992	0.1989
10) MA	O,P-DDE	5.27	5.84	60246601	60098762	0.2017	0.2055
11) MA	OXADIAZON	5.36	5.98	28435510	33800955	0.1718	0.1845
12) MA	OXYFLUORFEN	5.50	6.14	66870862	75066069	0.1863	0.1907
13) MA	CAPTAN	5.61	5.87	64843263	60979423	0.2028	0.2350
14) MA	O,P-TDE/DDD	5.77	6.30	58820288	55180898	0.2014	0.2075
15) MA	NITROFEN	6.05	6.62	122.0E6	91268411	0.1985	0.2055
16) MA	O,P-DDT	6.05	6.62	122.0E6	91268411	0.1985	0.2055
17) MA	CARBOPHENOTHION	6.37	6.93	43642869	36897715	0.2397	0.2077
18) MA	BIS(2-ETHYLHEXYL	6.60	7.63	7157922	6664358	3.9603	4.3473

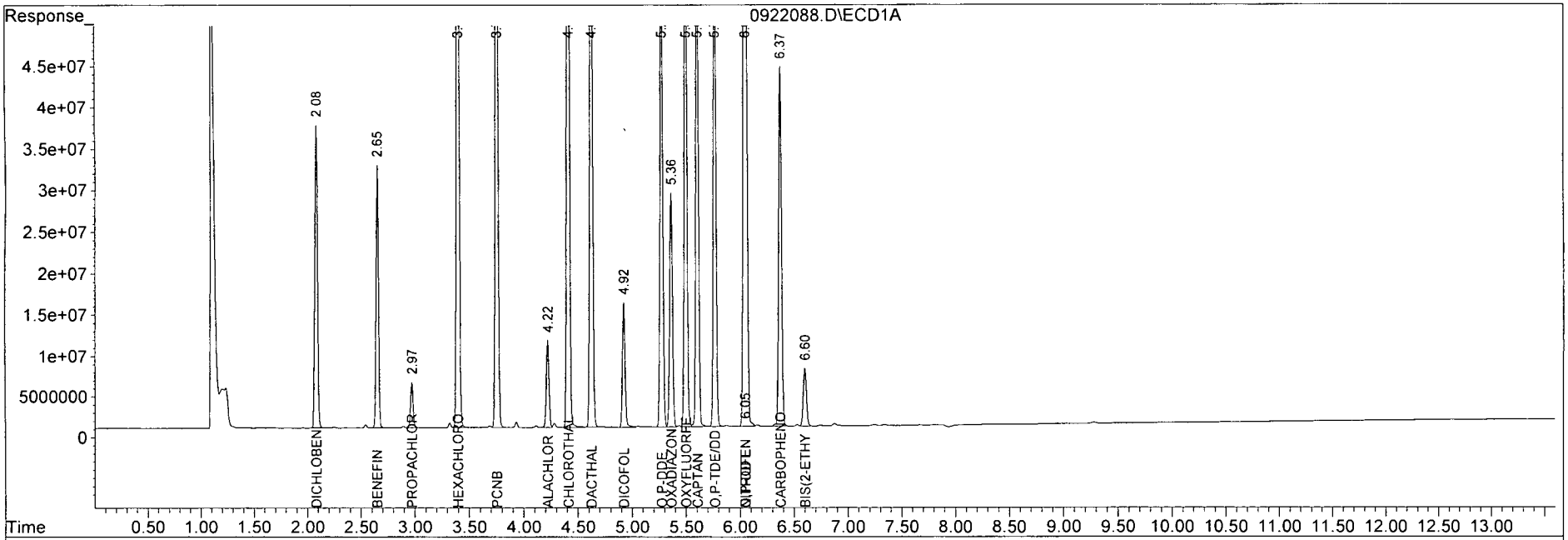
Target Compounds

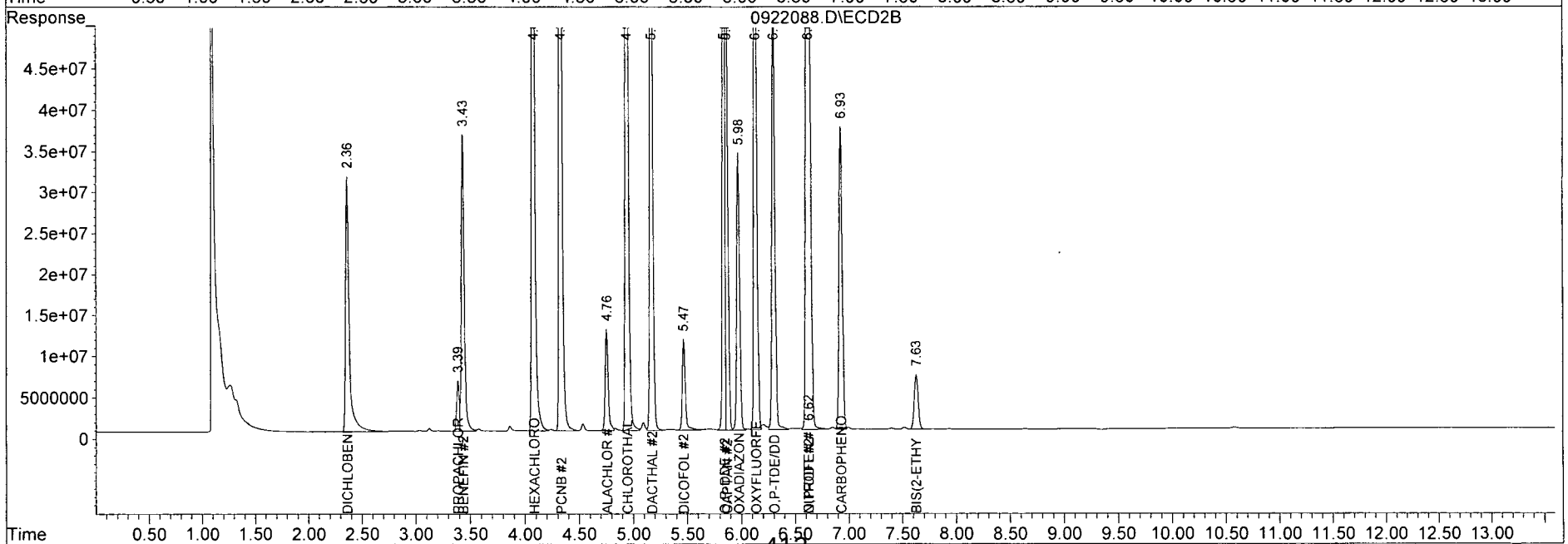
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922088.D
Acq On : 9-23-14 11:00:53
Sample : 5ES 6 9/22/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\5ES0922.M

Vial: 88
Operator: MA
Inst : Lucy
Multiplr: 1.00





Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/23/14
Instrument: Lucy
Initial Cal. Date: 09/23/14
Data File: 0922089.D

		Compound	MEAN	CCRF	%D	%Drift	
1	MA	DICHLOBENIL	96193200	91520500	4.9	MA	
2	MA	BENEFIN	86791800	79262200	8.7	MA	
3	M	PROPACHLOR	16272700	16588600	1.9	M	
4	M	HEXACHLOROBENZENE	311184000	279497000	10	M	
5	MA	PCNB	263903000	230442000	13	MA	
6	M	CHLOROTHALONIL	290346000	241993000	17	M	
7	MA	ALACHLOR	31331400	30855900	1.5	MA	
8	MA	DACTHAL	215479000	198866000	7.7	MA	
9	MAL	DICOFOL	45277200	43287900	4.4	MAL	2.7
10	MA	O,P-DDE	149323000	142681000	4.4	MA	
11	MA	OXADIAZON	82779100	76894900	7.1	MA	
12	MA	OXYFLUORFEN	179454000	172060000	4.1	MA	
13	MAL	CAPTAN	132088000	128780000	2.5	MAL	7.2
14	MA	O,P-TDE/DDD	146013000	127879000	12	MA	
15	MA	NITROFEN	307389000	288462000	6.2	MA	
16	MA	O,P-DDT	307389000	288462000	6.2	MA	
17	MA	CARBOPHENOTHION	91032000	88403300	2.9	MA	
18	MA	BIS(2-ETHYLHEXYL)PHTHALATE	903703	659365	27	MA	*NT
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.9		

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/23/14
Instrument: Lucy
Cal. Date: 09/23/14
Data File: 0922089.D

		Compound	MEAN	CCRF	%D		%Drift	
41	MA	DICHLOBENIL	82448800	79844600	3.2	MA		
42	MA	BENEFIN	96097500	87603100	8.8	MA		
43	MAL	PROPACHLOR	18396900	17982300	2.3	MAL	6.6	
44	MA	HEXACHLOROBENZENE	263070000	225659000	14	MA		
45	MA	PCNB	272456000	235044000	14	MA		
46	MA	CHLOROTHALONIL	295586000	247456000	16	MA		
47	MA	ALACHLOR	35452800	33203300	6.3	MA		
48	MA	DACTHAL	206007000	188158000	8.7	MA		
49	MAL	DICOFOL	32809800	29670200	9.6	MAL	2.9	
50	MA	O,P-DDE	146251000	136734000	6.5	MA		
51	MA	OXADIAZON	91592000	84245900	8.0	MA		
52	MA	OXYFLUORFEN	196778000	185661000	5.6	MA		
53	MAL	CAPTAN	113725000	99273800	13	MAL	12	
54	MA	O,P-TDE/DDD	132962000	120016000	9.7	MA		
55	MA	NITROFEN	222035000	200483000	9.7	MA		
56	MA	O,P-DDT	222035000	200483000	9.7	MA		
57	MAL	CARBOPHENOTHION	68148800	62326500	8.5	MAL	10	
58	MA	BIS(2-ETHYLHEXYL)PHTHALAT	766489	572963	25	MA		*NT
59								
60								
61								
62								
63								
64								
65								
66								
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								
79								
80								
		Average			9.9			

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922089.D\ECD1A.CH Vial: 89
Signal #2 : G:\LUCY\DATA\140922\0922089.D\ECD2B.CH
Acq On : 9-23-14 12:04:57 Operator: MA
Sample : 5ES 2ND SRC 9/22/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 27 15:01 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Sat Sep 27 15:00:45 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Target Compounds						
1)	MA	DICHLOBENIL	2.09	2.36	9152050	7984463	0.0476	0.0484
2)	MA	BENEFIN	2.66	3.43	7926220	8760310	0.0457	0.0456
3)	MA	PROPACHLOR	2.98	3.39	1658861	1798233	0.0510	0.0533
4)	MA	HEXACHLOROBENZEN	3.41	4.08	27949707	22565894	0.0449	0.0429
5)	MA	PCNB	3.77	4.33	23044216	23504443	0.0437	0.0431
6)	MA	CHLOROTHALONIL	4.42	4.95	24199343	24745649	0.0417	0.0419
7)	MA	ALACHLOR	4.23	4.76	3085586	3320325	0.0492	0.0468
8)	MA	DACTHAL	4.64	5.17	19886586	18815821	0.0461	0.0457
9)	MA	DICOFOL	4.94	5.47	4328786	2967022	0.0513	0.0486
10)	MA	O,P-DDE	5.29	5.84	14268133	13673438	0.0478	0.0467
11)	MA	OXADIAZON	5.37	5.98	7689488	8424585	0.0464	0.0460
12)	MA	OXYFLUORFEN	5.51	6.14	17206032	18566130	0.0479	0.0472
13)	MA	CAPTAN	5.62	5.87	12877960	9927381	0.0464	0.0439m
14)	MA	O,P-TDE/DDD	5.78	6.30	12787922	12001609	0.0438	0.0451
15)	MA	NITROFEN	6.06	6.62	28846158	20048259	0.0469	0.0451
16)	MA	O,P-DDT	6.06	6.62	28846158	20048259	0.0469	0.0451
17)	MA	CARBOPHENOTHION	6.39	6.93	8840329	6232649	0.0486	0.0450
18)	MA	BIS(2-ETHYLHEXYL	6.61	7.63	1318729	1145926	0.7296	0.7475

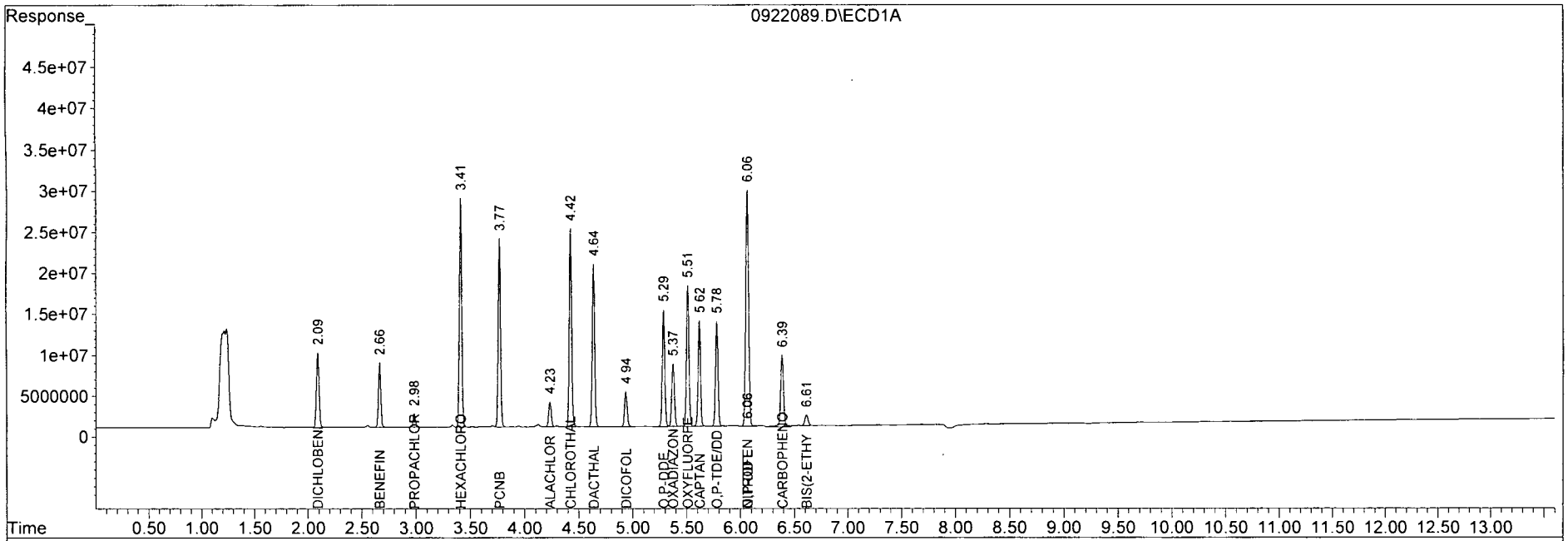
Target Compounds

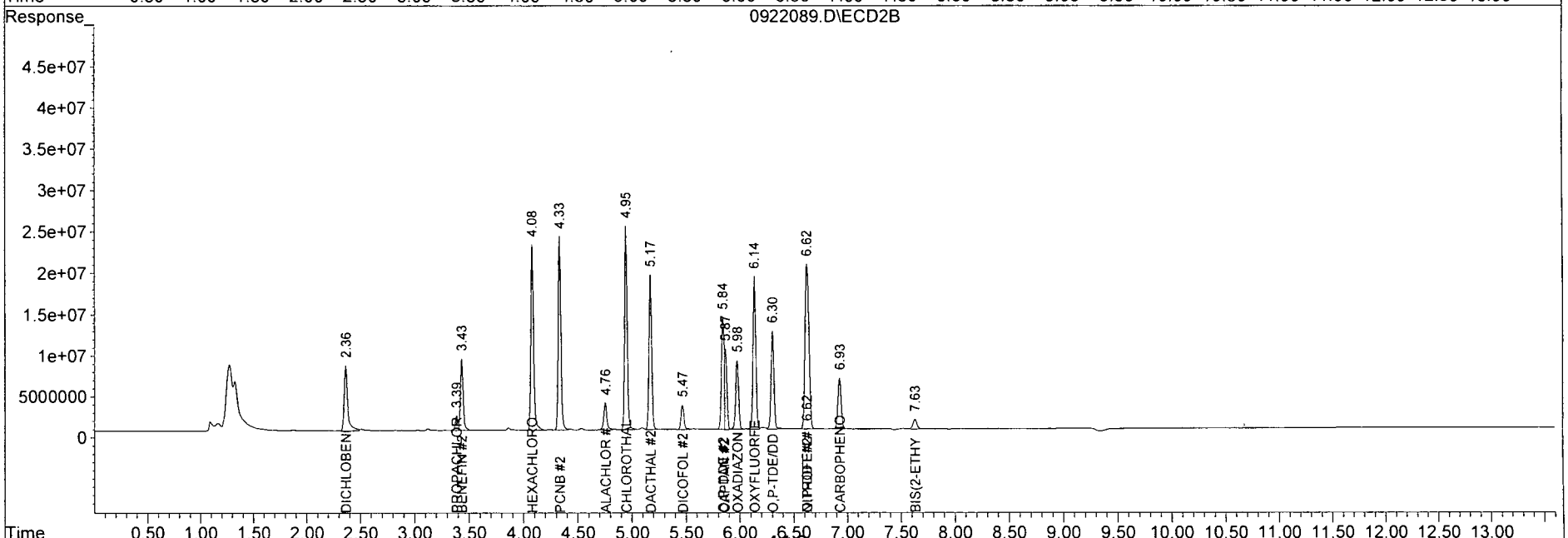
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922089.D
Acq On : 9-23-14 12:04:57
Sample : 5ES 2ND SRC 9/22/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\5ES0922.M

Vial: 89
Operator: MA
Inst : Lucy
Multiplr: 1.00

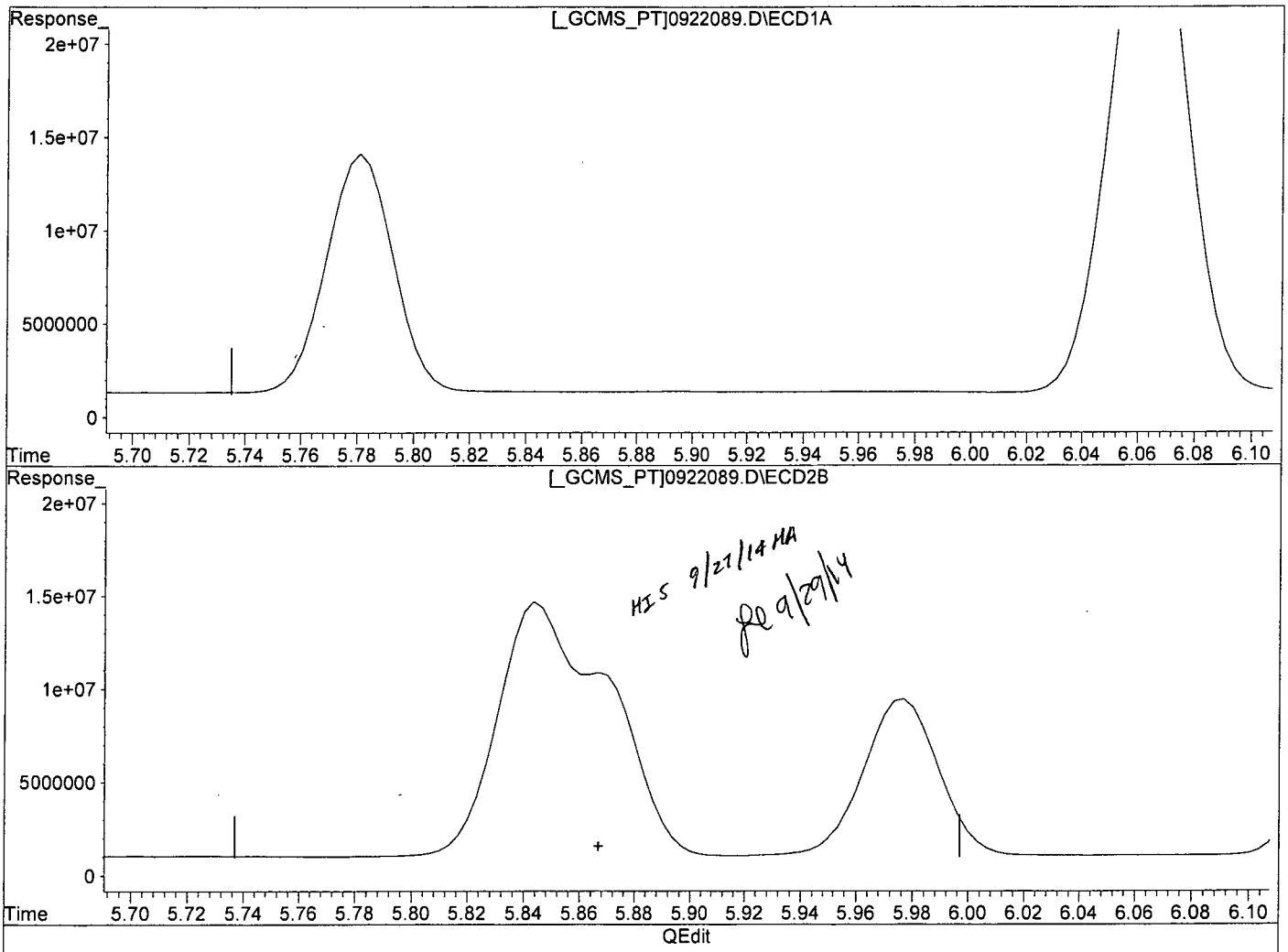




Quantitation Report

Signal #1 : G:\LUCY\DATA\140922\0922089.D\ECD1A.CH Vial: 89
Signal #2 : G:\LUCY\DATA\140922\0922089.D\ECD2B.CH
Acq On : 9-23-14 12:04:57 Operator: MA
Sample : 5ES 2ND SRC 9/22/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 27 15:00 2014 Quant Results File: 5ES0922.RES

Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Sat Sep 27 15:00:45 2014
Response via : Multiple Level Calibration



(13) CAPTAN (MA)

5.62min 0.046ppb

response 12877960

(13) CAPTAN #2 (MA)

0.00min 0.000ppb

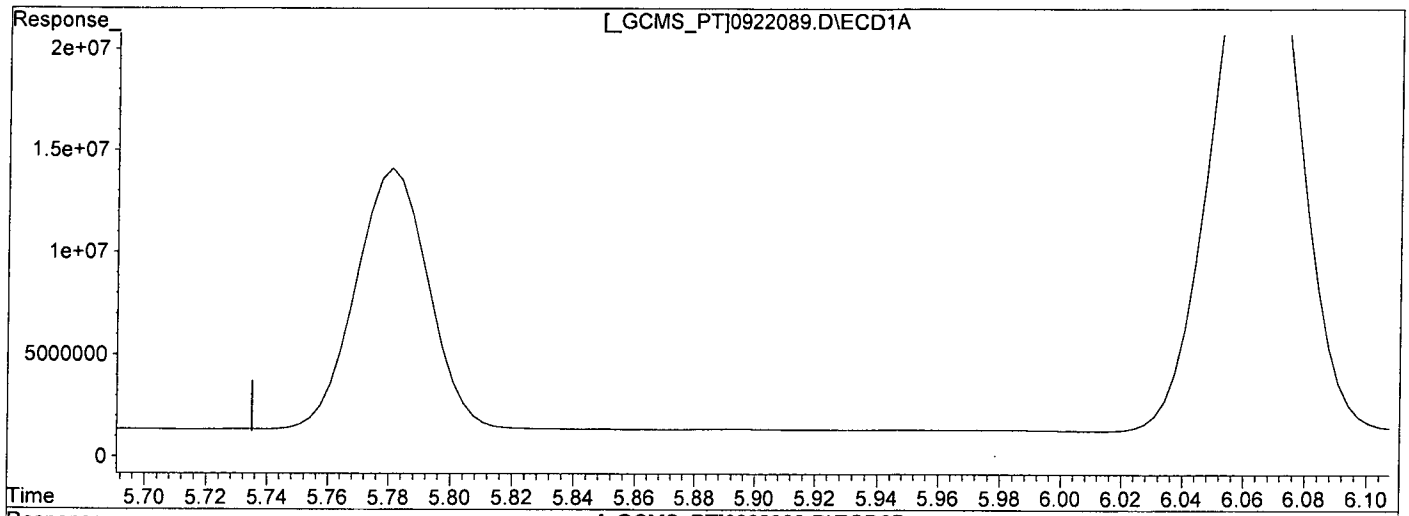
response 0

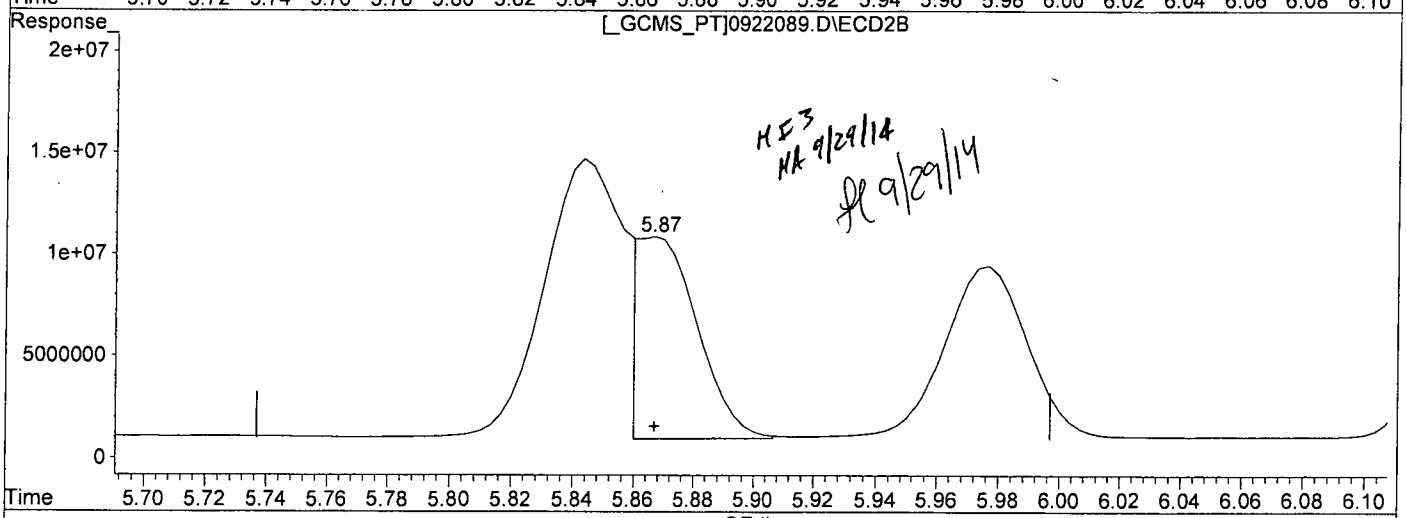
(+) = Expected Retention Time
0922089.D 5ES0922.M Sat Sep 27 15:01:07 2014

Quantitation Report

Signal #1 : G:\LUCY\DATA\140922\0922089.D\ECD1A.CH Vial: 89
Signal #2 : G:\LUCY\DATA\140922\0922089.D\ECD2B.CH
Acq On : 9-23-14 12:04:57 Operator: MA
Sample : 5ES 2ND SRC 9/22/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 27 15:00 2014 Quant Results File: 5ES0922.RES

Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Sat Sep 27 15:00:45 2014
Response via : Multiple Level Calibration





QEdit

(13) CAPTAN (MA)

5.62min 0.046ppb

response 12877960

(13) CAPTAN #2 (MA)

5.87min 0.044ppb m

response 9927381

(+) = Expected Retention Time
0922089.D 5ES0922.M Sat Sep 27 15:01:26 2014

Data File Name:	**0922090.D**
Data File Path:	**G:\LUCY\DATA\140922**
Operator:	**MA**
Date Acquired:	**23 Sep 2014 12:53**
Method File:	**OCL0922.M**
Sample Name:	**OCL DEG CHECK 8/19/14**
Vial Number:	**90**
Instrument Name:	**Lucy**

#	Name	Ret Time	Target Response
1)	P,P-DDT	6.43	173800000
2)	P,P-DDD	6.14	948807
3)	P,P-DDE	5.57	801006

Breakdown **1.00**

#	Name	Ret Time	Target Response
1)	P,P-DDT #2	7.14	150154000
2)	P,P-DDD #2	6.77	1288880
3)	P,P-DDE #2	6.20	811916

Breakdown **1.38**

#	Name	Ret Time	Target Response
1)	ENDRIN	6.04	165292000
2)	ENDRIN ALDEHYDE	6.55	3104310
3)	ENDRIN KETONE	7.55	3869880

Breakdown **4.0**

#	Name	Ret Time	Target Response
1)	ENDRIN #2	6.63	159380000
2)	ENDRIN ALDEHYDE #2	7.07	1357830
3)	ENDRIN KETONE #2	8.04	3892820

Breakdown **3.2**

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922090.D\ECD1A.CH Vial: 90
Signal #2 : G:\LUCY\DATA\140922\0922090.D\ECD2B.CH
Acq On : 9-23-14 12:53:25 Operator: MA
Sample : OCL DEG CHECK 8/19/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 23 13:40 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

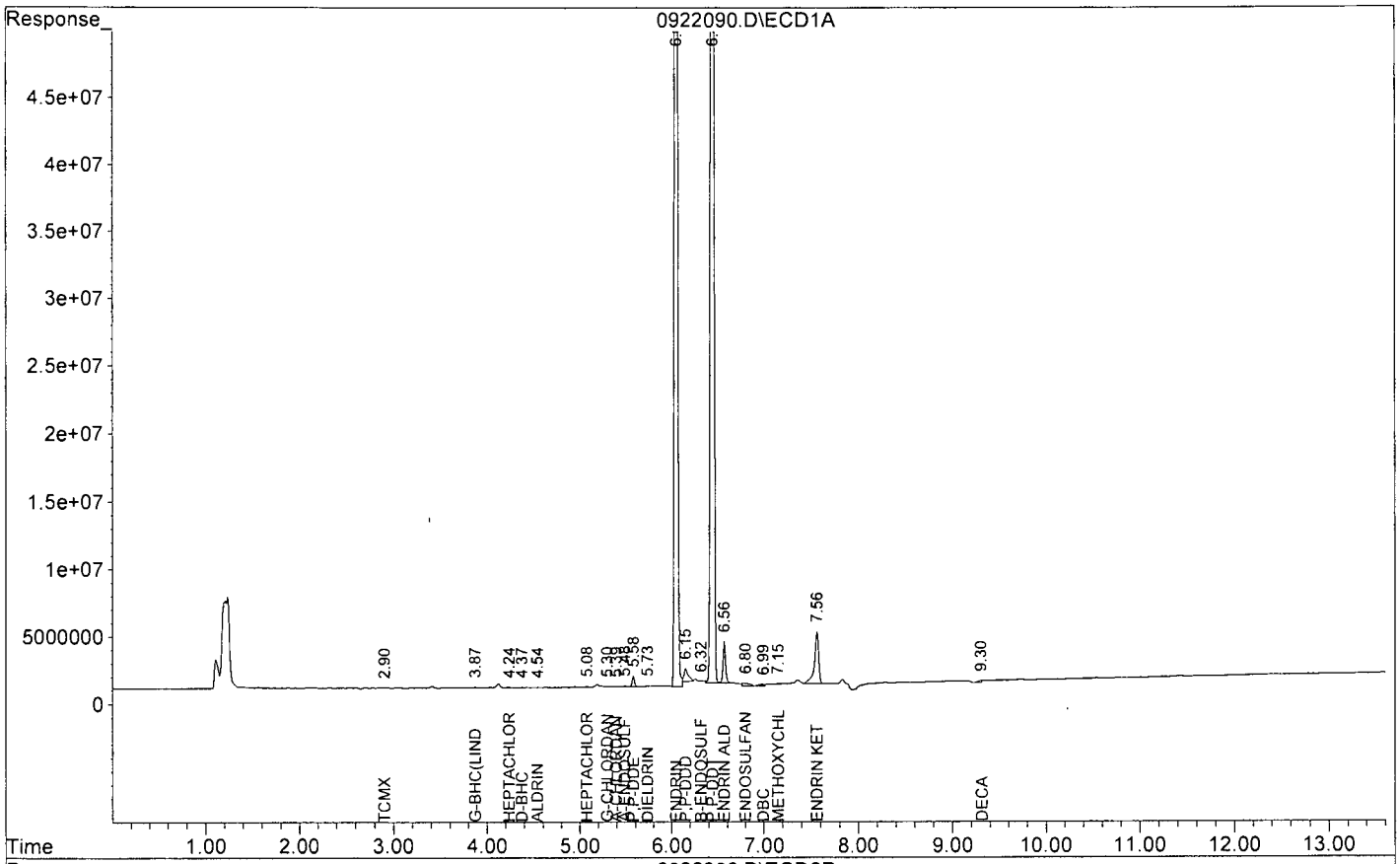
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
1)	S	TCMX	2.90	3.58	10266	11212	0.0000	0.0000
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					0.00%#	0.00%#
22)	S	DBC	6.99f	7.89f	713660	17931	0.0013	0.0001 #
		Surrogate Spike 0.150 Recovery =					0.87%	0.07%
23)	S	DECA	9.30	10.58	438801	26564	0.0006	0.0001 #
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					0.40%#	0.07%#
		Target Compounds						
4)	M	G-BHC(LINDANE)	3.87	4.33	86738	51660	0.0002	0.0001 #
5)	TM	D-BHC	4.37	4.85	56856	10359	0.0001	0.0000 #
6)	M	HEPTACHLOR	4.24	4.94	30074	24285	0.0001	0.0001
7)	M	ALDRIN	4.54	5.23	26031	24825	0.0001	0.0001
8)	TM	HEPTACHLOR EPOXI	5.08	5.68	99042	88137	0.0003	0.0002
9)	TM	G-CHLORDANE	5.30	6.01	34583	114920	0.0001	0.0003 #
10)	TM	A-ENDOSULFAN	5.48f	6.13	111554	31052	0.0003	0.0001 #
11)	TM	A-CHLORDANE	5.39	6.07	32087	12659	0.0001	0.0000 #
12)	TM	P,P-DDE	5.58	6.20	801006	811916	0.0020	0.0022
13)	M	DIELDRIN	5.73	6.37	67206	57531	0.0002	0.0002
14)	M	ENDRIN	6.05	6.63	165.3E6	159.4E6	0.4854	0.5279
15)	TM	B-ENDOSULFAN	6.32	0.00	21326	0	0.0001	N.D. #
16)	TM	P,P-DDD	6.15	6.78	948807	1288880	0.0027	0.0083 #
17)	TM	ENDRIN ALDEHYDE	6.56	7.07	3104305	1357829	0.0112	0.0064 #
18)	M	P,P-DDT	6.44	7.13	173.8E6	150.2E6	0.5357	0.6581
19)	TM	ENDOSULFAN SULFA	6.80	7.49f	218394	12579	0.0007	0.0006
20)	TM	ENDRIN KETONE	7.56	8.03	3869880	3892820	0.0129	0.0143
21)	TM	METHOXYCHLOR	7.15f	7.72	31765	3880	0.0002	0.0000 #
		Target Compounds						
2)	TM	A-BHC	3.45	3.95f	60929	5385	N.D.	N.D.
3)	TM	B-BHC	4.12	4.64f	304370	4294	N.D.	0.0000

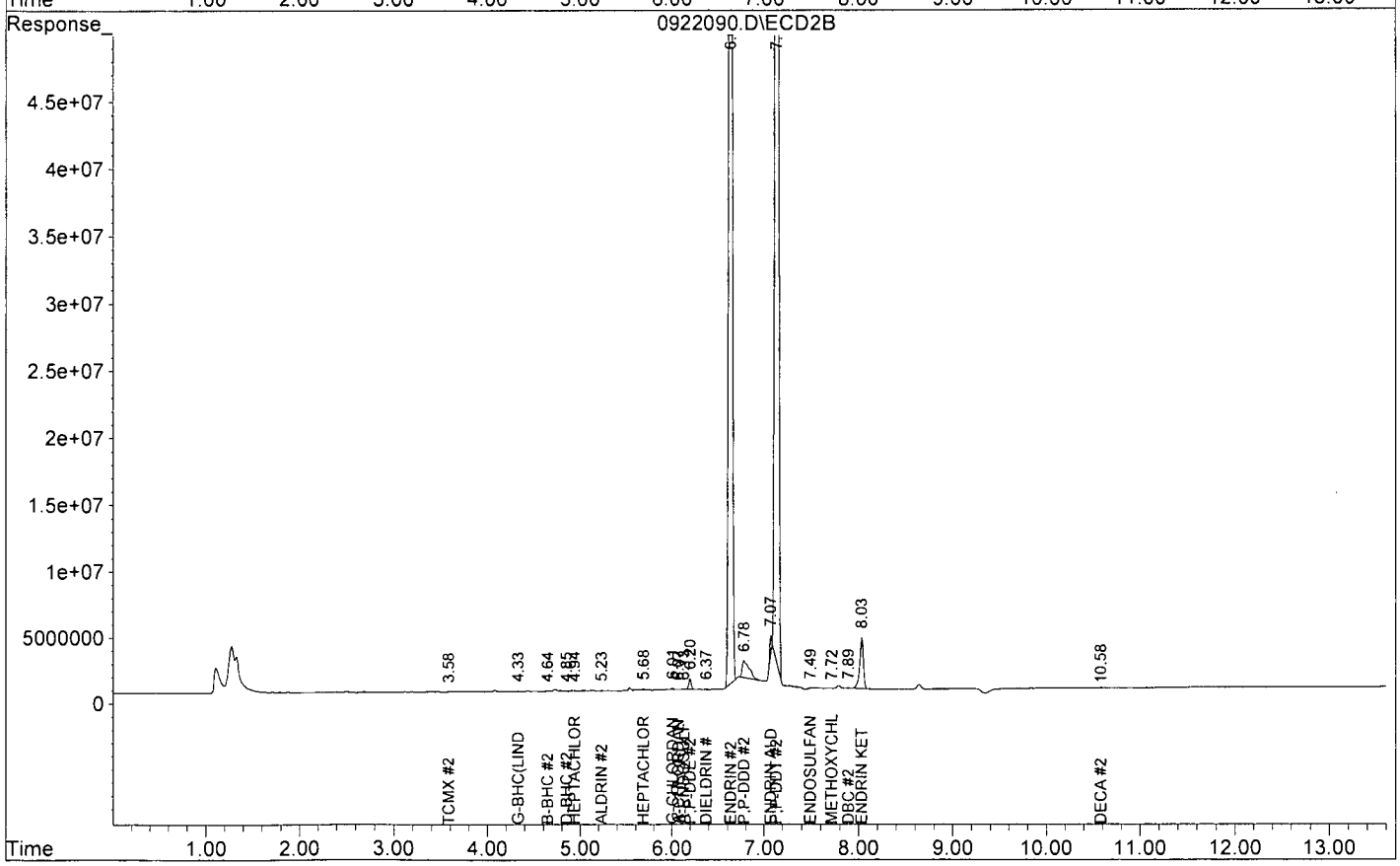
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922090.D
Acq On : 9-23-14 12:53:25
Sample : OCL DEG CHECK 8/19/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 90
Operator: MA
Inst : Lucy
Multiplr: 1.00





Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/23/14
Instrument: Lucy
Initial Cal. Date: 09/22/14
Data File: 0922097.D

		Compound	MEAN	CCRF	%D		%Drift
1	S	TCMX	210790000	221208000	4.9	S	
2	TML	A-BHC	255476000	287142000	12	TML	0.64
3	TML	B-BHC	152965000	119814000	22	TML	0.04
4	M	G-BHC(LINDANE)	243641000	269965000	11	M	
5	TM	D-BHC	244454000	272917000	12	TM	
6	M	HEPTACHLOR	196579000	232231000	18	M	
7	M	ALDRIN	205550000	229526000	12	M	
8	TM	HEPTACHLOR EPOXIDE	197109000	212317000	7.7	TM	
9	TM	G-CHLORDANE	204186000	222649000	9.0	TM	
10	TM	A-ENDOSULFAN	175738000	184823000	5.2	TM	
11	TM	A-CHLORDANE	198027000	200881000	1.4	TM	
12	TM	P,P-DDE	204962000	221356000	8.0	TM	
13	M	DIELDRIN	193242000	207003000	7.1	M	
14	M	ENDRIN	170280000	151957000	11	M	
15	TM	B-ENDOSULFAN	171252000	174963000	2.2	TM	
16	TM	P,P-DDD	177919000	176243000	0.94	TM	
17	TM	ENDRIN ALDEHYDE	138606000	136186000	1.7	TM	
18	M	P,P-DDT	162232000	177134000	9.2	M	
19	TM	ENDOSULFAN SULFATE	156789000	147103000	6.2	TM	
20	TM	ENDRIN KETONE	150391000	160172000	6.5	TM	
21	TM	METHOXYCHLOR	69309500	72958500	5.3	TM	
22	S	DBC	272683000	246859000	9.5	S	
23	S	DECA	392004000	348722000	11	S	
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.4		

Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 14218
Date Analyzed: 09/23/14
Instrument: Lucy
Cal. Date: 09/22/14
Data File: 0922097.D

		Compound	MEAN	CCRF	%D		%Drift
41	S	TCMX	210430000	207059000	1.6	S	
42	TML	A-BHC	263066000	283934000	7.9	TML	6.1
43	TM	B-BHC	115335000	113574000	1.5	TM	
44	M	G-BHC(LINDANE)	422048000	432908000	2.6	M	
45	TM	D-BHC	236931000	253771000	7.1	TM	
46	M	HEPTACHLOR	156614000	182767000	17	M	
47	M	ALDRIN	208238000	216191000	3.8	M	
48	TM	HEPTACHLOR EPOXIDE	202172000	198852000	1.6	TM	
49	TM	G-CHLORDANE	173189000	171906000	0.74	TM	
50	TM	A-ENDOSULFAN	133067000	130116000	2.2	TM	
51	TM	A-CHLORDANE	136781000	135864000	0.67	TM	
52	TM	P,P-DDE	188279000	193595000	2.8	TM	
53	M	DIELDRIN	177809000	172161000	3.2	M	
54	M	ENDRIN	150961000	142678000	5.5	M	
55	TM	B-ENDOSULFAN	151093000	145354000	3.8	TM	
56	TML	P,P-DDD	105593000	115407000	9.3	TML	9.1
57	TM	ENDRIN ALDEHYDE	106388000	100245000	5.8	TM	
58	M	P,P-DDT	114081000	113448000	0.56	M	
59	TML	ENDOSULFAN SULFATE	113130000	117747000	4.1	TML	5.7
60	TM	ENDRIN KETONE	135926000	132626000	2.4	TM	
61	TM	METHOXYCHLOR	65534200	61066300	6.8	TM	
62	S	DBC	92838500	92801100	0.04	S	
63	S	DECA	92970600	83259800	10	S	
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			4.4		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922097.D\ECD1A.CH Vial: 97
Signal #2 : G:\LUCY\DATA\140922\0922097.D\ECD2B.CH
Acq On : 9-23-14 15:10:17 Operator: MA
Sample : OCL 2 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 23 16:30 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S TCMX	2.90	3.58	22120835	20705897	0.0525	0.0492
	Surrogate Spike 0.150 Range 25 - 150 Recovery =					35.00%	32.80%
22)	S DBC	6.92	7.93	24685947	9280107	0.0453	0.0500
	Surrogate Spike 0.150 Recovery =					30.20%	33.33%
23)	S DECA	9.28	10.58	34872245	8325976	0.0445	0.0448
	Surrogate Spike 0.150 Range 25 - 150 Recovery =					29.67%	29.87%
	Target Compounds						
2)	TM A-BHC	3.48	3.99	28714224	28393410	0.0497	0.0469
3)	TM B-BHC	4.09	4.60	11981384	11357397	0.0500	0.0492
4)	M G-BHC(LINDANE)	3.85	4.33	26996464	43290752	0.0554	0.0513
5)	TM D-BHC	4.38	4.87	27291685	25377064	0.0558	0.0536
6)	M HEPTACHLOR	4.21	4.93	23223077	18276721	0.0591	0.0583
7)	M ALDRIN	4.52	5.26	22952556	21619054	0.0558	0.0519
8)	TM HEPTACHLOR EPOXI	5.06	5.70	21231689	19885237	0.0539	0.0492
9)	TM G-CHLORDANE	5.29	6.01	22264864	17190620	0.0545	0.0496
10)	TM A-ENDOSULFAN	5.44	6.10	18482330	13011602	0.0526	0.0489
11)	TM A-CHLORDANE	5.38	6.06	20088068	13586374	0.0507	0.0497
12)	TM P,P-DDE	5.57	6.20	22135646	19359546	0.0540	0.0514
13)	M DIELDRIN	5.73	6.37	20700274	17216065	0.0536	0.0484
14)	M ENDRIN	6.04	6.63	15195703	14267795	0.0446	0.0473
15)	TM B-ENDOSULFAN	6.31	6.94	17496272	14535406	0.0511	0.0481
16)	TM P,P-DDD	6.14	6.77	17624315	11540714	0.0495	0.0455
17)	TM ENDRIN ALDEHYDE	6.55	7.07	13618608	10024523	0.0491	0.0471
18)	M P,P-DDT	6.43	7.13	17713427	11344766	0.0546	0.0497
19)	TM ENDOSULFAN SULFA	6.78	7.43	14710311	11774658	0.0469	0.0472
20)	TM ENDRIN KETONE	7.55	8.03	16017246	13262600	0.0533	0.0488
21)	TM METHOXYCHLOR	7.22	7.71	7295847	6106626	0.0526	0.0466

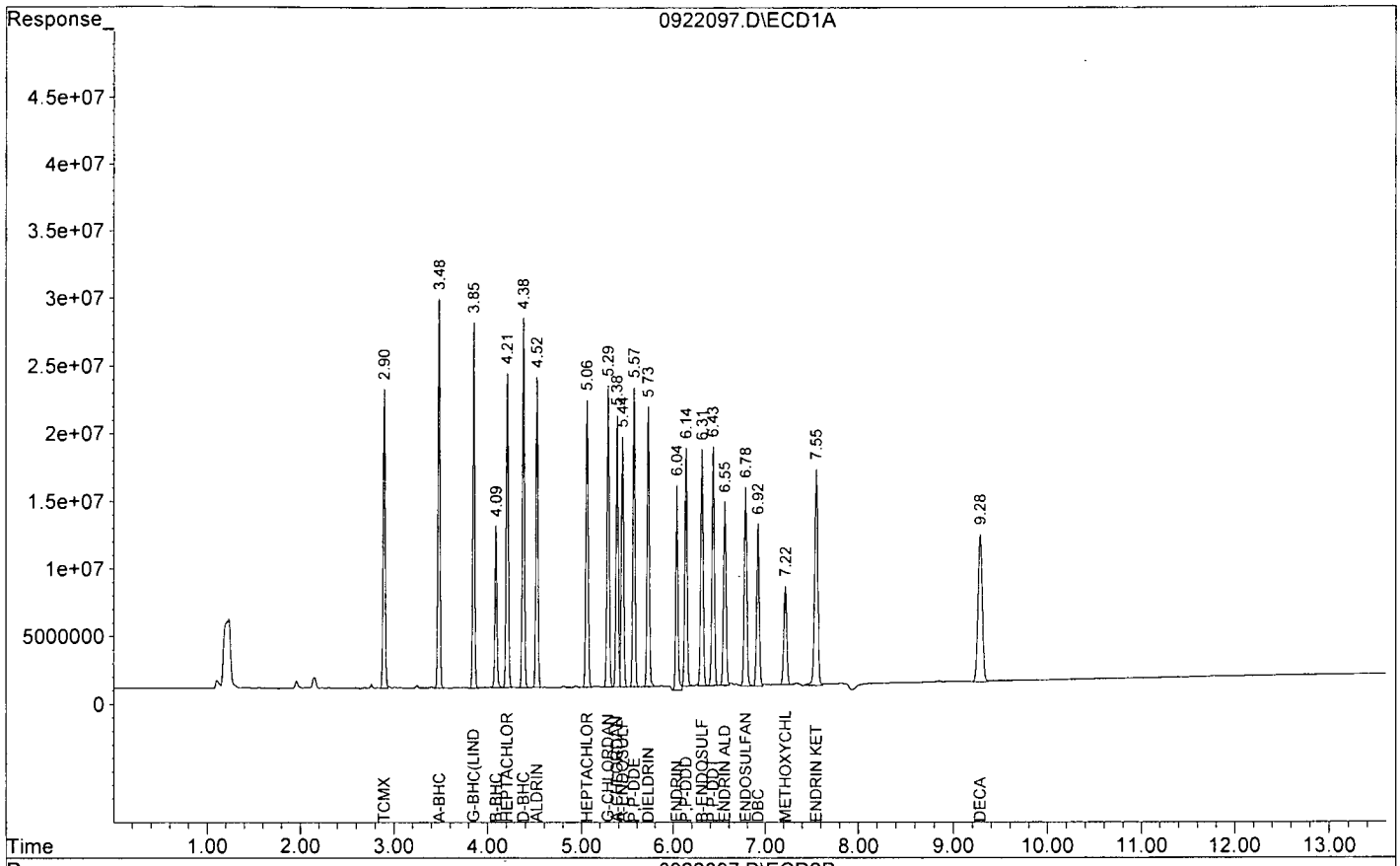
Target Compounds

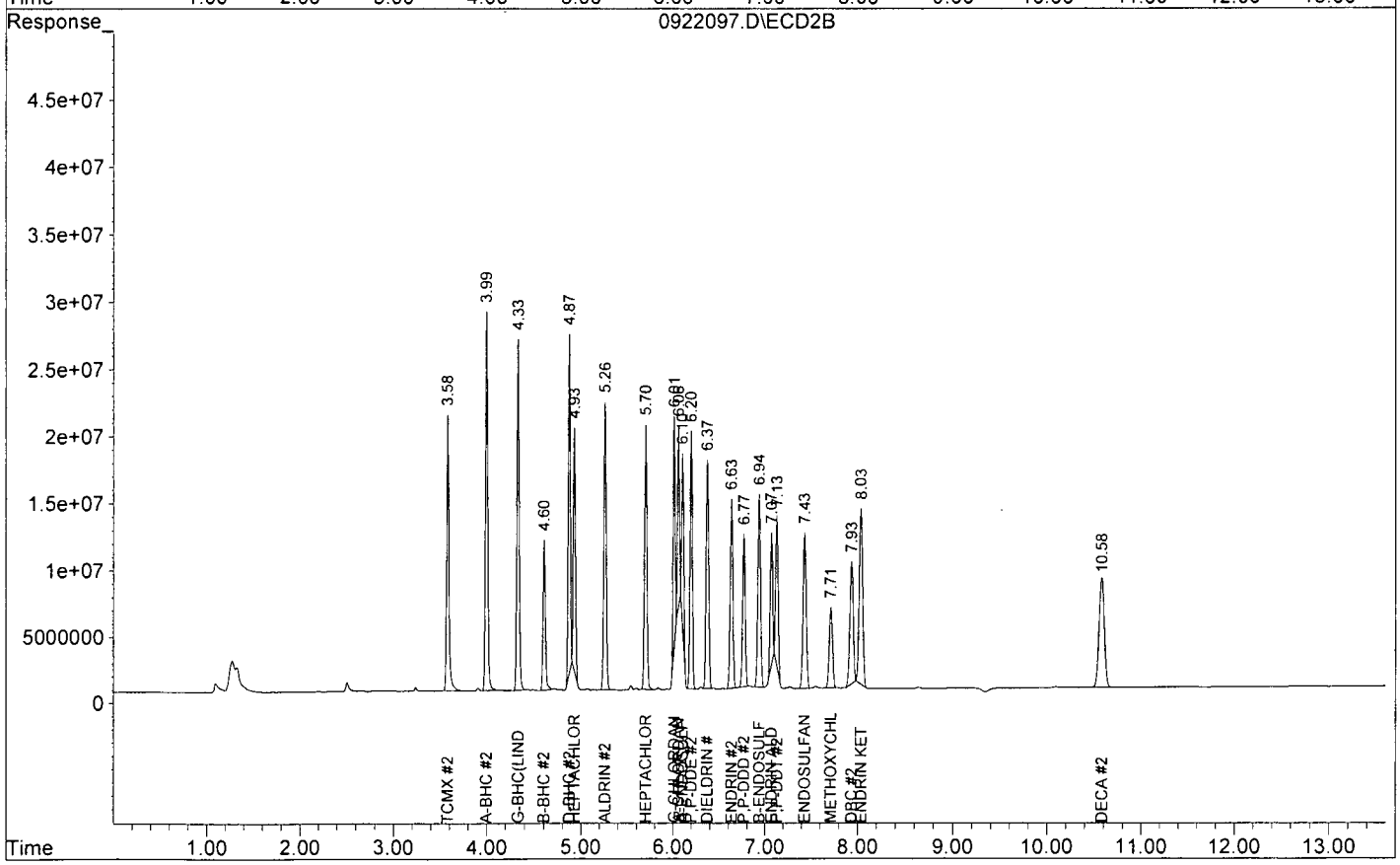
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922097.D
Acq On : 9-23-14 15:10:17
Sample : OCL 2 7/16/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 97
Operator: MA
Inst : Lucy
Multiplr: 1.00





TOXAPHENE
METHOD 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/23/14
Instrument: Lucy
Initial Cal. Date: 09/22/14
Data File: 0922098.D

		Compound	MEAN	CCRF	%D		%Drift
1	ANM	Toxaphene Total	8521920	8403660	1.4	ANM	
2	L2AK	Toxaphene	826949	914315	11	L2AK	
3	L2AK	Toxaphene {2}	2509940	2563880	2.1	L2AK	
4	L2AK	Toxaphene {3}	1879990	1817170	3.3	L2AK	
5	L2AK	Toxaphene {4}	788914	786487	0.31	L2AK	
6	L2AK	Toxaphene {5}	2516130	2321810	7.7	L2AK	
7	signal #1						
8	ANM	Toxaphene Total	8150230	7877410	3.3	ANM	
9	L2AK	Toxaphene	686998	642741	6.4	L2AK	
10	L2AK	Toxaphene {2}	1361590	1306870	4.0	L2AK	
11	L2AK	Toxaphene {3}	2205810	2129470	3.5	L2AK	
12	L2AK	Toxaphene {4}	1622820	1615580	0.45	L2AK	
13	L2AK	Toxaphene {5}	2273020	2182750	4.0	L2AK	
14							
15							
16							
17							
18							
19							
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39							
40							
		Average			#REF!		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922098.D\ECD1A.CH Vial: 98
Signal #2 : G:\LUCY\DATA\140922\0922098.D\ECD2B.CH
Acq On : 9-23-14 15:26:43 Operator: MA
Sample : TOX 2 9/19/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 16:31 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

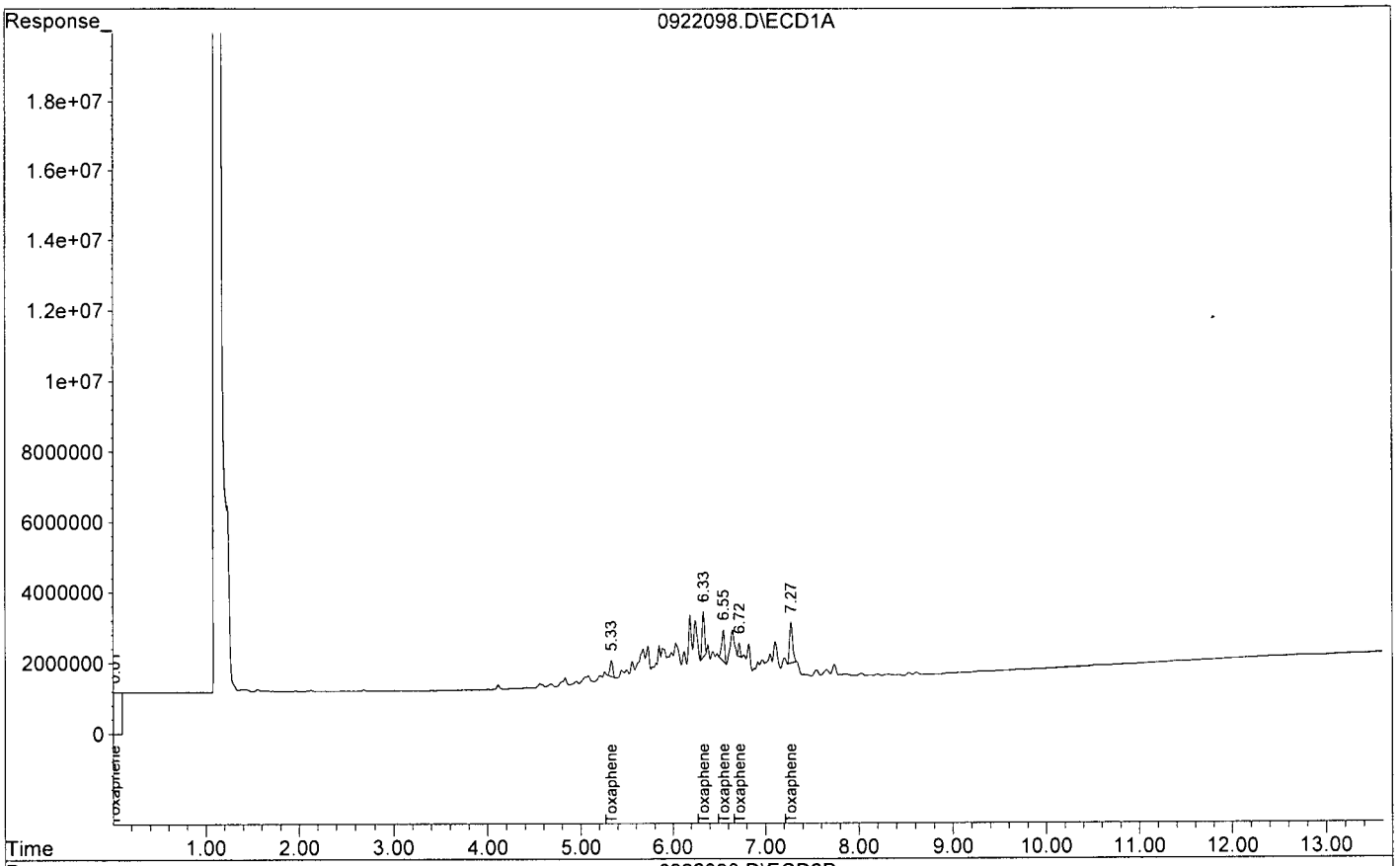
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	4201832	3938705	0.2465m	0.2416m
2) L2AK Toxaphene	5.33	6.55	457158	321371	0.2764	0.2339
3) L2AK Toxaphene {2}	6.33	7.02	1281939	653433	0.2554	0.2400
4) L2AK Toxaphene {3}	6.55	7.32	908586	1064734	0.2416	0.2413
5) L2AK Toxaphene {4}	6.72	7.41	393243	807791	0.2492	0.2489
6) L2AK Toxaphene {5}	7.28	8.07	1160905	1091376	0.2307	0.2401
Sum Toxaphene			4201832	3938705	1.2534	1.2042
Average Toxaphene					0.251	0.241

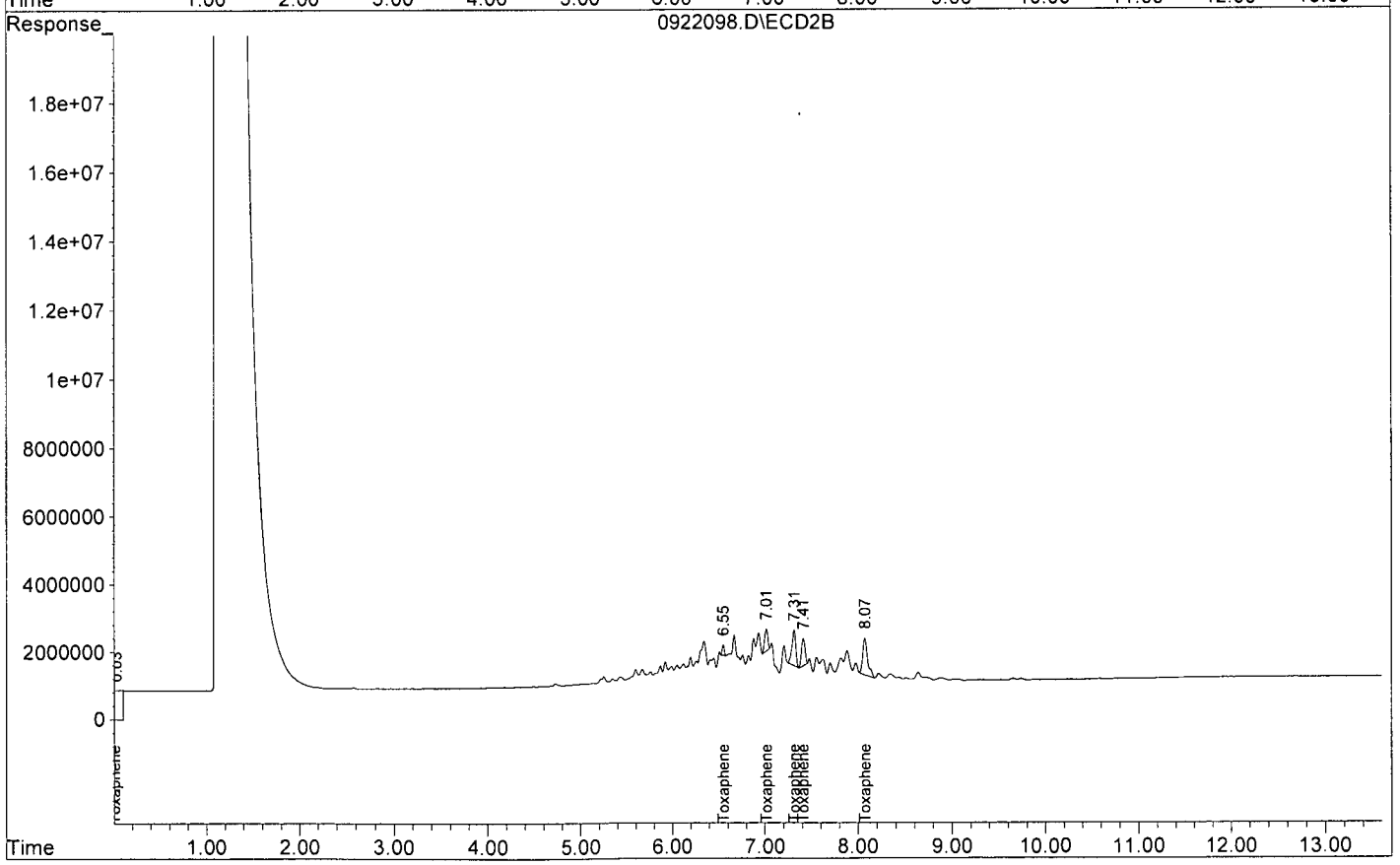
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922098.D
Acq On : 9-23-14 15:26:43
Sample : TOX 2 9/19/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 98
Operator: MA
Inst : Lucy
Multiplr: 1.00





Data File Name:	**0922127.D**
Data File Path:	**G:\LUCY\DATA\140922**
Operator:	**MA**
Date Acquired:	**23 Sep 2014 23:47**
Method File:	**OCL0922.M**
Sample Name:	**OCL DEG CHECK 8/19/14**
Vial Number:	**27**
Instrument Name:	**Lucy**

#	Name	Ret Time	Target Response
1)	P,P-DDT	6.43	120570000
2)	P,P-DDD	6.14	19695900
3)	P,P-DDE	5.57	658042

Breakdown **14**

#	Name	Ret Time	Target Response
1)	P,P-DDT #2	7.14	118804000
2)	P,P-DDD #2	6.77	19062700
3)	P,P-DDE #2	6.20	603251

Breakdown **14**

#	Name	Ret Time	Target Response
1)	ENDRIN	6.04	153388000
2)	ENDRIN ALDEHYDE	6.55	1313550
3)	ENDRIN KETONE	7.55	3094770

Breakdown **2.8**

#	Name	Ret Time	Target Response
1)	ENDRIN #2	6.63	162988000
2)	ENDRIN ALDEHYDE #2	7.07	380005
3)	ENDRIN KETONE #2	8.04	3416080

Breakdown **2.3**

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922127.D\ECD1A.CH Vial: 27
Signal #2 : G:\LUCY\DATA\140922\0922127.D\ECD2B.CH
Acq On : 9-23-14 23:47:56 Operator: MA
Sample : OCL DEG CHECK 8/19/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 8:17 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

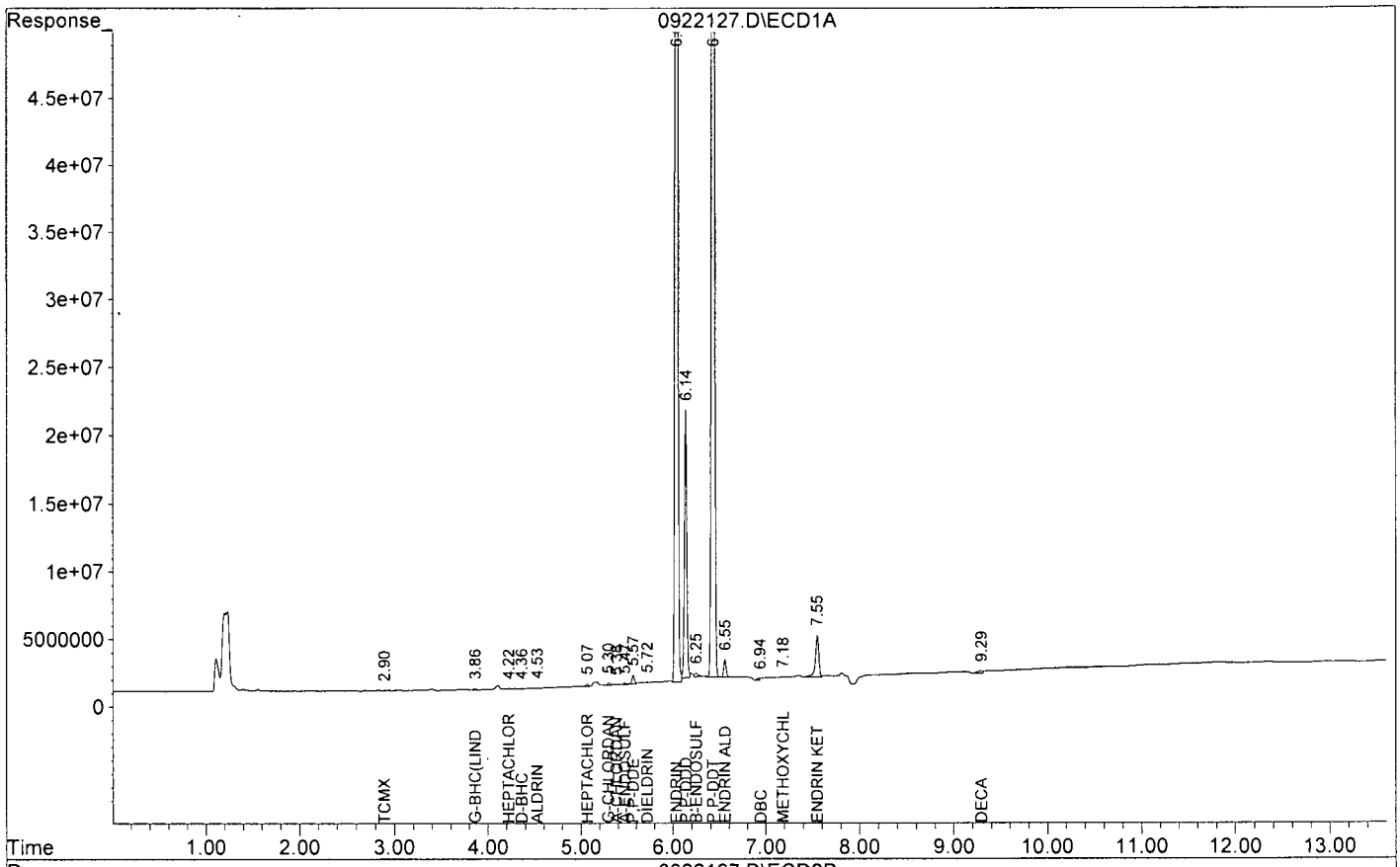
Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

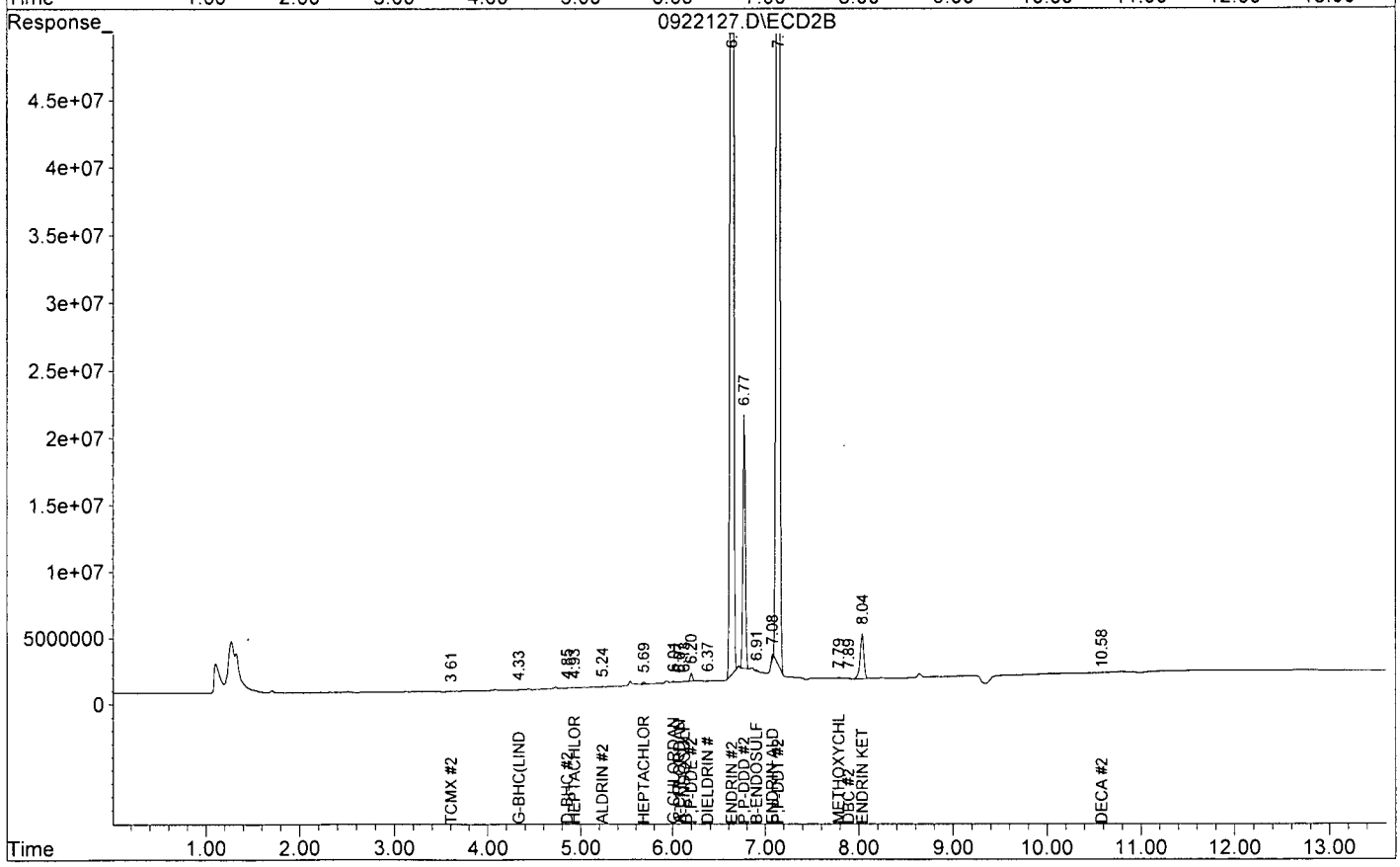
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
1)	S	TCMX	2.90	3.61	9898	27047	0.0000	0.0001	#
		Surrogate Spike 0.100			Recovery	=	0.00%	0.10%	
22)	S	DBC	6.94	7.89f	355878	54399	0.0007	0.0003	#
		Surrogate Spike 0.100			Recovery	=	0.70%	0.30%	
23)	S	DECA	9.29	10.58	786971	7861	0.0010	0.0000	#
		Surrogate Spike 0.100			Recovery	=	1.00%	0.00%	
		Target Compounds							
4)	M	G-BHC(LINDANE)	3.86	4.33	96066	25874	0.0002	0.0000	#
5)	TM	D-BHC	4.36	4.85	67620	25752	0.0001	0.0001	#
6)	M	HEPTACHLOR	4.22	4.93	10013	15519	0.0000	0.0000	#
7)	M	ALDRIN	4.53	5.24	46013	24186	0.0001	0.0001	#
8)	TM	HEPTACHLOR EPOXI	5.07	5.69	188452	169856	0.0005	0.0004	
9)	TM	G-CHLORDANE	5.30	6.01	173965	109455	0.0004	0.0003	#
10)	TM	A-ENDOSULFAN	5.47	6.13	116787	39663	0.0003	0.0001	#
11)	TM	A-CHLORDANE	5.38	6.07	20315	2759	0.0001	0.0000	#
12)	TM	P,P-DDE	5.57	6.20	658042	603251	0.0016	0.0016	
13)	M	DIELDRIN	5.72	6.37	70196	49997	0.0002	0.0001	
14)	M	ENDRIN	6.04	6.63	153.4E6	163.0E6	0.4504	0.5398	
15)	TM	B-ENDOSULFAN	6.25f	6.91	239129	79987	0.0007	0.0003	#
16)	TM	P,P-DDD	6.14	6.77	19695918	19062661	0.0554	0.0727	#
17)	TM	ENDRIN ALDEHYDE	6.55	7.08	1313546	380005	0.0047	0.0018	#
18)	M	P,P-DDT	6.43	7.14	120.6E6	118.8E6	0.3716	0.5207	#
20)	TM	ENDRIN KETONE	7.55	8.04	3094767	3416081	0.0103	0.0126	
21)	TM	METHOXYCHLOR	7.18	7.79f	11750	55849	0.0001	0.0004	#
		Target Compounds							
2)	TM	A-BHC	3.50	3.96	74506	5068	N.D.	N.D.	
3)	TM	B-BHC	4.11	0.00	289990	0	N.D.	N.D.	
19)	TM	ENDOSULFAN SULFA	0.00	0.00	0	0	N.D.	N.D.	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922127.D Vial: 27
Acq On : 9-23-14 23:47:56 Operator: MA
Sample : OCL DEG CHECK 8/19/14 Inst : Lucy
Misc : soil Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140922\OCL0922.M





Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No:
Date Analyzed: 09/24/14
Instrument: Lucy
Initial Cal. Date: 09/22/14
Data File: 0922128.D

		Compound	MEAN	CCRF	%D		%Drift	
1	S	TCMX	210790000	268709000	27	S		*see back
2	TML	A-BHC	255476000	347101000	36	TML	21	*see back
3	TML	B-BHC	152965000	139094000	9.1	TML	19	
4	M	G-BHC(LINDANE)	243641000	317221000	30	M		*
5	TM	D-BHC	244454000	312027000	28	TM		*
6	M	HEPTACHLOR	196579000	267119000	36	M		*
7	M	ALDRIN	205550000	254761000	24	M		*see back
8	TM	HEPTACHLOR EPOXIDE	197109000	216505000	9.8	TM		
9	TM	G-CHLORDANE	204186000	224856000	10	TM		
10	TM	A-ENDOSULFAN	175738000	191298000	8.9	TM		
11	TM	A-CHLORDANE	198027000	211831000	7.0	TM		
12	TM	P,P-DDE	204962000	221657000	8.1	TM		
13	M	DIELDRIN	193242000	205752000	6.5	M		
14	M	ENDRIN	170280000	157766000	7.3	M		
15	TM	B-ENDOSULFAN	171252000	165200000	3.5	TM		
16	TM	P,P-DDD	177919000	189208000	6.3	TM		
17	TM	ENDRIN ALDEHYDE	138606000	124771000	10	TM		
18	M	P,P-DDT	162232000	122836000	24	M		*see back
19	TM	ENDOSULFAN SULFATE	156789000	137487000	12	TM		
20	TM	ENDRIN KETONE	150391000	135380000	10	TM		
21	TM	METHOXYCHLOR	69309500	53029300	23	TM		*see back
22	S	DBC	272683000	238076000	13	S		
23	S	DECA	392004000	293738000	25	S		*see back
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
		Average			16.3			

Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 14218
Date Analyzed: 09/24/14
Instrument: Lucy
Cal. Date: 09/22/14
Data File: 0922128.D

		Compound	MEAN	CCRF	%D	%Drift		
41	S	TCMX	210430000	250881000	19	S		
42	TML	A-BHC	263066000	346895000	32	TML	16	
43	TM	B-BHC	115335000	134029000	16	TM		
44	M	G-BHC(LINDANE)	422048000	522089000	24	M		*
45	TM	D-BHC	236931000	294074000	24	TM		*
46	M	HEPTACHLOR	156614000	239523000	53	M		*
47	M	ALDRIN	208238000	249377000	20	M		
48	TM	HEPTACHLOR EPOXIDE	202172000	221026000	9.3	TM		
49	TM	G-CHLORDANE	173189000	191631000	11	TM		
50	TM	A-ENDOSULFAN	133067000	147730000	11	TM		
51	TM	A-CHLORDANE	136781000	150429000	10	TM		
52	TM	P,P-DDE	188279000	218985000	16	TM		
53	M	DIELDRIN	177809000	202484000	14	M		
54	M	ENDRIN	150961000	163197000	8.1	M		
55	TM	B-ENDOSULFAN	151093000	161316000	6.8	TM		
56	TML	P,P-DDD	105593000	152406000	44	TML	14	
57	TM	ENDRIN ALDEHYDE	106388000	108938000	2.4	TM		
58	M	P,P-DDT	114081000	98578200	14	M		
59	TML	ENDOSULFAN SULFATE	113130000	132068000	17	TML	5.1	
60	TM	ENDRIN KETONE	135926000	140448000	3.3	TM		
61	TM	METHOXYCHLOR	65534200	58304900	11	TM		
62	S	DBC	92838500	99608500	7.3	S		
63	S	DECA	92970600	82423300	11	S		
64								
65								
66								
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								
79								
80								
		Average			16.7			

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922128.D\ECD1A.CH Vial: 28
Signal #2 : G:\LUCY\DATA\140922\0922128.D\ECD2B.CH
Acq On : 9-24-14 0:04:18 Operator: MA
Sample : OCL 3 7/16/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 8:18 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

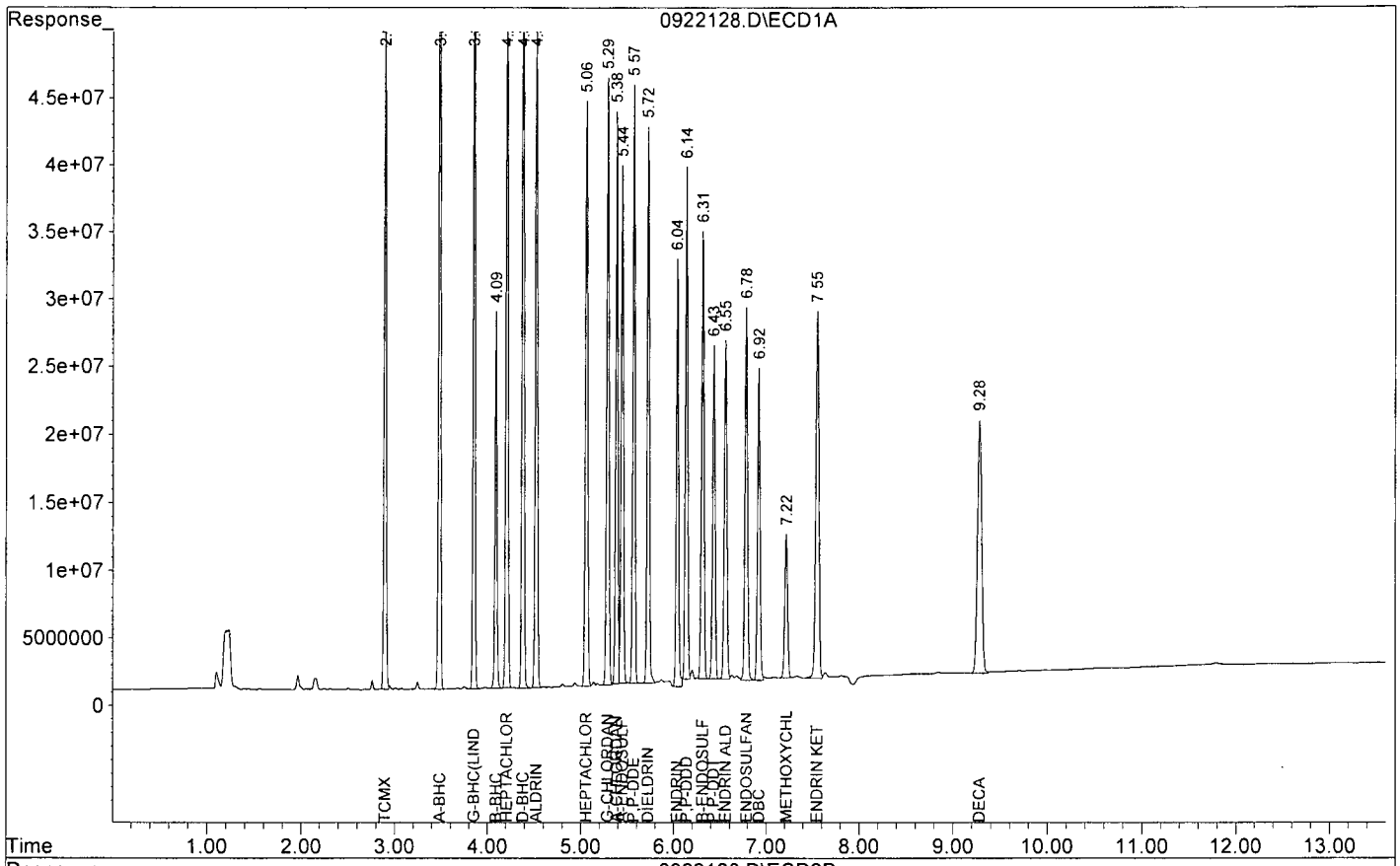
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S TCMX	2.90	3.58	53741899	50176179	0.1275	0.1192
	Surrogate Spike 0.100			Recovery	=	127.50%	119.20%
22)	S DBC	6.92	7.93	47615280	19921701	0.0873	0.1073
	Surrogate Spike 0.100			Recovery	=	87.30%	107.30%
23)	S DECA	9.28	10.58	58747586	16484660	0.0749	0.0887
	Surrogate Spike 0.100			Recovery	=	74.90%	88.70%
	Target Compounds						
2)	TM A-BHC	3.48	4.00	69420221	69379001	0.1211	0.1155
3)	TM B-BHC	4.09	4.61	27818744	26805796	0.1186	0.1162
4)	M G-BHC(LINDANE)	3.85	4.33	63444252	104.4E6	0.1302	0.1237
5)	TM D-BHC	4.38	4.87	62405491	58814782	0.1276	0.1241
6)	M HEPTACHLOR	4.21	4.93	53423716	47904683	0.1359	0.1529
7)	M ALDRIN	4.52	5.26	50952209	49875447	0.1239	0.1198
8)	TM HEPTACHLOR EPOXI	5.06	5.70	43301074	44205105	0.1098	0.1093
9)	TM G-CHLORDANE	5.29	6.01	44971254	38326152	0.1101	0.1106
10)	TM A-ENDOSULFAN	5.44	6.10	38259590	29546030	0.1089	0.1110
11)	TM A-CHLORDANE	5.38	6.06	42366200	30085795	0.1070	0.1100
12)	TM P,P-DDE	5.57	6.20	44331408	43796916	0.1081	0.1163
13)	M DIELDRIN	5.72	6.37	41150367	40496709	0.1065	0.1139
14)	M ENDRIN	6.04	6.63	31553222	32639380	0.0927	0.1081
15)	TM B-ENDOSULFAN	6.31	6.94	33040070	32263293	0.0965	0.1068
16)	TM P,P-DDD	6.14	6.77	37841611	30481182	0.1063	0.1141
17)	TM ENDRIN ALDEHYDE	6.55	7.07	24954273	21787614	0.0900	0.1024
18)	M P,P-DDT	6.43	7.13	24567114	19715635	0.0757	0.0864
19)	TM ENDOSULFAN SULFA	6.78	7.43	27497302	26413685	0.0877	0.1051
20)	TM ENDRIN KETONE	7.55	8.03	27075994	28089550	0.0900	0.1033
21)	TM METHOXYCHLOR	7.22	7.71	10605865	11660988	0.0765	0.0890

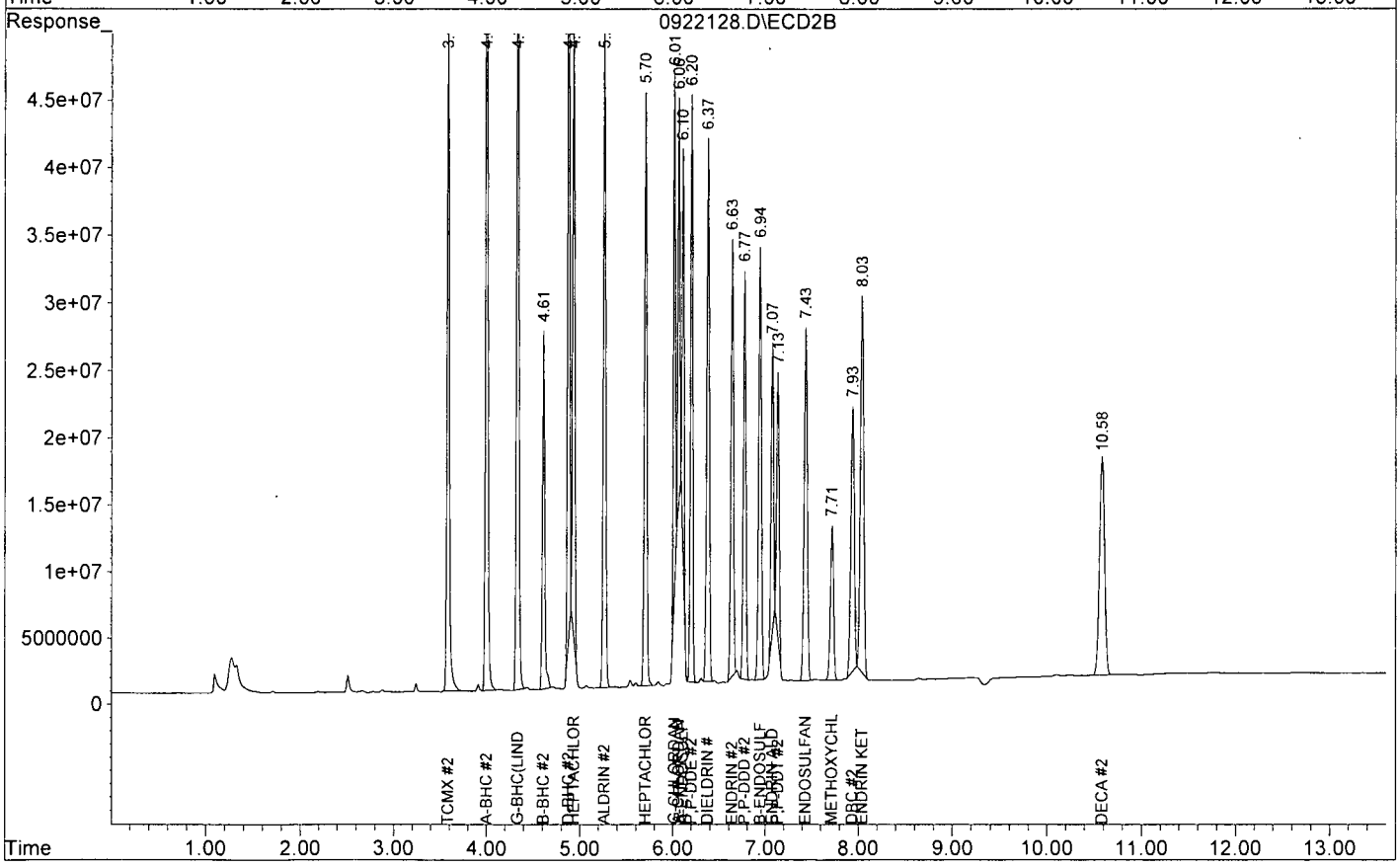
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922128.D Vial: 28
Acq On : 9-24-14 0:04:18 Operator: MA
Sample : OCL 3 7/16/14 Inst : Lucy
Misc : soil Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140922\OCL0922.M





TOXAPHENE
METHOD 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 14218
Date Analyzed: 09/24/14
Instrument: Lucy
Initial Cal. Date: 09/22/14
Data File: 0922129.D

		Compound	MEAN	CCRF	%D		%Drift
1	ANM	Toxaphene Total	8521920	7011670	18	ANM	
2	L2AK	Toxaphene	826949	962295	16	L2AK	
3	L2AK	Toxaphene {2}	2509940	2211830	12	L2AK	
4	L2AK	Toxaphene {3}	1879990	1602190	15	L2AK	
5	L2AK	Toxaphene {4}	788914	621661	21	L2AK	
6	L2AK	Toxaphene {5}	2516130	1613700	36	L2AK	
7	signal #2						
8	ANM	Toxaphene Total	8150230	6833680	16	ANM	
9	L2AK	Toxaphene	686998	715134	4.1	L2AK	
10	L2AK	Toxaphene {2}	1361590	1248730	8.3	L2AK	
11	L2AK	Toxaphene {3}	2205810	1952280	11	L2AK	
12	L2AK	Toxaphene {4}	1622820	1279510	21	L2AK	
13	L2AK	Toxaphene {5}	2273020	1638030	28	L2AK	
14							
15							
16							
17							
18							
19							
20							
21							
22							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			17.2		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922129.D\ECD1A.CH Vial: 29
Signal #2 : G:\LUCY\DATA\140922\0922129.D\ECD2B.CH
Acq On : 9-24-14 0:20:43 Operator: MA
Sample : TOX 3 9/19/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 8:22 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

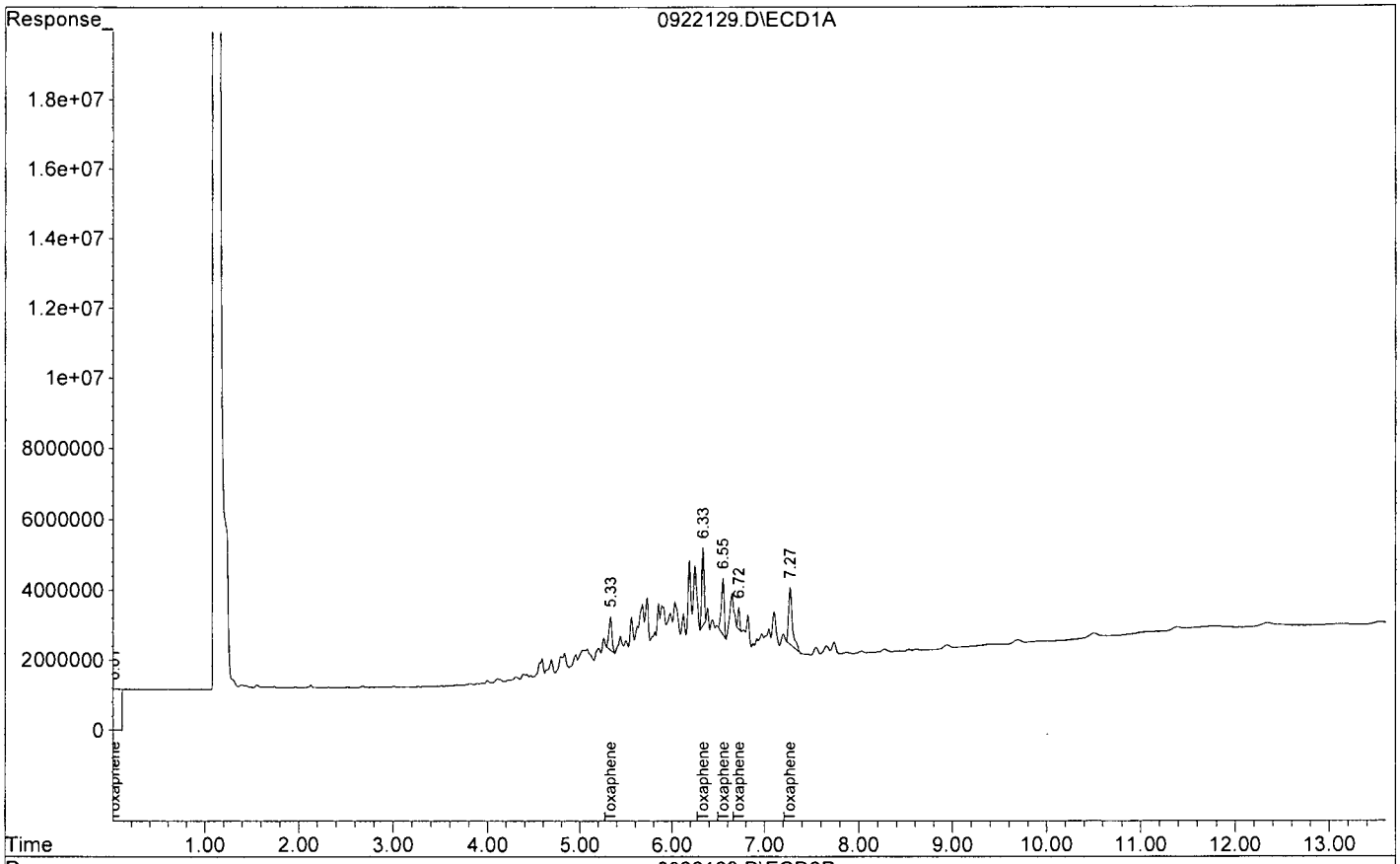
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	7011674	6833681	0.4114m	0.4192m
2) L2AK Toxaphene	5.33	6.55	962295	715134	0.5818	0.5205
3) L2AK Toxaphene {2}	6.33	7.02	2211826	1248725	0.4406	0.4586
4) L2AK Toxaphene {3}	6.55	7.32	1602191	1952283	0.4261	0.4425
5) L2AK Toxaphene {4}	6.72	7.42	621661	1279507	0.3940	0.3942
6) L2AK Toxaphene {5}	7.28	8.08	1613701	1638032	0.3207	0.3603
Sum Toxaphene			7011674	6833681	2.1632	2.1761
Average Toxaphene					0.433	0.435

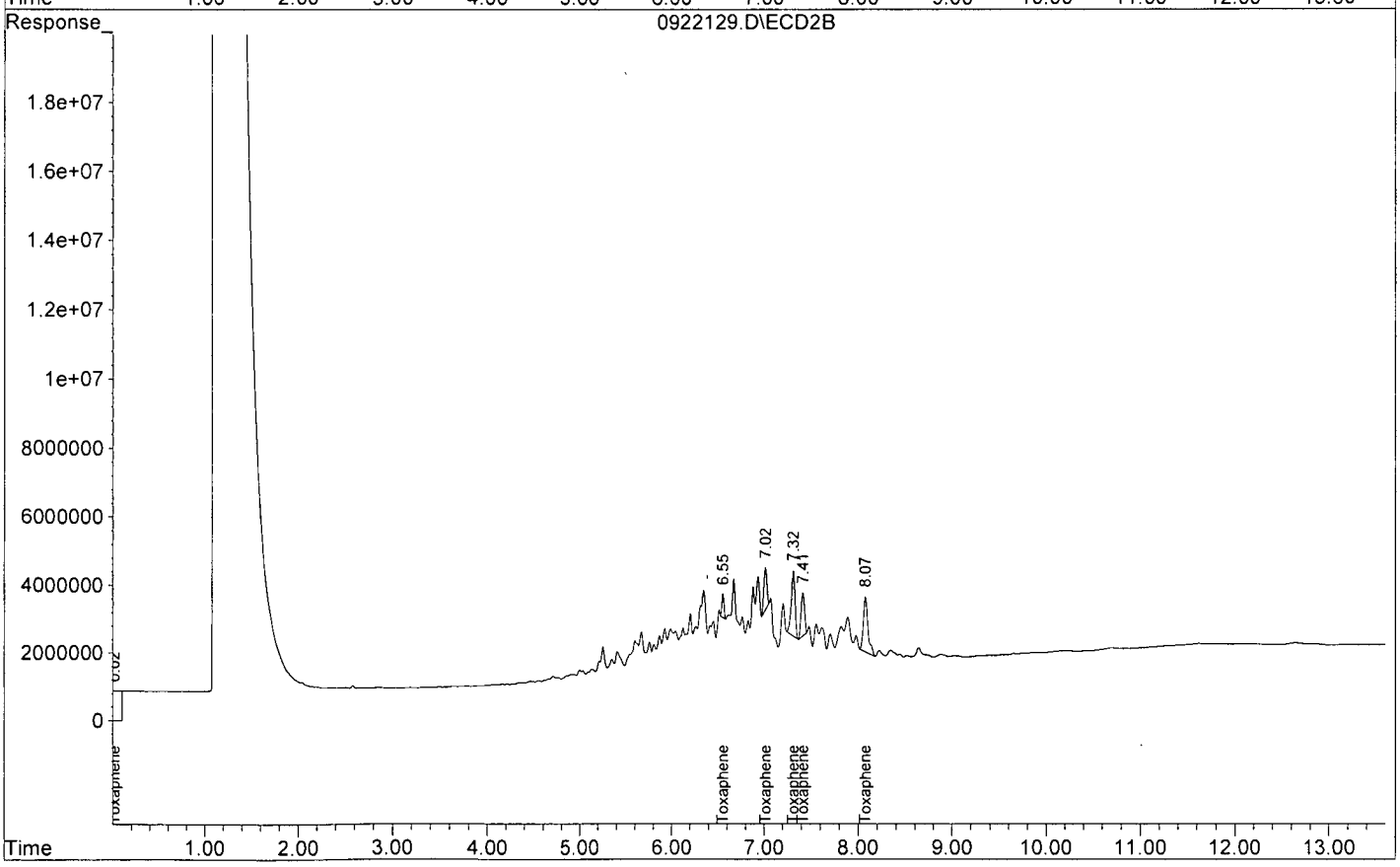
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922129.D
Acq On : 9-24-14 0:20:43
Sample : TOX 3 9/19/14
Misc : soil
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 29
Operator: MA
Inst : Lucy
Multiplr: 1.00





ORGANOCHLORINE PESTICIDES
TECHNICAL CHLORDANE

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 09/24/14
Instrument: Lucy
Initial Cal. Date: 09/23/14
Data File: 0922131.D

		Compound	MEAN	CCRF	%D		%Drift
1	ANM	T. CHLORDANE Total	143646000	139339000	3.0	ANM	
2	L2AK	T. CHLORDANE	27905700	29767400	6.7	L2AK	
3	L2AK	T. CHLORDANE {2}	14344300	14250800	0.65	L2AK	
4	L2AK	T. CHLORDANE {3}	55812300	54927600	1.6	L2AK	
5	L2AK	T. CHLORDANE {4}	32430600	30451600	6.1	L2AK	
6	L2AK	T. CHLORDANE {5}	13153000	9941830	24	L2AK	
7	signal #2						
8	ANM	T. CHLORDANE Total	132487000	132674000	0.14	ANM	
9	L2AK	T. CHLORDANE	24071300	28386200	18	L2AK	
10	L2AK	T. CHLORDANE {2}	15461300	14587200	5.7	L2AK	
11	L2AK	T. CHLORDANE {3}	56798300	55716400	1.9	L2AK	
12	L2AK	T. CHLORDANE {4}	25859800	25385200	1.8	L2AK	
13	L2AK	T. CHLORDANE {5}	10296900	8599450	16	L2AK	
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.1		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922131.D\ECD1A.CH Vial: 31
Signal #2 : G:\LUCY\DATA\140922\0922131.D\ECD2B.CH
Acq On : 9-24-14 0:53:36 Operator: MA
Sample : TCH 3 6/3/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 8:30 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

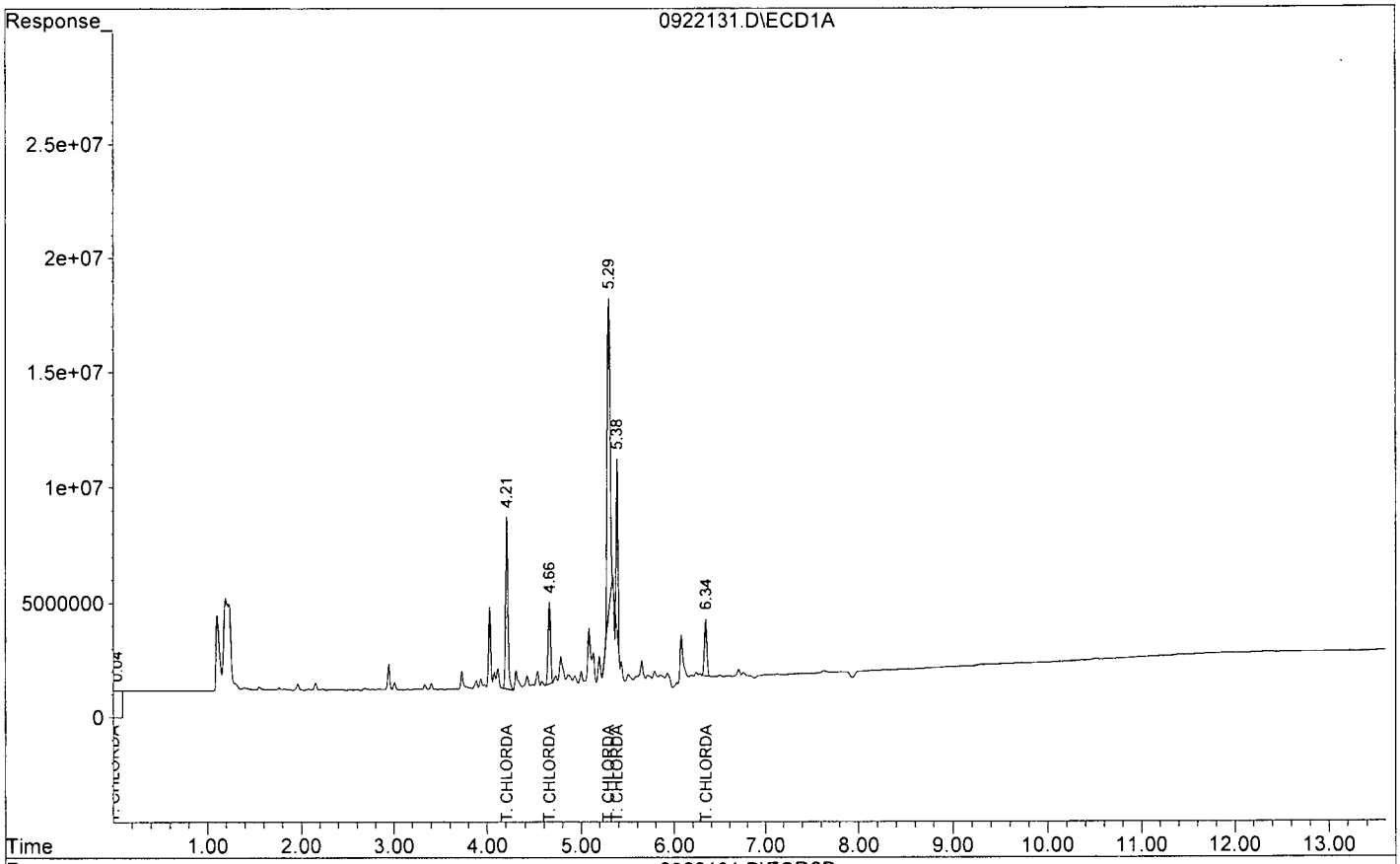
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	34834822	33168600	0.2425m	0.2504m
2) L2AK T. CHLORDANE	4.21	4.93	7441855	7096542	0.2667	0.2948
3) L2AK T. CHLORDANE {2}	4.66	5.27	3562701	3646801	0.2484	0.2359
4) L2AK T. CHLORDANE {3}	5.29	6.01	13731895	13929097	0.2460	0.2452
5) L2AK T. CHLORDANE {4}	5.38	6.10	7612911	6346297	0.2347	0.2454
6) L2AK T. CHLORDANE {5}	6.34	7.02	2485459	2149863	0.1890	0.2088
Sum T. CHLORDANE			34834822	33168600	1.1848	1.2301
Average T. CHLORDANE					0.237	0.246

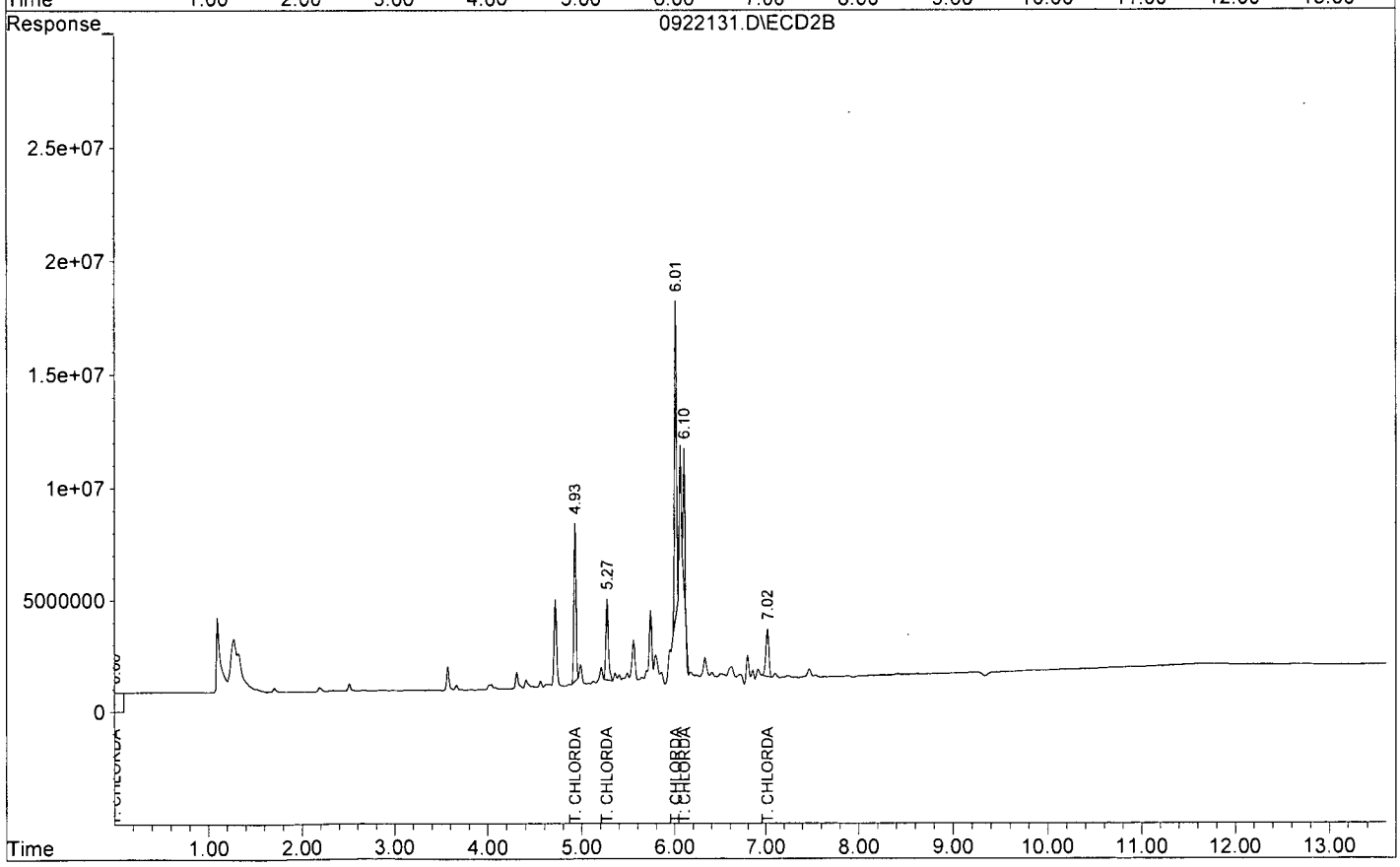
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922131.D
Acq On : 9-24-14 0:53:36
Sample : TCH 3 6/3/14
Misc : soil
Quant Method : G:\LUCY\DATA\140922\TCH0922.M

Vial: 31
Operator: MA
Inst : Lucy
Multiplr: 1.00





Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 09/24/14
Instrument: Lucy
Initial Cal. Date: 09/23/14
Data File: 0922132.D

		Compound	MEAN	CCRF	%D		%Drift	
1	MA	DICHLOBENIL	96193200	93407700	2.9	MA		
2	MA	BENEFIN	86791800	87633100	0.97	MA		
3	M	PROPACHLOR	16272700	16403600	0.80	M		
4	M	HEXACHLOROBENZENE	311184000	309347000	0.59	M		
5	MA	PCNB	263903000	270277000	2.4	MA		
6	M	CHLOROTHALONIL	290346000	263050000	9.4	M		
7	MA	ALACHLOR	31331400	31187400	0.46	MA		
8	MA	DACTHAL	215479000	212249000	1.5	MA		
9	MAL	DICOFOL	45277200	40696000	10	MAL	4.3	
10	MA	O,P-DDE	149323000	140199000	6.1	MA		
11	MA	OXADIAZON	82779100	78592500	5.1	MA		
12	MA	OXYFLUORFEN	179454000	175381000	2.3	MA		
13	MAL	CAPTAN	132088000	93772900	29	MAL	28	*NT
14	MA	O,P-TDE/DDD	146013000	139954000	4.1	MA		
15	MA	NITROFEN	307389000	266596000	13	MA		
16	MA	O,P-DDT	307389000	266596000	13	MA		
17	MA	CARBOPHENOTHION	91032000	94791000	4.1	MA		
18	MA	BIS(2-ETHYLHEXYL)PHTHALATE	903703	748213	17	MA		
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
		Average			6.8			

508
5ES0922

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 09/24/14
Instrument: Lucy
Cal. Date: 09/23/14
Data File: 0922132.D

		Compound	MEAN	CCRF	%D		%Drift	
41	MA	DICHLOBENIL	82448800	78925700	4.3	MA		
42	MA	BENEFIN	96097500	95233300	0.90	MA		
43	MAL	PROPACHLOR	18396900	17939200	2.5	MAL	6.3	
44	MA	HEXACHLOROBENZENE	263070000	263814000	0.28	MA		
45	MA	PCNB	272456000	272108000	0.13	MA		
46	MA	CHLOROTHALONIL	295586000	267637000	9.5	MA		
47	MA	ALACHLOR	35452800	33376400	5.9	MA		
48	MA	DACTHAL	206007000	199025000	3.4	MA		
49	MAL	DICOFOL	32809800	28089000	14	MAL	8.8	
50	MA	O,P-DDE	146251000	137583000	5.9	MA		
51	MA	OXADIAZON	91592000	85943000	6.2	MA		
52	MA	OXYFLUORFEN	196778000	192738000	2.1	MA		
53	MA	CAPTAN	129758000	105736000	19	MA		
54	MA	O,P-TDE/DDD	132962000	128595000	3.3	MA		
55	MA	NITROFEN	222035000	205929000	7.3	MA		
56	MA	O,P-DDT	222035000	205929000	7.3	MA		
57	MAL	CARBOPHENOTHION	68148800	94131700	38	MAL	24	*NT
58	MA	BIS(2-ETHYLHEXYL)PHTHALAT	766489	643334	16	MA		
59								
60								
61								
62								
63								
64								
65								
66								
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								
79								
80								
		Average			8.1			

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922132.D\ECD1A.CH Vial: 32
Signal #2 : G:\LUCY\DATA\140922\0922132.D\ECD2B.CH
Acq On : 9-24-14 1:09:59 Operator: MA
Sample : 5ES 3 9/22/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 8:33 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	MA DICHLOBENIL	2.08	2.37	9340771	7892569	0.0486	0.0479
2)	MA BENEFIN	2.65	3.43	8763307	9523326	0.0505	0.0496
3)	MA PROPACHLOR	2.97	3.39	1640364	1793924	0.0504	0.0532
4)	MA HEXACHLOROBENZEN	3.40	4.08	30934712	26381400	0.0497	0.0501
5)	MA PCNB	3.75	4.33	27027739	27210827	0.0512	0.0499
6)	MA CHLOROTHALONIL	4.41	4.95	26305046	26763739	0.0453	0.0453
7)	MA ALACHLOR	4.22	4.76	3118736	3337637	0.0498	0.0471
8)	MA DACTHAL	4.62	5.17	21224935	19902481	0.0493	0.0483
9)	MA DICOFOL	4.92	5.47	4069595	2808900	0.0478	0.0456
10)	MA O,P-DDE	5.27	5.84	14019860	13758319	0.0469	0.0470
11)	MA OXADIAZON	5.36	5.98	7859247	8594296	0.0475	0.0469
12)	MA OXYFLUORFEN	5.50	6.14	17538133	19273772	0.0489	0.0490
13)	MA CAPTAN	5.61	5.87	9377293	10573618	0.0358	0.0407
14)	MA O,P-TDE/DDD	5.77	6.30	13995418	12859457	0.0479	0.0484
15)	MA NITROFEN	6.05	6.62	26659649	20592904	0.0434	0.0464
16)	MA O,P-DDT	6.05	6.62	26659649	20592904	0.0434	0.0464
17)	MA CARBOPHENOTHION	6.37	6.93	9479098	9413174	0.0521	0.0619
18)	MA BIS(2-ETHYLHEXYL	6.60	7.63	1496426	1286667	0.8279	0.8393

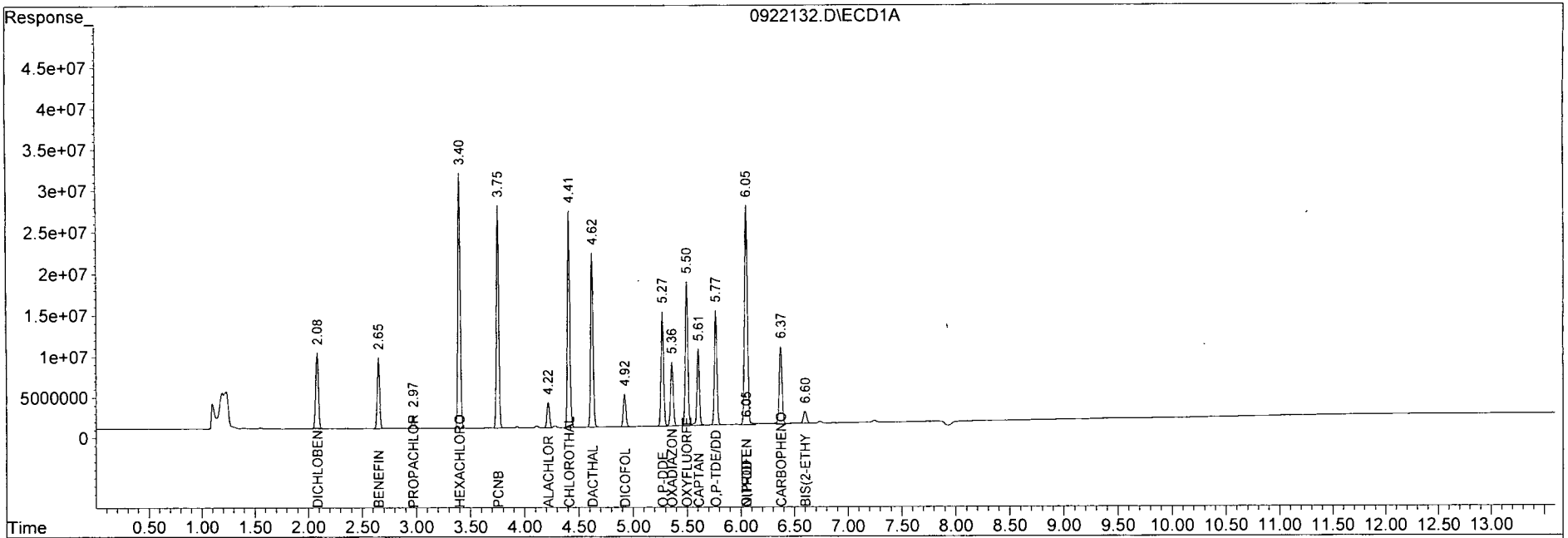
Target Compounds

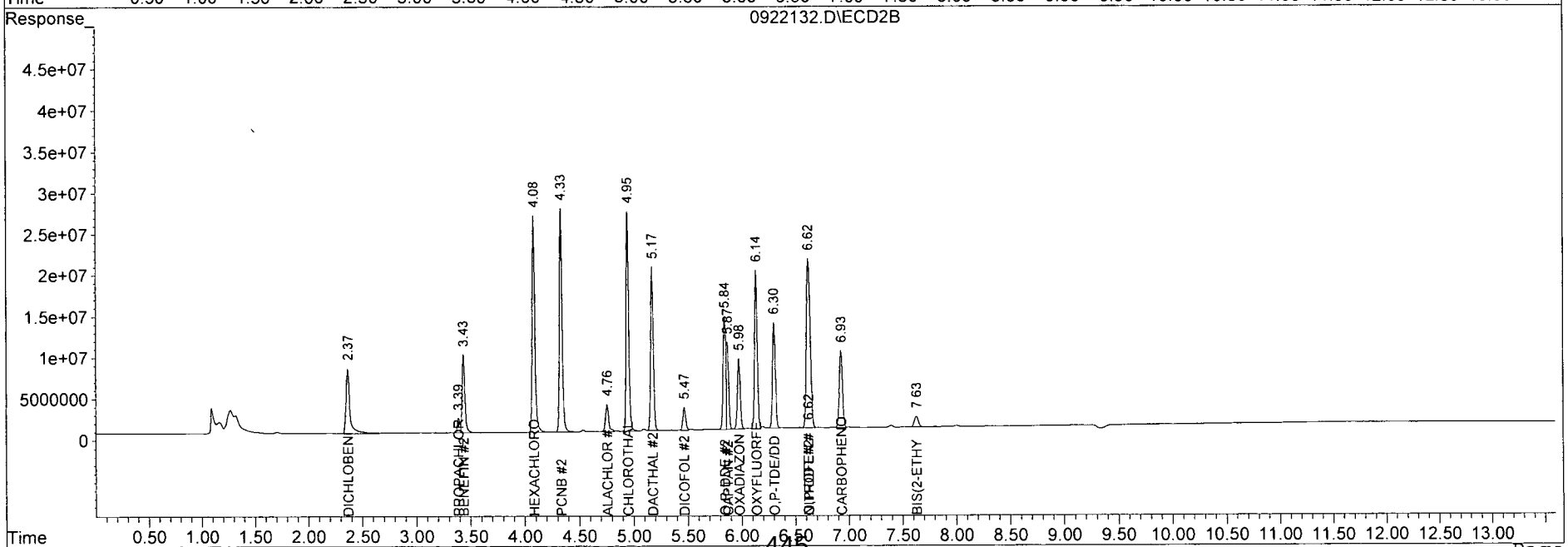
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922132.D
Acq On : 9-24-14 1:09:59
Sample : 5ES 3 9/22/14
Misc : soil
Quant Method : G:\LUCY\DATA\140922\5ES0922.M

Vial: 32
Operator: MA
Inst : Lucy
Multiplr: 1.00





Data File Name:	**0922144.D**
Data File Path:	**G:\LUCY\DATA\140922**
Operator:	**MA**
Date Acquired:	**24 Sep 2014 11:37**
Method File:	**OCL0922.M**
Sample Name:	**OCL DEG CHeCK 8/19/14**
Vial Number:	**44**
Instrument Name:	**Lucy**

#	Name	Ret Time	Target Response
1)	P,P-DDT	6.43	163642000
2)	P,P-DDD	6.14	1136450
3)	P,P-DDE	5.57	1863060

Breakdown **1.8**

#	Name	Ret Time	Target Response
1)	P,P-DDT #2	7.14	167719000
2)	P,P-DDD #2	6.77	753122
3)	P,P-DDE #2	6.20	1747570

Breakdown **1.47**

#	Name	Ret Time	Target Response
1)	ENDRIN	6.04	167848000
2)	ENDRIN ALDEHYDE	6.55	2139550
3)	ENDRIN KETONE	7.55	3086310

Breakdown **3.0**

#	Name	Ret Time	Target Response
1)	ENDRIN #2	6.63	170130000
2)	ENDRIN ALDEHYDE #2	7.07	880531
3)	ENDRIN KETONE #2	8.04	3868840

Breakdown **2.7**

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922144.D\ECD1A.CH Vial: 44
Signal #2 : G:\LUCY\DATA\140922\0922144.D\ECD2B.CH
Acq On : 9-24-14 11:37:17 Operator: MA
Sample : OCL DEG CHeCK 8/19/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 11:58 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

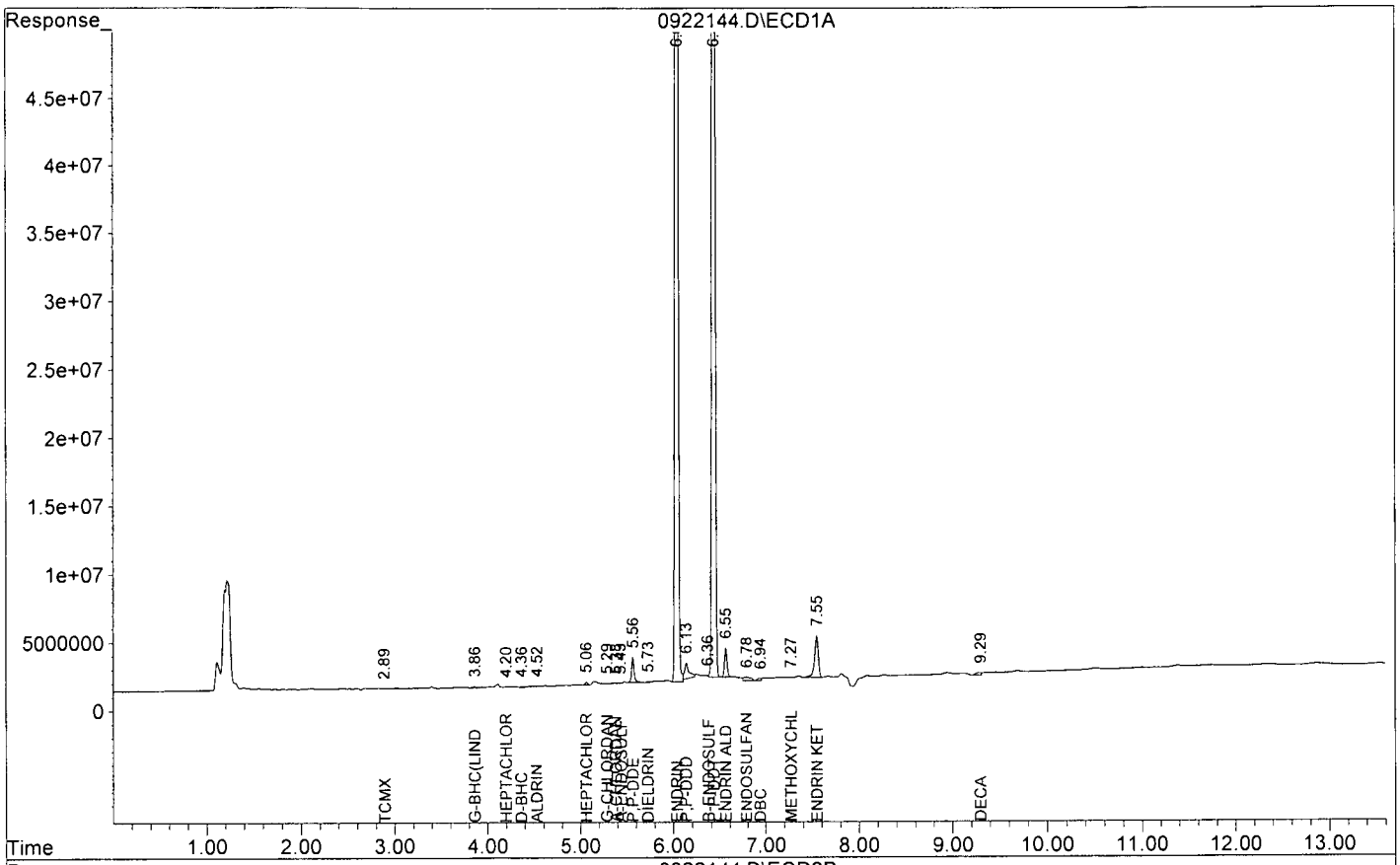
Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

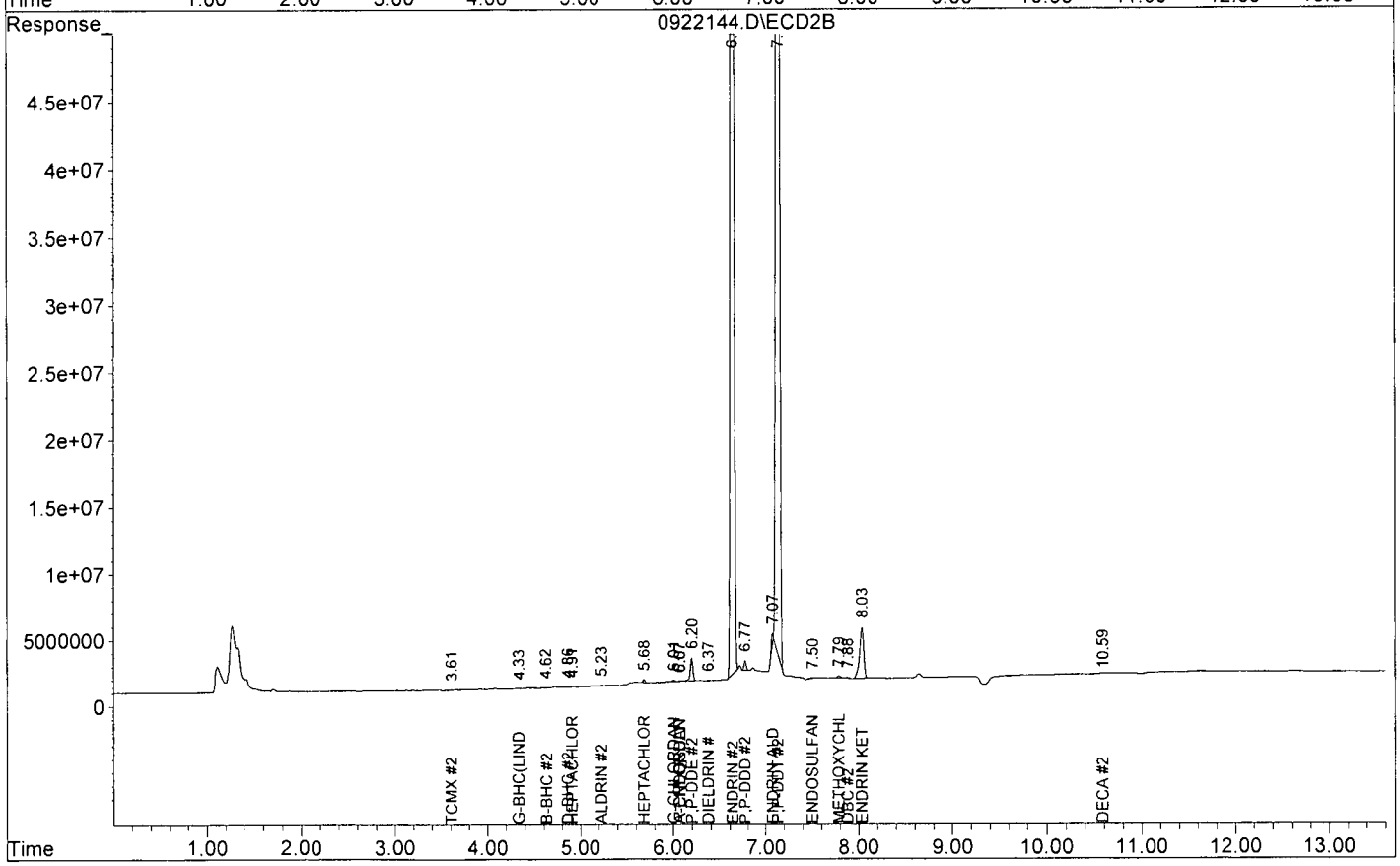
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
1)	S	TCMX	2.89	3.61	9201	22197	0.0000	0.0001	#
		Surrogate Spike 0.100			Recovery	=	0.00%	0.10%	
22)	S	DBC	6.94	7.88f	508541	81519	0.0009	0.0004	#
		Surrogate Spike 0.100			Recovery	=	0.90%	0.40%	
23)	S	DECA	9.29	10.59	778214	19477	0.0010	0.0001	#
		Surrogate Spike 0.100			Recovery	=	1.00%	0.10%	
		Target Compounds							
4)	M	G-BHC(LINDANE)	3.86	4.33	95609	38190	0.0002	0.0000	#
5)	TM	D-BHC	4.36	4.86	70502	15441	0.0001	0.0000	#
6)	M	HEPTACHLOR	4.20	4.91	36655	25187	0.0001	0.0001	
7)	M	ALDRIN	4.52	5.23	34319	53569	0.0001	0.0001	#
8)	TM	HEPTACHLOR EPOXI	5.06	5.68	220099	247965	0.0006	0.0006	
9)	TM	G-CHLORDANE	5.29	6.01	33638	128562	0.0001	0.0004	#
10)	TM	A-ENDOSULFAN	5.43	6.07	22644	4544	0.0001	0.0000	#
11)	TM	A-CHLORDANE	5.38	6.07	21899	4544	0.0001	0.0000	#
12)	TM	P,P-DDE	5.56	6.20	1863059	1747566	0.0045	0.0046	
13)	M	DIELDRIN	5.73	6.37	102954	52002	0.0003	0.0001	#
14)	M	ENDRIN	6.04	6.63	167.8E6	170.1E6	0.4929	0.5635	
15)	TM	B-ENDOSULFAN	6.36f	0.00	38939	0	0.0001	N.D.	#
16)	TM	P,P-DDD	6.13	6.77	1136447	753122	0.0032	0.0064	#
17)	TM	ENDRIN ALDEHYDE	6.55	7.07	2139552	880531	0.0077	0.0041	#
18)	M	P,P-DDT	6.42	7.13	163.6E6	167.7E6	0.5043	0.7351	#
19)	TM	ENDOSULFAN SULFA	6.78	7.50f	283308	35324	0.0009	0.0007	#
20)	TM	ENDRIN KETONE	7.55	8.03	3086311	3868835	0.0103	0.0142	#
21)	TM	METHOXYCHLOR	7.27f	7.79f	34906	156779	0.0003	0.0012	#
		Target Compounds							
2)	TM	A-BHC	3.49	4.04f	80503	12329	N.D.	N.D.	
3)	TM	B-BHC	4.11	4.62	221023	2020	N.D.	0.0000	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922144.D Vial: 44
Acq On : 9-24-14 11:37:17 Operator: MA
Sample : OCL DEG CHeCK 8/19/14 Inst : Lucy
Misc : soil Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140922\OCL0922.M





Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 09/24/14
Instrument: Lucy
Initial Cal. Date: 09/01/14
Data File: 0922145.D

		Compound	MEAN	CCRF	%D		%Drift	
1	S	TCMX	210790000	209541000	0.59	S		
2	TML	A-BHC	255476000	265604000	4.0	TML	8.2	
3	TML	B-BHC	152965000	109071000	29	TML	9.3	
4	M	G-BHC(LINDANE)	243641000	244870000	0.50	M		
5	TM	D-BHC	244454000	227911000	6.8	TM		
6	M	HEPTACHLOR	196579000	218510000	11	M		
7	M	ALDRIN	205550000	205326000	0.11	M		
8	TM	HEPTACHLOR EPOXIDE	197109000	186443000	5.4	TM		
9	TM	G-CHLORDANE	204186000	193376000	5.3	TM		
10	TM	A-ENDOSULFAN	175738000	163278000	7.1	TM		
11	TM	A-CHLORDANE	198027000	180234000	9.0	TM		
12	TM	P,P-DDE	204962000	195602000	4.6	TM		
13	M	DIELDRIN	193242000	176542000	8.6	M		
14	M	ENDRIN	170280000	141842000	17	M		
15	TM	B-ENDOSULFAN	171252000	144667000	16	TM		
16	TM	P,P-DDD	177919000	146253000	18	TM		
17	TM	ENDRIN ALDEHYDE	138606000	115114000	17	TM		
18	M	P,P-DDT	162232000	141337000	13	M		
19	TM	ENDOSULFAN SULFATE	156789000	121556000	22	TM		*see back
20	TM	ENDRIN KETONE	150391000	127345000	15	TM		
21	TM	METHOXYCHLOR	69309500	61930900	11	TM		
22	S	DBC	272683000	218278000	20	S		
23	S	DECA	392004000	291807000	26	S		*see back
24								HA 9/27/14
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
		Average			11.6			

Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 09/24/14
Instrument: Lucy
Cal. Date: 09/01/14
Data File: 0922145.D

		Compound	MEAN	CCRF	%D		%Drift
41	S	TCMX	210430000	213950000	1.7	S	
42	TML	A-BHC	263066000	291921000	11	TML	3.4
43	TM	B-BHC	115335000	116804000	1.3	TM	
44	M	G-BHC(LINDANE)	422048000	429576000	1.8	M	
45	TM	D-BHC	236931000	226975000	4.2	TM	
46	M	HEPTACHLOR	156614000	214336000	37	M	
47	M	ALDRIN	208238000	208643000	0.19	M	
48	TM	HEPTACHLOR EPOXIDE	202172000	192338000	4.9	TM	
49	TM	G-CHLORDANE	173189000	166607000	3.8	TM	
50	TM	A-ENDOSULFAN	133067000	124791000	6.2	TM	
51	TM	A-CHLORDANE	136781000	132148000	3.4	TM	
52	TM	P,P-DDE	188279000	187909000	0.20	TM	
53	M	DIELDRIN	177809000	174265000	2.0	M	
54	M	ENDRIN	150961000	140155000	7.2	M	
55	TM	B-ENDOSULFAN	151093000	139419000	7.7	TM	
56	TML	P,P-DDD	105593000	110259000	4.4	TML	13
57	TM	ENDRIN ALDEHYDE	106388000	97346900	8.5	TM	
58	M	P,P-DDT	114081000	116680000	2.3	M	
59	TML	ENDOSULFAN SULFATE	113130000	106491000	5.9	TML	15
60	TM	ENDRIN KETONE	135926000	127383000	6.3	TM	
61	TM	METHOXYCHLOR	65534200	63703600	2.8	TM	
62	S	DBC	92838500	85374900	8.0	S	
63	S	DECA	92970600	80596800	13	S	
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			6.3		

* See front
HA 9/27/14

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922145.D\ECD1A.CH Vial: 45
Signal #2 : G:\LUCY\DATA\140922\0922145.D\ECD2B.CH
Acq On : 9-24-14 11:53:41 Operator: MA
Sample : OCL 2 7/16/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 12:07 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S TCMX	2.89	3.58	20954106	21394965	0.0497	0.0508
	Surrogate Spike 0.100			Recovery	=	49.70%	50.80%
22)	S DBC	6.92	7.93	21827803	8537494	0.0400	0.0460
	Surrogate Spike 0.100			Recovery	=	40.00%	46.00%
23)	S DECA	9.28	10.58	29180673	8059684	0.0372	0.0433
	Surrogate Spike 0.100			Recovery	=	37.20%	43.30%
	Target Compounds						
2)	TM A-BHC	3.48	3.99	26560438	29192062	0.0459	0.0483
3)	TM B-BHC	4.09	4.60	10907080	11680415	0.0454	0.0506
4)	M G-BHC(LINDANE)	3.85	4.33	24487043	42957635	0.0503	0.0509
5)	TM D-BHC	4.38	4.87	22791112	22697489	0.0466	0.0479
6)	M HEPTACHLOR	4.21	4.93	21850999	21433581	0.0556	0.0684
7)	M ALDRIN	4.52	5.26	20532614	20864316	0.0499	0.0501
8)	TM HEPTACHLOR EPOXI	5.06	5.70	18644261	19233797	0.0473	0.0476
9)	TM G-CHLORDANE	5.28	6.01	19337554	16660729	0.0474	0.0481
10)	TM A-ENDOSULFAN	5.44	6.10	16327814	12479117	0.0465	0.0469
11)	TM A-CHLORDANE	5.38	6.06	18023417	13214796	0.0455	0.0483
12)	TM P,P-DDE	5.56	6.20	19560197	18790933	0.0477	0.0499
13)	M DIELDRIN	5.72	6.37	17654167	17426503	0.0457	0.0490
14)	M ENDRIN	6.04	6.63	14184184	14015503	0.0416	0.0464
15)	TM B-ENDOSULFAN	6.31	6.94	14466654	13941854	0.0422	0.0461
16)	TM P,P-DDD	6.13	6.76	14625303	11025914	0.0411	0.0436
17)	TM ENDRIN ALDEHYDE	6.55	7.07	11511374	9734689	0.0415	0.0458
18)	M P,P-DDT	6.42	7.13	14133680	11667955	0.0436	0.0511
19)	TM ENDOSULFAN SULFA	6.78	7.43	12155550	10649059	0.0388	0.0427
20)	TM ENDRIN KETONE	7.55	8.03	12734464	12738296	0.0423	0.0469
21)	TM METHOXYCHLOR	7.22	7.71	6193091	6370358	0.0447	0.0486

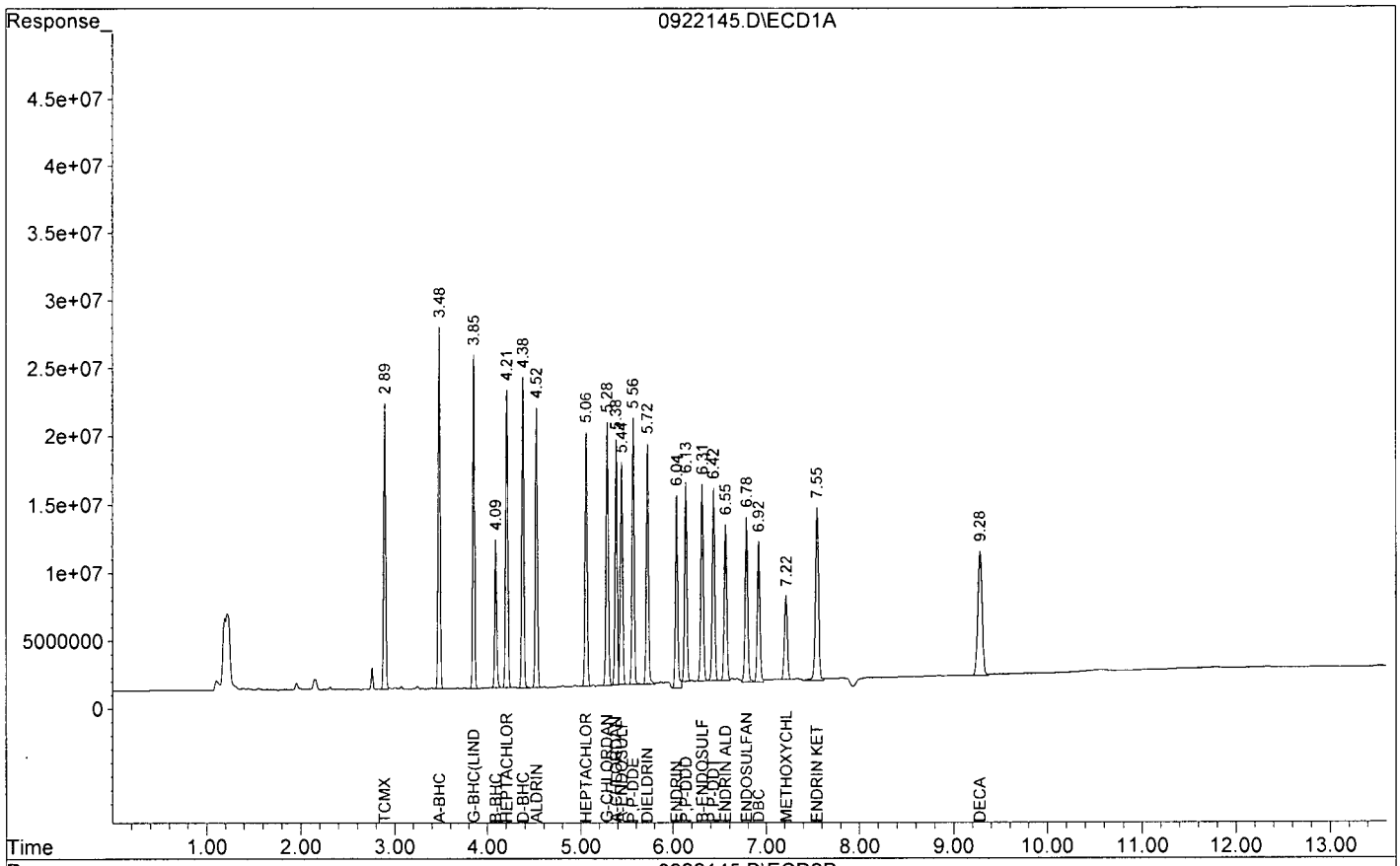
Target Compounds

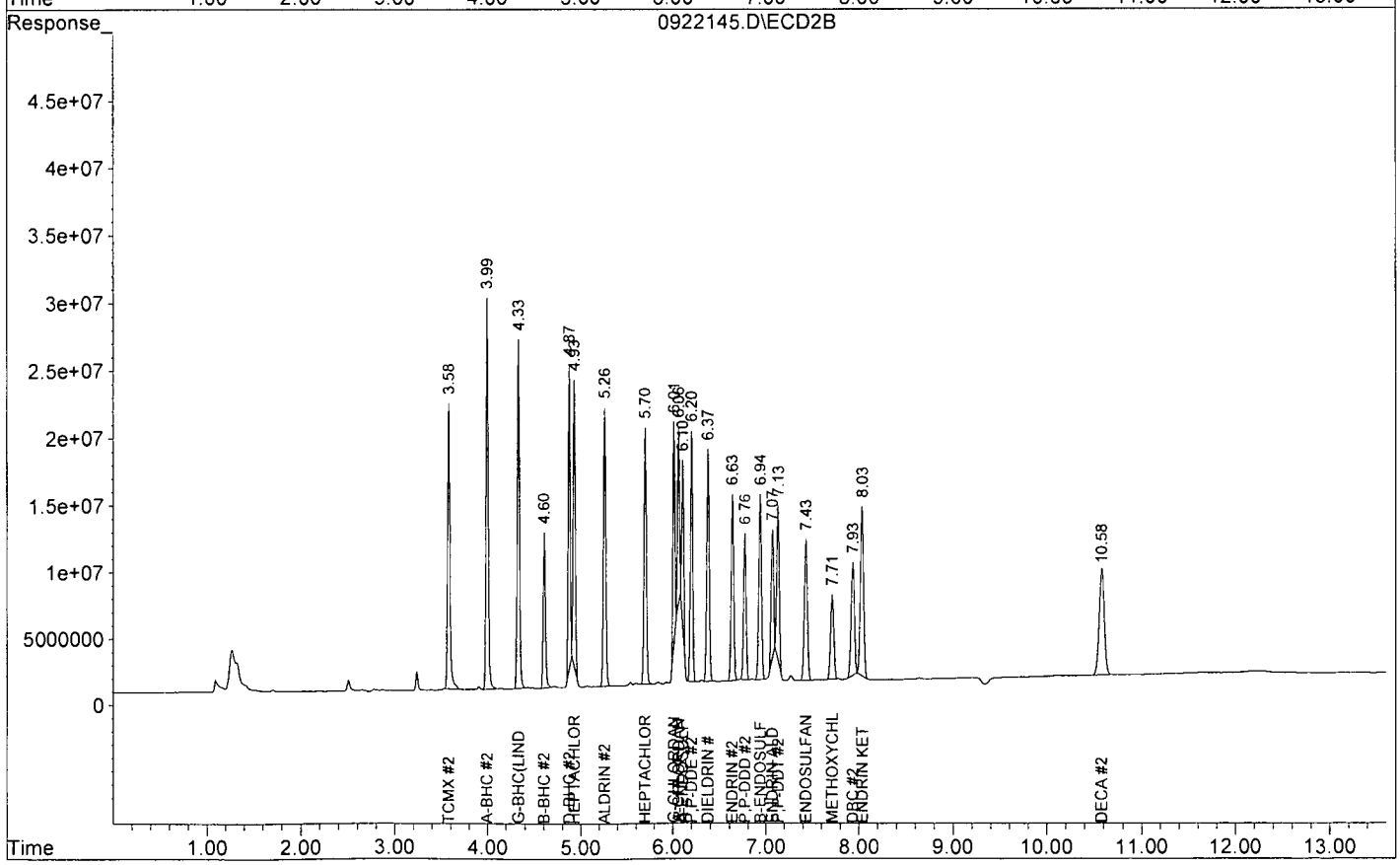
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922145.D
Acq On : 9-24-14 11:53:41
Sample : OCL 2 7/16/14
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 45
Operator: MA
Inst : Lucy
Multiplr: 1.00





TOXAPHENE
METHOD 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 09/24/14
Instrument: Lucy
Initial Cal. Date: 09/22/14
Data File: 0922146.D

		Compound	MEAN	CCRF	%D		%Drift
1	ANM	Toxaphene Total	8521920	6943110	19	ANM	
2	L2AK	Toxaphene	826949	785659	5.0	L2AK	
3	L2AK	Toxaphene {2}	2509940	2033030	19	L2AK	
4	L2AK	Toxaphene {3}	1879990	1474180	22	L2AK	
5	L2AK	Toxaphene {4}	788914	591072	25	L2AK	
6	L2AK	Toxaphene {5}	2516130	2059170	18	L2AK	
7	signal #2						
8	ANM	Toxaphene Total	8150230	7322640	10	ANM	
9	L2AK	Toxaphene	686998	641723	6.6	L2AK	
10	L2AK	Toxaphene {2}	1361590	1147680	16	L2AK	
11	L2AK	Toxaphene {3}	2205810	1960650	11	L2AK	
12	L2AK	Toxaphene {4}	1622820	1476110	9.0	L2AK	
13	L2AK	Toxaphene {5}	2273020	2096470	7.8	L2AK	
14							
15							
16							
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40							
		Average			#REF!		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922146.D\ECD1A.CH Vial: 46
Signal #2 : G:\LUCY\DATA\140922\0922146.D\ECD2B.CH
Acq On : 9-24-14 12:10:05 Operator: MA
Sample : TOX 2 9/19/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 13:31 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

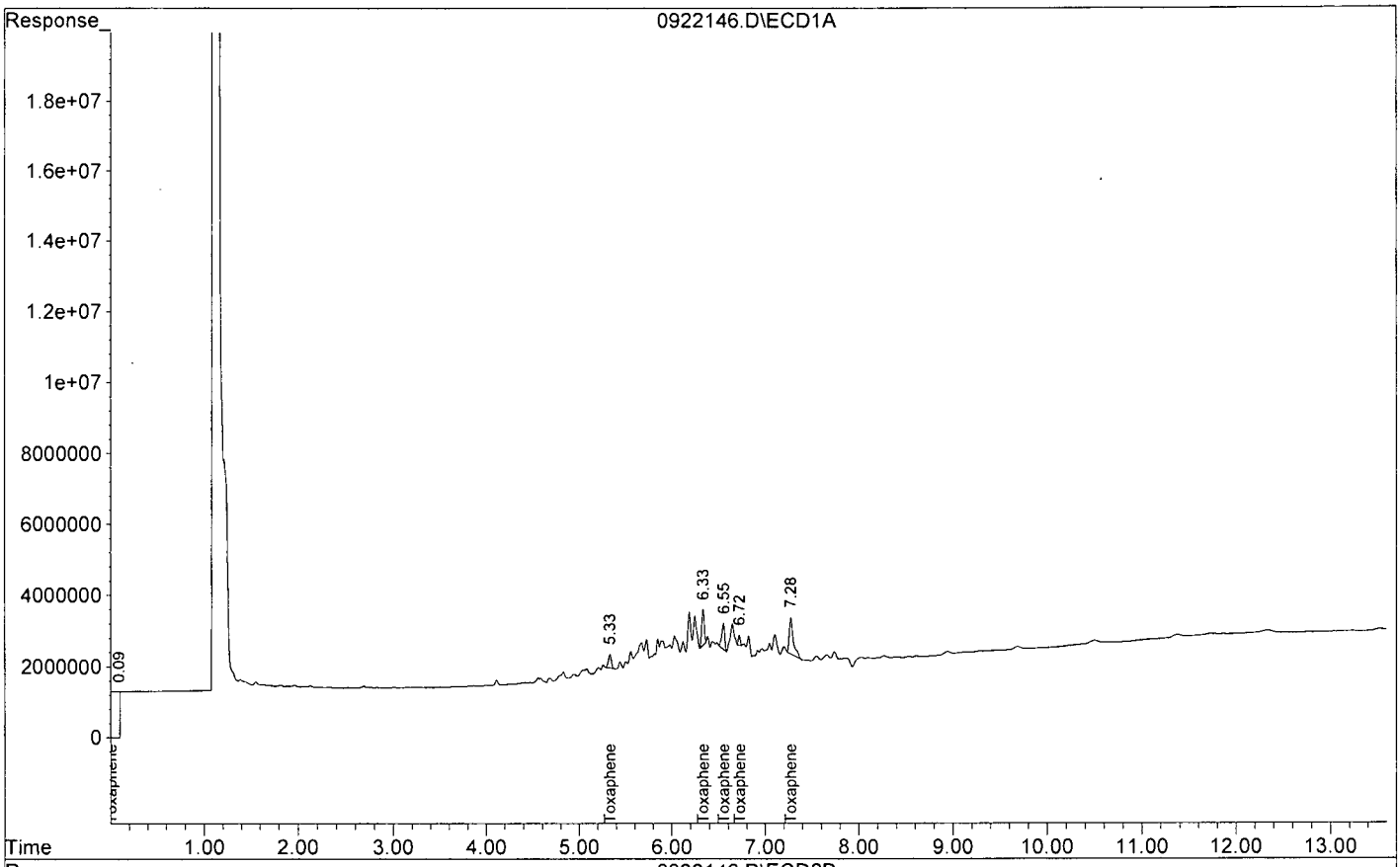
Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

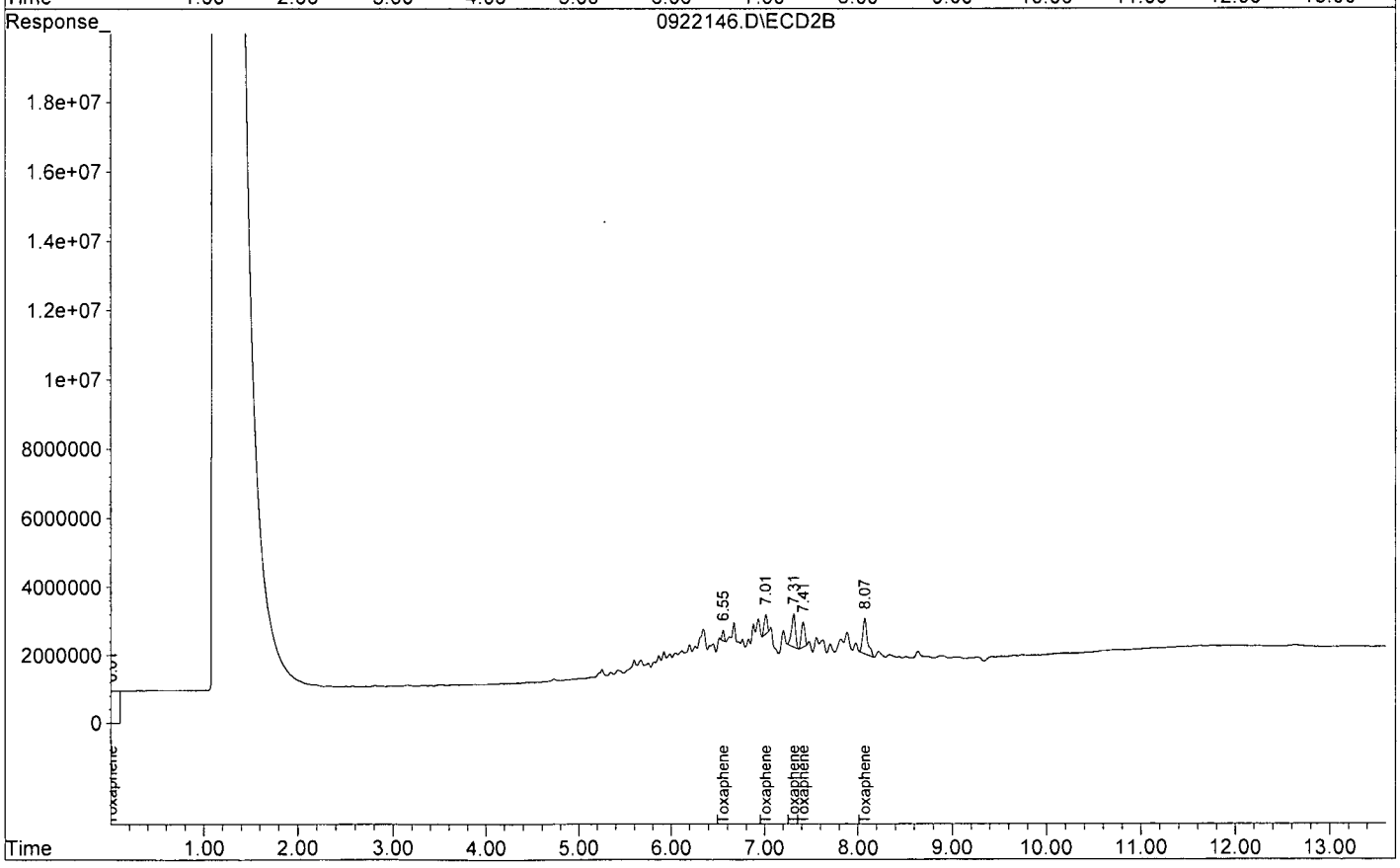
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	3471555	3661319	0.2037m	0.2246m
2) L2AK Toxaphene	5.33	6.55	392830	320862	0.2375	0.2335
3) L2AK Toxaphene {2}	6.33	7.02	1016515	573840	0.2025	0.2107
4) L2AK Toxaphene {3}	6.55	7.32	737090	980324	0.1960	0.2222
5) L2AK Toxaphene {4}	6.72	7.42	295536	738056	0.1873	0.2274
6) L2AK Toxaphene {5}	7.28	8.07	1029585	1048236	0.2046	0.2306
Sum Toxaphene			3471555	3661319	1.0280	1.1244
Average Toxaphene					0.206	0.225

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922146.D Vial: 46
Acq On : 9-24-14 12:10:05 Operator: MA
Sample : TOX 2 9/19/14 Inst : Lucy
Misc : soil Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140922\TOX0922.M





ORGANOCHLORINE PESTICIDES
TECHNICAL CHLORDANE

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 09/24/14
Instrument: Lucy
Initial Cal. Date: 09/23/14
Data File: 0922148.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ANM	T. CHLORDANE Total	143646000	146265000	1.8	ANM	
2	L2AK	T. CHLORDANE	27905700	30490000	9.3	L2AK	
3	L2AK	T. CHLORDANE {2}	14344300	14706300	2.5	L2AK	
4	L2AK	T. CHLORDANE {3}	55812300	56998000	2.1	L2AK	
5	L2AK	T. CHLORDANE {4}	32430600	31810800	1.9	L2AK	
6	L2AK	T. CHLORDANE {5}	13153000	12260200	6.8	L2AK	
7	signal #2						
8	ANM	T. CHLORDANE Total	132487000	143731000	8.5	ANM	
9	L2AK	T. CHLORDANE	24071300	30952300	29	L2AK	
10	L2AK	T. CHLORDANE {2}	15461300	15245300	1.4	L2AK	
11	L2AK	T. CHLORDANE {3}	56798300	60668100	6.8	L2AK	
12	L2AK	T. CHLORDANE {4}	25859800	26230600	1.4	L2AK	
13	L2AK	T. CHLORDANE {5}	10296900	10634900	3.3	L2AK	
14							
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40							
		Average			6.2		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922148.D\ECD1A.CH Vial: 48
Signal #2 : G:\LUCY\DATA\140922\0922148.D\ECD2B.CH
Acq On : 9-24-14 12:42:54 Operator: MA
Sample : TCH 3 6/3/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 13:32 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

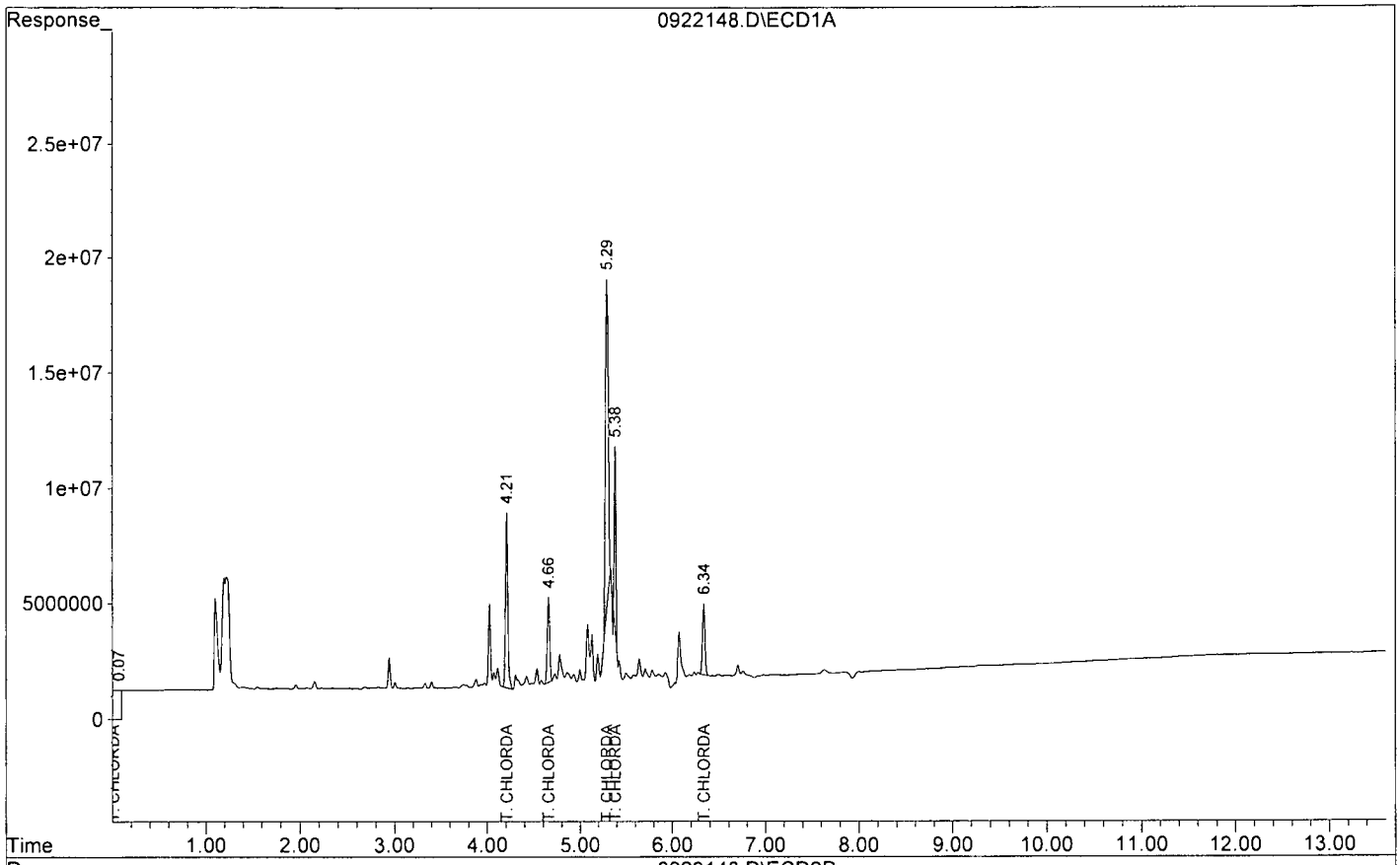
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	ANM T. CHLORDANE Tot	0.00	0.00	36566328	35932786	0.2546m	0.2712m
2)	L2AK T. CHLORDANE	4.21	4.93	7622499	7738077	0.2732	0.3215
3)	L2AK T. CHLORDANE {2}	4.66	5.27	3676584	3811333	0.2563	0.2465
4)	L2AK T. CHLORDANE {3}	5.29	6.01	14249500	15167013	0.2553	0.2670
5)	L2AK T. CHLORDANE {4}	5.38	6.10	7952701	6557644	0.2452	0.2536
6)	L2AK T. CHLORDANE {5}	6.34	7.02	3065045	2658719	0.2330	0.2582
	Sum T. CHLORDANE			36566328	35932786	1.2630	1.3468
	Average T. CHLORDANE					0.253	0.269

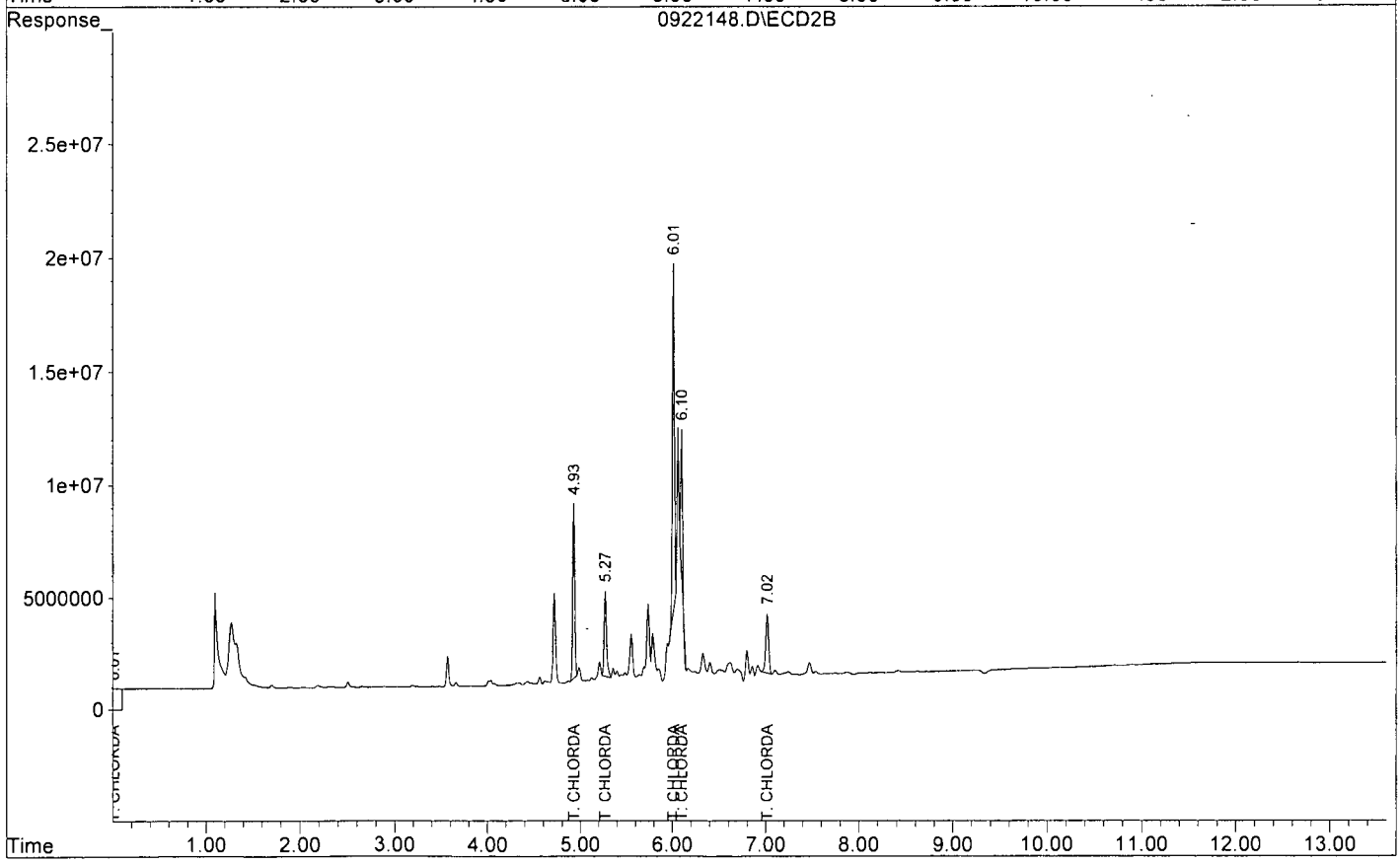
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922148.D
Acq On : 9-24-14 12:42:54
Sample : TCH 3 6/3/14
Misc : soil
Quant Method : G:\LUCY\DATA\140922\TCH0922.M

Vial: 48
Operator: MA
Inst : Lucy
Multiplr: 1.00





Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 14218
Date Analyzed: 09/24/14
Instrument: Lucy
Initial Cal. Date: 09/23/14
Data File: 0922149.D

		Compound	MEAN	CCRF	%D		%Drift
1	MA	DICHLOBENIL	96193200	88814300	7.7	MA	
2	MA	BENEFIN	86791800	85431100	1.6	MA	
3	M	PROPACHLOR	16272700	15771500	3.1	M	
4	M	HEXACHLOROBENZENE	311184000	299904000	3.6	M	
5	MA	PCNB	263903000	251562000	4.7	MA	
6	M	CHLOROTHALONIL	290346000	244587000	16	M	
7	MA	ALACHLOR	31331400	31074000	0.82	MA	
8	MA	DACTHAL	215479000	209496000	2.8	MA	
9	MAL	DICOFOL	45277200	49284600	8.9	MAL	19
10	MA	O,P-DDE	149323000	139636000	6.5	MA	
11	MA	OXADIAZON	82779100	79980100	3.4	MA	
12	MA	OXYFLUORFEN	179454000	179708000	0.14	MA	
13	MAL	CAPTAN	132088000	114349000	13	MAL	16
14	MA	O,P-TDE/DDD	146013000	134010000	8.2	MA	
15	MA	NITROFEN	307389000	286691000	6.7	MA	
16	MA	O,P-DDT	307389000	286691000	6.7	MA	
17	MA	CARBOPHENOTHION	91032000	97381400	7.0	MA	
18	MA	BIS(2-ETHYLHEXYL)PHTHALATE	903703	811510	10	MA	
19							
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40							
		Average			6.2		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 09/24/14
Instrument: Lucy
Cal. Date: 09/23/14
Data File: 0922149.D

		Compound	MEAN	CCRF	%D		%Drift
41	MA	DICHLOBENIL	82448800	81632600	0.99	MA	
42	MA	BENEFIN	96097500	98306800	2.3	MA	
43	MAL	PROPACHLOR	18396900	18040900	1.9	MAL	7.0
44	MA	HEXACHLOROBENZENE	263070000	270459000	2.8	MA	
45	MA	PCNB	272456000	276344000	1.4	MA	
46	MA	CHLOROTHALONIL	295586000	261650000	11	MA	
47	MA	ALACHLOR	35452800	34581800	2.5	MA	
48	MA	DACTHAL	206007000	210842000	2.3	MA	
49	MAL	DICOFOL	32809800	34583200	5.4	MAL	15
50	MA	O,P-DDE	146251000	145238000	0.69	MA	
51	MA	OXADIAZON	91592000	90306800	1.4	MA	
52	MA	OXYFLUORFEN	196778000	194893000	0.96	MA	
53	MA	CAPTAN	129758000	130646000	0.68	MA	
54	MA	O,P-TDE/DDD	132962000	128284000	3.5	MA	
55	MA	NITROFEN	222035000	220996000	0.47	MA	
56	MA	O,P-DDT	222035000	220996000	0.47	MA	
57	MAL	CARBOPHENOTHION	68148800	99485500	46	MAL	29
58	MA	BIS(2-ETHYLHEXYL)PHTHALAT	766489	687640	10	MA	
59							
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79							
80							
		Average			5.3		

*MT MA 9/27/14

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922149.D\ECD1A.CH Vial: 49
Signal #2 : G:\LUCY\DATA\140922\0922149.D\ECD2B.CH
Acq On : 9-24-14 12:59:28 Operator: MA
Sample : 5ES 3 9/22/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 13:33 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds								
1)	MA	DICHLOBENIL	2.08	2.36	8881426	8163262	0.0462	0.0495
2)	MA	BENEFIN	2.65	3.43	8543111	9830681	0.0492	0.0511
3)	MA	PROPACHLOR	2.97	3.39	1577145	1804090	0.0485	0.0535
4)	MA	HEXACHLOROBENZEN	3.40	4.08	29990367	27045904	0.0482	0.0514
5)	MA	PCNB	3.75	4.33	25156155	27634404	0.0477	0.0507
6)	MA	CHLOROTHALONIL	4.41	4.95	24458664	26164999	0.0421	0.0443
7)	MA	ALACHLOR	4.22	4.76	3107398	3458180	0.0496	0.0488
8)	MA	DACTHAL	4.62	5.17	20949632	21084205	0.0486	0.0512
9)	MA	DICOFOL	4.92	5.47	4928456	3458323	0.0594	0.0577
10)	MA	O,P-DDE	5.27	5.84	13963609	14523806	0.0468	0.0497
11)	MA	OXADIAZON	5.36	5.98	7998010	9030684	0.0483	0.0493
12)	MA	OXYFLUORFEN	5.50	6.14	17970794	19489310	0.0501	0.0495
13)	MA	CAPTAN	5.61	5.87	11434897	13064608	0.0420	0.0503
14)	MA	O,P-TDE/DDD	5.77	6.30	13400967	12828446	0.0459	0.0482
15)	MA	NITROFEN	6.05	6.63	28669058	22099585	0.0466	0.0498
16)	MA	O,P-DDT	6.05	6.63	28669058	22099585	0.0466	0.0498
17)	MA	CARBOPHENOTHION	6.37	6.93	9738144	9948545	0.0535	0.0647
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.63	1623019	1375279	0.8980	0.8971

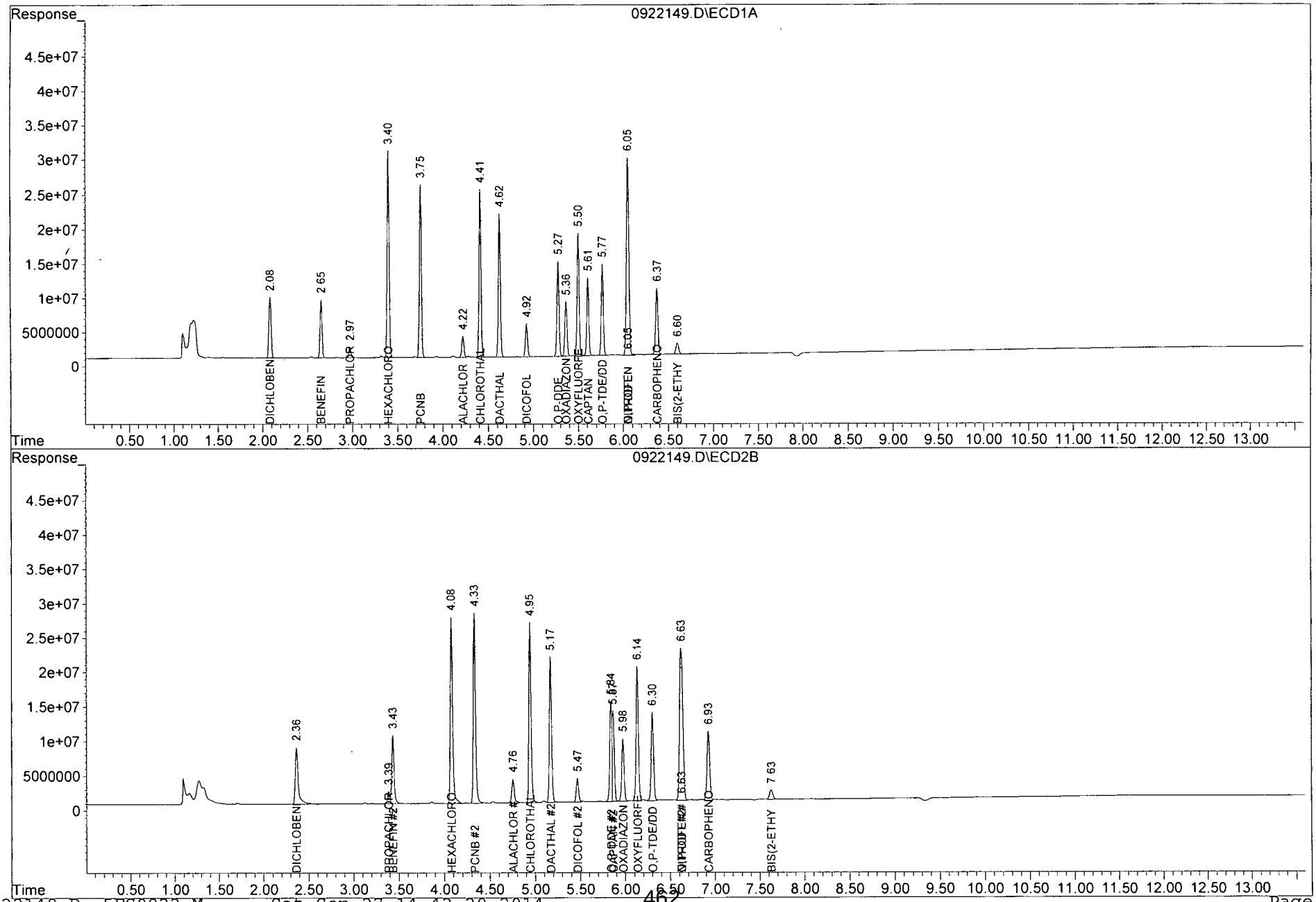
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922149.D
Acq On : 9-24-14 12:59:28
Sample : 5ES 3 9/22/14
Misc : soil
Quant Method : G:\LUCY\DATA\140922\5ES0922.M

Vial: 49
Operator: MA
Inst : Lucy
Multiplr: 1.00



Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/24/14
Instrument: Lucy
Initial Cal. Date: 09/23/14
Data File: 0922159.D

		Compound	MEAN	CCRF	%D	%Drift	
1	S	TCMX	210790000	231953000	10	S	
2	TML	A-BHC	255476000	280420000	9.8	TML	3.0
3	TML	B-BHC	152965000	118686000	22	TML	0.93
4	M	G-BHC(LINDANE)	243641000	271006000	11	M	
5	TM	D-BHC	244454000	253630000	3.8	TM	
6	M	HEPTACHLOR	196579000	236846000	20	M	
7	M	ALDRIN	205550000	224120000	9.0	M	
8	TM	HEPTACHLOR EPOXIDE	197109000	204997000	4.0	TM	
9	TM	G-CHLORDANE	204186000	210018000	2.9	TM	
10	TM	A-ENDOSULFAN	175738000	180445000	2.7	TM	
11	TM	A-CHLORDANE	198027000	191668000	3.2	TM	
12	TM	P,P-DDE	204962000	212932000	3.9	TM	
13	M	DIELDRIN	193242000	193370000	0.07	M	
14	M	ENDRIN	170280000	154879000	9.0	M	
15	TM	B-ENDOSULFAN	171252000	156735000	8.5	TM	
16	TM	P,P-DDD	177919000	162709000	8.5	TM	
17	TM	ENDRIN ALDEHYDE	138606000	125306000	9.6	TM	
18	M	P,P-DDT	162232000	156560000	3.5	M	
19	TM	ENDOSULFAN SULFATE	156789000	130780000	17	TM	
20	TM	ENDRIN KETONE	150391000	136353000	9.3	TM	
21	TM	METHOXYCHLOR	69309500	65193000	5.9	TM	
22	S	DBC	272683000	234943000	14	S	
23	S	DECA	392004000	313630000	20	S	
24							
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36							
37							
38							
39							
40							
		Average			9.0		

Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/24/14
Instrument: Lucy
Cal. Date: 09/23/14
Data File: 0922159.D

		Compound	MEAN	CCRF	%D		%Drift
41	S	TCMX	210430000	220712000	4.9	S	
42	TML	A-BHC	263066000	295919000	12	TML	2.1
43	TM	B-BHC	115335000	119462000	3.6	TM	
44	M	G-BHC(LINDANE)	422048000	444715000	5.4	M	
45	TM	D-BHC	236931000	244613000	3.2	TM	
46	M	HEPTACHLOR	156614000	221425000	41	M	
47	M	ALDRIN	208238000	219477000	5.4	M	
48	TM	HEPTACHLOR EPOXIDE	202172000	201280000	0.44	TM	
49	TM	G-CHLORDANE	173189000	169782000	2.0	TM	
50	TM	A-ENDOSULFAN	133067000	130041000	2.3	TM	
51	TM	A-CHLORDANE	136781000	134644000	1.6	TM	
52	TM	P,P-DDE	188279000	194021000	3.0	TM	
53	M	DIELDRIN	177809000	172635000	2.9	M	
54	M	ENDRIN	150961000	140296000	7.1	M	
55	TM	B-ENDOSULFAN	151093000	138366000	8.4	TM	
56	TML	P,P-DDD	105593000	111168000	5.3	TML	12
57	TM	ENDRIN ALDEHYDE	106388000	98281900	7.6	TM	
58	M	P,P-DDT	114081000	118922000	4.2	M	
59	TML	ENDOSULFAN SULFATE	113130000	112254000	0.77	TML	10
60	TM	ENDRIN KETONE	135926000	129731000	4.6	TM	
61	TM	METHOXYCHLOR	65534200	66410100	1.3	TM	
62	S	DBC	92838500	88764600	4.4	S	
63	S	DECA	92970600	80448800	13	S	
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			6.3		

* See front HA 9/27/14

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922159.D\ECD1A.CH Vial: 59
Signal #2 : G:\LUCY\DATA\140922\0922159.D\ECD2B.CH
Acq On : 9-24-14 16:16:57 Operator: MA
Sample : OCL 2 7/16/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 16:34 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
1)	S	TCMX	2.88	3.58	23195346	22071153	0.0550	0.0524
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					36.67%	34.93%
22)	S	DBC	6.91	7.93	23494277	8876456	0.0431	0.0478
		Surrogate Spike 0.150 Recovery =					28.73%	31.87%
23)	S	DECA	9.27	10.58	31363043	8044884	0.0400	0.0433
		Surrogate Spike 0.150 Range 25 - 150 Recovery =					26.67%	28.87%
		Target Compounds						
2)	TM	A-BHC	3.47	3.99	28042036	29591911	0.0485	0.0489
3)	TM	B-BHC	4.08	4.60	11868599	11946184	0.0495	0.0518
4)	M	G-BHC(LINDANE)	3.84	4.33	27100590	44471471	0.0556	0.0527
5)	TM	D-BHC	4.37	4.87	25363043	24461323	0.0519	0.0516
6)	M	HEPTACHLOR	4.20	4.93	23684620	22142506	0.0602	0.0707
7)	M	ALDRIN	4.51	5.26	22412019	21947731	0.0545	0.0527
8)	TM	HEPTACHLOR EPOXI	5.05	5.70	20499715	20127968	0.0520	0.0498
9)	TM	G-CHLORDANE	5.28	6.01	21001788	16978195	0.0514	0.0490
10)	TM	A-ENDOSULFAN	5.44	6.10	18044458	13004074	0.0513	0.0489
11)	TM	A-CHLORDANE	5.38	6.06	19166782	13464378	0.0484	0.0492
12)	TM	P,P-DDE	5.56	6.20	21293239	19402057	0.0519	0.0515
13)	M	DIELDRIN	5.72	6.37	19336966	17263492	0.0500	0.0485
14)	M	ENDRIN	6.03	6.63	15487884	14029570	0.0455	0.0465
15)	TM	B-ENDOSULFAN	6.30	6.94	15673496	13836592	0.0458	0.0458
16)	TM	P,P-DDD	6.13	6.76	16270857	11116770	0.0457	0.0439
17)	TM	ENDRIN ALDEHYDE	6.55	7.07	12530610	9828188	0.0452	0.0462
18)	M	P,P-DDT	6.42	7.13	15655956	11892181	0.0483	0.0521
19)	TM	ENDOSULFAN SULFA	6.78	7.43	13077952	11225378	0.0417	0.0450
20)	TM	ENDRIN KETONE	7.54	8.03	13635344	12973098	0.0453	0.0477
21)	TM	METHOXYCHLOR	7.21	7.71	6519295	6641008	0.0470	0.0507

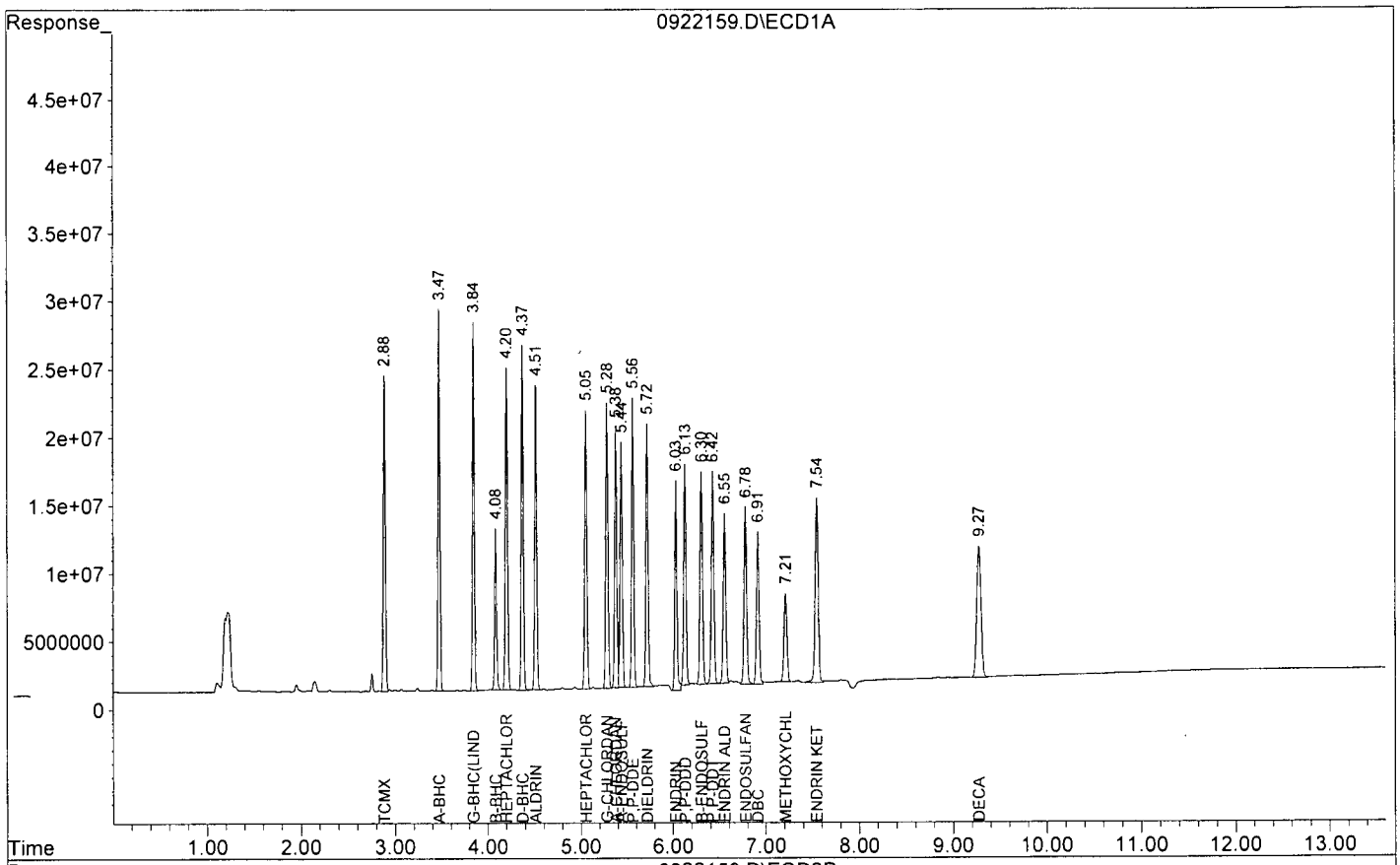
Target Compounds

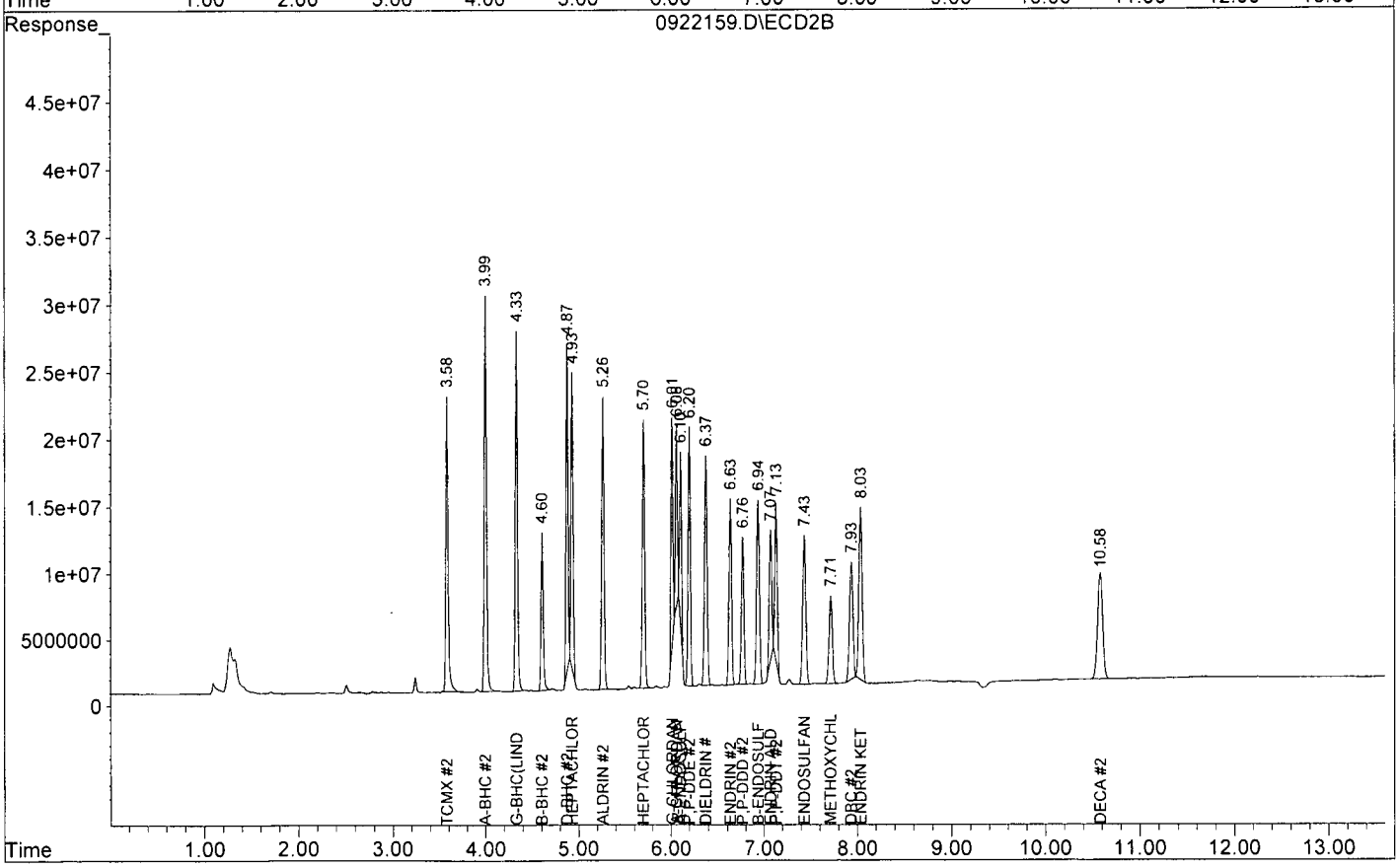
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922159.D
Acq On : 9-24-14 16:16:57
Sample : OCL 2 7/16/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 59
Operator: MA
Inst : Lucy
Multiplr: 1.00





466

TOXAPHENE
METHOD 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/24/14
Instrument: Lucy
Initial Cal. Date: 9/22/14/
Data File: 0922160.D

		Compound	MEAN	CCRF	%D		%Drift
1	ANM	Toxaphene Total	8521920	7649930	10	ANM	
2	L2AK	Toxaphene	826949	844181	2.1	L2AK	
3	L2AK	Toxaphene {2}	2509940	2295360	8.5	L2AK	
4	L2AK	Toxaphene {3}	1879990	1581160	16	L2AK	
5	L2AK	Toxaphene {4}	788914	675964	14	L2AK	
6	L2AK	Toxaphene {5}	2516130	2253270	10	L2AK	
7	signal #2						
8	ANM	Toxaphene Total	8150230	7509160	7.9	ANM	
9	L2AK	Toxaphene	686998	638401	7.1	L2AK	
10	L2AK	Toxaphene {2}	1361590	1200200	12	L2AK	
11	L2AK	Toxaphene {3}	2205810	2053630	6.9	L2AK	
12	L2AK	Toxaphene {4}	1622820	1519770	6.4	L2AK	
13	L2AK	Toxaphene {5}	2273020	2097160	7.7	L2AK	
14							
15							
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40							
		Average			#REF!		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922160.D\ECD1A.CH Vial: 60
Signal #2 : G:\LUCY\DATA\140922\0922160.D\ECD2B.CH
Acq On : 9-24-14 16:33:23 Operator: MA
Sample : TOX 2 9/19/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 16:50 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

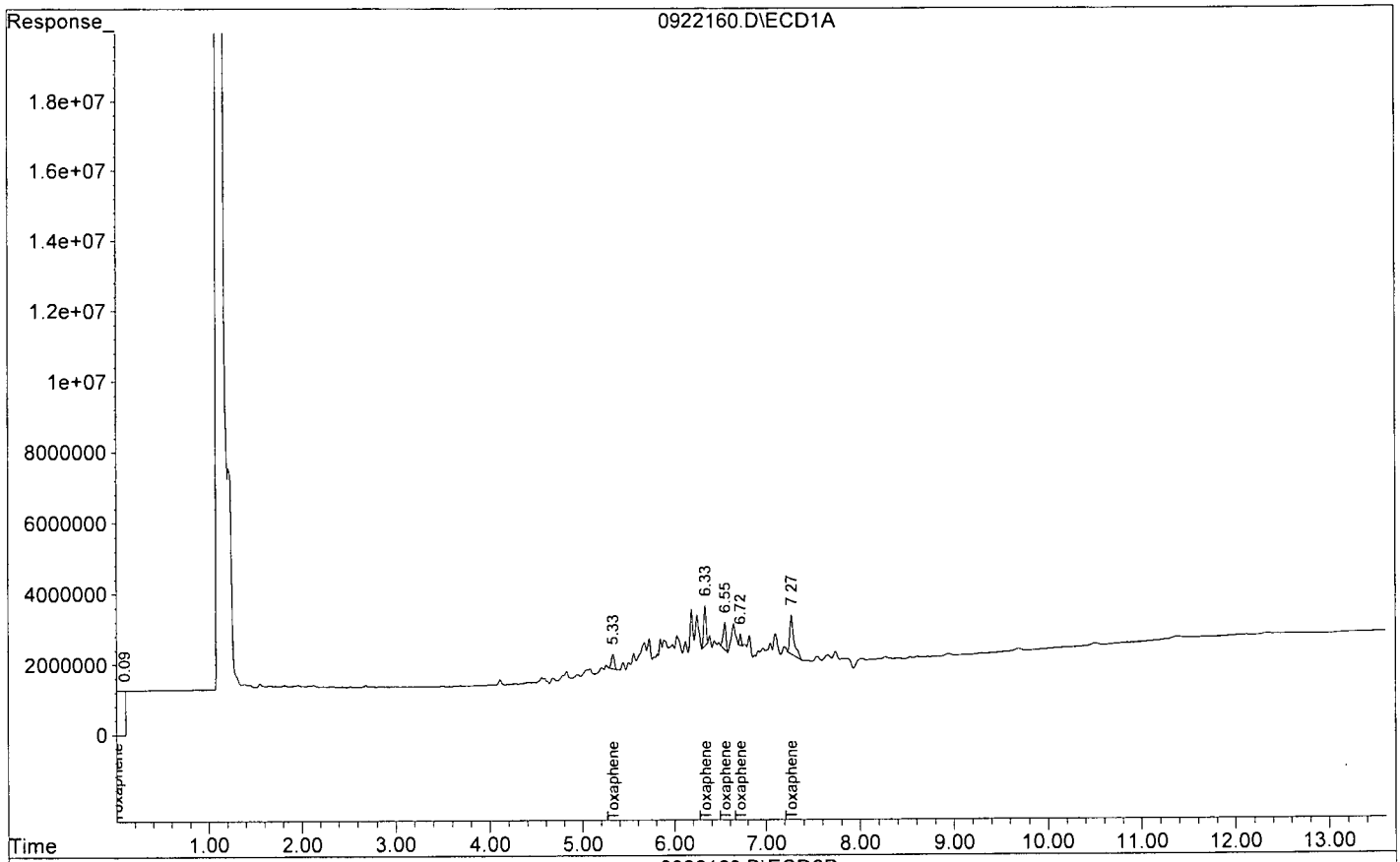
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	3824965	3754580	0.2244m	0.2303m
2) L2AK Toxaphene	5.33	6.55	422090	319200	0.2552	0.2323
3) L2AK Toxaphene {2}	6.33	7.02	1147682	600101	0.2286	0.2204
4) L2AK Toxaphene {3}	6.55	7.32	790578	1026816	0.2103	0.2328
5) L2AK Toxaphene {4}	6.72	7.41	337982	759885	0.2142	0.2341
6) L2AK Toxaphene {5}	7.28	8.07	1126633	1048579	0.2239	0.2307
Sum Toxaphene			3824965	3754580	1.1322	1.1502
Average Toxaphene					0.226	0.230

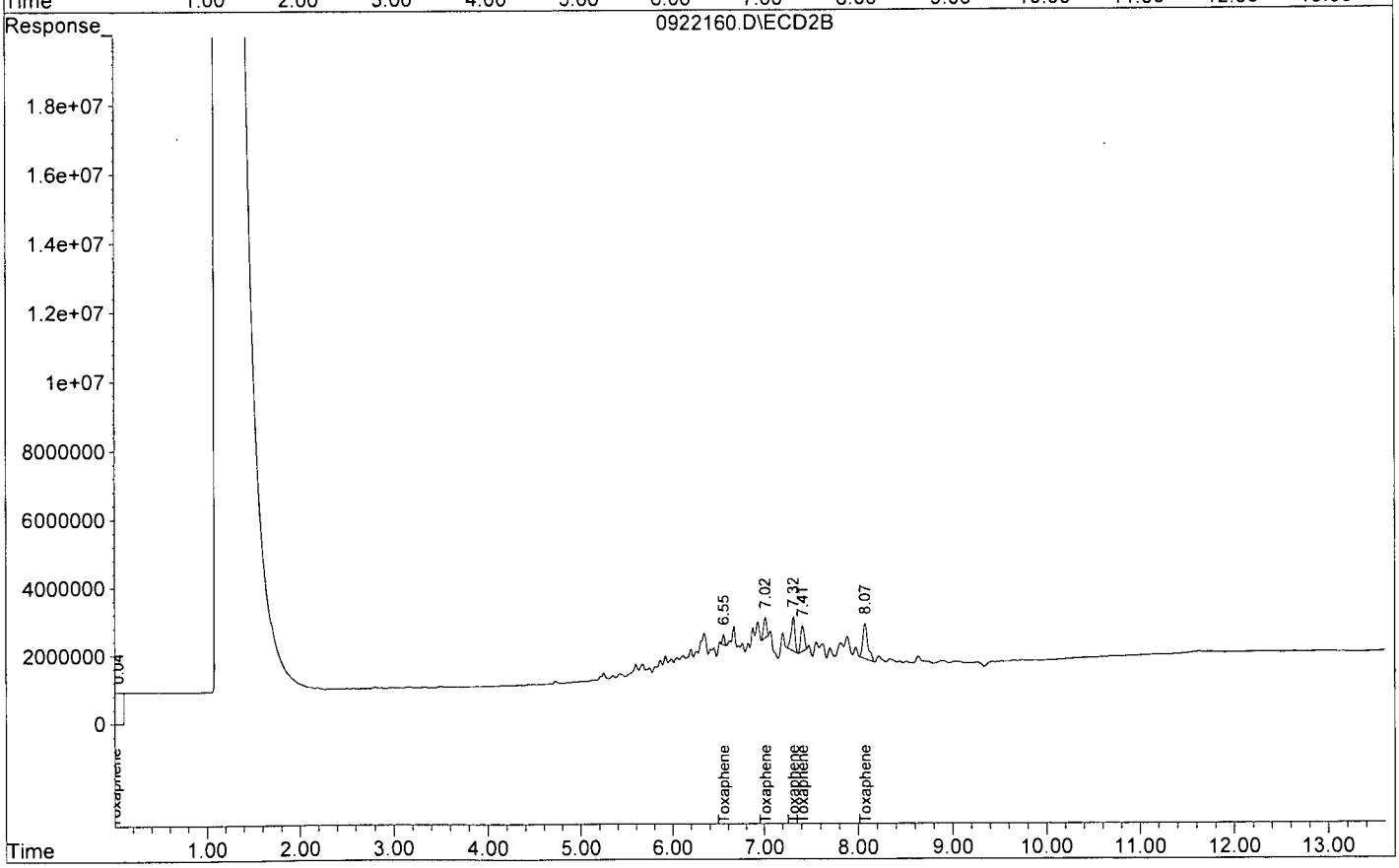
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922160.D
Acq On : 9-24-14 16:33:23
Sample : TOX 2 9/19/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 60
Operator: MA
Inst : Lucy
Multiplr: 1.00





ORGANOCHLORINE PESTICIDES
TECHNICAL CHLORDANE

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/24/14
Instrument: Lucy
Initial Cal. Date: 09/23/14
Data File: 0922162.D

		Compound	MEAN	CCRF	%D		%Drift	
1	ANM	T. CHLORDANE Total	143646000	148984000	3.7	ANM		
2	L2AK	T. CHLORDANE	27905700	30288600	8.5	L2AK		
3	L2AK	T. CHLORDANE {2}	14344300	14535600	1.3	L2AK		
4	L2AK	T. CHLORDANE {3}	55812300	59753900	7.1	L2AK		
5	L2AK	T. CHLORDANE {4}	32430600	31727500	2.2	L2AK		
6	L2AK	T. CHLORDANE {5}	13153000	12678200	3.6	L2AK		
7	signal #2							
8	ANM	T. CHLORDANE Total	132487000	140662000	6.2	ANM		
9	L2AK	T. CHLORDANE	24071300	29925900	24	L2AK		*
10	L2AK	T. CHLORDANE {2}	15461300	15224900	1.5	L2AK		
11	L2AK	T. CHLORDANE {3}	56798300	59440900	4.7	L2AK		
12	L2AK	T. CHLORDANE {4}	25859800	25302600	2.2	L2AK		
13	L2AK	T. CHLORDANE {5}	10296900	10767800	4.6	L2AK		
14								
15								
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17								
18								
19								
20								
21								
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35								
36								
37								
38								
39								
40								
		Average			5.8			

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922162.D\ECD1A.CH Vial: 62
Signal #2 : G:\LUCY\DATA\140922\0922162.D\ECD2B.CH
Acq On : 9-24-14 17:06:22 Operator: MA
Sample : TCH 3 6/3/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 17:33 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

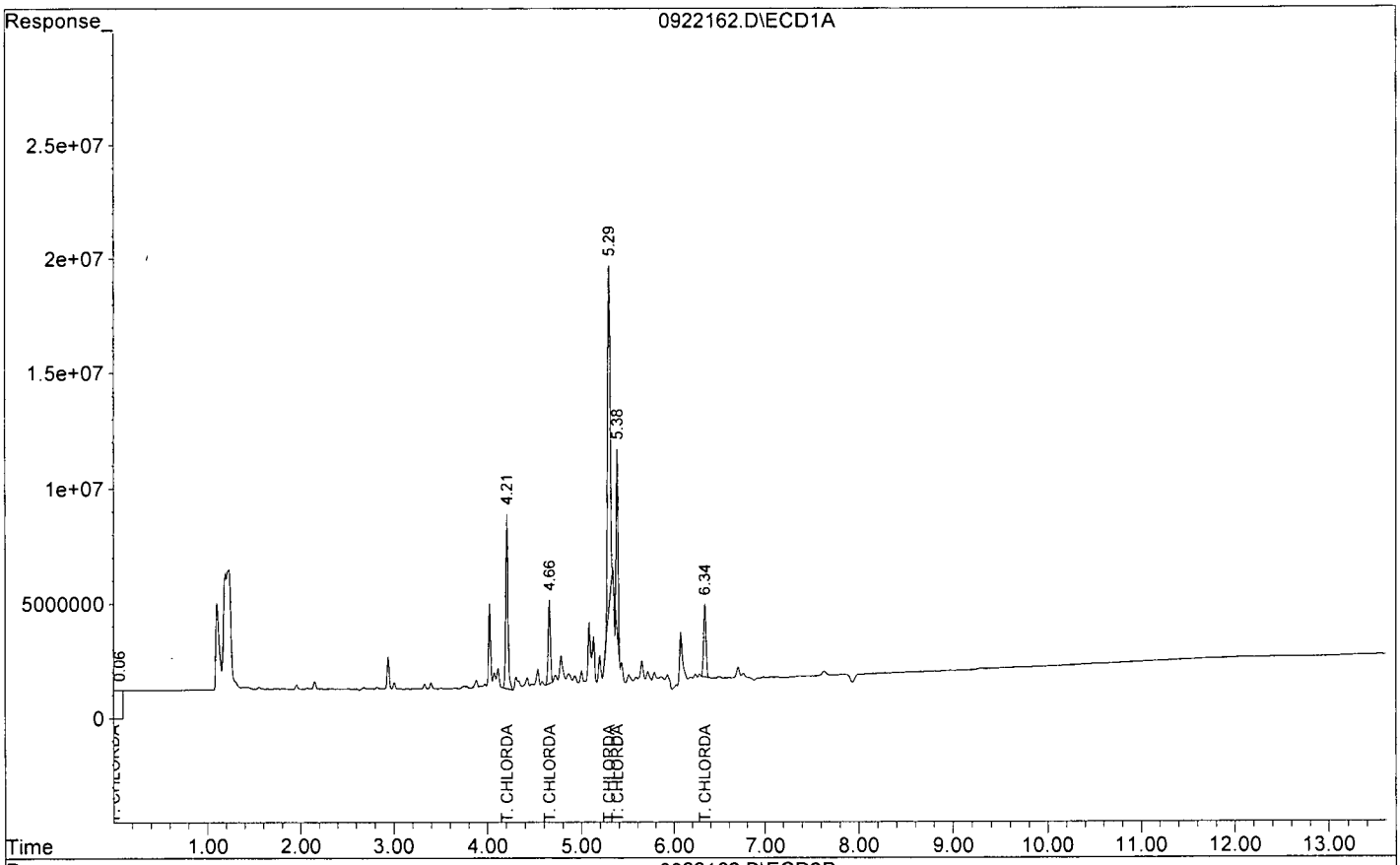
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	37245970	35165493	0.2593m	0.2654m
2) L2AK T. CHLORDANE	4.21	4.93	7572142	7481465	0.2713	0.3108
3) L2AK T. CHLORDANE {2}	4.66	5.27	3633902	3806221	0.2533	0.2462
4) L2AK T. CHLORDANE {3}	5.29	6.01	14938477	14860214	0.2677	0.2616
5) L2AK T. CHLORDANE {4}	5.38	6.10	7931886	6325650	0.2446	0.2446
6) L2AK T. CHLORDANE {5}	6.34	7.02	3169562	2691943	0.2410	0.2614
Sum T. CHLORDANE			37245970	35165493	1.2779	1.3247
Average T. CHLORDANE					0.256	0.265

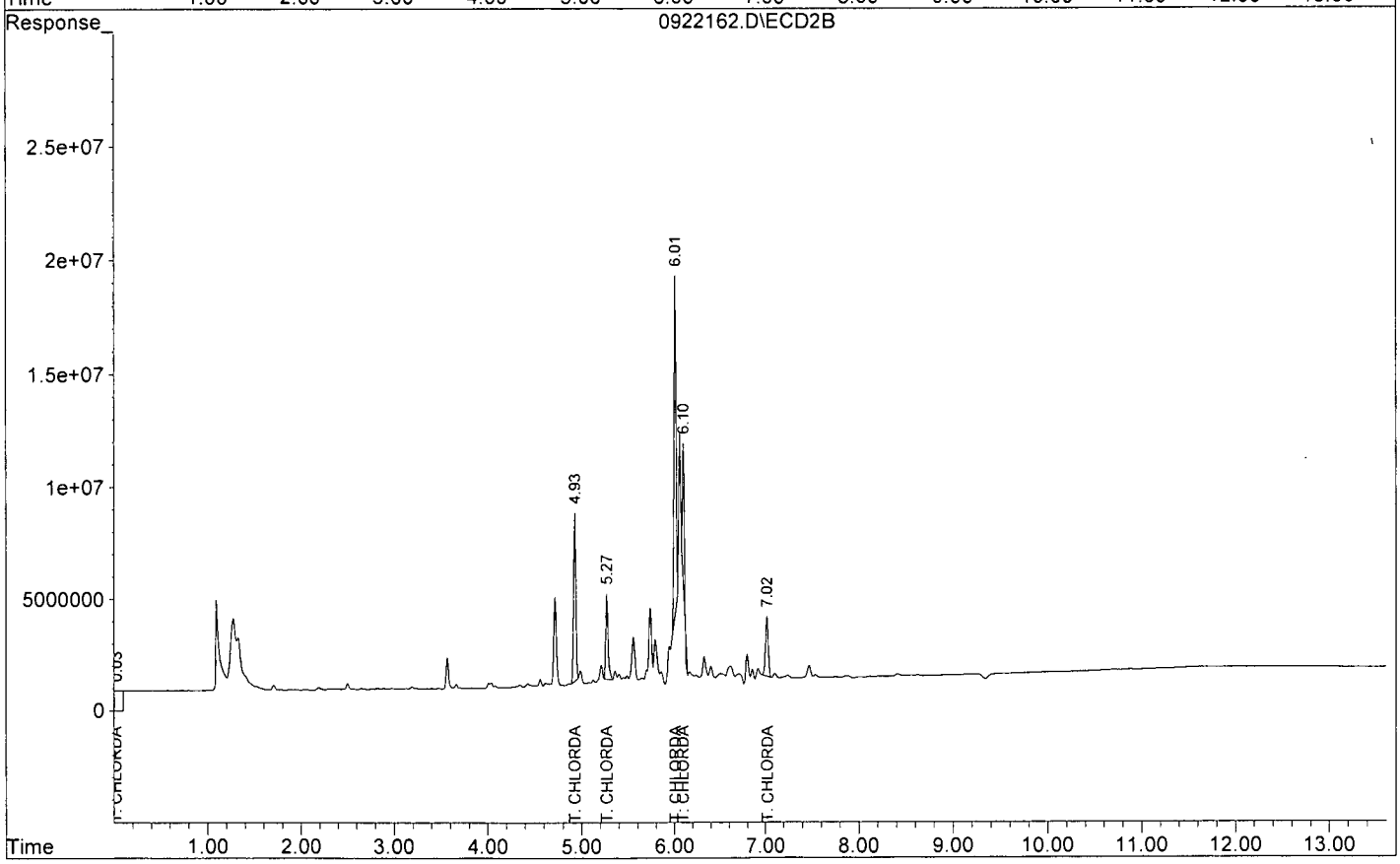
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922162.D
Acq On : 9-24-14 17:06:22
Sample : TCH 3 6/3/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\TCH0922.M

Vial: 62
Operator: MA
Inst : Lucy
Multiplr: 1.00





Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 14218
Date Analyzed: 09/24/14
Instrument: Lucy
Initial Cal. Date: 09/23/14
Data File: 0922163.D

		Compound	MEAN	CCRF	%D		%Drift	
1	MA	DICHLOBENIL	96193200	96103600	0.09	MA		
2	MA	BENEFIN	86791800	90504700	4.3	MA		
3	M	PROPACHLOR	16272700	16812700	3.3	M		
4	M	HEXACHLOROBENZENE	311184000	317166000	1.9	M		
5	MA	PCNB	263903000	272530000	3.3	MA		
6	M	CHLOROTHALONIL	290346000	276696000	4.7	M		
7	MA	ALACHLOR	31331400	32190400	2.7	MA		
8	MA	DACTHAL	215479000	213728000	0.81	MA		
9	MAL	DICOFOL	45277200	50757400	12	MAL	23	*NT
10	MA	O,P-DDE	149323000	146449000	1.9	MA		
11	MA	OXADIAZON	82779100	83014200	0.28	MA		
12	MA	OXYFLUORFEN	179454000	193683000	7.9	MA		
13	MAL	CAPTAN	132088000	133267000	0.89	MAL	4.5	
14	MA	O,P-TDE/DDD	146013000	138601000	5.1	MA		
15	MA	NITROFEN	307389000	302695000	1.5	MA		
16	MA	O,P-DDT	307389000	302695000	1.5	MA		
17	MA	CARBOPHENOTHION	91032000	94109600	3.4	MA		
18	MA	BIS(2-ETHYLHEXYL)PHTHALATE	903703	824155	8.8	MA		
19								
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30								
31								
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36								
37								
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39								
40								
		Average			3.6			

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/24/14
Instrument: Lucy
Cal. Date: 09/23/14
Data File: 0922163.D

		Compound	MEAN	CCRF	%D		%Drift	
41	MA	DICHLOBENIL	82448800	85878800	4.2	MA		
42	MA	BENEFIN	96097500	99931900	4.0	MA		
43	MAL	PROPACHLOR	18396900	18500400	0.56	MAL	10	
44	MA	HEXACHLOROBENZENE	263070000	268406000	2.0	MA		
45	MA	PCNB	272456000	279774000	2.7	MA		
46	MA	CHLOROTHALONIL	295586000	289542000	2.0	MA		
47	MA	ALACHLOR	35452800	34579800	2.5	MA		
48	MA	DACTHAL	206007000	210856000	2.4	MA		
49	MAL	DICOFOL	32809800	34878400	6.3	MAL	16	
50	MA	O,P-DDE	146251000	145737000	0.35	MA		
51	MA	OXADIAZON	91592000	90694300	0.98	MA		
52	MA	OXYFLUORFEN	196778000	201077000	2.2	MA		
53	MA	CAPTAN	129758000	147837000	14	MA		
54	MA	O,P-TDE/DDD	132962000	124543000	6.3	MA		
55	MA	NITROFEN	222035000	230429000	3.8	MA		
56	MA	O,P-DDT	222035000	230429000	3.8	MA		
57	MAL	CARBOPHENOTHION	68148800	97106600	42	MAL	27	*NT
58	MA	BIS(2-ETHYLHEXYL)PHTHALAT	766489	681852	11	MA		
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		Average			6.2			

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922163.D\ECD1A.CH Vial: 63
Signal #2 : G:\LUCY\DATA\140922\0922163.D\ECD2B.CH
Acq On : 9-24-14 17:22:48 Operator: MA
Sample : 5ES 3 9/22/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 25 8:24 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Thu Sep 25 08:24:05 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds								
1)	MA	DICHLOBENIL	2.08	2.36	9610357	8587884	0.0500	0.0521
2)	MA	BENEFIN	2.65	3.43	9050470	9993192	0.0521	0.0520
3)	MA	PROPACHLOR	2.97	3.38	1681268	1850038	0.0517	0.0551
4)	MA	HEXACHLOROBENZEN	3.39	4.08	31716582	26840625	0.0510	0.0510
5)	MA	PCNB	3.75	4.33	27252955	27977438	0.0516	0.0513
6)	MA	CHLOROTHALONIL	4.41	4.94	27669606	28954186	0.0476	0.0490
7)	MA	ALACHLOR	4.22	4.75	3219040	3457984	0.0514	0.0488
8)	MA	DACTHAL	4.62	5.17	21372797	21085610	0.0496	0.0512
9)	MA	DICOFOL	4.92	5.47	5075744	3487842	0.0614	0.0582
10)	MA	O,P-DDE	5.27	5.84	14644886	14573697	0.0490	0.0498
11)	MA	OXADIAZON	5.36	5.97	8301417	9069426	0.0501	0.0495
12)	MA	OXYFLUORFEN	5.50	6.13	19368294	20107714	0.0540	0.0511
13)	MA	CAPTAN	5.60	5.87	13326665	14783706	0.0477	0.0570
14)	MA	O,P-TDE/DDD	5.77	6.30	13860061	12454327	0.0475	0.0468
15)	MA	NITROFEN	6.05	6.62	30269536	23042852	0.0492	0.0519
16)	MA	O,P-DDT	6.05	6.62	30269536	23042852	0.0492	0.0519
17)	MA	CARBOPHENOTHION	6.37	6.93	9410963	9710662	0.0517	0.0634
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.63	1648309	1363704	0.9120	0.8896

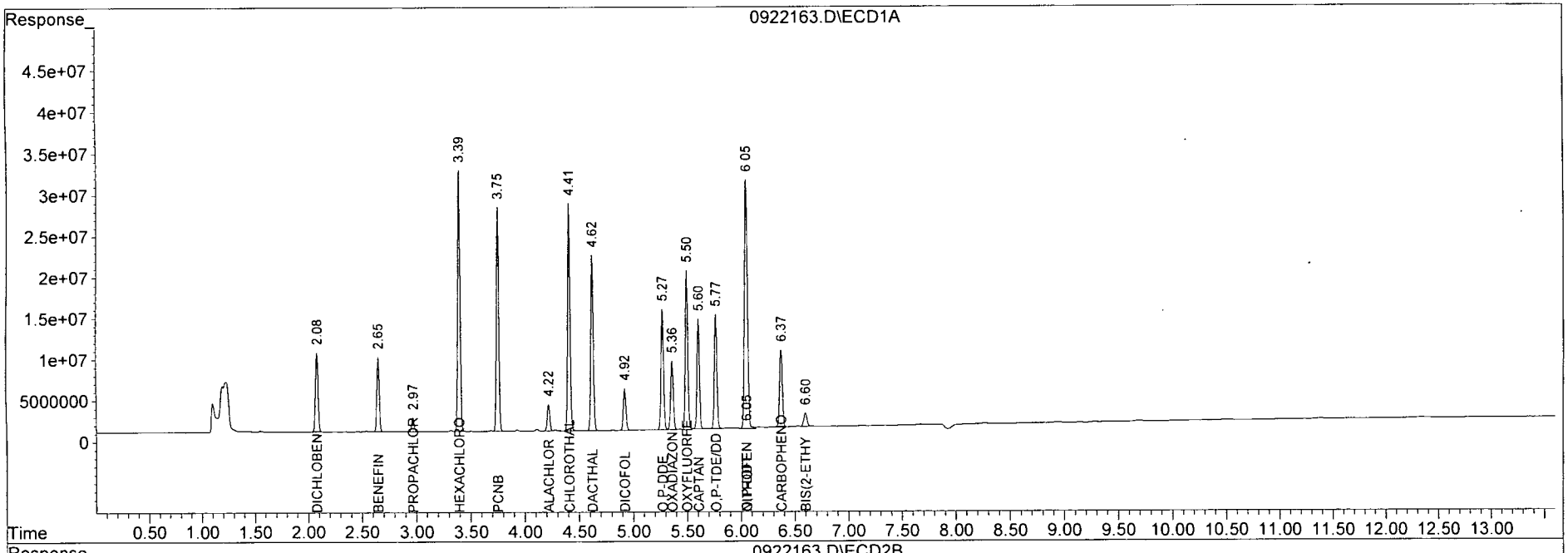
Target Compounds

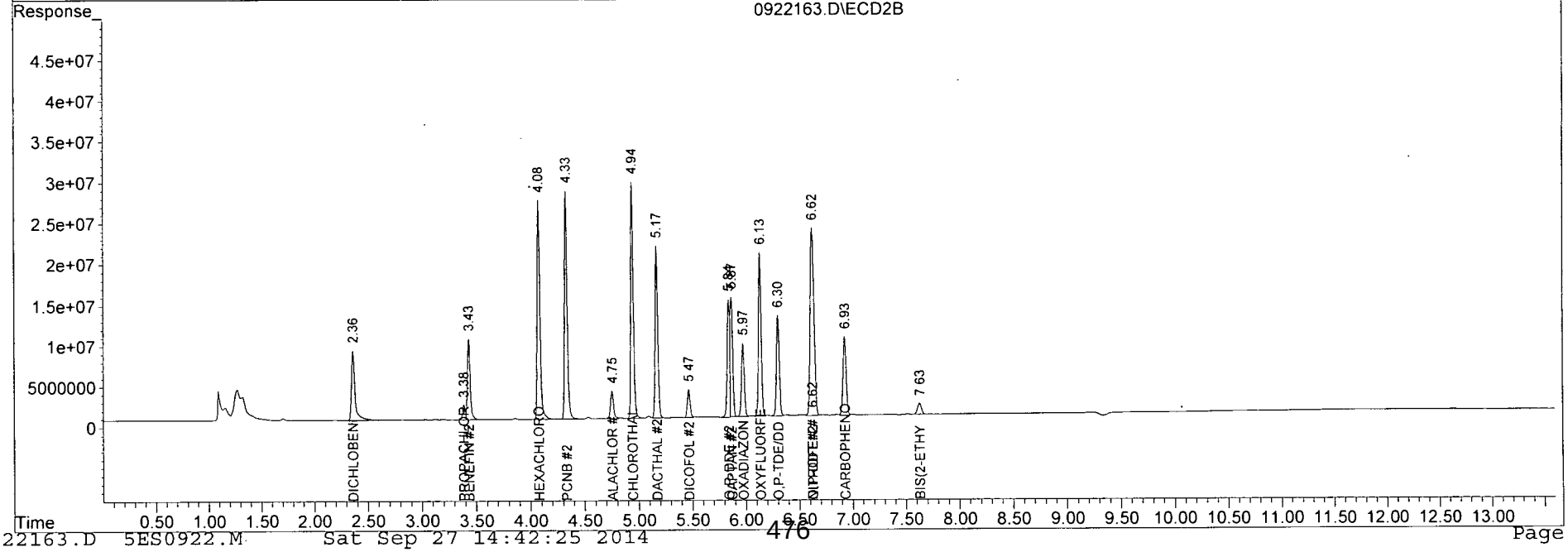
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922163.D
Acq On : 9-24-14 17:22:48
Sample : 5ES 3 9/22/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\5ES0922.M

Vial: 63
Operator: MA
Inst : Lucy
Multiplr: 1.00





EPA METHOD 8081A
Organochlorine Pesticides
Raw Data

APPL, INC.

Method Blank
EPA 8081A OCL WATER

Blank Name/QCG: **140909W-02108 - 190200**
Batch ID: #81HC0-140909A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	4,4'-DDD	0.010 U	0.05	0.010	0.003	ug/L	09/09/14	09/23/14
BLANK	4,4'-DDE	0.010 U	0.05	0.010	0.004	ug/L	09/09/14	09/23/14
BLANK	4,4'-DDT	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
BLANK	ALDRIN	0.010 U	0.05	0.010	0.009	ug/L	09/09/14	09/23/14
BLANK	CHLORDANE, TECHNICAL	0.04 U	1.0	0.04	0.01	ug/L	09/09/14	09/23/14
BLANK	DIELDRIN	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
BLANK	ENDOSULFAN I	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
BLANK	ENDOSULFAN II	0.010 U	0.05	0.010	0.004	ug/L	09/09/14	09/23/14
BLANK	ENDOSULFAN SULFATE	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
BLANK	ENDRIN	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
BLANK	GAMMA-BHC	0.010 U	0.05	0.010	0.005	ug/L	09/09/14	09/23/14
BLANK	HEPTACHLOR	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
BLANK	HEPTACHLOR EPOXIDE	0.010 U	0.05	0.010	0.007	ug/L	09/09/14	09/23/14
BLANK	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
BLANK	METHOXYCHLOR	0.010 U	0.05	0.010	0.008	ug/L	09/09/14	09/23/14
BLANK	TOXAPHENE	0.40 U	1.0	0.40	0.38	ug/L	09/09/14	09/23/14
BLANK	SURROGATE: DECACHLOROBIP	92.8	30-135			%	09/09/14	09/23/14
BLANK	SURROGATE: TCMX (S)	63.6	25-140			%	09/09/14	09/23/14

Quant Method: OCL0922.M
Run #: 0922099
Instrument: Lucy
Sequence: 140922
Initials: MA

GC SC-Blank-REG MDLs
Printed: 09/29/14 12:38:23 PM

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922099.D\ECD1A.CH Vial: 99
Signal #2 : G:\LUCY\DATA\140922\0922099.D\ECD2B.CH
Acq On : 9-23-14 16:06:19 Operator: MA
Sample : 140909A BLK 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 9:26 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
1)	S	TCMX	2.91	3.58	38972589	40156056	0.1849	0.1908
		Surrogate Spike 0.300 Range 25 - 150 Recovery =					61.63%	63.60%
22)	S	DBC	6.94	7.94	65162513	35062010	0.2390	0.3777 #
		Surrogate Spike 0.300 Recovery =					79.67%	125.90%
23)	S	DECA	9.30	10.58	98353273	25894879	0.2509	0.2785
		Surrogate Spike 0.300 Range 25 - 150 Recovery =					83.63%	92.83%
		Target Compounds						
		Target Compounds						
2)	TM	A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM	B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M	G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM	D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M	HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M	ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM	HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
9)	TM	G-CHLORDANE	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM	A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
11)	TM	A-CHLORDANE	0.00	0.00	0	0	N.D. d	N.D. d
12)	TM	P,P-DDE	0.00	0.00	0	0	N.D. d	N.D. d
13)	M	DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
14)	M	ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM	B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
16)	TM	P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM	ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
18)	M	P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM	ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM	ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM	METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922099.D\ECD1A.CH Vial: 99
Signal #2 : G:\LUCY\DATA\140922\0922099.D\ECD2B.CH
Acq On : 9-23-14 16:06:19 Operator: MA
Sample : 140909A BLK 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:21 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922099.D\ECD1A.CH Vial: 99
Signal #2 : G:\LUCY\DATA\140922\0922099.D\ECD2B.CH
Acq On : 9-23-14 16:06:19 Operator: MA
Sample : 140909A BLK 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:54 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum T. CHLORDANE			0	0	N.D.	N.D.
Average T. CHLORDANE					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922099.D\ECD1A.CH Vial: 99
Signal #2 : G:\LUCY\DATA\140922\0922099.D\ECD2B.CH
Acq On : 9-23-14 16:06:19 Operator: MA
Sample : 140909A BLK 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

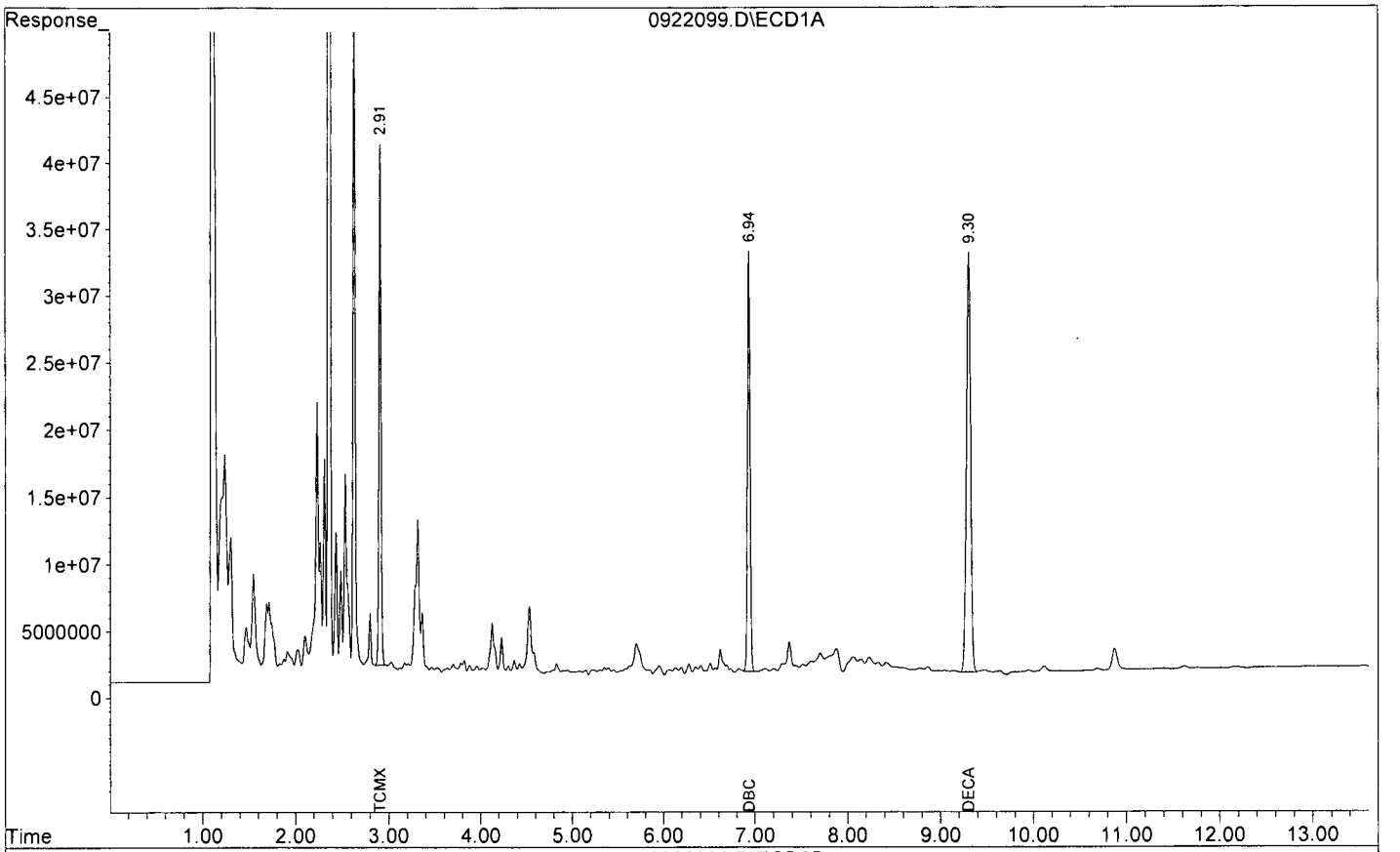
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Target Compounds						
5)	MA	PCNB	0.00	4.33	0	310475	N.D.	0.0011 #
6)	MA	CHLOROTHALONIL	4.42	4.95	569577	475953	0.0020	0.0016
7)	MA	ALACHLOR	4.23	4.75	2569298	3661419	0.0820	0.1033 #
10)	MA	O,P-DDE	5.30	0.00	346146	0	0.0023	N.D. #
11)	MA	OXADIAZON	0.00	5.96	0	3863996	N.D.	0.0422 #
12)	MA	OXYFLUORFEN	5.53	0.00	208427	0	0.0012	N.D. #
13)	MA	CAPTAN	5.62	5.87	586026	591860	0.0188	0.0046 #
15)	MA	NITROFEN	6.07	0.00	386727	0	0.0013	N.D. #
16)	MA	O,P-DDT	6.07	0.00	386727	0	0.0013	N.D. #
17)	MA	CARBOPHENOTHION	6.41	6.92	434321	1199287	0.0048	0.0366 #
18)	MA	BIS(2-ETHYLHEXYL	6.62	7.63	1615899	1559828	1.7881	2.0350
		Target Compounds						
1)	MA	DICHLOBENIL	0.00	0.00	0	0	N.D.	N.D.
2)	MA	BENEFIN	0.00	0.00	0	0	N.D.	N.D.
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D.	N.D.
8)	MA	DACTHAL	0.00	0.00	0	0	N.D.	N.D.
9)	MA	DICOFOL	0.00	5.46	0	145511	N.D.	N.D.
14)	MA	O,P-TDE/DDD	0.00	0.00	0	0	N.D.	N.D.

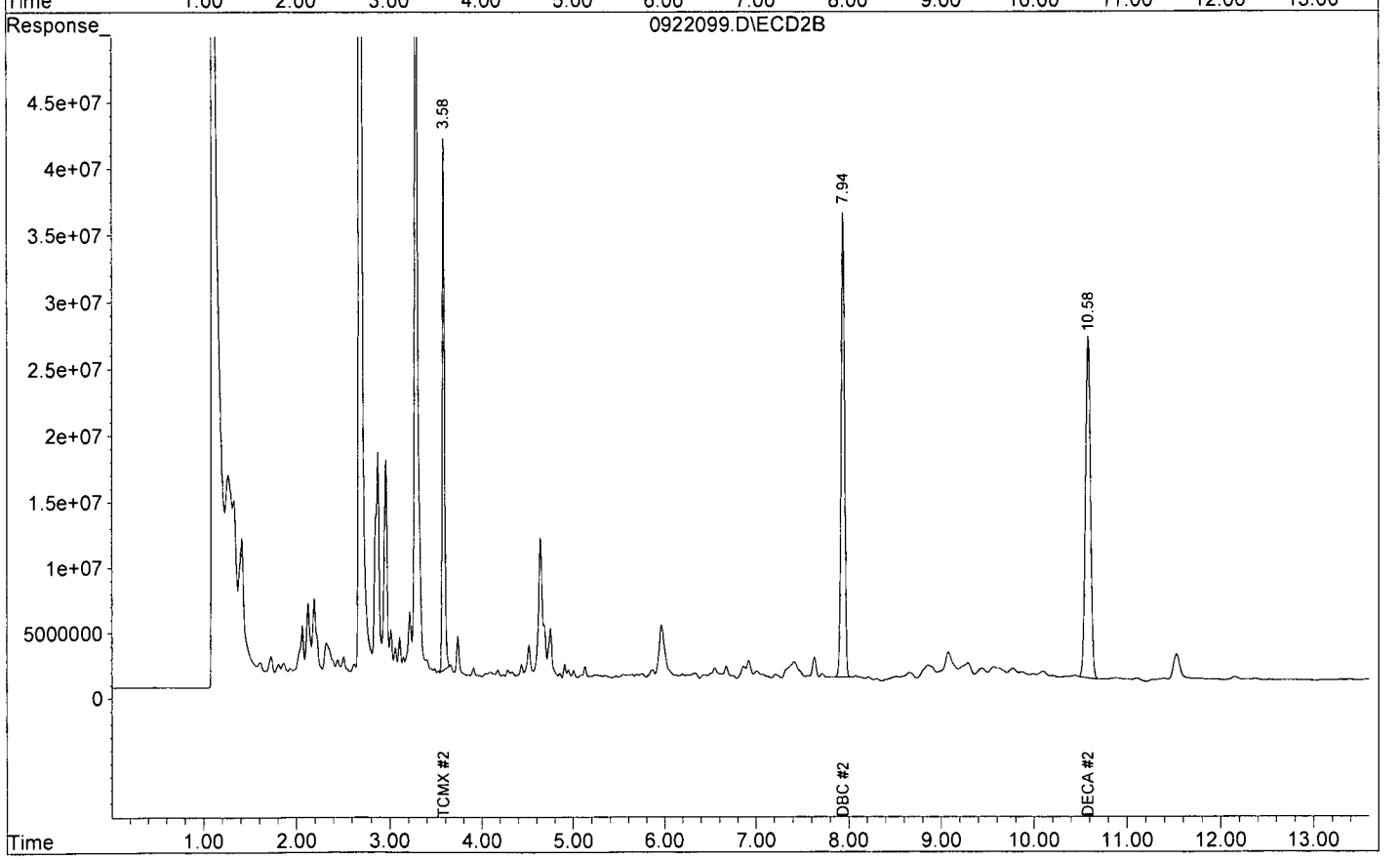
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922099.D
Acq On : 9-23-14 16:06:19
Sample : 140909A BLK 1/500
Misc : water
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 99
Operator: MA
Inst : Lucy
Multiplr: 2.00





Method Blank
EPA 8081A SOIL - ISM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **140916S-02100 - 190201**
Batch ID: #81ACT-140916A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	4,4'-DDD	0.0040 U	0.050	0.0040	0.0004	mg/kg	09/16/14	09/23/14
BLANK	4,4'-DDE	0.004 U	0.05	0.004	0.002	mg/kg	09/16/14	09/23/14
BLANK	4,4'-DDT	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
BLANK	ALDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	CHLORDANE, TECHNICAL	0.050 U	1.00	0.050	0.015	mg/kg	09/16/14	09/23/14
BLANK	DIELDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	ENDOSULFAN I	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
BLANK	ENDOSULFAN II	0.0016 U	0.050	0.0016	0.0004	mg/kg	09/16/14	09/23/14
BLANK	ENDOSULFAN SULFATE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	ENDRIN	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	GAMMA-BHC	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	HEPTACHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	HEPTACHLOR EPOXIDE	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	HEXACHLOROBENZENE	0.010 U	0.05	0.010	0.006	mg/kg	09/16/14	09/23/14
BLANK	METHOXYCHLOR	0.002 U	0.05	0.002	0.001	mg/kg	09/16/14	09/23/14
BLANK	TOXAPHENE	0.05 U	0.1	0.05	0.01	mg/kg	09/16/14	09/23/14
BLANK	SURROGATE: DECACHLOROBIP	83.1	55-130			%	09/16/14	09/23/14
BLANK	SURROGATE: TCMX (S)	84.3	70-125			%	09/16/14	09/23/14

Quant Method:OCL0922.M
Run #:0922108
Instrument:Lucy
Sequence:140922
Initials:MA

GC SC-Blank-REG MDLs
Printed: 09/29/14 12:38:23 PM

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922108.D\ECD1A.CH Vial: 8
Acq On : 9-23-14 18:39:50 Operator: MA
Sample : 140916A BLK 5X1/0.05/30.20G Inst : Lucy
Misc : soil Multiplr: 3311.26
IntFile : rteint.p

Data File : G:\LUCY\DATA\140922\0922108.D\ECD2B.CH Vial: 8
Acq On : 9-23-14 18:39:49 Operator: MA
Sample : 140916A BLK 5X1/0.05/30.20G Inst : Lucy
Misc : soil Multiplr: 3311.26
IntFile : rteint2.p
Quant Time: Sep 24 9:32 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
1)	S	TCMX	2.89	3.58	35689093	35490556	280.3165	279.2344
		Surrogate Spike 331.126			Recovery	=	84.66%	84.33%
22)	S	DBC	6.92	7.94	46858902	20289539	284.5099	361.8322 #
		Surrogate Spike 331.126			Recovery	=	85.92%	109.27%
23)	S	DECA	9.28	10.58	59922349	15453159	253.0818	275.1914
		Surrogate Spike 331.126			Recovery	=	76.43%	83.11%
		Target Compounds						
		Target Compounds						
2)	TM	A-BHC	0.00	0.00	0	0	N.D. d	N.D. d
3)	TM	B-BHC	0.00	0.00	0	0	N.D. d	N.D. d
4)	M	G-BHC(LINDANE)	0.00	0.00	0	0	N.D. d	N.D. d
5)	TM	D-BHC	0.00	0.00	0	0	N.D. d	N.D. d
6)	M	HEPTACHLOR	0.00	0.00	0	0	N.D. d	N.D. d
7)	M	ALDRIN	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM	HEPTACHLOR EPOXI	0.00	0.00	0	0	N.D. d	N.D. d
9)	TM	G-CHLORDANE	0.00	0.00	0	0	N.D. d	N.D. d
10)	TM	A-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
11)	TM	A-CHLORDANE	0.00	0.00	0	0	N.D. d	N.D. d
12)	TM	P,P-DDE	0.00	0.00	0	0	N.D. d	N.D. d
13)	M	DIELDRIN	0.00	0.00	0	0	N.D. d	N.D. d
14)	M	ENDRIN	0.00	0.00	0	0	N.D. d	N.D. d
15)	TM	B-ENDOSULFAN	0.00	0.00	0	0	N.D. d	N.D. d
16)	TM	P,P-DDD	0.00	0.00	0	0	N.D. d	N.D. d
17)	TM	ENDRIN ALDEHYDE	0.00	0.00	0	0	N.D. d	N.D. d
18)	M	P,P-DDT	0.00	0.00	0	0	N.D. d	N.D. d
19)	TM	ENDOSULFAN SULFA	0.00	0.00	0	0	N.D. d	N.D. d
20)	TM	ENDRIN KETONE	0.00	0.00	0	0	N.D. d	N.D. d
21)	TM	METHOXYCHLOR	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922108.D\ECD1A.CH Vial: 8
Acq On : 9-23-14 18:39:50 Operator: MA
Sample : 140916A BLK 5X1/0.05/30.20G Inst : Lucy
Misc : soil Multiplr: 3311.26
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922108.D\ECD2B.CH Vial: 8
Acq On : 9-23-14 18:39:49 Operator: MA
Sample : 140916A BLK 5X1/0.05/30.20G Inst : Lucy
Misc : soil Multiplr: 3311.26
IntFile : events2.e
Quant Time: Sep 24 11:22 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922108.D\ECD1A.CH Vial: 8
Acq On : 9-23-14 18:39:50 Operator: MA
Sample : 140916A BLK 5X1/0.05/30.20G Inst : Lucy
Misc : soil Multiplr: 3311.26
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922108.D\ECD2B.CH Vial: 8
Acq On : 9-23-14 18:39:49 Operator: MA
Sample : 140916A BLK 5X1/0.05/30.20G Inst : Lucy
Misc : soil Multiplr: 3311.26
IntFile : events2.e
Quant Time: Sep 24 11:56 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Sum T. CHLORDANE			0	0	N.D.	N.D.
Average T. CHLORDANE					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922108.D\ECD1A.CH Vial: 8
Acq On : 9-23-14 18:39:50 Operator: MA
Sample : 140916A BLK 5X1/0.05/30.20G Inst : Lucy
Misc : soil Multiplr: 3311.26
IntFile : rteint.p

Data File : G:\LUCY\DATA\140922\0922108.D\ECD2B.CH Vial: 8
Acq On : 9-23-14 18:39:49 Operator: MA
Sample : 140916A BLK 5X1/0.05/30.20G Inst : Lucy
Misc : soil Multiplr: 3311.26
IntFile : rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

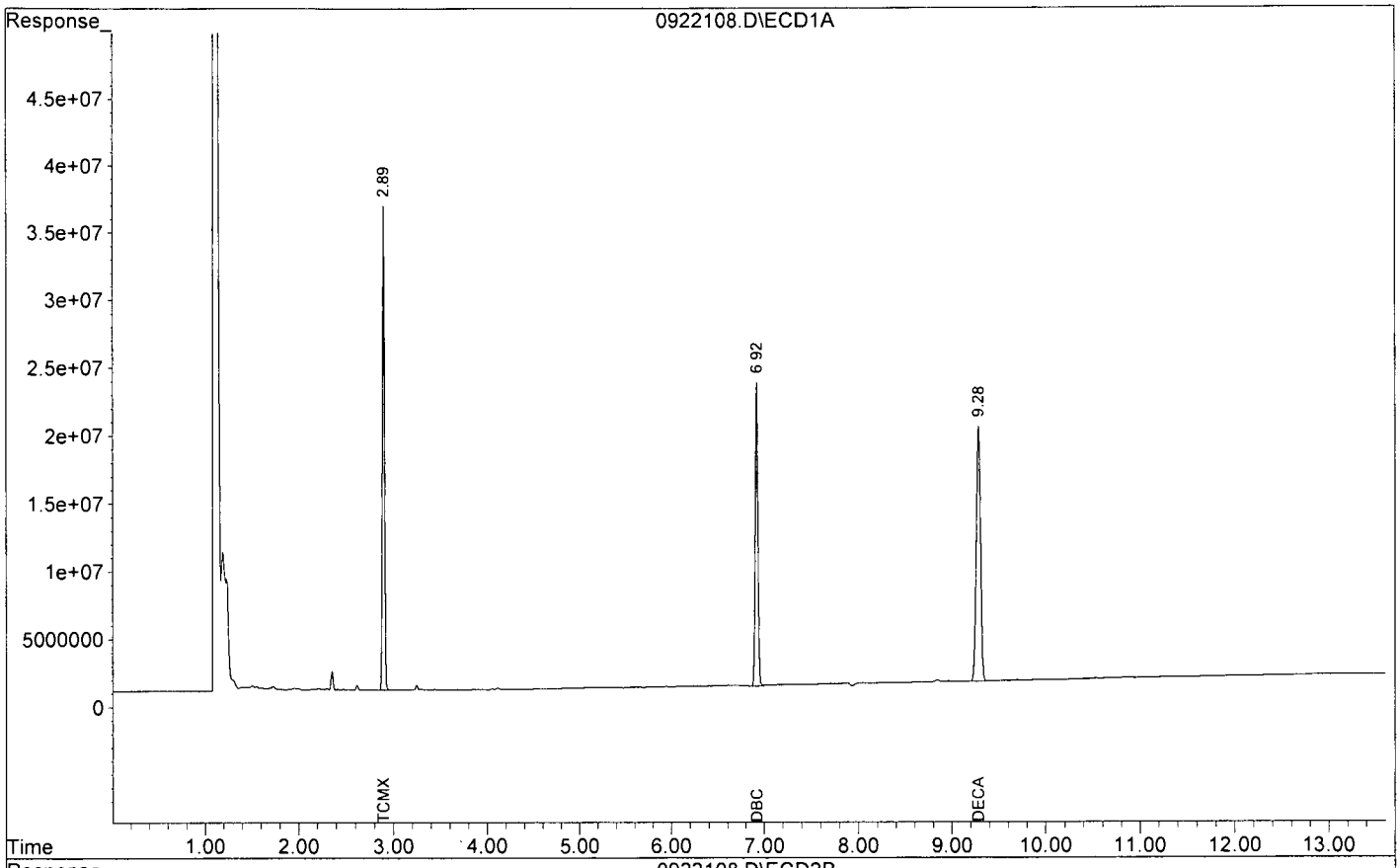
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Target Compounds						
1)	MA	DICHLOBENIL	2.09	2.36	9433	156838	0.1624	3.1494 #
5)	MA	PCNB	0.00	4.34	0	15425	N.D.	0.0937 #
7)	MA	ALACHLOR	4.22	0.00	23124	0	1.2219	N.D. #
8)	MA	DACTHAL	0.00	5.16	0	11951	N.D.	0.0960 #
11)	MA	OXADIAZON	0.00	5.97	0	40283	N.D.	0.7282 #
12)	MA	OXYFLUORFEN	5.52	0.00	25358	0	0.2340	N.D. #
13)	MA	CAPTAN	5.61	0.00	15895	0	25.4116	N.D. #
14)	MA	O,P-TDE/DDD	0.00	6.31	0	11195	N.D.	0.1394 #
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.64	32161	16068	58.9205	34.7071 #
		Target Compounds						
2)	MA	BENEFIN	0.00	0.00	0	0	N.D.	N.D.
3)	MA	PROPACHLOR	0.00	0.00	0	0	N.D.	N.D.
4)	MA	HEXACHLOROBENZEN	0.00	0.00	0	0	N.D.	N.D.
6)	MA	CHLOROTHALONIL	0.00	0.00	0	0	N.D.	N.D.
9)	MA	DICOFOL	0.00	5.45	0	25872	N.D.	N.D.
10)	MA	O,P-DDE	0.00	0.00	0	0	N.D.	N.D.
15)	MA	NITROFEN	0.00	0.00	0	0	N.D.	N.D.
16)	MA	O,P-DDT	0.00	0.00	0	0	N.D.	N.D.
17)	MA	CARBOPHENOTHION	0.00	0.00	0	0	N.D.	N.D.

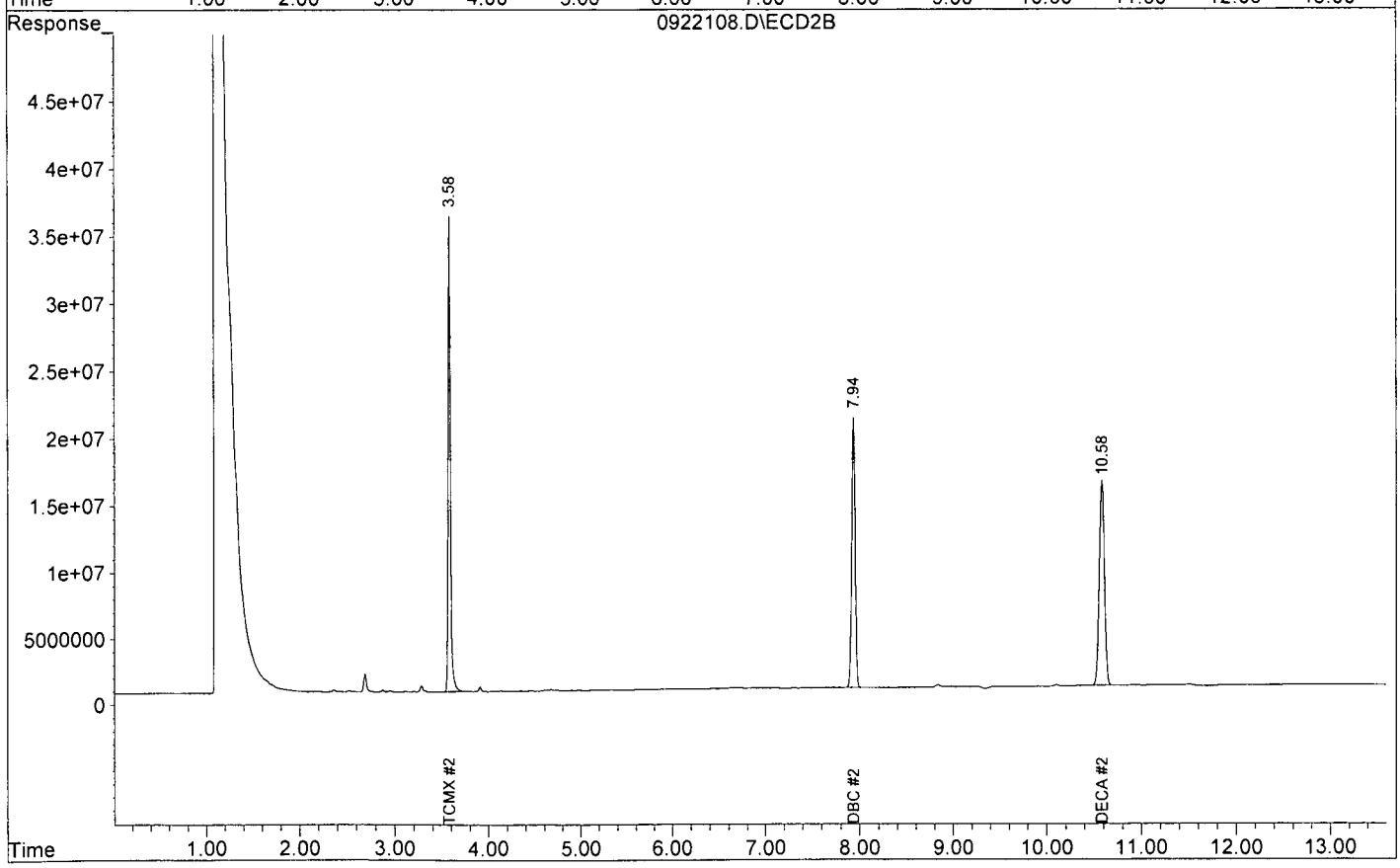
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922108.D
Acq On : 9-23-14 18:39:50
Sample : 140916A BLK 5X1/0.05/30.20G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 8
Operator: MA
Inst : Lucy
Multiplr: 3311.26





Laboratory Control Spike Recovery
EPA 8081A SOIL - ISM

APPL ID: **140916S-02100 LCS - 190201**
Batch ID: #81ACT-140916A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
4,4'-DDD	0.167	0.140	83.8	30-135
4,4'-DDE	0.167	0.128	76.6	70-125
4,4'-DDT	0.167	0.127	76.0	45-140
ALDRIN	0.167	0.126	75.4	45-140
CHLORDANE, TECHNICAL	1.67	1.40	83.8	54-121
DIELDRIN	0.167	0.130	77.8	65-125
ENDOSULFAN I	0.167	0.127	76.0	15-135
ENDOSULFAN II	0.167	0.124	74.3	35-140
ENDOSULFAN SULFATE	0.167	0.127	76.0	60-135
ENDRIN	0.167	0.118	70.7	60-135
GAMMA-BHC	0.167	0.127	76.0	60-125
HEPTACHLOR	0.167	0.141	84.4	50-140
HEPTACHLOR EPOXIDE	0.167	0.126	75.4	65-130
HEXACHLOROBENZENE	0.167	0.142	85.0	45-124
METHOXYCHLOR	0.167	0.123	73.7	55-145
TOXAPHENE	1.67	1.42	85.0	39-147
SURROGATE: DECACHLOROBIPHENYL	0.333	0.248	74.5	55-130
SURROGATE: TCMX (S)	0.333	0.270	81.1	70-125

Comments:

Primary	SPK
Quant Method :	OCL0922.M
Extraction Date :	09/16/14
Analysis Date :	09/23/14
Instrument :	Lucy
Run :	0922109
Initials :	MA

Printed: 09/29/14 12:38:24 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922100.D\ECD1A.CH Vial: 100
Acq On : 9-23-14 16:22:44 Operator: MA
Sample : 140909A LCS-1 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint.p

Data File : G:\LUCY\DATA\140922\0922100.D\ECD2B.CH Vial: 100
Acq On : 9-23-14 16:22:45 Operator: MA
Sample : 140909A LCS-1 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint2.p
Quant Time: Sep 24 8:42 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
1)	S TCMX	2.89	3.58	36389582	37039100	0.1726	0.1760	
	Surrogate Spike 0.300 Range 25 - 150 Recovery =					57.53%	58.67%	
22)	S DBC	6.92	7.94	55100083	27222435	0.2021	0.2932	#
	Surrogate Spike 0.300 Recovery =					67.37%	97.73%	
23)	S DECA	9.28	10.58	81616033	21938507	0.2082	0.2360	
	Surrogate Spike 0.300 Range 25 - 150 Recovery =					69.40%	78.67%	
	Target Compounds							
2)	TM A-BHC	3.48	4.00	65457015	68204252	0.2283	0.2271	
3)	TM B-BHC	4.09	4.61	25993726	32030134	0.2214	0.2777	#
4)	M G-BHC(LINDANE)	3.85	4.33	58749790	108.1E6	0.2411	0.2560	
5)	TM D-BHC	4.38	4.87	59229810	55387695	0.2423	0.2338	
6)	M HEPTACHLOR	4.21	4.93	38260001	34529499	0.1946	0.2205	
7)	M ALDRIN	4.52	5.26	37231758	36611295	0.1811	0.1758	
8)	TM HEPTACHLOR EPOXI	5.06	5.70	46534518	49538853	0.2361	0.2450	
9)	TM G-CHLORDANE	5.29	6.01	44741704	39115329	0.2191	0.2259	
10)	TM A-ENDOSULFAN	5.44	6.10	39198799	33103338	0.2231	0.2488	
11)	TM A-CHLORDANE	5.38	6.06	43833897	31627500	0.2214	0.2312	
12)	TM P,P-DDE	5.57	6.20	47522669	46412499	0.2319	0.2465	
13)	M DIELDRIN	5.72	6.37	49733768	41177504	0.2574	0.2316	
14)	M ENDRIN	6.04	6.63	36042514	36225339	0.2117	0.2400	
15)	TM B-ENDOSULFAN	6.31	6.94	37832935	36268190	0.2209	0.2400	
16)	TM P,P-DDD	6.14	6.77	39408581	36364018	0.2215	0.2709	
17)	TM ENDRIN ALDEHYDE	6.55	7.07	29971718	24754258	0.2162	0.2327	
18)	M P,P-DDT	6.43	7.13	37678807	31159733	0.2323	0.2731	
19)	TM ENDOSULFAN SULFA	6.78	7.43	31786805	32981279	0.2027	0.2623	#
20)	TM ENDRIN KETONE	7.55	8.03	36827024	38106658	0.2449	0.2803	
21)	TM METHOXYCHLOR	7.22	7.71	15227223	17289878	0.2197	0.2638	

Target Compounds

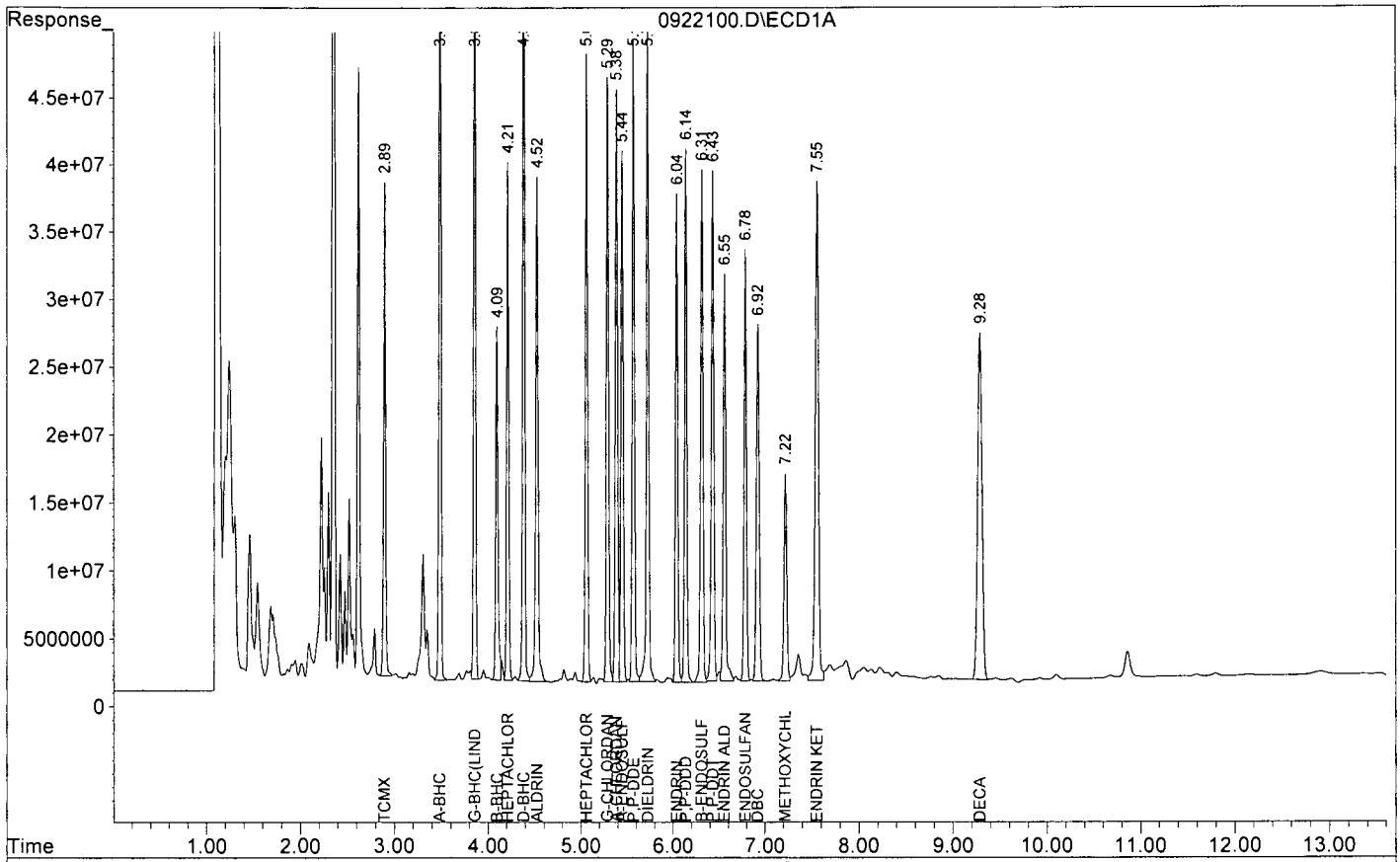
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
0922100.D OCL0922.M Mon Sep 29 13:12:31 2014

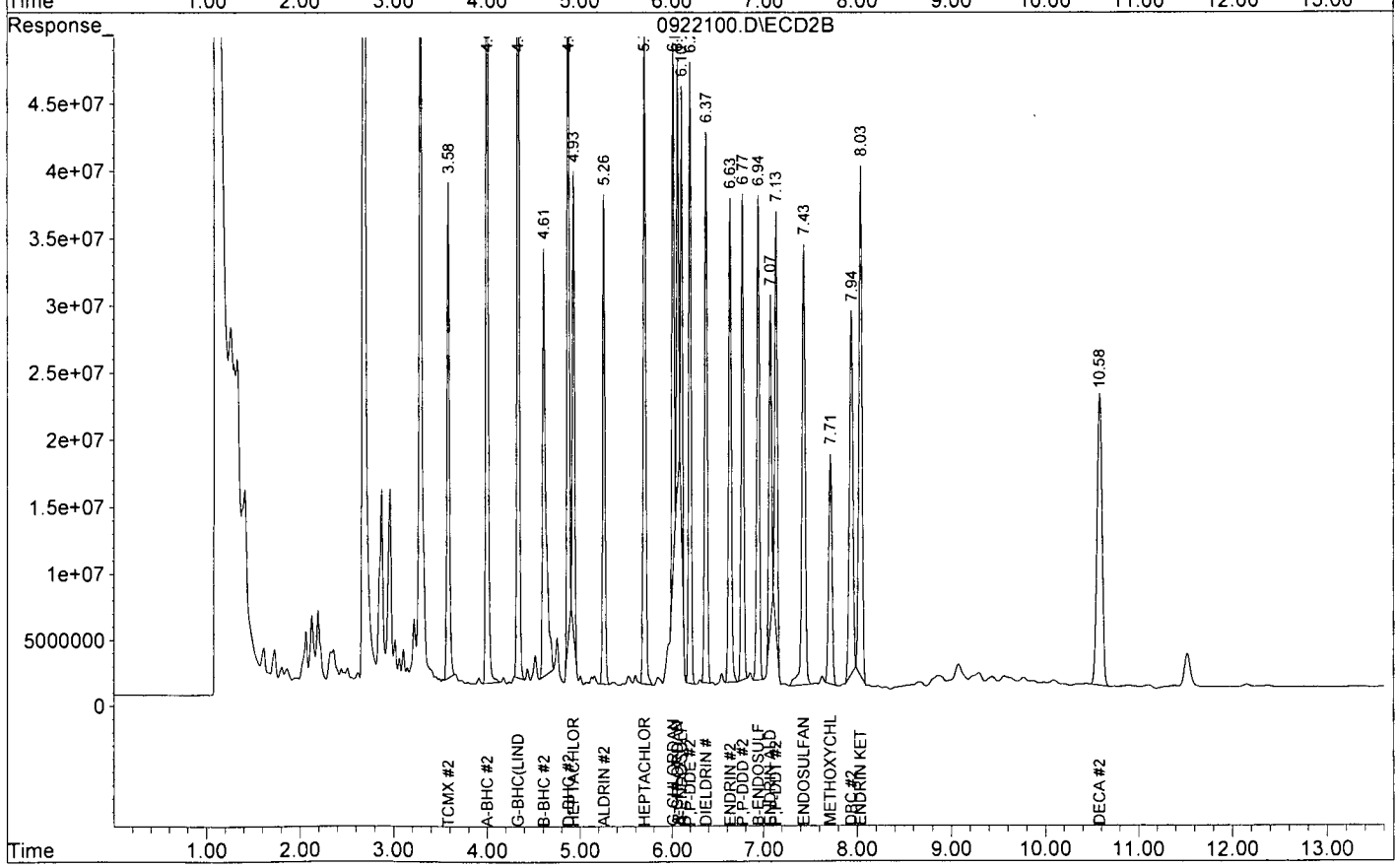
Algorithm = $\frac{58749790 \times 2}{2 \times 243641000} = 0.2411$ HA 9/29/14

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922100.D
Acq On : 9-23-14 16:22:44
Sample : 140909A LCS-1 1/500
Misc : water
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 100
Operator: MA
Inst : Lucy
Multiplr: 2.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922101.D\ECD1A.CH Vial: 1
Signal #2 : G:\LUCY\DATA\140922\0922101.D\ECD2B.CH
Acq On : 9-23-14 16:39:09 Operator: MA
Sample : 140909A LCS-2 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:11 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

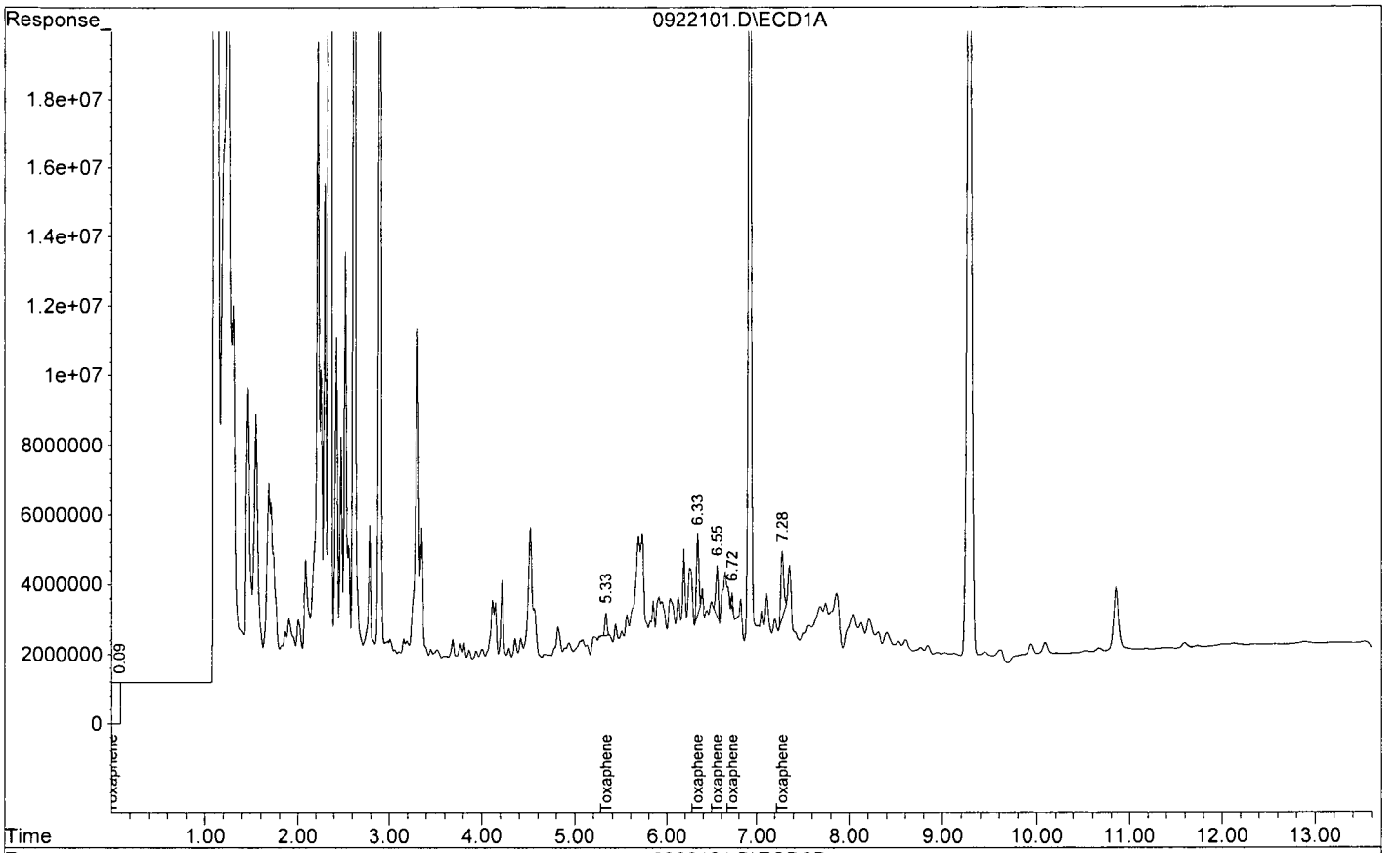
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
Target Compounds							
1) ANM Toxaphene Total	0.00	0.00	6776375	7093274	0.7952m	0.8703m	
2) L2AK Toxaphene	5.33	6.55	660016	857659	0.7981	1.2484	#
3) L2AK Toxaphene {2}	6.34	7.01	2291425	1205236	0.9129	0.8852	
4) L2AK Toxaphene {3}	6.55	7.32	1480487	1549435	0.7875	0.7024	
5) L2AK Toxaphene {4}	6.72	7.42	452919	1789006	0.5741	1.1024	#
6) L2AK Toxaphene {5}	7.28	8.07	1891528	1691938	0.7518	0.7444	
Sum Toxaphene			6776375	7093274	3.8244	4.6828	
Average Toxaphene					0.765	0.937	

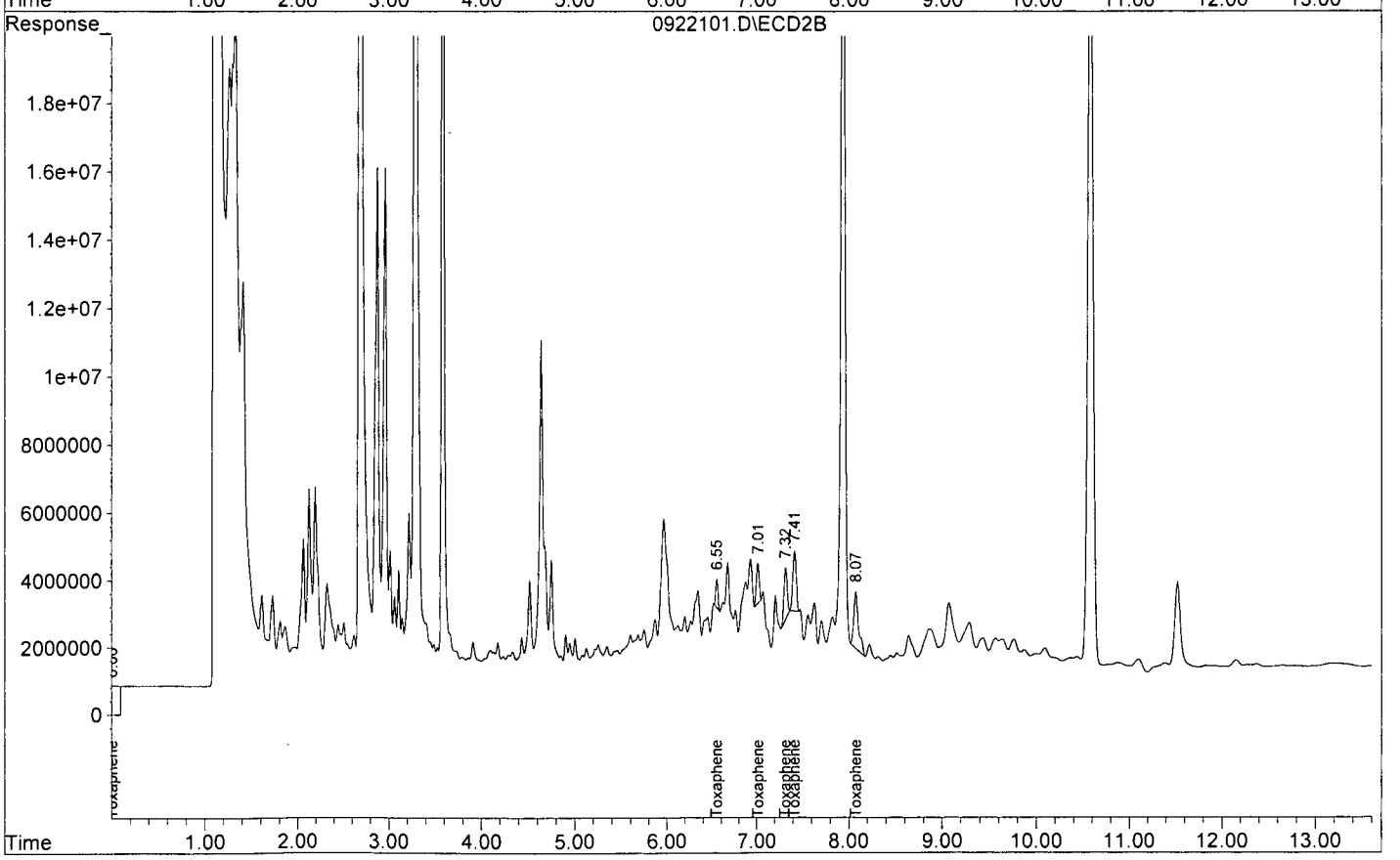
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922101.D
Acq On : 9-23-14 16:39:09
Sample : 140909A LCS-2 1/500
Misc : water
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 1
Operator: MA
Inst : Lucy
Multiplr: 2.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922103.D\ECD1A.CH Vial: 3
Signal #2 : G:\LUCY\DATA\140922\0922103.D\ECD2B.CH
Acq On : 9-23-14 17:17:44 Operator: MA
Sample : 140909A LCS-4 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:48 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

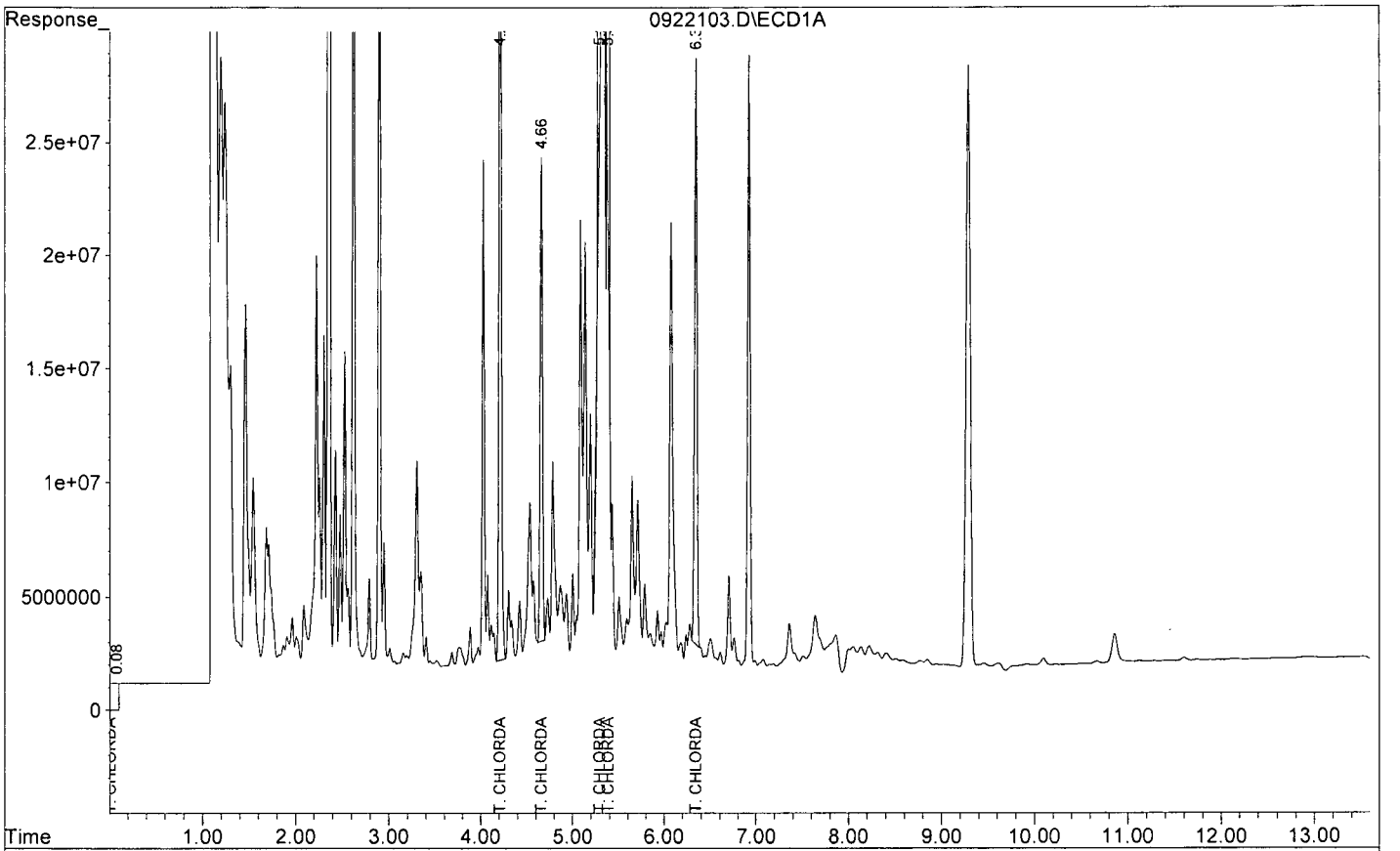
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	ANM T. CHLORDANE Tot	0.00	0.00	242.1E6	251.4E6	3.3706m	3.7956m
2)	L2AK T. CHLORDANE	4.21	4.93	45524921	48248417	3.2628	4.0088
3)	L2AK T. CHLORDANE {2}	4.66	5.27	21291362	24996751	2.9686	3.2335
4)	L2AK T. CHLORDANE {3}	5.29	6.01	95079415	107.9E6	3.4071	3.7991
5)	L2AK T. CHLORDANE {4}	5.39	6.10	54476406	48586888	3.3596	3.7577
6)	L2AK T. CHLORDANE {5}	6.34	7.02	25711586	21715094	3.9096	4.2178
	Sum T. CHLORDANE			242.1E6	251.4E6	16.9077	19.0169
	Average T. CHLORDANE					3.382	3.803

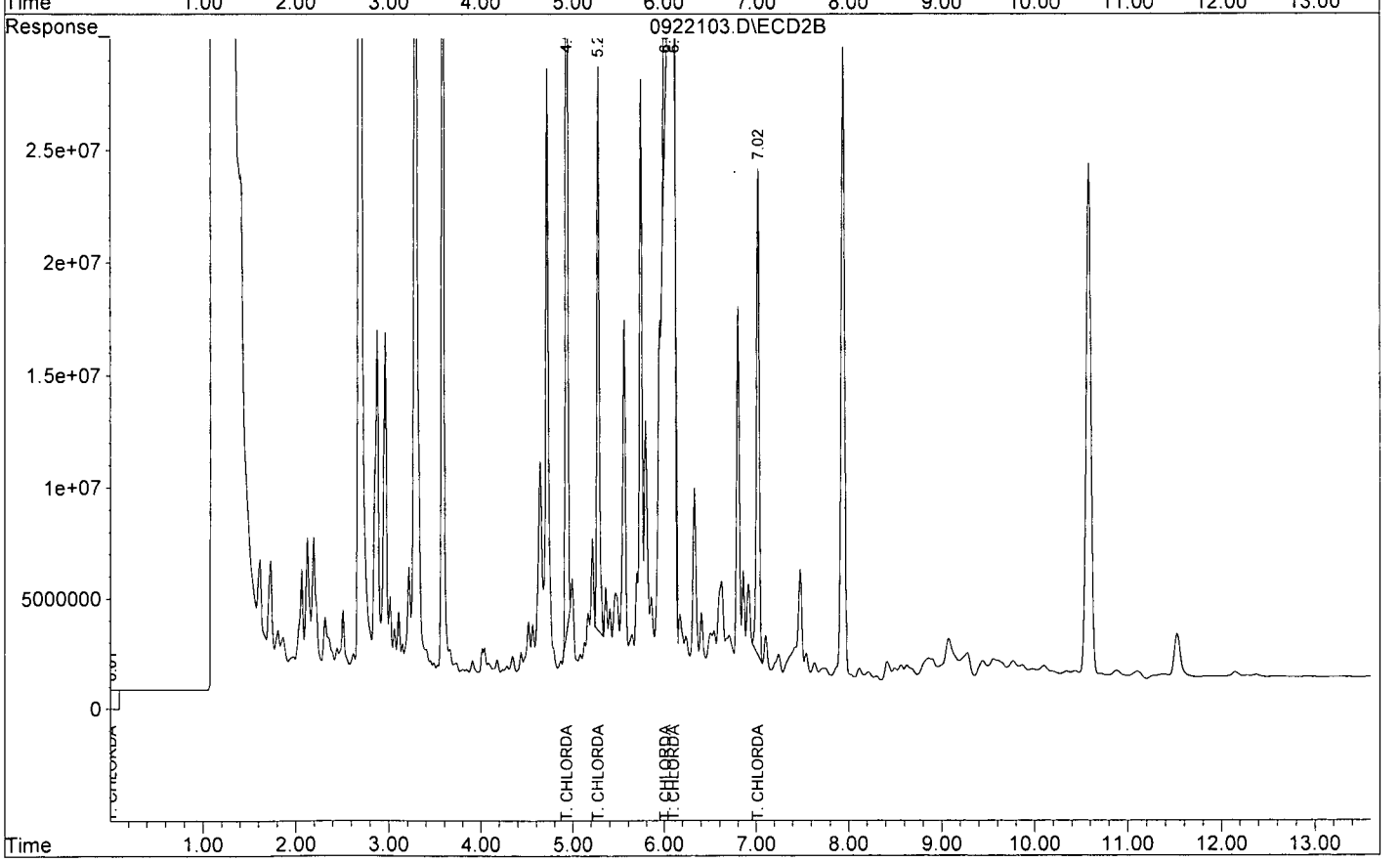
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922103.D
Acq On : 9-23-14 17:17:44
Sample : 140909A LCS-4 1/500
Misc : water
Quant Method : G:\LUCY\DATA\140922\TCH0922.M

Vial: 3
Operator: MA
Inst : Lucy
Multiplr: 2.00





Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922104.D\ECD1A.CH Vial: 4
Acq On : 9-23-14 17:34:08 Operator: MA
Sample : 140909A LCS-5 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint.p

Data File : G:\LUCY\DATA\140922\0922104.D\ECD2B.CH Vial: 4
Acq On : 9-23-14 17:34:09 Operator: MA
Sample : 140909A LCS-5 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

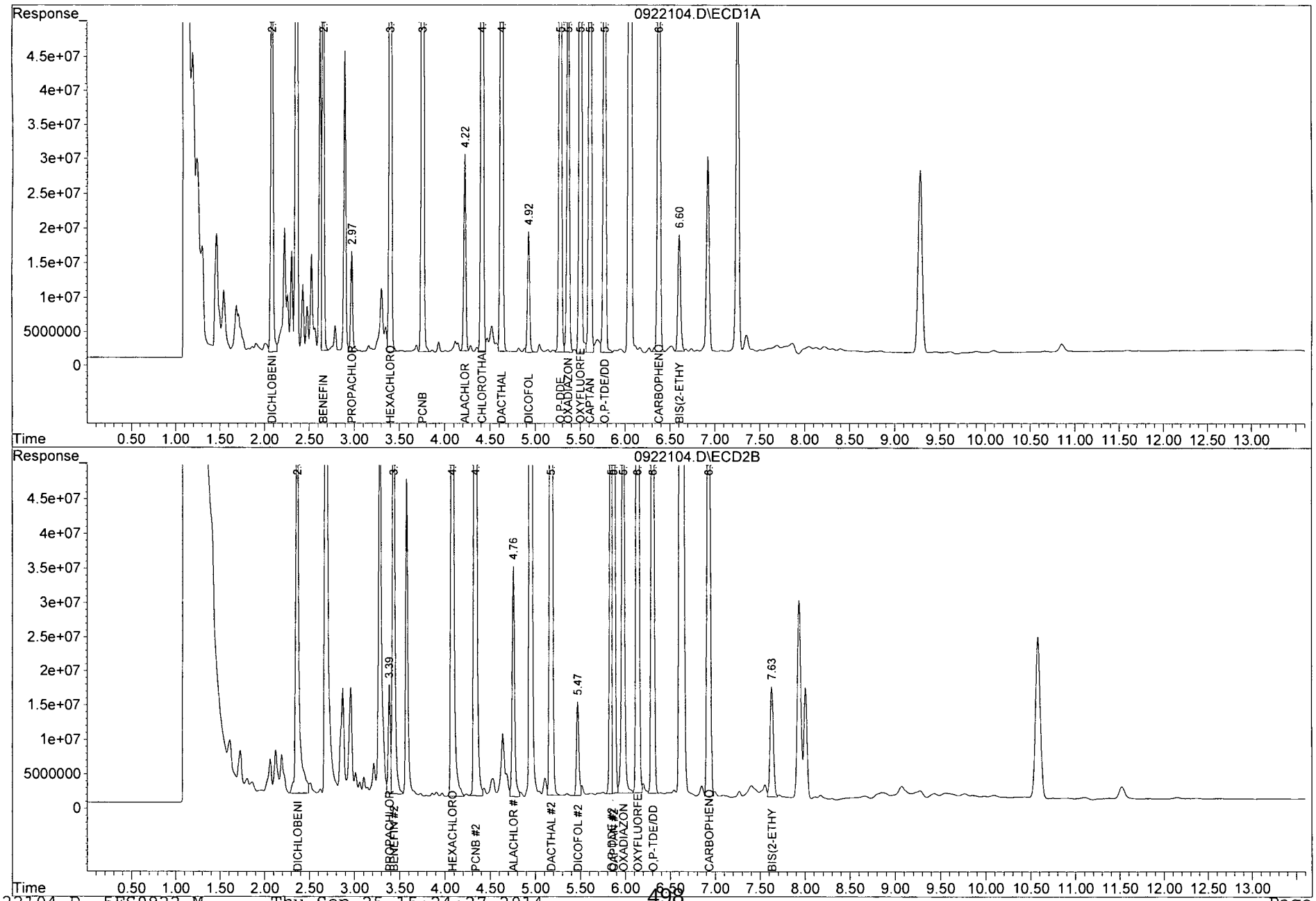
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		Target Compounds							
1)	MA	DICHLOBENIL	2.08	2.37	67754490	65854170	0.7044	0.7987	
2)	MA	BENEFIN	2.65	3.44	71080343	77500783	0.8190	0.8065	
3)	MA	PROPACHLOR	2.97	3.39	14530978	15820522	0.8930	1.0515	
4)	MA	HEXACHLOROBENZEN	3.40	4.08	166.4E6	157.2E6	0.5347	0.5975	
5)	MA	PCNB	3.75	4.34	198.5E6	220.3E6	0.7522	0.8087	
6)	MA	CHLOROTHALONIL	4.41	0.00	228.1E6	0	0.7857	N.D.	#
7)	MA	ALACHLOR	4.22	4.76	28507642	33613103	0.9099	0.9481	
8)	MA	DACTHAL	4.62	5.17	175.6E6	182.1E6	0.8148	0.8840	
9)	MA	DICOFOL	4.92	5.47	17615802	13637600	0.4615	0.4928	
10)	MA	O,P-DDE	5.28	5.85	125.3E6	146.0E6	0.8393	0.9980	
11)	MA	OXADIAZON	5.36	5.98	66989593	86854550	0.8093	0.9483	
12)	MA	OXYFLUORFEN	5.50	6.14	155.5E6	183.6E6	0.8663	0.9332	
13)	MA	CAPTAN	5.61	5.87	164.5E6	184.2E6	1.0052	1.4197	#
14)	MA	O,P-TDE/DDD	5.77	6.31	123.0E6	129.8E6	0.8427	0.9762	
17)	MA	CARBOPHENOTHION	6.37	6.93	104.4E6	105.3E6	1.1474	1.1415	
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.63	16995996	16085292	18.8070	20.9857	
		Target Compounds							
15)	MA	NITROFEN	0.00	0.00	0	0	N.D.	N.D.	
16)	MA	O,P-DDT	0.00	0.00	0	0	N.D.	N.D.	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922104.D
Acq On : 9-23-14 17:34:08
Sample : 140909A LCS-5 1/500
Misc : water
Quant Method : G:\LUCY\DATA\140922\5ES0922.M

Vial: 4
Operator: MA
Inst : Lucy
Multiplr: 2.00



Laboratory Control Spike Recovery
EPA 8081A OCL WATER

APPL ID: **140909W-02108 LCS - 190200**
Batch ID: #81HC0-140909A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
4,4'-DDD	0.300	0.271	90.3	25-150
4,4'-DDE	0.300	0.247	82.3	35-140
4,4'-DDT	0.300	0.273	91.0	45-140
ALDRIN	0.300	0.176	58.7	25-140
CHLORDANE, TECHNICAL	4.00	3.28	82.0	40-140
DIELDRIN	0.300	0.232	77.3	60-130
ENDOSULFAN I	0.300	0.249	83.0	50-110
ENDOSULFAN II	0.300	0.240	80.0	30-130
ENDOSULFAN SULFATE	0.300	0.262	87.3	55-135
ENDRIN	0.300	0.240	80.0	55-135
GAMMA-BHC	0.300	0.256	85.3	25-135
HEPTACHLOR	0.300	0.220	73.3	40-130
HEPTACHLOR EPOXIDE	0.300	0.245	81.7	60-130
HEXACHLOROBENZENE	1.00	0.597	59.7	29-146
METHOXYCHLOR	0.300	0.264	88.0	55-150
TOXAPHENE	1.00	0.870	87.0	58-116
SURROGATE: DECACHLOROBIPHENYL	0.300	0.236	78.7	30-135
SURROGATE: TCMX (S)	0.300	0.176	58.7	25-140

Comments: _____

Primary	SPK
Quant Method :	OCL0922.M
Extraction Date :	09/09/14
Analysis Date :	09/23/14
Instrument :	Lucy
Run :	0922100
Initials :	MA

Printed: 09/29/14 12:38:24 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922109.D\ECD1A.CH Vial: 9
Signal #2 : G:\LUCY\DATA\140922\0922109.D\ECD2B.CH
Acq On : 9-23-14 18:56:13 Operator: MA
Sample : 140916A LCS-1 5X1/0.05/30.35G Inst : Lucy
Misc : soil Multiplr: 3294.89
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 8:42 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
1)	S	TCMX	2.89	3.58	36594756	34547086	286.0093	270.4680
		Surrogate Spike 329.489			Recovery	=	86.80%	82.09%
22)	S	DBC	6.92	7.94	44165788	17641273	266.8330	313.0497
		Surrogate Spike 329.489			Recovery	=	80.98%	95.01%
23)	S	DECA	9.28	10.58	55841632	14007073	234.6813	248.2065
		Surrogate Spike 329.489			Recovery	=	71.23%	75.33%
		Target Compounds						
2)	TM	A-BHC	3.48	4.00	22814638	21788541	129.5918	118.2685
3)	TM	B-BHC	4.09	4.61	9235000	9055564	125.6384	129.3494
4)	M	G-BHC(LINDANE)	3.85	4.33	20503736	32660434	138.6419	127.4887
5)	TM	D-BHC	4.38	4.87	20710374	19142817	139.5729	133.1054
6)	M	HEPTACHLOR	4.21	4.93	16817966	14269821	140.9443	150.1062
7)	M	ALDRIN	4.52	5.26	16609981	15946889	133.1258	126.1616
8)	TM	HEPTACHLOR EPOXI	5.06	5.70	16098838	15409857	134.5547	125.5709
9)	TM	G-CHLORDANE	5.29	6.01	16407946	13338204	132.3854	126.8788
10)	TM	A-ENDOSULFAN	5.44	6.11	14142727	10220501	132.5801	126.5354
11)	TM	A-CHLORDANE	5.38	6.06	15728563	10058333	130.8510	121.1468
12)	TM	P,P-DDE	5.57	6.20	16501136	14685602	132.6333	128.4995
13)	M	DIELDRIN	5.72	6.37	15149577	14011602	129.1549	129.8208
14)	M	ENDRIN	6.04	6.63	12503232	10773189	120.9676	117.5683
15)	TM	B-ENDOSULFAN	6.31	6.94	12999075	11410817	125.0514	124.4179
16)	TM	P,P-DDD	6.14	6.77	13159228	10729674	121.8485	140.1101
17)	TM	ENDRIN ALDEHYDE	6.55	7.07	9778004	7358384	116.2197	113.9463
18)	M	P,P-DDT	6.43	7.13	13024371	8819142	132.2607	127.3576
19)	TM	ENDOSULFAN SULFA	6.78	7.44	10723251	9618484	112.6734	127.2435
20)	TM	ENDRIN KETONE	7.55	8.03	11810565	10211263	129.3776	123.7626
21)	TM	METHOXYCHLOR	7.22	7.72	5575437	4912331	132.5250	123.4898

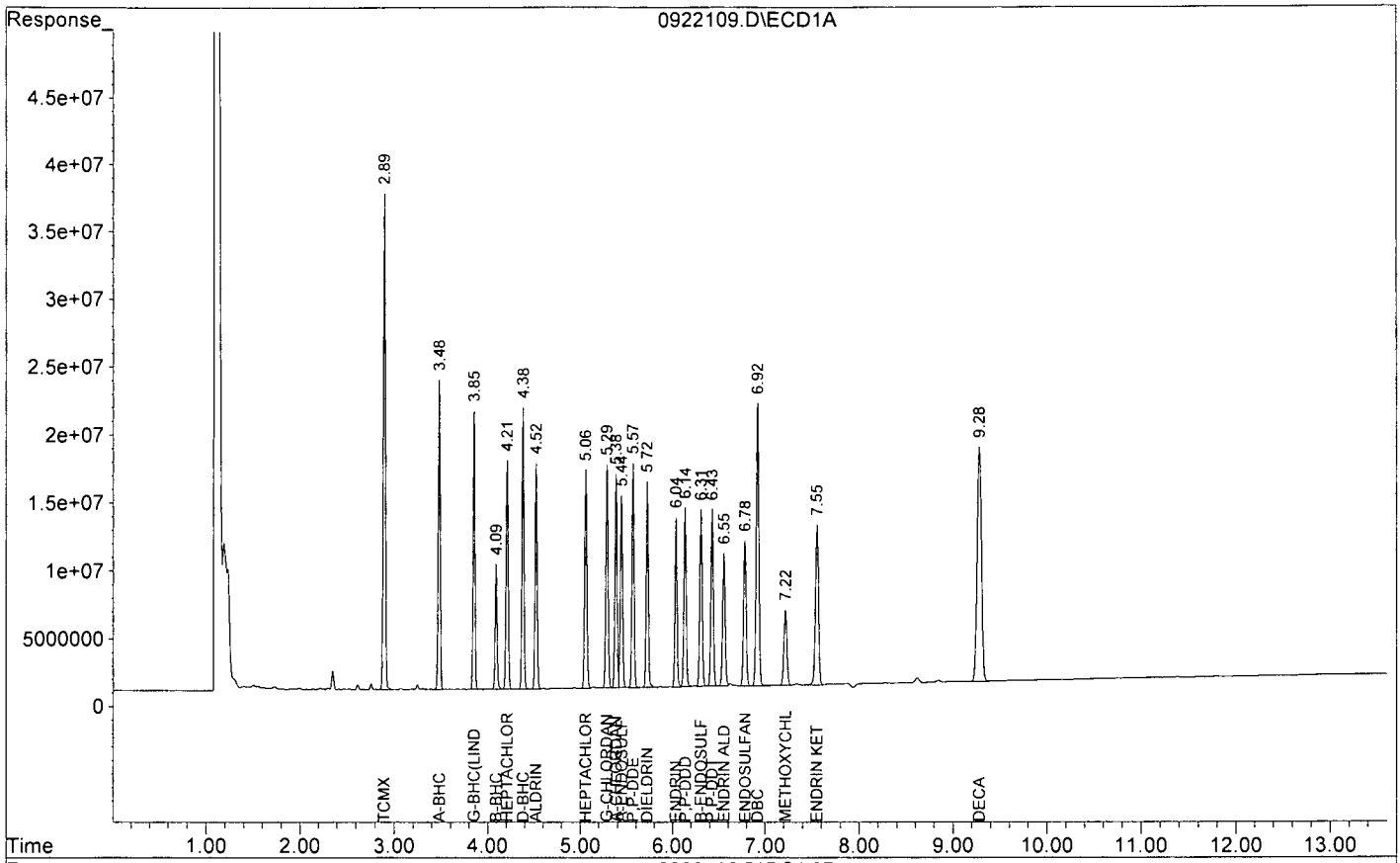
Target Compounds

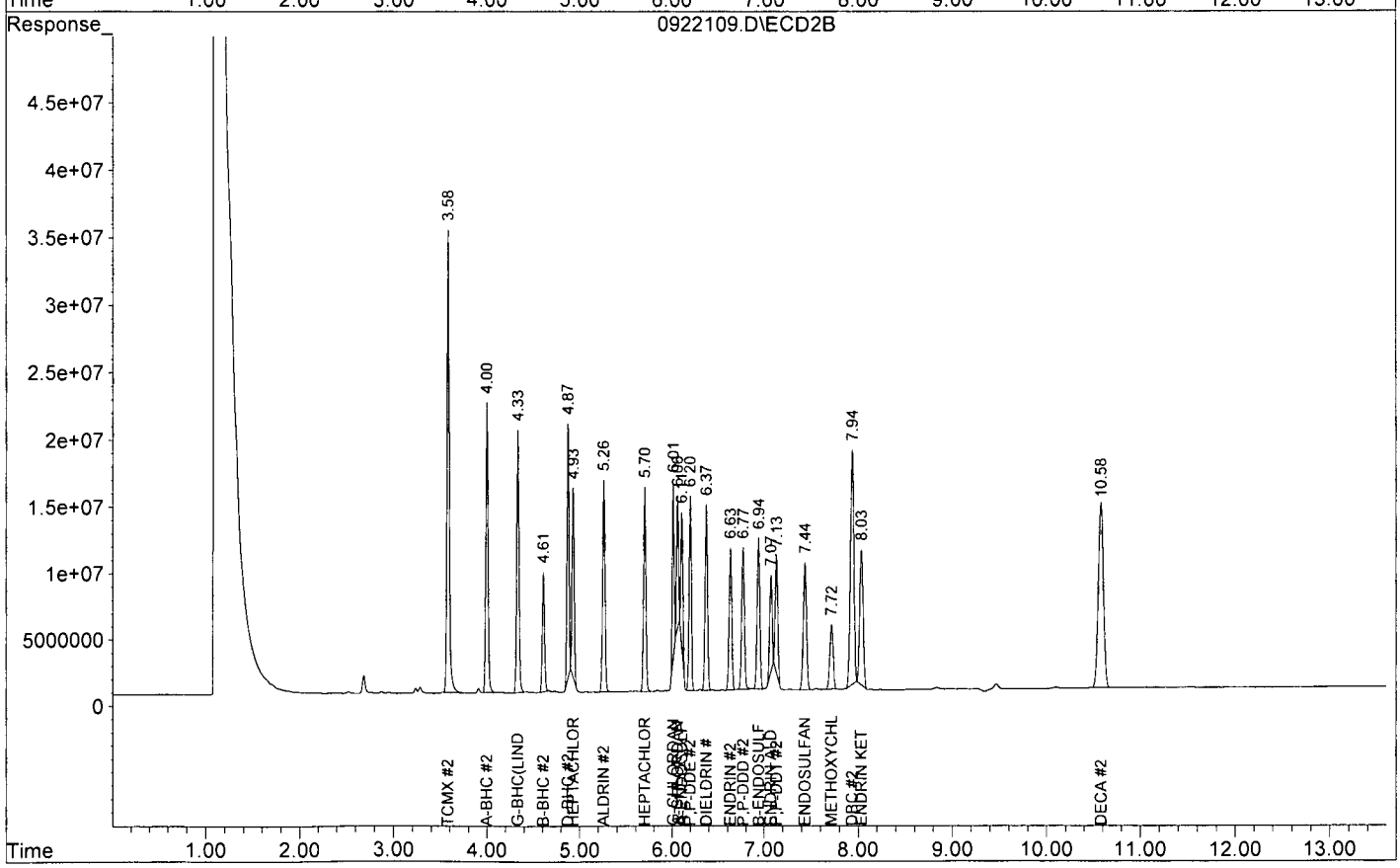
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922109.D
Acq On : 9-23-14 18:56:13
Sample : 140916A LCS-1 5X1/0.05/30.35G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 9
Operator: MA
Inst : Lucy
Multiplr: 3294.89





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922110.D\ECD1A.CH Vial: 10
Signal #2 : G:\LUCY\DATA\140922\0922110.D\ECD2B.CH
Acq On : 9-23-14 19:12:39 Operator: MA
Sample : 140916A LCS-2 5X1/0.05/30.20G Inst : Lucy
Misc : soil Multiplr: 3311.26
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:11 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

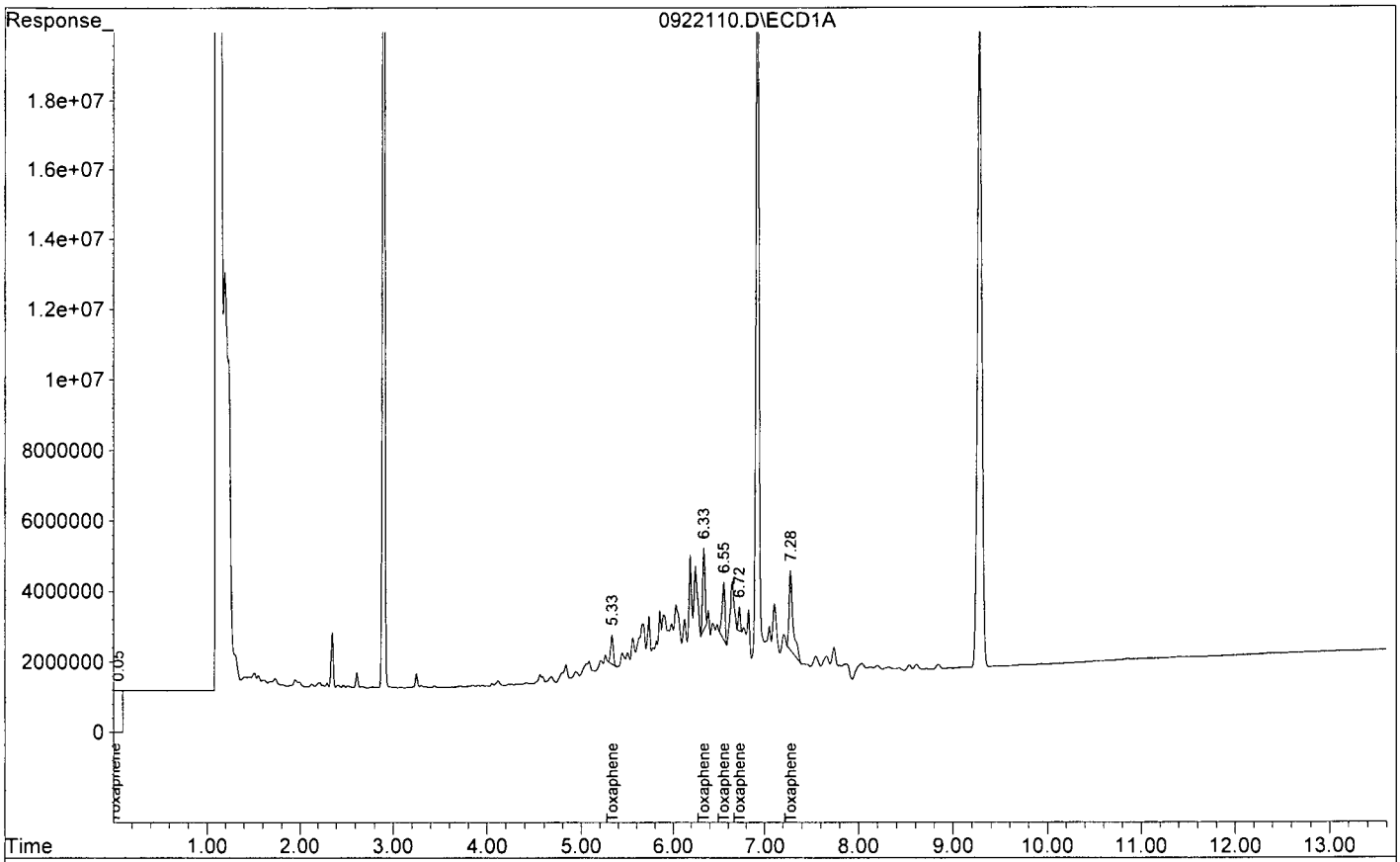
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	7740870	6997199	1503.8871m	1421.4031m
2) L2AK Toxaphene	5.33	6.55	833845	572147	1669.4358	1378.8440
3) L2AK Toxaphene {2}	6.34	7.02	2319981	1177855	1530.3276	1432.2144
4) L2AK Toxaphene {3}	6.55	7.32	1640782	1867882	1444.9707	1401.9912
5) L2AK Toxaphene {4}	6.72	7.41	675654	1400608	1417.9392	1428.9248
6) L2AK Toxaphene {5}	7.28	8.08	2270608	1978708	1494.0715	1441.2573
Sum Toxaphene			7740870	6997199	7556.7449	7083.2317
Average Toxaphene					1511.349	1416.646

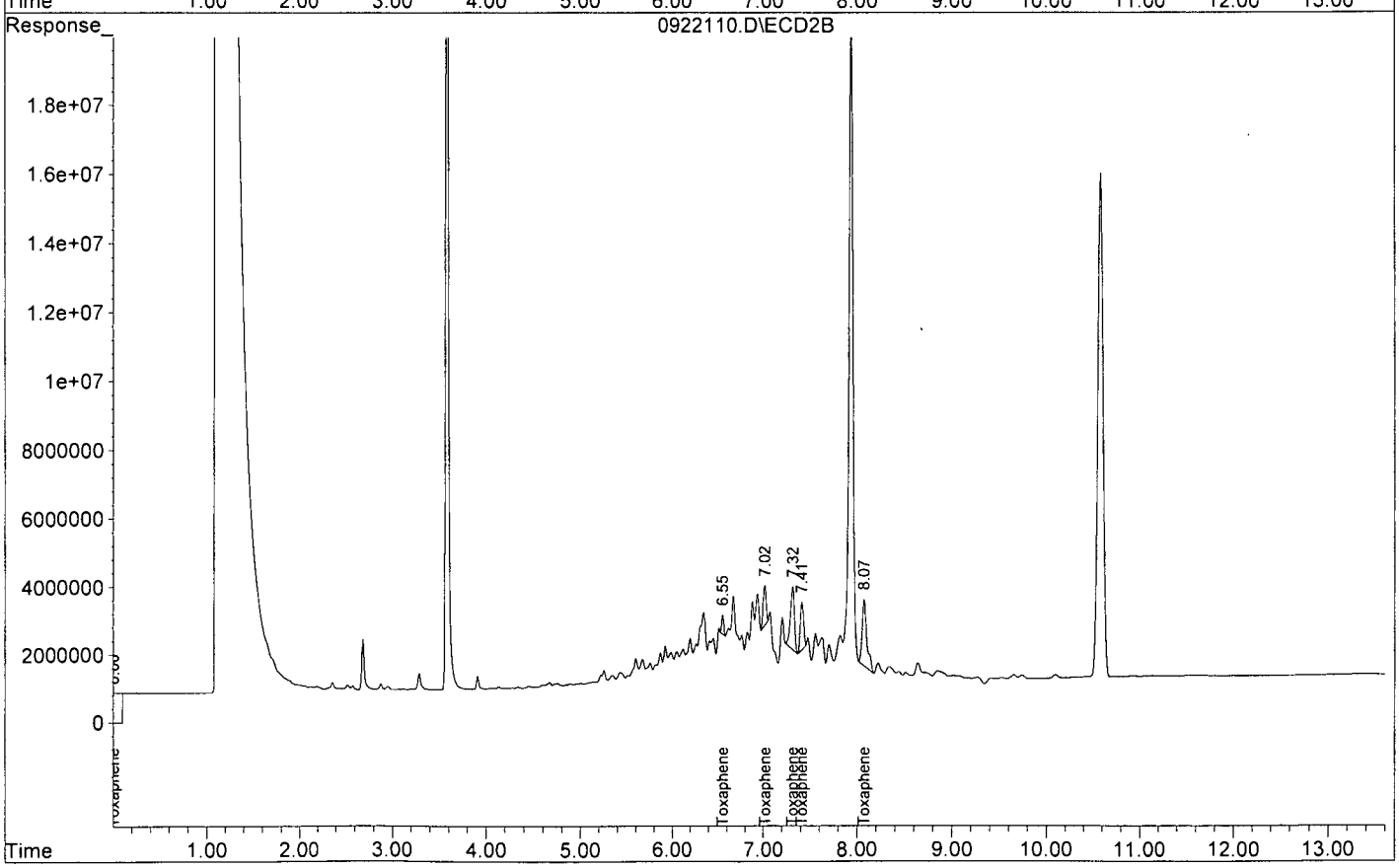
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922110.D
Acq On : 9-23-14 19:12:39
Sample : 140916A LCS-2 5X1/0.05/30.20G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 10
Operator: MA
Inst : Lucy
Multiplr: 3311.26





Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922111.D\ECD1A.CH Vial: 11
Acq On : 9-23-14 19:29:11 Operator: MA
Sample : 140916A LCS-4 5X1/0.05/30.39G Inst : Lucy
Misc : soil Multiplr: 3290.56
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922111.D\ECD2B.CH Vial: 11
Acq On : 9-23-14 19:29:12 Operator: MA
Sample : 140916A LCS-4 5X1/0.05/30.39G Inst : Lucy
Misc : soil Multiplr: 3290.56
IntFile : events2.e
Quant Time: Sep 24 11:48 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

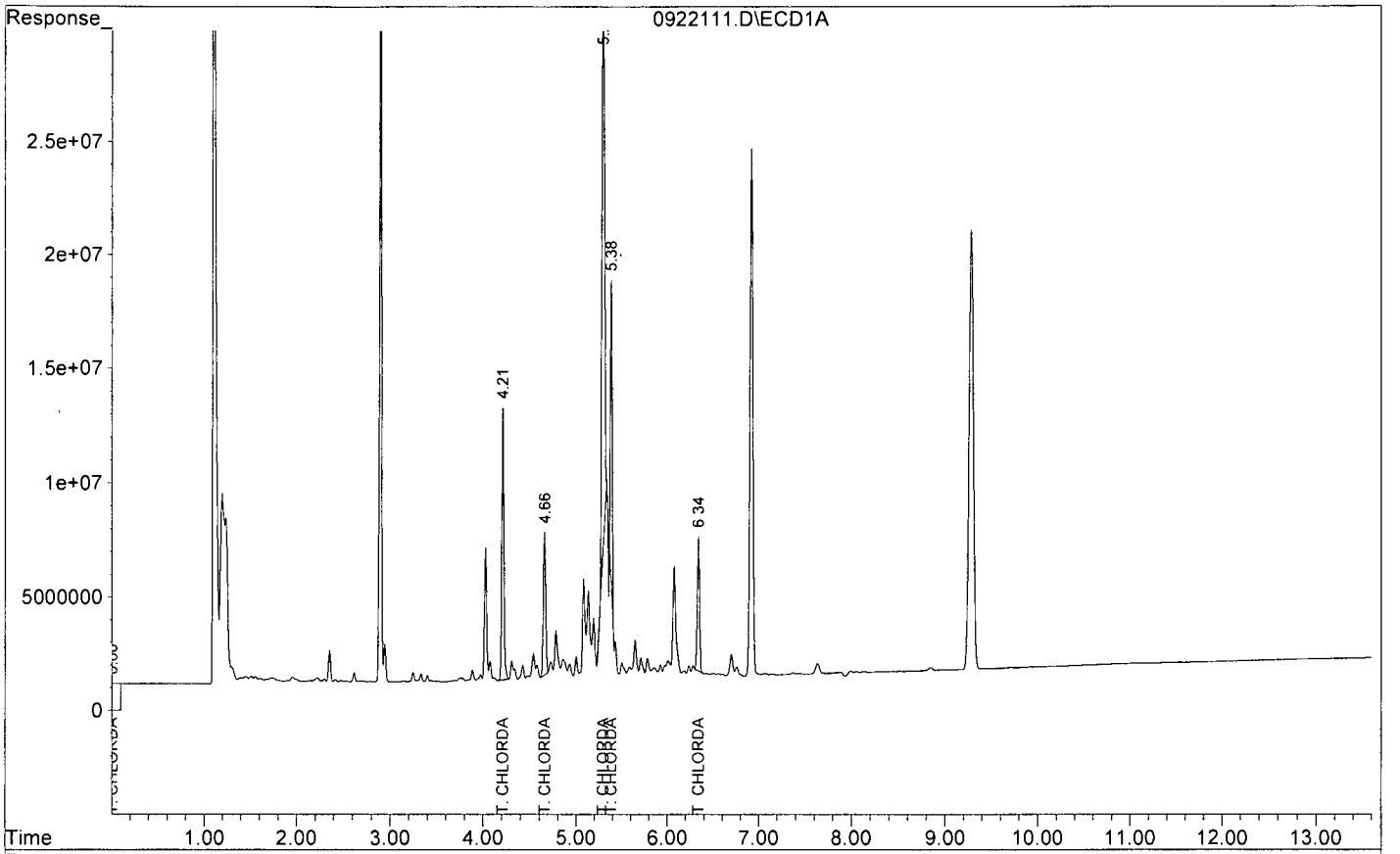
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	61670678	56248986	1412.7162m	1397.0408m
2) L2AK T. CHLORDANE	4.21	4.93	11965664	10730770	1410.9562	1466.8989
3) L2AK T. CHLORDANE {2}	4.66	5.27	6214830	5990322	1425.6704	1274.8945
4) L2AK T. CHLORDANE {3}	5.29	6.01	24258503	24473865	1430.2217	1417.8713
5) L2AK T. CHLORDANE {4}	5.38	6.10	13356813	10519555	1355.2428	1338.5717
6) L2AK T. CHLORDANE {5}	6.34	7.02	5874868	4534475	1469.7505	1449.0784
Sum T. CHLORDANE			61670678	56248986	7091.8416	6947.3148
Average T. CHLORDANE					1418.368	1389.463

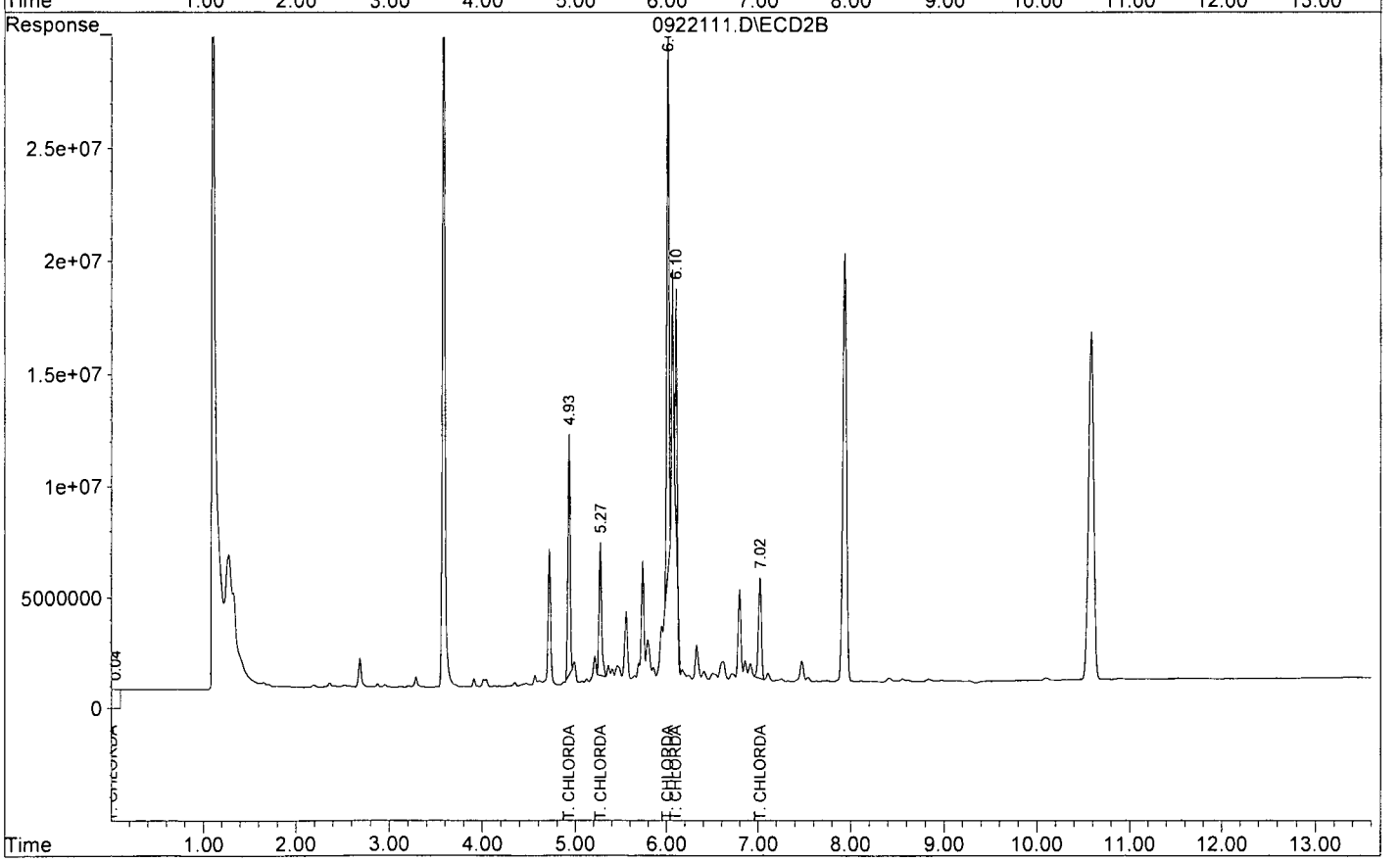
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922111.D
Acq On : 9-23-14 19:29:11
Sample : 140916A LCS-4 5X1/0.05/30.39G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\TCH0922.M

Vial: 11
Operator: MA
Inst : Lucy
Multiplr: 3290.56





Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922112.D\ECD1A.CH Vial: 12
Acq On : 9-23-14 19:45:35 Operator: MA
Sample : 140916A LCS-5 5X1/0.05/30.15G Inst : Lucy
Misc : soil Multiplr: 3316.75
IntFile : rteint.p

Data File : G:\LUCY\DATA\140922\0922112.D\ECD2B.CH Vial: 12
Acq On : 9-23-14 19:45:36 Operator: MA
Sample : 140916A LCS-5 5X1/0.05/30.15G Inst : Lucy
Misc : soil Multiplr: 3316.75
IntFile : rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1) MA	DICHLOBENIL	2.08	2.37	7587970	6381067	130.8169	128.3488
2) MA	BENEFIN	2.65	3.44	8181388	8719177	156.3259	150.4686
3) MA	PROPACHLOR	2.97	3.39	1637108	1717983	166.8398	167.8687
4) MA	HEXACHLOROBENZEN	3.40	4.08	27959719	22531297	149.0043	142.0356
5) MA	PCNB	3.75	4.33	24848138	24514908	156.1464	149.2161
6) MA	CHLOROTHALONIL	4.41	4.95	16111703	15857839	92.0257	88.9697
7) MA	ALACHLOR	4.22	4.76	3213650	3334840	170.0987	155.9938
8) MA	DACTHAL	4.62	5.17	20832432	19264836	160.3311	155.0839
9) MA	DICOFOL	4.92	5.47	4697883	3304410	186.7870	181.7783
10) MA	O,P-DDE	5.27	5.84	13833320	13391116	153.6319	151.8451
11) MA	OXADIAZON	5.36	5.98	7848058	8541727	157.2260	154.6575
12) MA	OXYFLUORFEN	5.50	6.14	17766823	18593268	164.1876	156.6974
13) MA	CAPTAN	5.61	5.87	15916904	13309891	184.1691	170.1068
14) MA	O,P-TDE/DDD	5.77	6.31	13466566	12026913	152.9496	150.0062
15) MA	NITROFEN	6.05	6.63	30339139	21470743	163.6808	160.3645
16) MA	O,P-DDT	6.05	6.63	30339139	21470743	163.6808	160.3645
17) MA	CARBOPHENOTHION	6.37	6.93	9339113	7628428	170.1352	173.7577
18) MA	BIS(2-ETHYLHEXYL	6.60	7.63	1582613	1326795	2904.2331	2870.6507

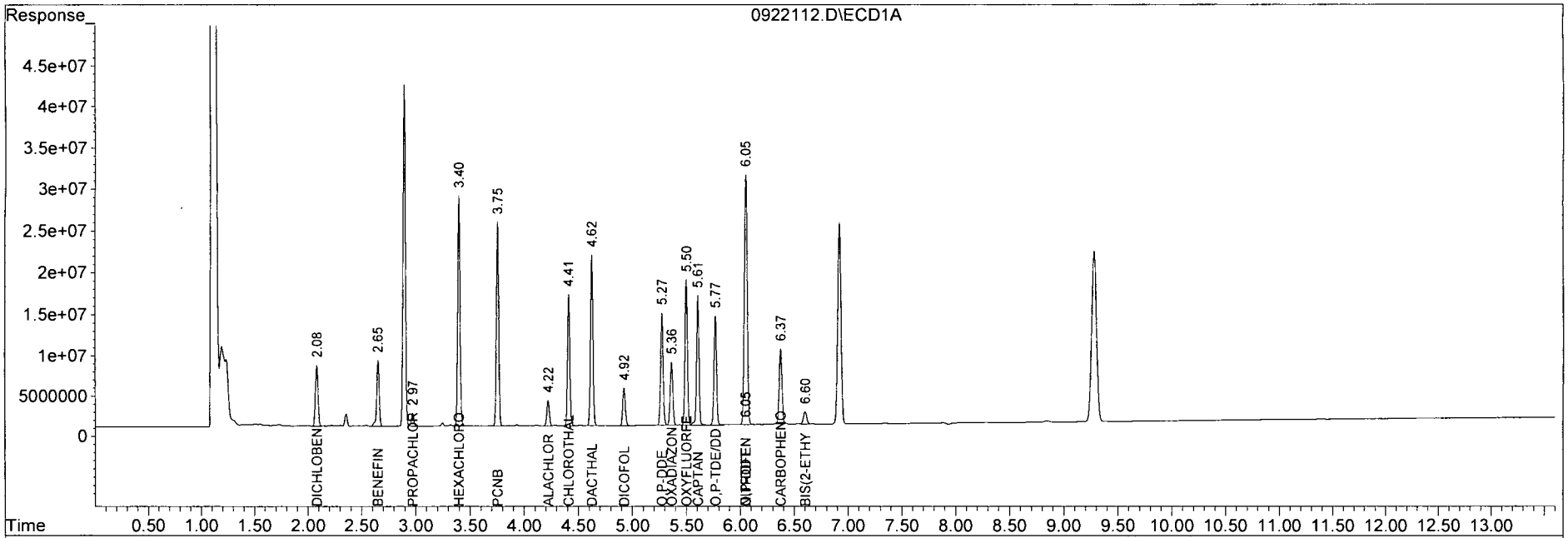
Target Compounds

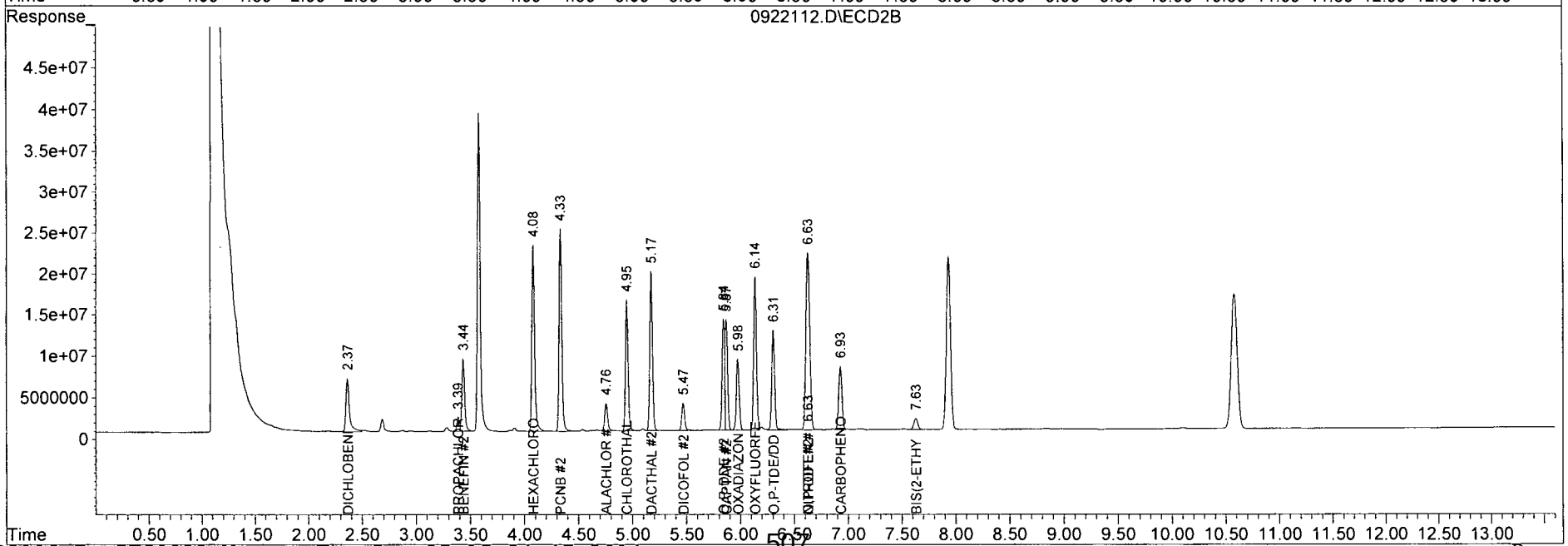
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922112.D
Acq On : 9-23-14 19:45:35
Sample : 140916A LCS-5 5X1/0.05/30.15G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\5ES0922.M

Vial: 12
Operator: MA
Inst : Lucy
Multiplr: 3316.75





Matrix Spike Recoveries

EPA 8081A SOIL - ISM

APPL ID: **140916S-02100 MS - 190201**
Batch ID: #81ACT-140916A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
4,4'-DDD	0.167	ND	0.145	0.143	86.8	85.6	30-135	1.4	30
4,4'-DDE	0.167	0.024	0.181	0.179	94.0	92.8	70-125	1.1	30
4,4'-DDT	0.167	ND	0.189	0.185	113	111	45-140	2.1	30
ALDRIN	0.167	ND	0.154	0.155	92.2	92.8	45-140	0.65	30
CHLORDANE, TECHNICAL	1.67	0.31	1.80	1.76	89.2	86.8	54-121	2.2	30
DIELDRIN	0.167	ND	0.142	0.143	85.0	85.6	65-125	0.70	30
ENDOSULFAN I	0.167	ND	0.195	0.196	117	117	15-135	0.51	30
ENDOSULFAN II	0.167	ND	0.139	0.138	83.2	82.6	35-140	0.72	30
ENDOSULFAN SULFATE	0.167	ND	0.138	0.140	82.6	83.8	60-135	1.4	30
ENDRIN	0.167	ND	0.159	0.154	95.2	92.2	60-135	3.2	30
GAMMA-BHC	0.167	ND	0.151	0.151	90.4	90.4	60-125	0.0	30
HEPTACHLOR	0.167	ND	0.194	0.190	116	114	50-140	2.1	30
HEPTACHLOR EPOXIDE	0.167	ND	0.164	0.165	98.2	98.8	65-130	0.61	30
HEXACHLOROBENZENE	0.167	ND	0.152	0.146	91.0	87.4	45-124	4.0	30
METHOXYCHLOR	0.167	ND	0.151	0.152	90.4	91.0	55-145	0.66	30
TOXAPHENE	1.67	ND	1.39	1.28	83.2	76.6	39-147	8.2	30
SURROGATE: DECACHLOROBIPHENYL	0.333	NA	0.277	0.283	83.2	85.0	55-130		
SURROGATE: TCMX (S)	0.333	NA	0.339	0.333	102	100	70-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	OCL0922.M	OCL0922.M
Extraction Date :	09/16/14	09/16/14
Analysis Date :	09/23/14	09/23/14
Instrument :	Lucy	Lucy
Run :	0922114	0922115
Initials :	MA	

Printed: 09/29/14 12:38:26 PM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922114.D\ECD1A.CH Vial: 14
Signal #2 : G:\LUCY\DATA\140922\0922114.D\ECD2B.CH
Acq On : 9-23-14 20:18:25 Operator: MA
Sample : AZ02100S11 MS-1 5X1/0.05/30.28G Inst : Lucy
Misc : soil Multiplr: 3302.51
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 8:42 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
1)	S TCMX	2.90	3.58	46080015	43161826	360.9747	338.6936	
	Surrogate Spike 330.251			Recovery	=	109.30%	102.56%	
22)	S DBC	6.92	7.93	45719716	20445001	276.8598	363.6414	#
	Surrogate Spike 330.251			Recovery	=	83.83%	110.11%	
23)	S DECA	9.28	10.58	56021325	15573342	235.9807	276.5989	
	Surrogate Spike 330.251			Recovery	=	71.45%	83.75%	
	Target Compounds							
2)	TM A-BHC	3.48	4.00	27598415	26590765	157.6105	145.0737	
3)	TM B-BHC	4.09	4.61	10107696	9343314	138.4074	133.7681	
4)	M G-BHC(LINDANE)	3.85	4.33	24673820	38583419	167.2249	150.9570	
5)	TM D-BHC	4.38	4.87	22436008	21152919	151.5520	147.4222	
6)	M HEPTACHLOR	4.21	4.93	23153526	17715714	194.4885	186.7848	
7)	M ALDRIN	4.52	5.26	20551902	19360456	165.1003	153.5216	
8)	TM HEPTACHLOR EPOXI	5.06	5.70	18636792	20084593	156.1271	164.0425	
9)	TM G-CHLORDANE	5.29	6.01	28291899	23686418	228.7973	225.8364	
10)	TM A-ENDOSULFAN	5.44	6.10	15622496	15686951	146.7907	194.6621	#
11)	TM A-CHLORDANE	5.38	6.06	26548514	17661999	221.3762	213.2203	
12)	TM P,P-DDE	5.57	6.20	21885327	20628186	176.3171	180.9146	
13)	M DIELDRIN	5.72	6.37	20988806	15280091	179.3498	141.9010	
14)	M ENDRIN	6.04	6.63	16149180	14515643	156.6030	158.7761	
15)	TM B-ENDOSULFAN	6.31	6.94	13880981	12699743	133.8441	138.7918	
16)	TM P,P-DDD	6.14	6.76	13646407	11079302	126.6517	144.6194	
17)	TM ENDRIN ALDEHYDE	6.55	7.07	8073122	6176371	96.1776	95.8636	
18)	M P,P-DDT	6.43	7.13	17774449	13050983	180.9144	188.9054	
19)	TM ENDOSULFAN SULFA	6.78	7.43	10842010	10395877	114.1846	137.7050	
20)	TM ENDRIN KETONE	7.55	8.03	11476374	11590604	126.0073	140.8052	
21)	TM METHOXYCHLOR	7.22	7.71	5858919	5996688	139.5851	151.0976	

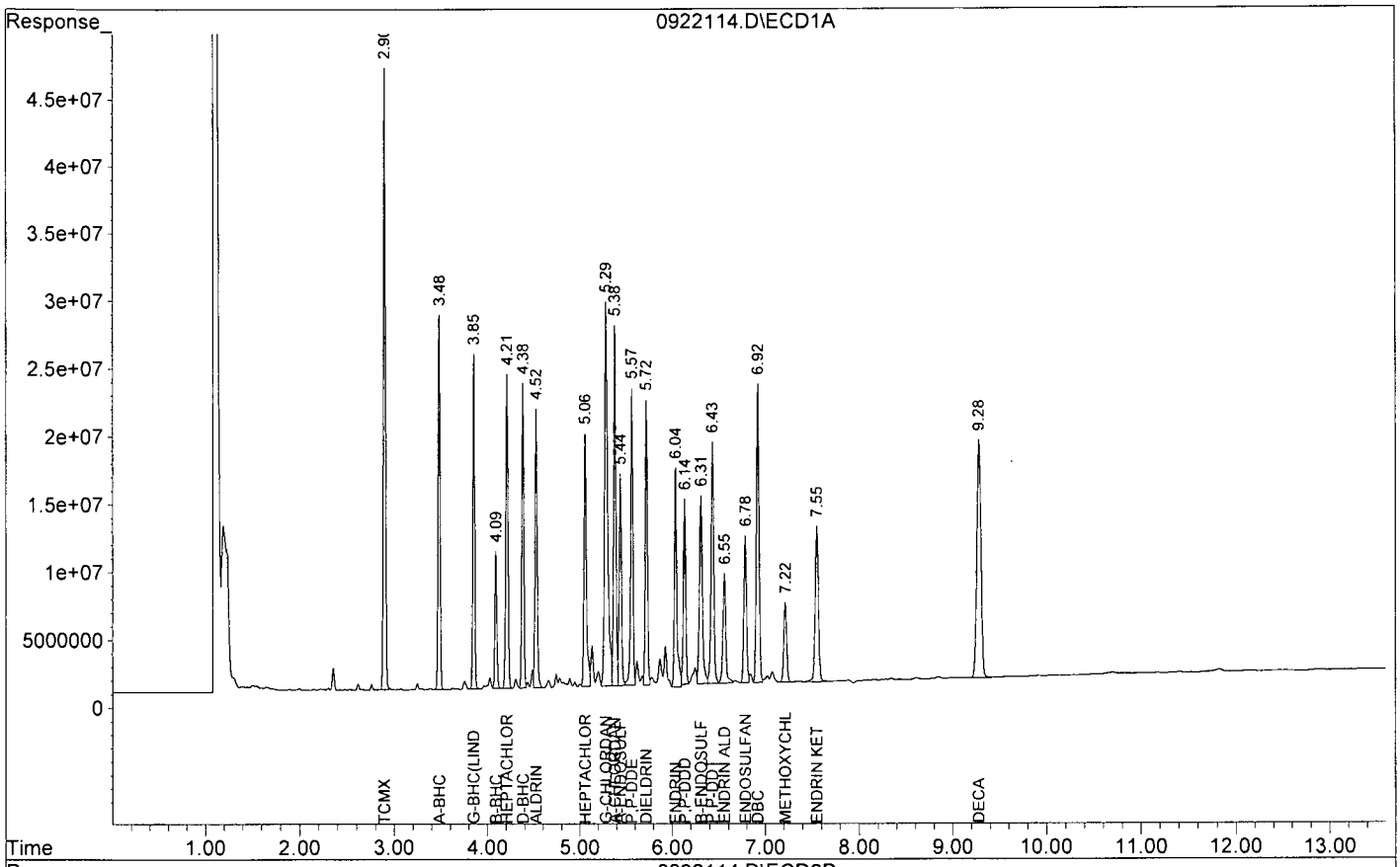
Target Compounds

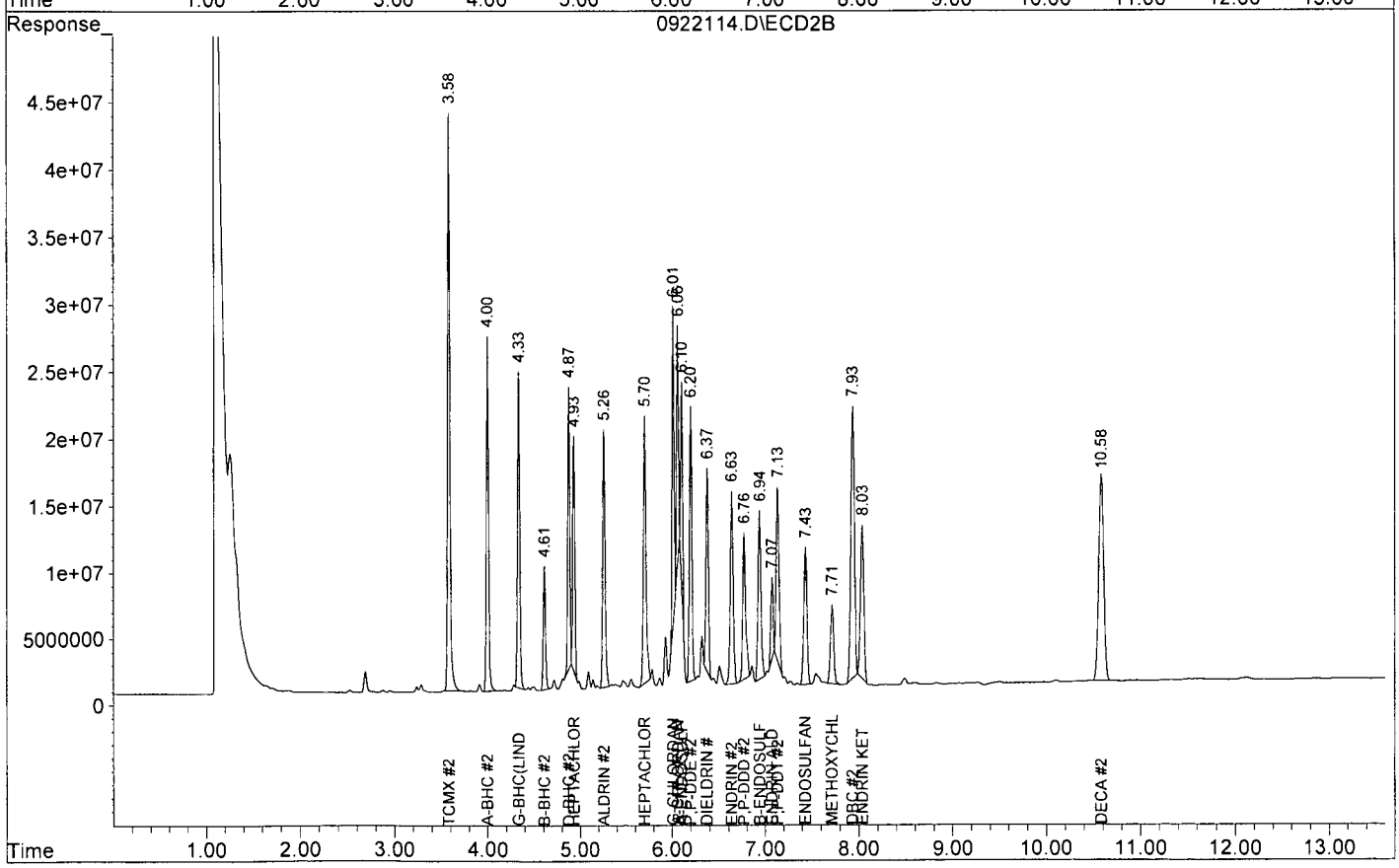
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922114.D
Acq On : 9-23-14 20:18:25
Sample : AZ02100S11 MS-1 5X1/0.05/30.28G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 14
Operator: MA
Inst : Lucy
Multiplr: 3302.51





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922115.D\ECD1A.CH Vial: 15
Signal #2 : G:\LUCY\DATA\140922\0922115.D\ECD2B.CH
Acq On : 9-23-14 20:34:56 Operator: MA
Sample : AZ02100S11 MSD-1 5X1/0.05/30.36G Inst : Lucy
Misc : soil Multiplr: 3293.81
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 8:42 2014 Quant Results File: OCL0922.RES

Quant Method : G:\LUCY\DATA\140922\OCL0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 13:52:46 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
1)	S	TCMX	2.89	3.58	44874896	42598073	350.6079	333.3890	
		Surrogate Spike 329.381			Recovery	=	106.44%	101.22%	
22)	S	DBC	6.92	7.93	43996135	20091088	265.7204	356.4049	#
		Surrogate Spike 329.381			Recovery	=	80.67%	108.20%	
23)	S	DECA	9.28	10.58	53253539	15961991	223.7308	282.7547	#
		Surrogate Spike 329.381			Recovery	=	67.92%	85.84%	
		Target Compounds							
2)	TM	A-BHC	3.48	4.00	28167111	26504388	160.4817	144.2154	
3)	TM	B-BHC	4.09	4.61	10194764	9694274	139.2844	138.4271	
4)	M	G-BHC(LINDANE)	3.85	4.33	24763062	38791960	167.3875	151.3730	
5)	TM	D-BHC	4.38	4.87	22534638	21227482	151.8171	147.5520	
6)	M	HEPTACHLOR	4.21	4.93	22626907	18747768	189.5641	197.1454	
7)	M	ALDRIN	4.52	5.26	20007482	19544749	160.3032	154.5746	
8)	TM	HEPTACHLOR EPOXI	5.06	5.70	18218764	20271334	152.2230	165.1315	
9)	TM	G-CHLORDANE	5.29	6.01	27481047	24110306	221.6543	229.2722	
10)	TM	A-ENDOSULFAN	5.44	6.10	15022947	15860037	140.7853	196.2913	#
11)	TM	A-CHLORDANE	5.38	6.06	25609475	17899690	212.9833	215.5204	
12)	TM	P,P-DDE	5.56	6.20	20917200	20470494	168.0735	179.0585	
13)	M	DIELDRIN	5.72	6.37	20547706	15387075	175.1180	142.5180	
14)	M	ENDRIN	6.04	6.63	15813669	14119952	152.9454	154.0410	
15)	TM	B-ENDOSULFAN	6.31	6.94	13568166	12636201	130.4831	137.7335	
16)	TM	P,P-DDD	6.13	6.77	13294857	10949534	123.0638	142.6890	
17)	TM	ENDRIN ALDEHYDE	6.55	7.07	8183330	6649459	97.2337	102.9345	
18)	M	P,P-DDT	6.42	7.14	17090620	12834399	173.4957	185.2810	
19)	TM	ENDOSULFAN SULFA	6.78	7.43	10680484	10608856	112.1870	140.1203	
20)	TM	ENDRIN KETONE	7.55	8.03	11194992	11203248	122.5939	135.7409	
21)	TM	METHOXYCHLOR	7.22	7.71	5517572	6039444	131.1064	151.7739	

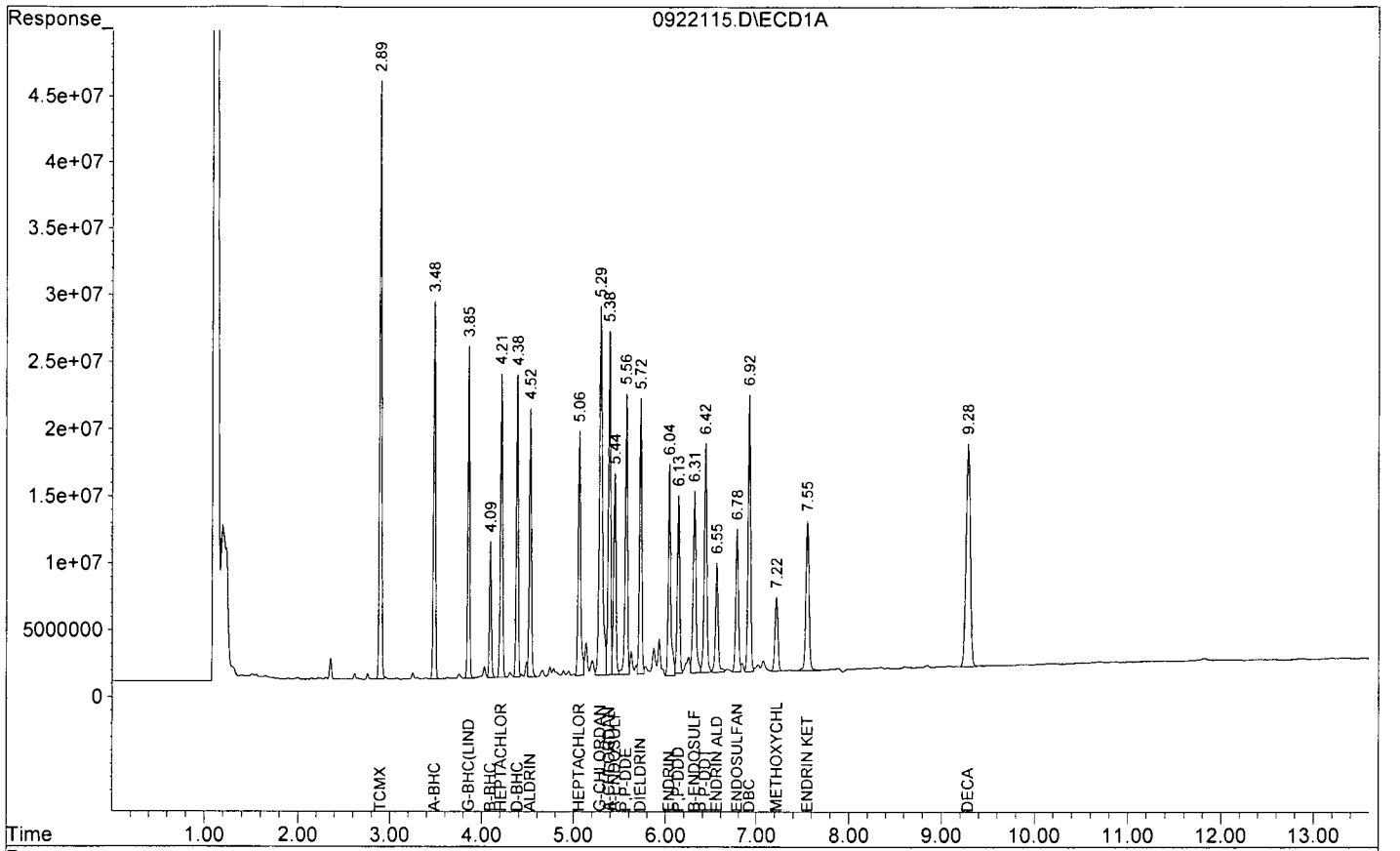
Target Compounds

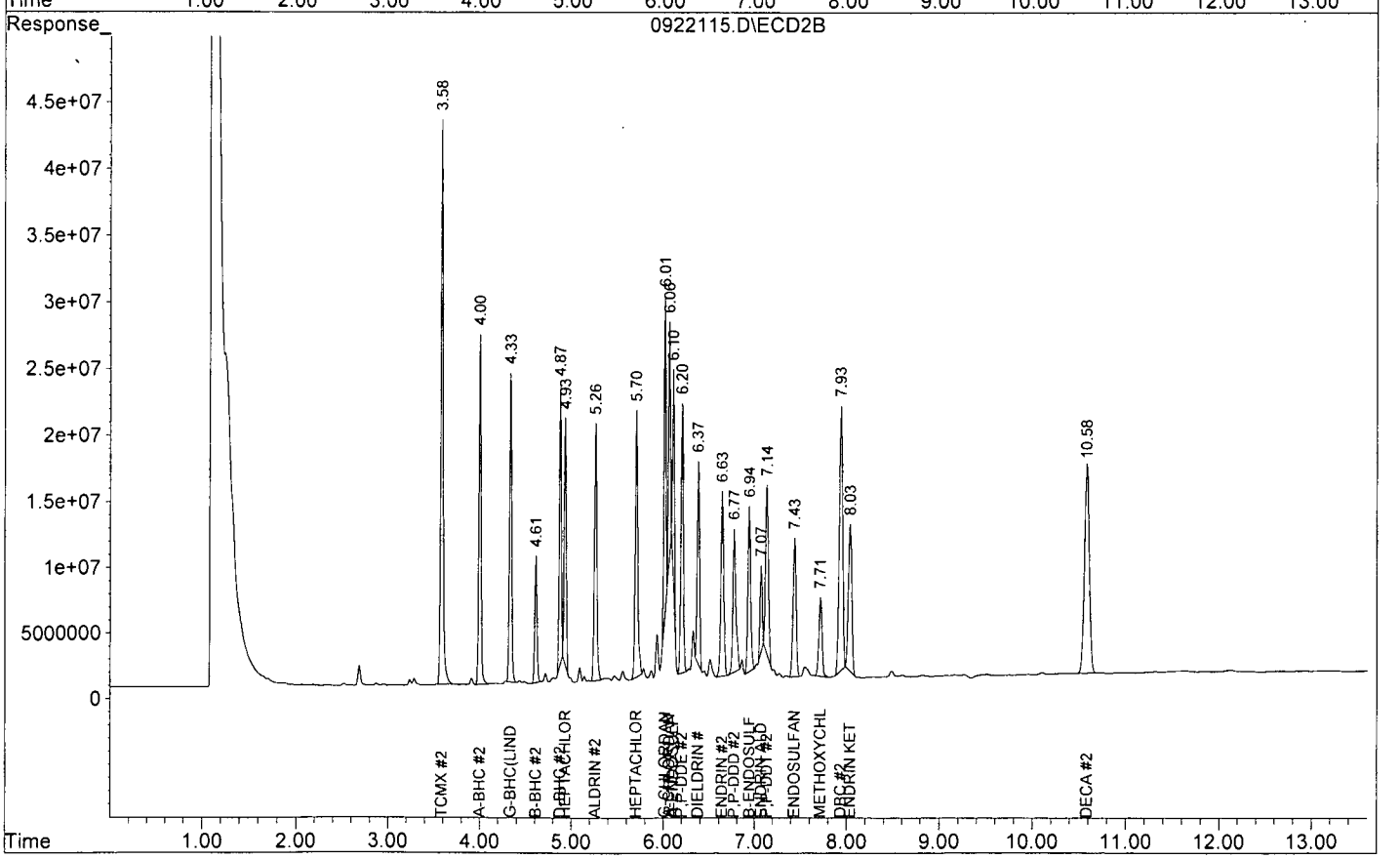
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922115.D
Acq On : 9-23-14 20:34:56
Sample : AZ02100S11 MSD-1 5X1/0.05/30.36G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\OCL0922.M

Vial: 15
Operator: MA
Inst : Lucy
Multiplr: 3293.81





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922116.D\ECD1A.CH Vial: 16
Signal #2 : G:\LUCY\DATA\140922\0922116.D\ECD2B.CH
Acq On : 9-23-14 20:51:20 Operator: MA
Sample : AZ02100S11 MS-2 5X1/0.05/30.11G Inst : Lucy
Misc : soil Multiplr: 3321.16
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:11 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

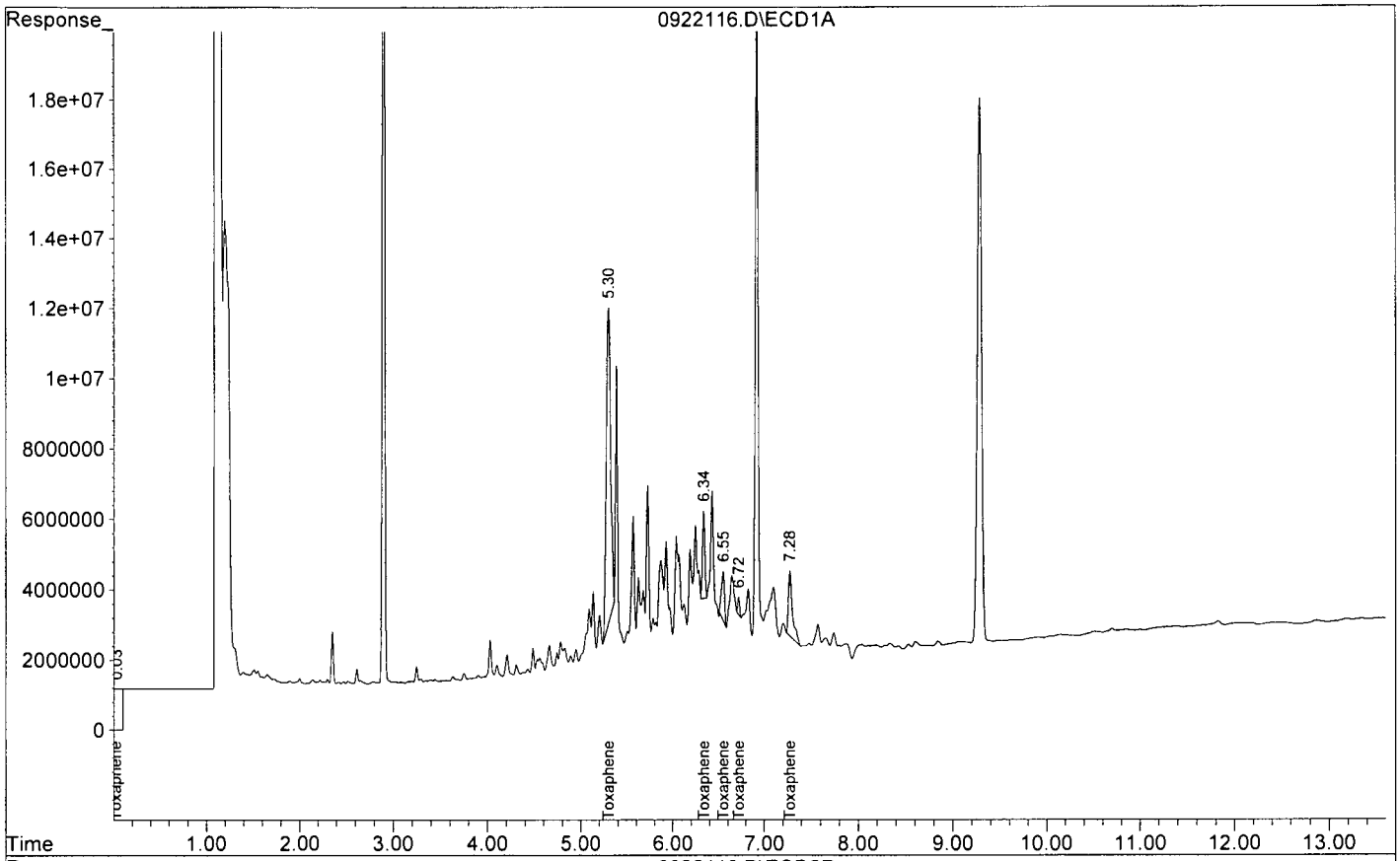
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	15194777	6811714	2960.8470m	1387.8598m#
2) L2AK Toxaphene	5.30	6.55	8966138	316877	18004.6965	765.9396 #
3) L2AK Toxaphene {2}	6.34	7.02	2473505	1560904	1636.4734	1903.6562
4) L2AK Toxaphene {3}	6.55	7.32	1414299	1825910	1249.2391	1374.5839
5) L2AK Toxaphene {4}	6.72	7.42	493334	1441390	1038.4145	1474.9268 #
6) L2AK Toxaphene {5}	7.28	8.08	1847501	1666634	1219.2987	1217.5765
Sum Toxaphene			15194777	6811714	23148.1221	6736.6831
Average Toxaphene					4629.624	1347.337

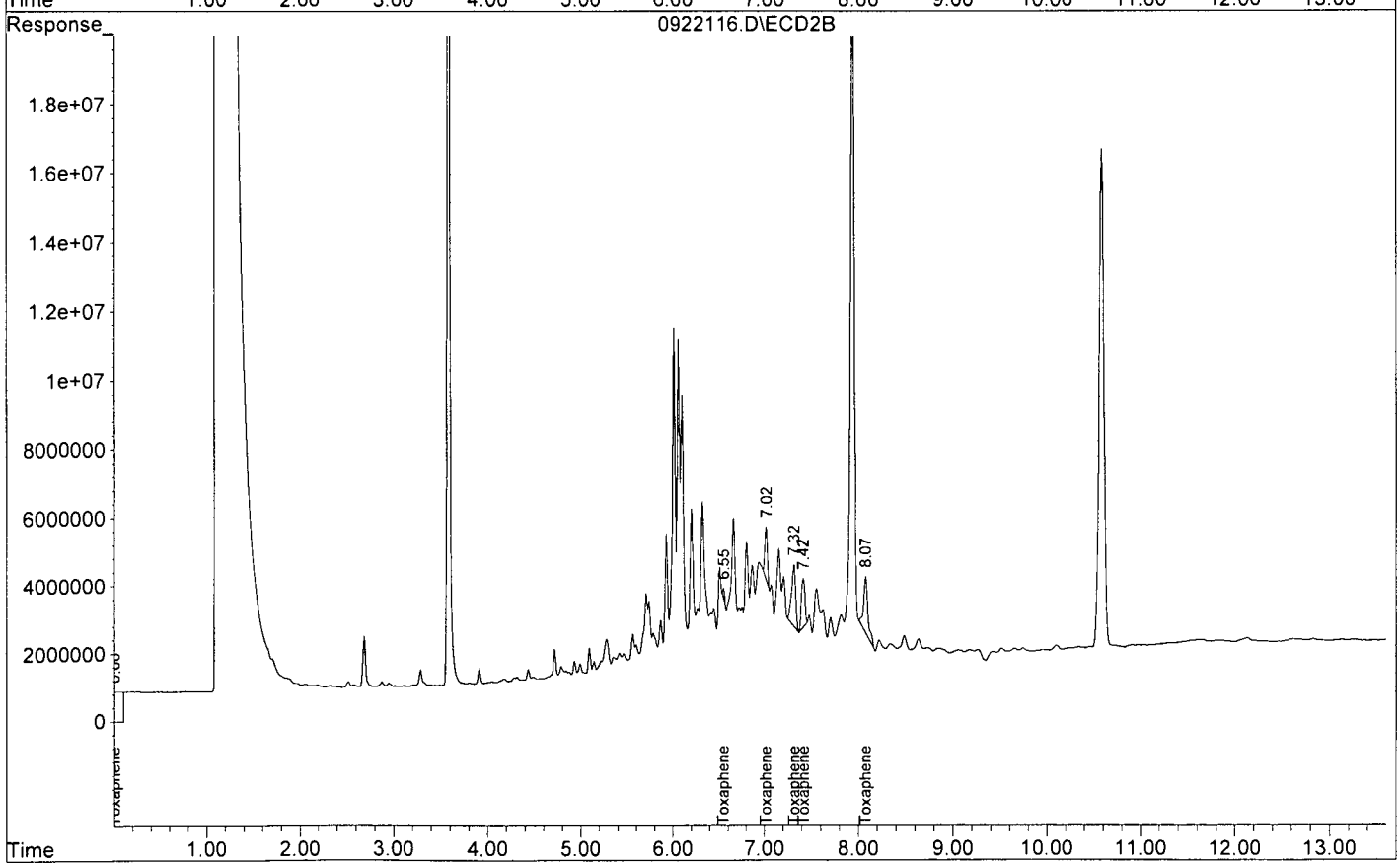
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922116.D
Acq On : 9-23-14 20:51:20
Sample : AZ02100S11 MS-2 5X1/0.05/30.11G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 16
Operator: MA
Inst : Lucy
Multiplr: 3321.16





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922117.D\ECD1A.CH Vial: 17
Signal #2 : G:\LUCY\DATA\140922\0922117.D\ECD2B.CH
Acq On : 9-23-14 21:07:45 Operator: MA
Sample : AZ02100S11 MSD-2 5X1/0.05/30.16G Inst : Lucy
Misc : soil Multiplr: 3315.65
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:11 2014 Quant Results File: TOX0922.RES

Quant Method : G:\LUCY\DATA\140922\TOX0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Mon Sep 22 15:03:12 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

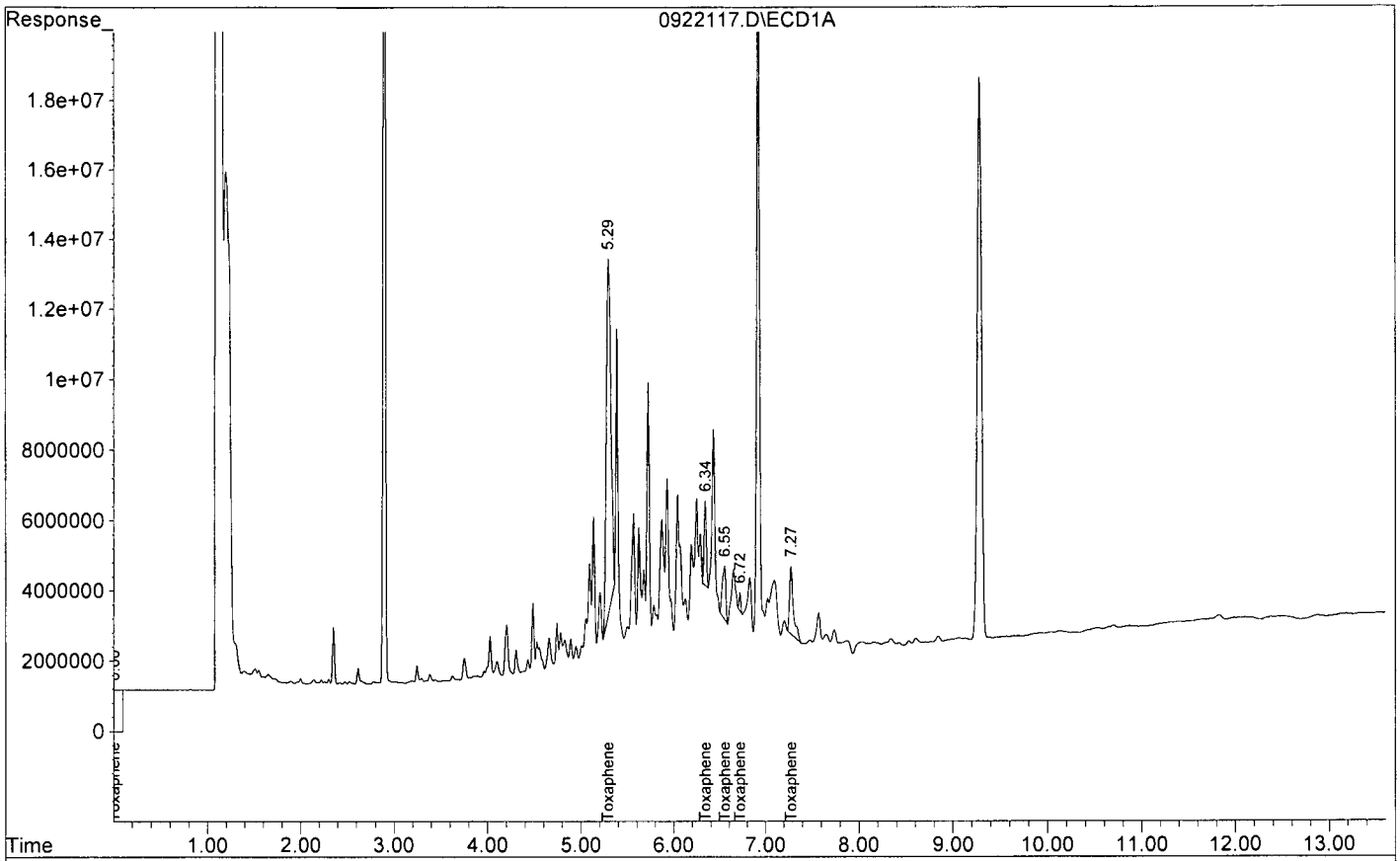
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM Toxaphene Total	0.00	0.00	16503649	6289174	3210.5617m	1279.2700m#
2) L2AK Toxaphene	5.29	6.55	10123980	262705	20296.0294	633.9463 #
3) L2AK Toxaphene {2}	6.34	7.02	2390950	1359541	1579.2330	1655.3279
4) L2AK Toxaphene {3}	6.55	7.32	1529466	1841044	1348.7248	1383.6797
5) L2AK Toxaphene {4}	6.72	7.42	529271	1512950	1112.2099	1545.5853 #
6) L2AK Toxaphene {5}	7.28	8.08	1929982	1312934	1271.6225	957.5871
Sum Toxaphene			16503649	6289174	25607.8196	6176.1262
Average Toxaphene					5121.564	1235.225

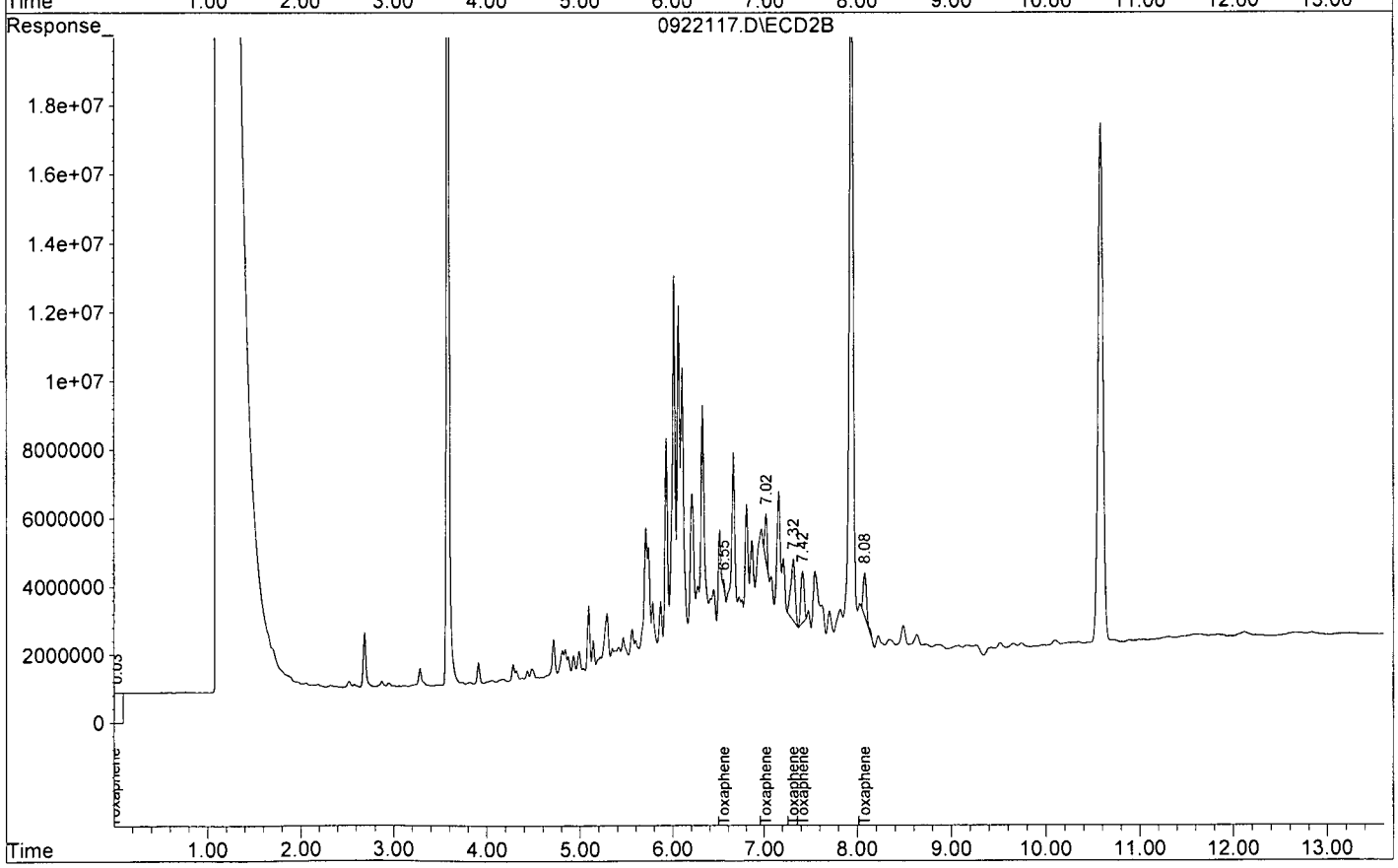
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922117.D
Acq On : 9-23-14 21:07:45
Sample : AZ02100S11 MSD-2 5X1/0.05/30.16G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\TOX0922.M

Vial: 17
Operator: MA
Inst : Lucy
Multiplr: 3315.65





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922119.D\ECD1A.CH Vial: 19
Signal #2 : G:\LUCY\DATA\140922\0922119.D\ECD2B.CH
Acq On : 9-23-14 21:40:42 Operator: MA
Sample : AZ02100S11 MS-4 5X1/0.05/30.13G Inst : Lucy
Misc : soil Multiplr: 3318.95
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:48 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

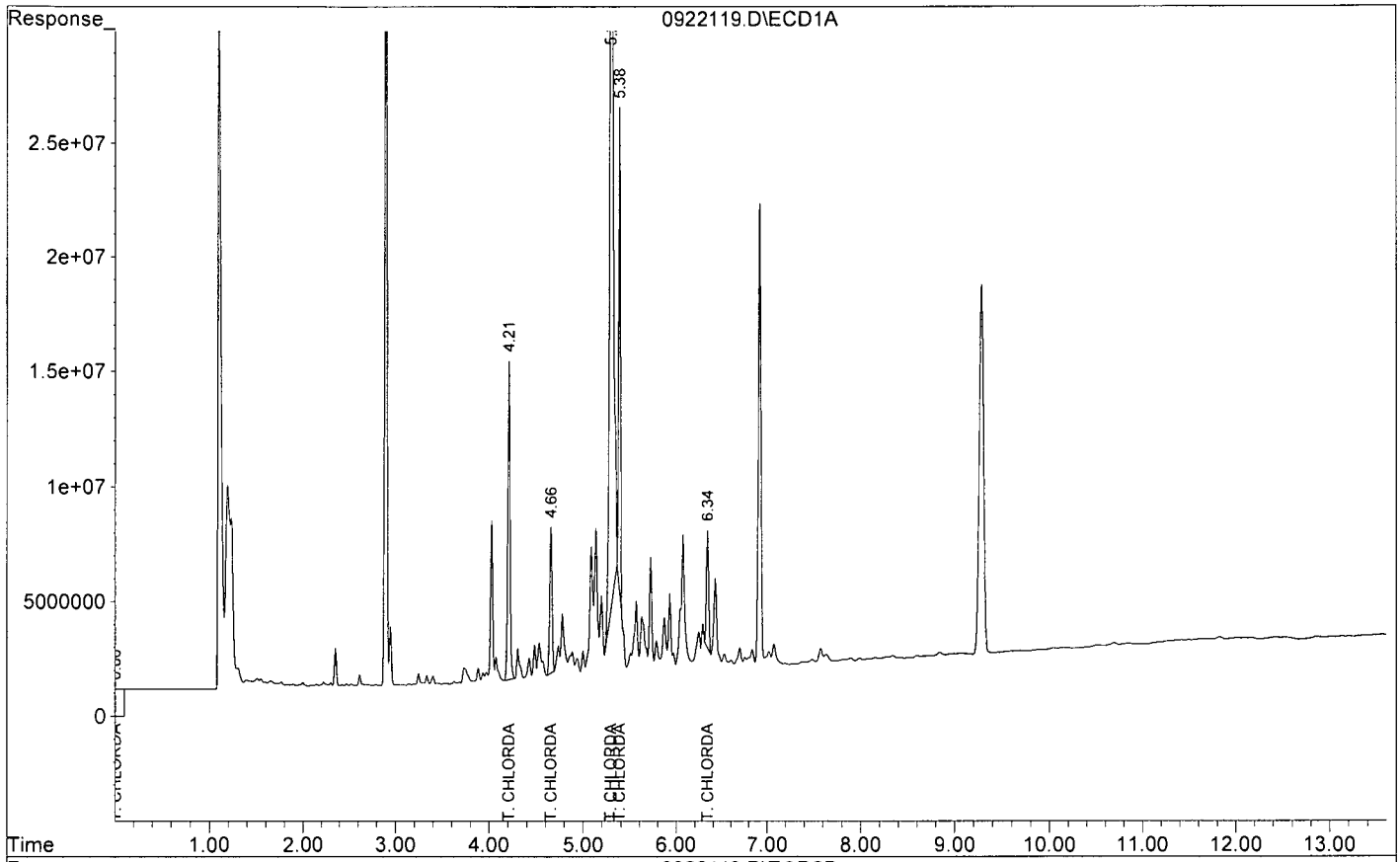
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	ANM T. CHLORDANE Tot	0.00	0.00	80330120	71986999	1856.0344m	1803.3494m
2)	L2AK T. CHLORDANE	4.21	4.93	13774766	13363695	1638.2960	1842.5839
3)	L2AK T. CHLORDANE {2}	4.66	5.27	6357066	6624779	1470.8825	1422.0894
4)	L2AK T. CHLORDANE {3}	5.29	6.01	34147929	33185726	2030.6504	1939.1749
5)	L2AK T. CHLORDANE {4}	5.38	6.10	20915083	14329623	2140.4508	1839.1217
6)	L2AK T. CHLORDANE {5}	6.34	7.02	5135277	4483175	1295.8084	1445.0472
	Sum T. CHLORDANE			80330120	71986999	8576.0880	8488.0171
	Average T. CHLORDANE					1715.218	1697.603

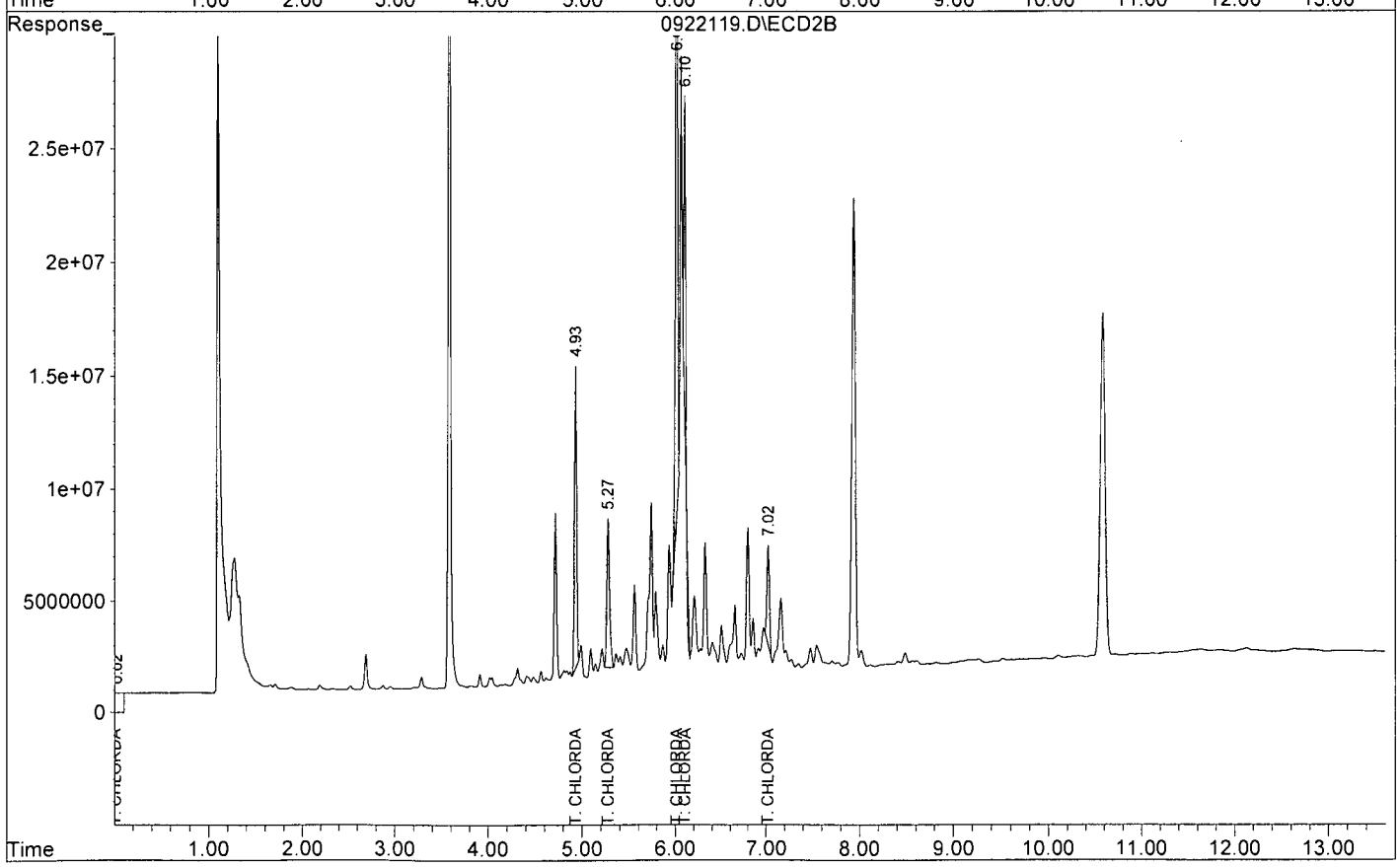
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922119.D
Acq On : 9-23-14 21:40:42
Sample : AZ02100S11 MS-4 5X1/0.05/30.13G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\TCH0922.M

Vial: 19
Operator: MA
Inst : Lucy
Multiplr: 3318.95





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922121.D\ECD1A.CH Vial: 21
Signal #2 : G:\LUCY\DATA\140922\0922121.D\ECD2B.CH
Acq On : 9-23-14 22:13:26 Operator: MA
Sample : AZ02100S11 MSD-4 5X1/0.05/30.32G Inst : Lucy
Misc : soil Multiplr: 3298.15
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 11:48 2014 Quant Results File: TCH0922.RES

Quant Method : G:\LUCY\DATA\140922\TCH0922.M (Chemstation Integrator)
Title : 508/608/8081
Last Update : Tue Sep 23 10:21:23 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1ul
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

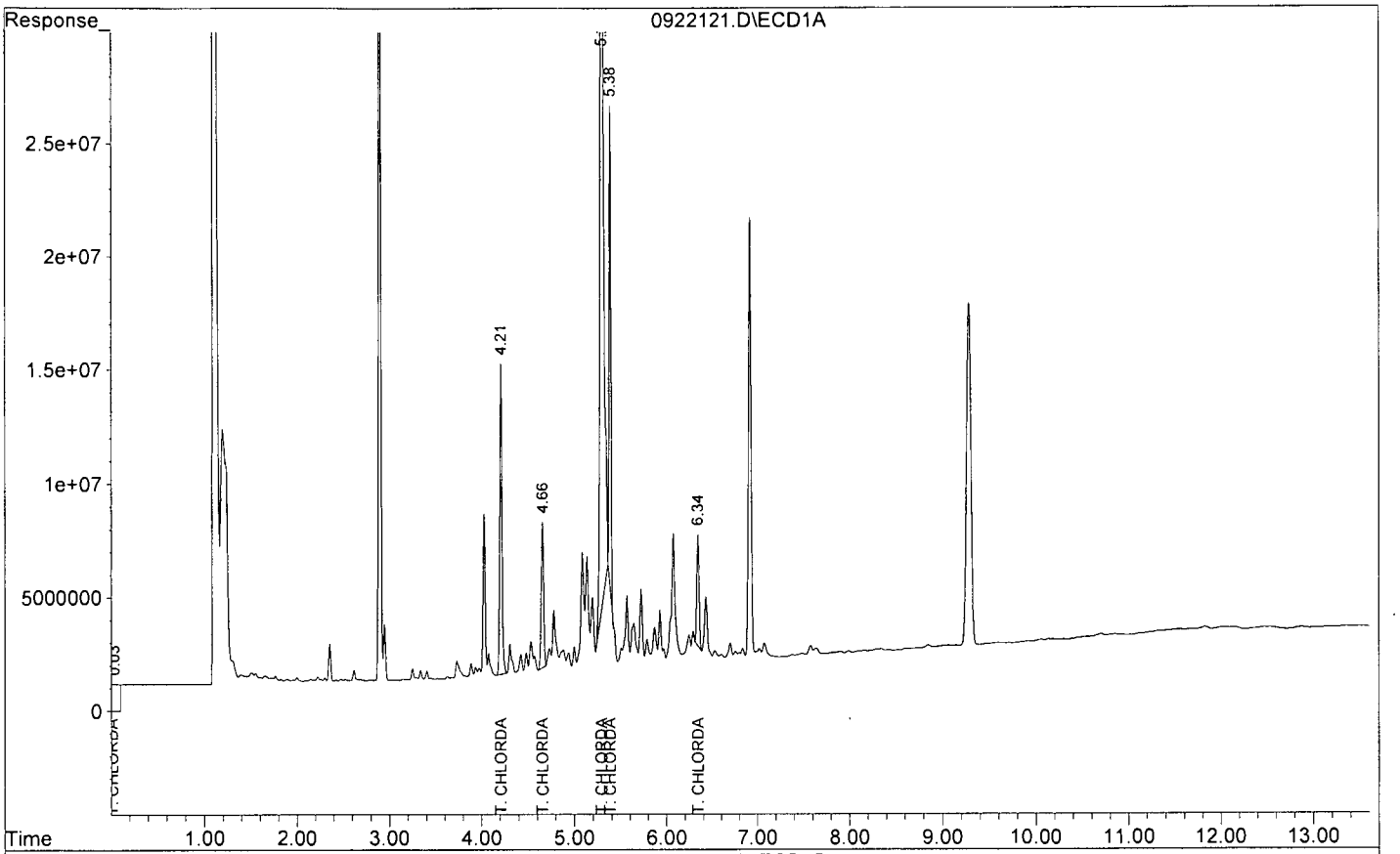
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) ANM T. CHLORDANE Tot	0.00	0.00	80081552	70895032	1838.6971m	1764.8658m
2) L2AK T. CHLORDANE	4.21	4.93	13528740	12945820	1598.9526	1773.7826
3) L2AK T. CHLORDANE {2}	4.66	5.27	6376570	6525290	1466.1503	1391.9558
4) L2AK T. CHLORDANE {3}	5.29	6.01	34061660	33040268	2012.8280	1918.5774
5) L2AK T. CHLORDANE {4}	5.38	6.10	21222985	13932030	2158.3517	1776.8886
6) L2AK T. CHLORDANE {5}	6.34	7.02	4891599	4451623	1226.5856	1425.8858
Sum T. CHLORDANE			80081552	70895032	8462.8682	8287.0901
Average T. CHLORDANE					1692.574	1657.418

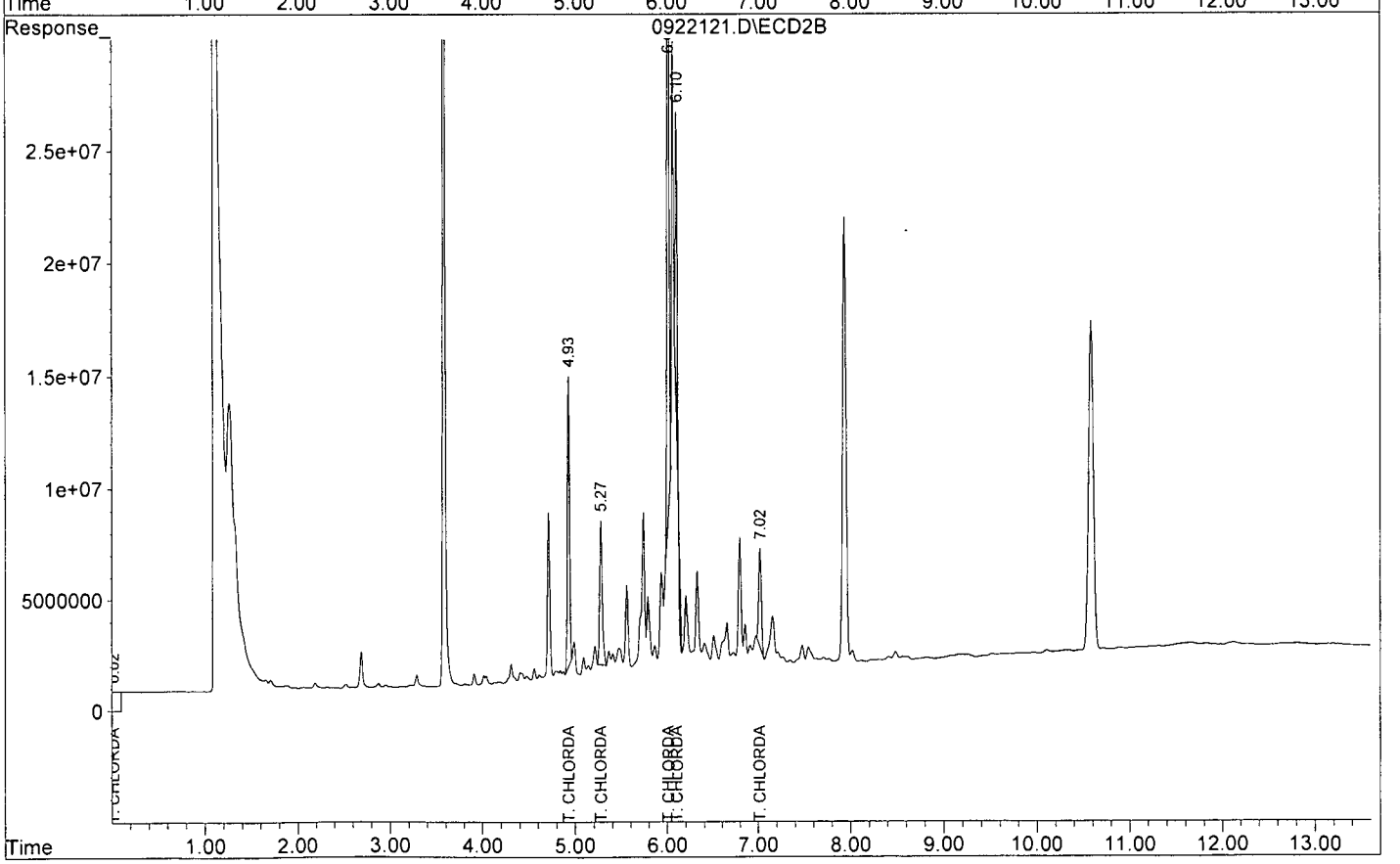
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922121.D
Acq On : 9-23-14 22:13:26
Sample : AZ02100S11 MSD-4 5X1/0.05/30.32G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\TCH0922.M

Vial: 21
Operator: MA
Inst : Lucy
Multiplr: 3298.15





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922120.D\ECD1A.CH Vial: 20
Signal #2 : G:\LUCY\DATA\140922\0922120.D\ECD2B.CH
Acq On : 9-23-14 21:57:02 Operator: MA
Sample : AZ02100S11 MS-5 5X1/0.05/30.07G Inst : Lucy
Misc : soil Multiplr: 3325.57
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1) MA	DICHLOBENIL	2.09	2.37	9113687	7452817	157.5383	150.3048	
2) MA	BENEFIN	2.65	3.44	8768447	8987016	167.9888	155.5034	
3) MA	PROPACHLOR	2.97	3.39	1633023	1692369	166.8662	165.4456	
4) MA	HEXACHLOROBENZEN	3.40	4.08	28966483	23979318	154.7802	151.5660	
5) MA	PCNB	3.76	4.33	24795237	25116781	156.2285	153.2863	
6) MA	CHLOROTHALONIL	4.41	4.95	20959378	21639296	120.0328	121.7293	
7) MA	ALACHLOR	4.22	4.76	3134623	2983873	166.3572	139.9479	
8) MA	DACTHAL	4.63	5.17	18515384	18004451	142.8777	145.3233	
9) MA	DICOFOL	4.92	5.47	3205604	2536915	120.2674	134.9338	
10) MA	O,P-DDE	5.28	5.84	17295291	12539563	192.5913	142.5674	#
11) MA	OXADIAZON	5.38	5.98	9193759	9253076	184.6754	167.9830	
12) MA	OXYFLUORFEN	5.50	6.14	16057203	17928117	148.7834	151.4937	
13) MA	CAPTAN	5.61	5.87	9777262	11598739	123.2134	148.6318	
14) MA	O,P-TDE/DDD	5.77	6.31	10743133	13030048	122.3422	162.9502	#
15) MA	NITROFEN	6.05	6.63	25309600	20635619	136.9095	154.5370	
16) MA	O,P-DDT	6.05	6.63	25309600	20635619	136.9095	154.5370	
17) MA	CARBOPHENOTHION	6.37	6.93	9134083	8866926	166.8428	196.0725	
18) MA	BIS(2-ETHYLHEXYL	6.60	7.63	1631407	1319042	3001.7392	2861.4689	

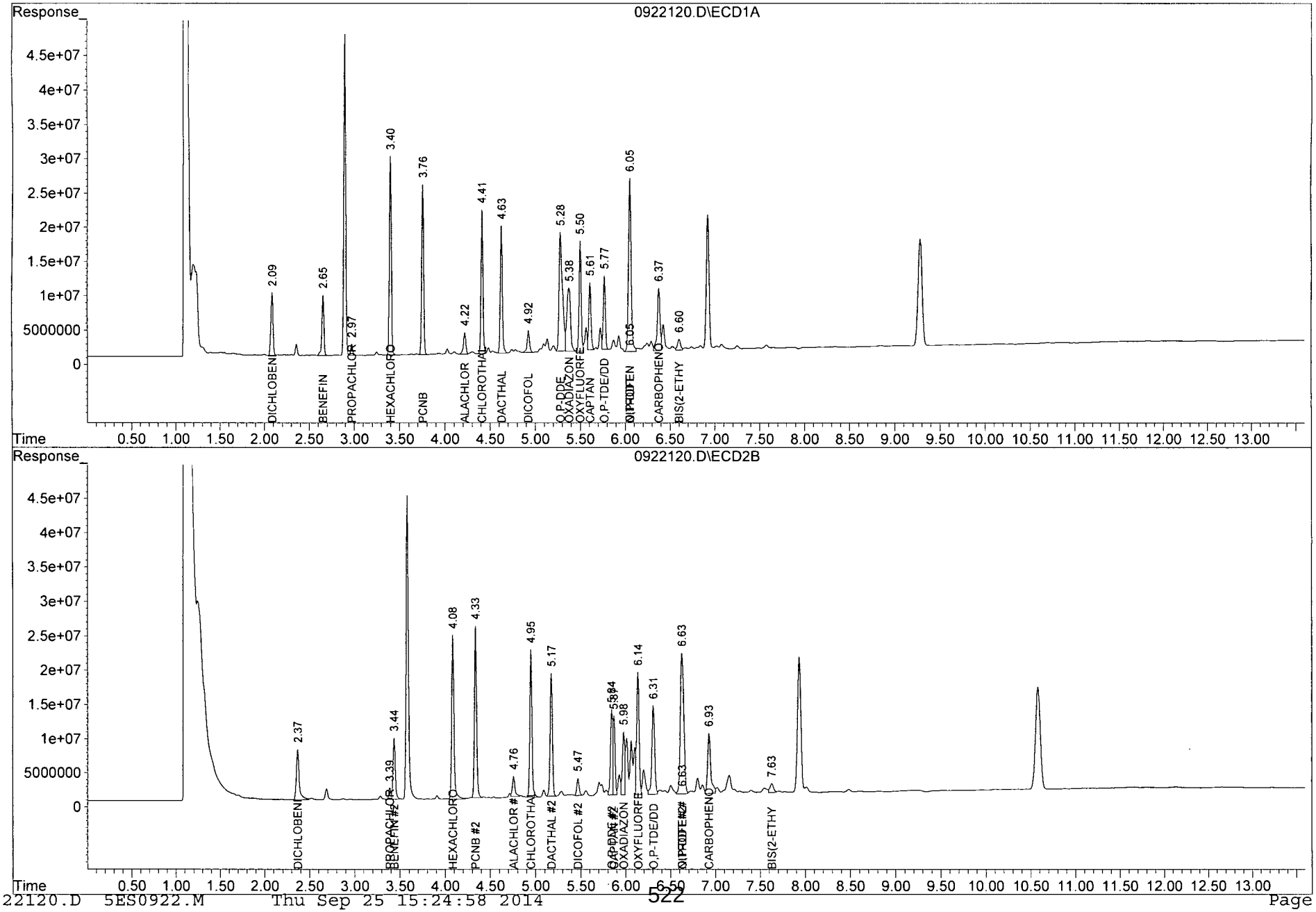
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922120.D
Acq On : 9-23-14 21:57:02
Sample : AZ02100S11 MS-5 5X1/0.05/30.07G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\5ES0922.M

Vial: 20
Operator: MA
Inst : Lucy
Multiplr: 3325.57



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922122.D\ECD1A.CH Vial: 22
Signal #2 : G:\LUCY\DATA\140922\0922122.D\ECD2B.CH
Acq On : 9-23-14 22:29:49 Operator: MA
Sample : AZ02100S11 MSD-5 5X1/0.05/30.42G Inst : Lucy
Misc : soil Multiplr: 3287.31
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 24 12:02 2014 Quant Results File: 5ES0922.RES

Quant Method : G:\LUCY\DATA\140922\5ES0922.M (RTE Integrator)
Title : 508/608/8081
Last Update : Wed Sep 24 08:33:00 2014
Response via : Multiple Level Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		Target Compounds							
1)	MA	DICHLOBENIL	2.08	2.37	8711950	7069549	148.8612	140.9348	
2)	MA	BENEFIN	2.65	3.44	8406120	8619572	159.1943	147.4294	
3)	MA	PROPACHLOR	2.97	3.39	1586477	1638299	160.2448	157.5537	
4)	MA	HEXACHLOROBENZEN	3.40	4.08	28018304	23368417	147.9911	146.0052	
5)	MA	PCNB	3.75	4.33	24710815	24181639	153.9051	145.8812	
6)	MA	CHLOROTHALONIL	4.41	4.95	20138855	20822288	114.0067	115.7856	
7)	MA	ALACHLOR	4.22	4.76	3323243	3122381	174.3382	144.7592	
8)	MA	DACTHAL	4.62	5.17	17830601	17893427	136.0103	142.7654	
9)	MA	DICOFOL	4.92	5.47	3130039	2996889	115.5292	161.4195	#
10)	MA	O,P-DDE	5.28	5.84	20063342	12424551	220.8443	139.6345	#
11)	MA	OXADIAZON	5.38	5.98	10312440	9950124	204.7630	178.5590	
12)	MA	OXYFLUORFEN	5.50	6.14	15261139	18684188	139.7802	156.0660	
13)	MA	CAPTAN	5.61	5.87	9703330	11105024	121.0643	140.6678	
14)	MA	O,P-TDE/DDD	5.77	6.31	10733646	15339563	120.8277	189.6251	#
15)	MA	NITROFEN	6.05	6.63	24395113	20074119	130.4444	148.6023	
16)	MA	O,P-DDT	6.05	6.63	24395113	20074119	130.4444	148.6023	
17)	MA	CARBOPHENOTHION	6.37	6.93	8830365	9133202	159.4393	198.4607	
18)	MA	BIS(2-ETHYLHEXYL	6.60	7.63	1420658	1352244	2583.8914	2899.7433	

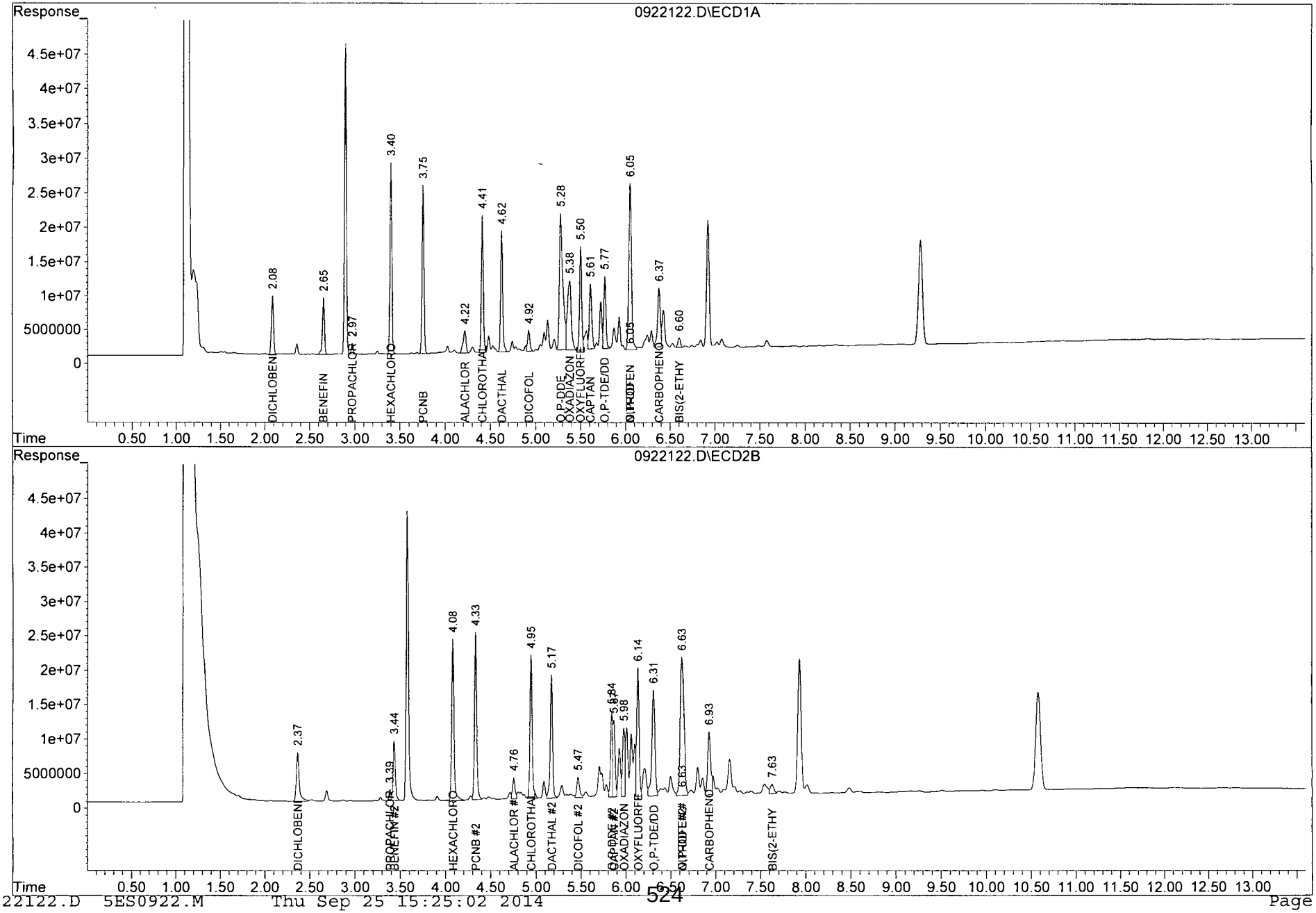
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922122.D
Acq On : 9-23-14 22:29:49
Sample : AZ02100S11 MSD-5 5X1/0.05/30.42G
Misc : soil
Quant Method : G:\LUCY\DATA\140922\5ES0922.M

Vial: 22
Operator: MA
Inst : Lucy
Multiplr: 3287.31



STANDARD 088

INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOL'N LOT # | INTL

GC STANDARD PREPARATION BOOK # 41 PAGE # [illegible]

OP/F CURVE						IA	IB	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	mL	mL	mL	mL	mL	mL	mL	mL
	OP/F STD	5		08/18/14	12/08/14	2	5	10	50	20	100	70	100
VWR	Hexane		080613A			998	995	990	950	80	100	30	NA
					Final VOL.	1000	1000	1000	1000	100	200	100	100

~~GA~~ 8/19/14
12/8/14

OCL DEGRADATION CHECK

100ug/mL OZSI 250uL 50mL 0.5ug/mL

CAT: 130109-01
LOT: 203573-32118
OP: 8/19/14
EXP: 8/19/15

Hexane
#080613A

~~GA~~ 8/19/14
8/19/15

MOTOR OIL SPIKE

~~HA~~ 8/19/14

CAT 116390-02
LOT 211942-33765
Open 8/19/14
Ex: 8/19/15

Motor Oil Composite,
50,000 mg/L, 1 ml
116390-02
Lot # 211942 Storage ≤-10 Degrees C Expiry 7/21/16
Solv: Methylene Chloride
Made in the USA. LEAD only, not known contents.
Motor oil composite
Lot #: 211942 - 33765
Rec: 6/18/14 MFR exp. 7/21/16

HA
8/19/14
Ex 8/19/15

EE SOIL 2 Level 3

various EESOIL2STOCK 100uL 1mL various Hexane ~~GA~~
Prep: 5/7/14 #080613A 8/20/14
EXP: 5/7/15 2/20/15

The Surrogate

CAT NO: 110316-05
LOT NO: 216091-33702
Open: 8/20/14
Exp: 8/20/15

KG
8/20/14
Exp. 8/20/15

STANDARD 078

INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N LOT #	DATE / INITIALS

LOG Book #41

OCL CALIBRATION CURVE GA 7/16/14

Compound	Initial conc	Source Stock	Aliquot	Final Conc	Final Vol.
Various	10 ug/ml	OCL Stock	250 ul	2 - 0.050 ug/ml	50 mL
Analytes	10 ug/ml	prep: 07/15/14	500 ul	3 - 0.100 ug/ml	50 mL
	10 ug/ml	exp: 11/05/14	375 ul	4 - 0.150 ug/ml	25 mL
	10 ug/ml		200ul	5 - 0.200 ug/ml	10 mL
	10 ug/ml		250 ul	6 - 0.250 ug/ml	10 mL
	10 ug/ml	Lvl 2	200 ul	1B - 0.001 ug/mL	10 mL
	10 ug/ml	prep: 07/16/14	600 ul	1A - 0.003 ug/mL	10 mL
	0.005 ug/mL	exp: 11/05/14	1000 ul	1 - 0.005 ug/ml	10 mL
Solvent:	Hexane	Lot: 080613A			

GA 7/16/14 11/5/14

TDX SOIL SPIKE

Various 5000ug/mL OCL CAT: 030279-31 LOT: 180049-32546 OP: 7/16/14 EXP: 10/21/14 1000uL 25mL 200ug/mL Acetone #090513C

GA 7/16/14 ~~10/21/14~~ 10/16/14

AR 1268 STOCK (20ug/mL)

AR 1268 1000ug/mL Restek CAT: 32410 LOT: A091582-326600 OP: 7/18/14 EXP: 7/18/15 200uL 1mL 20ug/mL Hexane #080613A

GA 7/18/14 7/18/15

OP/F CURVE						IA	1B	1	2	3	4	5	6
SUPPLIER	ID#	[ug/mL]	LOT #	DATE	EXP. DATE	mL	mL	mL	mL	mL	mL	mL	mL
	OP/F STD	5		06/24/14	08/10/14	2	5	10	50	20	100	70	100
VWR	Hexane		080613A			998	995	990	950	80	100	30	NA
					Final VOL.	1000	1000	1000	1000	100	200	100	100

GA 7/18/14

OPF 100/200 CCV						
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL
	OPF STD	5		06/24/14	08/10/14	100
VWR	HEXANE		080613A			200
					Final VOL.	200

GA 7/18/14 8/10/14

GA 7/18/14 8/10/14

AR 1268 (1ug/mL)

AR1268 20ug/mL AR1268STK Prep: 7/18/14 EXP: 7/18/15 500uL 10mL 1ug/mL Hexane #080613A

GA 7/18/14 1/18/15

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE INITIAL
		LOG Book #41					077

	OCL STOCK					7/15/14
Compounds	Initial Conc	Source stock	Aliquot	Final Conc	Final Vol	
a-BHC	100 ug/mL	O2SI	1000 ul	10ug/mL	10 mL	
b-BHC		Cat: 130015-09			Hexane	
d-BHC		Lot: 180895-29942			080613A	
g-BHC		Op: 07/15/14				
aldrin		Exp: 11/05/14				
heptachlor						
heptachlor-						
epoxide isomer B						
a-chlordane						
g-chlordane						
pp-DDD						
pp-DDE						
pp-DDT						
dieldrin						
endrin						
endrin aldehyde						
endrin ketone						
endosulfan I						
endosulfan II						
endosulfan sulfate						
methoxychlor						
TCMX	5000 µg/mL	o2si	20 ul	10ug/mL		
DECA		Cat: 130070-02				
DBC		Lot: 213973-32853				
		Op: 07/15/14				
		Exp: 07/15/15				

GA
7/15/14
11/5/14

	OCL Second Source Stock					7/15/14
Compounds	Initial Conc	Source stock	Aliquot	Final Conc	Final Vol	
a-BHC	100 ug/mL	O2SI	1000uL	10ug/mL	10mL	
b-BHC		Cat :130015-09			Hexane	
d-BHC		176673-32419			080613A	
g-BHC		Op. 07/15/14				
aldrin		Exp: 08/02/14				
heptachlor						
heptachlor-						
epoxide isomer B						
a-chlordane						
g-chlordane						
pp-DDD						
pp-DDE						
pp-DDT						
dieldrin						
endrin						
endrin aldehyde						
endrin ketone						
endosulfan I						
endosulfan II						
endosulfan sulfate						
methoxychlor						

GA
7/15/14
8/2/14

	OCL Second Source					7/16/14
Compounds	Initial Conc	Source stock	Aliquot	Final Conc	Final Vol	
a-BHC	10 ug/mL	OCL 2ND SRC STK	100 ul	0.1ug/mL	10 mL	
b-BHC		Prep: 07/15/14			Hexane	
d-BHC		Exp: 08/02/14			080613A	
g-BHC						
aldrin						
heptachlor						
heptachlor-						
epoxide isomer B						
a-chlordane						
g-chlordane						
pp-DDD						
pp-DDE						
pp-DDT						
dieldrin						
endrin						
endrin aldehyde						
endrin ketone						
endosulfan I						
endosulfan II						
endosulfan sulfate						
methoxychlor						

GA
7/16/14
8/2/14

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N LOT#	DATE INITIALS

LOG Book # 41 GA 4/4/14

043

Tox Calibration Curve

Compound	Conc. In Mix	Conc. Of Stock	Aliquot	stock source	Final Vol.
Toxaphene	1A - 0.05 ug/ml	100 ug/ml	5	Tox Stock	10 mL
	1 - 0.10 ug/ml	100 ug/ml	10	prep: 9/19/13	10 mL
	2 - 0.25 ug/ml	100 ug/ml	125	Ex: 9/19/14	50 mL
	3 - 0.50 ug/ml	100 ug/ml	250		50 mL
	4 - 0.75 ug/ml	100 ug/ml	75		10 mL
	5 - 1.00 ug/ml	100 ug/ml	100		10 mL
	6 - 1.50 ug/ml	100 ug/ml	150		10 mL
	1B - 0.025 ug/ml	1 ug/mL	250	Lvl 5	10 mL
				prep: 04/04/14	
				exp: 09/19/14	
Solvent:				Hexane	Lot: 040313B

PREP 4/4/14
EXP: 9/19/14
GA

OCL CALIBRATION CURVE

Compound	Initial conc	Source Stock	Aliquot	Final Conc	Final Vol.
Various	10 ug/ml	OCL Stock	250 ul	2 - 0.050 ug/ml	50 mL
Analytes	10 ug/ml	prep: 11/5/13	500 ul	3 - 0.100 ug/ml	50 mL
	10 ug/ml	exp: 9/13/14	375 ul	4 - 0.150 ug/ml	25 mL
	10 ug/ml		200ul	5 - 0.200 ug/ml	10 mL
	10 ug/ml		250 ul	6 - 0.250 ug/ml	10 mL
	10 ug/ml	Lvl 2	200 ul	1B - 0.001 ug/mL	10 mL
	10 ug/ml	prep: 4/7/14	600 ul	1A - 0.003 ug/mL	10 mL
	0.005 ug/mL	exp: 09/13/14	1000 ul	1 - 0.005 ug/mL	10 mL
Solvent:	Hexane	Lot: 040313B			

4/7/14 MA
Exp 9/13/14

~~TCH Level 3 Standard~~

Compound: Technical chlordane

~~10µg/mL Tech. Chld STK 250µL 0.25µg/mL Hexane~~ Final Volume
~~Prep 11/8/13~~ ~~Lot: 040313B~~ 10mL
~~EXP 5/8/14~~

TCH Level 3 Standard

Technical chlordane | 10µg/mL Tech Chld STK 250µL 10mL 0.25µg/mL Hexane PREP: 4/7/14
Pr: 11/8/13 Lot. 040313B EXP: 10/7/14
EXP: 11/8/14 GA

GC STANDARD PREPARATION BOOK # 48 PAGE #

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N LOT #	DATE / INITIALS

OCL CALIBRATION CURVE

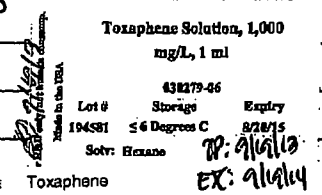
Compound	Initial conc	Source Stock	Aliquot	Final Conc	Final Vol.
Various	10 ug/ml	OCL Stock	3 ul	1A: 0.003 ug/ml	10 mL
Analytes	10 ug/ml	prep: 6/5/13	5 ul	1 - 0.005 ug/ml	10 mL
	10 ug/ml	exp: 6/5/14	250 ul	2 - 0.050 ug/ml	50 mL
	10 ug/ml		500 ul	3 - 0.100 ug/ml	50 mL
	10 ug/ml		375 ul	4 - 0.150 ug/ml	25 mL
	10 ug/ml		200ul	5 - 0.200 ug/ml	10 mL
	10 ug/ml		250 ul	6 - 0.250 ug/ml	10 mL
	0.005 ug/mL	Lvl 1	2000 ul	1B - 0.001 ug/mL	10 mL
		prep: 9/19/13			
		exp: 3/19/14			
Solvent:	Hexane	Lot: 030713A			

9/19/13
EX: 3/19/14

TOXAPHENE STANDARD

TOXAPHENE | 1000ug/mL | 0251 | 1000mL | 10mL | 100ug/mL | Hexane

9/19/13
EX: 9/19/14



Tox Calibration Curve

Compound	Conc. In Mix	Conc. Of Stock	Aliquot	stock source	Final Vol.
Toxaphene	1A - 0.05 ug/ml	100 ug/ml	5	Tox Stock	10 mL
	1 - 0.10 ug/ml	100 ug/ml	10	prep: 9/19/13	10 mL
	2 - 0.25 ug/ml	100 ug/ml	125	Ex: 9/19/14	50 mL
	3 - 0.50 ug/ml	100 ug/ml	250		50 mL
	4 - 0.75 ug/ml	100 ug/ml	75		10 mL
	5 - 1.00 ug/ml	100 ug/ml	100		10 mL
	6 - 1.50 ug/ml	100 ug/ml	150		10 mL
	1B - 0.025 ug/ml	1 ug/mL	250	Lvl 5	10 mL
				prep: 9/19/13	
				exp: 3/19/14	
Solvent:				Hexane	Lot: 030713A

9/19/13
EX: 3/19/14

TIN METHOD STANDARD 1UG/ML

COMPOUND	CONC IN MIX	STOCK SOURCE	ALIQUOT	FINAL VOL.	FIN. CONC	SOLVENT
Tetrabutylin chloride	20 ug/ml	TIN M. STD.20ug/ml	500 µL	10ml	1 ug/ml	MC
Dibutylin chloride		prep. 3/8/13				LOT#:
Butylin chloride		exp. 3/8/14				52312
Tetra-n-propyltin						

9/19/13
EX: 3/8/14

TIN CALIBRATION CURVE

COMPOUND	CONC IN MIX (ug/ml)	CONC OF STOCK (ug/ml)	ALIQUOT (uL)	STK SRC	FINAL VOL. SOLVENT MC #52312
Tetrabutylin chloride	0.05	1	50 µL	TIN M. STD 1ug/ml	1mL
Dibutylin chloride	0.1	1	100 µL	PREP 9/19/13	1mL
Butylin chloride	0.5	1	500 µL	EXP 3/8/14	1mL
Tetra-n-propyltin	1	1	1000 µL		1mL
	5	20	250 µL	TIN M. STD 20ug/ml	1mL
	20	20	1000 uL	PREP:3/08/13	1mL
				EXP. 3/08/14	

9/19/13
EX: 3/8/14

STANDARD | INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOL'N. LOT # | DATE INITIALS

STANDARD PREPARATION BOOK # 40 PAGE # 115

RS 11/20/13

PREP:	11/20/13												
PAC ECO CURVE													
EXP:	01/12/14					1a	1b	1	2	3	4	5	6
	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	PAC ECO CAL STD	5		10/28/13	01/12/14	2	5	10	50	200	500	700	1000
						998	995	990	950	800	500	300	N/A
	Hexane		030713A		Final VOL.	1000	1000	1000	1000	1000	1000	1000	1000

RS
Prep: 11/20/13
Exp: 1/12/14

RS 11/20/13

TIN CALIBRATION CURVE

COMPOUND	CONC IN MIX (ug/ml)	CONC OF STOCK (ug/ml)	ALIQUOT (uL)	STOCK SOURCE	FINAL VOL. SOLVENT (ml)
Tetrabutylin chloride	0.05	1	50µL	TIN M. STD 1ug/ml	1
Dibutylin chloride	0.1	1	100µL	PREP: 9/19/13	MC
Butylin chloride	0.5	1	500µL	EXP: 3/8/14	52312
Tetra-n-propyltin	1	1	1000µL		
	5	20	250 µL	TIN M. STD 20ug/ml	
	20	20	1000µL	prep: 3/8/13	
				exp. 3/8/14	

RS
Prep: 11/20/13 RS 1-20-14
~~Exp: 12/20/13~~
Exp: 3/8/14

RS 11/21/13

PREP:	11/21/13												
PAC ECO CURVE													
EXP:	01/12/14					1a	1b	1	2	3	4	5	6
	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	PAC ECO CAL STD	5		10/28/13	01/12/14	2	5	10	50	200	500	700	1000
						998	995	990	950	800	500	300	N/A
	Hexane		030713A		Final VOL.	1000	1000	1000	1000	1000	1000	1000	1000

RS
Prep: 11/21/13
RS 1-20-14
~~Exp: 12/21/13~~
Exp: 1/12/14

RS 11/22/13

AROCLOR 1242 curve

Compound	Initial Conc.	Stock Src.	Aliquot	Final Conc.	Solvent	Final Vol
AR 1242	1µg/mL	AR1242	1- 10uL	0.01	Hexane	1 mL
		Prep: 11/22/13	2- 50uL	0.05	#030713A	1 mL
		Exp: 04/11/14	3- 100uL	0.10		1 mL
			4- 250uL	0.25		1 mL
			5- 1000uL	1.00		1 mL

RS
Prep: 11/22/13
RS 1-20-14
~~Exp: 12/22/13~~
Exp: 4/11/14

11/22/13 RS

TOX 2nd SRC Stock

STANDARD	INIT CONC.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT
TOXAPHENE	5000 µg/mL	O2SI	50 µL	25 mL	10 µg/mL	Hexane
	Cat:	030279-31				062212E
	Lot:	180049-32545				
	Op:	11/22/13				
	Exp:	10/21/14				

RS
Prep: 11/22/13
Exp: 10/21/14

11/22/13 RS

TOX SECOND SOURCE

STANDARD	INIT CONC.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT
TOXAPHENE	10 ug/ml	Tox 2nd Src Stk	500 µL	10 mL	0.5µg/mL	Hexane
		Prep: 11/22/2013				Lot#
		Exp:10/21/2014				030713A

RS
Prep: 11/22/13
Exp: 10/21/14

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE INITIAL

STANDARD PREPARATION BOOK # 41 PAGE #

DOHS SPIKE

1000 µg/mL O2SI

CAT: 130271-08-SS 25µL 25mL 1µg/mL LH

LOT: 23469I-33983 Methanol 9/18/14

OP: 9/18/14 #070913A ex 12/18/14

ex: 9/18/15

-14 EDP

-15 TCP

DBCP

14

-14

7/14

7/14

PAC ECO CURVE						1a	1b	1	2	3	4	5	6
	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	PAC ECO CAL STD	5		06/23/14	11/09/14	2	5	10	50	20	100	70	1000
						998	995	990	950	80	100	30	N/A
	Hexane		080613A		Final vol.	1000	1000	1000	1000	100	200	100	1000

GA 9/18/14

GA 9/18/14
11/9/14

PAC ECO CURVE						1a	1b	1	2	3	4	5	6
	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	PAC ECO CAL STD	5		06/23/14	11/09/14	2	5	10	50	20	100	70	1000
						998	995	990	950	80	100	30	N/A
	Hexane		080613A		Final vol.	1000	1000	1000	1000	100	200	100	1000

GA 9/19/14

GA 9/19/14
11/9/14

Vel/Fen Curve						1	2	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL
VELPAR STD		10		03/26/14	01/28/15	10	50	20	100	70	100
VWR	Hexane		080613A			990	950	80	100	30	N/A
					Final vol.	1000	1000	100	200	100	100

GA 9/19/14

GA 9/19/14
1/28/15

5078 CURVE											
SUPPLIER	ID#	µg/mL	LOT #	DATE	EXP.	µL	µL	µL	µL	µL	µL
	5078 STD	5		07/22/14	01/04/15	10	50	20	100	70	100
	MTBE		50223			990	950	80	100	30	NA
					Final vol.	1000	1000	100	200	100	100

GA 9/19/14

GA 9/19/14
1/4/15

Toxaphene Stock						
Compound	Initial Conc.	Source	Aliquot	Final vol.	Final Conc.	Solvent
Toxaphene	1000 µg/mL	O2SI	1000 µL	10 mL	100 µg/mL	Hexane
	Cat:	030279-06				080613A
	Lot:	194581-31263				
	Open:	09/19/14				
	Exp:	08/20/15				

GA 9/19/14

GA 9/19/14
8/20/15

Tox Calibration Curve					
Compound	Conc. In Mix	Conc. Of Stock	Aliquot	stock source	Final Vol.
Toxaphene	1A - 0.05 ug/ml	100 ug/ml	5 uL	Tox Stock	10 mL
	1 - 0.10 ug/ml	100 ug/ml	10	prep: 09/19/14	10 mL
	2 - 0.25 ug/ml	100 ug/ml	125	Exp: 08/20/15	50 mL
	3 - 0.50 ug/ml	100 ug/ml	250		50 mL
	4 - 0.75 ug/ml	100 ug/ml	75		10 mL
	5 - 1.00 ug/ml	100 ug/ml	100		10 mL
	6 - 1.50 ug/ml	100 ug/ml	150		10 mL
	1B - 0.025 ug/ml	1 ug/mL	250	Lvl 5	10 mL
				prep :09/19/14	
				Ex: 3/19/14	
Solvent:				Hexane	Lot: 080613A

GA 9/19/14

GA 9/19/14
3/19/15

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE INITIALS

061

Log Book # 4/ GA 6/3/14

		PAC ECO STD			
DIAZINON	5ug/ml	200ug/ml	625ul	O2SI	25ml
DISULFOTON	5	200		CAT:130169-01	HEXANE
MALATHION	5	200		LOT: 219462-33202	LOT#
MOLINATE	5	200		Op: 03/19/14	080613A
PHORATE	5	200		* ~~Exp:06/15/14~~ Exp 12/21/16	
THIOBENCARB	5	200		CAT:130169-01	
TRIBUTYL PHOSPHATE	5	200		LOT: 219462-33203	
DEMETON	5	200		Op: 06/03/14	
DISCHLORVOS	5	200		* ~~Exp:06/15/14~~ Exp 12/21/16	
EPTC	5	200			
PARATHION	5	200			
AZINPHOS METHYL	5	200			
CHLORPYRIFOS	5	200			
DIMETHOATE	5	200			
METHIDATHION	5	200			
METHYL PARATHION	5	200			
ATRAZINE	5	200			
CYANIZINE	5	200			
TRIPHENYL PHOSPHATE	5	200			
PENDIMETHALIN	5	200			
TRIFLURALIN	5	200			
SIMAZINE	5	200			
PHOSMET	5	1000ug/ml	125ul	ABSOLUTE	
				PART:70798	
				LOT: 110912-31621	
				OP:06/03/14	
				EXP: 11/09/14	

*O2SI extend the expiration date. See certificate of analysis # 219462-33204 MA 6/24/14

GA 6/3/14 Exp. 6/15/14 New Exp. 11/9/14 MA

6/3/14

Technical Chlordane Calibration Curve						
Compound	Initial Conc.	Stock Src.	Aliquot	Final Conc.	Solvent	Final Vol
Technical Chlordane	10µg/mL	Tech. Chld Stk	1A- 25µL	0.025 µg/mL	Hexane	10 mL
		Prep: 11/08/13	1- 50uL	0.05µg/mL	Lot#	10 mL
		Exp: 11/08/14	2- 100uL	0.10µg/mL	080613A	10 mL
			3- 250uL	0.25µg/mL		10 mL
			4- 500uL	0.50µg/mL		10 mL
			5- 750uL	0.75µg/mL		10 mL

GA 6/3/14 11/8/14

~~GA~~ 6/3/14

Technical Chlordane 2nd Src						
Compound	Initial Conc.	Stock Src.	Aliquot	Final Conc.	Final Vol.	Solvent
Technical Chlordane	10µg/mL	Tech Chld 2nd Src Stk	250µL	0.25µg/mL	10mL	Hexane
	Prep:	11/08/13				Lot:
	Exp:	11/08/14				080613A

GA 6/3/14 11/8/14

~~GA 6/4/14~~

TCH SURROGATE CURVE											
STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	
THC SURR	60		05/23/14	11/23/14	50	100	400	600	800	1000	
MC		52312			950	900	600	400	200	NA	
				Final VOL.	1000	1000	1000	1000	1000	1000	

GA 6/4/14 11/23/14

~~GA 6/4/14~~

DIESEL CURVE										
STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
DIESEL	1000		05/16/14	* ~~05/31/15~~ 5/31/15	10	100	400	600	800	1000
MC		52312			990	900	600	400	200	NA
				Final VOL.	1000	1000	1000	1000	1000	1000

GA 6/4/14 5/3/15

~~GA 6/4/14~~

MOTOR OIL CURVE											
STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL
MOTOR OIL	2000		05/19/14	05/19/15	10	25	125	250	500	750	1000
MC		52312			990	975	875	750	500	250	NA
				Final VOL.	1000	1000	1,000	1000	1000	1000	1000
				ppm	10	50	250	500	1000	1500	2000

GA 6/4/14 12/4/14

STANDARD	INITIAL CONC	SOURCE	DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE / INITIALS

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TOX WATER SPIKE

Toxaphene	1000 ng/ml	0251	125 ml	25ml	5 ng/ml	Acetone #031813B	11/7/13
	CAT: 030279-06						EX:
	LOT: 194581-319169						2/7/14
	OP: 11/7/13						
	EX: 11/7/14						

This spk was Crc.ed on 02/11/14. ~~4/11/14~~ New Ex: 5/11/14 RS

Technical Chlordane Stock 11/08/13 EXP 11/08/14 RS

Compound	Initial Conc.	Stock Src.	Aliquot	Final Conc.	Final Vol.	Solvent
Technical	100µg/mL	Absolute	1000µL	10µg/mL	10mL	Hexane
Chlordane	Part:	91824				Lot:
	Lot:	080211-33050				030713A
	Open:	11/08/13				
	Exp:	11/08/14				

Technical Chlordane Calibration Curve 11/08/13 Exp 5/08/14 RS

Compound	Initial Conc.	Stock Src.	Aliquot	Final Conc.	Solvent	Final Vol
Technical	10µg/mL	Tech. Chld Stk	1A- 25µL	0.025 µg/mL	Hexane	10 mL
Chlordane		Prep: 11/08/13	1- 50uL	0.05µg/mL	Lot#	10 mL
		Exp: ~~05/08/14~~ 11/8/14	2- 100uL	0.10µg/mL	030713A	10 mL
			3- 250uL	0.25µg/mL		10 mL
		~~AA 4/3/14~~	4- 500uL	0.50µg/mL		10 mL
			5- 750uL	0.75µg/mL		10 mL

Technical Chlordane 2nd SrcStock 11/08/13 EXP 11/8/14 RS

Compound	Initial Conc.	Stock Src.	Aliquot	Final Conc.	Final Vol.	Solvent
Technical	100µg/mL	Absolute	500µL	10µg/mL	5mL	Hexane
Chlordane	Part:	91824				Lot:
	Lot:	081313-33045				030713A
	Open:	11/08/13				
	Exp:	11/08/14				

Technical Chlordane 2nd Src 11/08/13 EXP 5/08/14 RS

Compound	Initial Conc.	Stock Src.	Aliquot	Final Conc.	Final Vol.	Solvent
Technical	10µg/mL	Tech Chld 2nd Src Stk	250µL	0.25µg/mL	10mL	Hexane
Chlordane	Prep:	11/08/13				Lot:
	Exp:	~~05/08/14~~				030713A
		1/9/14 ~~6/3/14~~				

RS 11/07/13

TCQ CURVE

ID#	[µg/mL]	LOT #	DATE	EXP. DATE	mL	mL	mL	mL	mL	mL
TCQ STD	2		11/07/13	11/07/14	5	10	50	100	200	500
MTBE		50223			995	990	950	900	800	500
				Final VOL.	1000	1000	1000	1000	1000	1000
				Final Conc.	0.01µg/mL	0.02µg/mL	0.1µg/mL	0.2µg/mL	0.4µg/mL	1µg/mL

RS
prep: 11/07/13
exp: 5/07/14

RS 11/08/13

OPC CURVE

EXP:	04/25/14										
						1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
	OPC STD	5		10/25/13	04/25/14	10	50	200	500	700	1000
	Hexane		030713A			990	950	800	500	300	NA
					Final VOL.	1000	1000	1000	1000	1000	1000

RS
prep: 11/08/13
exp: 4/25/14

STANDARD | INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC

GC STANDARD PREPARATION BOOK # 41 PAGE # 103

TNRCC cal 2ND SRC STOCK

STD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT/ LOT#
GASOLINE	20,000 ugm/L	SUPELCO CAT#47516-U LOT #LB82077-30343 OP:5/5/14 EXP:5/5/15	500 µL	10mL	1000µg/mL	PENTANE LOT#K34E30
DIESEL FUEL #2	50,000 ugm/L	O2SI CAT#011589-01-SS LOT#207749-32372 OP:5/5/14 EXP.5/5/15	200 µL			

LH
Prep 9/22/14
Exp. 5/5/15

5ES STOCK ~~GA 9/22/14~~

Compound	Init. Conc.	Stock Src	Aliquot	Final Vol	Final Conc.	Solvent Lot#
alachlor	100/2000 ug/ml	O2SI	500 uL	10 mL	5/100 ug/ml	Hexane
benfluralin	Cat:	130200-02				Lot:
captan	Lot:	216095-33010				080613A
carbophenothion	Op:	09/22/14				
chlorothalonil	Exp:	09/22/15				
chlorthal(dacthal)						
2,6 dichlorobenzonitrile(dicofol)						
kelthane						
nitrofen						
oxadiazon						
oxyfluorfen						
propachlor						
op DDD						
op DDE						
op DDT						
bis(2-ethylhexyl)phthalate						

GA
9/22/14
~~3/22~~ GA 9/22/14
Ex 9/22/15

5ES CALIBRATION CURVE ~~GA 9/22/14~~

Compound	Conc. In Mix	Conc. Of Stock	Aliquot	stock source	Final Vol.	Solvent Lot#
alachlor	(1) 0.005/0.1	5/100ug/ml	10ul	508 stock	10 mL	Hexane
benfluralin	(2) 0.03/0.6	5/100ug/ml	60ul	prep: 09/22/14	10 mL	080613A
captan	(3) 0.05/1.0	5/100ug/ml	100ul	Exp: 09/22/15	10 mL	
carbophenothio	(4) 0.10/2.0	5/100ug/ml	200ul		10 mL	
chlorothalonil	(5) 0.15/3.0	5/100ug/ml	300ul		10 mL	
chlorthal(dacth	(6) 0.20/4.0	5/100ug/ml	400ul		10 mL	
2,6 dichlorobenzonitrile(dicofol)						
kelthane						
nitrofen						
oxadiazon						
oxyfluorfen						
propachlor						
op DDD						
op DDE						
op DDT						
bis(2-ethylhexyl)phthalate						

GA
9/22/14
Ex 3/22/15

MOTOR OIL CCV 1000ppm

STANDARD	CONC.	DATE	ALIQUOT	VOL	CONC.	/LOT#
MO STD.	2000 µg/mL	MO Std.	3000µL	5mL	1000 µg/ml	MC
	PREP:	08/05/14				54024
	Exp:	08/05/15				

MA
9/23/14
Ex 8/5/15

038

STANDARD | INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOLVENT LOT # | DATE/INITIALS

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MOTOR OIL CCV 1000ppm						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MOTOR OIL STD	2000UG/ML	MO STD prep 2/11/14	3000µL exp2/11/15	5mL	1000 µg/ml	MC 52312

MA 3/20/14
EY 9/20/14

OCI-2

Various 10 ug/mL OCI stock 250 uL 50 mL 0.05 ug/mL Hexane MA 3/24/14
prep. 11/5/13
EY 9/24/14
WP ~~11/5/14~~
9/4/14 MA 3/24/14

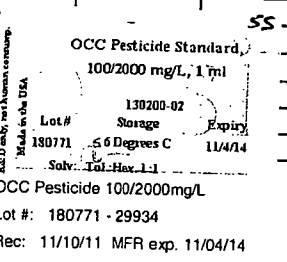
prep
3-24-14 WP
ex 9-24-14
11-4-14
WP 3-24-14

		5ES 2ND SRC				
Compound	Init. Conc.	Stock Src	Aliquot	Final Vol	Final Conc.	Solvent Lot#
See analytes	5/100 ug/ml	508 2nd Src Stk	100 uL	10 mL	0.05/1 ug/ml	Hexane
Bk# 39 Pg 065		Prep:3/24/14				030713A
		Exp: 11/4/14				

3-24-14 WP
ex 9-24-14

		5ES 2nd Src Stock				
Compound	Init. Conc.	Stock Src	Aliquot	Final Vol	Final Conc.	Solvent Lot#
alachlor	100/2000 ug/m	O2SI	500 uL	10 mL	5/100 ug/ml	Hexane
benfluralin	CAT	130200-02				082610B
captan	LOT	180771-29934				
carbophenothion	OPEN	03/24/14				
chlorothalonil	EXP	11/04/14				
chlorthal(dacthal)						
2,6 dichlorobenzonitrile(dicofol)						
kelthane						
nitrofen						
oxadiazon						
oxyfluorfen						
propachlor						
op DDD						
op DDE						
op DDT						
bis(2-ethylhexyl)phthalate						

55



OCC Pesticide 100/2000mg/L
Lot #: 180771 - 29934
Rec: 11/10/11 MFR exp. 11/04/14

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PCB CONGENERS SPIKE

PCB Congener Solution
(Second Source), 28-1, 100
mg/L, 1 ml
130116-01-SS
Lot# 217672 Storage ≤ Ambient Expiry 11/16/16
Solv: Isooctane
Made in the USA
PCB Congener Sol (SS)
Lot #: 217672 - 33111
Rec: 11/15/13 MFR exp. 11/16/16

Open 9/4/14 — 9/4/14 HA
Ex 9/4/15

Compounds	Final Conc.	507A STANDARD Initial Conc	Aliquot	Stock Src	Solvent
ATRAZINE	5 ug/ml	1000ug/ml	50 ul	O2SI	10ml
DIMETHOATE	5	1000		CAT: 132085-01	MTBE
DISULFOTON	5	1000		LOT: 201707-31879	LOT#
PROMETON	5	1000		OP:02/06/14	50223
THIOBENCARB	5	1000		EXP: 01/04/15	
PROMETRYN	5	1000			
BUTACHLOR	5	1000			
PRONAMIDE	5	1000			
METRIBUZIN	5	1000			

RS
9/04/14 RS
ex: 01/04/15

OCI Water Spike

various — 100ug/ml — O2SI — 375ul — 25ml — 1.5ug/ml Acetone #090513C

CAT: 13005-09
lot: 177948-32413
OP: 6/26/14
ex: 6/26/15

RS
Prep: 9/09/14
ex: 6/26/15

PCB CONGENERS SURROGATE

TCMX — 1000 — 500uL — 50mL — 10ug/mL Acetone #090513C

Part#: 70273
Lot # 04111-30677
Open: 9/4/14
Exp: 9/4/15

LH
9/5/14
ex. 9/4/15 LH
ex. 3/6/15

STANDARD	INITIAL CONC	SOURCE	DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	INITIALS

LOG BOOK #41 053

THC SURROGATE (Given to EXTRACTION)

05/09/14 KY
Exp. 05/09/15

CAT NO: 110316-05
LOT NO: 216091-32999
OPEN DATE: 05/09/14
EXPIRE DATE: 05/09/15

LAC 5/12/14

GA by LAC

OP/F CURVE						IA	1B	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	OP/F STD	5	~~LAC 5/12/14~~	~~5/12/2014~~	8/10/2014	2	5	10	50	20	50	70	100
VWR	Hexane		0403138	5/9/14		998	995	990	950	80	50	30	NA
					Final VOL.	1000	1000	1000	1000	100	100	100	100

prep 5/12/14
exp 8/10/14

MITC SURROGATE						
Compounds	Initial Con	Stock Source	Aliquot	Fin Vol	Final Conc	Solvent Lot
Butylate	100 ug/ml	O2SI	1250 µL	25 mL	5 µg/mL	Ethyl Acetate
	Cat:	031160-03				Lot#
	Lot:	180046-33177				10171642
	Op.	02/05/14				
	Exp.	10/21/14				
		180046-33178				
	Op:	05/13/14				
	Exp:	10/21/14				

05/13/14 MA
Exp 08/13/14

MA 05/13/14

Butylate Solution, 100 mg/L, 1 ml
031160-03
Lot # 180046 Storage ≤-10 Degrees C Expiry 10/21/14
Solv: Methanol
Made in the USA
For R&D only, not human consumption.

Butylate
Lot #: 180046 - 33178
Rec: 11/26/13 MFR exp. 10/21/14

TOX. WATER SPIKE

1000 mg/mL O2SI CAT: 030279-06 LOT: 194581-31969 OP: 11/7/13 EX: 11/7/14 | 125uL | 25mL | 5ug/mL | Acetone 090513C | 05/13/14 MA Ex 08/13/14

DATE / INITIALS | STANDARD | INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOLVENT LOT#

LOG BOOK #41

039

HP
open 3-24-14
Ex 3-24-15

5ES STOCK

Compound	Init. Conc.	Stock Src	Aliquot	Final Vol	Final Conc.	Solvent Lot#
alachlor	100/2000 ug/ml	O2SI	500 uL	10 mL	5/100 ug/ml	Hexane
benfluralin	Cat:	130200-02				Lot:
captan	Lot:	216095-33008				040313B
carbophenothion	Op:	03/24/14				
chlorothalonil	Exp.	03/24/15				
chlorthal(dacthal)						
2,6 dichlorobenzonitrile(dicofol)						
kelthane						
nitrofen						
oxadiazon						
oxyfluorfen						
propachlor						
op DDD						
op DDE						
op DDT						
bis(2-ethylhexyl)phthalate						

OCC Pesticide Standard,
100/2000 mg/L, 1 ml
130200-02
Lot# 216095 Storage ≤ 6 Degrees C Expiry 10/14/16
Solv: Tol..Hex. 1:1
Made in the USA
For R&D only, not for human consump.

OCC Pesticide 100/2000mg/L
Lot #: 216095 - 33008
Rec: 10/15/13 MFR exp. 10/14/16

prep
03-24-14 HP
Exp 03-24-14

5ES CALIBRATION CURVE

Compound	Conc. In Mix	Conc. Of Stock	Aliquot	stock source	Final Vol.	Solvent Lot#
alachlor	(1) 0 005/0 1	5/100ug/ml	10ul	508 stock	10 mL	Hexane
benfluralin	(2) 0.03/0.6	5/100ug/ml	60ul	prep: 3/24/14	10 mL	040313B
captan	(3) 0 05/1 0	5/100ug/ml	100ul	Exp: 3/24/15	10 mL	
carbophenothio	(4) 0 10/2.0	5/100ug/ml	200ul		10 mL	
chlorothalonil	(5) 0.15/3.0	5/100ug/ml	300ul		10 mL	
chlorthal(dacth	(6) 0.20/4.0	5/100ug/ml	400ul		10 mL	
2,6 dichlorobenzonitrile(dicofol)						
kelthane						
nitrofen						
oxadiazon						
oxyfluorfen						
propachlor						
op DDD						
op DDE						
op DDT						
bis(2-ethylhexyl)phthalate						

Velpar/ Fenamiphos Standard 3/26/14 CK

ANALYTES	INIT. CONC	SOURCE	ALIQUOT	FIN CONC.	SOLVENT
Velpar	1000µg/ml	O2SI	100µL	10µg/ml	10 ml
	CAT	031176-01			Acetone
	LOT	210104-32704			LOT#
	OPEN	01/28/14			090513C
	EXP	01/28/15			
Fenamiphos	1000µg/ml	O2SI	100µL	10µg/ml	
	Cat.	031189-02			
	Lot:	210105-32707			
	Op:	01/28/14			
	Exp:	01/28/15			

Prep 3/26/14
EXP 1/28/15
CK

STANDARD

INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOLVENT LOT # | DATE

GC STANDARD PREPARATION BOOK # 4/ PAGE # 089

		OCL-OP water Surrogate				
Standard	Initial conc ug/ml	Source date	Aliquot	Final VOL	Final conc	Solvent LOT#
TCMX	5000	O2SI	30ul	100ml	1.5ug/ml	ACETONE
DBC		cat:130070-02				090513C
DECA		lot: 213973-32853				
		open:07/15/14				
		EX:07/15/15	MA 8/20/14			
TBP	1000	O2SI	500ul		5ug/ml	
TPP		cat:130161-02				
		lot:199464-31892				
		open: 08/5/14				
		EX: 08/5/15				

MA 8/20/14

8/20/14 MA
Exp
11/20/14

OP/F CURVE						IA	1B	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	mL	mL	mL	mL	mL	mL	mL	mL
	OP/F STD	5		08/18/14	12/08/14	2	5	10	50	20	100	70	100
VWR	Hexane		080613A			998	995	990	950	80	100	30	NA
					Final VOL.	1000	1000	1000	1000	100	200	100	100

GA
8/22/14
12/8/14

OPC CURVE						1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
	OPC STD	5		08/04/14	07/19/15	10	50	20	100	70	1000
	Hexane		080613A			990	950	80	100	30	NA
					Final VOL.	1000	1000	100	200	100	1000

GA
8/22/14
2/22/15

TERBACIL CURVE						0.05	0.25	1	2.5	3.5	5
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
	TERBACIL STD	5		08/18/14	08/18/15	10	50	20	100	70	100
VWR	HEXANE		080613A			990	950	80	100	30	NA
					Final VOL.	1000	1000	100	200	100	100

GA
8/22/14
2/22/15

8141 Surrogate 1000 ug/ml 08-26-14 JP

Tributyl- and
Triphenylphosphate
Solution, 1,000 mg/L, 1 ml
130161-02
Lot # 199464 Storage ≤-10 Degrees C Expiry 11/19/15
Solv: Acetone

Tributyl and Triphenyl phosphate
Lot #: 199464 - 31893
Rec: 1/15/13 MFR exp. 11/19/15

I broke open the vial labeled to the left and transferred to an amber 1.8ml Injection vial.
→ 8141 Surr 1000 ug/ml 08-26-14

GC STANDARD PREPARATION BOOK # 40 PAGE #

STANDARD	INITIAL CONC	SOURCE	DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	LOT #	INITIALS

* WAS NOT RECORDED ON 10/21/13 *

PREP:	10/21/13												
PAC ECO CURVE													
EXP:	01/12/14					1a	1b	1	2	3	4	5	6
	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	PAC ECO CAL STD	5		10/17/13	01/12/14	2	5	10	50	200	500	700	1000
						998	995	990	950	800	500	300	N/A
	Hexane		030713A		Final VOL.	1000	1000	1000	1000	1000	1000	1000	1000

10/21/13 EX 1/12/14

OCL Soil Spike

MA 1/7/14 — VARIOUS — 1000µg/mL — 1000µL — 50mL — 20µg/mL — Acetone — #031813B — PJ

Organochlorine Pesticide Solution 20, 1,000 mg/L, 1 ml — 130015-05 — Lot# 180881 — Storage ≤ 6 Degrees C — Expiry 11/5/14 — Solv: Tol.:Hex. 1:1 — For R&D only, not for human consump. Made in the USA

PJ 10/22/13 — Ex: 10/22/14

Organochlorine Pest Soln 20
Lot #: 180881 - 29955
Rec: 11/10/11 MFR exp. 11/05/14
PJ 10/22/13

Prep: 10/22/13
Ex: ~~10/22/14~~ 1/22/14
PJ 10/22/13
Ex 4/23/14
Ex 7/23/14
Ex 10/22/14

10/17/13 — 1/4/14 — * Spike was quanted (QC) on 1/23/14. New Exp. date MA 1/23/14
4/23/14. New Exp date MA 4/23/14

Tox Soil Spike

10/21/13 — 7/24/14 — VARIOUS — 5000µg/mL — 1000µL — 25mL — 200µg/mL — Acetone — #031813B — PJ

Toxaphene Solution, 5,000 mg/L, 1 ml — 030279-31 — Lot# 180049 — Storage <= 6 Degrees — Expiry 10/21/14 — Solv: Methanol — For R&D only, not for human consump. Made in the USA

OP: 10/22/13 — Ex: 10/21/14 — PJ

Toxaphene
Lot #: 180049 - 29725
Rec: 10/24/11 MFR exp. 10/21/14
PJ 10/22/13

Prep: 10/22/13
Ex: 1/22/14
Ex 4/23/14
Ex 7/23/14

10/22/13 — 1/22/14 — Spike was quanted (QC) on 1/23/14. New Exp. date. MA 1/23/14
4/23/14. MA 4/23/14

22/14 — 504/8011 10W METHOD STD DF10 — MA

EDB — 0.0Z — 504/8011 10W M.STD — 500mL — 5mL — 0.003 µg/mL — Methanol 10/23/13
TCP — Prep 10/4/13 — 031313A Ex 11/4/13
DBCP
1,3-DBP — Ex 10 11/4/13
22/13 — MA 10/23/13
2/14
x 4/22/14

* OCL Soil Spike was QC on 7/22/14

STANDARD 078	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CNC	SOLVENT LOT #	DATE / INITIALS

LOG Book #41

GA 7/16/14

OCL CALIBRATION CURVE

Compound	Initial conc	Source Stock	Aliquot	Final Conc	Final Vol.
Various	10 ug/ml	OCL Stock	250 ul	2 - 0.050 ug/ml	50 mL
Analytes	10 ug/ml	prep: 07/15/14	500 ul	3 - 0.100 ug/ml	50 mL
	10 ug/ml	exp: 11/05/14	375 ul	4 - 0.150 ug/ml	25 mL
	10 ug/ml		200ul	5 - 0.200 ug/ml	10 mL
	10 ug/ml		250 ul	6 - 0.250 ug/ml	10 mL
	10 ug/ml	Lvl 2	200 ul	1B - 0.001 ug/mL	10 mL
	10 ug/ml	prep: 07/16/14	600 ul	1A - 0.003 ug/mL	10 mL
	0.005 ug/mL	exp: 11/05/14	1000 ul	1 - 0.005 ug/ml	10 mL
Solvent:	Hexane	Lot: 080613A			

GA 7/16/14
11/5/14

TOX SOIL SPIKE

VARIOUS 5000ug/mL O2SI CAT: 030279-31 LOT: 180049-32546 OP: 7/16/14 EXP: 10/21/14 — 1000uL 25mL 200ug/mL Acetone #090513C

GA 7/16/14
GA 7/16/14 ~~10/21/14~~
10/16/14

AR 1268 STOCK (20ug/mL)

AR 1268 1000ug/mL Restek CAT: 32410 LOT: A0915862-32660 OP: 7/18/14 EXP: 7/18/15 — 200uL 10mL 20ug/mL Hexane #080613A

GA 7/18/14
7/18/15

GA 7/18/14

OP/F CURVE						IA	1B	1	2	3	4	5	6
SUPPLIER	ID#	[ug/mL]	LOT #	DATE	EXP. DATE	mL	mL	mL	mL	mL	mL	mL	mL
	OP/F STD	5		06/24/14	08/10/14	2	5	10	50	20	100	70	100
VWR	Hexane		080613A			998	995	990	950	80	100	30	NA
					Final VOL	1000	1000	1000	1000	100	200	100	100

GA 7/18/14

OPF 100/200 CCV						
SUPPLIER	ID#	[ug/mL]	LOT #	DATE	EXP. DATE	µL
	OPF STD	5		06/24/14	08/10/14	100
VWR	HEXANE		080613A			100
					Final vol.	200

GA 7/18/14
8/10/14
GA 7/18/14
8/10/14

AR 1268 (1ug/mL)

AR1268 20ug/mL AR1268STK Prep: 7/18/14 EXP: 7/18/15 — 500uL 10mL 1ug/mL Hexane #080613A

GA 7/18/14
7/18/15

STANDARD 036

INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOLVENT LOT# | DATE INITIALS

LOG BOOK #41

RS 3/13/14

MITC CURVE											
						1	2	3	4	5	6
SUPPLIER	ID#	ug/mL	LOT #	DATE	EXP.	µL	µL	µL	µL	µL	µL
	MITC STD	5		02/05/14	08/29/14	4	50	20	50	70	100
VWR	ETHYL ACETATE		10171642			996	950	80	50	30	N/A
					Final VOL	1000	1000	100	100	100	100

RS
Prep: 3/13/14
EX: 8/29/14

OP/F CURVE													
						IA	1B	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	OP/F STD	5		02/20/14	08/20/14	2	5	10	50	20	50	70	100
VWR	Hexane		040313B			998	995	990	950	80	50	30	NA
					Final VOL.	1000	1000	1000	1000	100	100	100	100

PREP: 3/17/14
EXP: 8/20/14
GA

OPC CURVE											
					GA 3/17/14	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DAT	µL	µL	µL	µL	µL	µL
	OPC STD	5		02/11/14	########	10	50	200	500	700	1000
	Hexane		040313B		7/22/14	990	950	800	500	300	NA
					Final Vo	1000	1000	1000	1000	1000	1000

PREP: 3/17/14
EXP: 7/22/14
GA

DOHS M STD						
Compound	Initial Conc. (ug/ml)	Source	Aliquot (uL)	Final Vol. (mL)	Final Conc. (ug/ml)	Solvent Lot #
EDB TCP DBCP	20	504/DOHS STOCK prep. 3/09/14 exp 7/02/14	500	10mL	1ug/mL	Methanol 031313A
1,3 DBP	100	1,3 DBP STOCK prep. 02/17/14 exp.02/17/15	100		1ug/mL	

PREP: 3/17/14
EXP: 7/02/14
GA
EXP 2/17/15

504/DOHS STOCK QC on 6/19/14

SES ~~508~~ AMPULE MA 3/18/14
0251
CAT: 130200-02
Lot: 172011-28787
Open: 3/18/14
Exp: 4/23/14

100 ug/mL

MA 3/18/14
Prep 3/18/14
Open:
Ex 4/23/14

PAC ECO CURVE													
						1a	1b	1	2	3	4	5	6
	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	PAC ECO CAL STD	5		01/30/14	06/15/14	2	5	10	50	200	500	700	1000
						998	995	990	950	800	500	300	N/A
	Hexane		030713A		Final VOL.	1000	1000	1000	1000	100	1000	1000	1000

Prep 3/19/14
Exp. 6/15/14
GA

TPH SURROGATE CAT: 110316-05 LOT NO: 216091-33002 Ky Open: 3/19/14 Exp 3/19/15
Open: 3/19/14 Expire: 3/19/15 - Ging to Extractions 3/19/14

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'EN'T LOT #	DATE INITIALS

L06 BOOK #41

065

5ES AMPULE

CAT: 130200-02

LOT: 216095-33009

Opn: 6/12/14

Exp 6/12/15

6/12/14 MA

Ex 6/12/15

OP/F CURVE

GA 6/12/14

SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	IA µL	1B µL	1 µL	2 µL	3 µL	4 µL	5 µL	6 µL
	OP/F STD	5		05/30/14	08/10/14	2	5	10	50	20	200	70	100
VWR	Hexane		080613A			998	995	990	950	80	200	30	NA
					Final VOL.	1000	1000	1000	1000	100	400	100	100

GA

6/13/14

GA 6/13/14 ~~6/30/14~~

8/10/14

GA 6/17/14

507A STANDARD

ATRAZINE	5 ug/ml	1000ug/ml	50 ul	O2SI	10ml
DIMETHOATE	5	1000	Cat:	132085-01	MTBE
DISULFOTON	5	1000	Lot:	201707-31879	LOT#
PROMETON	5	1000	Open:	02/06/14	50223
THIOBENCARB	5	1000	Exp:	01/04/15	
PROMETRYN	5	1000			
BUTACHLOR	5	1000			
PRONAMIDE	5	1000			
METRABUZIN	5	1000			

GA

6/17/14

1/4/15

GA 6/18/14

MSE002 SPIKE

COMPOUNDS	INIT CONC.	STK SRC	ALIQUOT	FIN VOL	FIN CONC	SOLVENT
EDB	200 µg/mL	ABSOLUTE	100µL	10mL	2µg/mL	Methanol
TCP	Cat:	30096				#031313A
DBCP	Lot:	080111-30272				
	Op:	01/29/14				
	Exp:	01/29/15				

GA

6/18/14

9/18/14

MSE002 SURROGATE

100ug/mL 1,3DBP STK 100uL 5mL 2ug/mL Methanol

Prep: 2/17/14 #031313A

Exp: 2/17/15

GA

6/18/14

9/18/14

STANDARD | INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOLVENT LOT# | DATE / INITIALS

AA STANDARD PREPARATION BOOK # CA 4/15/14 PAGE # 099

MOTOR OIL CCV 1000ppm						
STANDARD	CONC.	DATE	ALIQUOT	VOL	CONC.	/LOT#
MO STD.	2000 µg/mL	MO Std.	3000µL	5mL	1000 µg/ml	MC
	PREP:	08/05/14				54024
	Exp:	08/05/15				

CA 9/12/14
12/12/14

PCB CONG LVL 4

Various 10ug/mL PCB CONG STK 10uL 10mL 0.01ug/mL — CA 9/12/14

Prep: 9/5/14 — Hexane — 9/12/14

EXP: 4/30/15 — #080613A — 3/12/15

		FIN PT CURVE		CA 9/12/14	
COMPOUND	INITIAL CONC	FINAL CONC	ALIQUOT	STK SRCE	FINAL VOL.
FOLPET	5 ug/ml	VARIOUS	5 ul	FIN PT Std.	1 ml
IPRODIONE	25 ug/ml		50 ul	Prep: 07/01/14	Hexane
NORFLURAZON	5 ug/ml		100 ul	EXP: 07/01/15	Lot: 080613A
PERTHANE	50 ug/ml		150 ul		
TETRADIFON	5 ug/ml		250 ul		

CA 9/12/14
3/12/15

PAC ECO CURVE													CA 9/12/14
						1a	1b	1	2	3	4	5	6
ID#	[µg/mL]	LOT #	DATE	EXP. DATE		µL	µL	µL	µL	µL	µL	µL	µL
PAC ECO CAL STD	5		06/23/14	11/09/14		2	5	10	50	20	100	70	1000
						998	995	990	950	80	100	30	N/A
Hexane		080613A		Final VOL.		1000	1000	1000	1000	100	200	100	1000

CA 9/12/14
3/12/15 CA 9/5/14
11/9/14

PAC ECO CURVE									CA 9/15/14				
						1a	1b	1	2	3	4	5	6
ID#	[µg/mL]	LOT #	DATE	EXP. DATE		µL	µL	µL	µL	µL	µL	µL	µL
PAC ECO CAL STD	5		06/23/14	11/09/14		2	5	10	50	20	100	70	1000
						998	995	990	950	80	100	30	N/A
Hexane		080613A		Final VOL.		1000	1000	1000	1000	100	200	100	1000

CA 9/15/14
11/9/14

OCL-OP Soil Surrogate						
Standard	Initial conc ug/ml	Source date	Aliquot	Final VOL	Final conc	Solvent LOT#
TCMX	5000	O2SI	400ul	100ml	20ug/ml	ACETONE
DBC		cat:130070-02				090513C
DECA		lot: 213973-32853				
		open:07/5/14				
		EX:7/5/15				
TBP	1000	O2SI	500ul		5ug/ml	
TPP		cat:130161-02				
		lot:199464-31892				
		open: 08/5/14				
		EX: 08/5/15				

LH
9/16/14
ex. 12/16/14

Incremental Sampling Preparation Log Book # 1 Page # 1827

ARF # / Project	Sample #	1st Weight *	2nd Weight *	3rd Weight *	4th Weight * (If Needed)	Passing Sample (weight of foil negligible)	Tarred Container + Non-passing Sample	I.S. before grind (Initial Box when Complete)
	AZ 02222 NG sticker verified Date/Initials	Weight: 78.92 g Date: 9-9-14 Time: 15:25 Initials: CFM	Weight: 75.08 g Date: 9-10-14 Time: 07:75 Initials: CFM	Weight: 75.09 g Date: 9-10-14 Time: 10:20 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02223 NG sticker verified Date/Initials	Weight: 75.81 g Date: 9-9-14 Time: 15:75 Initials: CFM	Weight: 72.51 g Date: 9-10-14 Time: 07:25 Initials: CFM	Weight: 72.50 g Date: 9-10-14 Time: 10:20 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
74218 Element	AZ 02099 NG sticker verified Date/Initials	Weight: 2.004 Kg Date: 9.10.14 Time: 8:41 Initials: Rmm	Weight: 2.498 Kg Date: 9.11.14 Time: 8:35 Initials: E.R.	Weight: 2.494 Kg Date: 9-12-14 Time: 8:08 Initials: E.R Rmm	Weight: g Date: Time: Initials:	0.754 Kg Initials: Rmm	250.62 g Initials: Rmm	Metals: NM 8270: 8290: Other:
	AZ 02100 NG sticker verified Date/Initials	Weight: 2.144 Kg Date: 9.10.14 Time: 8:51 Initials: Rmm	Weight: 2.06de Kg Date: 9-11-14 Time: 8:36 Initials: E.R.	Weight: 2.0102 Kg Date: 9.12.14 Time: 8:10 Initials: Rmm	Weight: g Date: Time: Initials:	0.568 Kg Initials: E.R.	226.64 g Initials: E.R.	Metals: NM 8270: 8290: Other:
	AZ 02101 NG sticker verified Date/Initials	Weight: 2.724 Kg Date: 9.10.14 Time: 8:56 Initials: Rmm	Weight: 2.612 Kg Date: 9-11-14 Time: 8:38 Initials: E.R	Weight: 2.602 Kg Date: 9.12.14 Time: 8:12 Initials: Rmm	Weight: g Date: Time: Initials:	0.834 Kg Initials: Rmm	279.68 g Initials: Rmm	Metals: NM 8270: 8290: Other:
	AZ 02102 NG sticker verified Date/Initials	Weight: 2.788 Kg Date: 9.10.14 Time: 9:02 Initials: Rmm	Weight: 2.636 Kg Date: 9-11-14 Time: 8:39 Initials: E.R	Weight: 2.626 Kg Date: 9.12.14 Time: 8:15 Initials: Rmm	Weight: g Date: Time: Initials:	0.890 Kg Initials: E.R	282.97 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02103 NG sticker verified Date/Initials	Weight: 2.830 Kg Date: 9-10-14 Time: 9:08 Initials: Rmm	Weight: 2.672 Kg Date: 9-11-14 Time: 8:40 Initials: E.R	Weight: 2.6600 Kg Date: 9.12.14 Time: 8:16 Initials: Rmm	Weight: g Date: Time: Initials:	0.924 Kg Initials: E.R	264.59 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02104 NG sticker verified Date/Initials	Weight: 2.796 Kg Date: 9.10.14 Time: 9:12 Initials: Rmm	Weight: 2.636 Kg Date: 9-11-14 Time: 8:41 Initials: E.R	Weight: 2624 Kg Date: 9.12.14 Time: 8:17 Initials: Rmm	Weight: g Date: Time: Initials:	0.894 Kg Initials: Rmm	318.83 g Initials: Rmm	Metals: NM 8270: 8290: Other:

* Each recorded weight includes the foil-lined tray + the sample.

NG = No Grind (applies to metals, PAH, Perchlorate, other methods etc.)

Incremental Sampling Preparation Log Book # 1 Page # 1828

ARF # / Project	Sample #	1st Weight *	2nd Weight *	3rd Weight *	4th Weight * (If Needed)	Passing Sample (weight of foil negligible)	Tarred Container + Non-passing Sample	I.S. before grind (Initial Box when Complete)
	AZ 02105 NG sticker verified Date/Initials	Weight: 2.814 Kg Date: 9-10-14 Time: 9:15 Initials: RMM	Weight: 2.572 Kg Date: 9-11-14 Time: 8:42 Initials: E.R.	Weight: 2.508 Kg Date: 9-12-14 Time: 8:18 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.978 Kg Initials: J.R	163.14 g Initials: J.R	Metals: NM 8270: 8290: Other:
	AZ 02106 NG sticker verified Date/Initials	Weight: 2.862 Kg Date: 9-10-14 Time: 9:19 Initials: RMM	Weight: 2.600 Kg Date: 9-11-14 Time: 8:43 Initials: E.R.	Weight: 2.546 Kg Date: 9-12-14 Time: 8:18 Initials: RMM	Weight: ____ g Date: Time: Initials:	E.R. 1.000 Kg Initials: E.R	136.28 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02107 NG sticker verified Date/Initials	Weight: 2.834 Kg Date: 9-10-14 Time: 9:19 Initials: RMM	Weight: 2.586 Kg Date: 9-11-14 Time: 8:44 Initials: E.R	Weight: 2.536 Kg Date: 9-12-14 Time: 8:19 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.924 Kg Initials: JR	219.20 g Initials: J.R	Metals: NM 8270: 8290: Other:
	AZ 02110 NG sticker verified Date/Initials	Weight: 2.720 Kg Date: 9-10-14 Time: 9:22 Initials: RMM	Weight: 2.584 Kg Date: 9-11-14 Time: 8:45 Initials: E.R	Weight: 2.574 Kg Date: 9-12-14 Time: 8:19 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.902 Kg Initials: E.R	282.40 g Initials: ER	Metals: NM 8270: 8290: Other:
	AZ 02111 NG sticker verified Date/Initials	Weight: 2.642 Kg Date: 9-10-14 Time: 9:30 Initials: RMM	Weight: 2.468 g Date: 9-11-14 Time: 8:45 Initials: E.R	Weight: 2.456 Kg Date: 9-12-14 Time: 8:21 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.892 Kg Initials: ER	302.54 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02112 NG sticker verified Date/Initials	Weight: 2.780 Kg Date: 9-10-14 Time: 9:35 Initials: RMM	Weight: 2.520 Kg Date: 9-11-14 Time: 8:46 Initials: ER	Weight: 2.486 Kg Date: 9-12-14 Time: 8:22 Initials: RMM	Weight: 2.482 Kg Date: 9/12/14 Time: 11:20 Initials: KY	0.980 Kg Initials: E.R	129.53 g Initials: ER	Metals: NM 8270: 8290: Other:
	AZ 02113 NG sticker verified Date/Initials	Weight: 2.596 Kg Date: 9-10-14 Time: 9:39 Initials: RMM	Weight: 2.464 Kg Date: 9-11-14 Time: 8:46 Initials: ER	Weight: 2.458 Kg Date: 9-12-14 Time: 8:23 Initials: RMM	Weight: ____ g Date: Time: Initials:	0884 Kg Initials: J.R	167.65 g Initials: J.R	Metals: NM 8270: 8290: Other:
	AZ 02114 NG sticker verified Date/Initials	Weight: 2.856 Kg Date: 9-10-14 Time: 9:45 Initials: RMM	Weight: 2.666 Kg Date: 9-11-14 Time: 8:47 Initials: ER	Weight: 2.654 Kg Date: 9-12-14 Time: 8:23 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.998 Kg Initials: E.R	241.29 g Initials: ER	Metals: NM 8270: 8290: Other:

* Each recorded weight includes the foil-lined tray + the sample.

NG = No Grind (applies to metals, PAH, Perchlorate, other methods etc.)

Incremental Sampling Preparation Log Book # 1 Page # 1829

ARF # / Project	Sample #	1st Weight *	2nd Weight *	3rd Weight *	4th Weight * (If Needed)	Passing Sample (weight of foil negligible)	Tarred Container + Non-passing Sample	I.S. before grind (Initial Box when Complete)
	AZ 02615 NG sticker verified Date/Initials	Weight: 2.8301 kg Date: 9-10-14 Time: 9:49 Initials: RMM	Weight: 2.594 g Date: 9-11-14 Time: 8:47 Initials: E.R	Weight: 2.5016 kg Date: 9-12-14 Time: 8:23 Initials: RMM	Weight: g Date: Time: Initials:	0.992K g Initials: E.R	139.57 g Initials: E.R	Metals: PM 8270: 8290: Other:
74237 UBS, Grimp	AZ 02231 NG sticker verified Date/Initials	Weight: 77.92 g Date: 9-10-14 Time: 14:54 Initials: CRM	Weight: 74.08 g Date: 9-11-14 Time: 08:14 Initials: CRM	Weight: 74.09 g Date: 9-12-14 Time: 11:36 Initials: CRM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02232 NG sticker verified Date/Initials	Weight: 68.64 g Date: 9-10-14 Time: 14:54 Initials: CRM	Weight: 65.11 g Date: 9-11-14 Time: 08:14 Initials: CRM	Weight: 65.11 g Date: 9-12-14 Time: 11:36 Initials: CRM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02233 NG sticker verified Date/Initials	Weight: 75.27 g Date: 9-10-14 Time: 14:54 Initials: CRM	Weight: 71.63 g Date: 9-11-14 Time: 08:14 Initials: CRM	Weight: 71.64 g Date: 9-12-14 Time: 11:36 Initials: CRM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
74278 UBS, Grimp	AZ 02584 MS/MSD NG sticker verified Date/Initials	Weight: 75.59 g Date: 9-12-14 Time: 14:18 Initials: CRM	Weight: 72.47 g Date: 9-15-14 Time: 07:03 Initials: CRM	Weight: 72.48 g Date: 9-15-14 Time: 09:13 Initials: CRM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02585 NG sticker verified Date/Initials	Weight: 74.17 g Date: 9-12-14 Time: 14:18 Initials: CRM	Weight: 70.92 g Date: 9-15-14 Time: 07:07 Initials: CRM	Weight: 70.91 g Date: 9-15-14 Time: 09:13 Initials: CRM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
74297 UBS, Grimp	AZ 02668 NG sticker verified Date/Initials	Weight: 69.36 g Date: 9-16-14 Time: 13:31 Initials: CRM	Weight: 66.24 g Date: 9-17-14 Time: 07:54 Initials: CRM	Weight: 66.31 g Date: 9-17-14 Time: 15:33 Initials: CRM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02669 NG sticker verified Date/Initials	Weight: 68.28 g Date: 9-16-14 Time: 13:31 Initials: CRM	Weight: 65.13 g Date: 9-17-14 Time: 07:54 Initials: CRM	Weight: 65.14 g Date: 9-17-14 Time: 15:33 Initials: 547 CRM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:

* Each recorded weight includes the foil-lined tray + the sample.

NG = No Grind (applies to metals, PAH, Perchlorate, other methods etc.)

_SEP025

Organic Extraction Worksheet

Method	OCL OP/Triazine Sep Funnel Low 3510C	Extraction Set	140909A	Extraction Method	SEP025	Units	mL

Spiked ID 1	OCL Water Spike 9-4-4 EXP 6-26-15		Surrogate ID 1	OCL/OP Water Surrogate 8-20-14 EXP 11-20-14	
Spiked ID 2	TOX Water Spike 6-13-14 EXP 11-12-14		Surrogate ID 2		
Spiked ID 3	PCB Water Spike 12-9-13 EXP 12-2-14		Surrogate ID 3		
Spiked ID 4	Tech Chlordane Stk 11-8-13 EXP 11-8-14		Surrogate ID 4		
Spiked ID 5	5 ES Std 3-24-14 EXP 3-24-15		Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	09/09/14 9:50	
Spiked ID 8			Ext. End Time:	09/10/14 15:30	
			GC Requires Extract By:	09/19/14 0:00	

pH1	2	9/09/14 10:00:00 AM	Water Bath Temp Criteria	35,35,35,3
pH2				
pH3				

Spiked By: IC **Date** 09/09/14 **Witnessed By:** DL **Date** 09/09/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	140909A Blk				0.1	1 equip	500 E-WB1	1	2	09/09/14 9:50	
2	140909A LCS-1		0.1	1	0.1	1 equip	500 E-WB2	1	2	09/09/14 9:50	
3	140909A LCS-2		0.1	2	0.1	1 equip	500 E-WB3	1	2	09/09/14 9:50	
4	140909A LCS-3		0.1	3	0.1	1 equip	500 E-WB4	1	2	09/09/14 9:50	
5	140909A LCS-4		0.2	4	0.1	1 equip	500 E-WB1	1	2	09/09/14 9:50	
6	140909A LCS-5		0.1	5	0.1	1 equip	500 E-WB2	1	2	09/09/14 9:50	
7	140909A LCSD-1		0.1	1	0.1	1 equip	500 E-WB3	1	2	09/09/14 9:50	
8	140909A LCSD-2		0.1	2	0.1	1 equip	500 E-WB4	1	2	09/09/14 9:50	
9	AZ01347	AZ01347W02			0.1	1 equip	500 E-WB2	1	2	09/09/14 9:50	74100
10	AZ01350	AZ01350W01			0.1	1 equip	500 E-WB3	1	2	09/09/14 9:50	74100
11	AZ02108	AZ02108W09			0.1	1 equip	500 E-WB1	1	2	09/09/14 9:50	74218 RUSH 2 WEEKS
12	AZ02109	AZ02109W08			0.1	1 equip	500 E-WB2	1	2	09/09/14 9:50	74218 RUSH 2 WEEKS
13	AZ02116	AZ02116W04			0.1	1 equip	500 E-WB3	1	2	09/09/14 9:50	74218 RUSH 2 WEEKS
14	AZ02136	AZ02136W02			0.1	1 equip	500 E-WB4	1	2	09/09/14 9:50	74228
15	AZ02137	AZ02137W01			0.1	1 equip	500 E-WB1	1	2	09/09/14 9:50	74228

lvent and Lot#	
1 H2S04	9-5-14
C	54128
ter Paper	400038
IDIFIED Na2SO4	8-28-14
xane	080613A

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	HA
Date	9/10/14
Time	16:00
Refrigerator	Hobart

	Technician's Initials
Scanned By	IC
Sample Preparation	IC
Extraction	IC
Concentration	DL

Modified	09/10/14 3:33:04 PM

Reviewed By: Ky **Date** 9/10/14

Organic Extraction Worksheet

Method	LOW LEVEL OCL/OP/Triaz So Ext 3550B MIS	Extraction Set	140916A	Extraction Method	SON002LLMIS	Units	mL

Spiked ID 1	OCL Soil Spike 10-22-13 exp 10-22-14		Surrogate ID 1	OCL/OP Soil Surrogate 9-16-14 exp 12-16-14	
Spiked ID 2	TOX SOIL SPIKE 7-16-14 exp 10-16-14		Surrogate ID 2		
Spiked ID 3	PCB SOIL SPIKE 5-30-14 exp 11-30-14		Surrogate ID 3		
Spiked ID 4	Tech Chlordane Amplue 3-18-14 exp 3-18-15		Surrogate ID 4		
Spiked ID 5	5 ES Stock 6-12-14 exp 6-12-15		Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	09/16/14 13:10	
Spiked ID 8			Ext. End Time:	09/18/14 16:05	
			GC Requires Extract By:	**09/19/14 0:00**	

pH1			Water Bath Temp Criteria	35,35,35,3
pH2				
pH3				

Spiked By: KY **Date** 09/16/14 **Witnessed By:** CFM **Date** 09/16/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	140916A Blk				0.5	1 equip	30.20g	5x1/0.05	NA	09/16/14 13:10	
							E-S5 E-WB1				
2	140916A LCS-1		0.250	1	0.5	1 equip	30.35g	5x1/0.05	NA	09/16/14 13:10	
							E-S4 E-WB2				
3	140916A LCS-2		0.250	2	0.5	1 equip	30.20g	5x1/0.05	NA	09/16/14 13:10	
							E-S3.1 E-WB3				
4	140916A LCS-3		0.250	3	0.5	1 equip	30.48g	5x1/0.05	NA	09/16/14 13:10	
							E-S2 E-WB4				
5	140916A LCS-4		0.050	4	0.5	1 equip	30.39g	5x1/0.05	NA	09/16/14 13:10	
							E-S1.2 E-WB1				
6	140916A LCS-5		0.050	5	0.5	1 equip	30.15g	5x1/0.05	NA	09/16/14 13:10	
							E-S1.1 E-WB2				
7	AZ02099	AZ02099S11			0.5	1 equip	30.21g	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
							E-S6 E-WB3				
8	AZ02100 MS-1	AZ02100S11	0.250	1	0.5	1 equip	30.28g	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
							E-S7 E-WB4				
9	AZ02100 MSD-1	AZ02100S11	0.250	1	0.5	1 equip	30.36g	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
							E-S5 E-WB1				
10	AZ02100 MS-2	AZ02100S11	0.250	2	0.5	1 equip	30.11g	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
							E-S5 E-WB2				
11	AZ02100 MSD-2	AZ02100S11	0.250	2	0.5	1 equip	30.16g	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
							E-S3.1 E-WB3				
12	AZ02100	AZ02100S11			0.5	1 equip	30.51g	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
							E-S2 E-WB4				
13	AZ02100 MS-3	AZ02100S11	0.250	3	0.5	1 equip	30.68g	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
							E-S1.2 E-WB1				
14	AZ02100 MS-4	AZ02100S11	0.050	4	0.5	1 equip	30.13g	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
							E-S1.1 E-WB2				
15	AZ02100 MS-5	AZ02100S11	0.050	5	0.5	1 equip	30.07g	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
							E-S6 E-WB3				
16	AZ02100 MSD-3	AZ02100S11	0.250	3	0.5	1 equip	30.68g	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
							E-S7 E-WB4				

Solvent and Lot#	
MC	54128
Acetone	051314C
Hexane	080613A
Na2S04	WE05D
Sand	WF27C
Filter Paper	FC010442
Sulfuric Acid	60269

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	9/18/14
Time	17:30
Refrigerator	HOBART

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	IC
Concentration	DL

Modified	09/18/14 5:11:28 PM

Reviewed By: [illegible] **Date** 9/18/14

Organic Extraction Worksheet

Method	LOW LEVEL OCL/OP/Triaz So Ext 3550B MIS	Extraction Set	140916A	Extraction Method	SON002LLMIS	Units	mL

Spiked ID 1	OCL Soil Spike 10-22-13 exp 10-22-14		Surrogate ID 1	OCL/OP Soil Surrogate 9-16-14 exp 12-16-14	
Spiked ID 2	TOX SOIL SPIKE 7-16-14 exp 10-16-14		Surrogate ID 2		
Spiked ID 3	PCB SOIL SPIKE 5-30-14 exp 11-30-14		Surrogate ID 3		
Spiked ID 4	Tech Chlordane Amplue 3-18-14 exp 3-18-15		Surrogate ID 4		
Spiked ID 5	5 ES Stock 6-12-14 exp 6-12-15		Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	09/16/14 13:10	
Spiked ID 8			Ext. End Time:	09/18/14 16:05	
			GC Requires Extract By:	**09/19/14 0:00**	

pH1			Water Bath Temp Criteria	35,35,35,3
pH2				
pH3				

Spiked By: KY **Date** 09/16/14 **Witnessed By:** CFM **Date** 09/16/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ02100 MSD-4	AZ02100S11	0.050	4	0.5	1 equip	30.32g E-S5 E-WB1	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
18	AZ02100 MSD-5	AZ02100S11	0.050	5	0.5	1 equip	30.42g E-S4 E-WB2	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
19	AZ02101	AZ02101S11			0.5	1 equip	30.26g E-S3.1 E-WB3	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
20	AZ02102	AZ02102S11			0.5	1 equip	30.08g E-S2 E-WB4	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
21	AZ02103	AZ02103S11			0.5	1 equip	30.14g E-S1.2 E-WB1	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
22	AZ02104	AZ02104S11			0.5	1 equip	30.47g E-S1.1 E-WB2	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
23	AZ02105	AZ02105S11			0.5	1 equip	30.51g E-S6 E-WB3	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
24	AZ02106	AZ02106S11			0.5	1 equip	30.38g E-S7 E-WB4	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
25	AZ02107	AZ02107S11			0.5	1 equip	30.65g E-S5 E-WB1	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
26	AZ02110	AZ02110S11			0.5	1 equip	30.30g E-S4 E-WB2	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
27	AZ02111	AZ02111S11			0.5	1 equip	30.28g E-S3.1 E-WB3	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
28	AZ02112	AZ02112S11			0.5	1 equip	30.81g E-S2 E-WB4	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
29	AZ02113	AZ02113S11			0.5	1 equip	30.16g E-S1.2 E-WB1	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
30	AZ02114	AZ02114S11			0.5	1 equip	30.04g E-S1.1 E-WB2	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
31	AZ02115	AZ02115S11			0.5	1 equip	30.34g E-S6 E-WB3	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS

Solvent and Lot#	
MC	54128
Acetone	051314C
Hexane	080613A
Na2S04	WE05D
Sand	WF27C
Filter Paper	FC010442
Sulfuric Acid	60269

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	9/18/14
Time	17:30
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	IC
Concentration	DL

Modified	09/18/14 5:11:28 PM

Reviewed By: [signature] **Date** 9/18/14

Injection Log

Directory: G:\LUCY\DATA\140922\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0922002.D	1	OCL DEG CHK 8/19/14	water	9-22-14 9:13:38
2	3	0922003.D	1	OCL 1B 7/16/14	water	9-22-14 9:50:12
3	4	0922004.D	1	OCL 1A 7/16/14	water	9-22-14 10:06:43
4	5	0922005.D	1	OCL 1 7/16/14	water	9-22-14 10:23:08
5	6	0922006.D	1	OCL 2 7/16/14	water	9-22-14 10:39:34
6	7	0922007.D	1	OCL 3 7/16/14	water	9-22-14 10:55:59
7	8	0922008.D	1	OCL 4 7/16/14	water	9-22-14 11:12:31
8	9	0922009.D	1	OCL 5 7/16/14	water	9-22-14 11:28:56
9	10	0922010.D	1	OCL 6 7/16/14	water	9-22-14 11:45:22
10	11	0922011.D	1	OCL 2ND SRC 7/16/14	water	9-22-14 12:01:45
11	13	0922013.D	1	TOX 1A 4/4/14	water	9-22-14 12:34:41
12	14	0922014.D	1	TOX 1 4/4/14	water	9-22-14 12:51:04
13	15	0922015.D	1	TOX 2 4/4/14	water	9-22-14 13:07:28
14	16	0922016.D	1	TOX 3 4/4/14	water	9-22-14 13:24:00
15	17	0922017.D	1	TOX 4 4/4/14	water	9-22-14 13:40:24
16	18	0922018.D	1	TOX 5 4/4/14	water	9-22-14 13:56:46
17	19	0922019.D	1	TOX 6 4/4/14	water	9-22-14 14:13:10
18	20	0922020.D	1	TOX 1B 4/4/14	water	9-22-14 15:07:40
19	21	0922021.D	1	TOX 2ND SRC 11/22/13	water	9-22-14 15:24:04
20	75	0922075.D	1	TCH 1A 6/3/14	soil	9-23-14 7:26:45
21	76	0922076.D	1	TCH 1 6/3/14	water	9-23-14 7:43:17
22	77	0922077.D	1	TCH 2 6/3/14	water	9-23-14 7:59:43
23	78	0922078.D	1	TCH 3 6/3/14	water	9-23-14 8:16:09
24	79	0922079.D	1	TCH 4 6/3/14	water	9-23-14 8:32:34
25	80	0922080.D	1	TCH 5 6/3/14	water	9-23-14 8:49:08
26	81	0922081.D	1	TCH 2nd Source 6/3/14	water	9-23-14 9:05:35
27	83	0922083.D	1	5ES 1 9/22/14	water	9-23-14 9:38:28
28	84	0922084.D	1	5ES 2 9/22/14	water	9-23-14 9:55:01
29	85	0922085.D	1	5ES 3 9/22/14	water	9-23-14 10:11:28
30	86	0922086.D	1	5ES 4 9/22/14	water	9-23-14 10:27:53
31	87	0922087.D	1	5ES 5 9/22/14	water	9-23-14 10:44:20
32	88	0922088.D	1	5ES 6 9/22/14	water	9-23-14 11:00:53
33	89	0922089.D	1	5ES 2ND SRC 9/22/14	water	9-23-14 12:04:57
34	90	0922090.D	1	OCL DEG CHECK 8/19/14	water	9-23-14 12:53:25
35	97	0922097.D	1	OCL 2 7/16/14	water	9-23-14 15:10:17
36	98	0922098.D	1	TOX 2 9/19/14	water	9-23-14 15:26:43
37	99	0922099.D	2	140909A BLK 1/500	water	9-23-14 16:06:19
38	100	0922100.D	2	140909A LCS-1 1/500	water	9-23-14 16:22:44
39	1	0922101.D	2	140909A LCS-2 1/500	water	9-23-14 16:39:09
40	4	0922104.D	2	140909A LCS-5 1/500	water	9-23-14 17:34:08
41	5	0922105.D	2	AZ02108W09 1/500	water	9-23-14 17:50:32
42	6	0922106.D	2	AZ02109W08 1/500	water	9-23-14 18:06:56
43	7	0922107.D	2	AZ02116W04 1/500	water	9-23-14 18:23:26
44	8	0922108.D	3311.26	140916A BLK 5X1/0.05/30.20G	soil	9-23-14 18:39:50
45	9	0922109.D	3294.89	140916A LCS-1 5X1/0.05/30.35G	soil	9-23-14 18:56:13
46	10	0922110.D	3311.26	140916A LCS-2 5X1/0.05/30.20G	soil	9-23-14 19:12:39
47	11	0922111.D	3290.56	140916A LCS-4 5X1/0.05/30.39G	soil	9-23-14 19:29:11
48	12	0922112.D	3316.75	140916A LCS-5 5X1/0.05/30.15G	soil	9-23-14 19:45:35
49	13	0922113.D	3310.16	AZ02099S11 5X1/0.05/30.21G	soil	9-23-14 20:01:59
50	14	0922114.D	3302.51	AZ02100S11 MS-1 5X1/0.05/30.28G	soil	9-23-14 20:18:25
51	15	0922115.D	3293.81	AZ02100S11 MSD-1 5X1/0.05/30.36G	soil	9-23-14 20:34:56

52	16	0922116.D	3321.16	AZ02100S11 MS-2 5X1/0.05/30.11G	soil	9-23-14 20:51:20
53	17	0922117.D	3315.65	AZ02100S11 MSD-2 5X1/0.05/30.16G	soil	9-23-14 21:07:45
54	18	0922118.D	3277.61	AZ02100S11 5X1/0.05/30.51G	soil	9-23-14 21:24:10
55	19	0922119.D	3318.95	AZ02100S11 MS-4 5X1/0.05/30.13G	soil	9-23-14 21:40:42
56	20	0922120.D	3325.57	AZ02100S11 MS-5 5X1/0.05/30.07G	soil	9-23-14 21:57:02
57	21	0922121.D	3298.15	AZ02100S11 MSD-4 5X1/0.05/30.32G	soil	9-23-14 22:13:26
58	22	0922122.D	3287.31	AZ02100S11 MSD-5 5X1/0.05/30.42G	soil	9-23-14 22:29:49
59	23	0922123.D	3304.69	AZ02101S11 5X1/0.05/30.26G	soil	9-23-14 22:46:19
60	24	0922124.D	3324.47	AZ02102S11 5X1/0.05/30.08G	soil	9-23-14 23:02:42
61	25	0922125.D	3317.85	AZ02103S11 5X1/0.05/30.14G	soil	9-23-14 23:19:08
62	27	0922127.D	1	OCL DEG CHECK 8/19/14	soil	9-23-14 23:47:56
63	28	0922128.D	1	OCL 3 7/16/14	soil	9-24-14 0:04:18
64	29	0922129.D	1	TOX 3 9/19/14	soil	9-24-14 0:20:43
65	31	0922131.D	1	TCH 3 6/3/14	soil	9-24-14 0:53:36
66	32	0922132.D	1	5ES 3 9/22/14	soil	9-24-14 1:09:59
67	33	0922133.D	3281.92	AZ02104S11 5X1/0.05/30.47G	soil	9-24-14 1:26:23
68	34	0922134.D	3277.61	AZ02105S11 5X1/0.05/30.51G	soil	9-24-14 1:42:46
69	36	0922136.D	3262.64	AZ02107S11 5X1/0.05/30.65G	soil	9-24-14 2:15:41
70	42	0922142.D	3295.98	AZ02115S11 5X1/0.05/30.34G	soil	9-24-14 10:54:11
71	44	0922144.D	1	OCL DEG CHeCK 8/19/14	soil	9-24-14 11:37:17
72	45	0922145.D	1	OCL 2 7/16/14	soil	9-24-14 11:53:41
73	46	0922146.D	1	TOX 2 9/19/14	soil	9-24-14 12:10:05
74	48	0922148.D	1	TCH 3 6/3/14	soil	9-24-14 12:42:54
75	49	0922149.D	1	5ES 3 9/22/14	soil	9-24-14 12:59:28
76	51	0922151.D	3291.64	AZ02106S11 5X1/0.05/30.38G	soil	9-24-14 13:44:36
77	52	0922152.D	3300.33	AZ02110S11 5X1/0.05/30.30G	soil	9-24-14 14:01:06
78	53	0922153.D	3302.51	AZ02111S11 5X1/0.05/30.28G	soil	9-24-14 14:17:31
79	54	0922154.D	3245.7	AZ02112S11 5X1/0.05/30.81G	soil	9-24-14 14:33:56
80	55	0922155.D	3315.65	AZ02113S11 5X1/0.05/30.16G	soil	9-24-14 14:50:21
81	56	0922156.D	3328.89	AZ02114S11 5X1/0.05/30.04G	soil	9-24-14 15:06:55
82	57	0922157.D	10	140909A LCS-4 1/500x5	water	9-24-14 15:23:21
83	59	0922159.D	1	OCL 2 7/16/14	water	9-24-14 16:16:57
84	60	0922160.D	1	TOX 2 9/19/14	water	9-24-14 16:33:23
85	62	0922162.D	1	TCH 3 6/3/14	water	9-24-14 17:06:22
86	63	0922163.D	1	5ES 3 9/22/14	water	9-24-14 17:22:48

EPA METHOD 8082
PCBs

APPL, INC.

EPA METHOD 8082
PCBs
QC Summary

APPL, INC.

Method Blank
EPA 8082A PCB WATER

Blank Name/QCG: **140909W-02108 - 190310**
Batch ID: #82ACA-140909A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	AROCLOR 1016	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
BLANK	AROCLOR 1221	0.250 U	0.50	0.250	0.080	ug/L	09/09/14	09/23/14
BLANK	AROCLOR 1232	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
BLANK	AROCLOR 1242	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
BLANK	AROCLOR 1248	0.250 U	0.50	0.250	0.090	ug/L	09/09/14	09/23/14
BLANK	AROCLOR 1254	0.250 U	0.50	0.250	0.200	ug/L	09/09/14	09/23/14
BLANK	AROCLOR 1260	0.250 U	0.50	0.250	0.090	ug/L	09/09/14	09/23/14
BLANK	TOTAL PCBS	0.250 U	0.50	0.250	0.200	ug/L	09/09/14	09/23/14
BLANK	SURROGATE: DECACHLOROBIP	83.0	40-135			%	09/09/14	09/23/14

Quant Method: PSX0922.M
Run #: 0922099
Instrument: Lucy
Sequence: 140922
Initials: MA

GC SC-Blank-REG MDLs
Printed: 09/30/14 11:01:06 AM

Method Blank
EPA 8082A SOIL MIS

Blank Name/QCG: **140916S-02100 - 190311**
Batch ID: #82HC4-140916A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/29/14
BLANK	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/29/14
BLANK	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
BLANK	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
BLANK	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
BLANK	AROCLOR 1254	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
BLANK	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
BLANK	TOTAL PCBS	0.020 U	0.05	0.020	0.004	mg/kg	09/16/14	09/29/14
BLANK	SURROGATE: DECACHLOROBIP	82.7	60-125			%	09/16/14	09/29/14

Quant Method: PSX0922.M
Run #: 0927069
Instrument: Lucy
Sequence: 140927
Initials: MA

GC SC-Blank-REG MDLs
Printed: 09/30/14 11:01:06 AM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/23/14

Matrix: WATER Instrument: Lucy

APPL ID.	Client Sample No.	SURROGATE: DECACHLOROBIPHENYL (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
140909A-BLK	Blank	40-135	83.0				
140909A-LCS	Lab Control Spike	40-135	88.7				
AZ02108	EN010	40-135	76.3				
AZ02109	EN011	40-135	69.0				
AZ02116	EN018	40-135	77.7				

Comments: Batch: #82ACA-140909A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/29/14

Matrix: SOIL Instrument: Lucy

APPL ID.	Client Sample No.	SURROGATE: DECACHLOROBIPHENYL (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
140916A-BLK	Blank	60-125	82.7				
140916A-LCS	Lab Control Spike	60-125	81.4				
AZ02099	EN001	60-125	84.9				
AZ02100	EN002	60-125	86.8				
AZ02100-MS	Matrix Spike	60-125	84.4				
AZ02100-MSD	Matrix SpikeD	60-125	82.3				
AZ02101	EN003	60-125	87.6				
AZ02102	EN004	60-125	85.5				
AZ02103	EN005	60-125	86.3				
AZ02104	EN006	60-125	85.3				
AZ02105	EN007	60-125	82.4				
AZ02106	EN008	60-125	85.6				
AZ02107	EN009	60-125	82.6				
AZ02110	EN012	60-125	82.8				
AZ02111	EN013	60-125	82.9				
AZ02112	EN014	60-125	85.6				
AZ02113	EN015	60-125	82.2				
AZ02114	EN016	60-125	81.4				
AZ02115	EN017	60-125	84.4				

Comments: Batch: #82HC4-140916A

Laboratory Control Spike Recovery
EPA 8082A PCB WATER

APPL ID: **140909W-02108 LCS - 190310**
Batch ID: #82ACA-140909A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
AROCLOR 1016	1.0	0.593	59.3	25-145
AROCLOR 1260	1.0	0.674	67.4	30-145
SURROGATE: DECACHLOROBIPHENYL	0.300	0.266	88.7	40-135

Comments: _____

Primary	SPK
Quant Method :	PSX0922.M
Extraction Date :	09/09/14
Analysis Date :	09/23/14
Instrument :	Lucy
Run :	0922102
Initials :	MA

Printed: 09/30/14 11:01:07 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8082A SOIL MIS

APPL ID: **140916S-02100 LCS - 190311**
Batch ID: #82HC4-140916A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
AROCLOR 1016	0.417	0.434	104	40-140
AROCLOR 1260	0.417	0.411	98.6	60-130
SURROGATE: DECACHLOROBIPHENYL	0.333	0.271	81.4	60-125

Comments: _____

Primary	SPK
Quant Method :	PSX0922.M
Extraction Date :	09/16/14
Analysis Date :	09/29/14
Instrument :	Lucy
Run :	0927070
Initials :	MA

Printed: 09/30/14 11:01:07 AM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8082A SOIL MIS

APPL ID: **140916S-02100 MS - 190311**
Batch ID: #82HC4-140916A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
AROCLOR 1016	0.417	ND	0.531	0.566	127	136	40-140	6.4	30
AROCLOR 1260	0.417	ND	0.535	0.513	128	123	60-130	4.2	30
SURROGATE: DECACHLOROBIPHENYL	0.333	NA	0.281	0.274	84.4	82.3	60-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	PSX0922.M	PSX0922.M
Extraction Date :	09/16/14	09/16/14
Analysis Date :	09/29/14	09/29/14
Instrument :	Lucy	Lucy
Run :	0927073	0927074
Initials :	MA	

Printed: 09/30/14 11:11:33 AM
APPL MSD SCII

EPA 8082A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/23/14

Matrix: WATER Instrument: Lucy

Blank ID: 140909A-BLK Time Analyzed: 1606

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140909A-BLK	Blank	0922099	09/23/14 1606
140909A-LCS	Lab Control Spike	0922102	09/23/14 1701
AZ02108	EN010	0922105	09/23/14 1750
AZ02109	EN011	0922106	09/23/14 1806
AZ02116	EN018	0922107	09/23/14 1823

Comments: Batch: #82ACA-140909A

EPA 8082A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/29/14

Matrix: SOIL Instrument: Lucy

Blank ID: 140916A-BLK Time Analyzed: 1948

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140916A-BLK	Blank	0927069	09/29/14 1948
140916A-LCS	Lab Control Spike	0927070	09/29/14 2004
AZ02099	EN001	0927071	09/29/14 2020
AZ02100	EN002	0927072	09/29/14 2037
140916A-MS	Matrix Spike	0927073	09/29/14 2053
140916A-MSD	Matrix SpikeD	0927074	09/29/14 2110
AZ02101	EN003	0927075	09/29/14 2126
AZ02102	EN004	0927076	09/29/14 2143
AZ02103	EN005	0927077	09/29/14 2159
AZ02104	EN006	0927078	09/29/14 2216
AZ02105	EN007	0927079	09/29/14 2232
AZ02106	EN008	0927080	09/29/14 2248
AZ02107	EN009	0927084	09/29/14 2350
AZ02110	EN012	0927085	09/30/14 0006
AZ02111	EN013	0927086	09/30/14 0023
AZ02112	EN014	0927087	09/30/14 0039
AZ02113	EN015	0927088	09/30/14 0056
AZ02114	EN016	0927089	09/30/14 0112
AZ02115	EN017	0927090	09/30/14 0129

Comments: Batch: #82HC4-140916A

EPA METHOD 8082
PCBs
Sample Data

APPL, INC.

EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN001

APPL ID: AZ02099

Sample Collection Date: 09/02/14

QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1254	0.49	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	TOTAL PCBS	0.49	0.05	0.020	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	84.9	60-125			%	09/16/14	09/29/14

Quant Method: PSX0922.M
Run #: 0927071
Instrument: Lucy
Sequence: 140927
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:12 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927071.D\ECD1A.CH Vial: 71
Signal #2 : G:\LUCY\DATA\140927\0927071.D\ECD2B.CH
Acq On : 9-29-14 20:20:58 Operator: MA
Sample : AZ02099S11 5X1/0.05/30.21G Inst : Lucy
Misc : soil Multiplr: 3310.16
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:31 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

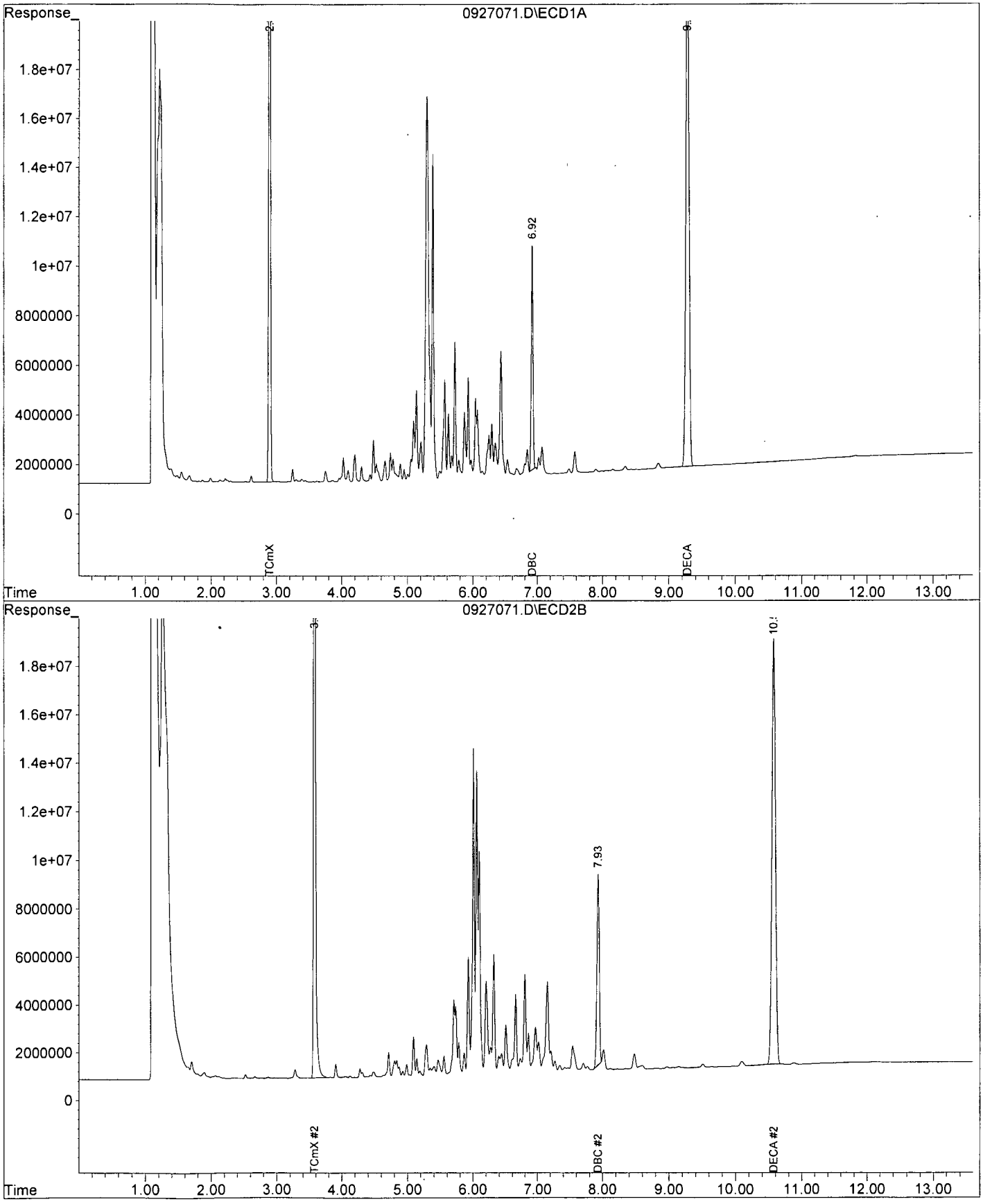
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	51182588	48977355	347.339	344.993
Spiked Amount 331.016			Recovery	=	104.93%	104.22%
2) SA DBC	6.92	7.93	9028240	7920304	105.597	115.617
Spiked Amount 331.016			Recovery	=	31.90%	34.93%
3) SA DECA	9.28	10.57	21946758	17619645	294.831	280.861
Spiked Amount 331.016			Recovery	=	89.07%	84.85%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927071.D
Acq On : 9-29-14 20:20:58
Sample : AZ02099S11 5X1/0.05/30.21G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 71
Operator: MA
Inst : Lucy
Multiplr: 3310.16



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927071.D\ECD1A.CH Vial: 71
Signal #2 : G:\LUCY\DATA\140927\0927071.D\ECD2B.CH
Acq On : 9-29-14 20:20:58 Operator: MA
Sample : AZ02099S11 5X1/0.05/30.21G Inst : Lucy
Misc : soil Multiplr: 3310.16
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:18 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	BNMC Total AR1254	0.00	0.00	16191043	12904160	537.992m	487.545m
2)	L3BKC AR 1254	5.72	5.09	5115966	1512756	509.648	448.129
3)	L3BKC AR 1254 {2}	5.93	5.93	3357918	4227802	513.449	482.306
4)	L3BKC AR 1254 {3}	6.04	6.65	1554990	2883588	370.172	458.507
5)	L3BKC AR 1254 {4}	6.29	6.97	1477546	1129986	458.773	363.880
6)	L3BKC AR 1254 {5}	6.42	7.16	4684623	3150029	768.500	638.738

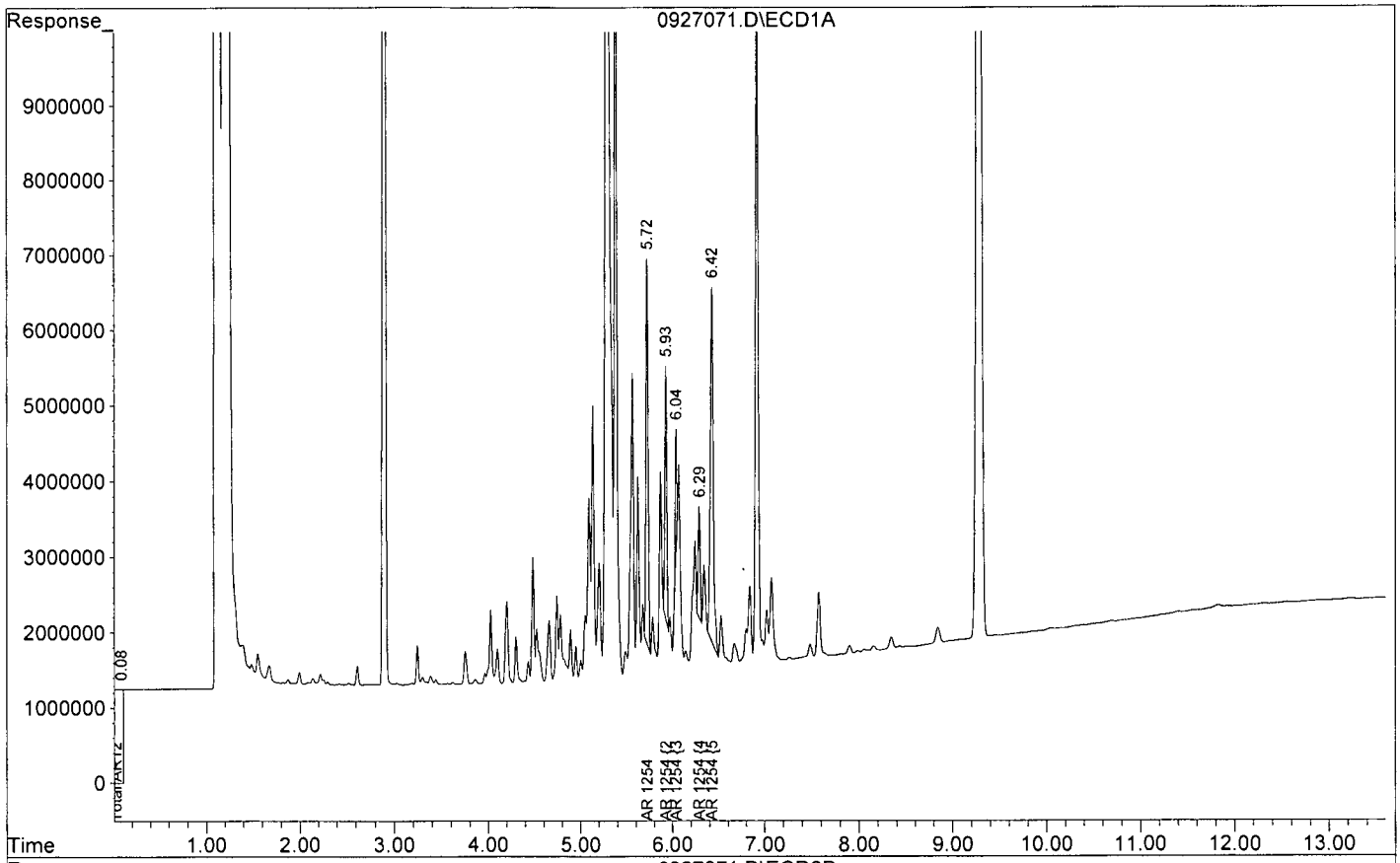
Target Compounds

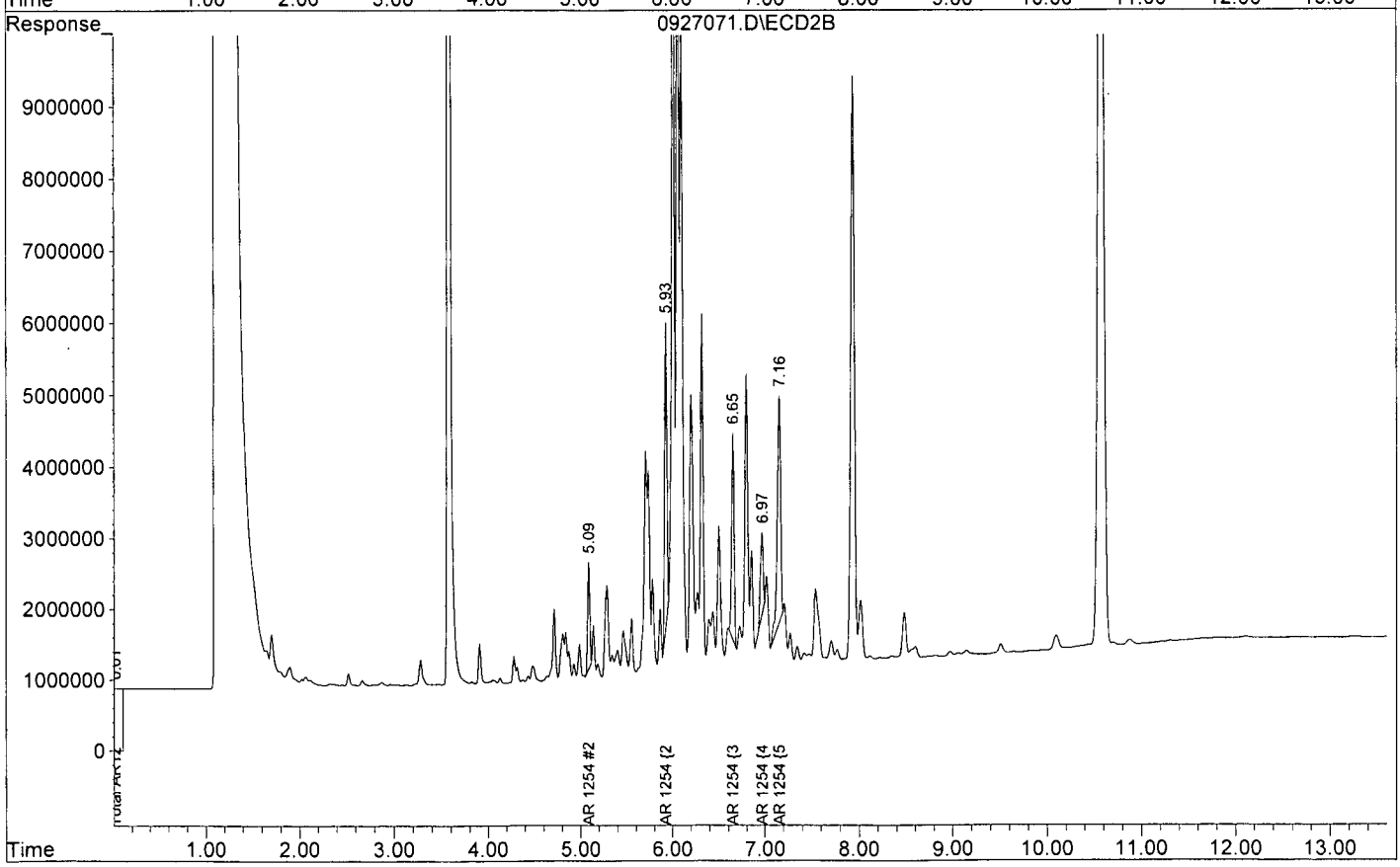
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927071.D
Acq On : 9-29-14 20:20:58
Sample : AZ02099S11 5X1/0.05/30.21G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 71
Operator: MA
Inst : Lucy
Multiplr: 3310.16





EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN002
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02100
QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1254	0.38	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	TOTAL PCBS	0.38	0.05	0.020	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	86.8	60-125			%	09/16/14	09/29/14

Quant Method: PSX0922.M
Run #: 0927072
Instrument: Lucy
Sequence: 140927
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:12 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927072.D\ECD1A.CH Vial: 72
Signal #2 : G:\LUCY\DATA\140927\0927072.D\ECD2B.CH
Acq On : 9-29-14 20:37:23 Operator: MA
Sample : AZ02100S11 5X1/0.05/30.51G Inst : Lucy
Misc : soil Multiplr: 3277.61
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:32 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

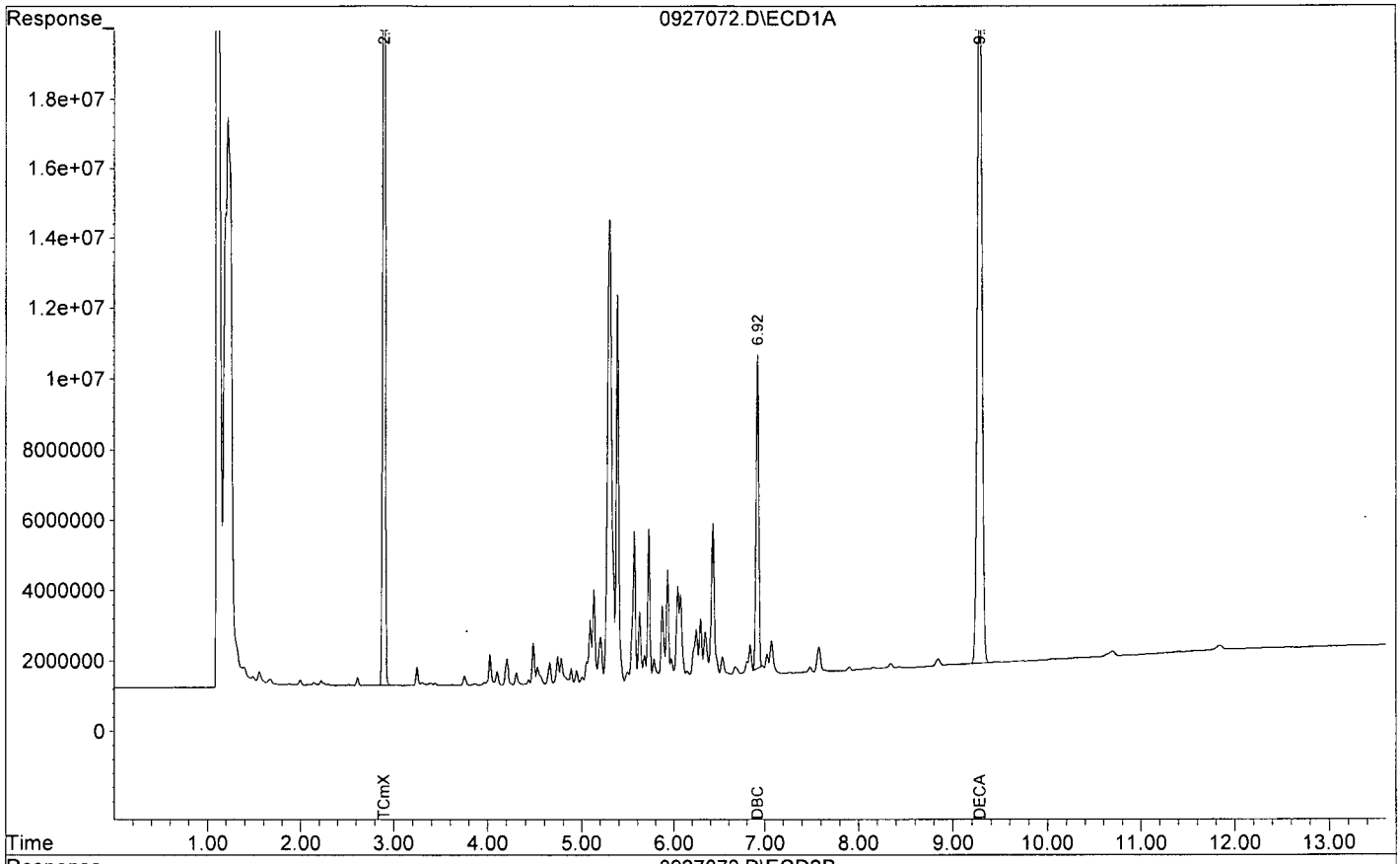
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	50779181	48613232	341.213	339.061
Spiked Amount 327.761			Recovery	=	104.10%	103.45%
2) SA DBC	6.92	7.93	8884996	7669397	102.899	110.854
Spiked Amount 327.761			Recovery	=	31.39%	33.82%
3) SA DECA	9.28	10.58	21527379	18033055	286.353	284.624
Spiked Amount 327.761			Recovery	=	87.37%	86.84%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

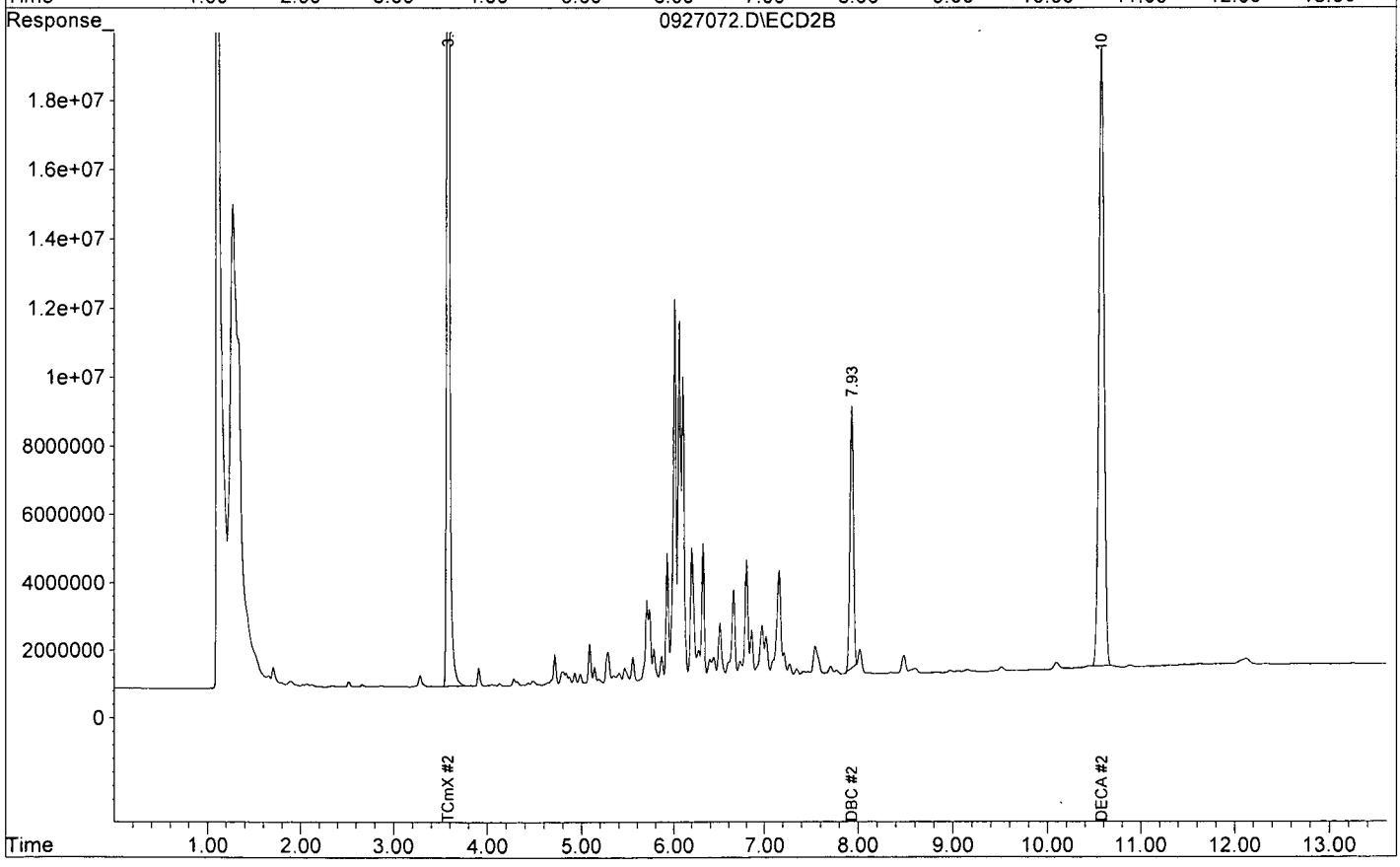
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927072.D
Acq On : 9-29-14 20:37:23
Sample : AZ02100S11 5X1/0.05/30.51G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 72
Operator: MA
Inst : Lucy
Multiplr: 3277.61





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927072.D\ECD1A.CH Vial: 72
Signal #2 : G:\LUCY\DATA\140927\0927072.D\ECD2B.CH
Acq On : 9-29-14 20:37:23 Operator: MA
Sample : AZ02100S11 5X1/0.05/30.51G Inst : Lucy
Misc : soil Multiplr: 3277.61
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:19 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	12988925	10076931	427.349m	376.983m	
2)	L3BKC AR 1254	5.72	5.09	4002344	1084241	394.790	318.031	
3)	L3BKC AR 1254 {2}	5.93	5.93	2594347	3236755	392.793	365.617	
4)	L3BKC AR 1254 {3}	6.04	6.65	1206225	2271185	284.324	357.581	#
5)	L3BKC AR 1254 {4}	6.29	6.97	1117992	850591	343.719	271.216	
6)	L3BKC AR 1254 {5}	6.42	7.16	4068016	2634159	660.785	528.882	

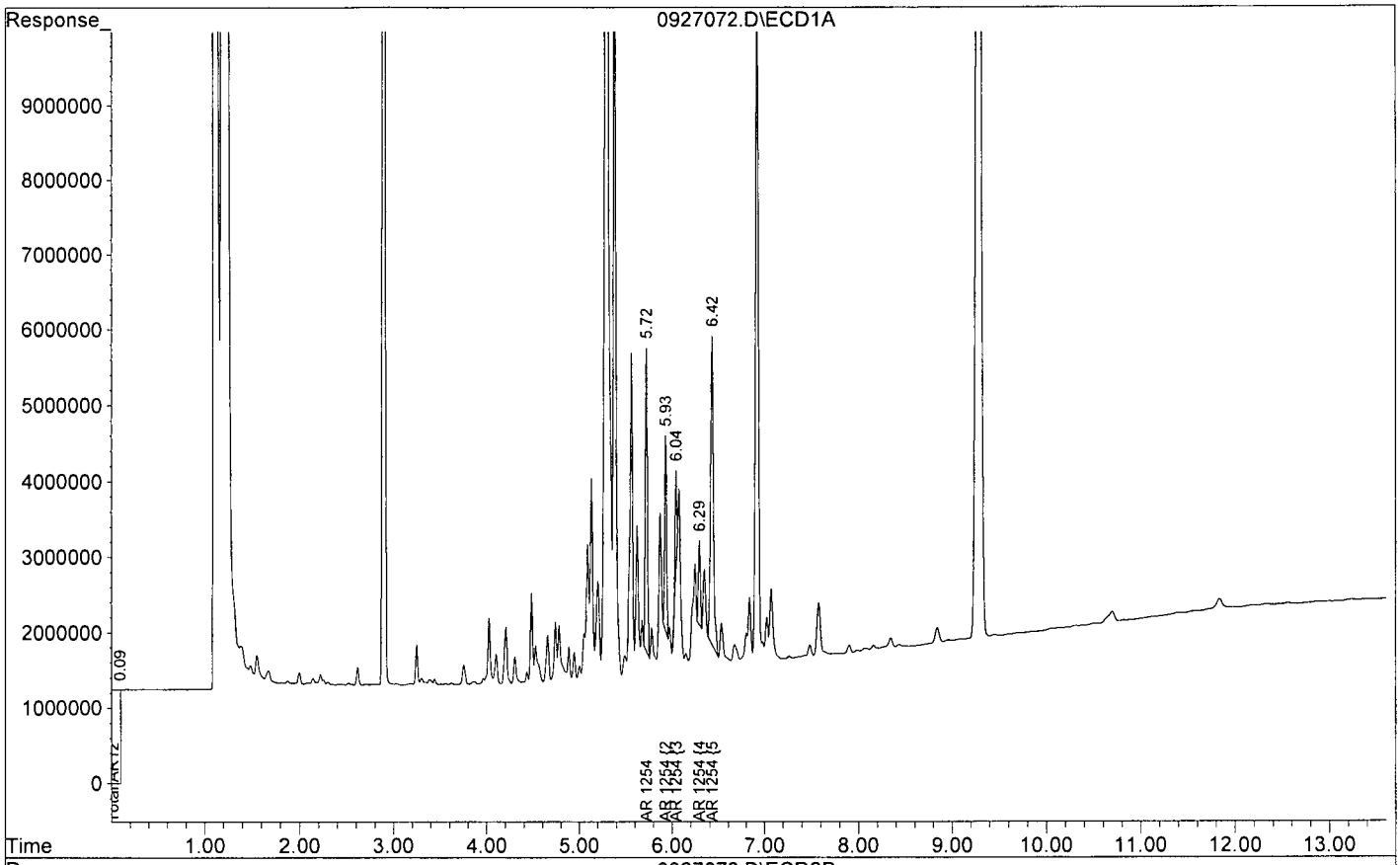
Target Compounds

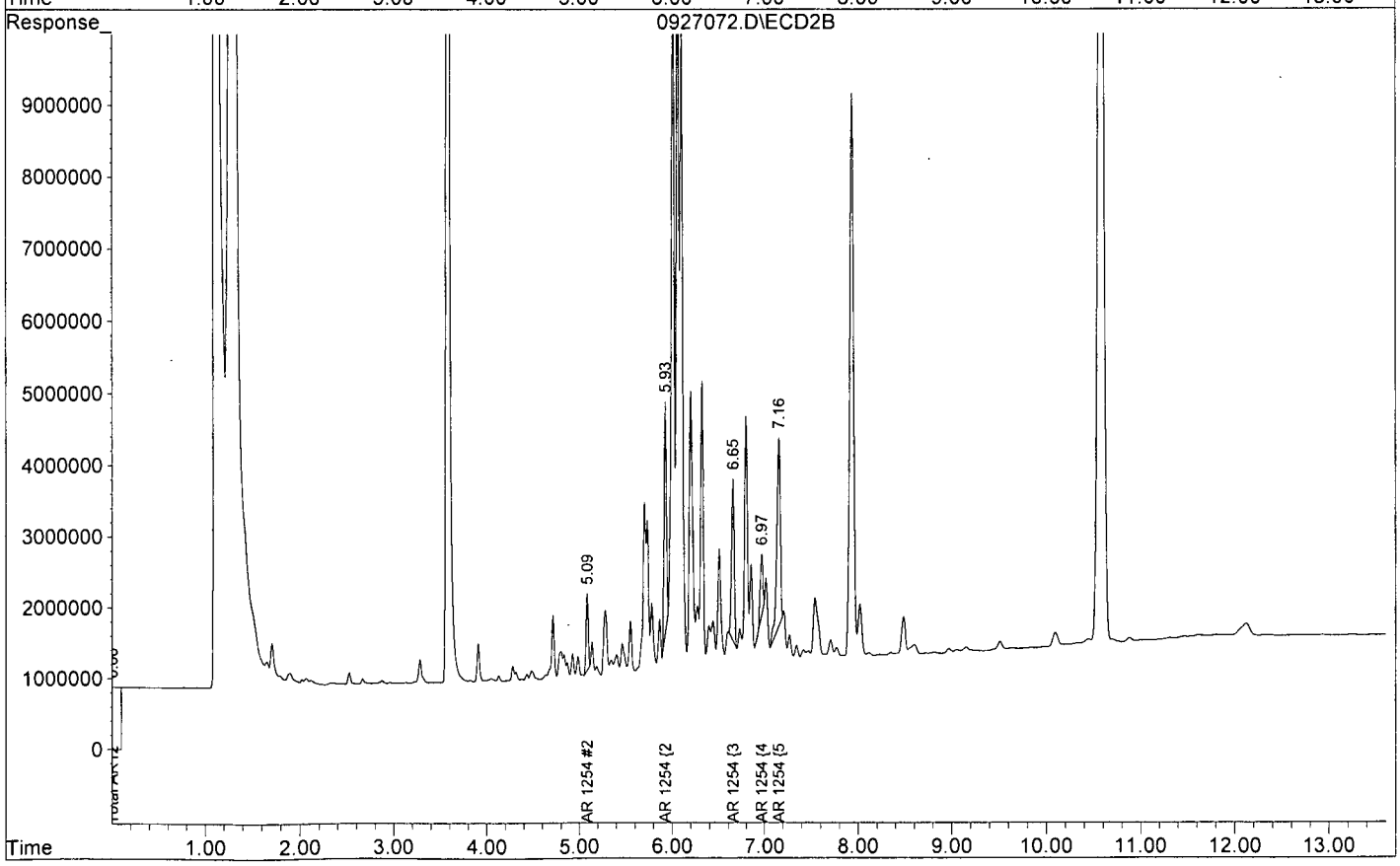
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927072.D
Acq On : 9-29-14 20:37:23
Sample : AZ02100S11 5X1/0.05/30.51G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 72
Operator: MA
Inst : Lucy
Multiplr: 3277.61





EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN003

APPL ID: AZ02101

Sample Collection Date: 09/02/14

QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1254	0.59	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	TOTAL PCBS	0.59	0.05	0.020	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	87.6	60-125			%	09/16/14	09/29/14

Quant Method: PSX0922.M
Run #: 0927075
Instrument: Lucy
Sequence: 140927
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:12 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927075.D\ECD1A.CH Vial: 75
Signal #2 : G:\LUCY\DATA\140927\0927075.D\ECD2B.CH
Acq On : 9-29-14 21:26:42 Operator: MA
Sample : AZ02101S11 5X1/0.05/30.26G Inst : Lucy
Misc : soil Multiplr: 3304.69
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:32 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

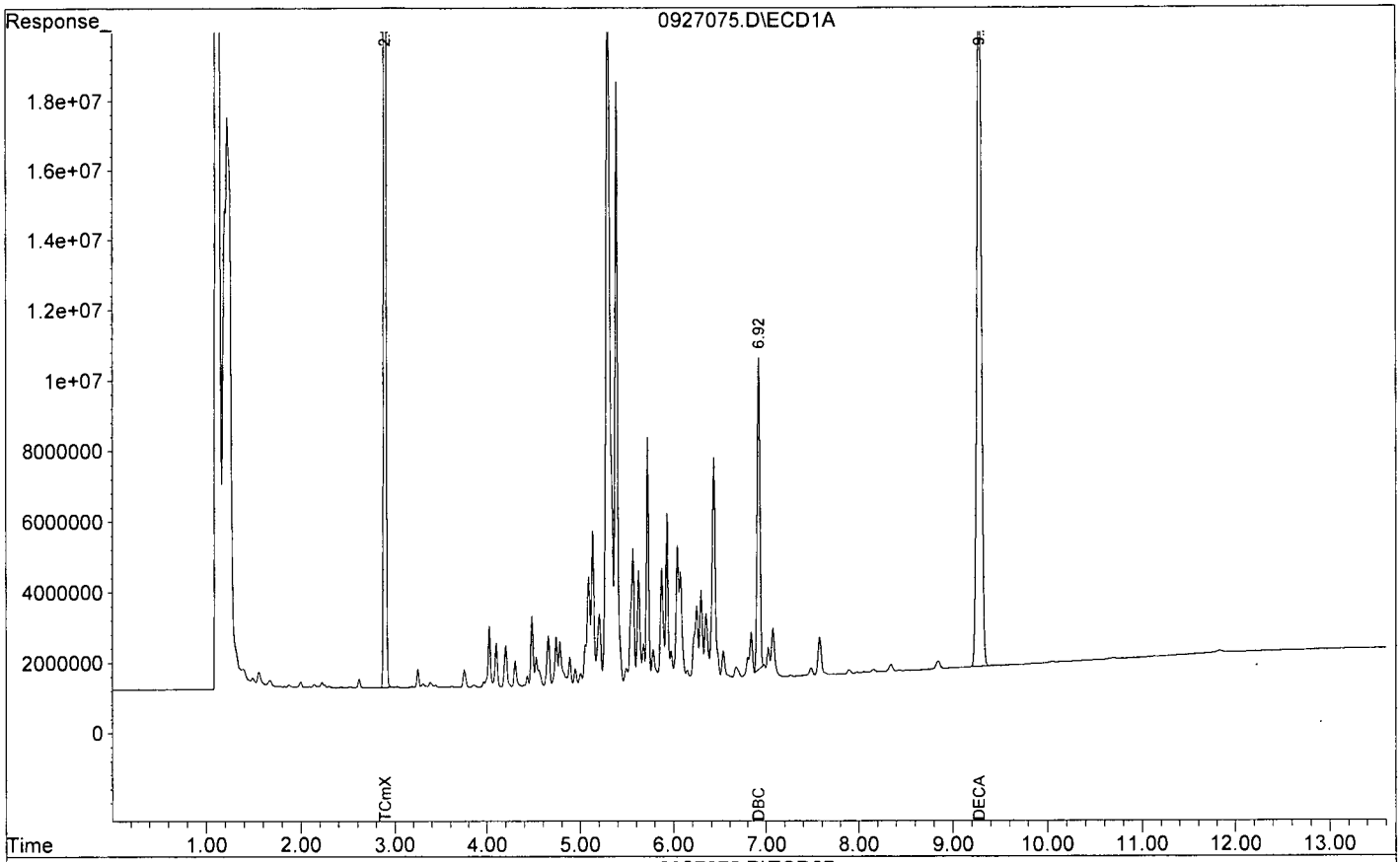
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	51788638	49439498	350.870	347.672
Spiked Amount 330.469			Recovery	=	106.17%	105.21%
2) SA DBC	6.92	7.93	8806749	7686591	102.836	112.020
Spiked Amount 330.469			Recovery	=	31.12%	33.90%
3) SA DECA	9.28	10.58	21136247	18180361	283.473	289.320
Spiked Amount 330.469			Recovery	=	85.78%	87.55%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

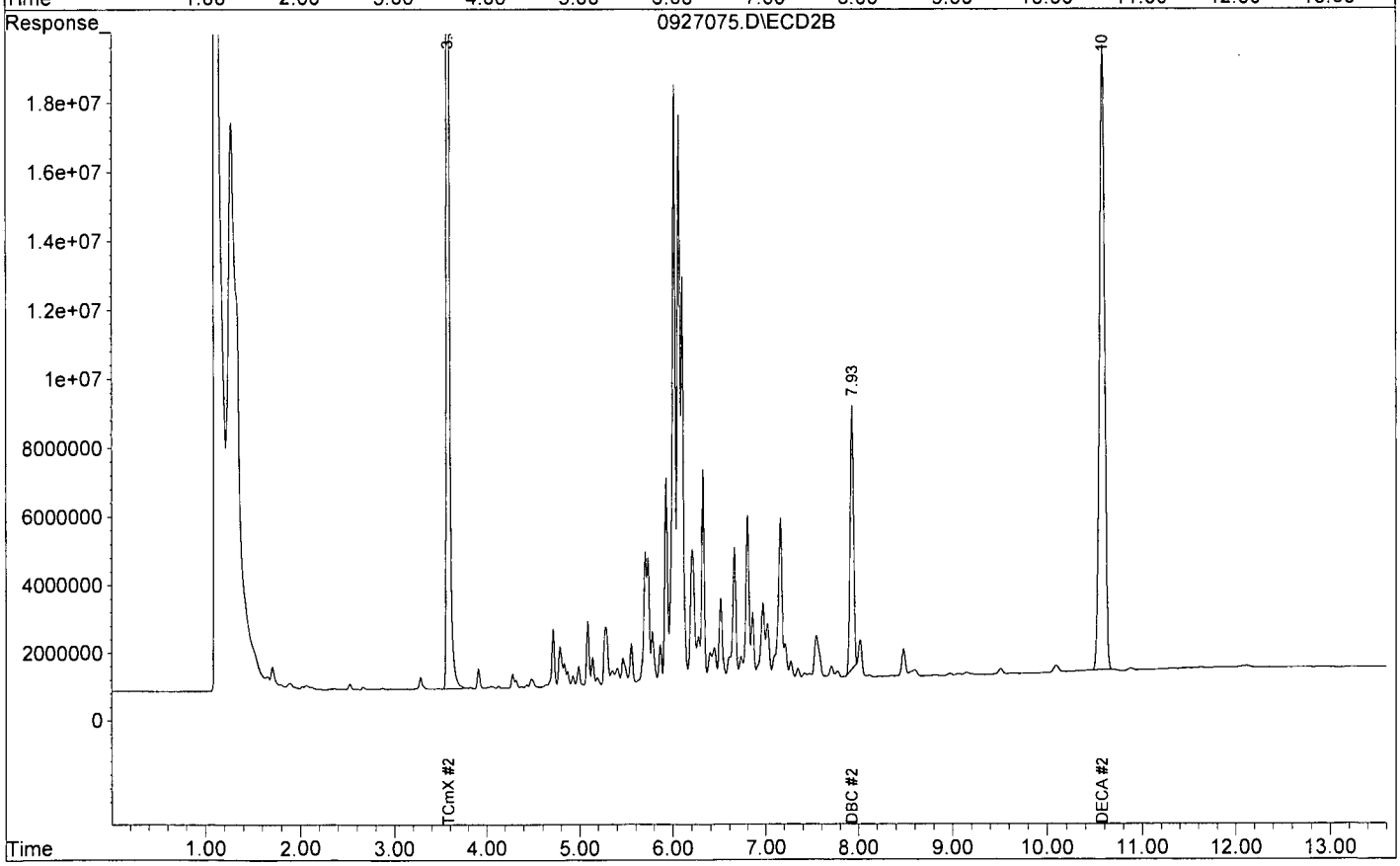
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927075.D
Acq On : 9-29-14 21:26:42
Sample : AZ02101S11 5X1/0.05/30.26G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 75
Operator: MA
Inst : Lucy
Multiplr: 3304.69





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927075.D\ECD1A.CH Vial: 75
Signal #2 : G:\LUCY\DATA\140927\0927075.D\ECD2B.CH
Acq On : 9-29-14 21:26:42 Operator: MA
Sample : AZ02101S11 5X1/0.05/30.26G Inst : Lucy
Misc : soil Multiplr: 3304.69
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:19 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) BNMC Total AR1254	0.00	0.00	20031169	15602716	664.491m	588.528m
2) L3BKC AR 1254	5.72	5.09	6503694	1745570	646.822	516.242
3) L3BKC AR 1254 {2}	5.93	5.93	3951842	5114401	603.265	582.485
4) L3BKC AR 1254 {3}	6.04	6.65	1945222	3410890	462.304	541.455
5) L3BKC AR 1254 {4}	6.29	6.97	1742767	1326154	540.229	426.345
6) L3BKC AR 1254 {5}	6.42	7.16	5887644	4005700	964.256	810.903

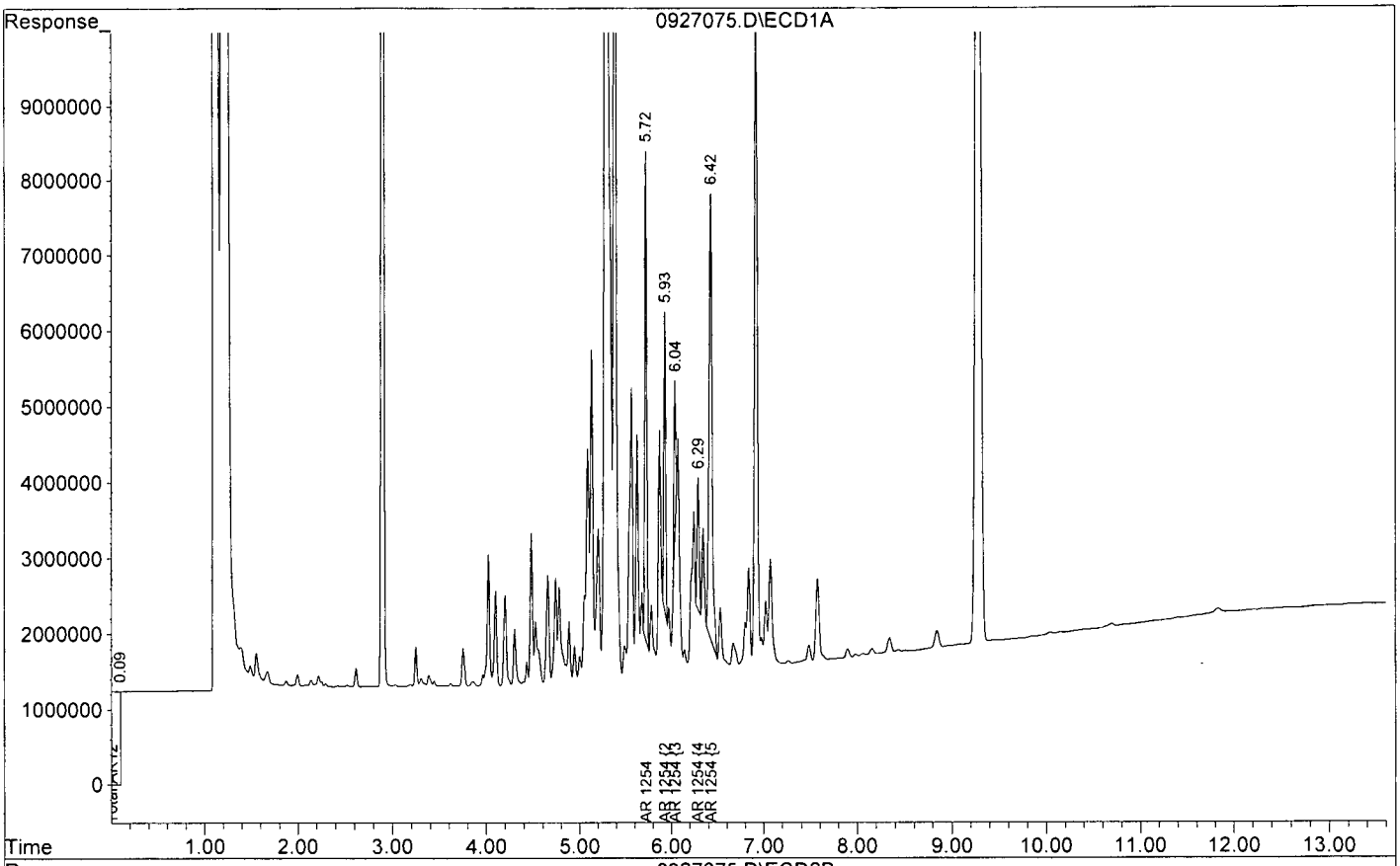
Target Compounds

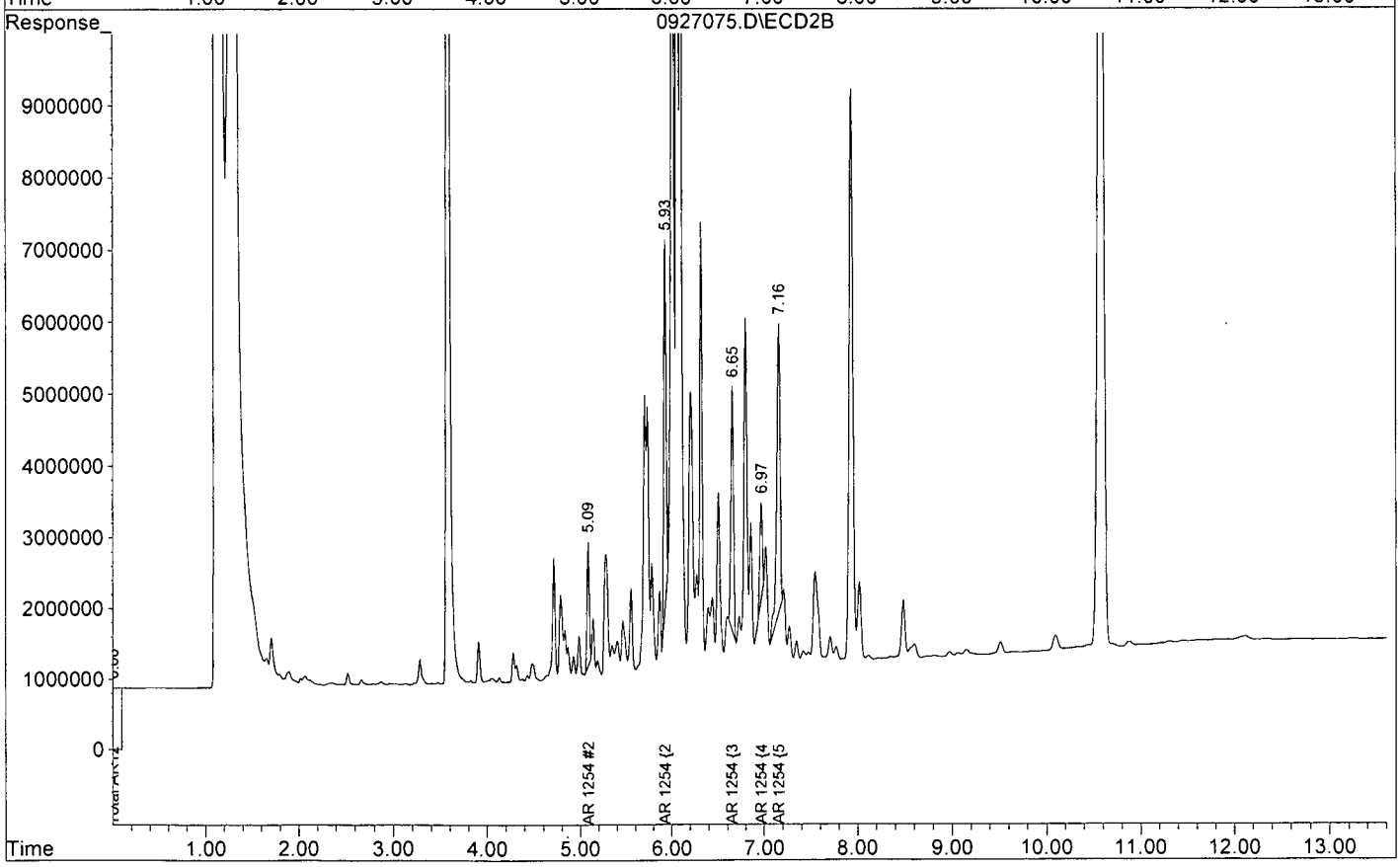
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927075.D
Acq On : 9-29-14 21:26:42
Sample : AZ02101S11 5X1/0.05/30.26G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 75
Operator: MA
Inst : Lucy
Multiplr: 3304.69





EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN004

APPL ID: AZ02102

Sample Collection Date: 09/02/14

QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1254	0.84	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	TOTAL PCBS	0.84	0.05	0.020	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	85.5	60-125			%	09/16/14	09/29/14

Quant Method: PSX0922.M
Run #: 0927076
Instrument: Lucy
Sequence: 140927
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:12 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927076.D\ECD1A.CH Vial: 76
Signal #2 : G:\LUCY\DATA\140927\0927076.D\ECD2B.CH
Acq On : 9-29-14 21:43:04 Operator: MA
Sample : AZ02102S11 5X1/0.05/30.08G Inst : Lucy
Misc : soil Multiplr: 3324.47
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:32 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

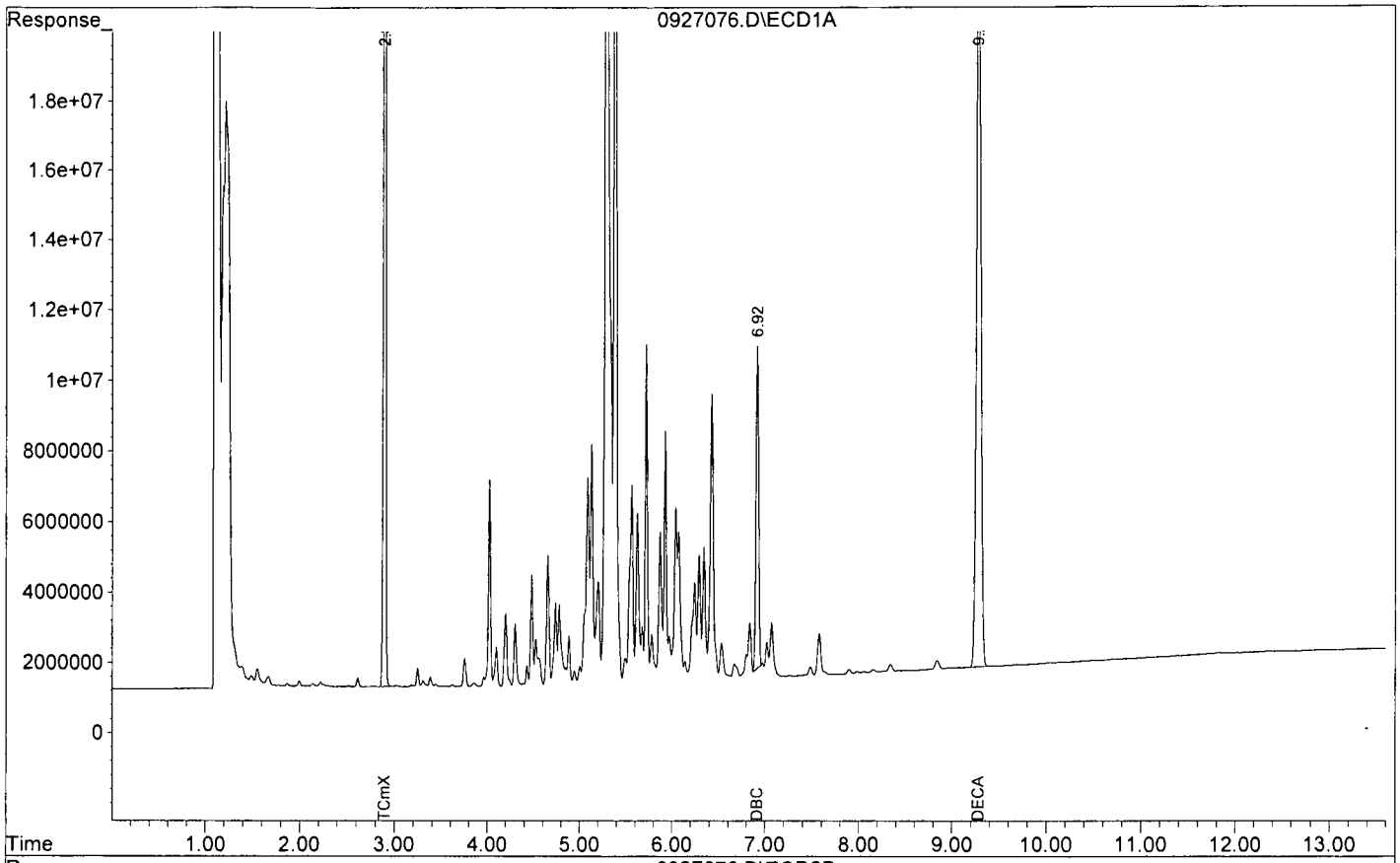
Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

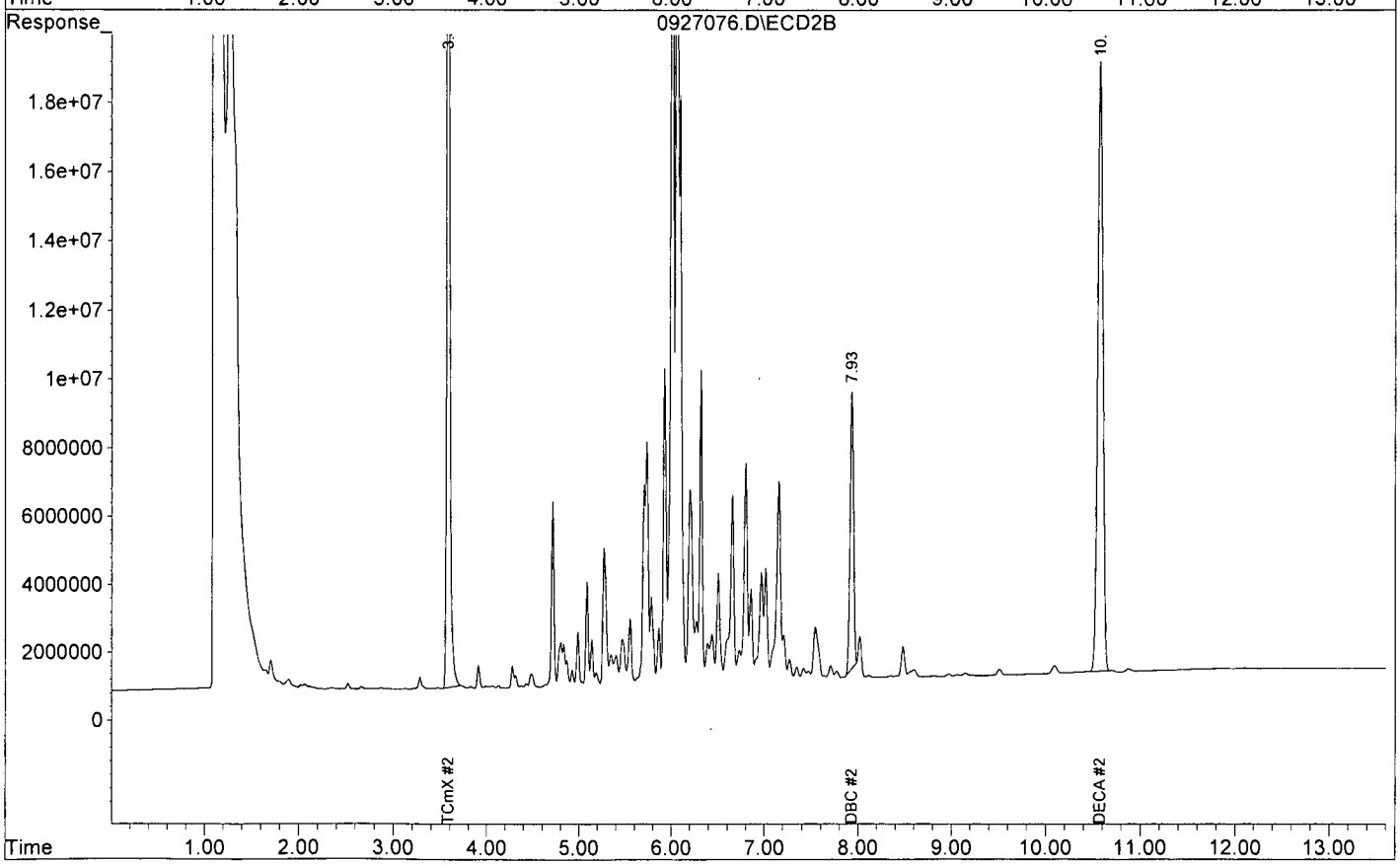
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	51602587	48237245	351.702	341.248
Spiked Amount 332.447			Recovery	=	105.79%	102.65%
2) SA DBC	6.92	7.93	9080870	8097695	106.671	118.717
Spiked Amount 332.447			Recovery	=	32.09%	35.71%
3) SA DECA	9.28	10.58	21823913	17755971	294.447	284.257
Spiked Amount 332.447			Recovery	=	88.57%	85.50%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : G:\LUCY\DATA\140927\0927076.D
Acq On : 9-29-14 21:43:04
Sample : AZ02102S11 5X1/0.05/30.08G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 76
Operator: MA
Inst : Lucy
Multiplr: 3324.47





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927076.D\ECD1A.CH Vial: 76
Signal #2 : G:\LUCY\DATA\140927\0927076.D\ECD2B.CH
Acq On : 9-29-14 21:43:04 Operator: MA
Sample : AZ02102S11 5X1/0.05/30.08G Inst : Lucy
Misc : soil Multiplr: 3324.47
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:19 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	26745479	22090573	892.533m	838.234m	
2)	L3BKC AR 1254	5.72	5.09	8835465	2793708	883.986	831.167	
3)	L3BKC AR 1254 {2}	5.93	5.93	5841833	7693945	897.117	881.516	
4)	L3BKC AR 1254 {3}	6.04	6.65	2187226	5050197	522.929	806.481	#
5)	L3BKC AR 1254 {4}	6.29	6.97	2314386	1620784	721.714	524.184	#
6)	L3BKC AR 1254 {5}	6.42	7.16	7566569	4931940	1246.640	1004.382	

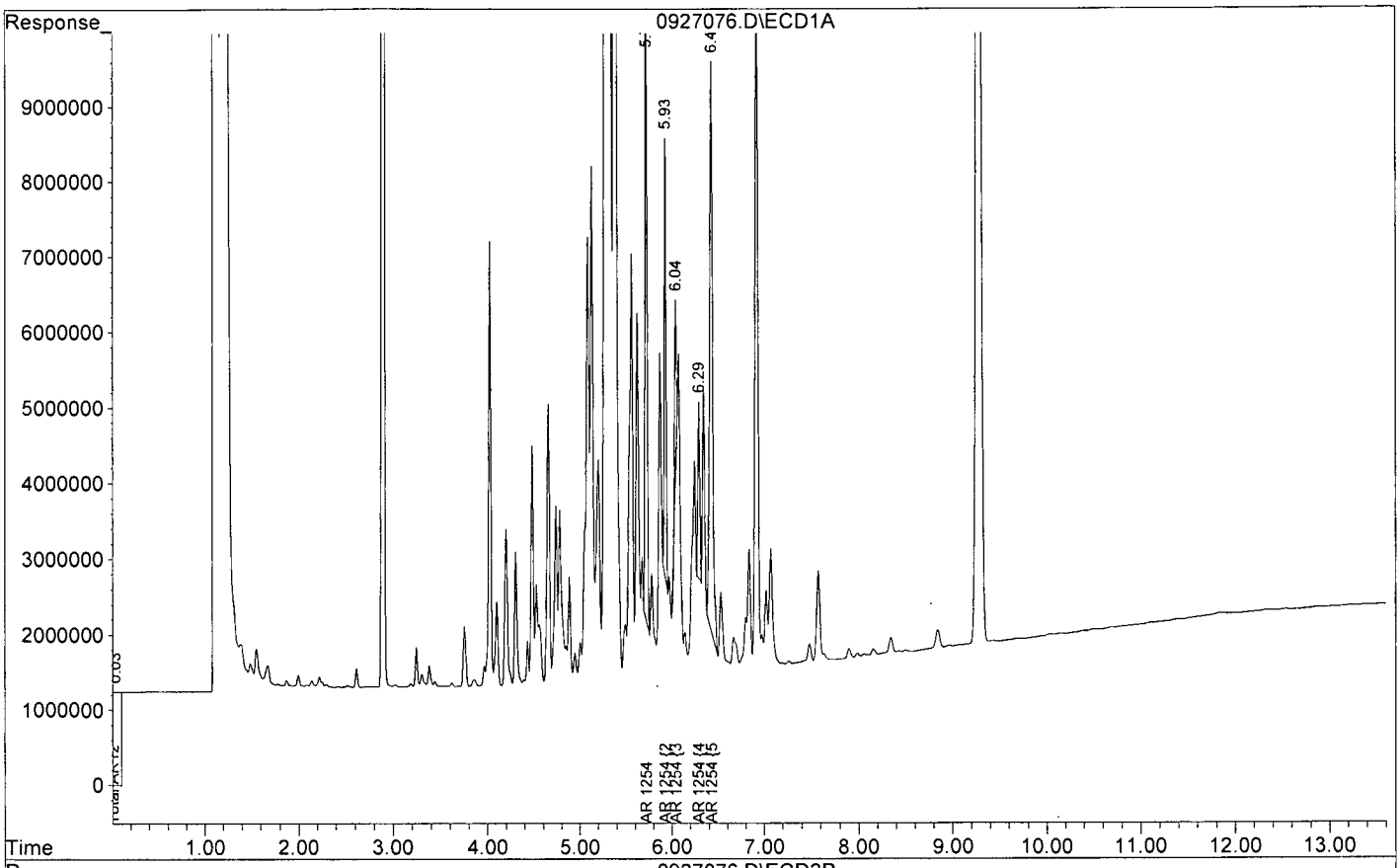
Target Compounds

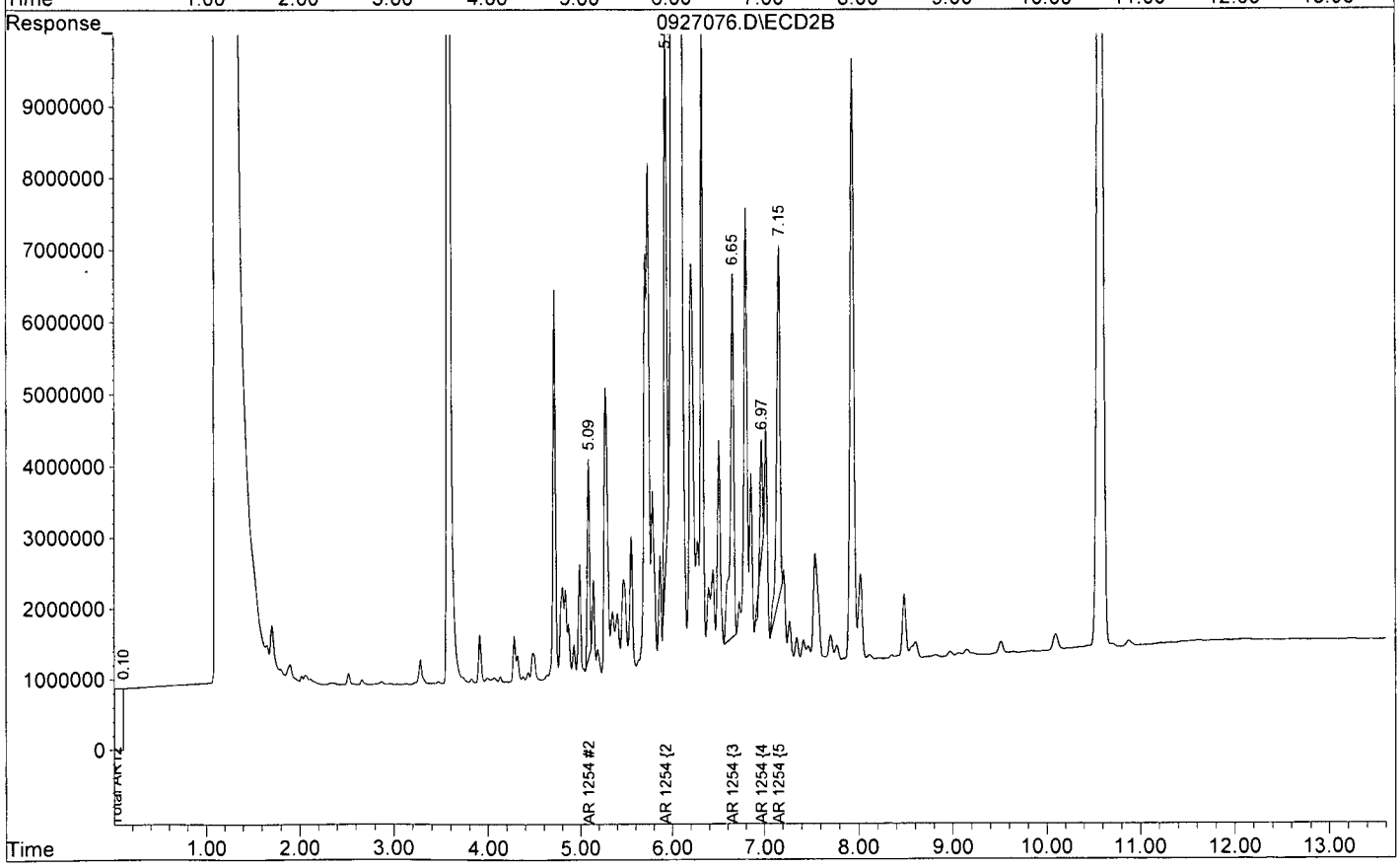
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927076.D
Acq On : 9-29-14 21:43:04
Sample : AZ02102S11 5X1/0.05/30.08G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 76
Operator: MA
Inst : Lucy
Multiplr: 3324.47





EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN005

APPL ID: AZ02103

Sample Collection Date: 09/02/14

QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1254	0.53	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	TOTAL PCBS	0.53	0.05	0.020	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	86.3	60-125			%	09/16/14	09/29/14

Quant Method: PSX0922.M
Run #: 0927077
Instrument: Lucy
Sequence: 140927
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:12 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927077.D\ECD1A.CH Vial: 77
Signal #2 : G:\LUCY\DATA\140927\0927077.D\ECD2B.CH
Acq On : 9-29-14 21:59:29 Operator: MA
Sample : AZ02103S11 5X1/0.05/30.14G Inst : Lucy
Misc : soil Multiplr: 3317.85
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:32 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

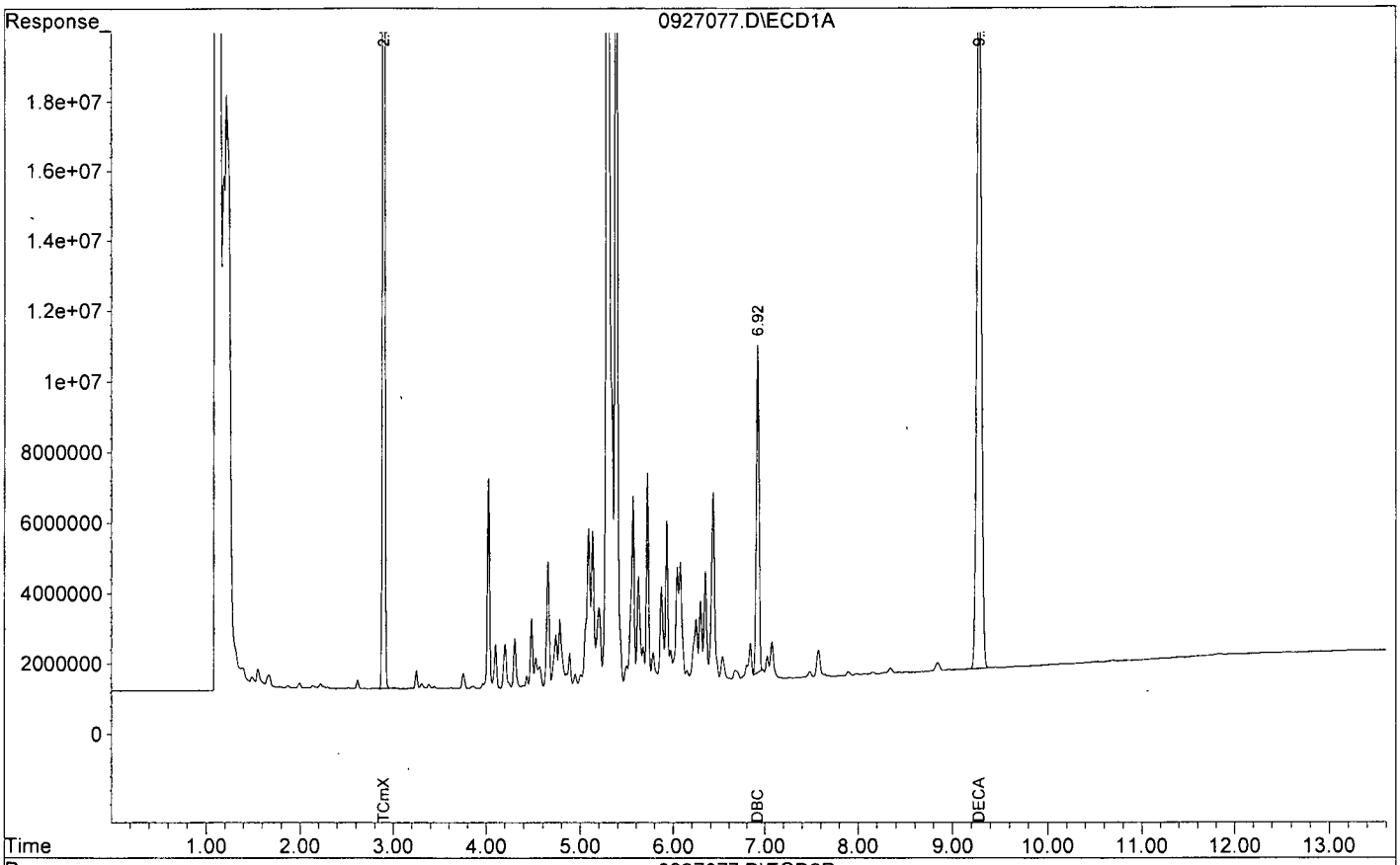
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	51440857	48603008	349.902	343.151
Spiked Amount 331.785			Recovery	=	105.46%	103.43%
2) SA DBC	6.92	7.93	9231039	8030639	108.219	117.500
Spiked Amount 331.785			Recovery	=	32.62%	35.41%
3) SA DECA	9.28	10.58	20848174	17919718	280.723	286.308
Spiked Amount 331.785			Recovery	=	84.61%	86.29%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

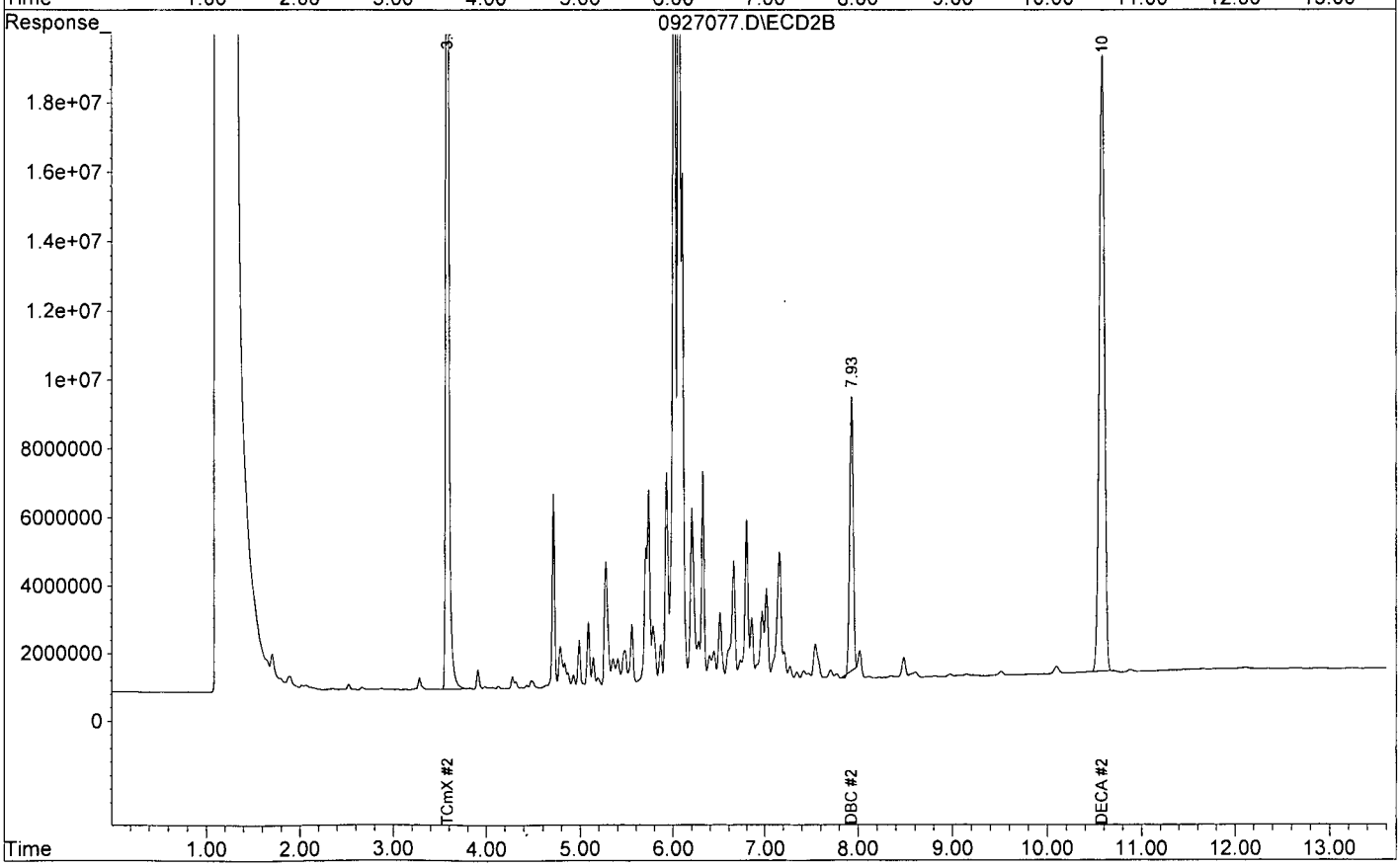
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927077.D
Acq On : 9-29-14 21:59:29
Sample : AZ02103S11 5X1/0.05/30.14G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 77
Operator: MA
Inst : Lucy
Multiplr: 3317.85





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927077.D\ECD1A.CH Vial: 77
Signal #2 : G:\LUCY\DATA\140927\0927077.D\ECD2B.CH
Acq On : 9-29-14 21:59:29 Operator: MA
Sample : AZ02103S11 5X1/0.05/30.14G Inst : Lucy
Misc : soil Multiplr: 3317.85
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:19 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	17007198	14043559	566.424m	531.826m	
2)	L3BKC AR 1254	5.72	5.09	5529904	1725420	552.164	512.315	
3)	L3BKC AR 1254 {2}	5.93	5.93	3762546	4917419	576.655	562.280	
4)	L3BKC AR 1254 {3}	6.04	6.65	1221382	3255261	291.431	518.808	#
5)	L3BKC AR 1254 {4}	6.29	6.97	1468527	946578	457.031	305.527	#
6)	L3BKC AR 1254 {5}	6.42	7.16	5024839	3198882	826.226	650.151	

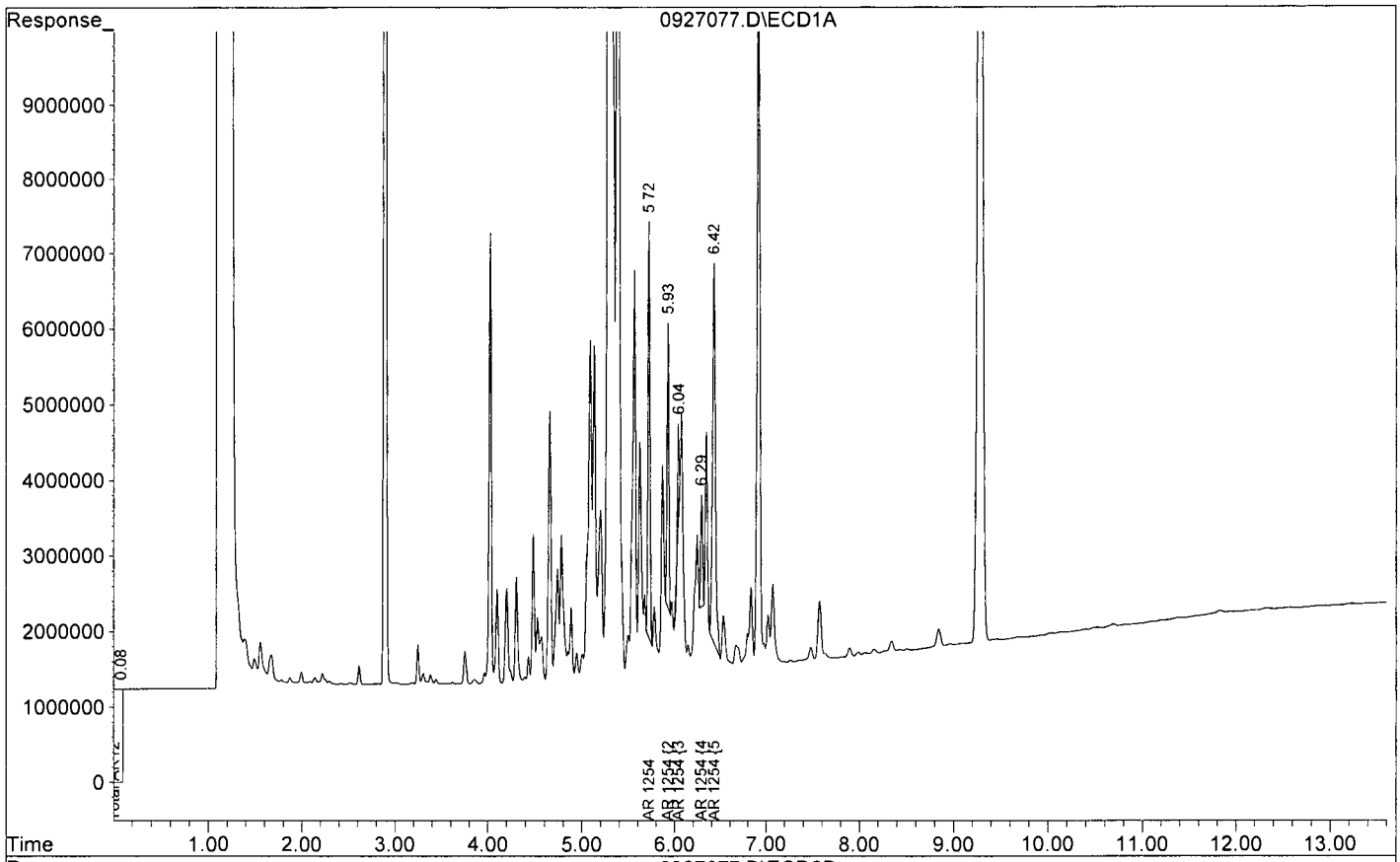
Target Compounds

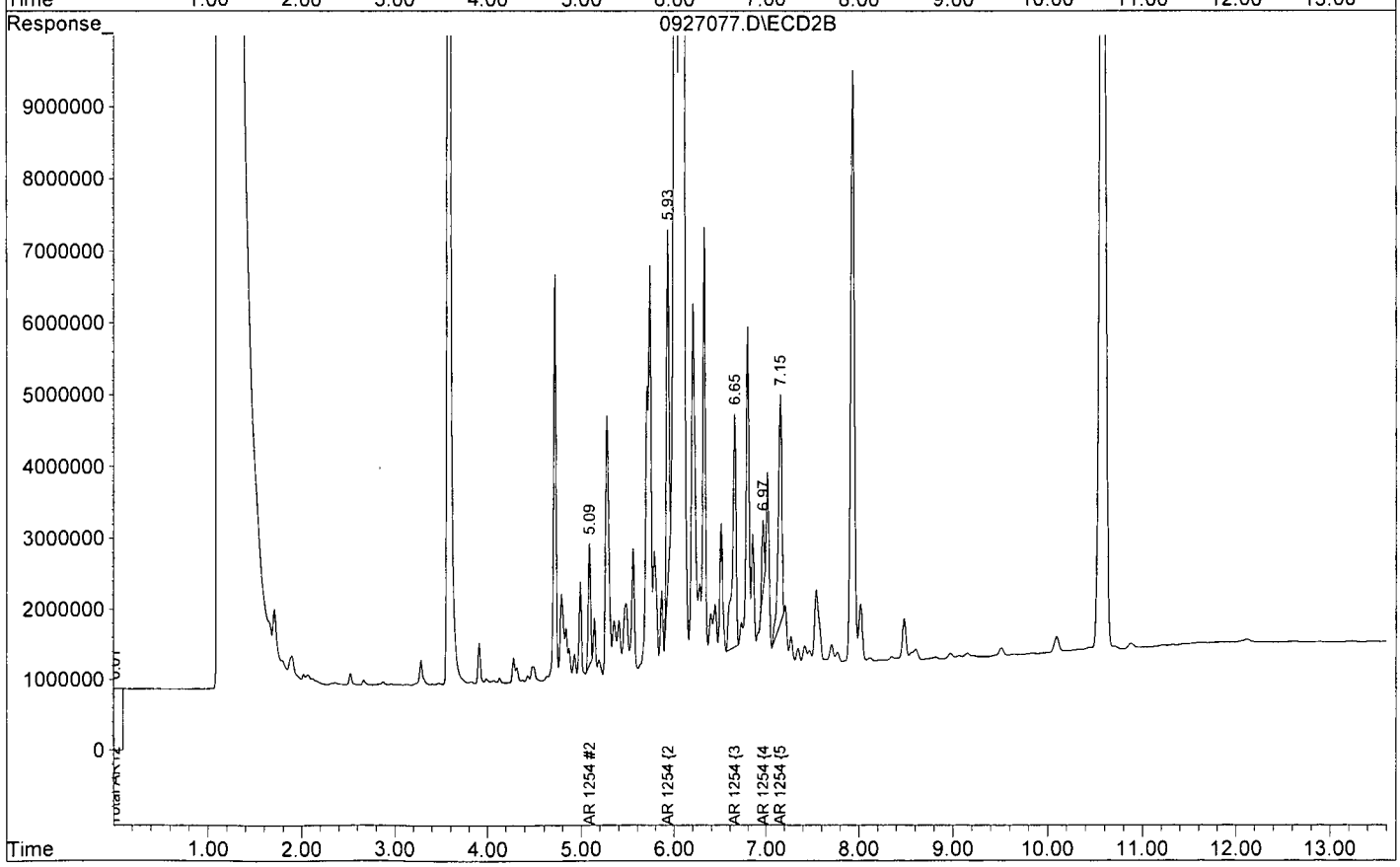
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927077.D
Acq On : 9-29-14 21:59:29
Sample : AZ02103S11 5X1/0.05/30.14G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 77
Operator: MA
Inst : Lucy
Multiplr: 3317.85





EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN006

APPL ID: AZ02104

Sample Collection Date: 09/02/14

QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1254	1.2	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	TOTAL PCBS	1.2	0.05	0.020	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	85.3	60-125			%	09/16/14	09/29/14

Quant Method: PSX0922.M
Run #: 0927078
Instrument: Lucy
Sequence: 140927
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:12 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927078.D\ECD1A.CH Vial: 78
Signal #2 : G:\LUCY\DATA\140927\0927078.D\ECD2B.CH
Acq On : 9-29-14 22:16:00 Operator: MA
Sample : AZ02104S11 5X1/0.05/30.47G Inst : Lucy
Misc : soil Multiplr: 3281.92
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:31 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

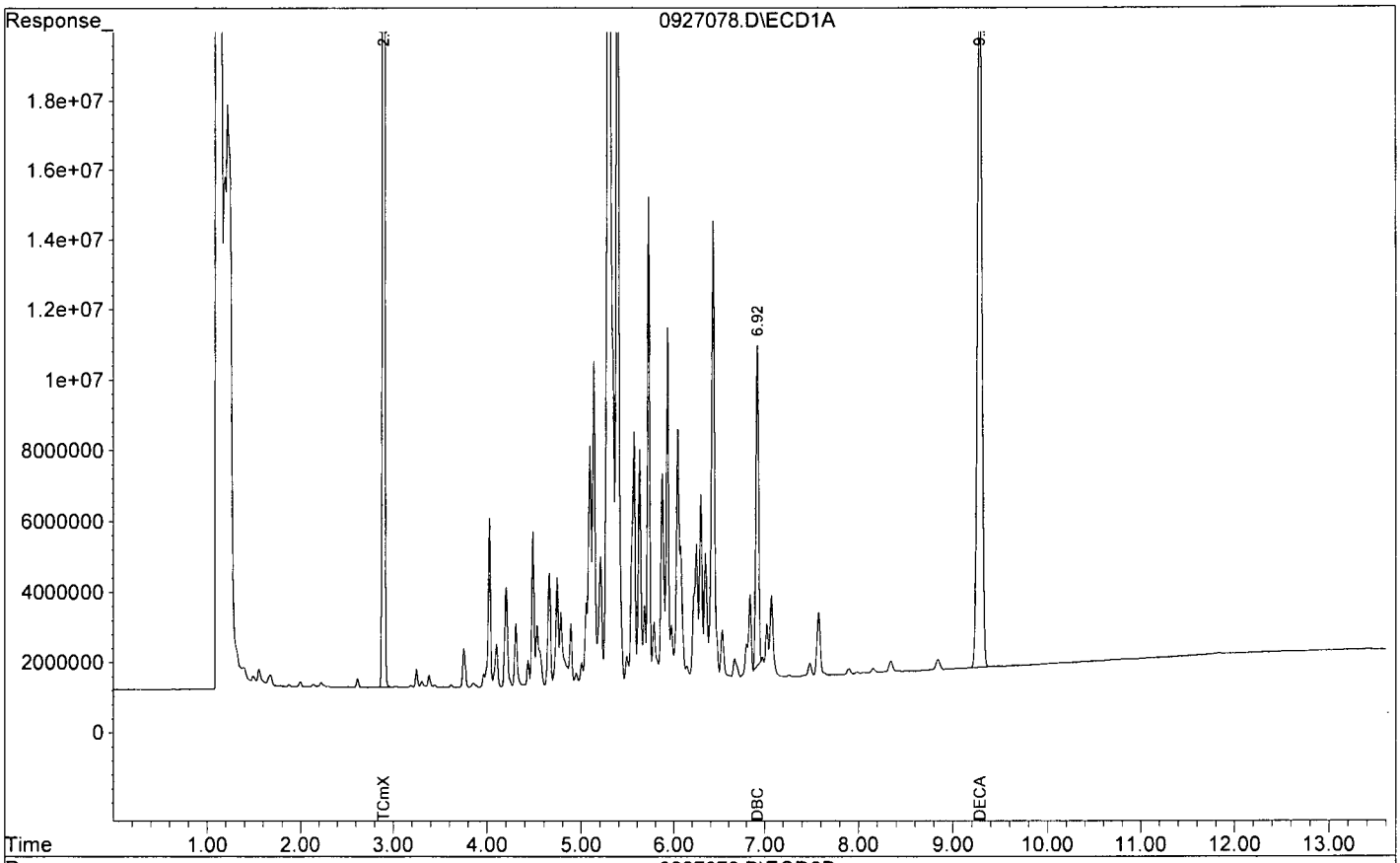
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.90	3.58	51243296	48626610	344.784	339.600
Spiked Amount 328.192			Recovery	=	105.06%	103.48%
2) SA DBC	6.92	7.93	9083575	8566449	105.337	123.982
Spiked Amount 328.192			Recovery	=	32.10%	37.78%
3) SA DECA	9.28	10.58	20859847	17713431	277.838	279.947
Spiked Amount 328.192			Recovery	=	84.66%	85.30%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

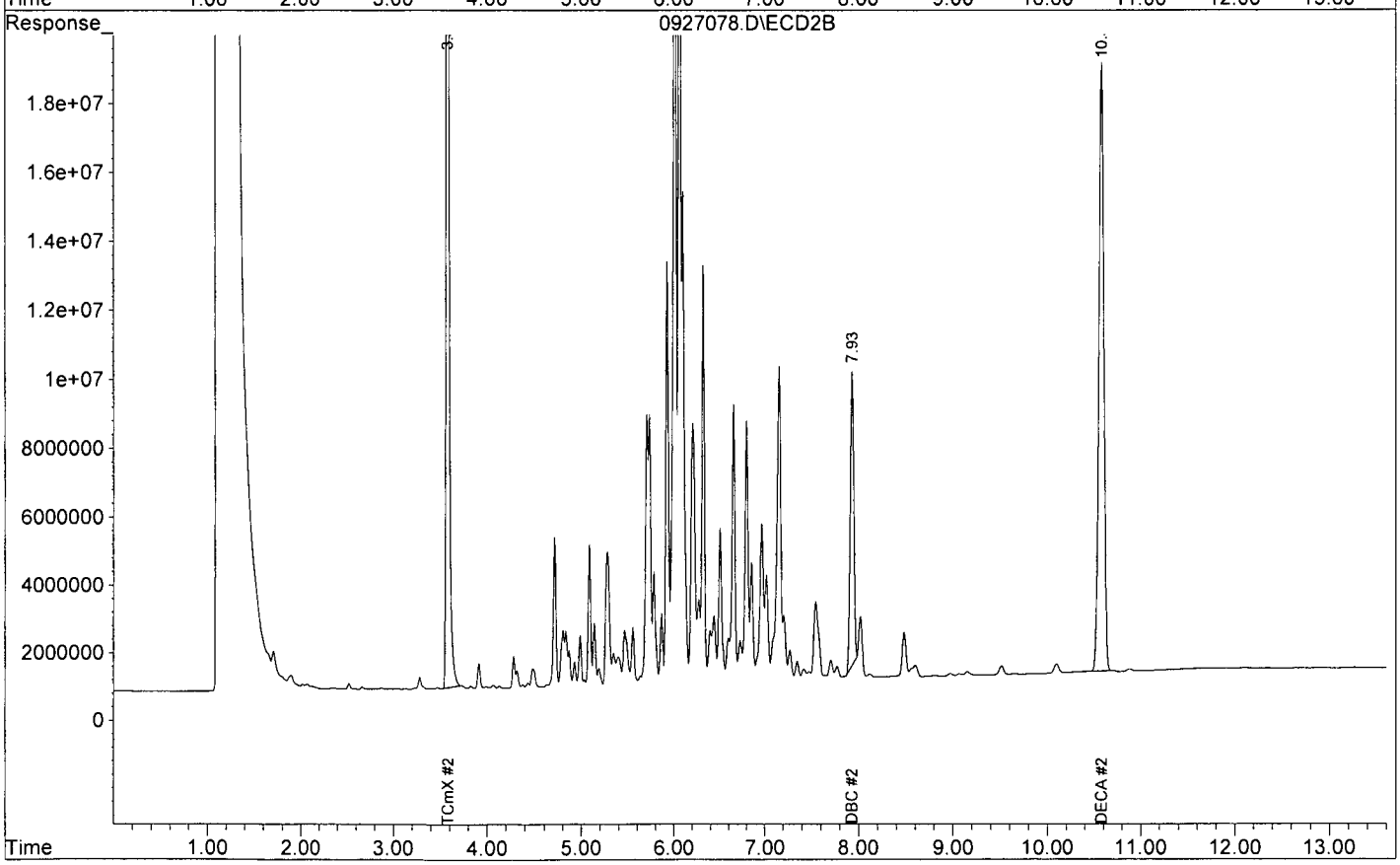
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927078.D
Acq On : 9-29-14 22:16:00
Sample : AZ02104S11 5X1/0.05/30.47G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 78
Operator: MA
Inst : Lucy
Multiplr: 3281.92





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927078.D\ECD1A.CH Vial: 78
Signal #2 : G:\LUCY\DATA\140927\0927078.D\ECD2B.CH
Acq On : 9-29-14 22:16:00 Operator: MA
Sample : AZ02104S11 5X1/0.05/30.47G Inst : Lucy
Misc : soil Multiplr: 3281.92
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:19 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	BNMC Total AR1254	0.00	0.00	41604218	32506036	1370.619m	1217.664m
2)	L3BKC AR 1254	5.72	5.09	12809330	3762157	1265.167	1104.968
3)	L3BKC AR 1254 {2}	5.93	5.93	8328107	10762465	1262.559	1217.302
4)	L3BKC AR 1254 {3}	6.04	6.65	4520890	7240433	1067.035	1141.447
5)	L3BKC AR 1254 {4}	6.29	6.97	3696566	2938744	1137.976	938.265
6)	L3BKC AR 1254 {5}	6.42	7.16	12249325	7802237	1992.322	1568.577

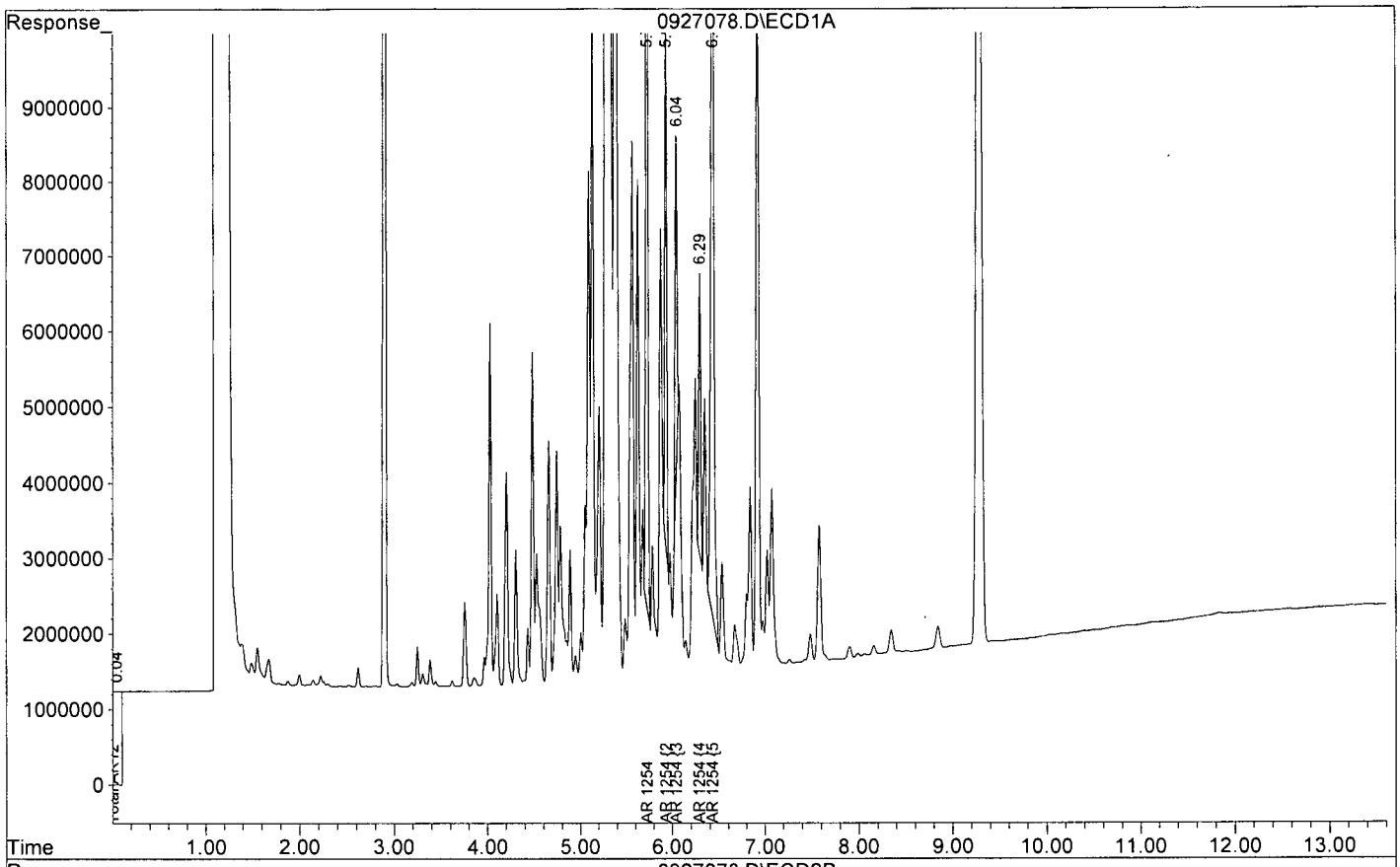
Target Compounds

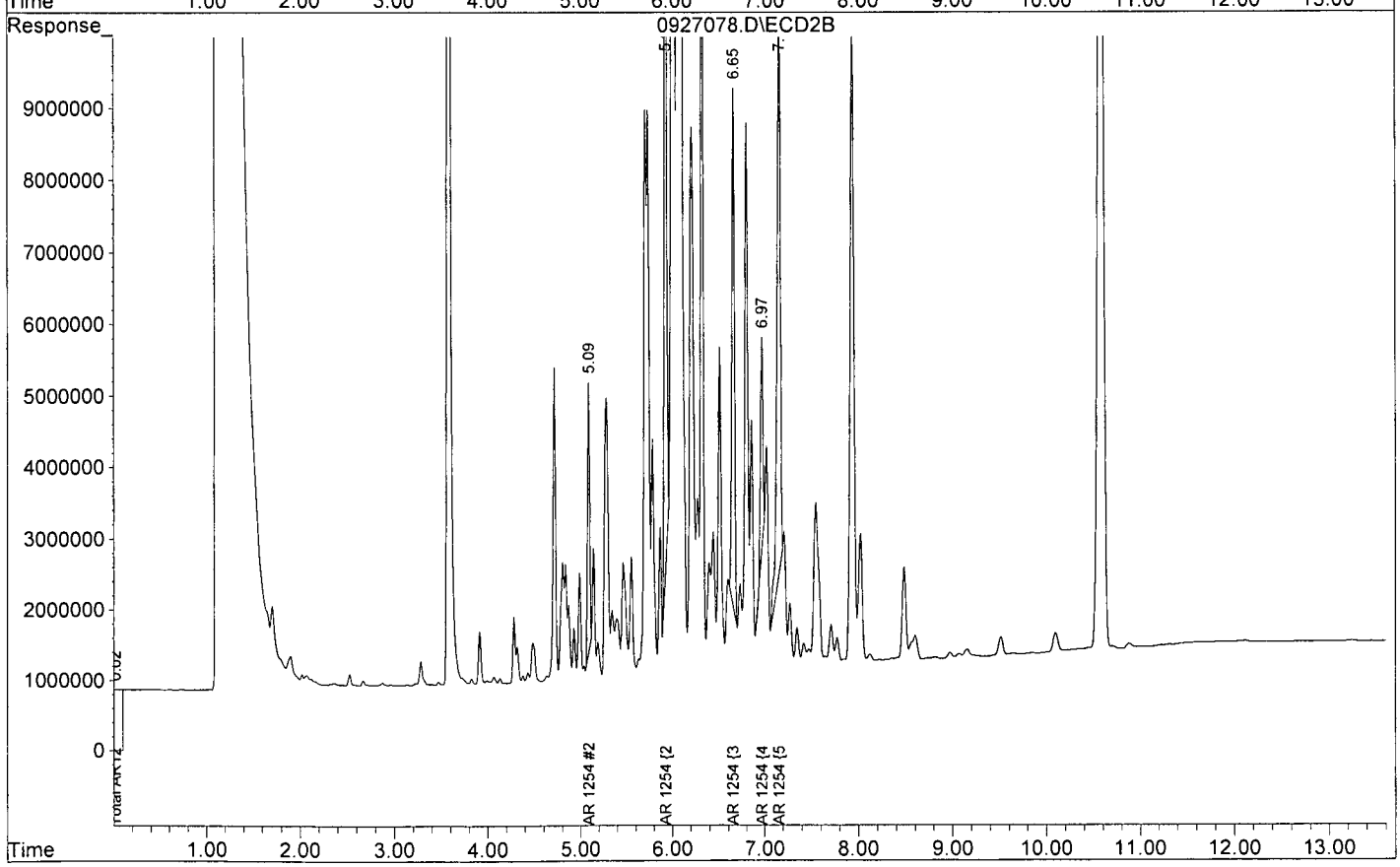
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927078.D
Acq On : 9-29-14 22:16:00
Sample : AZ02104S11 5X1/0.05/30.47G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 78
Operator: MA
Inst : Lucy
Multiplr: 3281.92





EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN007

APPL ID: AZ02105

Sample Collection Date: 09/02/14

QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1254	0.28	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	TOTAL PCBS	0.28	0.05	0.020	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	82.4	60-125			%	09/16/14	09/29/14

Quant Method: PSX0922.M
Run #: 0927079
Instrument: Lucy
Sequence: 140927
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:12 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927079.D\ECD1A.CH Vial: 79
Signal #2 : G:\LUCY\DATA\140927\0927079.D\ECD2B.CH
Acq On : 9-29-14 22:32:24 Operator: MA
Sample : AZ02105S11 5X1/0.05/30.51G Inst : Lucy
Misc : soil Multiplr: 3277.61
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:31 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

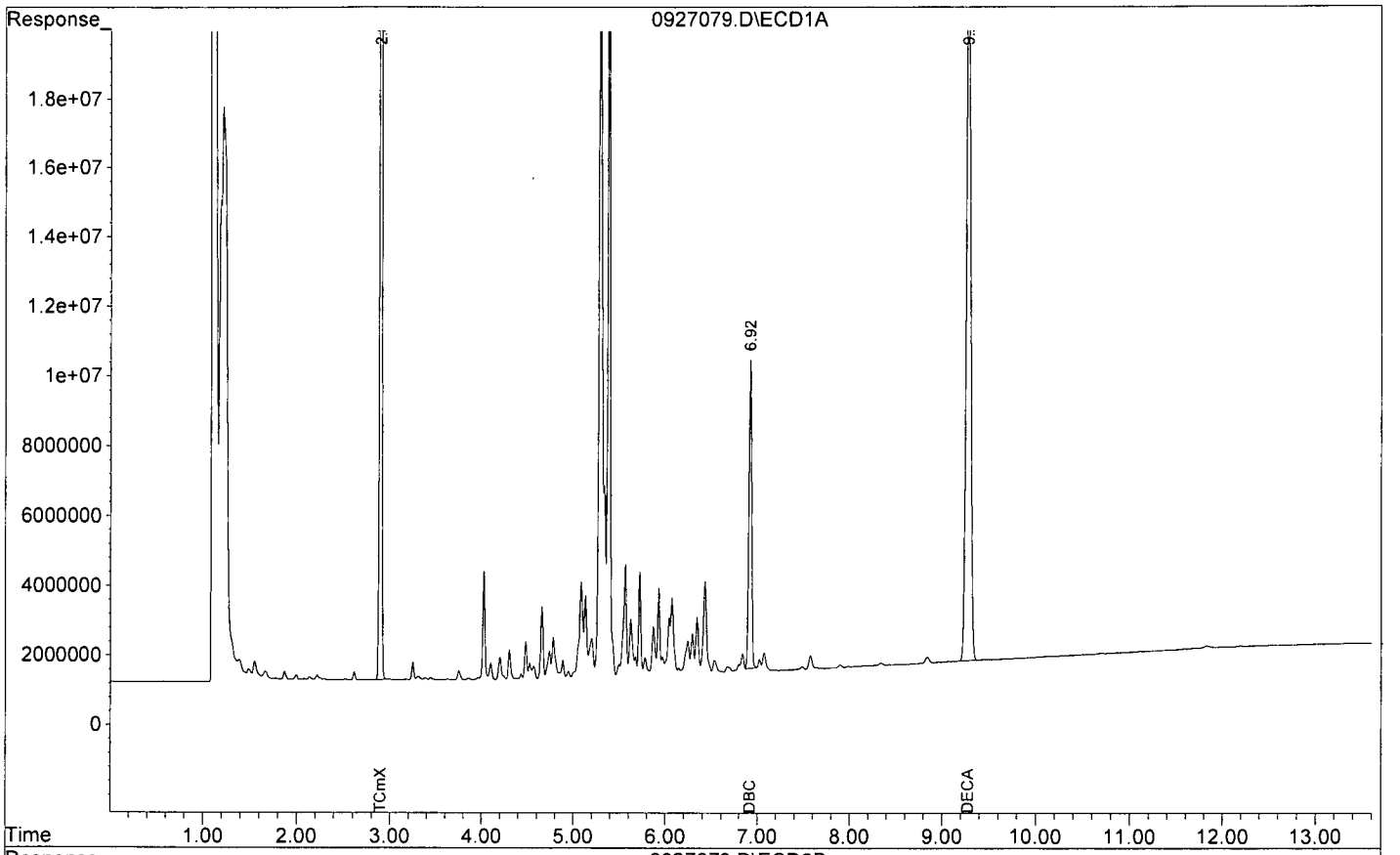
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	49059576	46790801	329.658	326.350
Spiked Amount 327.761			Recovery	=	100.58%	99.57%
2) SA DBC	6.92	7.93	8830831	7227404	102.272	104.465
Spiked Amount 327.761			Recovery	=	31.20%	31.87%
3) SA DECA	9.28	10.58	21390572	17114057	284.533	270.119
Spiked Amount 327.761			Recovery	=	86.81%	82.41%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

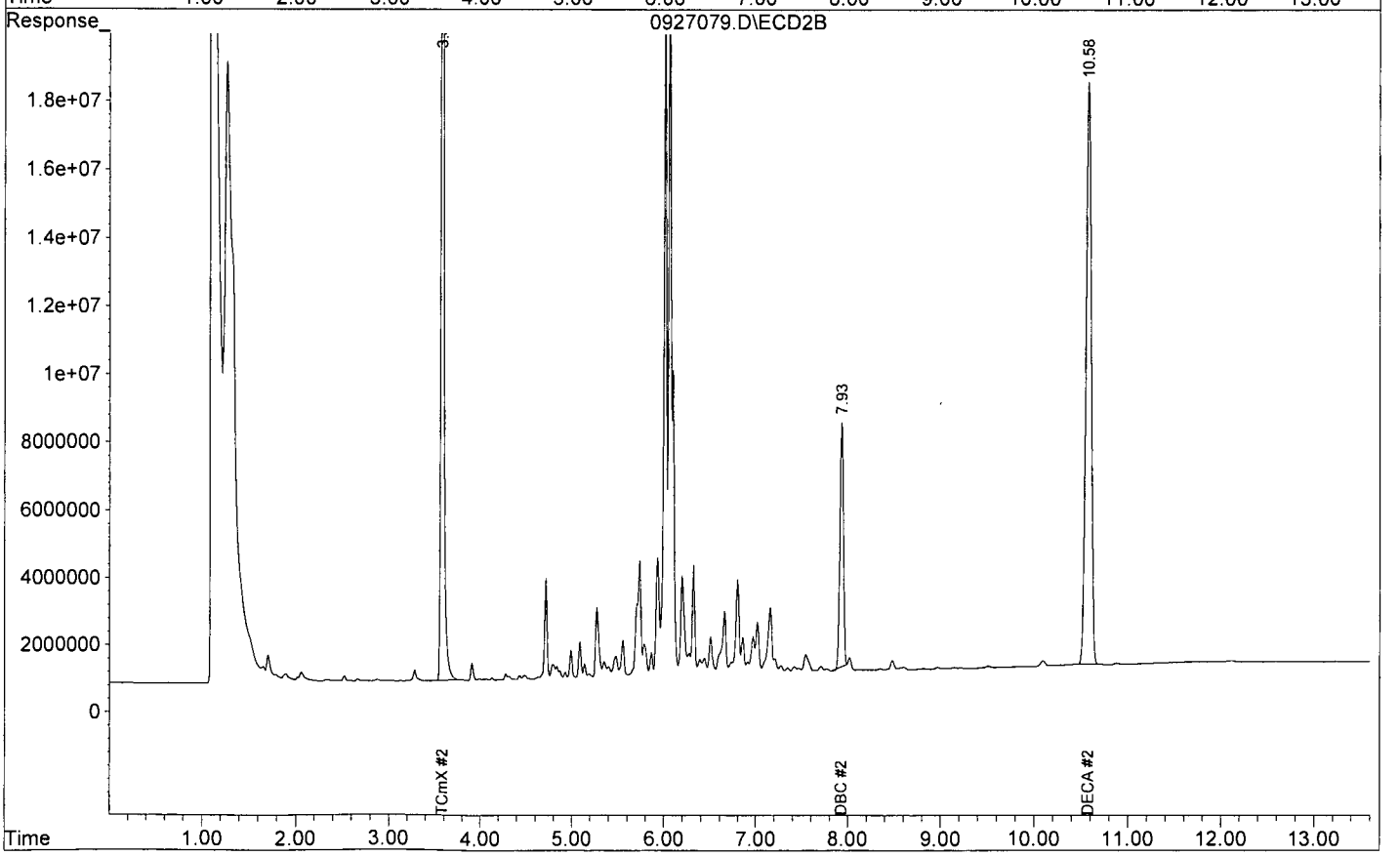
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927079.D
Acq On : 9-29-14 22:32:24
Sample : AZ02105S11 5X1/0.05/30.51G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 79
Operator: MA
Inst : Lucy
Multiplr: 3277.61





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927079.D\ECD1A.CH Vial: 79
Signal #2 : G:\LUCY\DATA\140927\0927079.D\ECD2B.CH
Acq On : 9-29-14 22:32:24 Operator: MA
Sample : AZ02105S11 5X1/0.05/30.51G Inst : Lucy
Misc : soil Multiplr: 3277.61
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:19 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	8419813	7493464	277.021m	280.334m	
2)	L3BKC AR 1254	5.72	5.09	2738532	993217	270.128	291.331	
3)	L3BKC AR 1254 {2}	5.93	5.93	2044052	2650205	309.476	299.362	
4)	L3BKC AR 1254 {3}	6.04	6.65	443323	1698582	104.497	267.429	#
5)	L3BKC AR 1254 {4}	6.29	6.97	730745	508789	224.663	162.230	#
6)	L3BKC AR 1254 {5}	6.42	7.16	2463161	1642670	400.102	329.813	

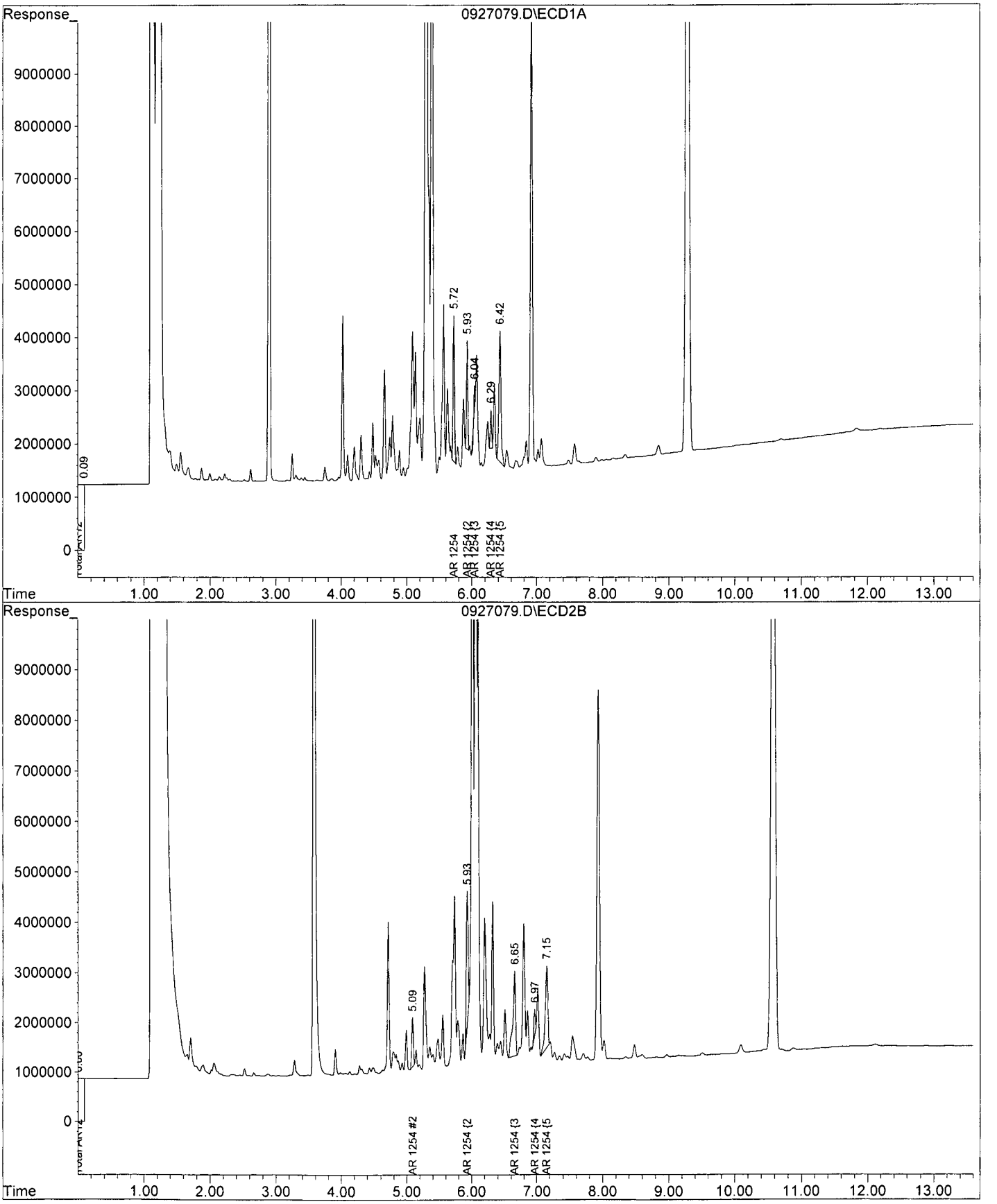
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927079.D
Acq On : 9-29-14 22:32:24
Sample : AZ02105S11 5X1/0.05/30.51G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 79
Operator: MA
Inst : Lucy
Multiplr: 3277.61



EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN008

APPL ID: AZ02106

Sample Collection Date: 09/02/14

QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1254	0.42	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	TOTAL PCBS	0.42	0.05	0.020	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	85.6	60-125			%	09/16/14	09/29/14

Quant Method: PSX0922.M
Run #: 0927080
Instrument: Lucy
Sequence: 140927
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:12 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927080.D\ECD1A.CH Vial: 80
Signal #2 : G:\LUCY\DATA\140927\0927080.D\ECD2B.CH
Acq On : 9-29-14 22:48:51 Operator: MA
Sample : AZ02106S11 5X1/0.05/30.38G Inst : Lucy
Misc : soil Multiplr: 3291.64
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:30 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

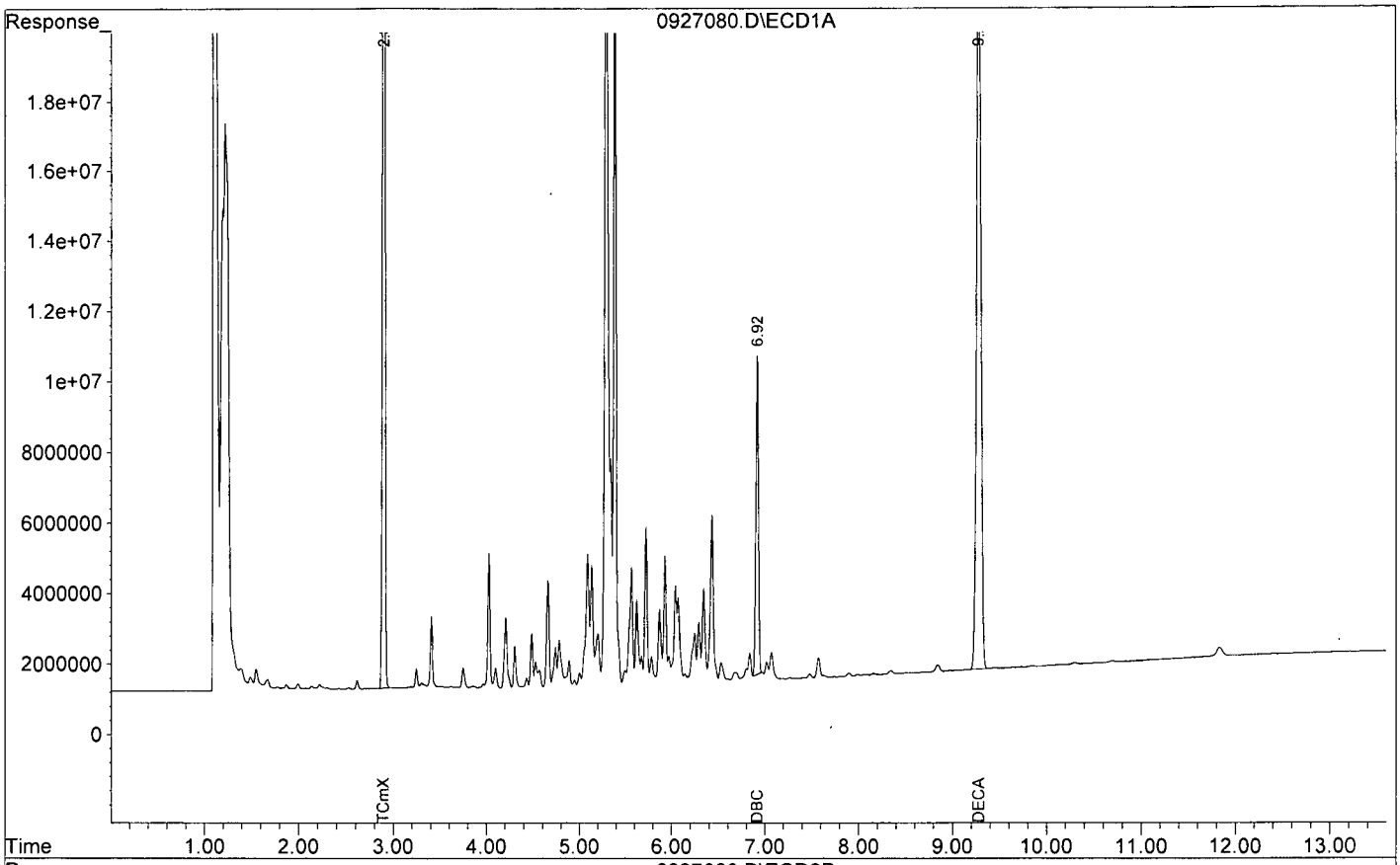
	Compound		RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds							
1)	SA TCmX		2.89	3.58	51308512	48665224	346.245	340.876
	Spiked Amount	329.164			Recovery	=	105.19%	103.56%
2)	SA DBC		6.92	7.93	8982905	7761172	104.478	112.660
	Spiked Amount	329.164			Recovery	=	31.74%	34.23%
3)	SA DECA		9.28	10.58	21921516	17775318	292.844	281.757
	Spiked Amount	329.164			Recovery	=	88.97%	85.60%
	Target Compounds							
	Target Compounds							
4)	BNMC Total AR1016		0.00	0.00	0	0	N.D. d	N.D. d
5)	L3BKC AR 1016		0.00	0.00	0	0	N.D. d	N.D. d
6)	L3BKC AR 1016 {2}		0.00	0.00	0	0	N.D. d	N.D. d
7)	L3BKC AR 1016 {3}		0.00	0.00	0	0	N.D. d	N.D. d
8)	L3BKC AR 1016 {4}		0.00	0.00	0	0	N.D. d	N.D. d
9)	L3BKC AR 1016 {5}		0.00	0.00	0	0	N.D. d	N.D. d
10)	BNMC Total AR1260		0.00	0.00	0	0	N.D. d	N.D. d
11)	L9BKC AR 1260		0.00	0.00	0	0	N.D. d	N.D. d
12)	L9BKC AR 1260 {2}		0.00	0.00	0	0	N.D. d	N.D. d
13)	L9BKC AR 1260 {3}		0.00	0.00	0	0	N.D. d	N.D. d
14)	L9BKC AR 1260 {4}		0.00	0.00	0	0	N.D. d	N.D. d
15)	L9BKC AR 1260 {5}		0.00	0.00	0	0	N.D. d	N.D. d

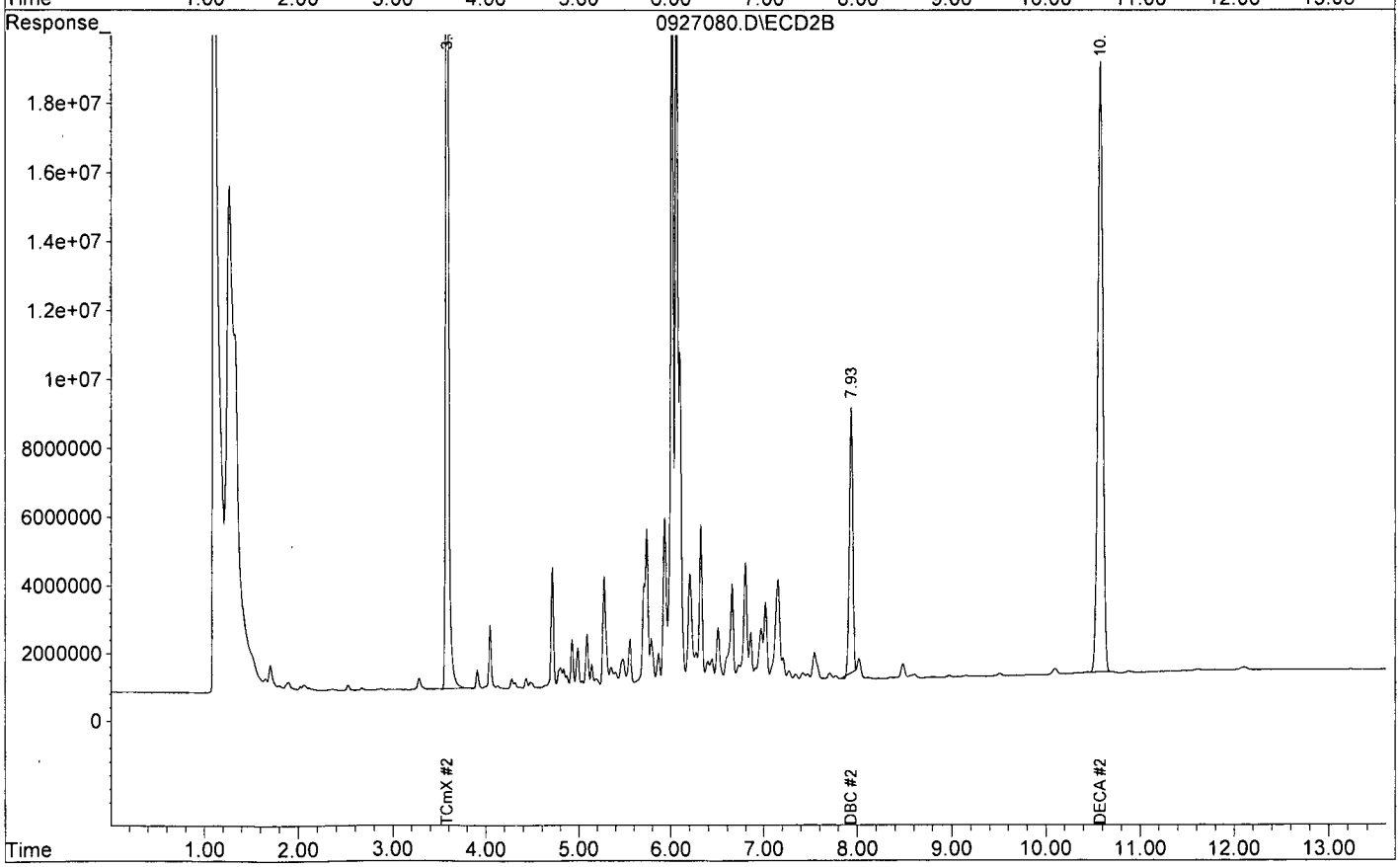
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927080.D
Acq On : 9-29-14 22:48:51
Sample : AZ02106S11 5X1/0.05/30.38G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 80
Operator: MA
Inst : Lucy
Multiplr: 3291.64





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927080.D\ECD1A.CH Vial: 80
Signal #2 : G:\LUCY\DATA\140927\0927080.D\ECD2B.CH
Acq On : 9-29-14 22:48:51 Operator: MA
Sample : AZ02106S11 5X1/0.05/30.38G Inst : Lucy
Misc : soil Multiplr: 3291.64
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:19 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	13653715	11092915	451.144m	416.767m	
2)	L3BKC AR 1254	5.72	5.09	4058927	1389510	402.084	409.316	
3)	L3BKC AR 1254 {2}	5.93	5.93	2927527	3848410	445.134	436.569	
4)	L3BKC AR 1254 {3}	6.04	6.65	1159687	2666396	274.524	421.600	#
5)	L3BKC AR 1254 {4}	6.29	6.97	1040392	655623	321.230	209.944	#
6)	L3BKC AR 1254 {5}	6.42	7.15	4467182	2532976	728.729	510.743	#

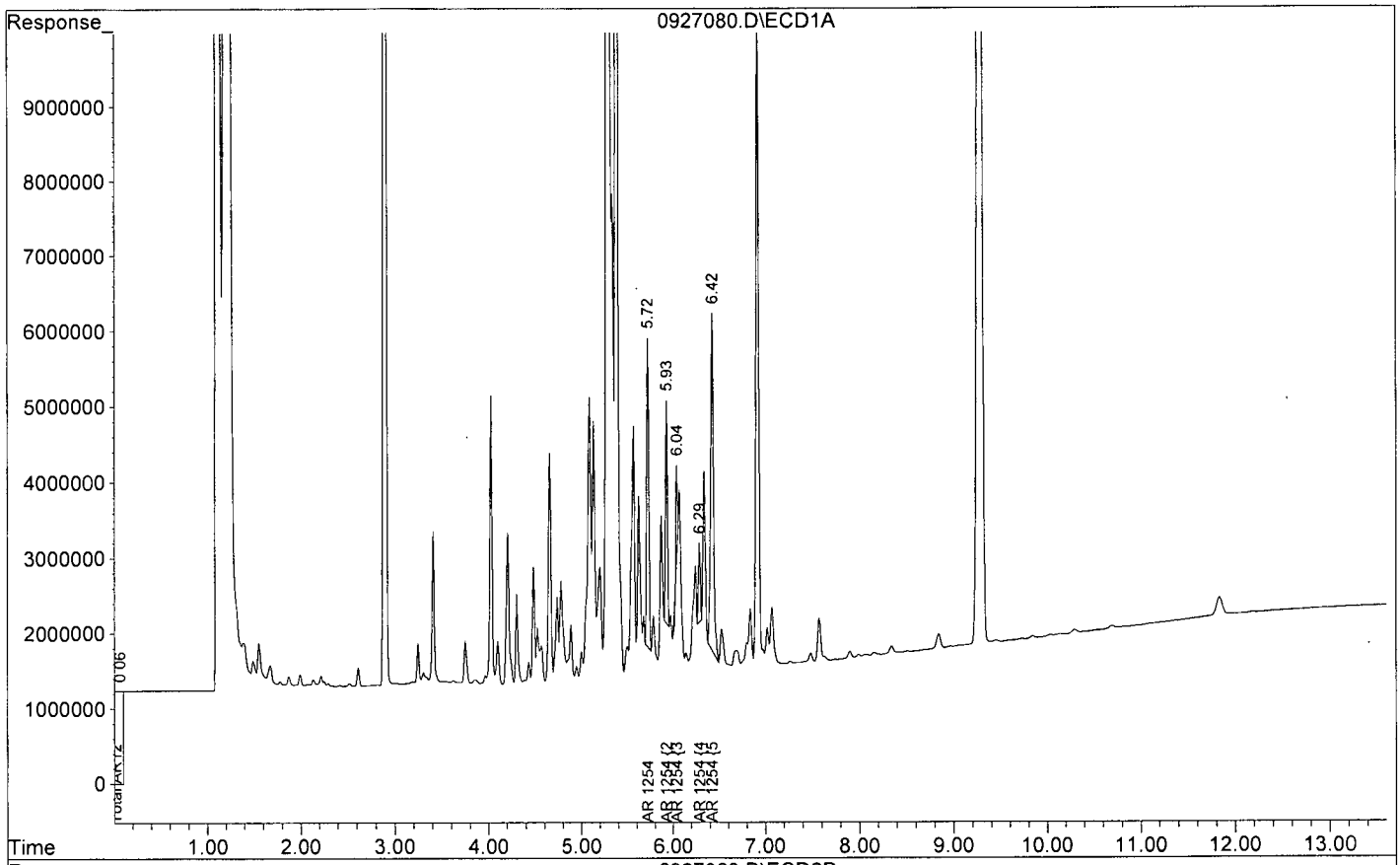
Target Compounds

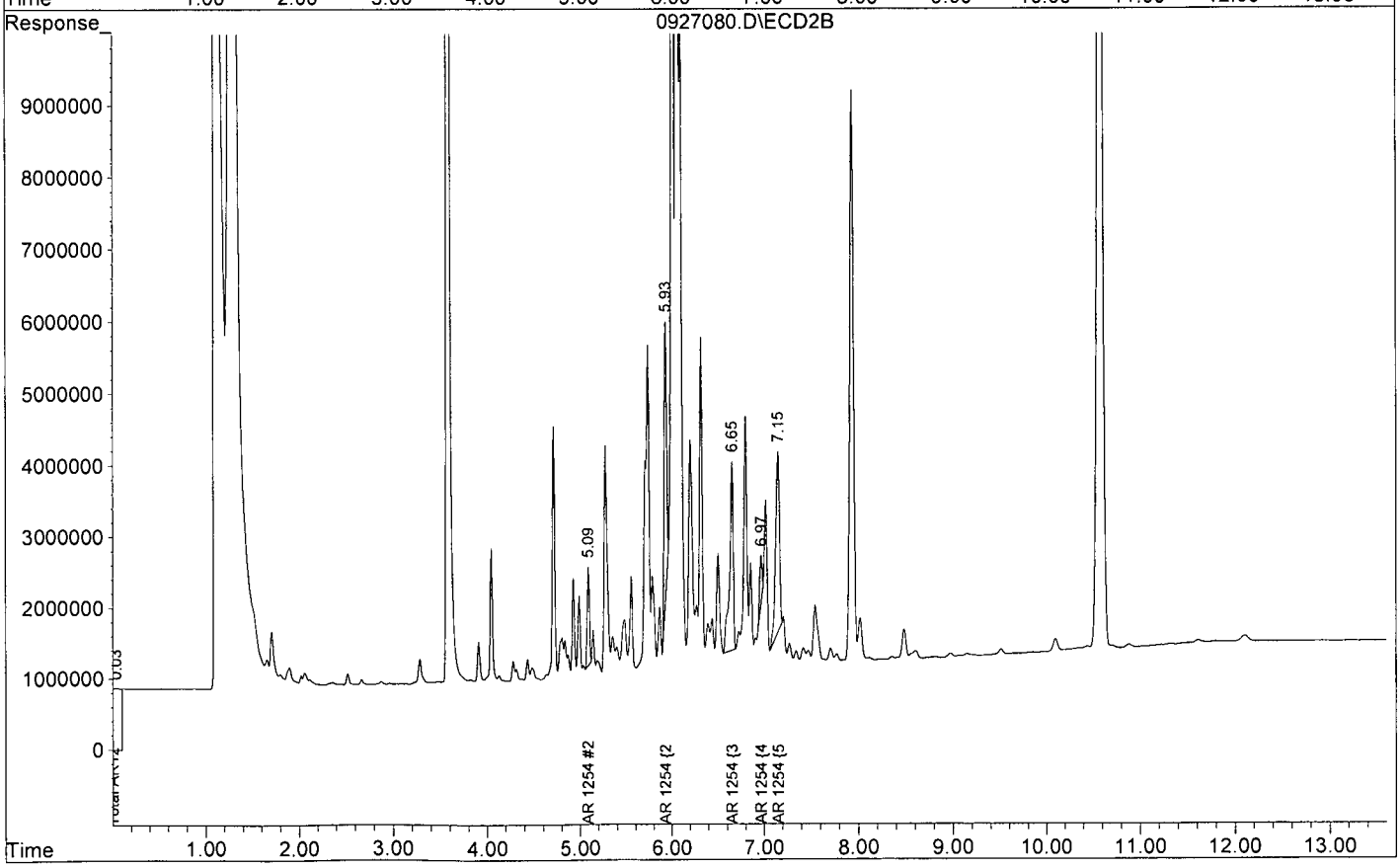
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927080.D
Acq On : 9-29-14 22:48:51
Sample : AZ02106S11 5X1/0.05/30.38G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 80
Operator: MA
Inst : Lucy
Multiplr: 3291.64





EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN009

APPL ID: AZ02107

Sample Collection Date: 09/02/14

QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1254	0.23	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	TOTAL PCBS	0.23	0.05	0.020	0.004	mg/kg	09/16/14	09/29/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	82.6	60-125			%	09/16/14	09/29/14

Quant Method: PSX0922.M
Run #: 0927084
Instrument: Lucy
Sequence: 140927
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:12 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927084.D\ECD1A.CH Vial: 84
Signal #2 : G:\LUCY\DATA\140927\0927084.D\ECD2B.CH
Acq On : 9-29-14 23:50:26 Operator: MA
Sample : AZ02107S11 5X1/0.05/30.65G Inst : Lucy
Misc : soil Multiplr: 3262.64
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:30 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

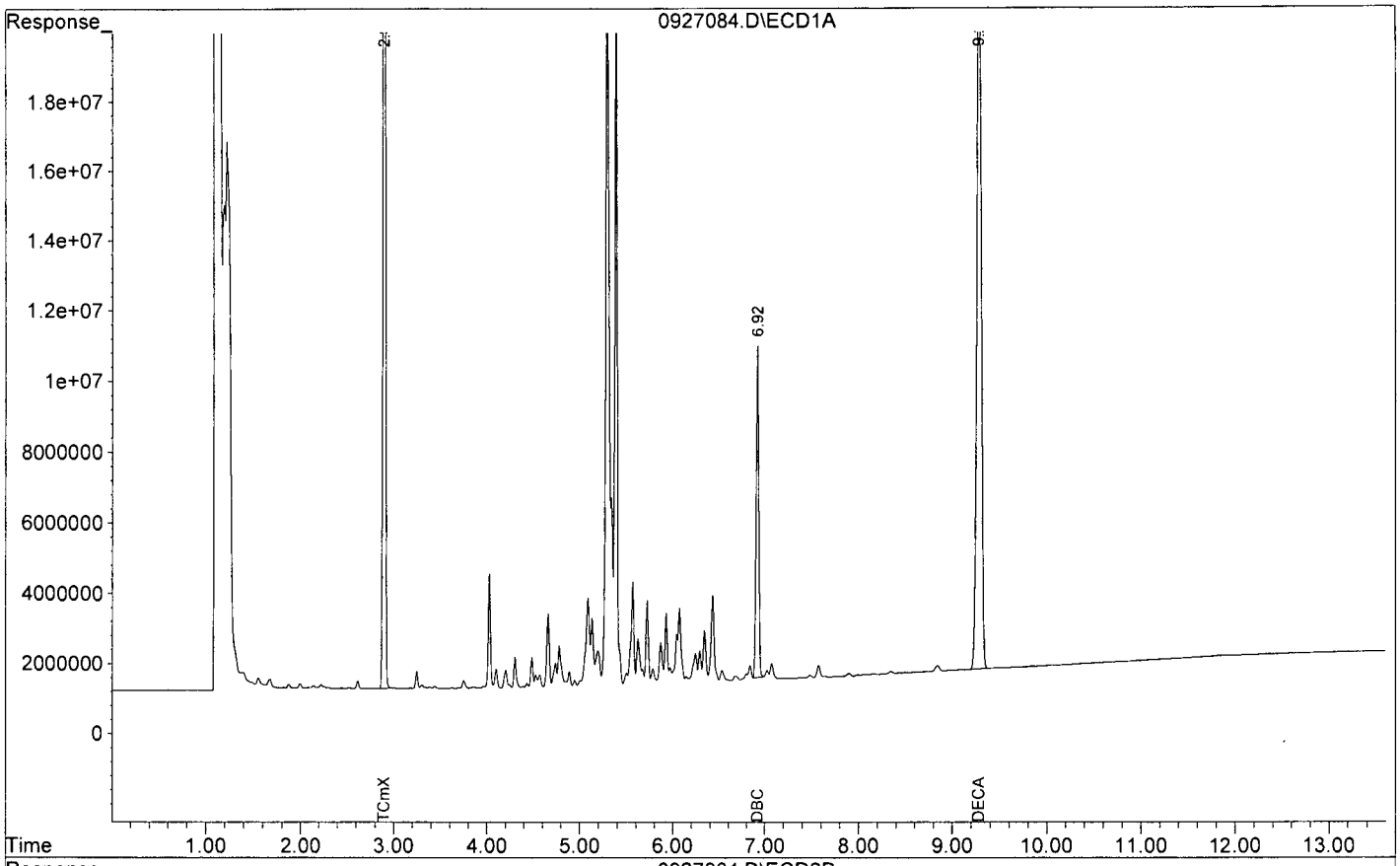
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	48075297	46744535	321.568	324.538
Spiked Amount 326.264			Recovery	=	98.56%	99.47%
2) SA DBC	6.92	7.93	9361461	7789466	107.922	112.075
Spiked Amount 326.264			Recovery	=	33.08%	34.35%
3) SA DECA	9.28	10.58	21220839	17157071	280.986	269.561
Spiked Amount 326.264			Recovery	=	86.12%	82.62%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

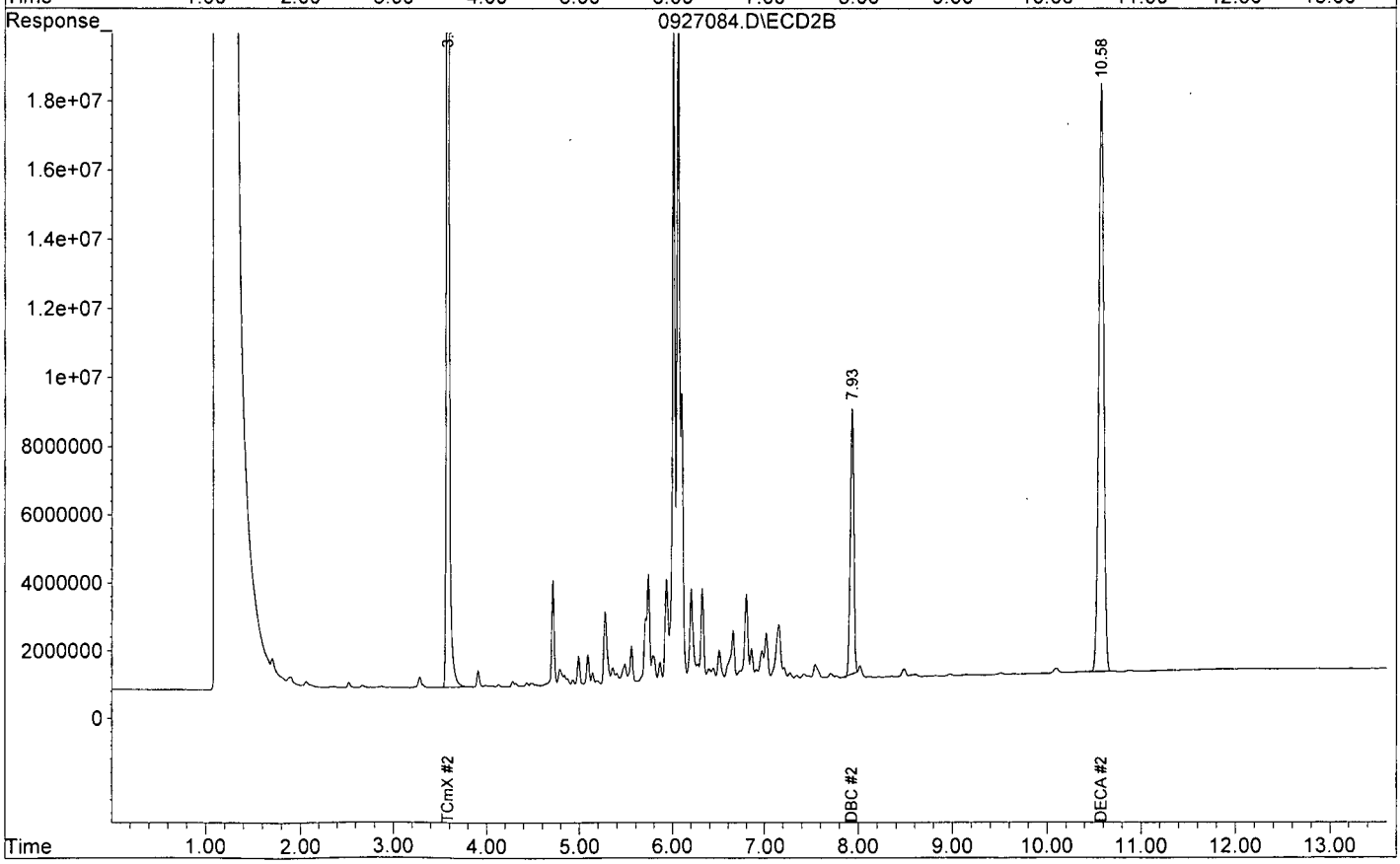
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927084.D
Acq On : 9-29-14 23:50:26
Sample : AZ02107S11 5X1/0.05/30.65G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 84
Operator: MA
Inst : Lucy
Multiplr: 3262.64





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927084.D\ECD1A.CH Vial: 84
Signal #2 : G:\LUCY\DATA\140927\0927084.D\ECD2B.CH
Acq On : 9-29-14 23:50:26 Operator: MA
Sample : AZ02107S11 5X1/0.05/30.65G Inst : Lucy
Misc : soil Multiplr: 3262.64
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:19 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	7024117	6081824	230.045m	226.485m	
2)	L3BKC AR 1254	5.72	5.09	2176763	812524	213.734	237.242	
3)	L3BKC AR 1254 {2}	5.93	5.93	1636591	2192349	246.654	246.512	
4)	L3BKC AR 1254 {3}	6.04	6.65	348366	1345978	81.739	210.946	#
5)	L3BKC AR 1254 {4}	6.29	6.97	536681	351983	164.245	111.719	#
6)	L3BKC AR 1254 {5}	6.42	7.15	2325717	1378990	376.051	275.607	#

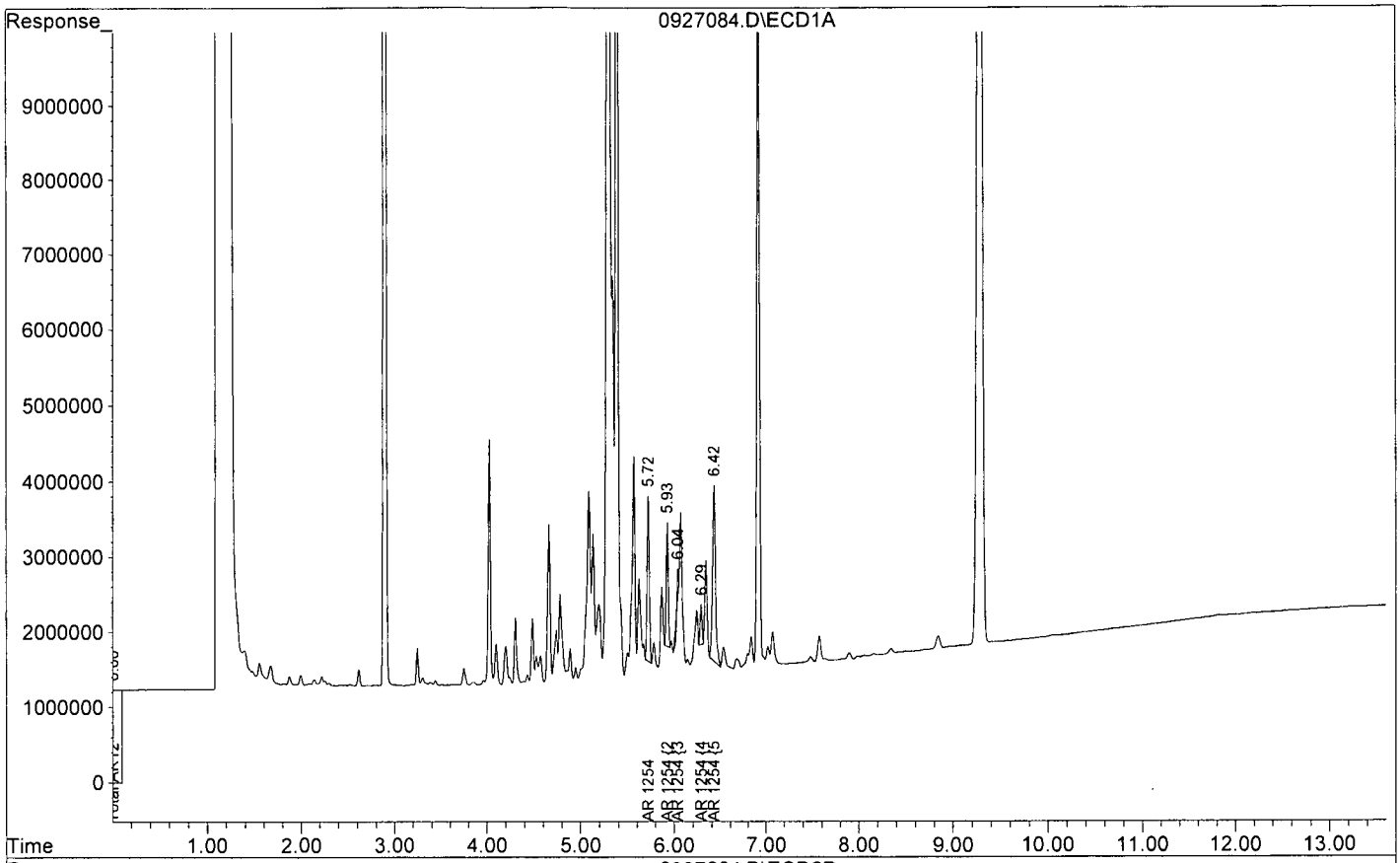
Target Compounds

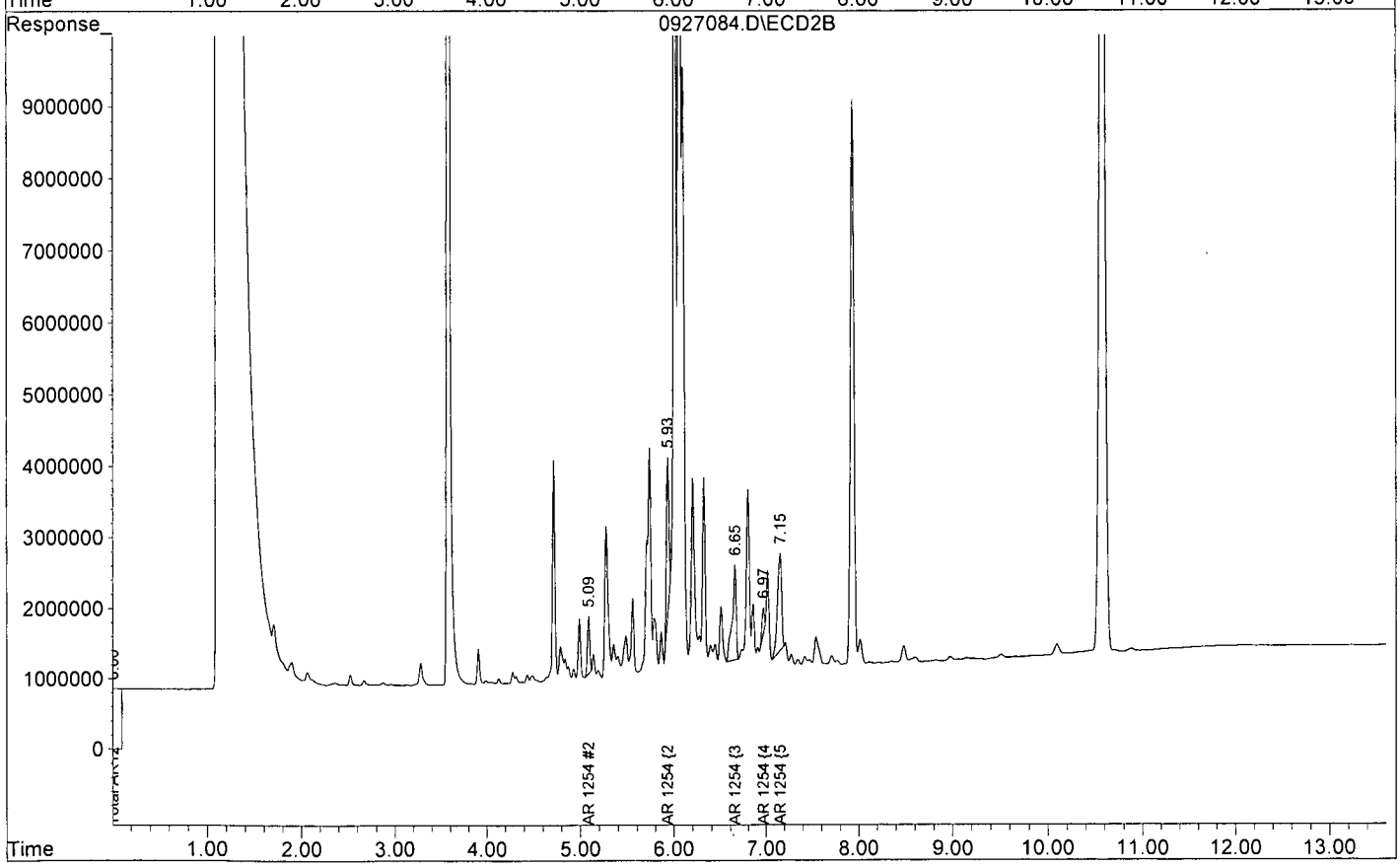
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927084.D
Acq On : 9-29-14 23:50:26
Sample : AZ02107S11 5X1/0.05/30.65G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 84
Operator: MA
Inst : Lucy
Multiplr: 3262.64





EPA 8082A PCB WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN010

APPL ID: AZ02108

Sample Collection Date: 09/02/14

QCG: #82ACA-140909A-190310

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1221	0.250 U	0.50	0.250	0.080	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1232	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1242	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1248	0.250 U	0.50	0.250	0.090	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1254	0.250 U	0.50	0.250	0.200	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1260	0.250 U	0.50	0.250	0.090	ug/L	09/09/14	09/23/14
EPA 8082A	TOTAL PCBS	0.250 U	0.50	0.250	0.200	ug/L	09/09/14	09/23/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	76.3	40-135			%	09/09/14	09/23/14

Quant Method: PSX0922.M
Run #: 0922105
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:12 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922105.D\ECD1A.CH Vial: 5
Acq On : 9-23-14 17:50:32 Operator: MA
Sample : AZ02108W09 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922105.D\ECD2B.CH Vial: 5
Acq On : 9-23-14 17:50:33 Operator: MA
Sample : AZ02108W09 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events2.e
Quant Time: Sep 24 12:17 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

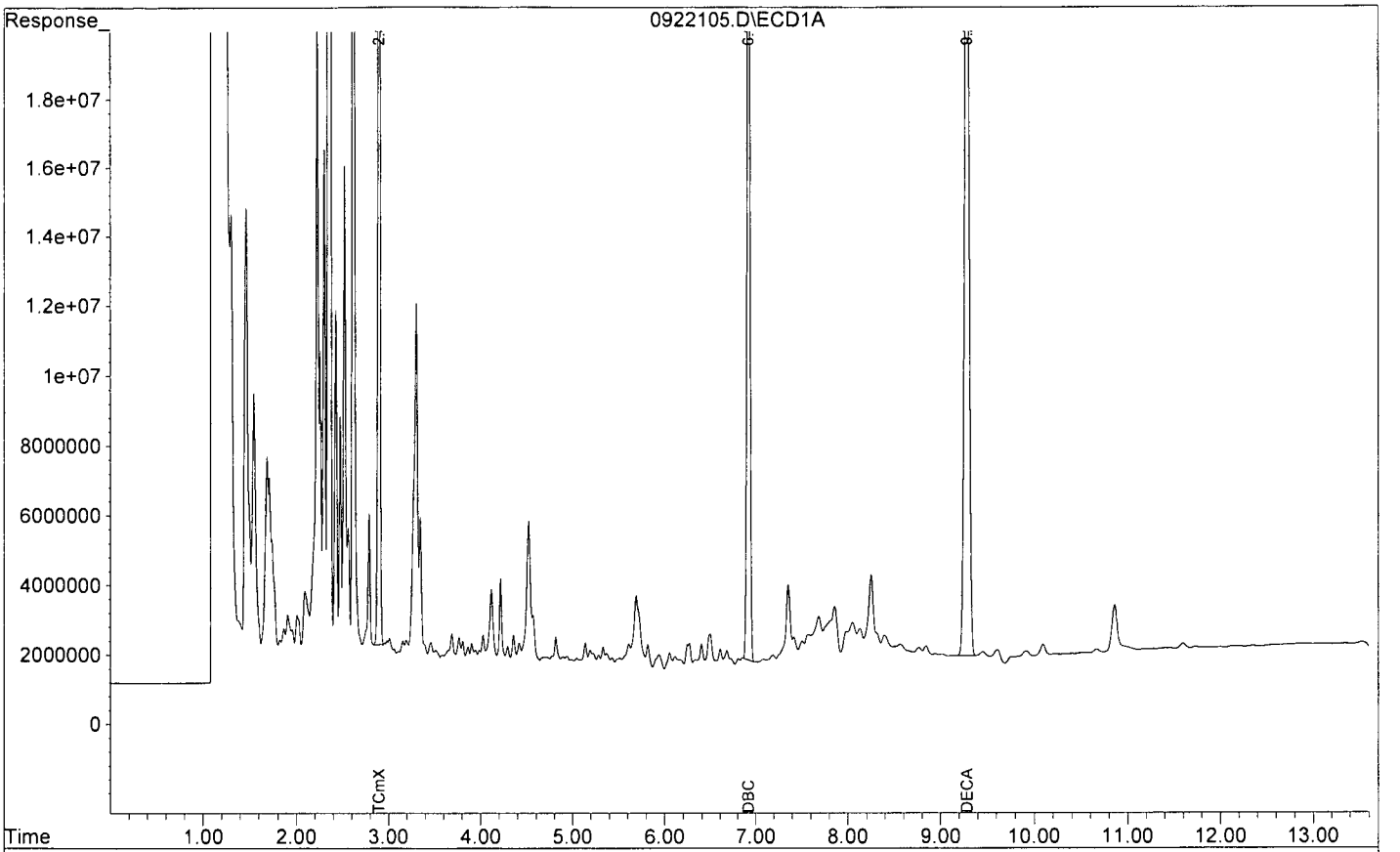
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.90	3.58	38960271	39743516	0.160	0.169
Spiked Amount 0.300			Recovery	=	53.33%	56.33%
2) SA DBC	6.92	7.94	28085055	30602541	0.198	0.270 #
Spiked Amount 0.300			Recovery	=	66.00%	90.00%
3) SA DECA	9.28	10.58	27343431	23751473	0.222	0.229
Spiked Amount 0.300			Recovery	=	74.00%	76.33%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

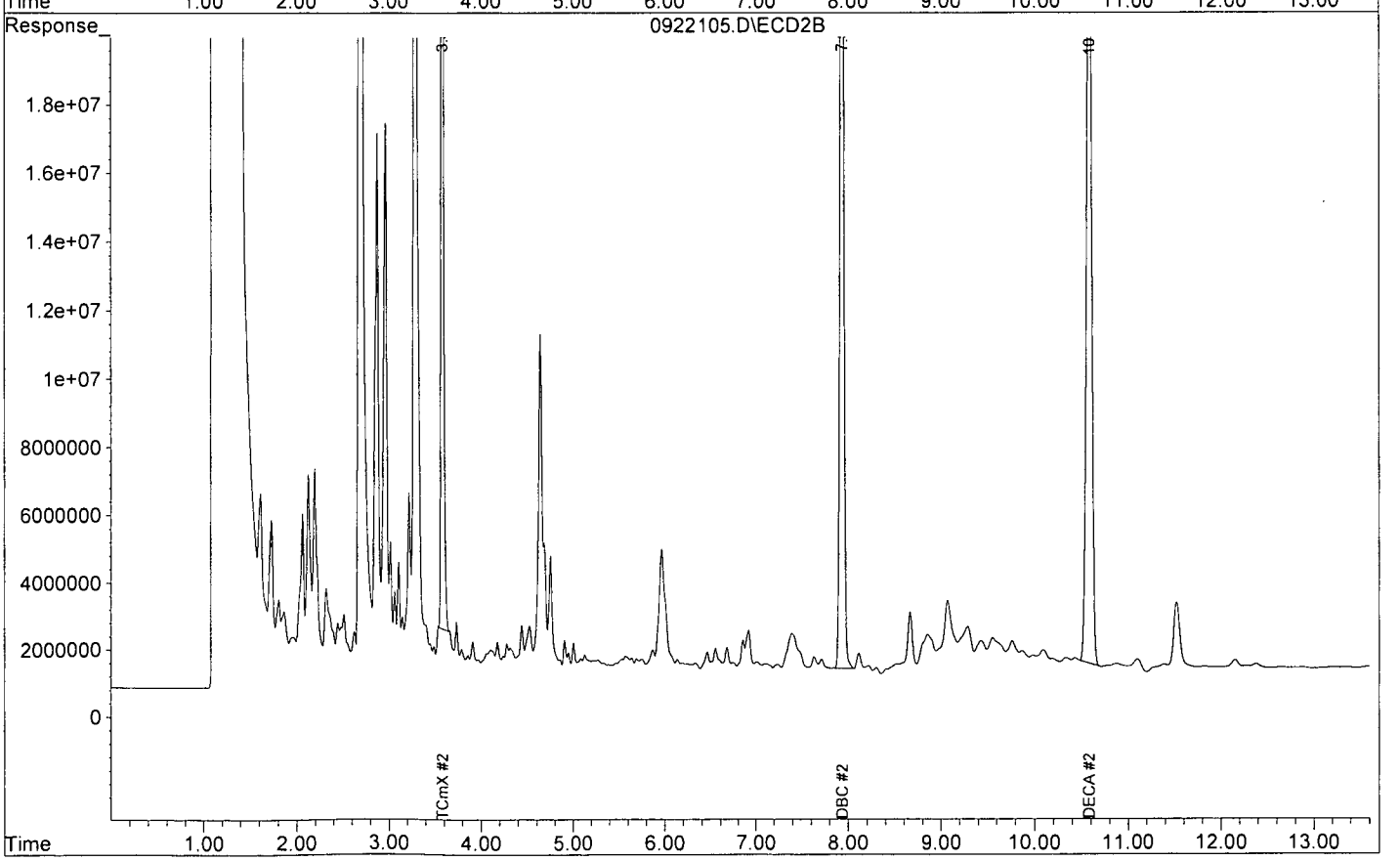
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922105.D
Acq On : 9-23-14 17:50:32
Sample : AZ02108W09 1/500
Misc : water
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 5
Operator: MA
Inst : Lucy
Multiplr: 2.00





EPA 8082A PCB WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN011

APPL ID: AZ02109

Sample Collection Date: 09/02/14

QCG: #82ACA-140909A-190310

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1221	0.250 U	0.50	0.250	0.080	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1232	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1242	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1248	0.250 U	0.50	0.250	0.090	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1254	0.250 U	0.50	0.250	0.200	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1260	0.250 U	0.50	0.250	0.090	ug/L	09/09/14	09/23/14
EPA 8082A	TOTAL PCBS	0.250 U	0.50	0.250	0.200	ug/L	09/09/14	09/23/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	69.0	40-135			%	09/09/14	09/23/14

Quant Method: PSX0922.M
Run #: 0922106
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:12 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922106.D\ECD1A.CH Vial: 6
Acq On : 9-23-14 18:06:56 Operator: MA
Sample : AZ02109W08 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922106.D\ECD2B.CH Vial: 6
Acq On : 9-23-14 18:06:57 Operator: MA
Sample : AZ02109W08 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events2.e
Quant Time: Sep 24 12:17 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

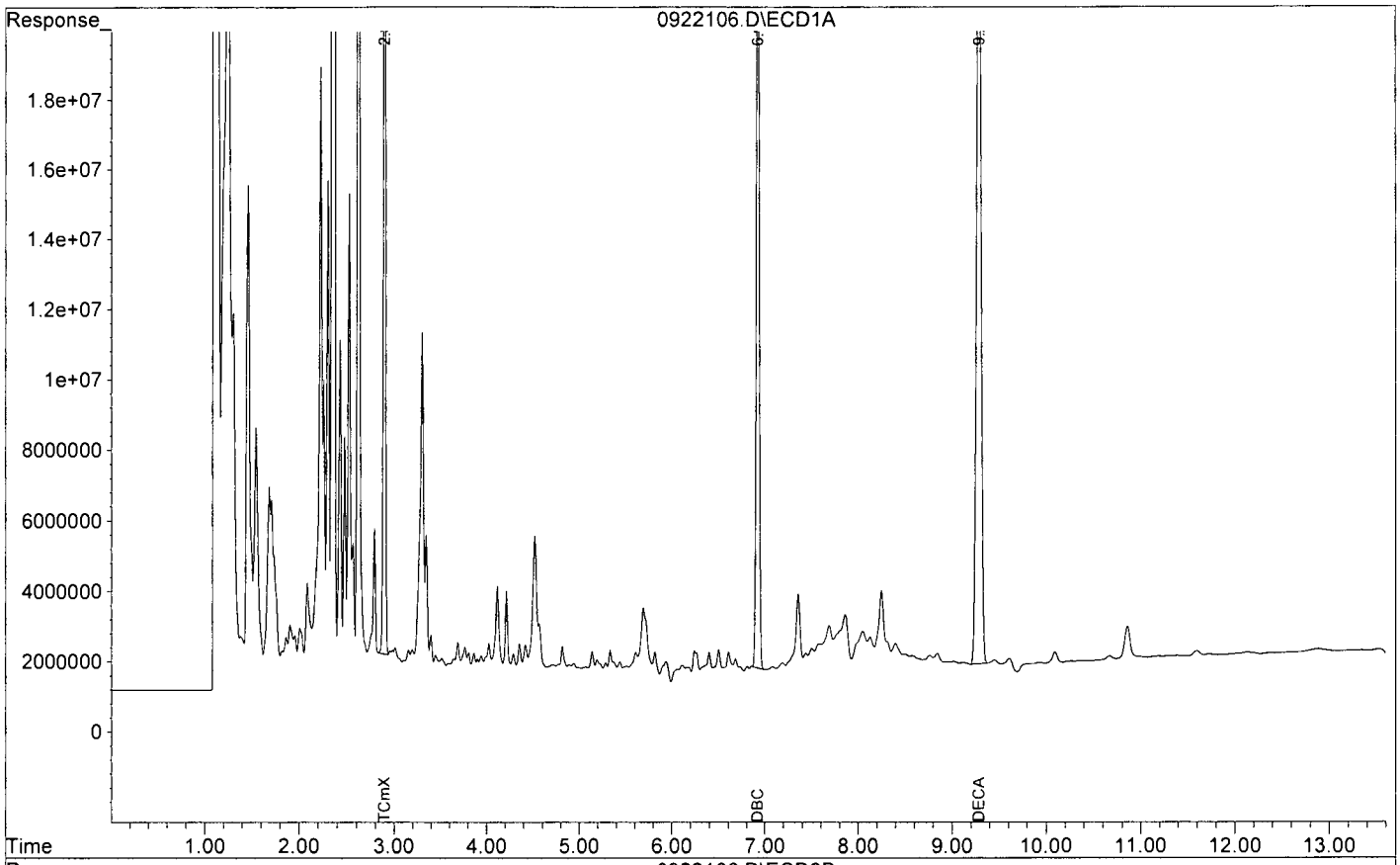
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	SA TCmX	2.89	3.58	32873978	33673088	0.135	0.143
	Spiked Amount 0.300			Recovery	=	45.00%	47.67%
2)	SA DBC	6.92	7.94	25194205	26700032	0.178	0.235 #
	Spiked Amount 0.300			Recovery	=	59.33%	78.33%
3)	SA DECA	9.28	10.58	23879421	21529773	0.194	0.207
	Spiked Amount 0.300			Recovery	=	64.67%	69.00%
	Target Compounds						
	Target Compounds						
4)	BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5)	L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6)	L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7)	L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8)	L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9)	L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10)	BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11)	L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12)	L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13)	L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14)	L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15)	L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

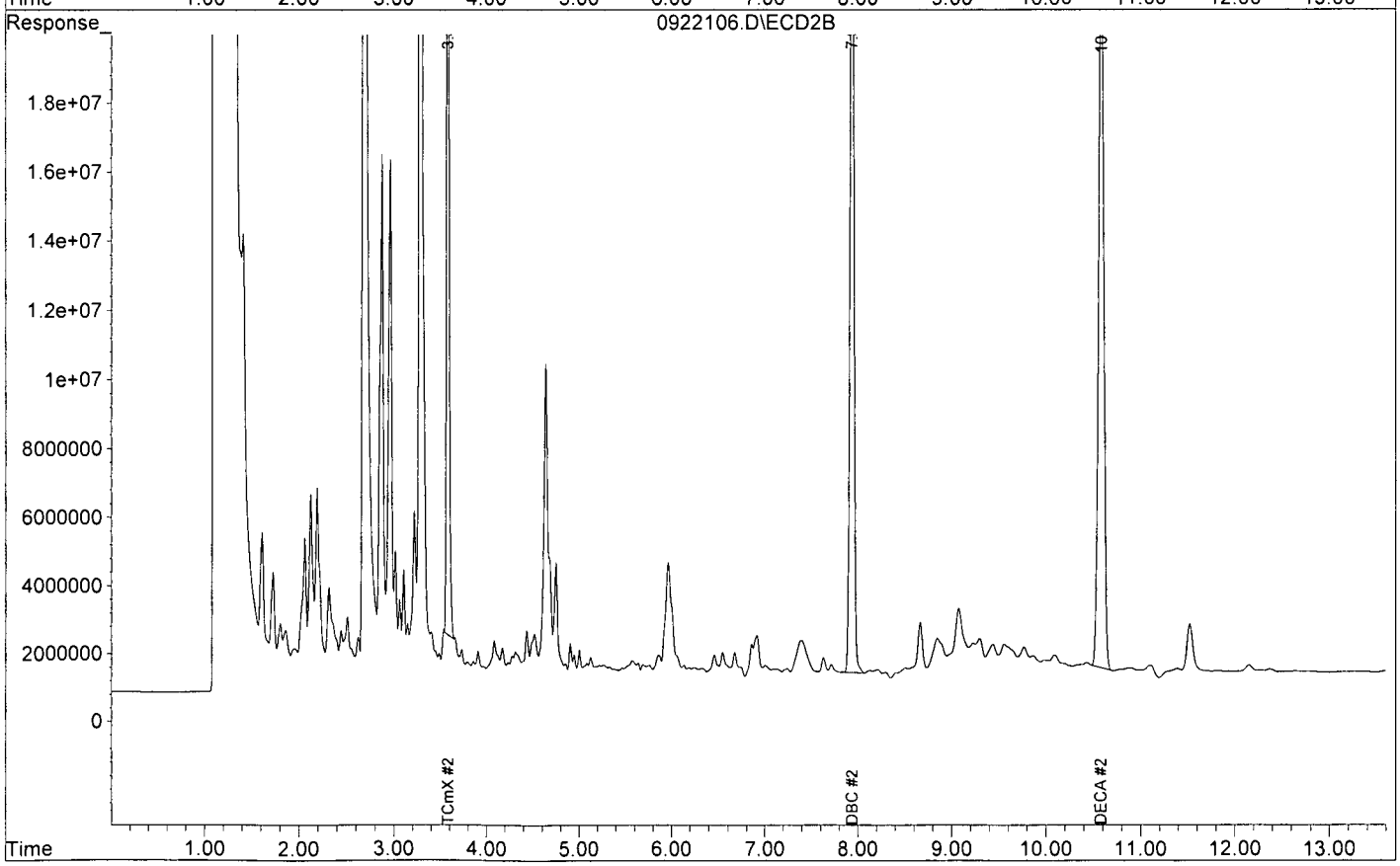
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922106.D
Acq On : 9-23-14 18:06:56
Sample : AZ02109W08 1/500
Misc : water
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 6
Operator: MA
Inst : Lucy
Multiplr: 2.00





EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN012

APPL ID: AZ02110

Sample Collection Date: 09/03/14

QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1254	0.32	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	TOTAL PCBS	0.32	0.05	0.020	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	82.8	60-125			%	09/16/14	09/30/14

Quant Method: PSX0922.M
Run #: 0927085
Instrument: Lucy
Sequence: 140927
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:12 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927085.D\ECD1A.CH Vial: 85
Signal #2 : G:\LUCY\DATA\140927\0927085.D\ECD2B.CH
Acq On : 9-30-14 0:06:51 Operator: MA
Sample : AZ02110S11 5X1/0.05/30.30G Inst : Lucy
Misc : soil Multiplr: 3300.33
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:30 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

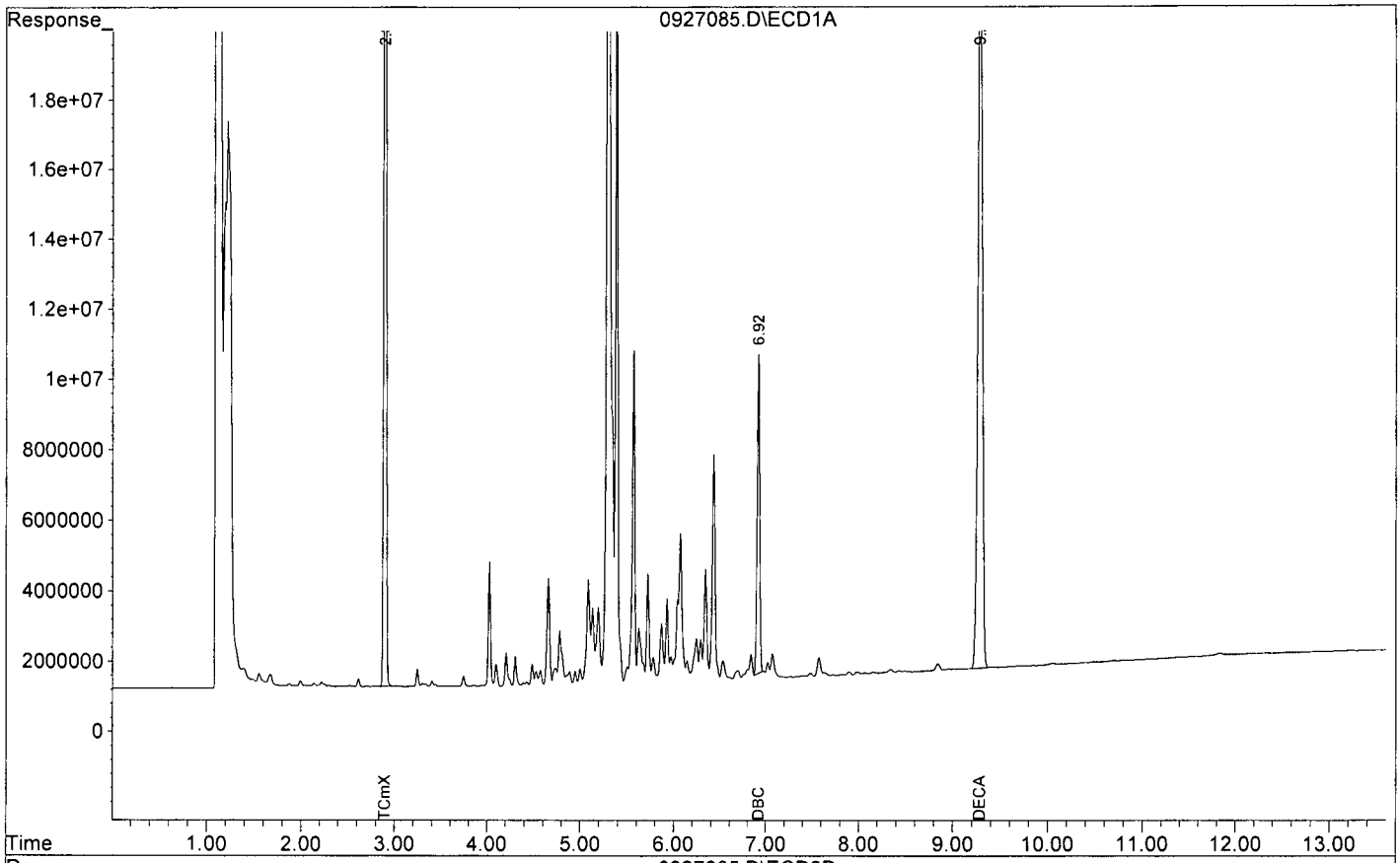
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.90	3.58	50298744	47109120	340.327	330.847
Spiked Amount 330.033			Recovery	=	103.12%	100.25%
2) SA DBC	6.92	7.93	9016456	7824370	105.146	113.877
Spiked Amount 330.033			Recovery	=	31.86%	34.50%
3) SA DECA	9.28	10.58	21300161	17195264	285.294	273.282
Spiked Amount 330.033			Recovery	=	86.44%	82.80%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

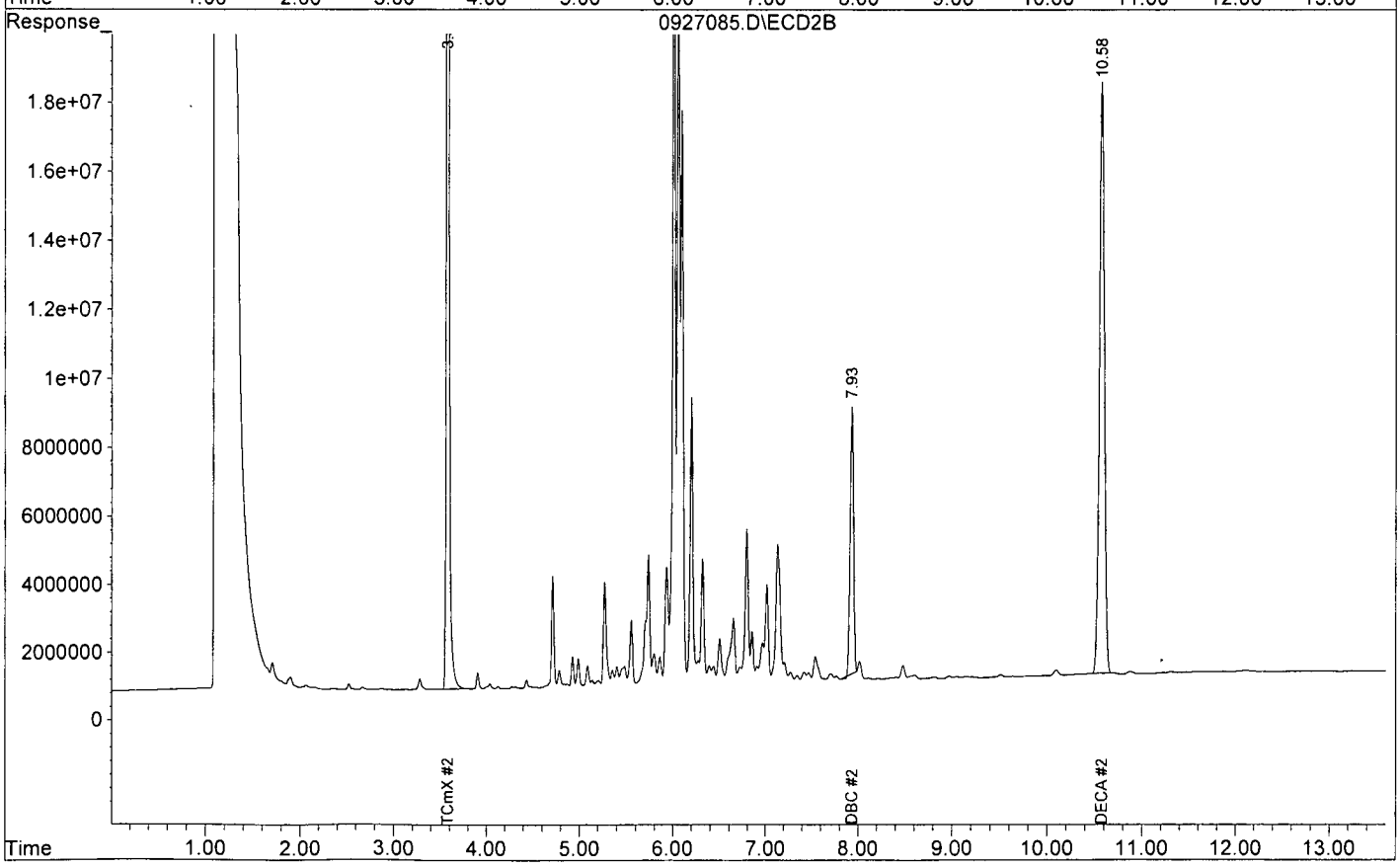
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927085.D
Acq On : 9-30-14 0:06:51
Sample : AZ02110S11 5X1/0.05/30.30G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 85
Operator: MA
Inst : Lucy
Multiplr: 3300.33





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927085.D\ECD1A.CH Vial: 85
Signal #2 : G:\LUCY\DATA\140927\0927085.D\ECD2B.CH
Acq On : 9-30-14 0:06:51 Operator: MA
Sample : AZ02110S11 5X1/0.05/30.30G Inst : Lucy
Misc : soil Multiplr: 3300.33
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:19 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	11689121	8512816	387.250m	320.676m	
2)	L3BKC AR 1254	5.72	5.09	2765335	531624	274.662	157.017	#
3)	L3BKC AR 1254 {2}	5.93	5.93	1827804	2313332	278.654	263.120	
4)	L3BKC AR 1254 {3}	6.04	6.65	374098	1654921	88.791	262.360	#
5)	L3BKC AR 1254 {4}	6.29	6.97	595302	323307	184.290	103.803	#
6)	L3BKC AR 1254 {5}	6.42	7.14	6126582	3689632	1002.064	745.933	#

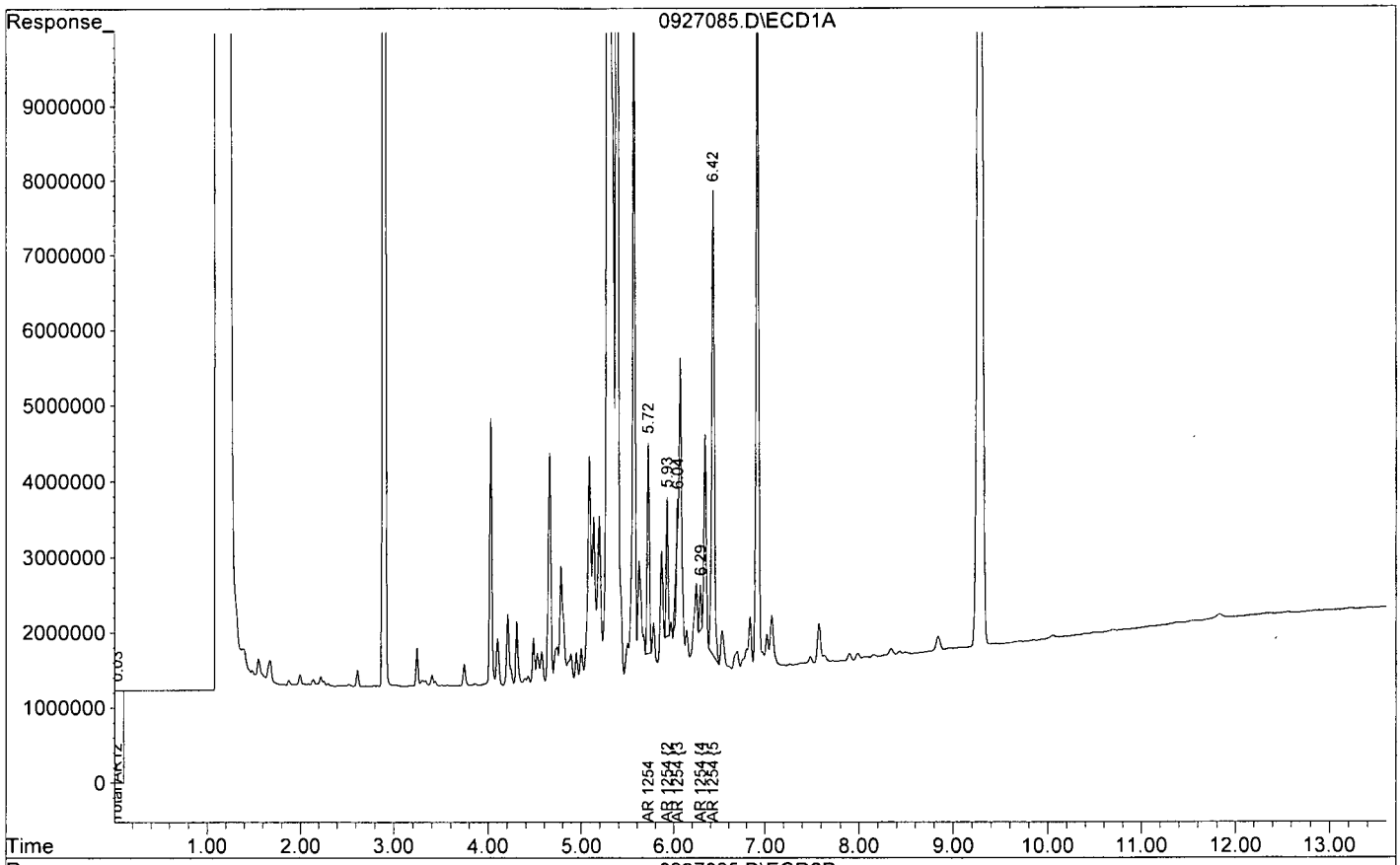
Target Compounds

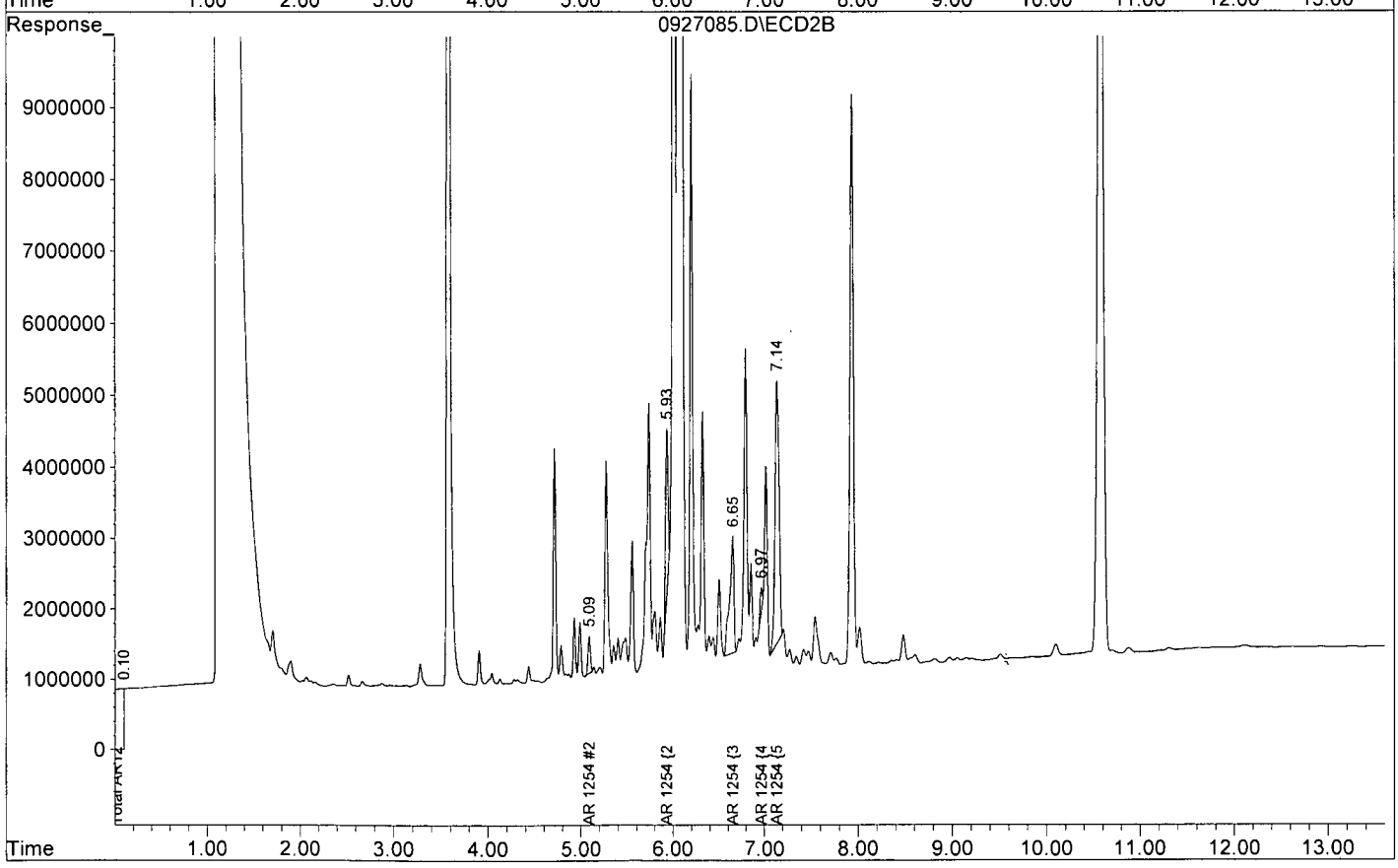
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927085.D
Acq On : 9-30-14 0:06:51
Sample : AZ02110S11 5X1/0.05/30.30G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 85
Operator: MA
Inst : Lucy
Multiplr: 3300.33





EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN013
Sample Collection Date: 09/03/14

ARF: 74218
APPL ID: AZ02111
QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1254	0.33	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	TOTAL PCBS	0.33	0.05	0.020	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	82.9	60-125			%	09/16/14	09/30/14

Quant Method: PSX0922.M
Run #: 0927086
Instrument: Lucy
Sequence: 140927
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:12 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927086.D\ECD1A.CH Vial: 86
Signal #2 : G:\LUCY\DATA\140927\0927086.D\ECD2B.CH
Acq On : 9-30-14 0:23:31 Operator: MA
Sample : AZ02111S11 5X1/0.05/30.28G Inst : Lucy
Misc : soil Multiplr: 3302.51
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:30 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

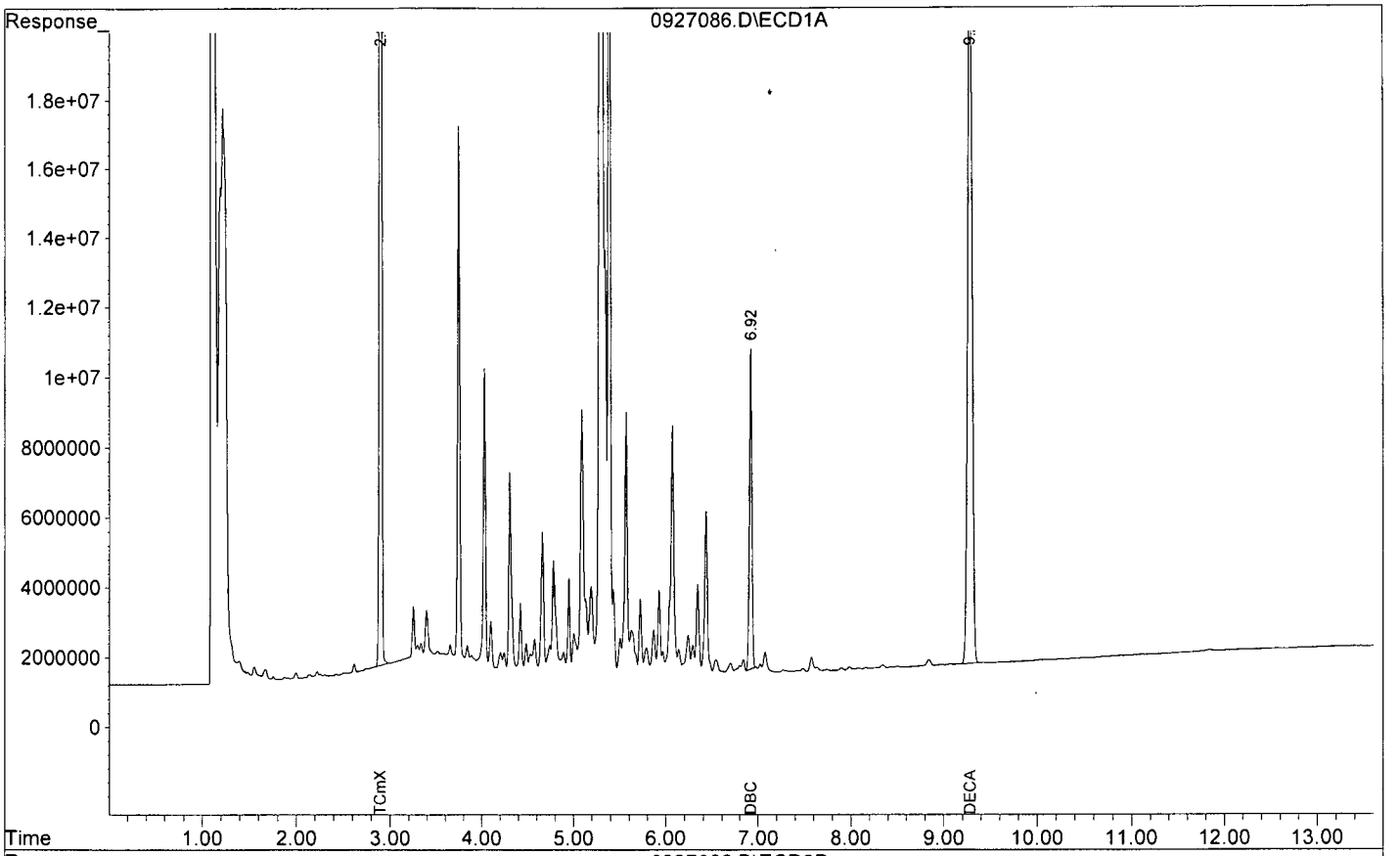
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.90	3.58	51303840	47855811	347.357	336.313
Spiked Amount 330.251			Recovery	=	105.18%	101.84%
2) SA DBC	6.92	7.93	9072123	7378212	105.865	107.455
Spiked Amount 330.251			Recovery	=	32.06%	32.54%
3) SA DECA	9.28	10.58	21853912	17213862	292.905	273.758
Spiked Amount 330.251			Recovery	=	88.69%	82.89%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

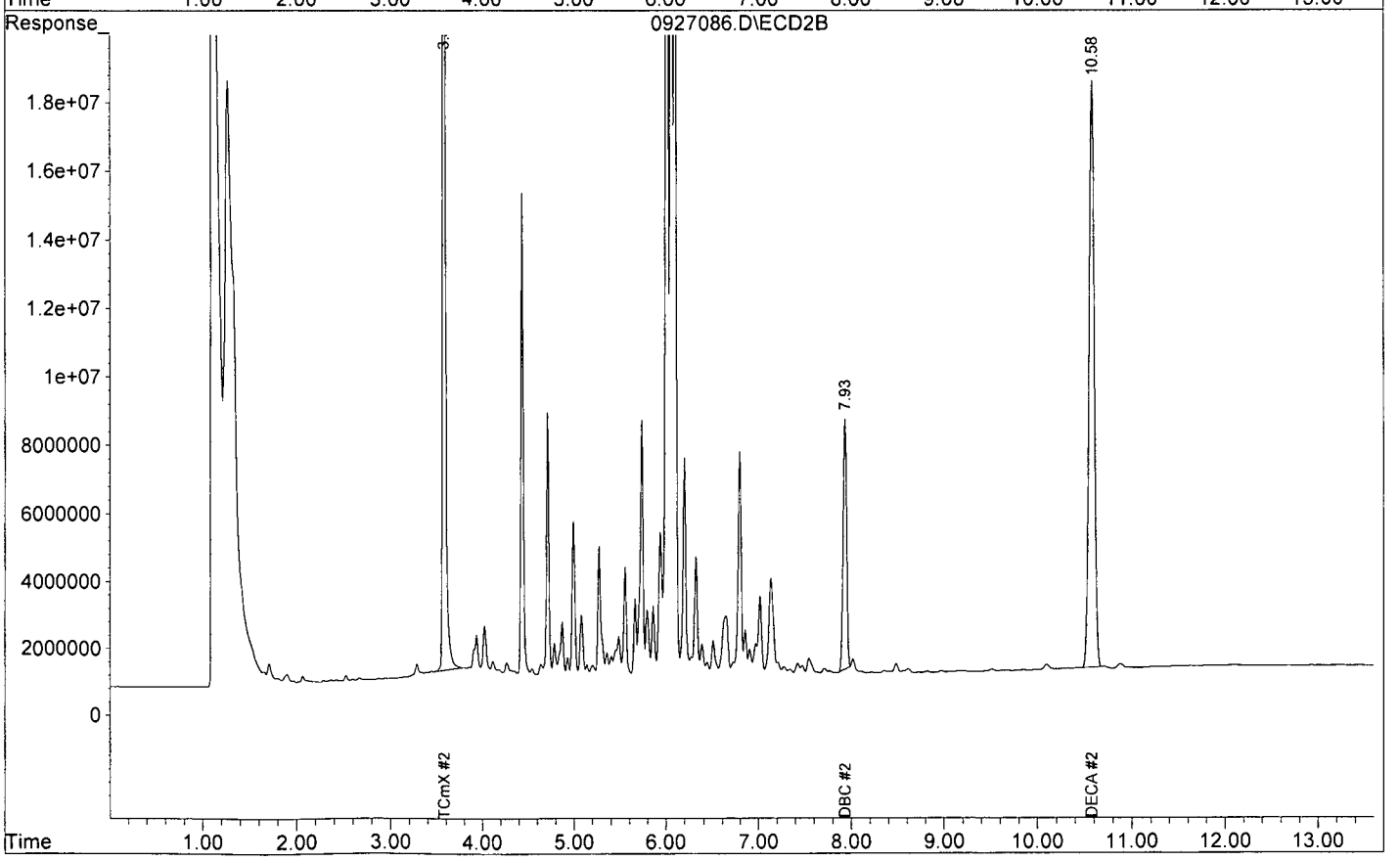
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927086.D
Acq On : 9-30-14 0:23:31
Sample : AZ02111S11 5X1/0.05/30.28G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 86
Operator: MA
Inst : Lucy
Multiplr: 3302.51





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927086.D\ECD1A.CH Vial: 86
Signal #2 : G:\LUCY\DATA\140927\0927086.D\ECD2B.CH
Acq On : 9-30-14 0:23:31 Operator: MA
Sample : AZ02111S11 5X1/0.05/30.28G Inst : Lucy
Misc : soil Multiplr: 3302.51
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:19 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) BNMC Total AR1254	0.00	0.00	15251485	8643867	505.601m	325.828m#
2) L3BKC AR 1254	5.72	5.08	1827966	1645376	181.680	486.289 #
3) L3BKC AR 1254 {2}	5.93	5.94	1927569	2610489	294.057	297.115
4) L3BKC AR 1254 {3}	6.07	6.64	6631958	1550154	1575.118	245.914 #
5) L3BKC AR 1254 {4}	6.29	6.97	377216	212380	116.853	68.233 #
6) L3BKC AR 1254 {5}	6.43	7.14	4486777	2625469	734.342	531.141 #

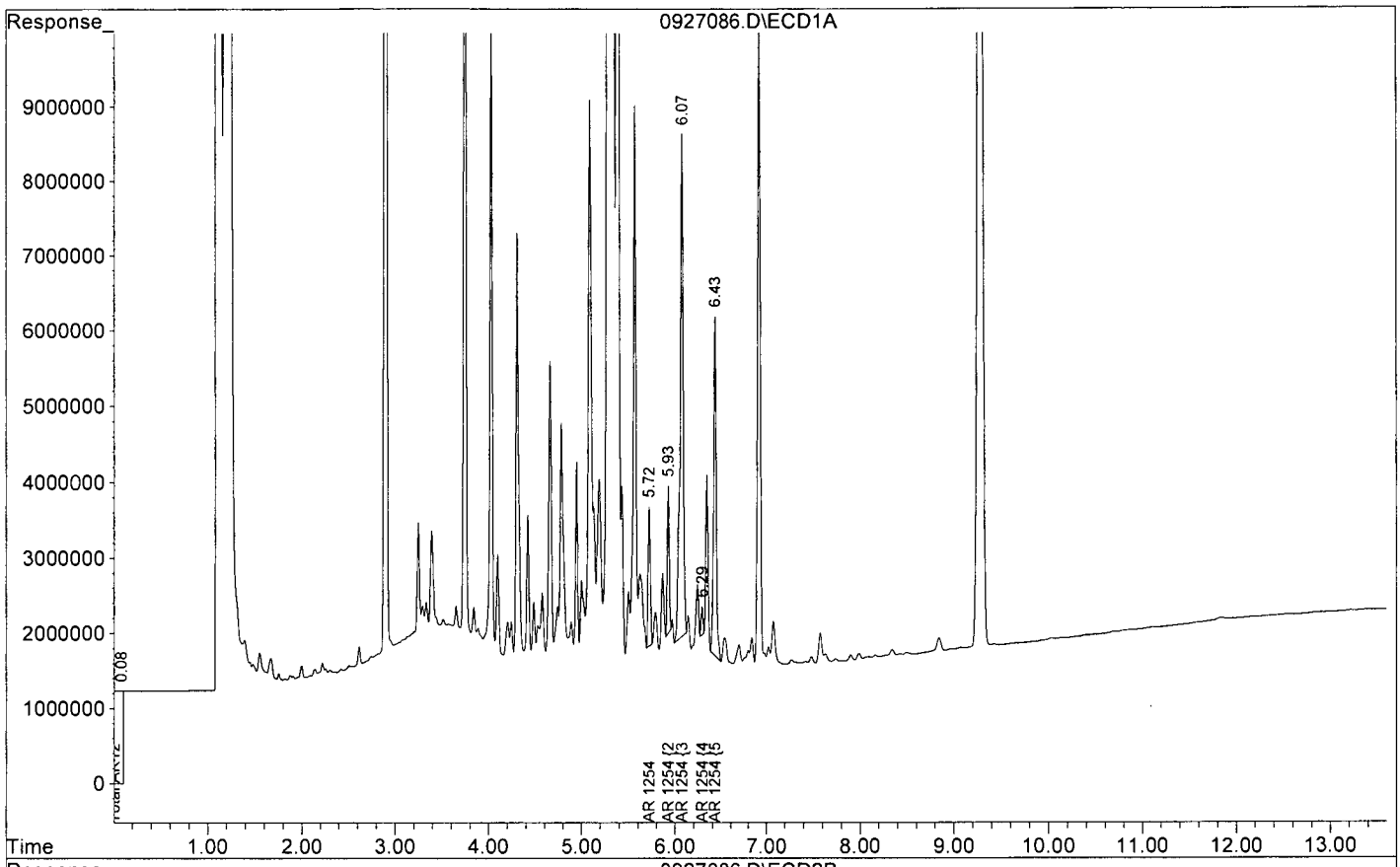
Target Compounds

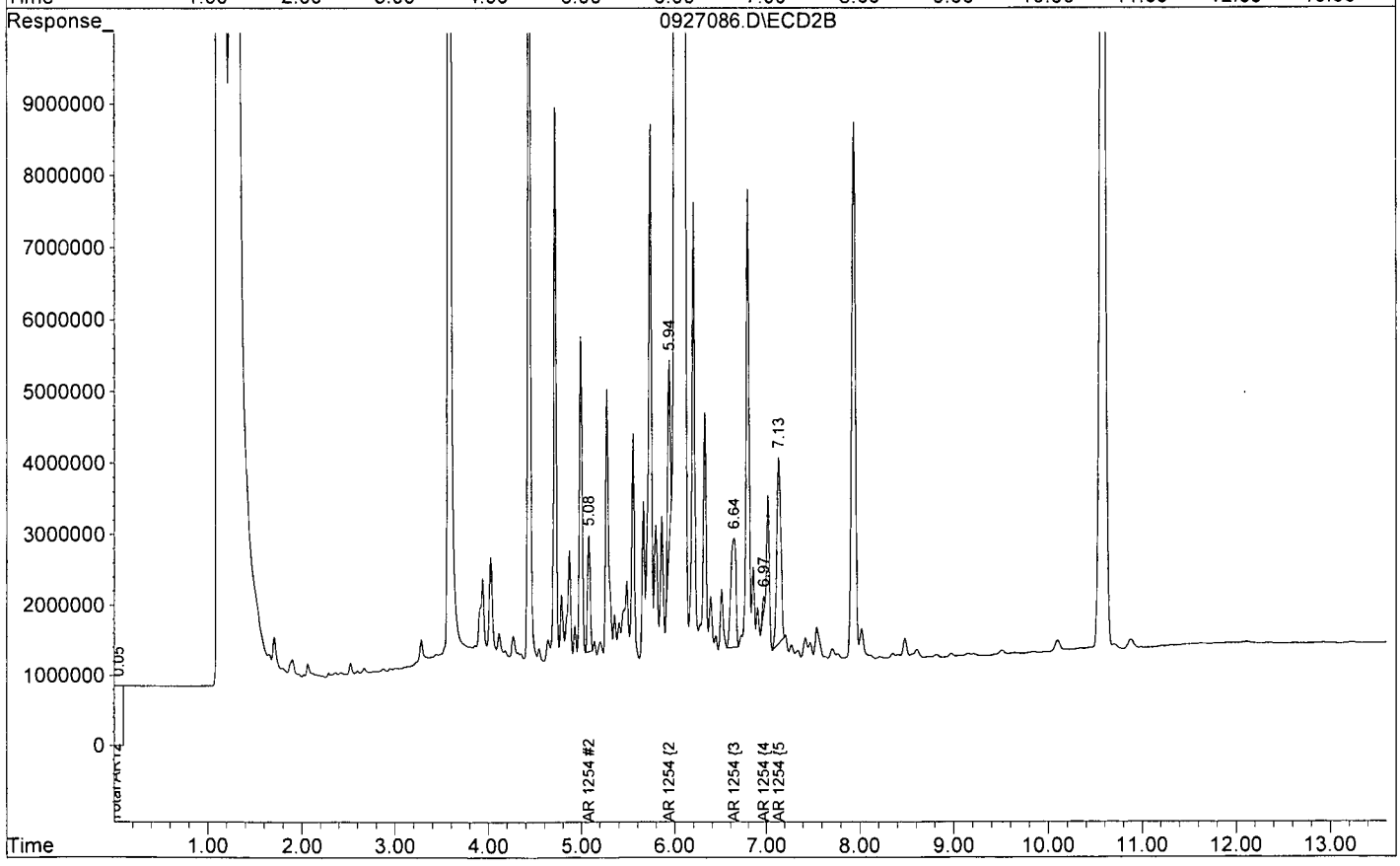
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927086.D
Acq On : 9-30-14 0:23:31
Sample : AZ02111S11 5X1/0.05/30.28G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 86
Operator: MA
Inst : Lucy
Multiplr: 3302.51





EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN014

APPL ID: AZ02112

Sample Collection Date: 09/03/14

QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1254	0.90	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	TOTAL PCBS	0.90	0.05	0.020	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	85.6	60-125			%	09/16/14	09/30/14

Quant Method: PSX0922.M
Run #: 0927087
Instrument: Lucy
Sequence: 140927
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:13 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927087.D\ECD1A.CH Vial: 87
Signal #2 : G:\LUCY\DATA\140927\0927087.D\ECD2B.CH
Acq On : 9-30-14 0:39:54 Operator: MA
Sample : AZ02112S11 5X1/0.05/30.81G Inst : Lucy
Misc : soil Multiplr: 3245.70
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:29 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

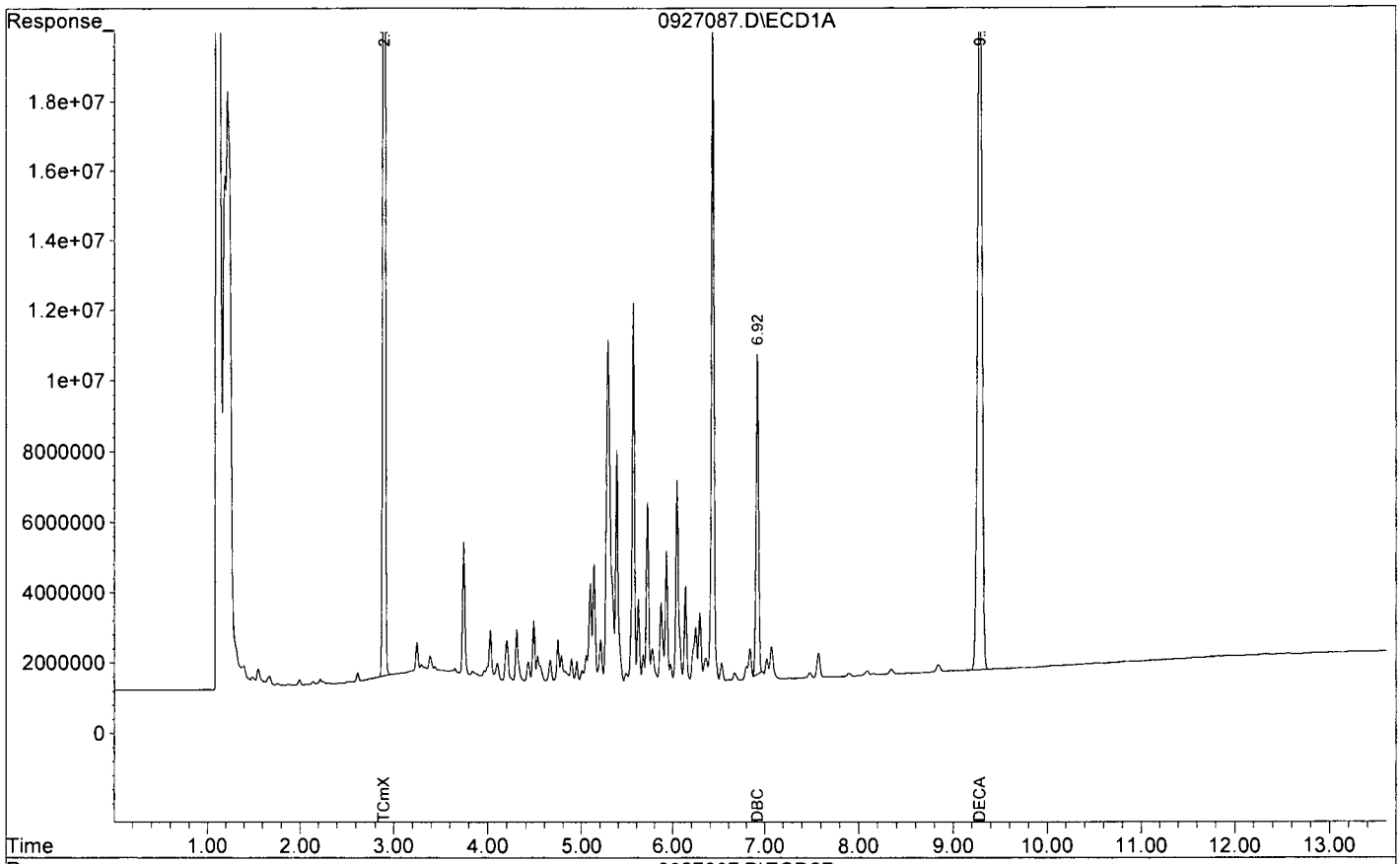
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	50859250	48285270	338.423	333.494
Spiked Amount 324.570			Recovery	=	104.27%	102.75%
2) SA DBC	6.92	7.93	9069680	7535460	104.015	107.857
Spiked Amount 324.570			Recovery	=	32.05%	33.23%
3) SA DECA	9.28	10.58	22148938	17772306	291.752	277.778
Spiked Amount 324.570			Recovery	=	89.89%	85.58%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

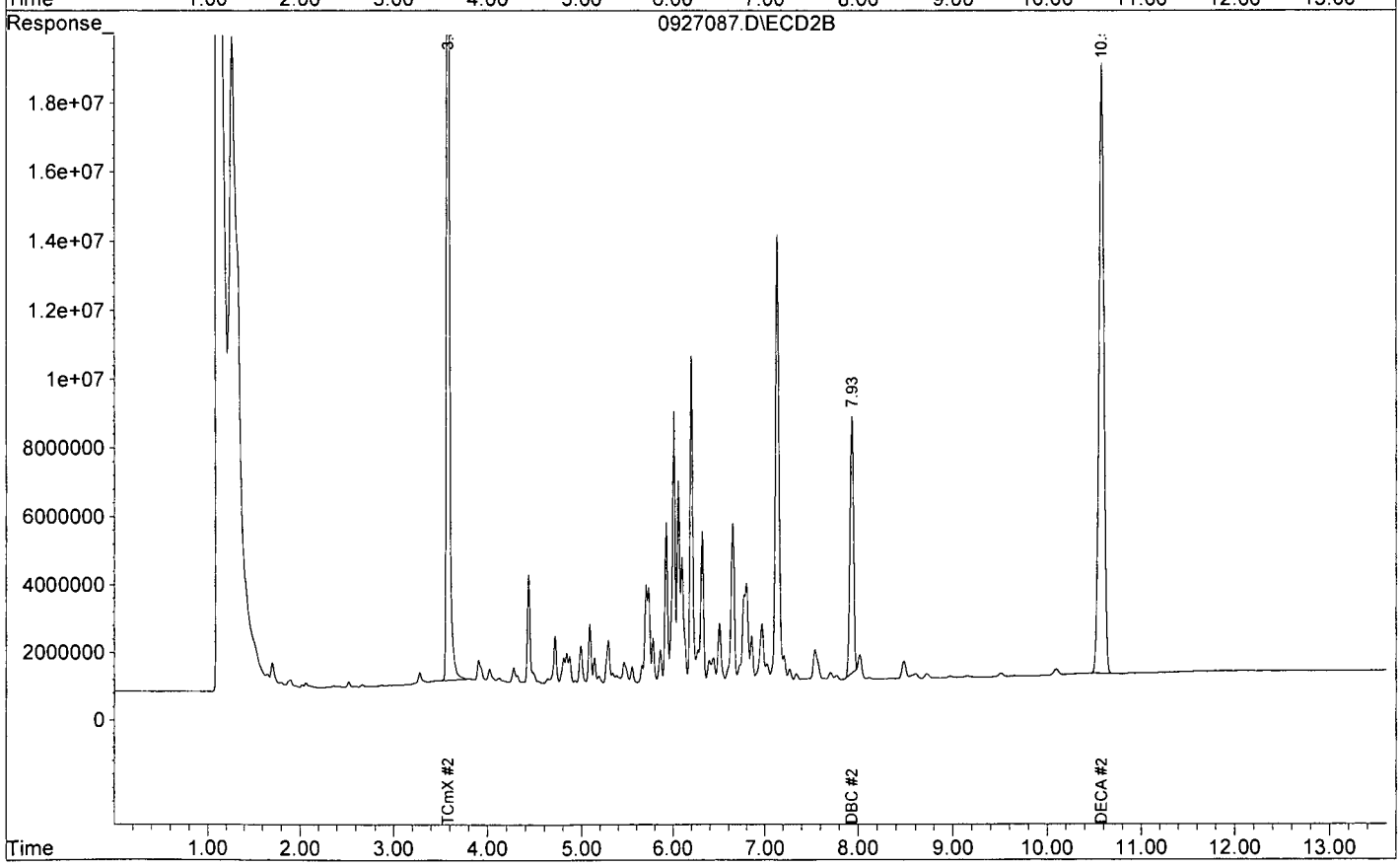
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927087.D
Acq On : 9-30-14 0:39:54
Sample : AZ02112S11 5X1/0.05/30.81G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 87
Operator: MA
Inst : Lucy
Multiplr: 3245.70





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927087.D\ECD1A.CH Vial: 87
Signal #2 : G:\LUCY\DATA\140927\0927087.D\ECD2B.CH
Acq On : 9-30-14 0:39:54 Operator: MA
Sample : AZ02112S11 5X1/0.05/30.81G Inst : Lucy
Misc : soil Multiplr: 3245.70
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:19 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	33529174	24237296	1092.403m	897.901m	
2)	L3BKC AR 1254	5.72	5.09	4626320	1594670	451.895	463.196	
3)	L3BKC AR 1254 {2}	5.93	5.93	3159081	4231900	473.638	473.372	
4)	L3BKC AR 1254 {3}	6.04	6.64	5545093	4515456	1294.328	704.002	#
5)	L3BKC AR 1254 {4}	6.29	6.97	1462409	1351096	445.230	426.610	
6)	L3BKC AR 1254 {5}	6.43	7.14	18736273	12544174	3013.779	2494.075	

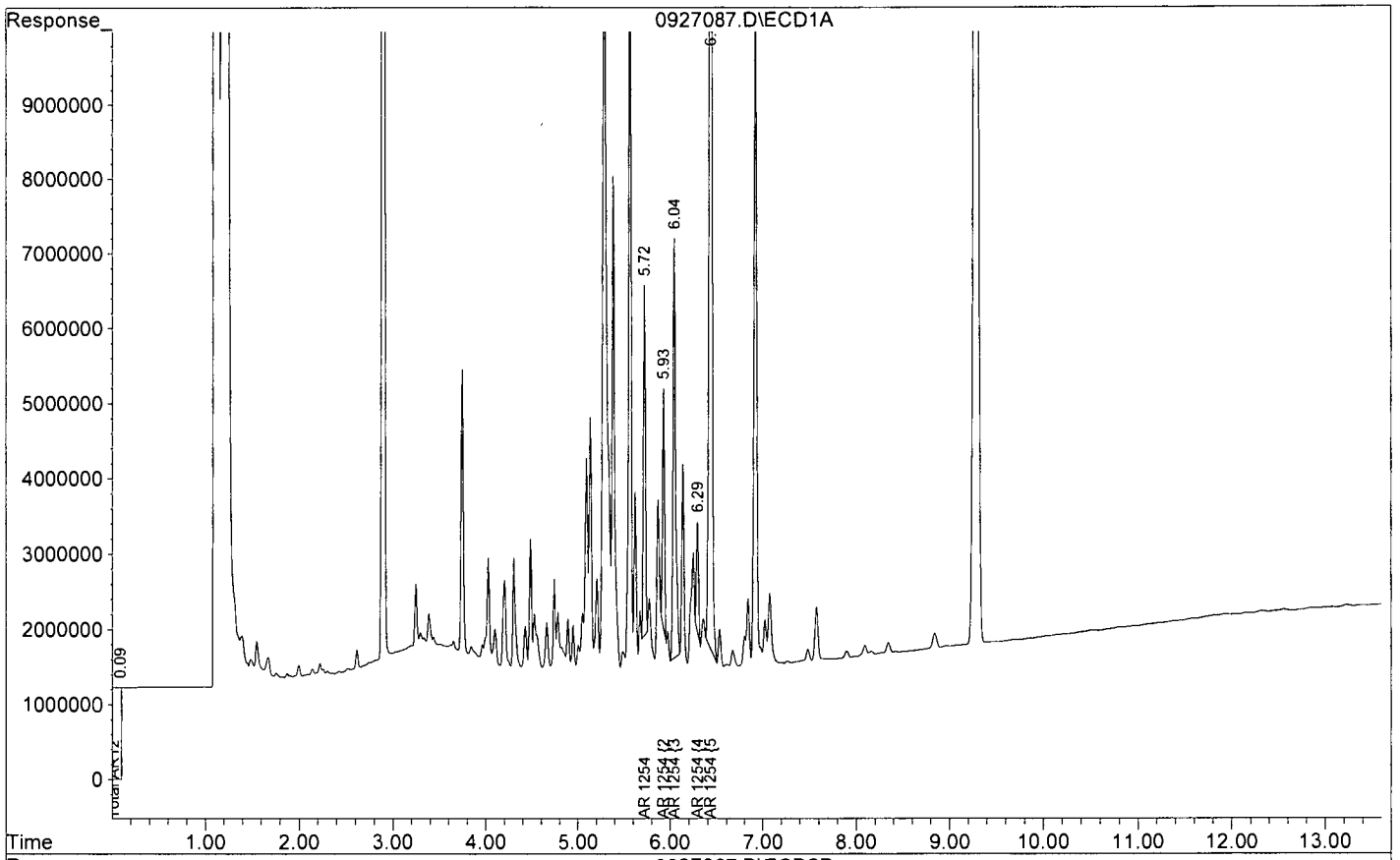
Target Compounds

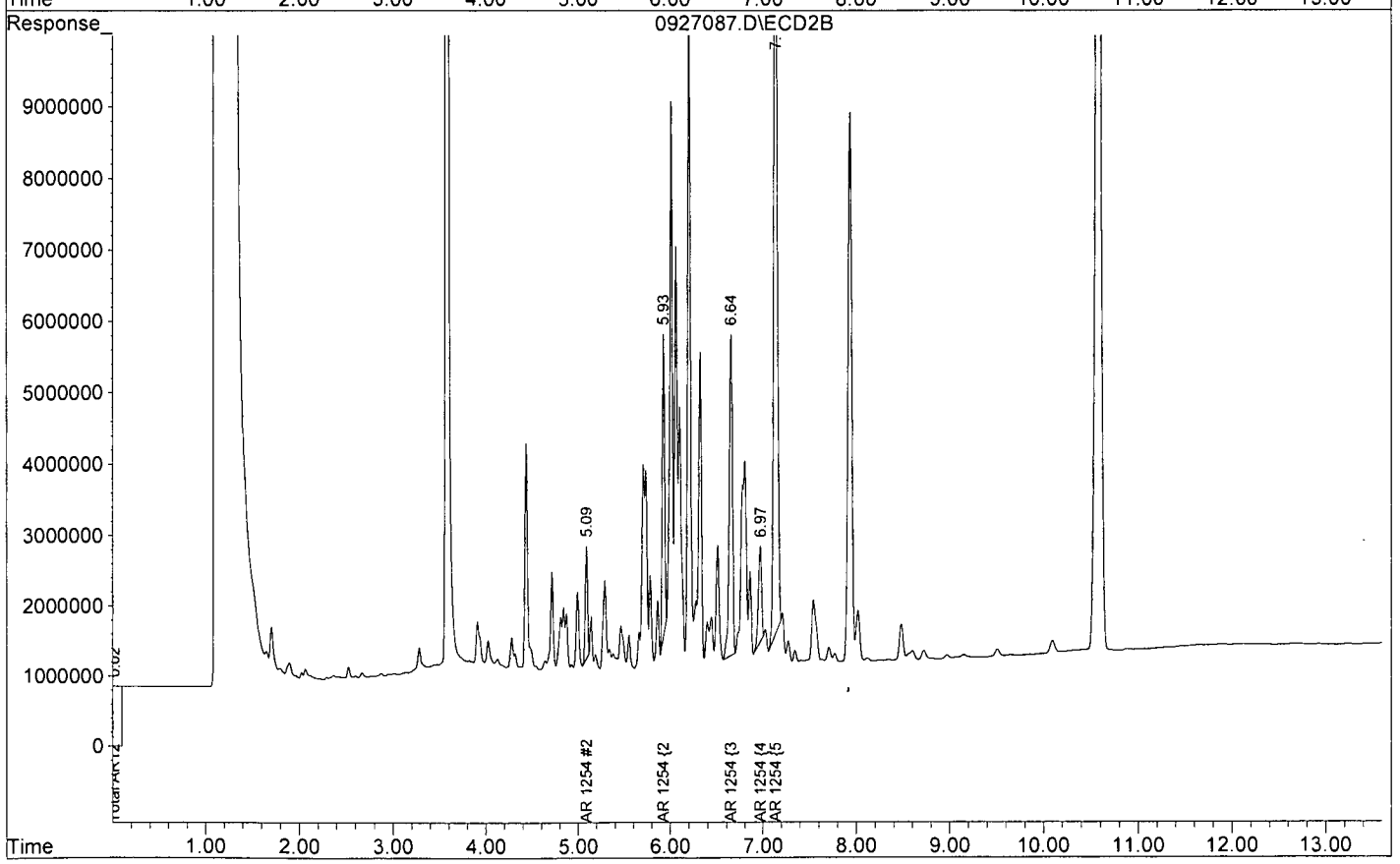
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927087.D
Acq On : 9-30-14 0:39:54
Sample : AZ02112S11 5X1/0.05/30.81G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 87
Operator: MA
Inst : Lucy
Multiplr: 3245.70





EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN015
Sample Collection Date: 09/03/14

ARF: 74218
APPL ID: AZ02113
QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1254	0.18	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	TOTAL PCBS	0.18	0.05	0.020	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	82.2	60-125			%	09/16/14	09/30/14

Quant Method: PSX0922.M
Run #: 0927088
Instrument: Lucy
Sequence: 140927
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:13 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927088.D\ECD1A.CH Vial: 88
Signal #2 : G:\LUCY\DATA\140927\0927088.D\ECD2B.CH
Acq On : 9-30-14 0:56:16 Operator: MA
Sample : AZ02113S11 5X1/0.05/30.16G Inst : Lucy
Misc : soil Multiplr: 3315.65
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:29 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

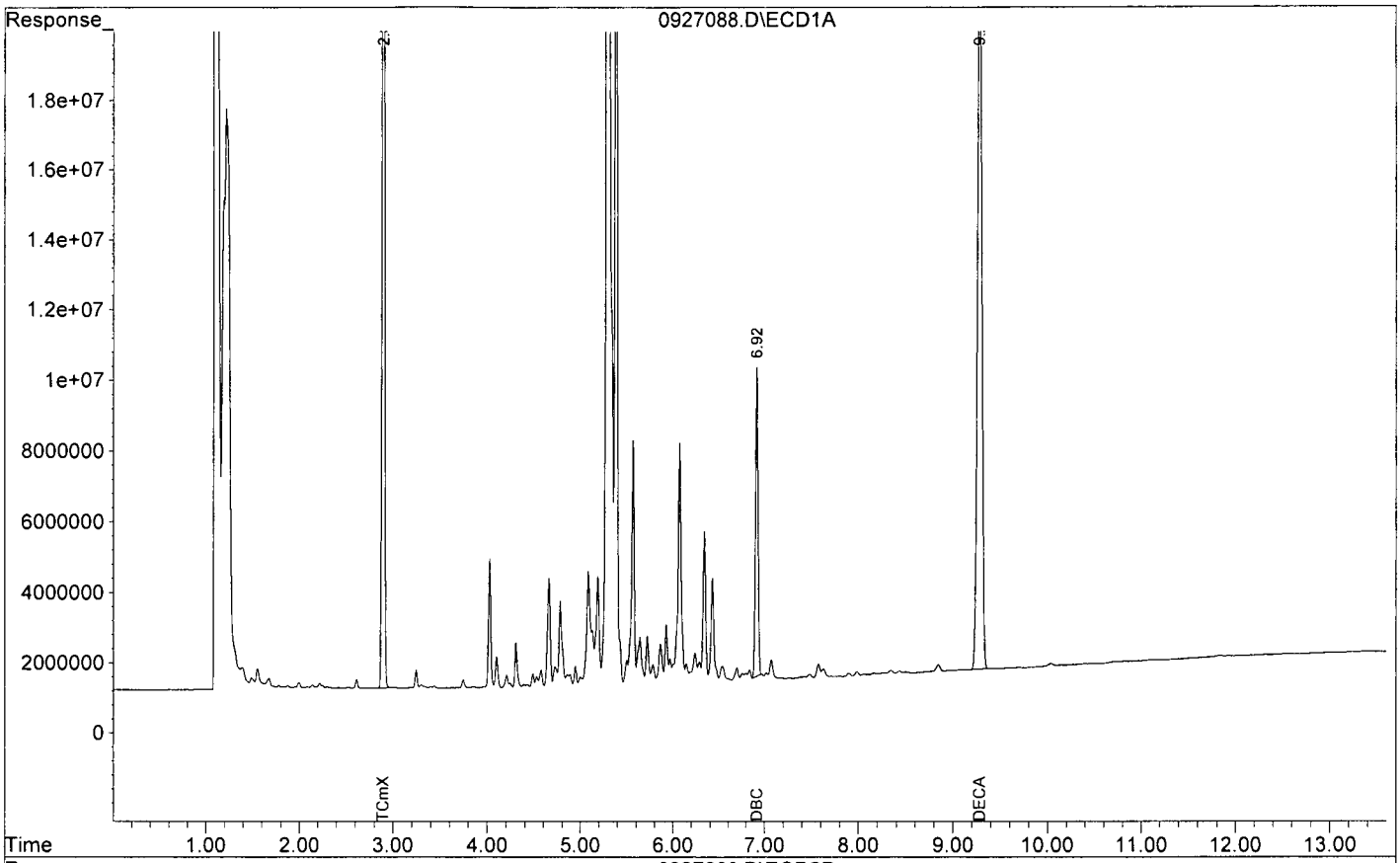
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	51324773	48129739	348.881	339.584
Spiked Amount 331.565			Recovery	=	105.22%	102.42%
2) SA DBC	6.92	7.93	8714813	7242073	102.100	105.892
Spiked Amount 331.565			Recovery	=	30.79%	31.94%
3) SA DECA	9.28	10.58	21576498	17066771	290.337	272.499
Spiked Amount 331.565			Recovery	=	87.57%	82.19%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

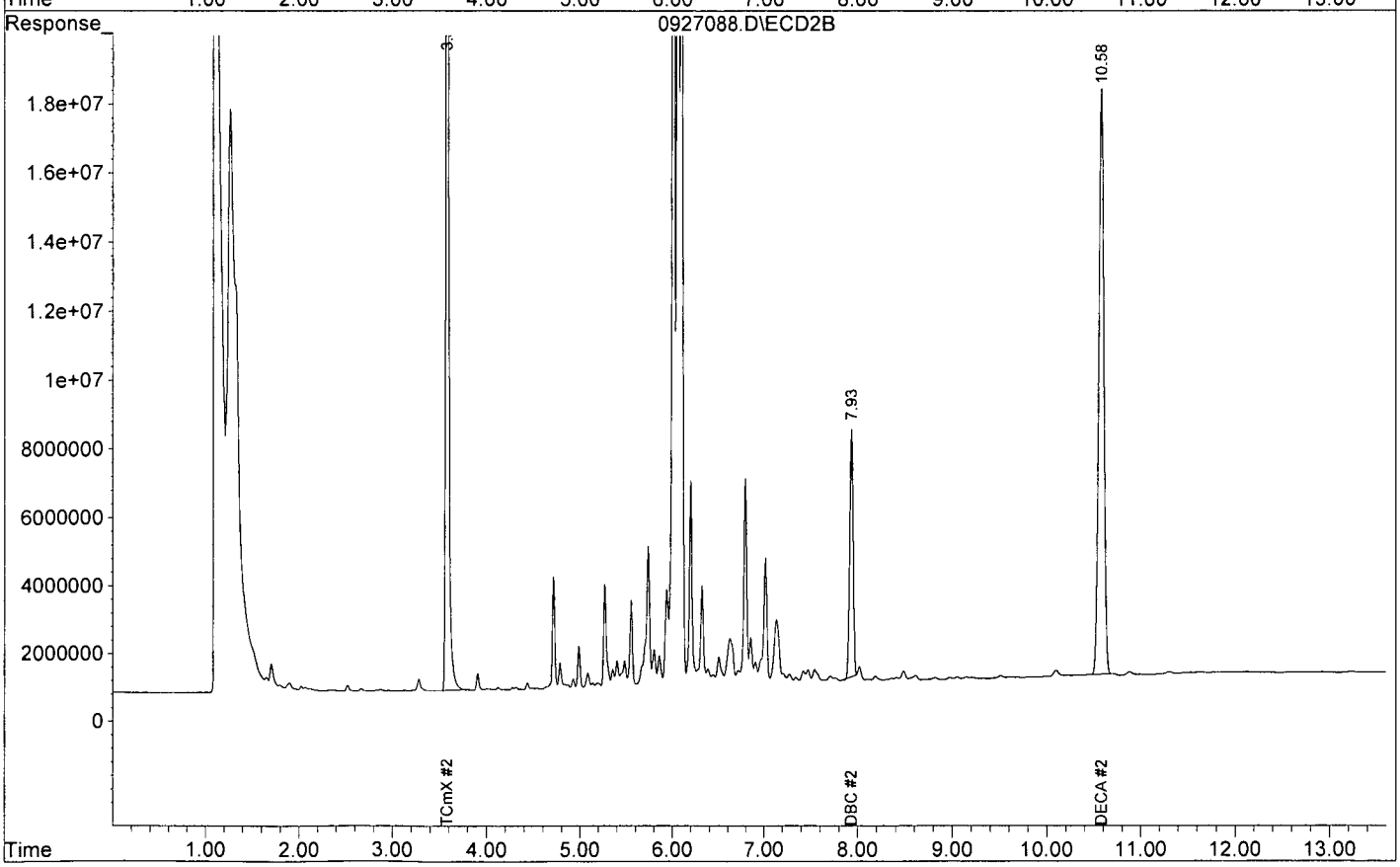
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927088.D
Acq On : 9-30-14 0:56:16
Sample : AZ02113S11 5X1/0.05/30.16G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 88
Operator: MA
Inst : Lucy
Multiplr: 3315.65





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927088.D\ECD1A.CH Vial: 88
Signal #2 : G:\LUCY\DATA\140927\0927088.D\ECD2B.CH
Acq On : 9-30-14 0:56:16 Operator: MA
Sample : AZ02113S11 5X1/0.05/30.16G Inst : Lucy
Misc : soil Multiplr: 3315.65
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:20 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	11604139	4654001	386.219m	176.129m	#
2)	L3BKC AR 1254	5.72	5.09	1118595	377682	111.618	112.068	
3)	L3BKC AR 1254 {2}	5.93	5.94	1238132	1436044	189.633	164.095	
4)	L3BKC AR 1254 {3}	6.07	6.62	6295564	1106941	1501.172	176.302	#
5)	L3BKC AR 1254 {4}	6.29	6.97	173345	70845	53.912	22.851	#
6)	L3BKC AR 1254 {5}	6.43	7.14	2778503	1662489	456.562	337.665	#

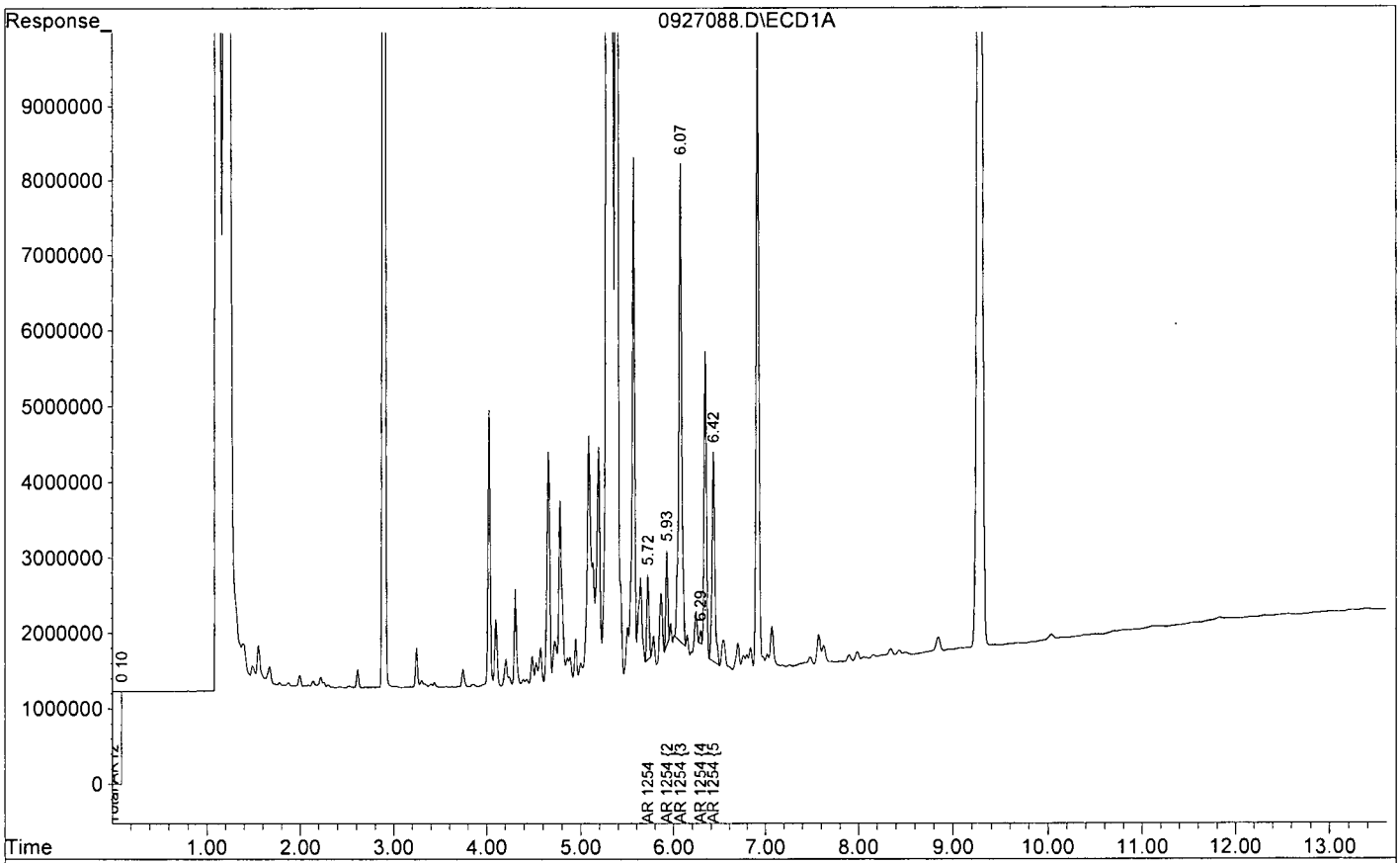
Target Compounds

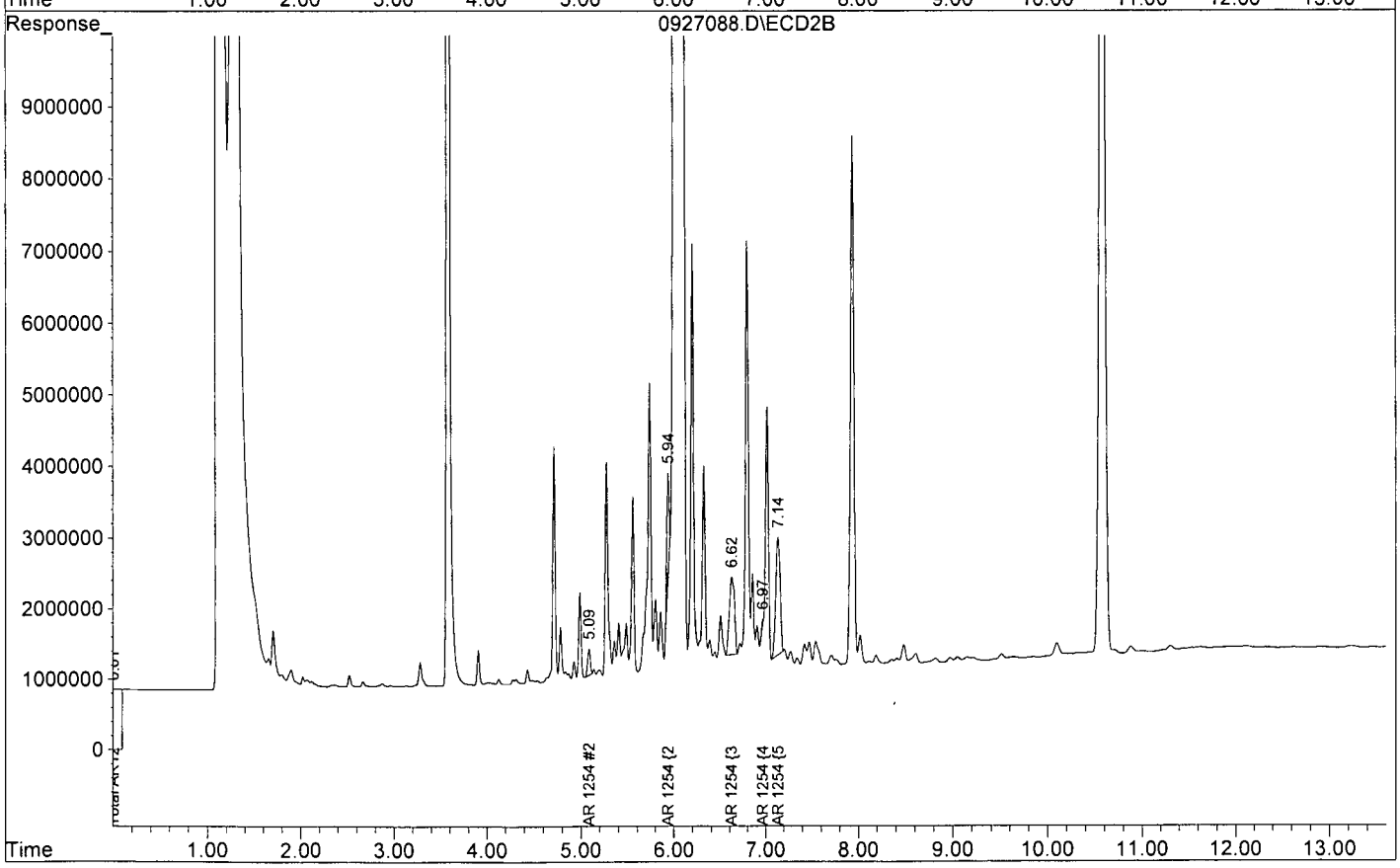
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927088.D
Acq On : 9-30-14 0:56:16
Sample : AZ02113S11 5X1/0.05/30.16G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 88
Operator: MA
Inst : Lucy
Multiplr: 3315.65





EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN016

APPL ID: AZ02114

Sample Collection Date: 09/03/14

QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1254	0.18	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	TOTAL PCBS	0.18	0.05	0.020	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	81.4	60-125			%	09/16/14	09/30/14

Quant Method: PSX0922.M
Run #: 0927089
Instrument: Lucy
Sequence: 140927
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:13 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927089.D\ECD1A.CH Vial: 89
Signal #2 : G:\LUCY\DATA\140927\0927089.D\ECD2B.CH
Acq On : 9-30-14 1:12:39 Operator: MA
Sample : AZ02114S11 5X1/0.05/30.04G Inst : Lucy
Misc : soil Multiplr: 3328.89
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:29 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

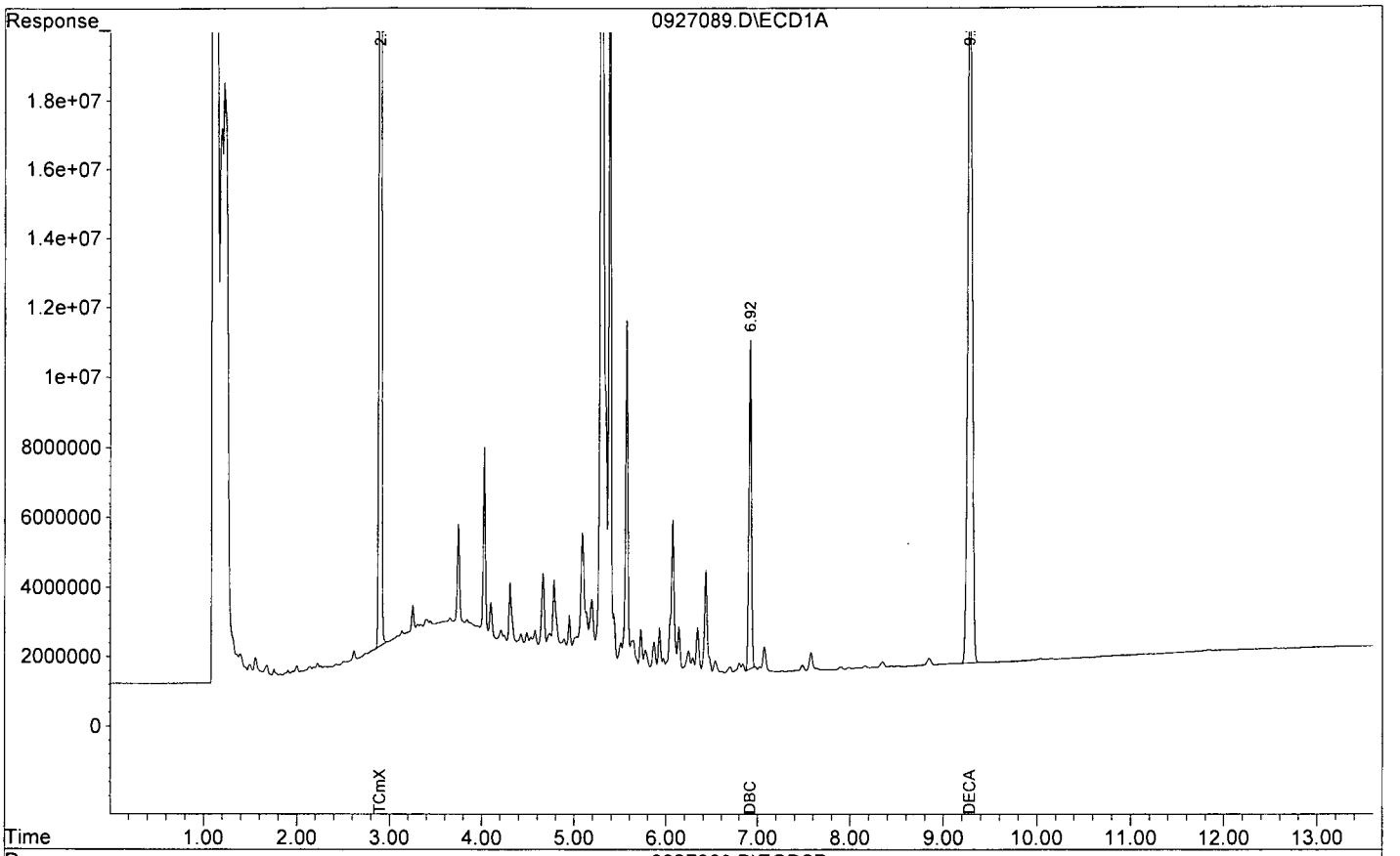
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	SA TCmX	2.89	3.58	50602333	46778306	345.344	331.367
	Spiked Amount 332.889			Recovery	=	103.74%	99.54%
2)	SA DBC	6.92	7.93	9332783	7416709	109.776	108.879
	Spiked Amount 332.889			Recovery	=	32.98%	32.71%
3)	SA DECA	9.28	10.58	20825240	16909608	281.347	271.068
	Spiked Amount 332.889			Recovery	=	84.52%	81.43%
	Target Compounds						
	Target Compounds						
4)	BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5)	L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6)	L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7)	L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8)	L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9)	L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10)	BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11)	L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12)	L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13)	L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14)	L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15)	L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

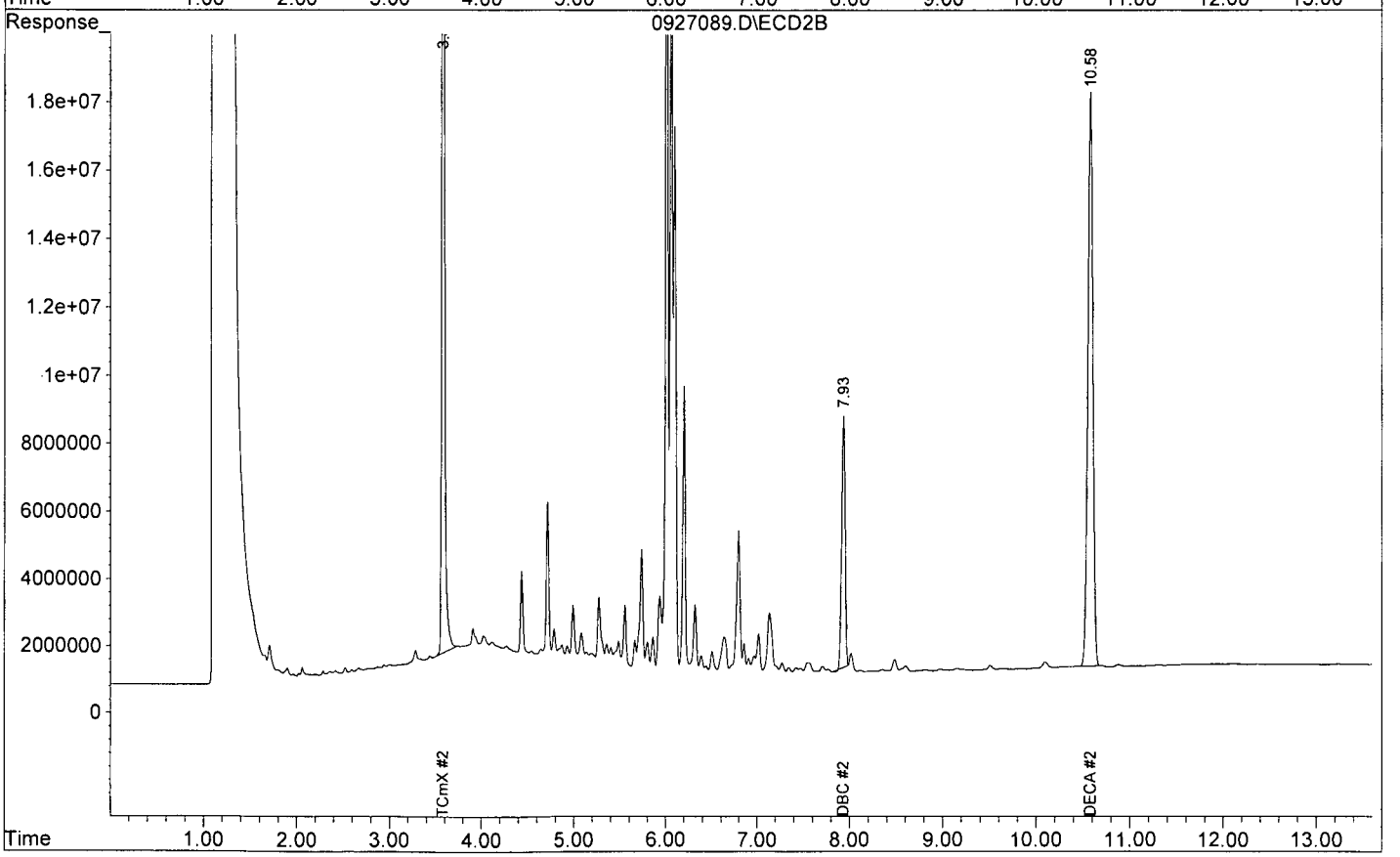
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927089.D
Acq On : 9-30-14 1:12:39
Sample : AZ02114S11 5X1/0.05/30.04G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 89
Operator: MA
Inst : Lucy
Multiplr: 3328.89





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927089.D\ECD1A.CH Vial: 89
Signal #2 : G:\LUCY\DATA\140927\0927089.D\ECD2B.CH
Acq On : 9-30-14 1:12:39 Operator: MA
Sample : AZ02114S11 5X1/0.05/30.04G Inst : Lucy
Misc : soil Multiplr: 3328.89
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:20 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) BNMC Total AR1254	0.00	0.00	8919213	4646907	298.043m	176.563m#
2) L3BKC AR 1254	5.72	5.08	932002	619838	93.371	184.656 #
3) L3BKC AR 1254 {2}	5.93	5.94	1020744	1279374	156.962	146.777
4) L3BKC AR 1254 {3}	6.07	6.63	3931158	956847	941.126	153.005 #
5) L3BKC AR 1254 {4}	6.29	6.97	191668	142794	59.849	46.243
6) L3BKC AR 1254 {5}	6.43	7.14	2843642	1648054	469.132	336.071 #

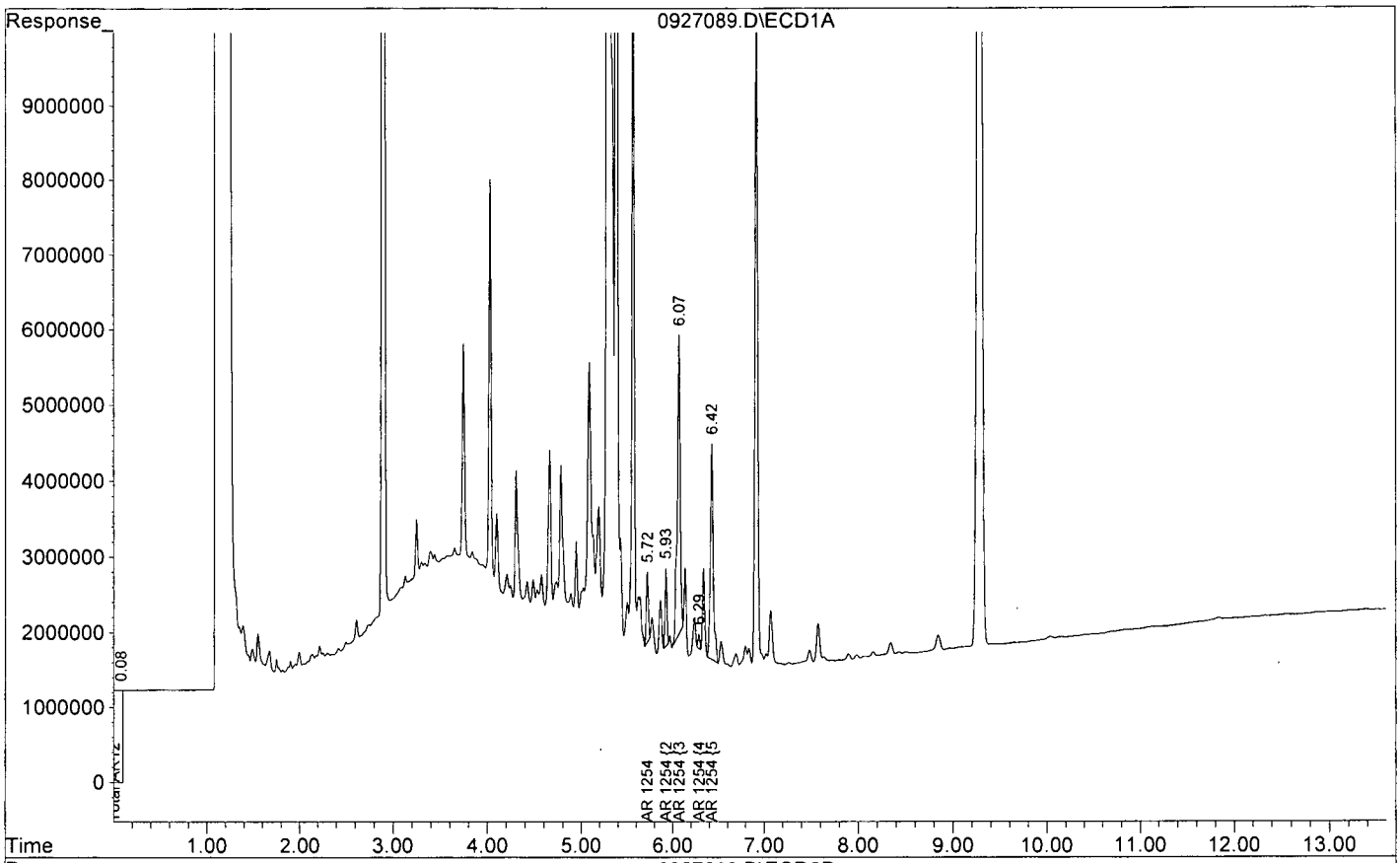
Target Compounds

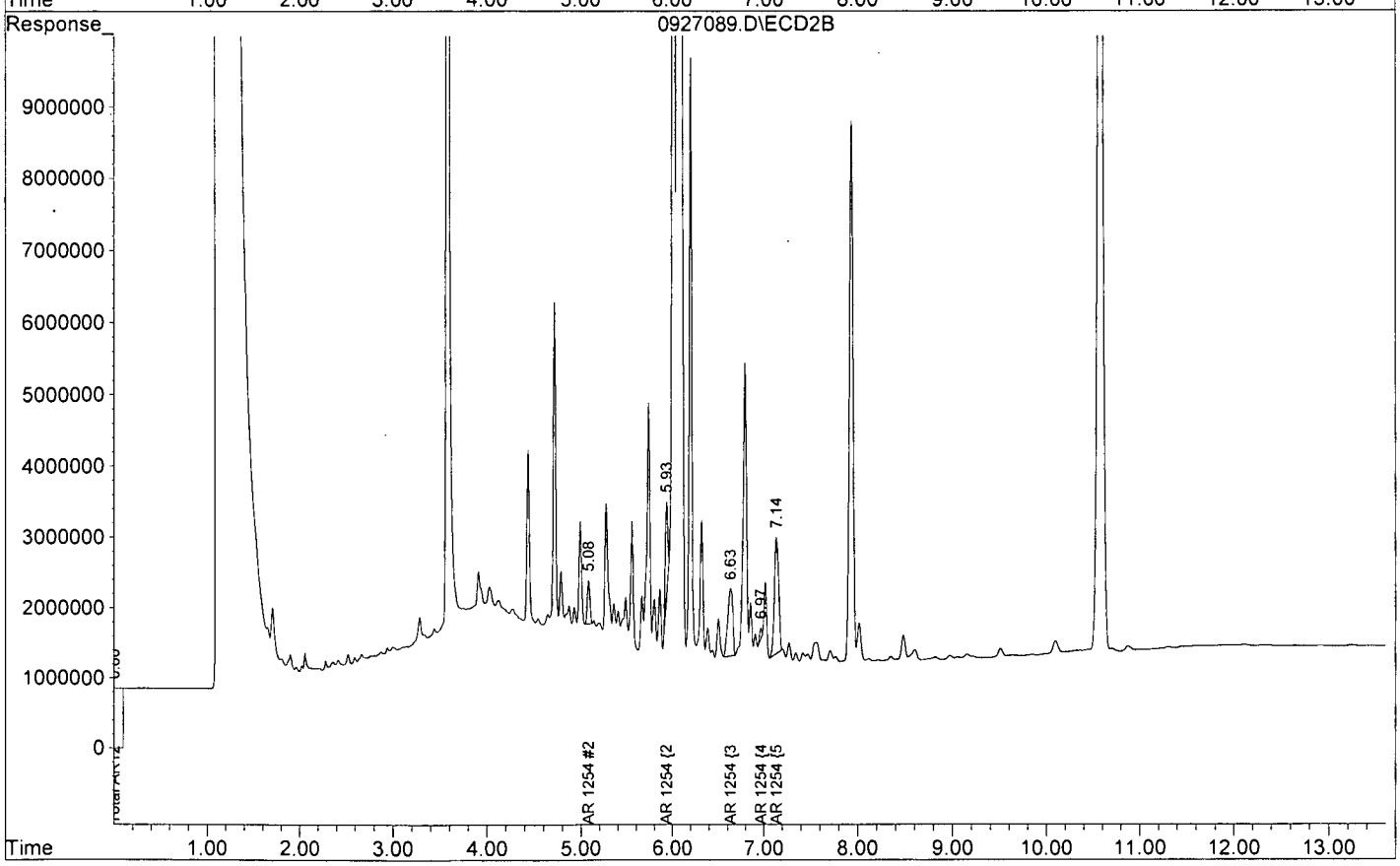
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927089.D
Acq On : 9-30-14 1:12:39
Sample : AZ02114S11 5X1/0.05/30.04G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 89
Operator: MA
Inst : Lucy
Multiplr: 3328.89





EPA 8082A SOIL MIS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN017

APPL ID: AZ02115

Sample Collection Date: 09/03/14

QCG: #82HC4-140916A-190311

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1254	0.21	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	TOTAL PCBS	0.21	0.05	0.020	0.004	mg/kg	09/16/14	09/30/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	84.4	60-125			%	09/16/14	09/30/14

Quant Method:	PSX0922.M
Run #:	0927090
Instrument:	Lucy
Sequence:	140927
Dilution Factor:	1
Initials:	MA

Printed: 09/30/14 11:01:13 AM

APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927090.D\ECD1A.CH Vial: 90
Signal #2 : G:\LUCY\DATA\140927\0927090.D\ECD2B.CH
Acq On : 9-30-14 1:29:09 Operator: MA
Sample : AZ02115S11 5X1/0.05/30.34G Inst : Lucy
Misc : soil Multiplr: 3295.98
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:29 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

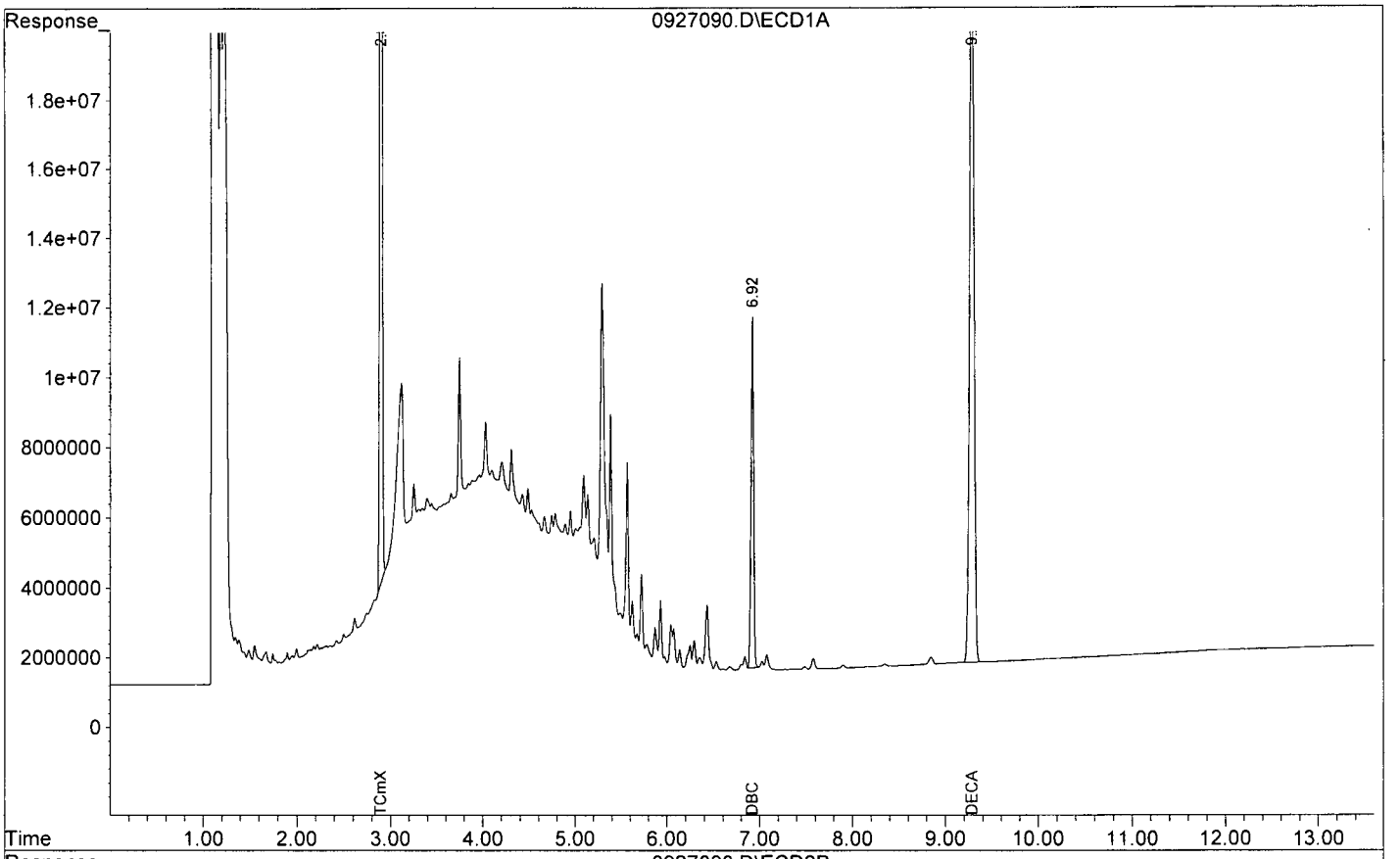
Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

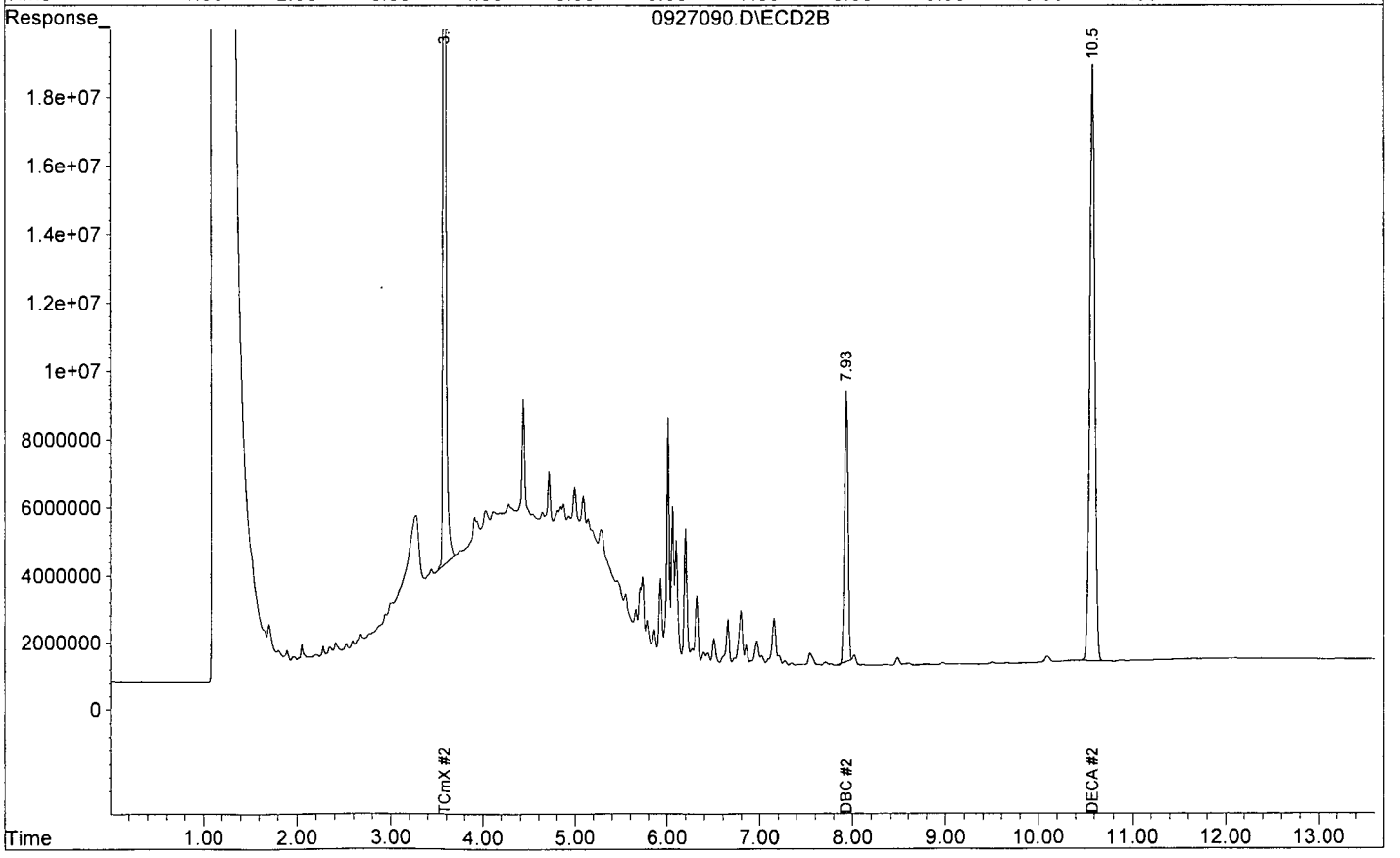
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	52771685	48019996	356.588	336.800
Spiked Amount 329.598			Recovery	=	108.19%	102.19%
2) SA DBC	6.92	7.93	9985864	7981348	116.297	116.009
Spiked Amount 329.598			Recovery	=	35.28%	35.20%
3) SA DECA	9.28	10.58	21868887	17525207	292.526	278.159
Spiked Amount 329.598			Recovery	=	88.75%	84.39%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927090.D
Acq On : 9-30-14 1:29:09
Sample : AZ02115S11 5X1/0.05/30.34G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 90
Operator: MA
Inst : Lucy
Multiplr: 3295.98





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927090.D\ECD1A.CH Vial: 90
Signal #2 : G:\LUCY\DATA\140927\0927090.D\ECD2B.CH
Acq On : 9-30-14 1:29:09 Operator: MA
Sample : AZ02115S11 5X1/0.05/30.34G Inst : Lucy
Misc : soil Multiplr: 3295.98
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:20 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	6463456	5692927	213.846m	214.169m	
2)	L3BKC AR 1254	5.72	5.09	2002492	798667	198.632	235.578	
3)	L3BKC AR 1254 {2}	5.93	5.93	1534549	1906856	233.638	216.601	
4)	L3BKC AR 1254 {3}	6.04	6.65	577151	1289690	136.805	204.190	#
5)	L3BKC AR 1254 {4}	6.29	6.97	603509	533092	186.584	170.932	
6)	L3BKC AR 1254 {5}	6.42	7.16	1745755	1164621	285.159	235.141	

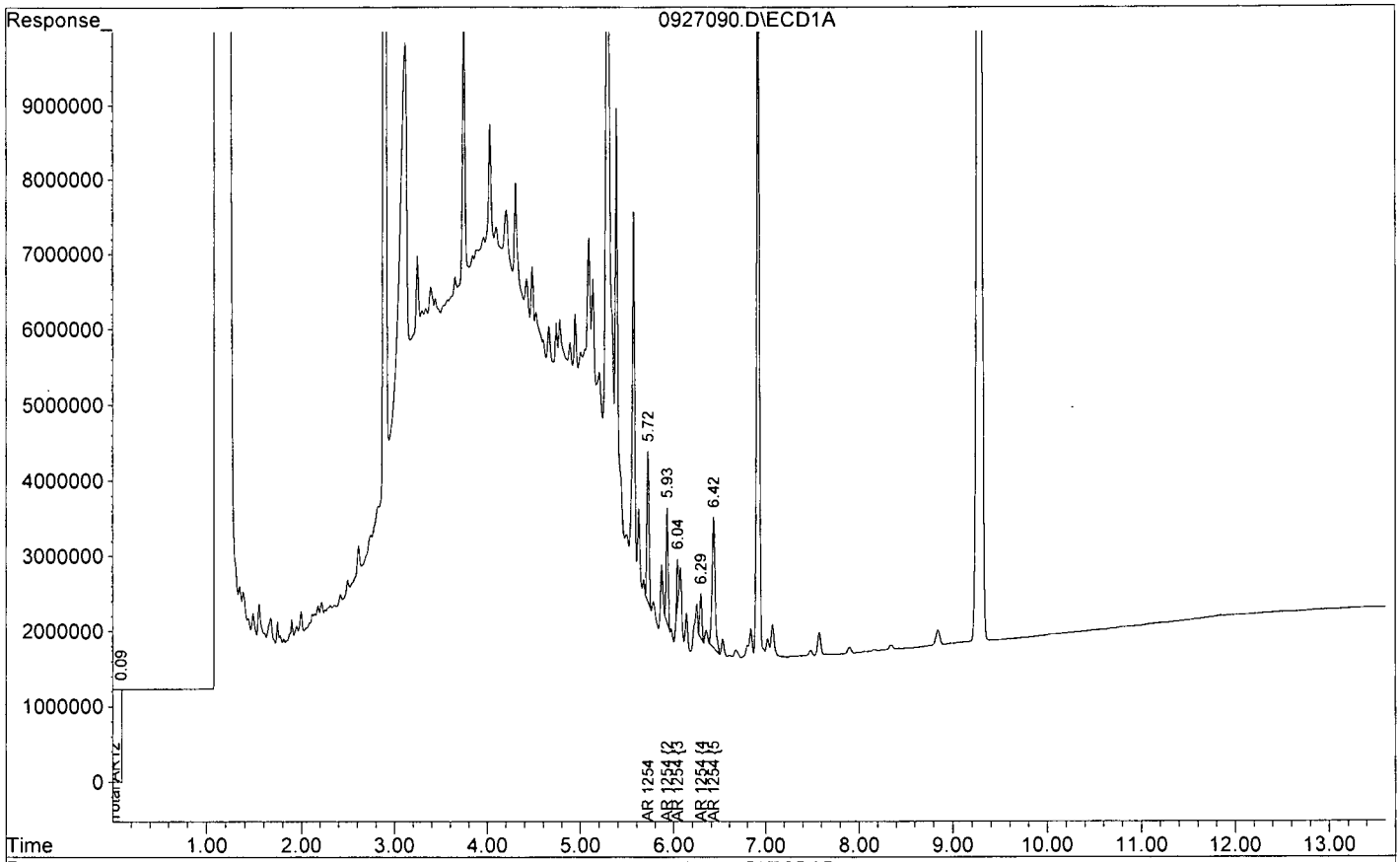
Target Compounds

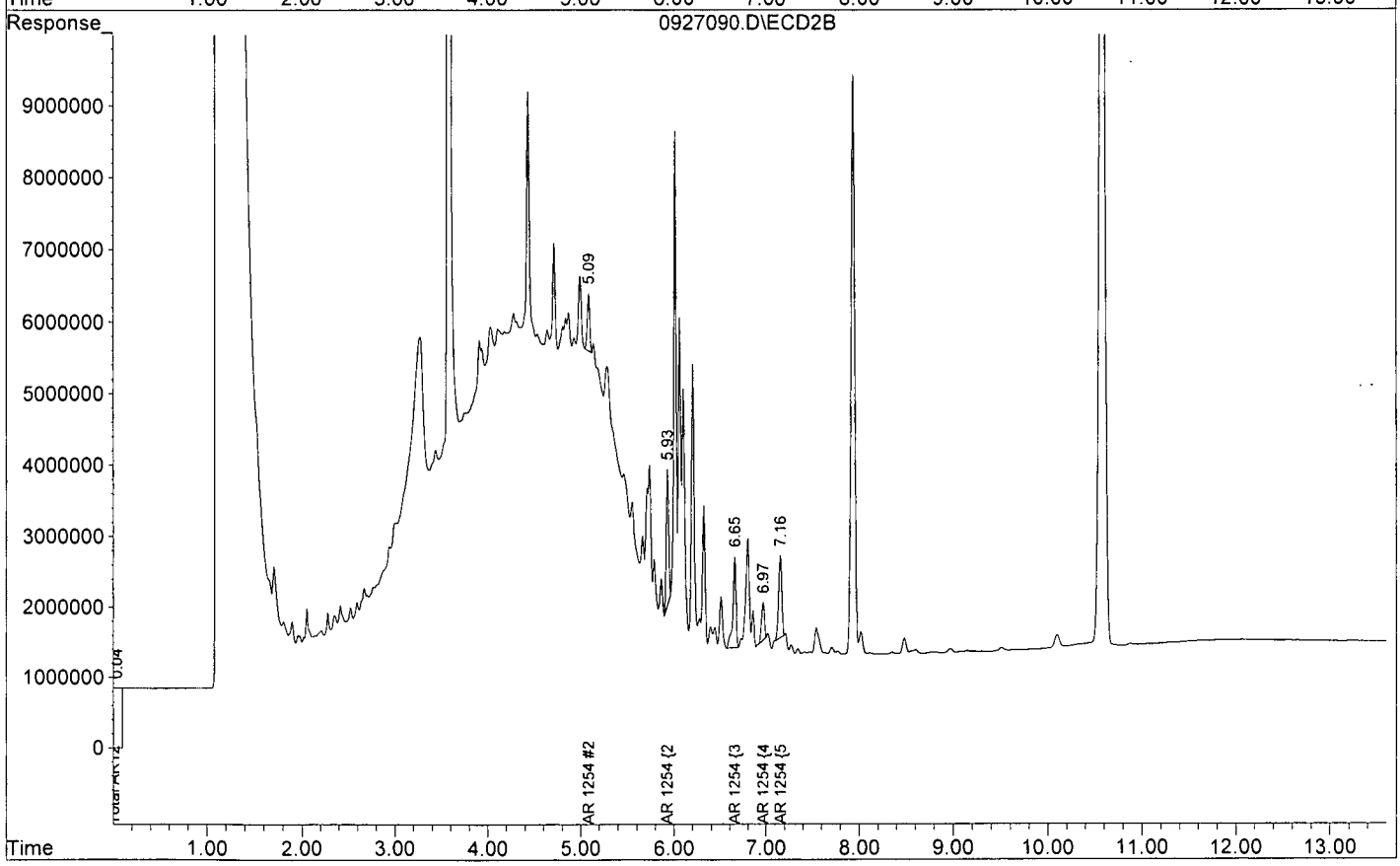
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927090.D
Acq On : 9-30-14 1:29:09
Sample : AZ02115S11 5X1/0.05/30.34G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 90
Operator: MA
Inst : Lucy
Multiplr: 3295.98





EPA 8082A PCB WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN018

APPL ID: AZ02116

Sample Collection Date: 09/03/14

QCG: #82ACA-140909A-190310

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8082A	AROCLOR 1016	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1221	0.250 U	0.50	0.250	0.080	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1232	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1242	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1248	0.250 U	0.50	0.250	0.090	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1254	0.250 U	0.50	0.250	0.200	ug/L	09/09/14	09/23/14
EPA 8082A	AROCLOR 1260	0.250 U	0.50	0.250	0.090	ug/L	09/09/14	09/23/14
EPA 8082A	TOTAL PCBS	0.250 U	0.50	0.250	0.200	ug/L	09/09/14	09/23/14
EPA 8082A	SURROGATE: DECACHLOROBIPHEN	77.7	40-135			%	09/09/14	09/23/14

Quant Method: PSX0922.M
Run #: 0922107
Instrument: Lucy
Sequence: 140922
Dilution Factor: 1
Initials: MA

Printed: 09/30/14 11:01:13 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922107.D\ECD1A.CH Vial: 7
Acq On : 9-23-14 18:23:26 Operator: MA
Sample : AZ02116W04 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922107.D\ECD2B.CH Vial: 7
Acq On : 9-23-14 18:23:25 Operator: MA
Sample : AZ02116W04 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile : events2.e
Quant Time: Sep 24 12:16 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

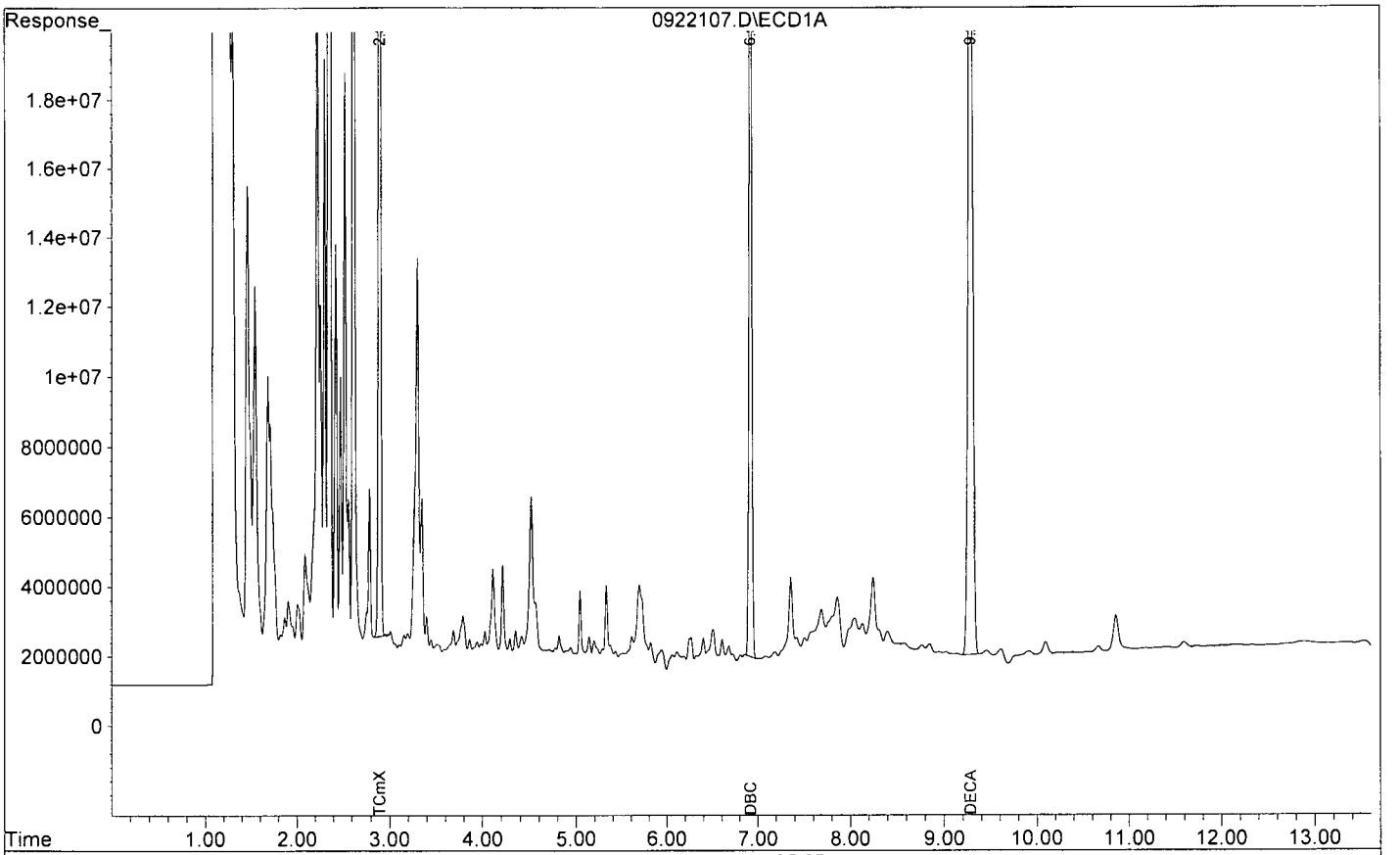
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.90	3.58	46262488	47157819	0.190	0.201
Spiked Amount 0.300			Recovery	=	63.33%	67.00%
2) SA DBC	6.92	7.94	28838961	32205684	0.204	0.284 #
Spiked Amount 0.300			Recovery	=	68.00%	94.67%
3) SA DECA	9.28	10.58	27033299	24230470	0.219	0.233
Spiked Amount 0.300			Recovery	=	73.00%	77.67%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

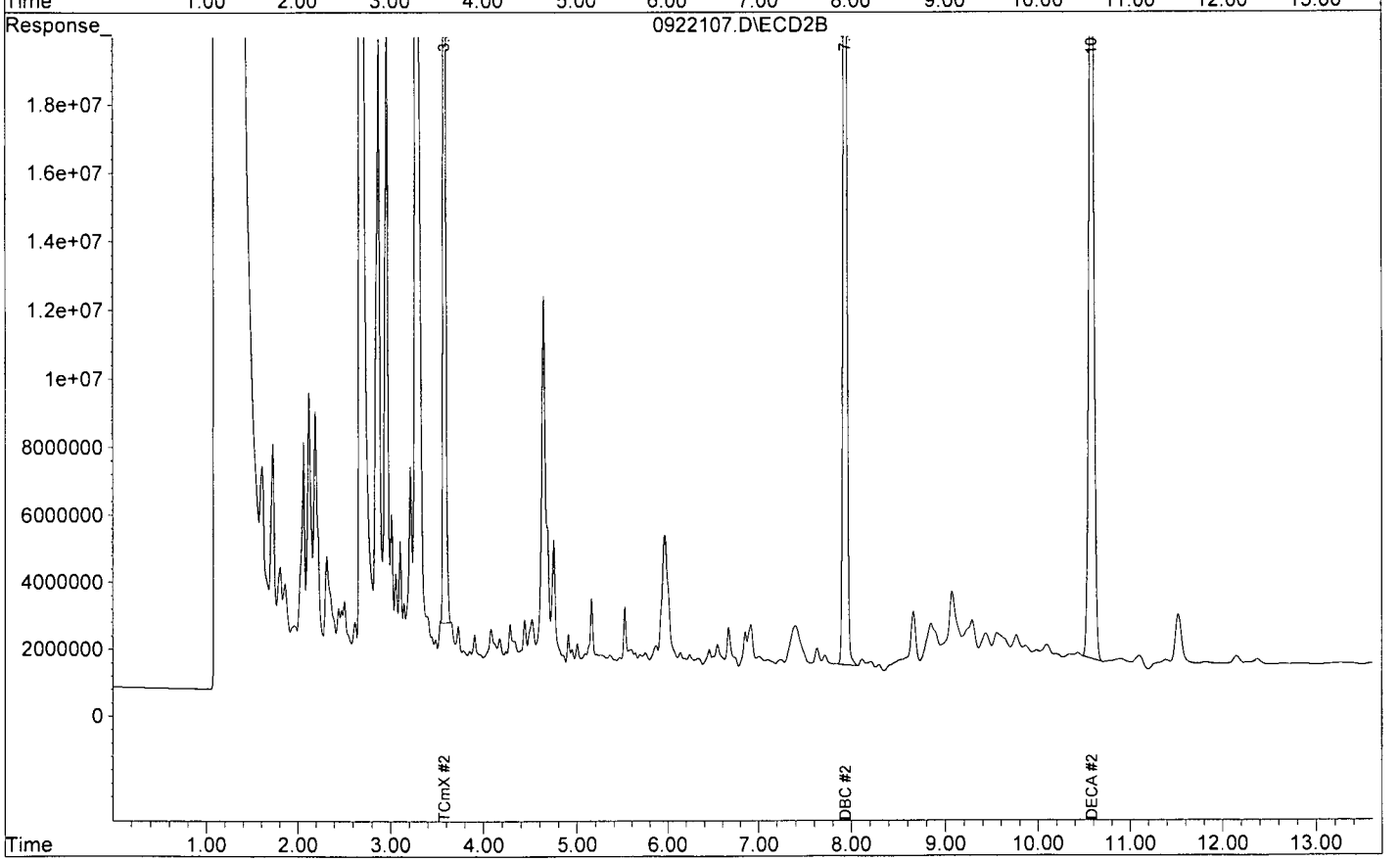
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922107.D
Acq On : 9-23-14 18:23:26
Sample : AZ02116W04 1/500
Misc : water
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 7
Operator: MA
Inst : Lucy
Multiplr: 2.00





EPA METHOD 8082
PCBs
Calibration Data

APPL, INC.

EPA 8082
PSX0922

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 74218
Case No: Initial Cal. Date: 09/23/14
Matrix: Water Instrument: Lucy Initials: MA

		Compound	0922051 D	0922052.D	0922053 D	0922054.D	0922055.D	0922050.D	0922049 D	0922048.D			Avg	%RSD		
1	SA	TCmX	242705225	241854410	256736520	254574650	242082258	235846300	233408700				243886866	3.6	SA	
2	SA	DBC	135271625	139036490	150252465	151198070	145311603	133004650	136461100				141505143	5.2	SA	
3	SA	DECA	123747375	117924570	120854045	116532820	114574278	127188050	141591500				123201805	7.5	SA	
4	BNMC	Total AR1016	37933873	35318712	35909882	35749021	35005743	39058094	41704707	39418639			37512334	6.4	BNMC	
5	L3BKC	AR 1016	16707081	15693767	16032867	16020904	15647124	16974856	18565846	17353415			16624483	6.0	L3BKC	
6	L3BKC	AR 1016 {2}	7465158	6891196	6887447	6800810	6666465	7899046	8413541	8367578			7423905	9.7	L3BKC	
7	L3BKC	AR 1016 {3}	4333551	4021305	4054285	4015886	3950411	4413313	4522311	4193479			4188068	5.1	L3BKC	
8	L3BKC	AR 1016 {4}	5586220	5180700	5262461	5149304	5068170	5978817	6416812	6016461			5582368	9.0	L3BKC	
9	L3BKC	AR 1016 {5}	3841863	3531744	3672822	3762117	3673573	3792061	3786197	3487705			3693510	3.5	L3BKC	
10	BNMC	Total AR1260	52746363	50341857	52448186	52647444	50679783	55008732	58711412	57511768			53761943	5.7	BNMC	
11	L9BKC	AR 1260	11675376	10826487	11072034	11105818	10690869	12557623	13663059	12812527			11800474	9.2	L9BKC	
12	L9BKC	AR 1260 {2}	4362929	3981840	4061536	4094939	3946229	4499430	4827239	4170053			4243024	7.1	L9BKC	
13	L9BKC	AR 1260 {3}	7738776	7321480	7420413	7566888	7216985	8341475	9228322	9597488			8053978	11	L9BKC	
14	L9BKC	AR 1260 {4}	17493918	17073523	18074003	17946510	17454894	17907359	18387393	18784461			17890258	3.1	L9BKC	
15	L9BKC	AR 1260 {5}	11475364	11138526	11820200	11933289	11370807	11702846	12605399	12147239			11774209	4.0	L9BKC	
16		Signal #2														
17	SA	TCmX #2	229230825	230526640	243179510	241540943	236526410	228403200	235353500				234965861	2.5	SA	
18	SA	DBC #2	104782775	108249740	123006250	120706270	120445773	103908650	112565500				113380708	7.1	SA	
19	SA	DECA #2	105536400	93746710	94517370	95469323	93259330	115642200	128642000				103830476	13	SA	
20	BNMC	Total AR1016 #2	24137149	20883333	20707322	20752306	20019138	24920883	27784396	27727454			23366497	14	BNMC	
21	L3BKC	AR 1016 #2	5156638	4256970	4153396	4159348	4000174	5250803	6232297	6272748			4935297	19	L3BKC	
22	L3BKC	AR 1016 {2} #2	3690282	3167019	3172359	3384826	3223512	3826128	4094474	4260298			3602362	12	L3BKC	
23	L3BKC	AR 1016 {3} #2	5203861	4701964	4772727	4736464	4572731	5232043	5932672	5622405			5096858	9.6	L3BKC	
24	L3BKC	AR 1016 {4} #2	4966246	4313408	4168813	4089753	3986626	5283417	5786508	5843273			4804756	16	L3BKC	
25	L3BKC	AR 1016 {5} #2	5120122	4443972	4440026	4381915	4236094	5328492	5738445	5728728			4927224	13	L3BKC	
26	BNMC	Total AR1260 #2	43389246	39444219	40541357	40140386	39625274	46656999	51212593	46646687			43457095	9.9	BNMC	
27	L9BKC	AR 1260 #2	5178961	4476549	4463011	4345349	4323435	5295773	5881307	5420621			4923126	12	L9BKC	
28	L9BKC	AR 1260 {2} #2	11404290	10580149	11180298	10652184	10664430	12294286	13965554	13118459			11732456	11	L9BKC	
29	L9BKC	AR 1260 {3} #2	6209227	5615526	5544873	5552526	5382607	6775522	7355129	7207517			6205366	13	L9BKC	
30	L9BKC	AR 1260 {4} #2	12472904	11557096	11970529	12284644	11982360	13655180	14497066	12041316			12557637	8.0	L9BKC	
31	L9BKC	AR 1260 {5} #2	8123864	7214900	7382645	7305683	7272442	8636238	9513537	8858774			8038510	11	L9BKC	
32																
33																
34																
35																

7.6240752

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922048.D\ECD1A.CH Vial: 48
Signal #2 : G:\LUCY\DATA\140922\0922048.D\ECD2B.CH
Acq On : 9-23-14 0:07:35 Operator: MA
Sample : PCB 1D 8/1/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 9:02 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:01:12 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

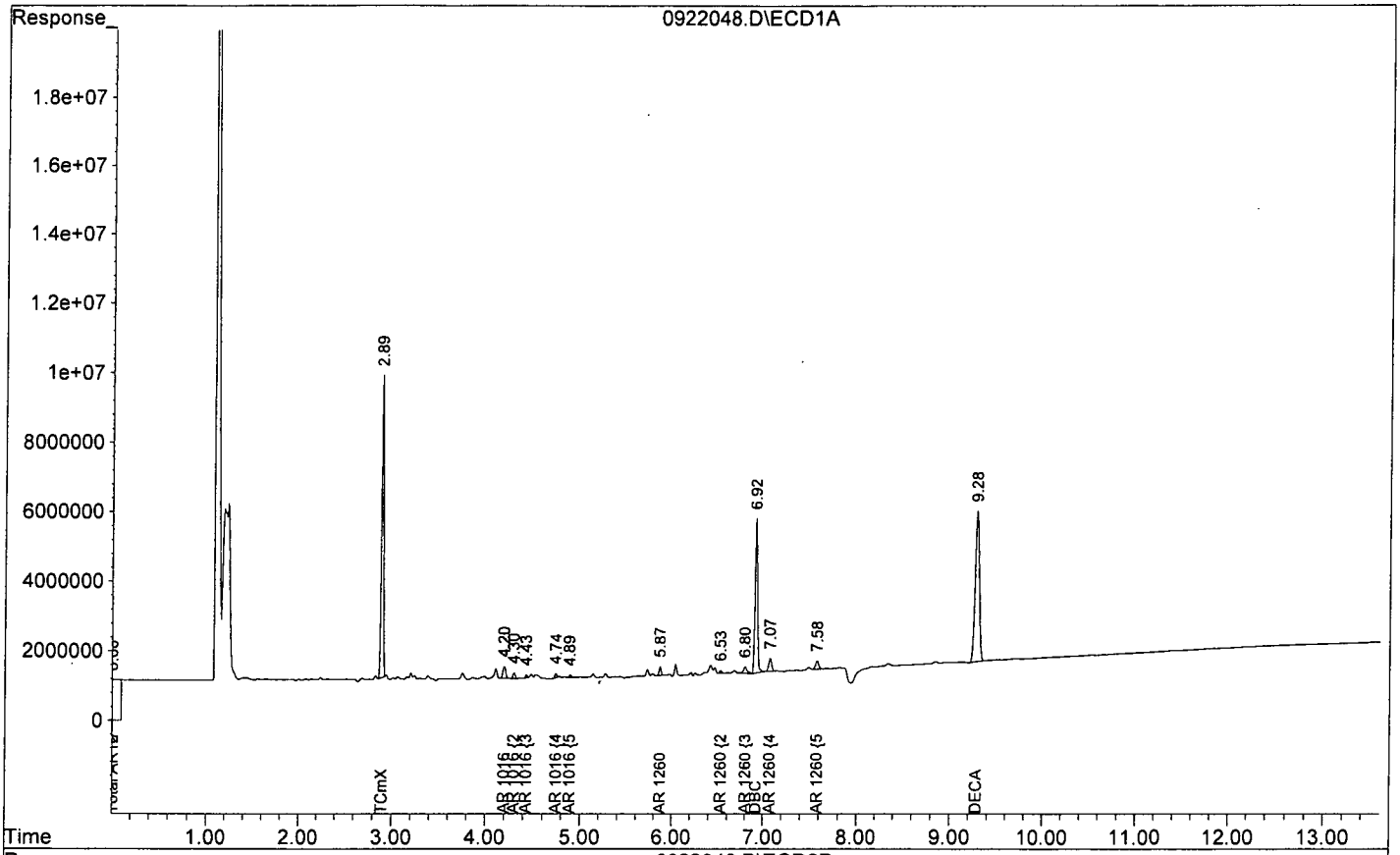
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	8616163	8352730	0.021	0.019
Spiked Amount 0.150			Recovery =		14.00%	12.67%
2) SA DBC	6.92	7.94	4433062	3636083	0.019	0.019
Spiked Amount 0.150			Recovery =		12.67%	12.67%
3) SA DECA	9.28	10.59	4337131	3746008	0.021	0.020
Spiked Amount 0.150			Recovery =		14.00%	13.33%
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	788373	554549	0.013m	0.014m
5) L3BKC AR 1016	4.20	4.28	347068	125455	0.013	0.015
6) L3BKC AR 1016 {2}	4.30	4.81	167352	85206	0.014	0.014
7) L3BKC AR 1016 {3}	4.43	4.99	83870	112448	0.013	0.013
8) L3BKC AR 1016 {4}	4.74	5.09	120329	116865	0.014	0.014
9) L3BKC AR 1016 {5}	4.89	5.29	69754	114575	0.012	0.014
10) BNMC Total AR1260	0.00	0.00	1150235	932934	0.014m	0.012m
11) L9BKC AR 1260	5.87	6.40	256251	108412	0.014	0.013
12) L9BKC AR 1260 {2}	6.53	7.16	83401	262369	0.013	0.013
13) L9BKC AR 1260 {3}	6.80	7.28	191950	144150	0.015	0.013
14) L9BKC AR 1260 {4}	7.08	8.02	375689	240826	0.013	0.011
15) L9BKC AR 1260 {5}	7.58	8.49	242945	177175	0.013	0.013

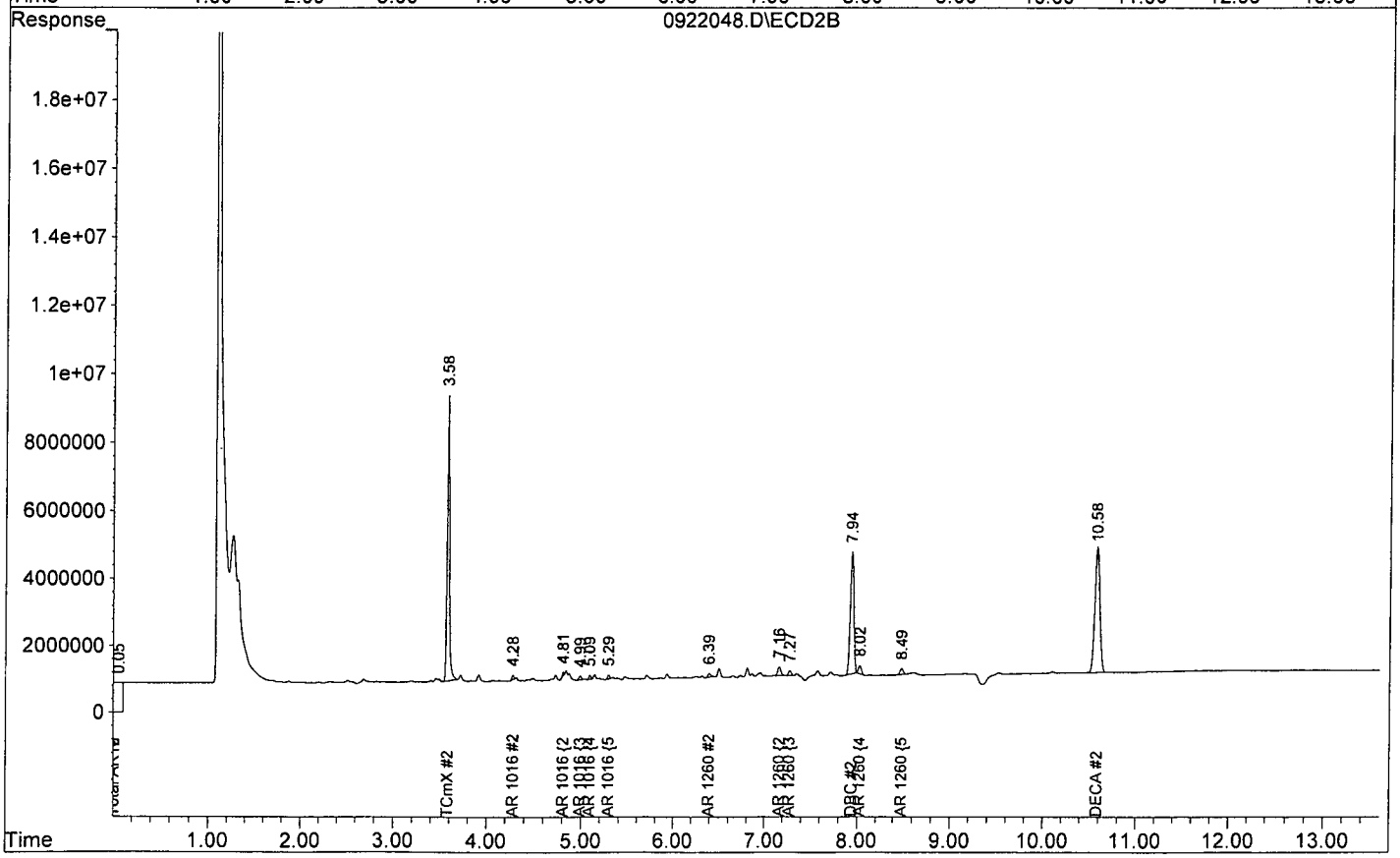
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922048.D Vial: 48
Acq On : 9-23-14 0:07:35 Operator: MA
Sample : PCB 1D 8/1/14 Inst : Lucy
Misc : water Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140922\PSX0922.M





Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922049.D\ECD1A.CH Vial: 49
Acq On : 9-23-14 0:23:58 Operator: MA
Sample : PCB 1C 8/1/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922049.D\ECD2B.CH Vial: 49
Acq On : 9-23-14 0:23:59 Operator: MA
Sample : PCB 1C 8/1/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile : events2.e
Quant Time: Sep 23 9:02 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:01:12 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	2334087	2353535	0.006	0.005
Spiked Amount 0.150			Recovery =		4.00%	3.33%
2) SA DBC	6.92	7.93	1364611	1125655	0.006	0.006
Spiked Amount 0.150			Recovery =		4.00%	4.00%
3) SA DECA	9.28	10.58	1415915	1286420	0.007	0.007
Spiked Amount 0.150			Recovery =		4.67%	4.67%
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	2085235	1389220	0.036m	0.035m
5) L3BKC AR 1016	4.20	4.28	928292	311615	0.036	0.037
6) L3BKC AR 1016 {2}	4.30	4.81	420677	204724	0.036	0.033
7) L3BKC AR 1016 {3}	4.43	4.99	226116	296634	0.036	0.033
8) L3BKC AR 1016 {4}	4.74	5.09	320841	289325	0.037	0.035
9) L3BKC AR 1016 {5}	4.89	5.29	189310	286922	0.032	0.034
10) BNMC Total AR1260	0.00	0.00	2935571	2560630	0.035m	0.034m
11) L9BKC AR 1260	5.87	6.39	683153	294065	0.037	0.034
12) L9BKC AR 1260 {2}	6.53	7.16	241362	698278	0.039	0.034
13) L9BKC AR 1260 {3}	6.80	7.27	461416	367756	0.037	0.034
14) L9BKC AR 1260 {4}	7.08	8.02	919370	724853	0.033	0.033
15) L9BKC AR 1260 {5}	7.58	8.48	630270	475677	0.034	0.035

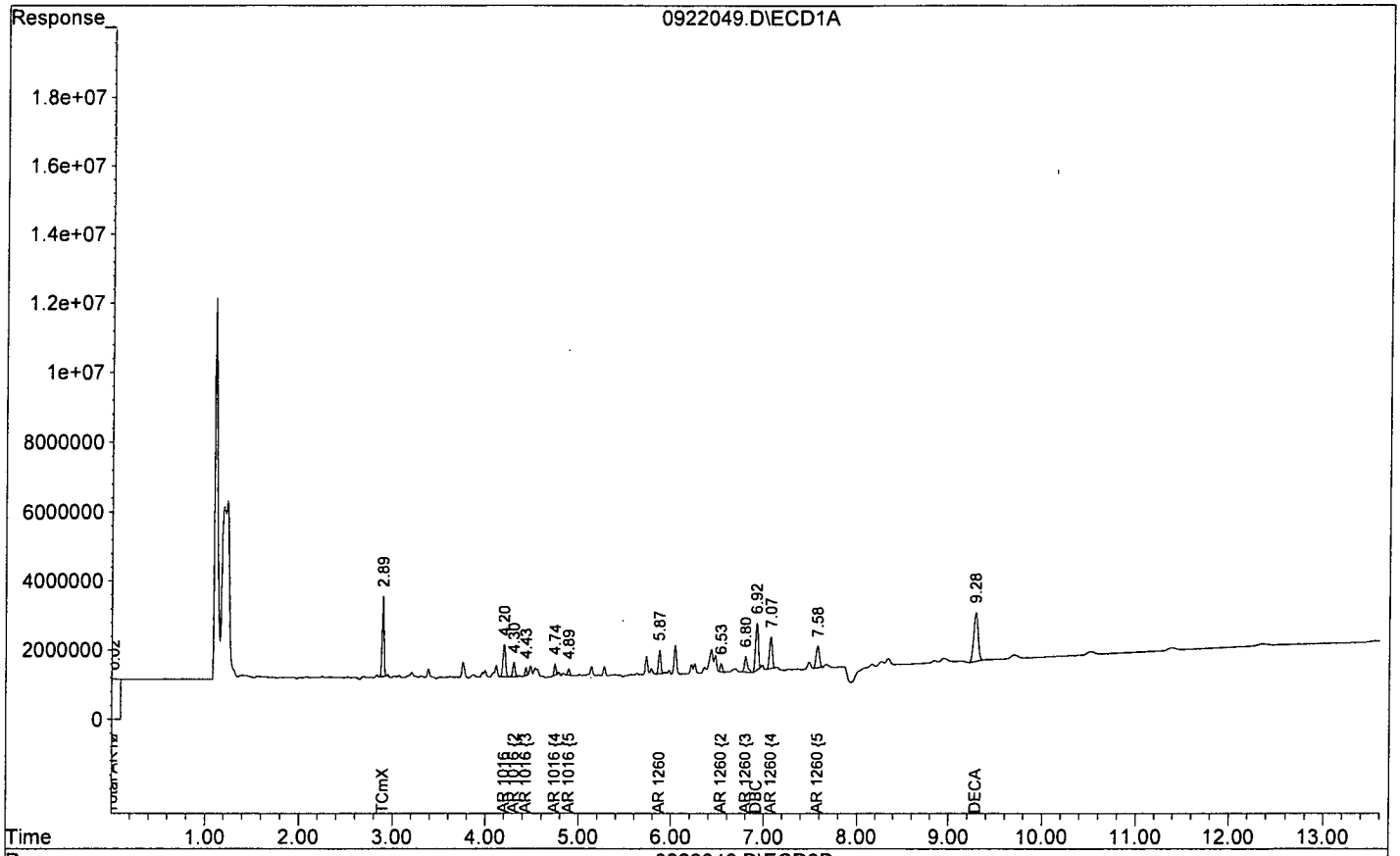
Target Compounds

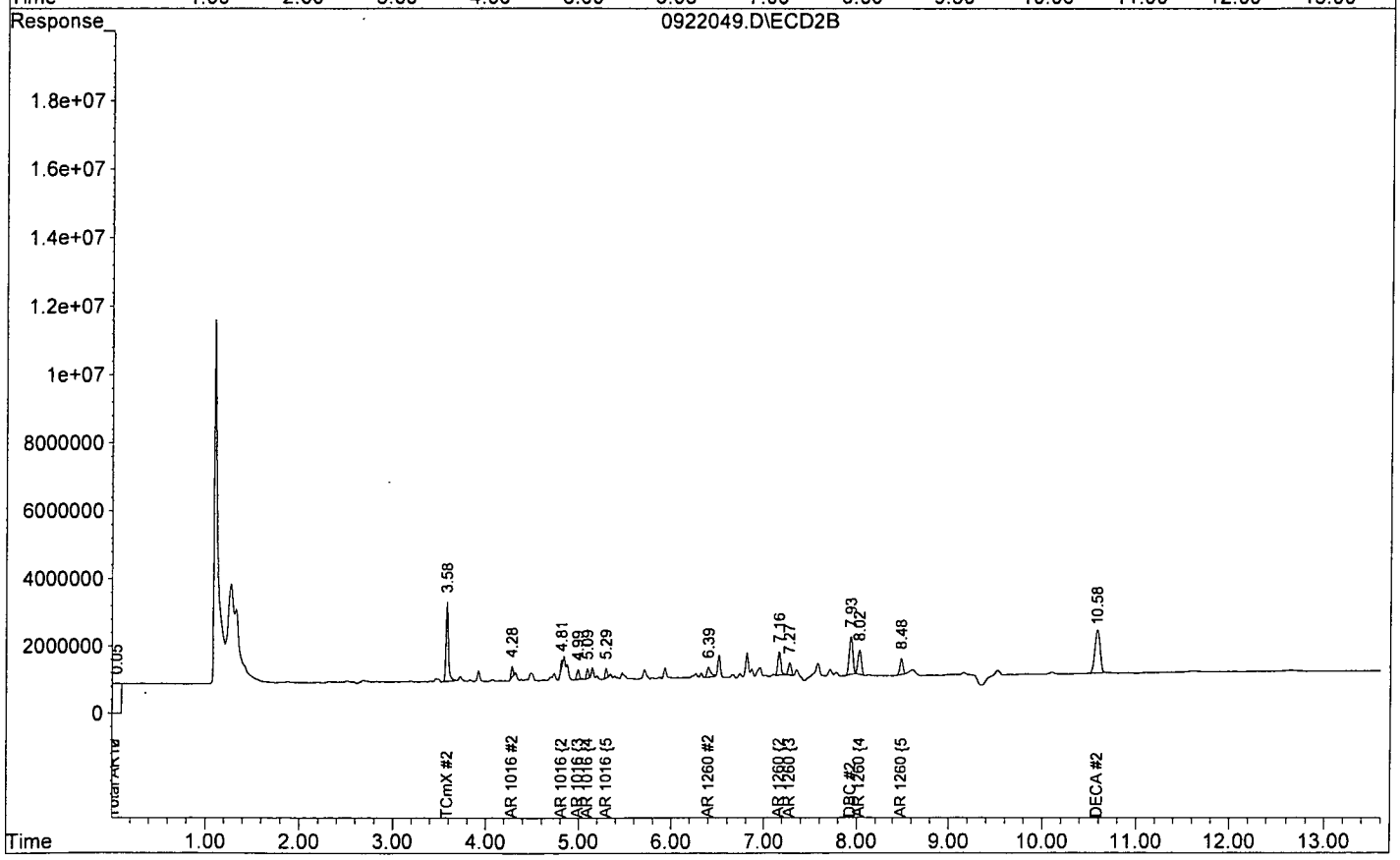
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922049.D
Acq On : 9-23-14 0:23:58
Sample : PCB 1C 8/1/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 49
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922050.D\ECD1A.CH Vial: 50
Signal #2 : G:\LUCY\DATA\140922\0922050.D\ECD2B.CH
Acq On : 9-23-14 0:40:23 Operator: MA
Sample : PCB 1B 8/1/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 9:02 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:01:12 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	4716926	4568064	0.011	0.011
Spiked Amount 0.150			Recovery =		7.33%	7.33%
2) SA DBC	6.92	7.94	2660093	2078173	0.011	0.011
Spiked Amount 0.150			Recovery =		7.33%	7.33%
3) SA DECA	9.28	10.58	2543761	2312844	0.012	0.013
Spiked Amount 0.150			Recovery =		8.00%	8.67%
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	3905809	2492088	0.067m	0.062m
5) L3BKC AR 1016	4.20	4.28	1697486	525080	0.065	0.062
6) L3BKC AR 1016 {2}	4.30	4.81	789905	382613	0.067	0.063
7) L3BKC AR 1016 {3}	4.43	4.99	441331	523204	0.069	0.059
8) L3BKC AR 1016 {4}	4.74	5.09	597882	528342	0.069	0.063
9) L3BKC AR 1016 {5}	4.89	5.29	379206	532849	0.064	0.063
10) BNMC Total AR1260	0.00	0.00	5500873	4665700	0.066m	0.062m
11) L9BKC AR 1260	5.87	6.40	1255762	529577	0.068	0.062
12) L9BKC AR 1260 {2}	6.53	7.16	449943	1229429	0.073	0.060
13) L9BKC AR 1260 {3}	6.80	7.28	834147	677552	0.066	0.063
14) L9BKC AR 1260 {4}	7.08	8.02	1790736	1365518	0.064	0.063
15) L9BKC AR 1260 {5}	7.58	8.49	1170285	863624	0.063	0.064

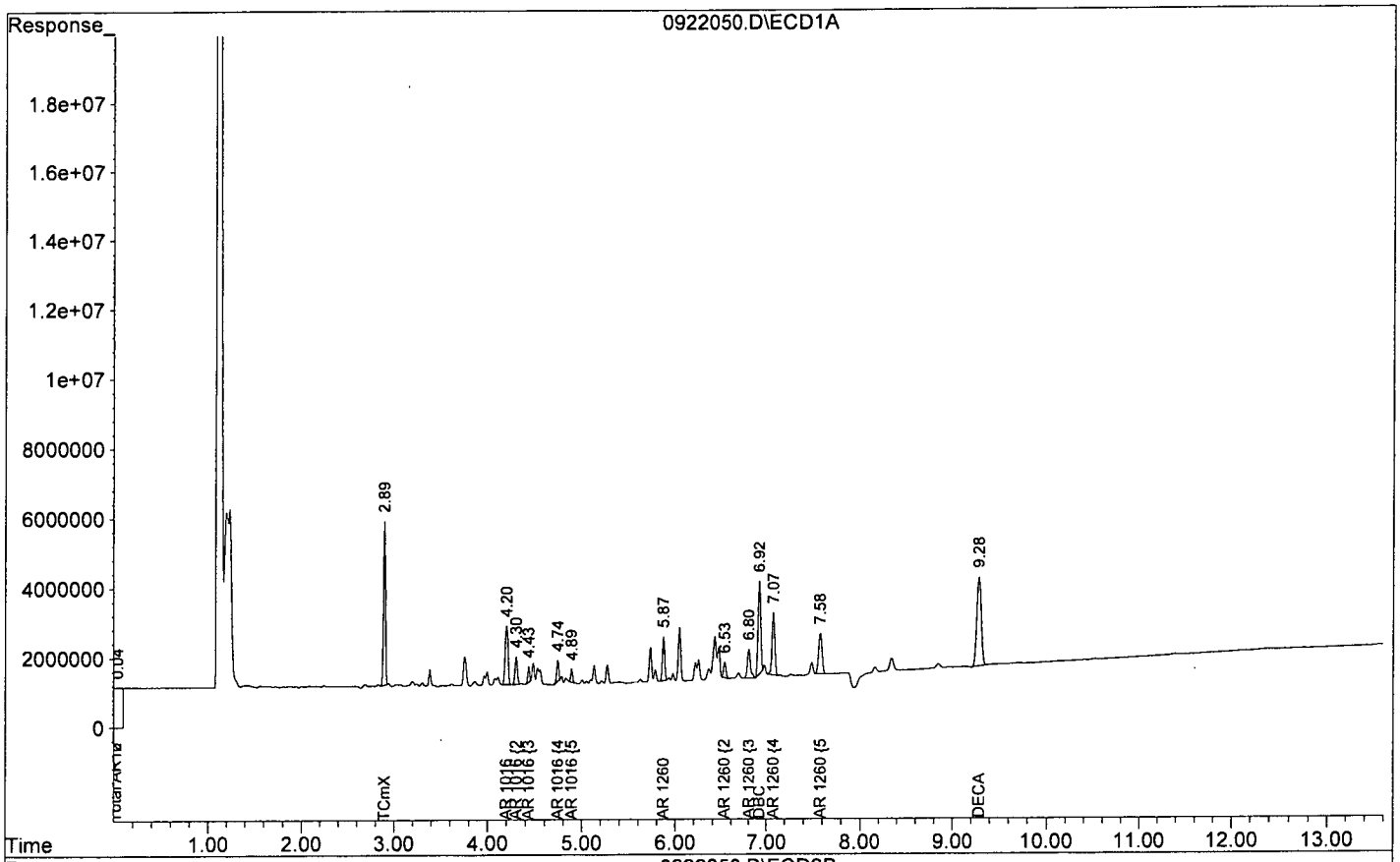
Target Compounds

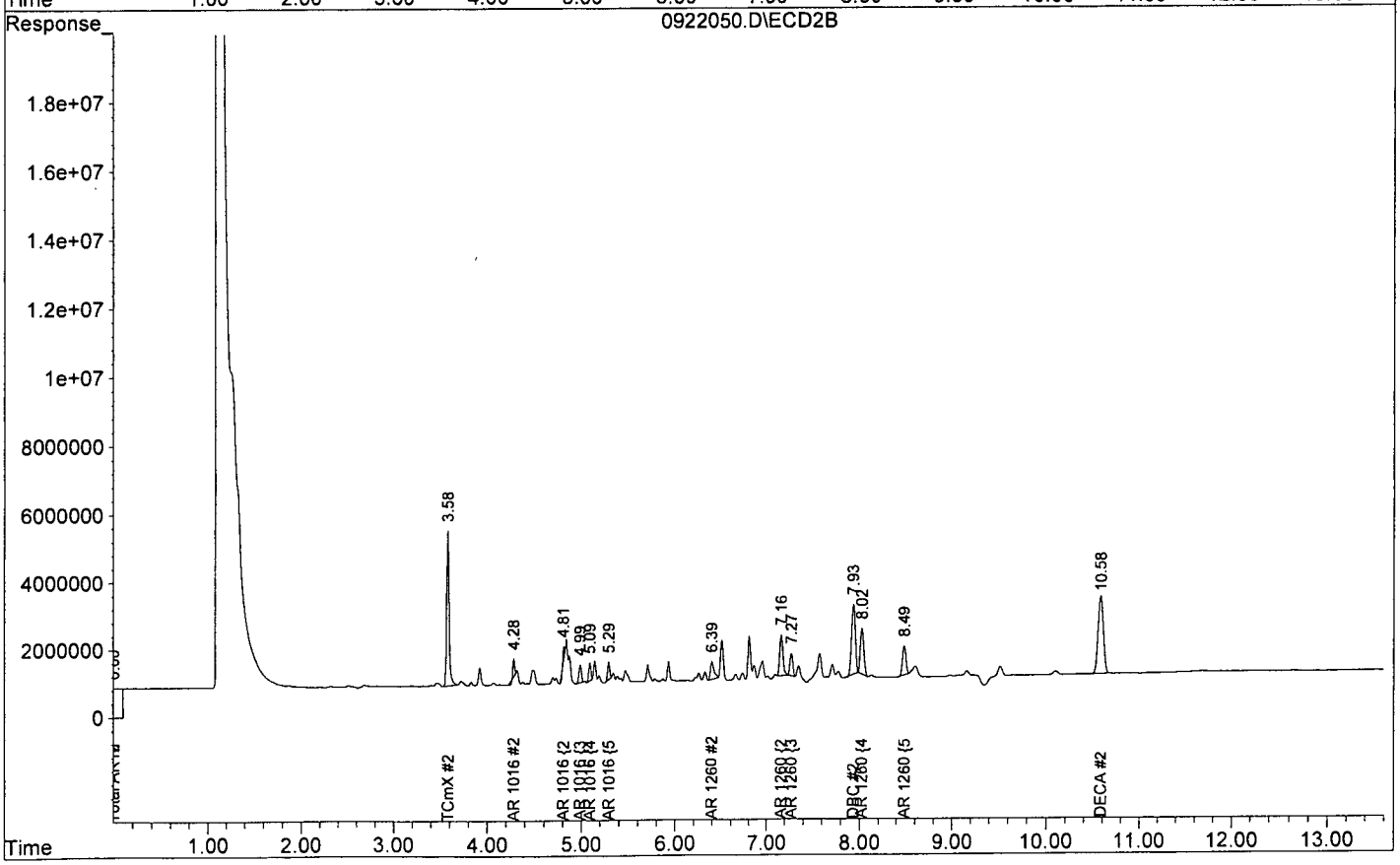
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922050.D
Acq On : 9-23-14 0:40:23
Sample : PCB 1B 8/1/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 50
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922051.D\ECD1A.CH Vial: 51
Signal #2 : G:\LUCY\DATA\140922\0922051.D\ECD2B.CH
Acq On : 9-23-14 0:56:44 Operator: MA
Sample : PCB 1 8/1/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 9:02 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:01:12 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	9708209	9169233	0.023	0.021
Spiked Amount 0.150			Recovery =		15.33%	14.00%
2) SA DBC	6.92	7.93	5410865	4191311	0.023	0.022
Spiked Amount 0.150			Recovery =		15.33%	14.67%
3) SA DECA	9.28	10.58	4949895	4221456	0.024	0.023
Spiked Amount 0.150			Recovery =		16.00%	15.33%
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	7586775	4827430	0.129m	0.120m
5) L3BKC AR 1016	4.20	4.28	3341416	1031328	0.129	0.122
6) L3BKC AR 1016 {2}	4.30	4.81	1493032	738056	0.126	0.121
7) L3BKC AR 1016 {3}	4.43	4.99	866710	1040772	0.136	0.117
8) L3BKC AR 1016 {4}	4.74	5.09	1117244	993249	0.130	0.119
9) L3BKC AR 1016 {5}	4.89	5.29	768373	1024024	0.130	0.121
10) BNMC Total AR1260	0.00	0.00	10549273	8677849	0.126m	0.115m
11) L9BKC AR 1260	5.87	6.40	2335075	1035792	0.127	0.121
12) L9BKC AR 1260 {2}	6.53	7.16	872586	2280858	0.141	0.111
13) L9BKC AR 1260 {3}	6.80	7.27	1547755	1241845	0.123	0.115
14) L9BKC AR 1260 {4}	7.07	8.02	3498784	2494581	0.125	0.114
15) L9BKC AR 1260 {5}	7.58	8.49	2295073	1624773	0.123	0.120

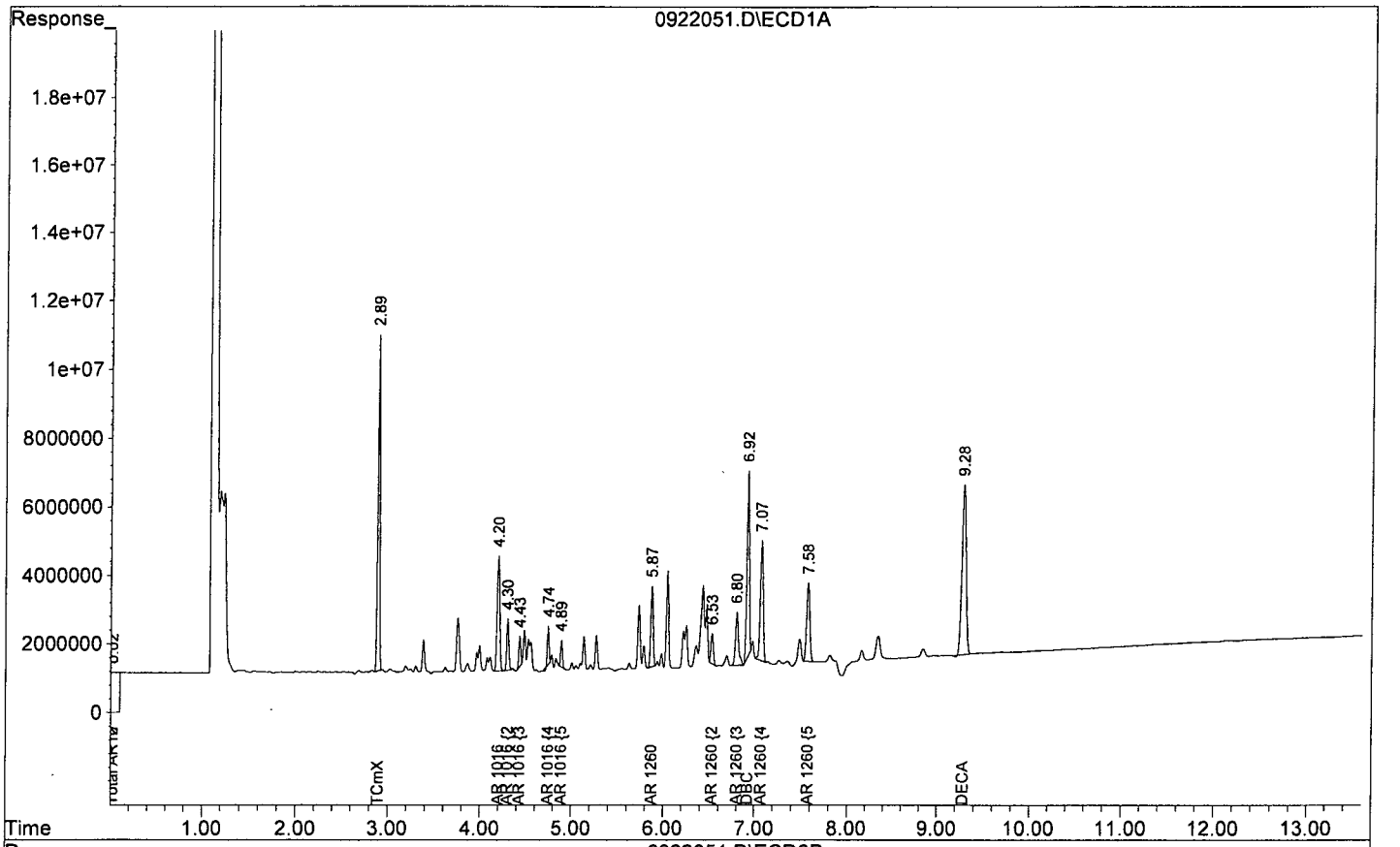
Target Compounds

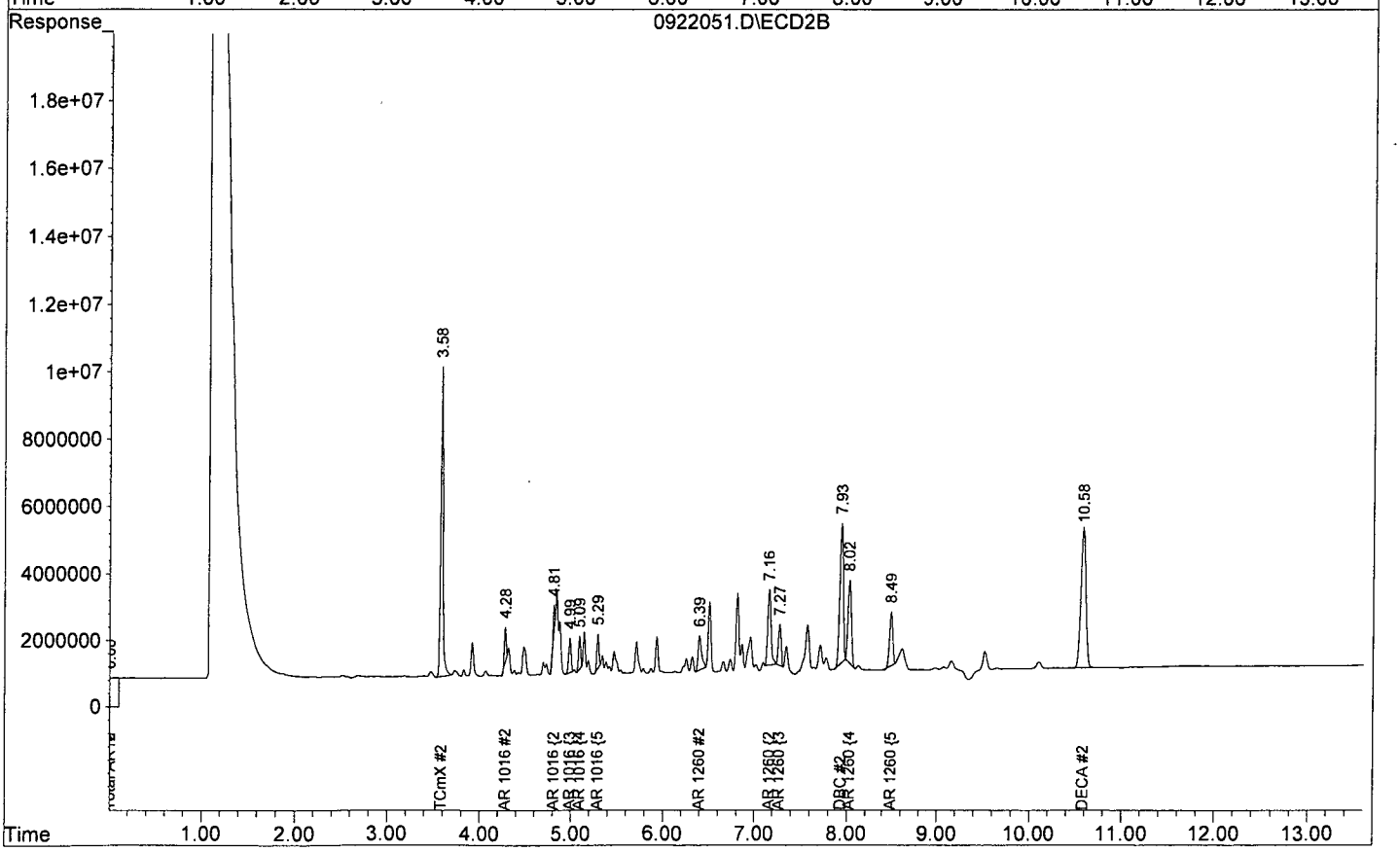
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922051.D
Acq On : 9-23-14 0:56:44
Sample : PCB 1 8/1/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 51
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922052.D\ECD1A.CH Vial: 52
Signal #2 : G:\LUCY\DATA\140922\0922052.D\ECD2B.CH
Acq On : 9-23-14 1:13:13 Operator: MA
Sample : PCB 2 8/1/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 9:02 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:01:12 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.90	3.58	24185441	23052664	0.058	0.054
Spiked Amount 0.150			Recovery =		38.67%	36.00%
2) SA DBC	6.92	7.94	13903649	10824974	0.059	0.056
Spiked Amount 0.150			Recovery =		39.33%	37.33%
3) SA DECA	9.28	10.58	11792457	9374671	0.058	0.051
Spiked Amount 0.150			Recovery =		38.67%	34.00%
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	17659356	10441667	0.301m	0.259m
5) L3BKC AR 1016	4.20	4.28	7846883	2128485	0.302	0.252
6) L3BKC AR 1016 {2}	4.30	4.81	3445598	1583510	0.291	0.259
7) L3BKC AR 1016 {3}	4.43	4.99	2010652	2350982	0.317	0.264
8) L3BKC AR 1016 {4}	4.74	5.09	2590350	2156704	0.301	0.258
9) L3BKC AR 1016 {5}	4.89	5.29	1765872	2221986	0.299	0.263
10) BNMC Total AR1260	0.00	0.00	25170928	19722110	0.300m	0.262m
11) L9BKC AR 1260	5.87	6.40	5413244	2238275	0.294	0.261
12) L9BKC AR 1260 {2}	6.53	7.16	1990920	5290074	0.321	0.258
13) L9BKC AR 1260 {3}	6.80	7.28	3660740	2807763	0.290	0.260
14) L9BKC AR 1260 {4}	7.08	8.02	8536762	5778548	0.306	0.265
15) L9BKC AR 1260 {5}	7.58	8.49	5569263	3607450	0.298	0.267

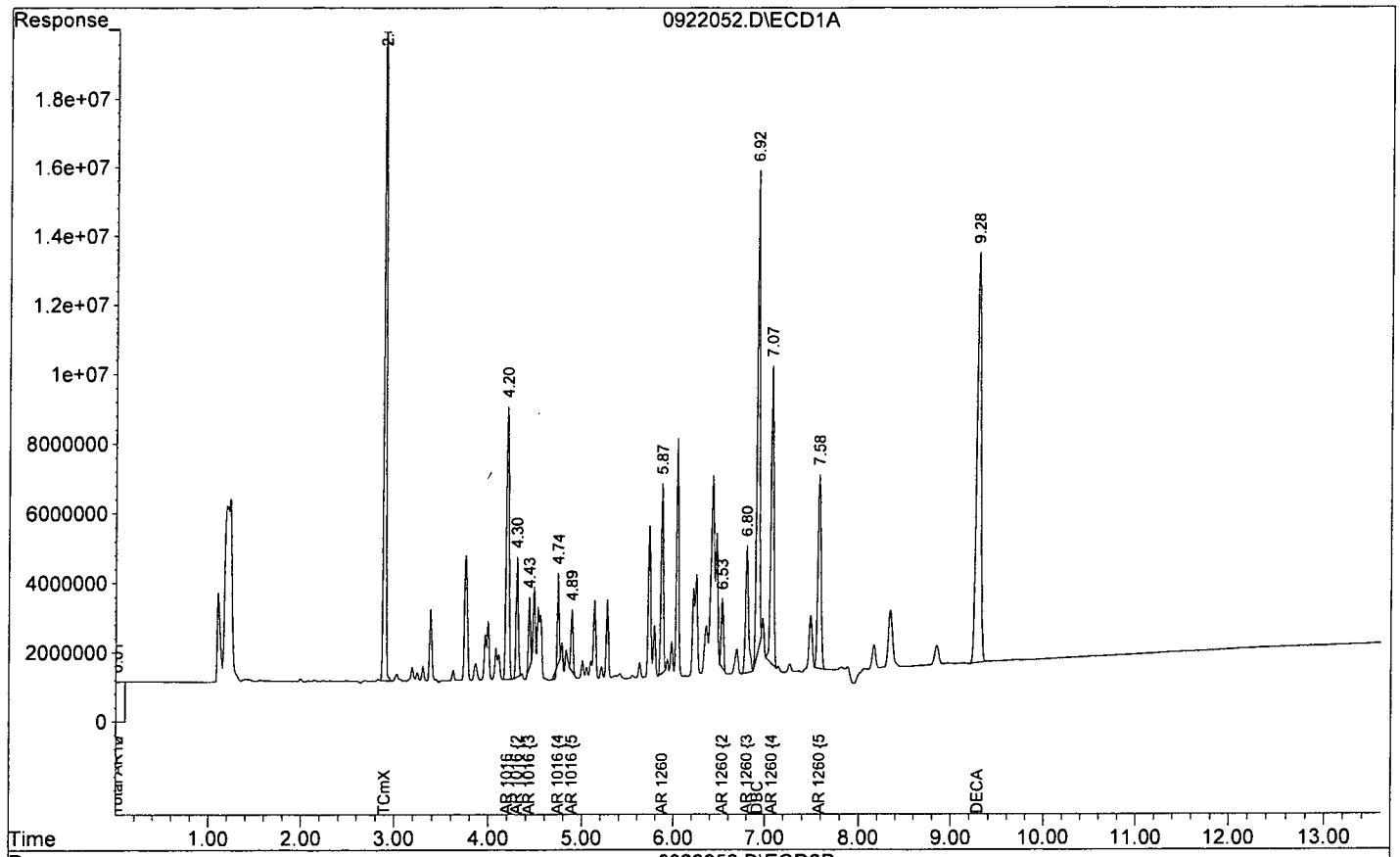
Target Compounds

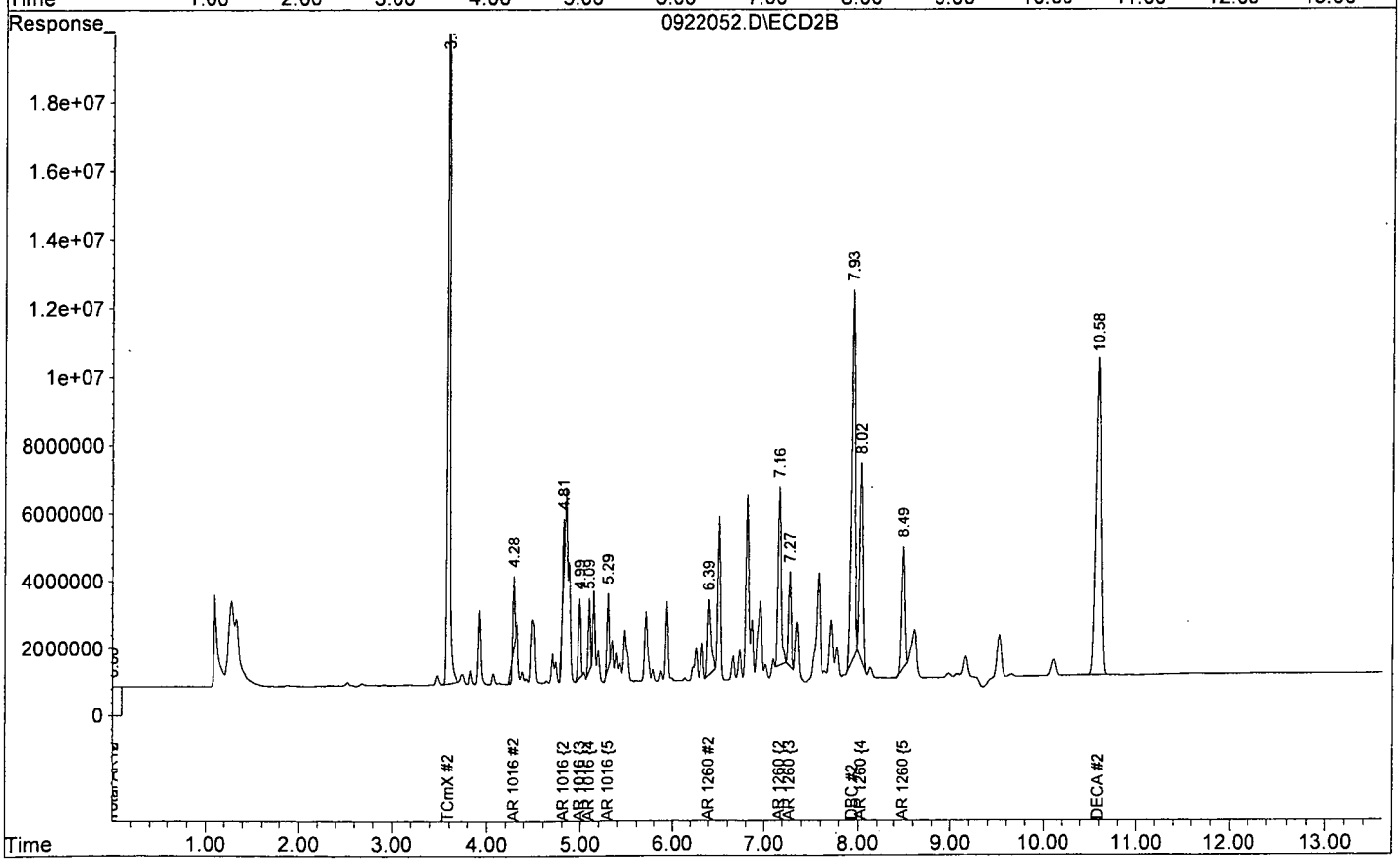
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922052.D
Acq On : 9-23-14 1:13:13
Sample : PCB 2 8/1/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 52
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922053.D\ECD1A.CH Vial: 53
Signal #2 : G:\LUCY\DATA\140922\0922053.D\ECD2B.CH
Acq On : 9-23-14 1:29:36 Operator: MA
Sample : PCB 3 8/1/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 9:09 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	0.00	0.00	0	0	N.D. d	N.D. d
Spiked Amount 0.150			Recovery =		0.00%	0.00%
2) SA DBC	0.00	0.00	0	0	N.D. d	N.D. d
Spiked Amount 0.150			Recovery =		0.00%	0.00%
3) SA DECA	0.00	0.00	0	0	N.D. d	N.D. d
Spiked Amount 0.150			Recovery =		0.00%	0.00%
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	35909882	20707322	0.479m	0.443m
5) L3BKC AR 1016	4.20	4.28	16032867	4153396	0.482	0.421
6) L3BKC AR 1016 {2}	4.30	4.81	6887447	3172359	0.464	0.440
7) L3BKC AR 1016 {3}	4.43	4.99	4054285	4772727	0.484	0.468
8) L3BKC AR 1016 {4}	4.74	5.09	5262461	4168813	0.471	0.434
9) L3BKC AR 1016 {5}	4.89	5.29	3672822	4440026	0.497	0.451
10) BNMC Total AR1260	0.00	0.00	52448186	40541357	0.488m	0.466m
11) L9BKC AR 1260	5.87	6.40	11072034	4463011	0.469	0.453
12) L9BKC AR 1260 {2}	6.53	7.16	4061536	11180298	0.479	0.476
13) L9BKC AR 1260 {3}	6.80	7.28	7420413	5544873	0.461	0.447
14) L9BKC AR 1260 {4}	7.07	8.02	18074003	11970529	0.505	0.477
15) L9BKC AR 1260 {5}	7.58	8.49	11820200	7382645	0.502	0.459

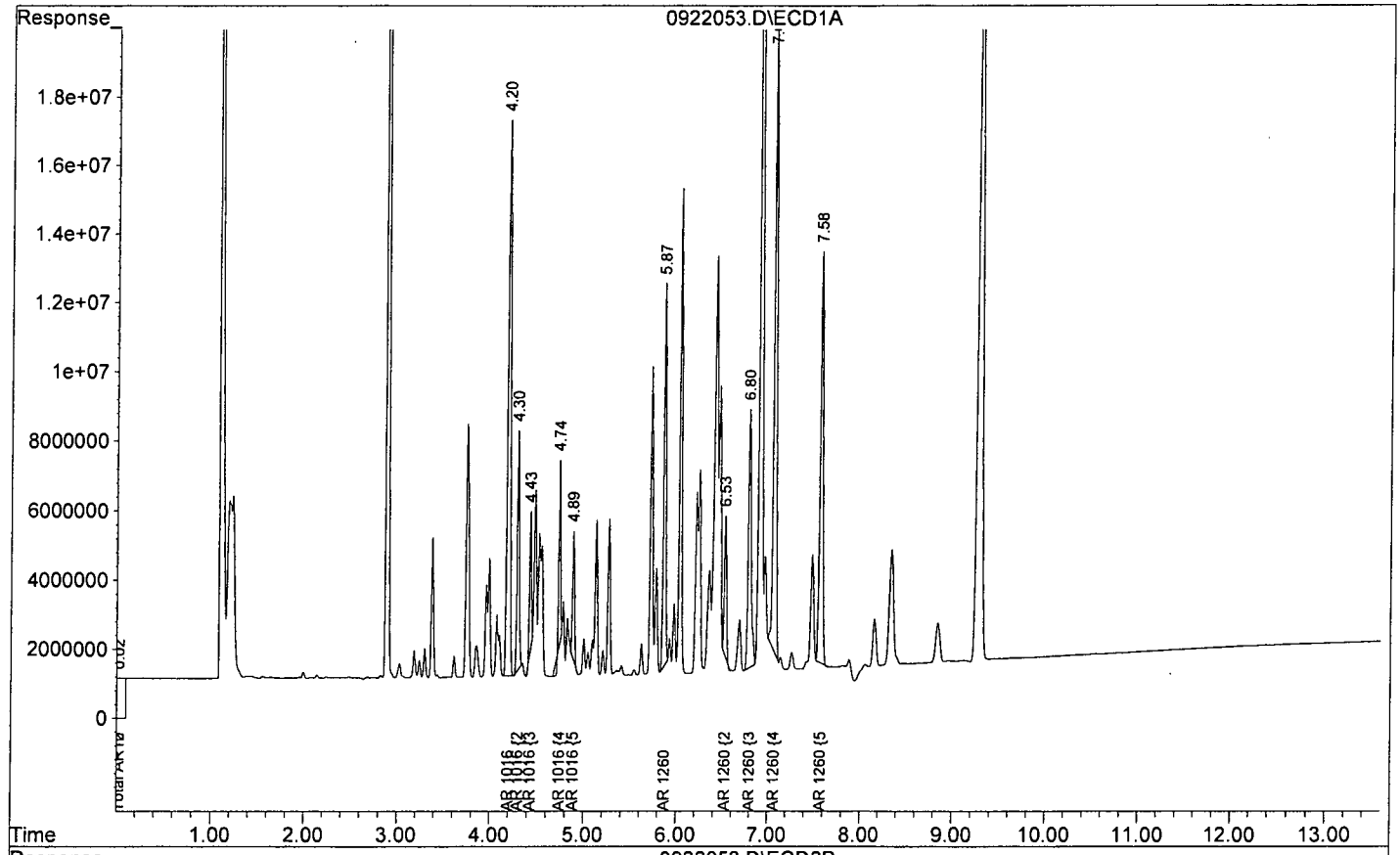
Target Compounds

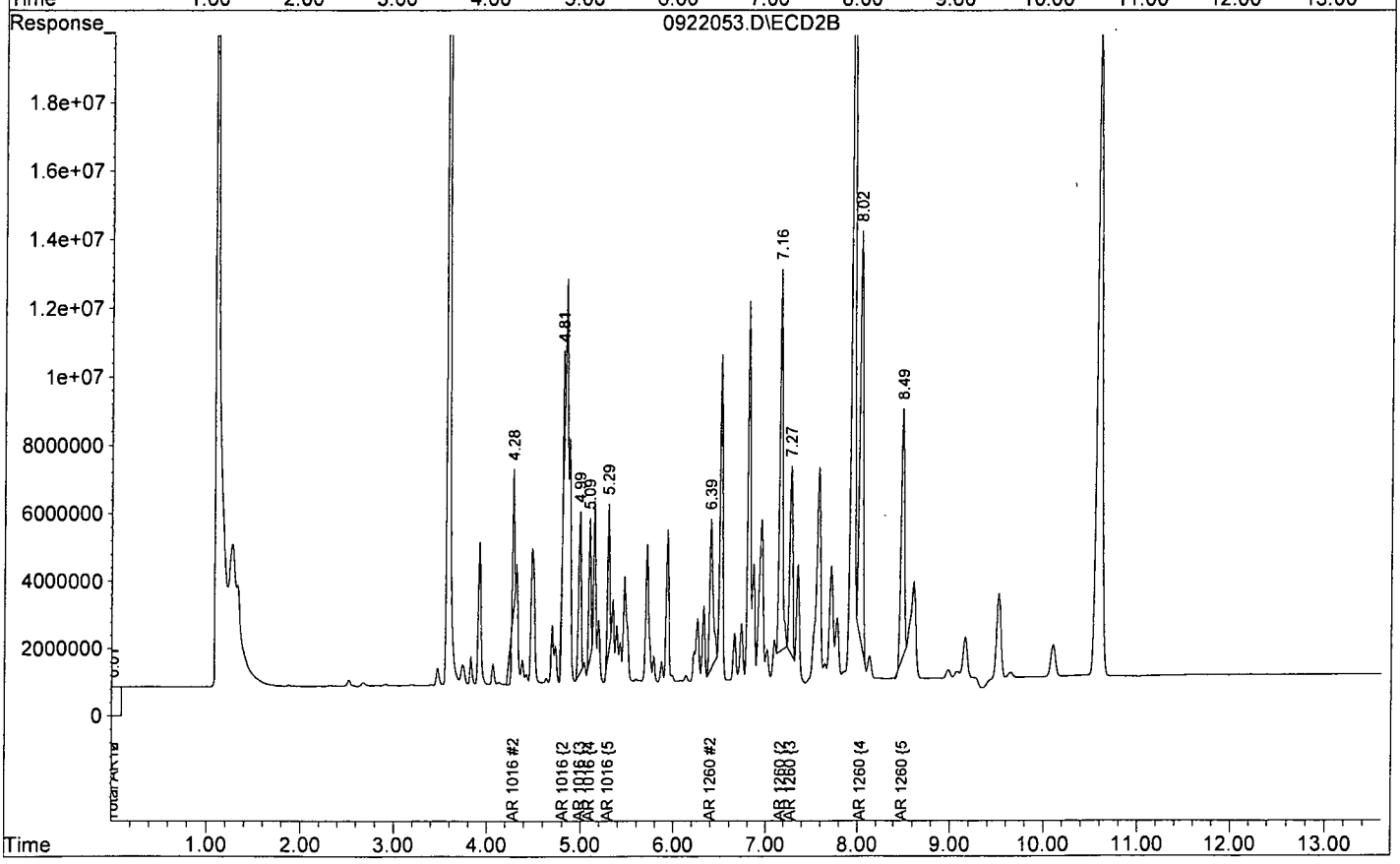
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922053.D
Acq On : 9-23-14 1:29:36
Sample : PCB 3 8/1/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 53
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922054.D\ECD1A.CH Vial: 54
Signal #2 : G:\LUCY\DATA\140922\0922054.D\ECD2B.CH
Acq On : 9-23-14 1:45:59 Operator: MA
Sample : PCB 4 8/1/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 9:02 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:01:12 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	76372395	72462283	0.185	0.168
Spiked Amount 0.150			Recovery	=	123.33%	112.00%
2) SA DBC	6.92	7.94	45359421	36211881	0.193	0.186
Spiked Amount 0.150			Recovery	=	128.67%	124.00%
3) SA DECA	9.28	10.59	34959846	28640797	0.171	0.156
Spiked Amount 0.150			Recovery	=	114.00%	104.00%
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	53623532	31128458	0.913m	0.774m
5) L3BKC AR 1016	4.20	4.28	24031356	6239022	0.925	0.740
6) L3BKC AR 1016 {2}	4.30	4.81	10201215	5077238	0.861	0.830
7) L3BKC AR 1016 {3}	4.43	4.99	6023829	7104697	0.948	0.798
8) L3BKC AR 1016 {4}	4.74	5.09	7723955	6134629	0.897	0.735
9) L3BKC AR 1016 {5}	4.89	5.29	5643176	6572872	0.955	0.778
10) BNMC Total AR1260	0.00	0.00	78971165	60210579	0.942m	0.800m
11) L9BKC AR 1260	5.87	6.40	16658727	6518023	0.903	0.759
12) L9BKC AR 1260 {2}	6.53	7.16	6142409	15978276	0.991	0.779
13) L9BKC AR 1260 {3}	6.80	7.28	11350332	8328789	0.900	0.771
14) L9BKC AR 1260 {4}	7.08	8.02	26919764	18426966	0.965	0.844
15) L9BKC AR 1260 {5}	7.58	8.49	17899934	10958525	0.958	0.810

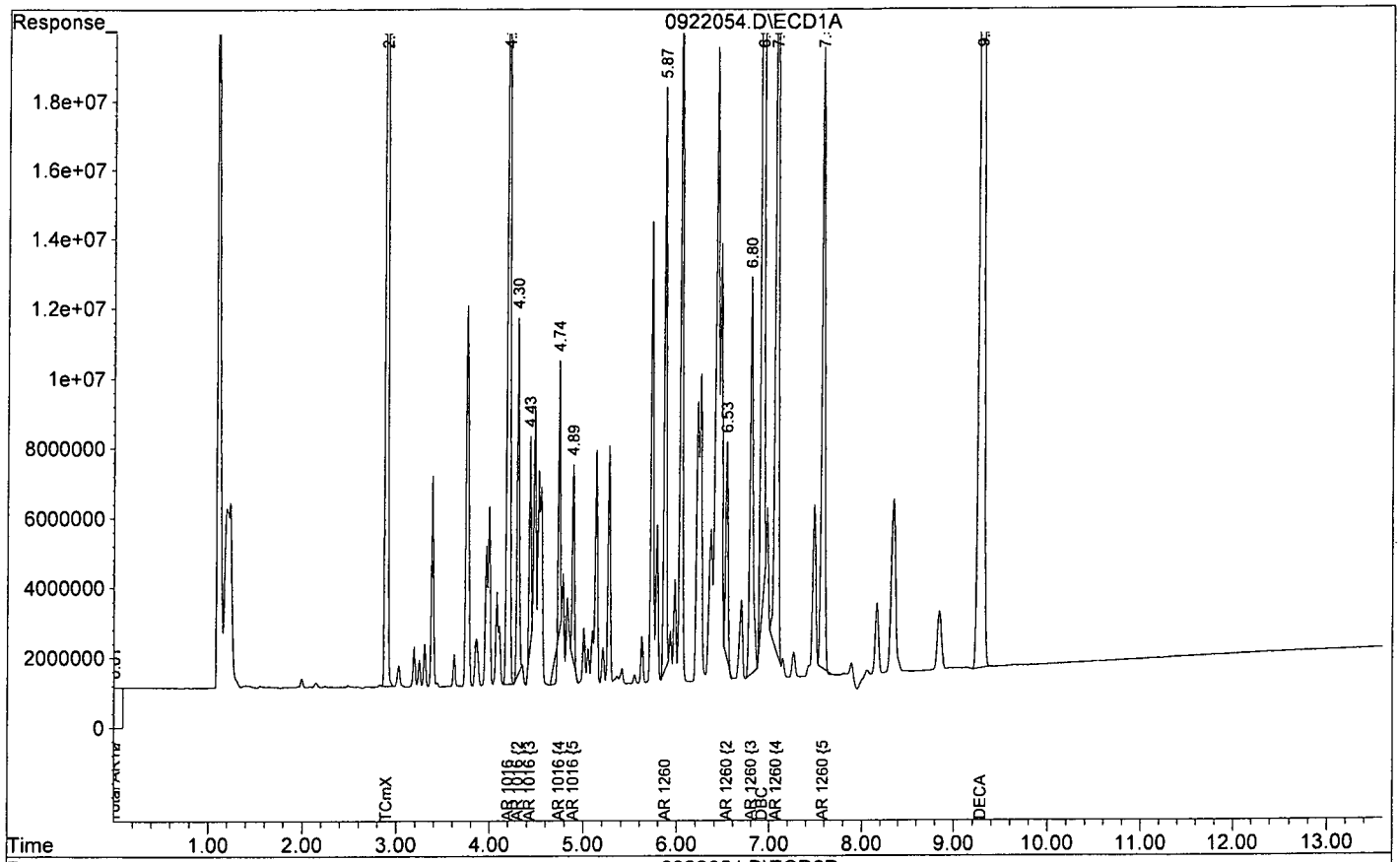
Target Compounds

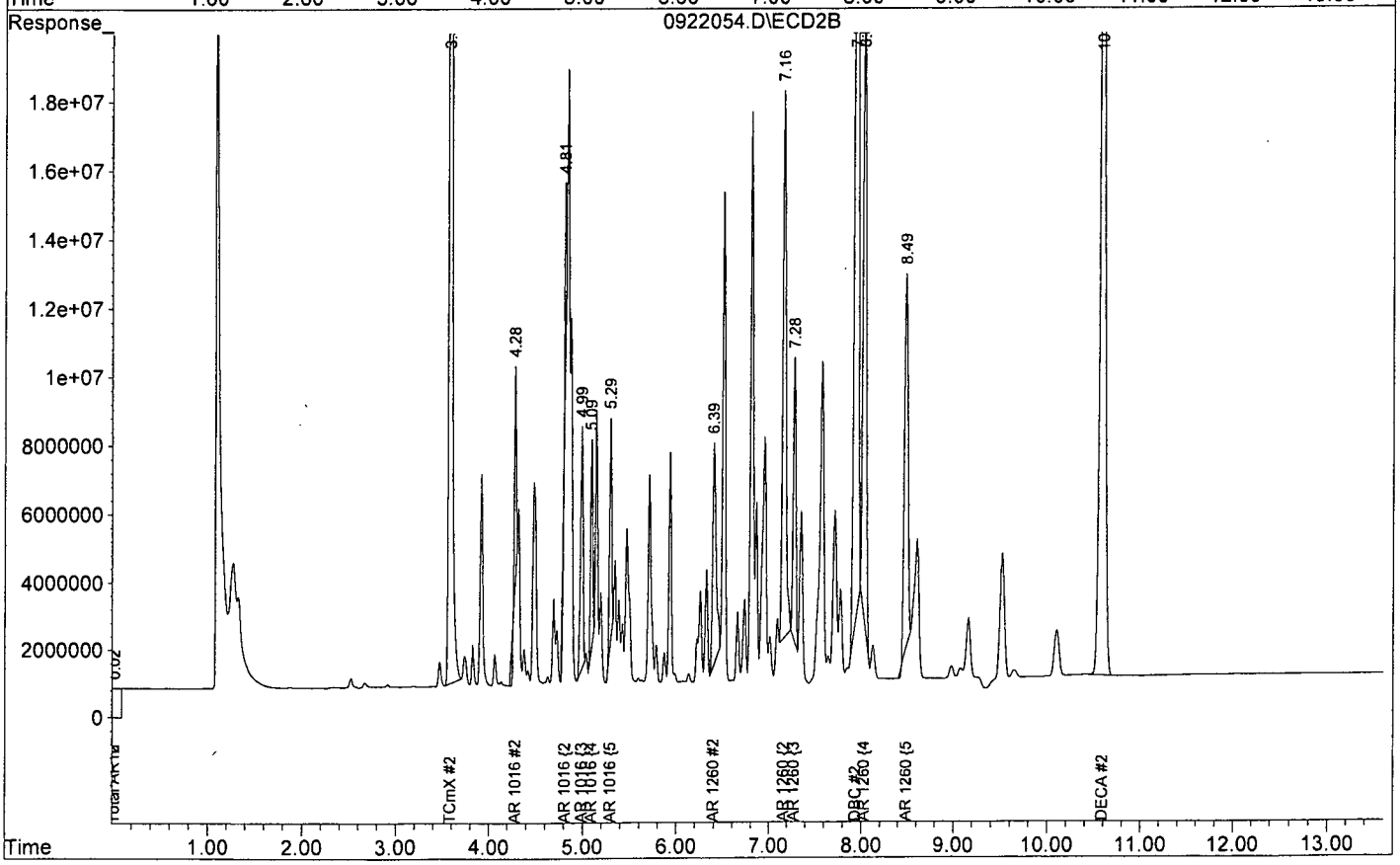
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922054.D
Acq On : 9-23-14 1:45:59
Sample : PCB 4 8/1/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 54
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922055.D\ECD1A.CH Vial: 55
Signal #2 : G:\LUCY\DATA\140922\0922055.D\ECD2B.CH
Acq On : 9-23-14 2:02:24 Operator: MA
Sample : PCB 5 8/1/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 9:02 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:01:12 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	96832903	94610564	0.234	0.220
Spiked Amount 0.150			Recovery	=	156.00%	146.67%
2) SA DBC	6.92	7.94	58124641	48178309	0.247	0.248
Spiked Amount 0.150			Recovery	=	164.67%	165.33%
3) SA DECA	9.28	10.58	45829711	37303732	0.224	0.204
Spiked Amount 0.150			Recovery	=	149.33%	136.00%
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	70011486	40038276	1.192m	0.995m
5) L3BKC AR 1016	4.20	4.28	31294249	8000348	1.204	0.949
6) L3BKC AR 1016 (2)	4.30	4.81	13332929	6447024	1.126	1.054
7) L3BKC AR 1016 (3)	4.43	4.99	7900822	9145462	1.244	1.028
8) L3BKC AR 1016 (4)	4.74	5.09	10136340	7973252	1.177	0.955
9) L3BKC AR 1016 (5)	4.89	5.29	7347147	8472189	1.243	1.003
10) BNMC Total AR1260	0.00	0.00	101.4E6	79250548	1.209m	1.053m
11) L9BKC AR 1260	5.87	6.40	21381738	8646870	1.159	1.007
12) L9BKC AR 1260 (2)	6.53	7.16	7892457	21328859	1.273	1.039
13) L9BKC AR 1260 (3)	6.80	7.28	14433971	10765214	1.145	0.996
14) L9BKC AR 1260 (4)	7.08	8.02	34909788	23964721	1.252	1.097
15) L9BKC AR 1260 (5)	7.58	8.49	22741613	14544883	1.217	1.076

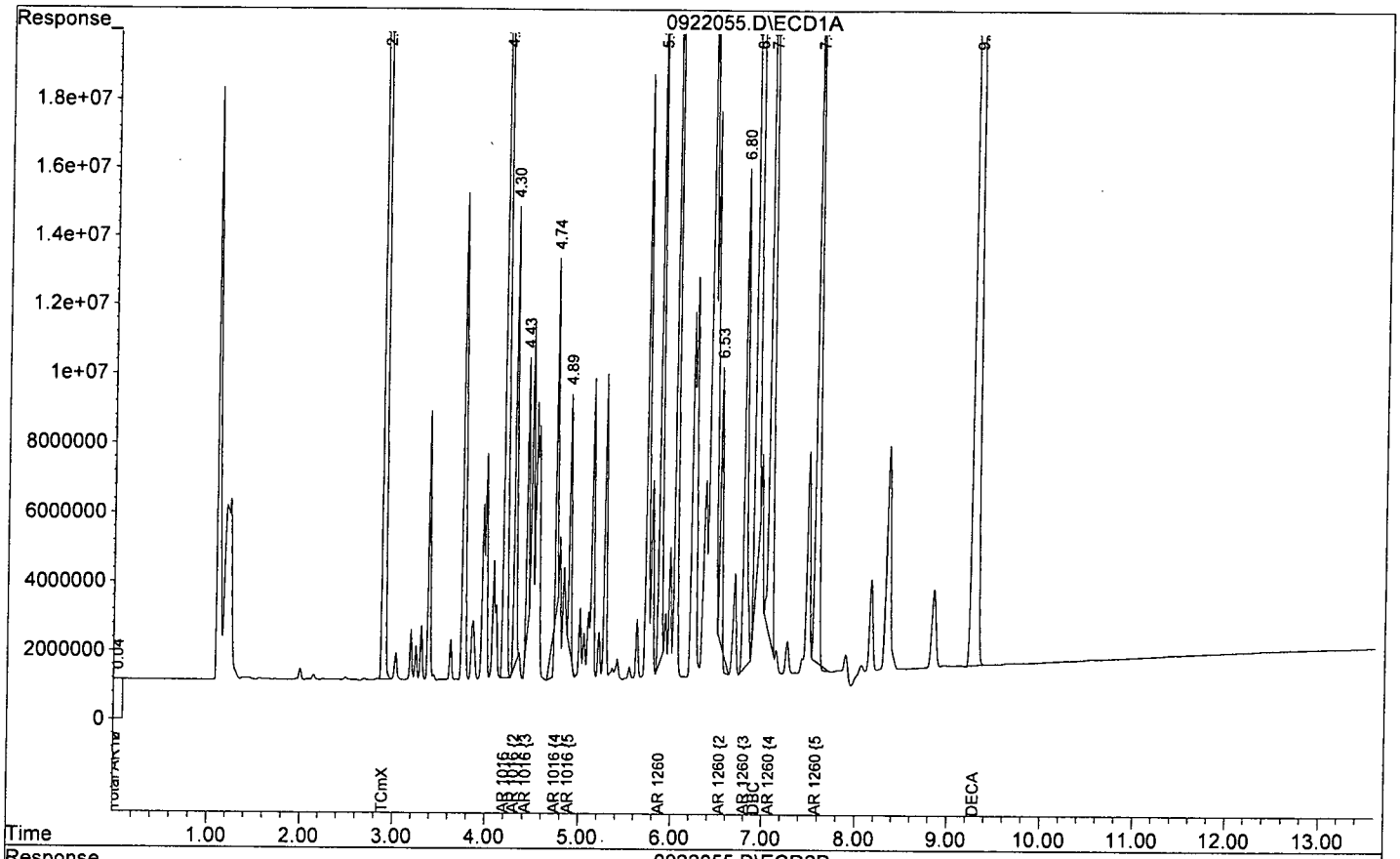
Target Compounds

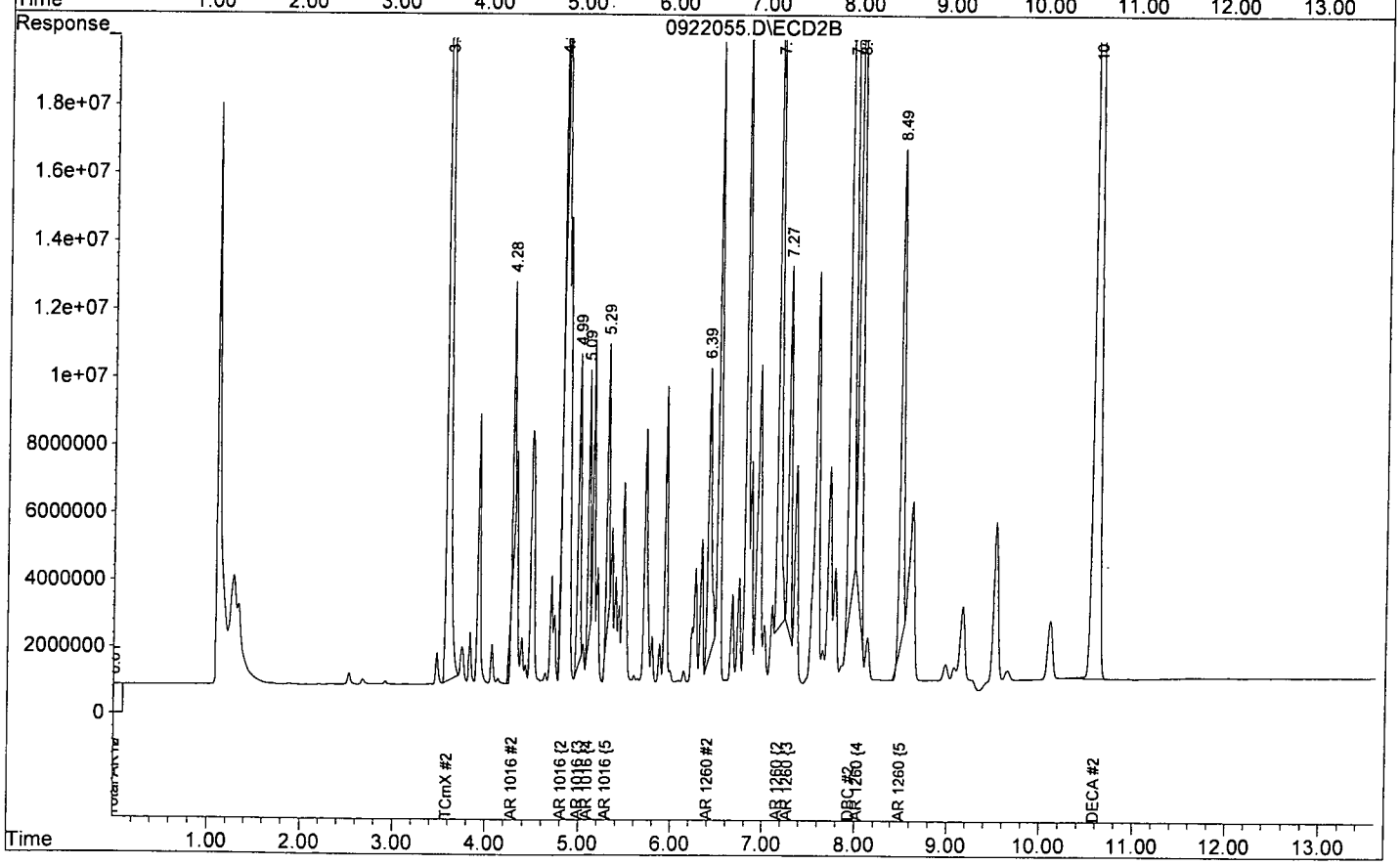
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922055.D
Acq On : 9-23-14 2:02:24
Sample : PCB 5 8/1/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 55
Operator: MA
Inst : Lucy
Multiplr: 1.00





EPA 8082
PSX0922

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/23/14
Instrument: Lucy
Initial Cal. Date: 09/23/14
Data File: 0922056.D

		Compound	MEAN	CCRF	%D		%Drift	
1	BNMC	Total AR1016	37512300	35671700	4.9	BNMC		
2	L3BKC	AR 1016	16624500	16030200	3.6	L3BKC		
3	L3BKC	AR 1016 {2}	7423910	6222490	16	L3BKC		
4	L3BKC	AR 1016 {3}	4188070	4137610	1.2	L3BKC		
5	L3BKC	AR 1016 {4}	5582370	5332710	4.5	L3BKC		
6	L3BKC	AR 1016 {5}	3693510	3948660	6.9	L3BKC		
7	BNMC	Total AR1260	53761900	66318900	23	BNMC		*see back
8	L9BKC	AR 1260	11800500	13038600	10	L9BKC		
9	L9BKC	AR 1260 {2}	4243020	5170780	22	L9BKC		*
10	L9BKC	AR 1260 {3}	8053980	9744120	21	L9BKC		*
11	L9BKC	AR 1260 {4}	17890300	23455900	31	L9BKC		*
12	L9BKC	AR 1260 {5}	11774200	14909500	27	L9BKC		*
13	signal #2							
14	BNMC	Total AR1016	23366500	20340800	13	BNMC		
15	L3BKC	AR 1016	4935300	4156340	16	L3BKC		
16	L3BKC	AR 1016 {2}	3602360	3284230	8.8	L3BKC		
17	L3BKC	AR 1016 {3}	5096860	4597980	9.8	L3BKC		
18	L3BKC	AR 1016 {4}	4804760	4104710	15	L3BKC		
19	L3BKC	AR 1016 {5}	4927220	4197570	15	L3BKC		
20	BNMC	Total AR1260	43457100	51202100	18	BNMC		
21	L9BKC	AR 1260	4923130	5484850	11	L9BKC		
22	L9BKC	AR 1260 {2}	11732500	11496800	2.0	L9BKC		
23	L9BKC	AR 1260 {3}	6205370	7560020	22	L9BKC		
24	L9BKC	AR 1260 {4}	12557600	17281700	38	L9BKC		
25	L9BKC	AR 1260 {5}	8038510	9378830	17	L9BKC		
26								
27								
28								
29								
30								
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32								
33								
34								
35								
36								
37								
38								
39								
40								
		Average			#REF!			

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922056.D\ECD1A.CH Vial: 56
Signal #2 : G:\LUCY\DATA\140922\0922056.D\ECD2B.CH
Acq On : 9-23-14 2:18:54 Operator: MA
Sample : PCB 2ND SRC 6/9/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 15:04 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	0.00	0.00	0	0	N.D. d	N.D. d
Spiked Amount 0.150			Recovery =		0.00%	0.00%
2) SA DBC	0.00	0.00	0	0	N.D. d	N.D. d
Spiked Amount 0.150			Recovery =		0.00%	0.00%
3) SA DECA	0.00	0.00	0	0	N.D. d	N.D. d
Spiked Amount 0.150			Recovery =		0.00%	0.00%
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	35671651	20340833	0.475m	0.435m
5) L3BKC AR 1016	4.20	4.28	16030173	4156338	0.482	0.421
6) L3BKC AR 1016 (2)	4.30	4.81	6222492	3284226	0.419	0.456
7) L3BKC AR 1016 (3)	4.43	4.99	4137614	4597984	0.494	0.451
8) L3BKC AR 1016 (4)	4.74	5.09	5332709	4104712	0.478	0.427
9) L3BKC AR 1016 (5)	4.89	5.30	3948664	4197573	0.535	0.426
10) BNMC Total AR1260	0.00	0.00	66318868	51202148	0.617m	0.589m
11) L9BKC AR 1260	5.87	6.40	13038620	5484850	0.552	0.557
12) L9BKC AR 1260 (2)	6.53	7.16	5170780	11496770	0.609	0.490
13) L9BKC AR 1260 (3)	6.80	7.28	9744124	7560020	0.605	0.609
14) L9BKC AR 1260 (4)	7.08	8.02	23455875	17281679	0.656	0.688
15) L9BKC AR 1260 (5)	7.58	8.49	14909470	9378828	0.633	0.583

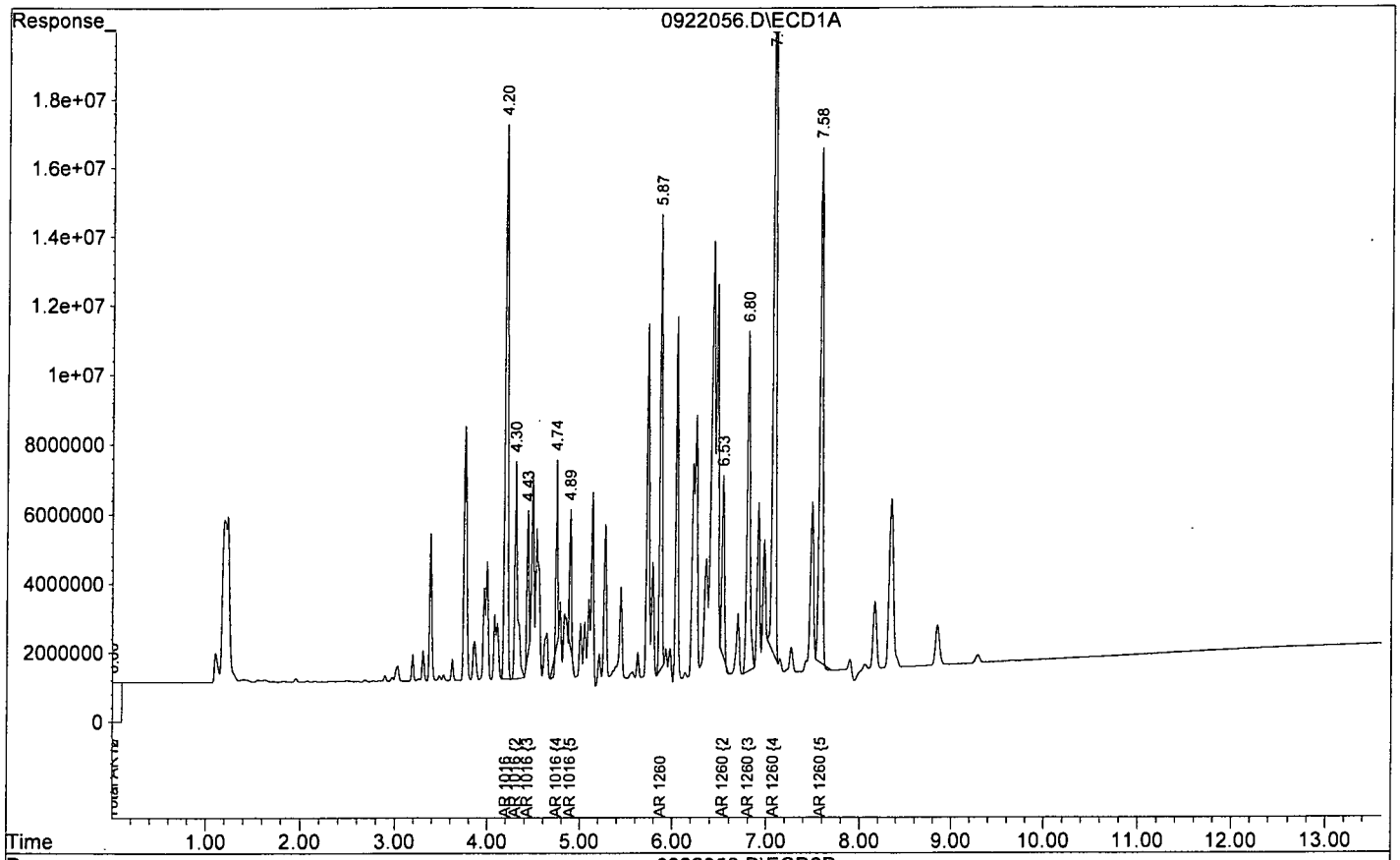
Target Compounds

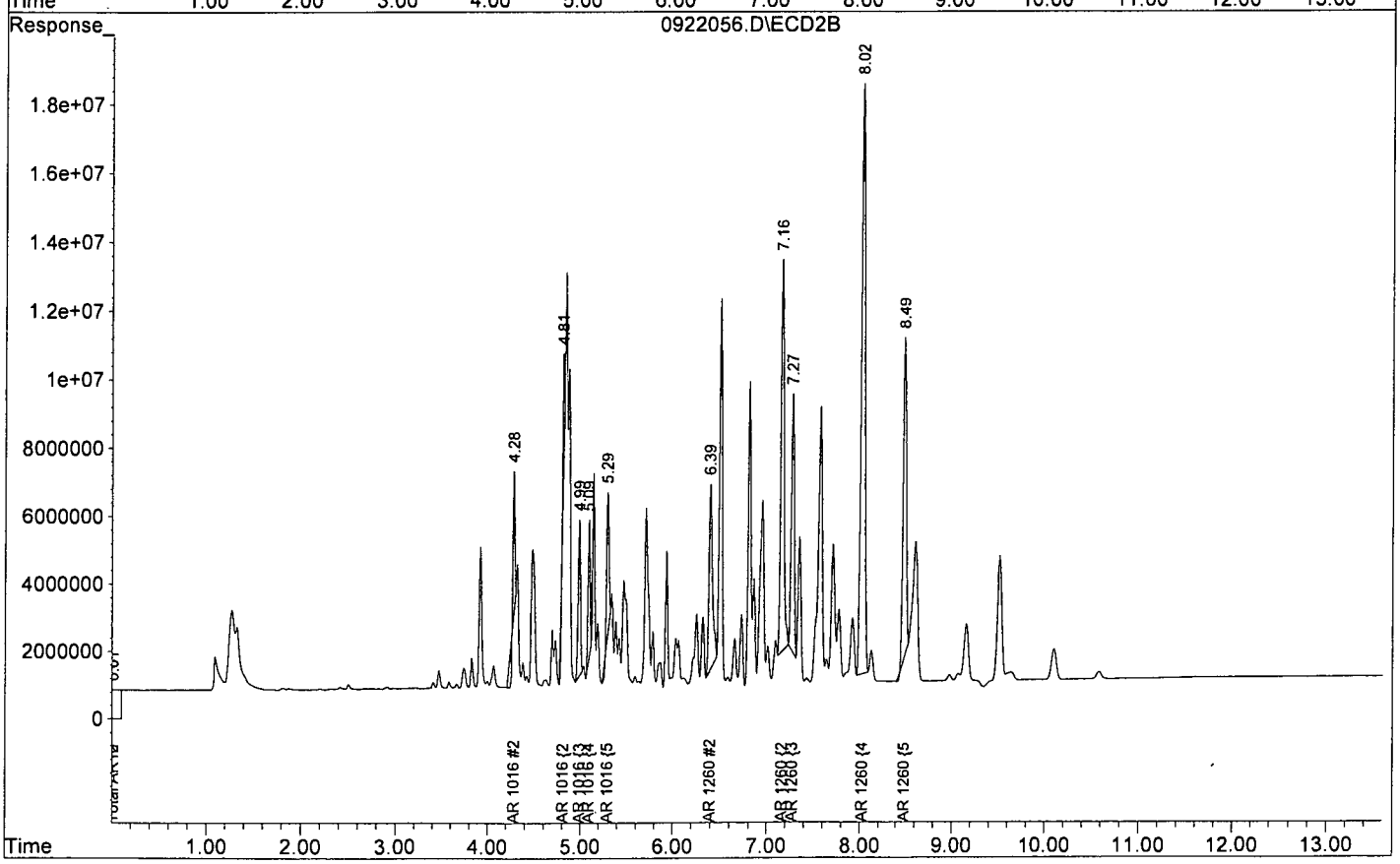
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922056.D
Acq On : 9-23-14 2:18:54
Sample : PCB 2ND SRC 6/9/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 56
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922057.D\ECD1A.CH Vial: 57
Acq On : 9-23-14 2:35:18 Operator: MA
Sample : AR 1221 4/11/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922057.D\ECD2B.CH Vial: 57
Acq On : 9-23-14 2:35:19 Operator: MA
Sample : AR 1221 4/11/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile : events2.e
Quant Time: Sep 23 11:45 2014 Quant Results File: AR1221.RES

Quant Method : G:\LUCY\DATA\140922\AR1221.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 11:45:19 2014
Response via : Continuing Cal File: G:\LUCY\DATA\140922\0922057.D
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) BNMC Total AR1221	0.00	0.00	23727598	21283163	1.000m	1.000m
2) L3BKC AR 1221	2.49	2.91	3313230	3171631	1.000	1.000
3) L3BKC AR 1221 {2}	3.19	3.75	4847441	3334874	1.000	1.000
4) L3BKC AR 1221 {3}	3.30	3.83	3078324	2816336	1.000	1.000
5) L3BKC AR 1221 {4}	3.38	3.92	10496549	9918176	1.000	1.000
6) L3BKC AR 1221 {5}	3.86	4.48	1992054	2042147	1.000	1.000

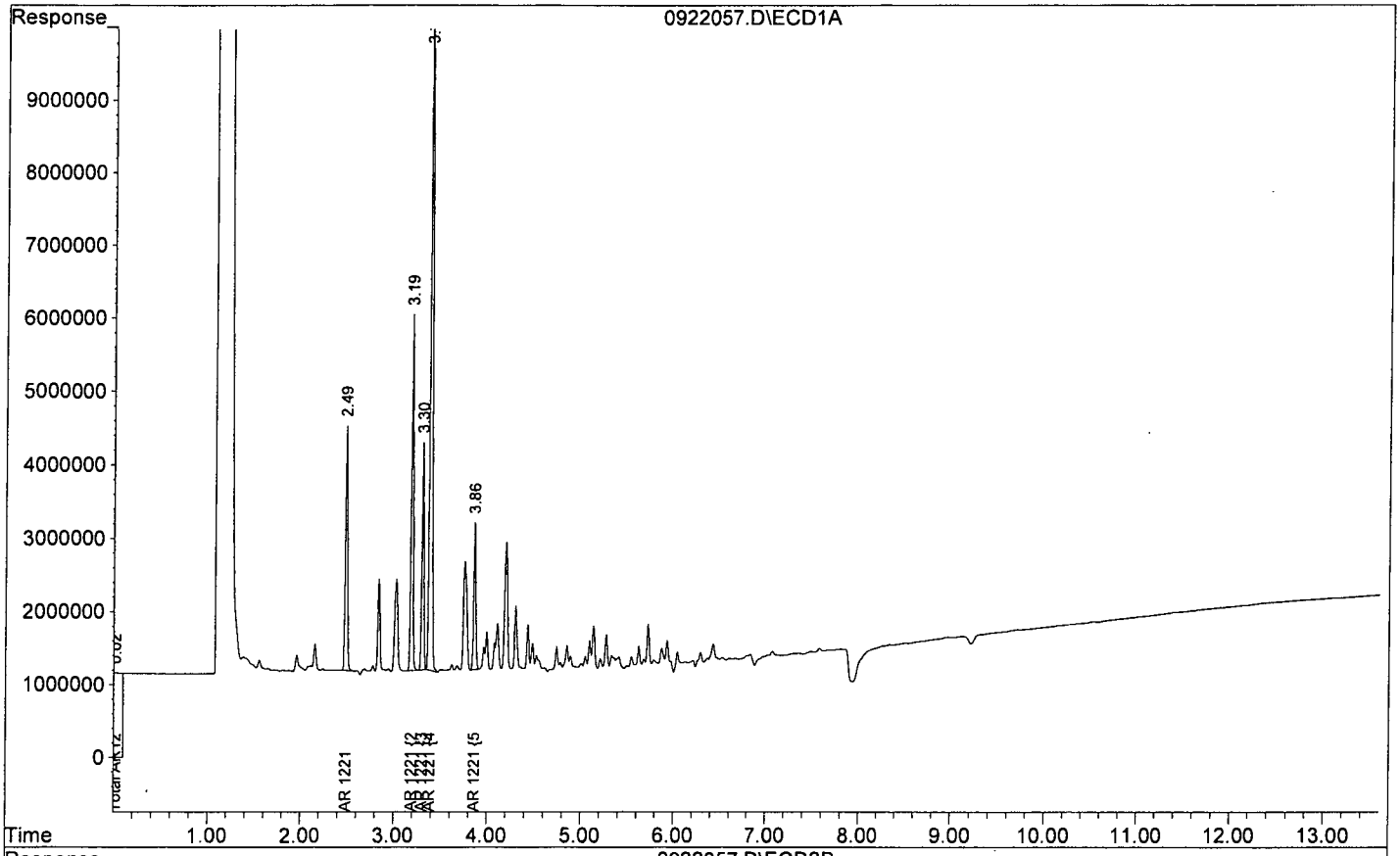
Target Compounds

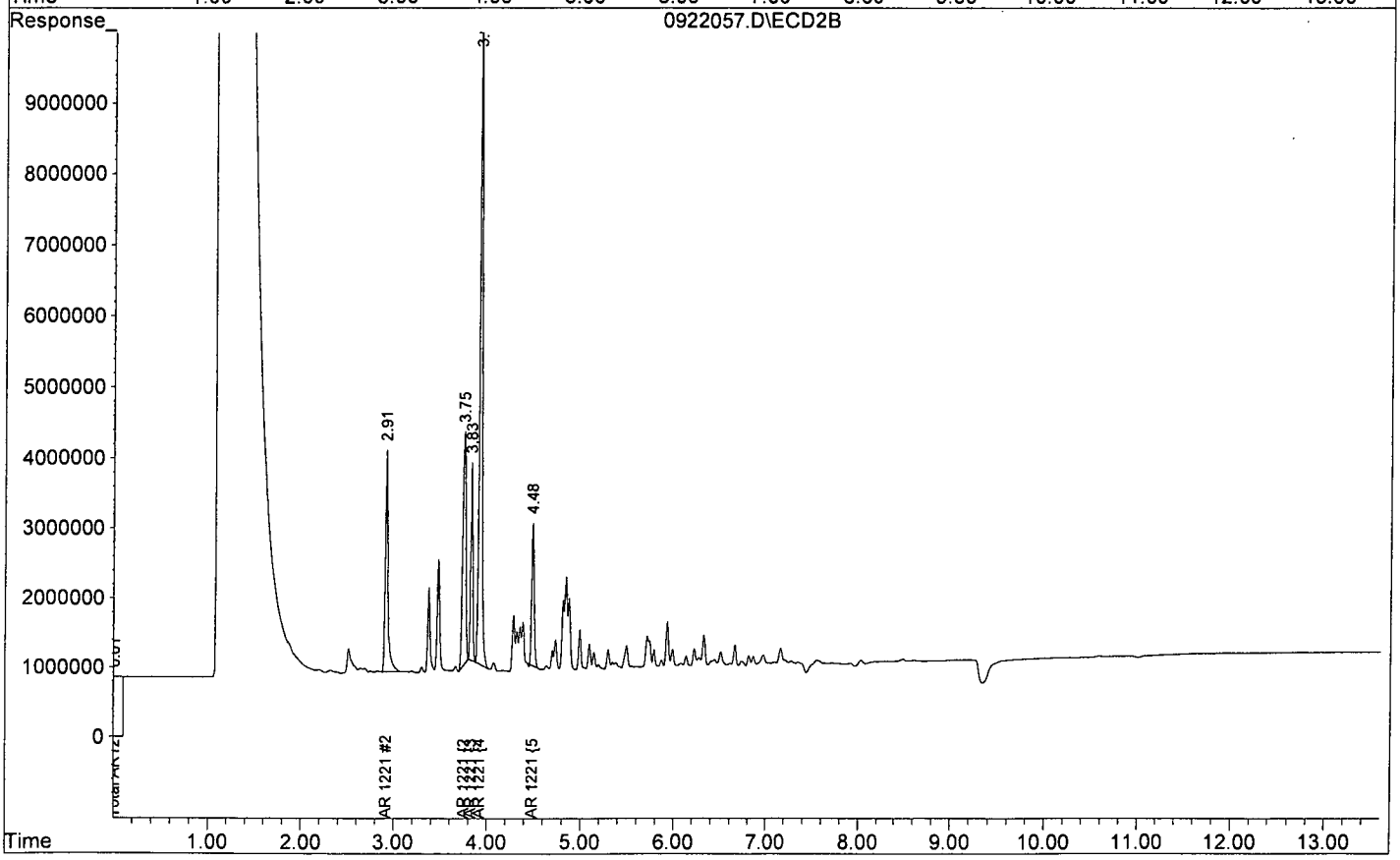
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922057.D
Acq On : 9-23-14 2:35:18
Sample : AR 1221 4/11/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\AR1221.M

Vial: 57
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922058.D\ECD1A.CH Vial: 58
Acq On : 9-23-14 2:51:43 Operator: MA
Sample : AR 1232 4/11/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile : events.e

Data File : G:\LUCY\DATA\140922\0922058.D\ECD2B.CH Vial: 58
Acq On : 9-23-14 2:51:42 Operator: MA
Sample : AR 1232 4/11/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile : events2.e
Quant Time: Sep 23 11:47 2014 Quant Results File: AR1232.RES

Quant Method : G:\LUCY\DATA\140922\AR1232.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 11:46:49 2014
Response via : Continuing Cal File: G:\LUCY\DATA\140922\0922058.D
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) BNMC Total AR1232	0.00	0.00	37009880	22468497	1.000m	1.000m
2) L3BKC AR 1232	3.38	3.92	9292043	8916194	1.000	1.000
3) L3BKC AR 1232 {2}	3.75	4.28	6473590	3378282	1.000	1.000
4) L3BKC AR 1232 {3}	4.20	5.14	13367177	3283532	1.000	1.000
5) L3BKC AR 1232 {4}	4.74	5.78	4088647	3614807	1.000	1.000
6) L3BKC AR 1232 {5}	5.10	5.93	3788424	3275681	1.000	1.000

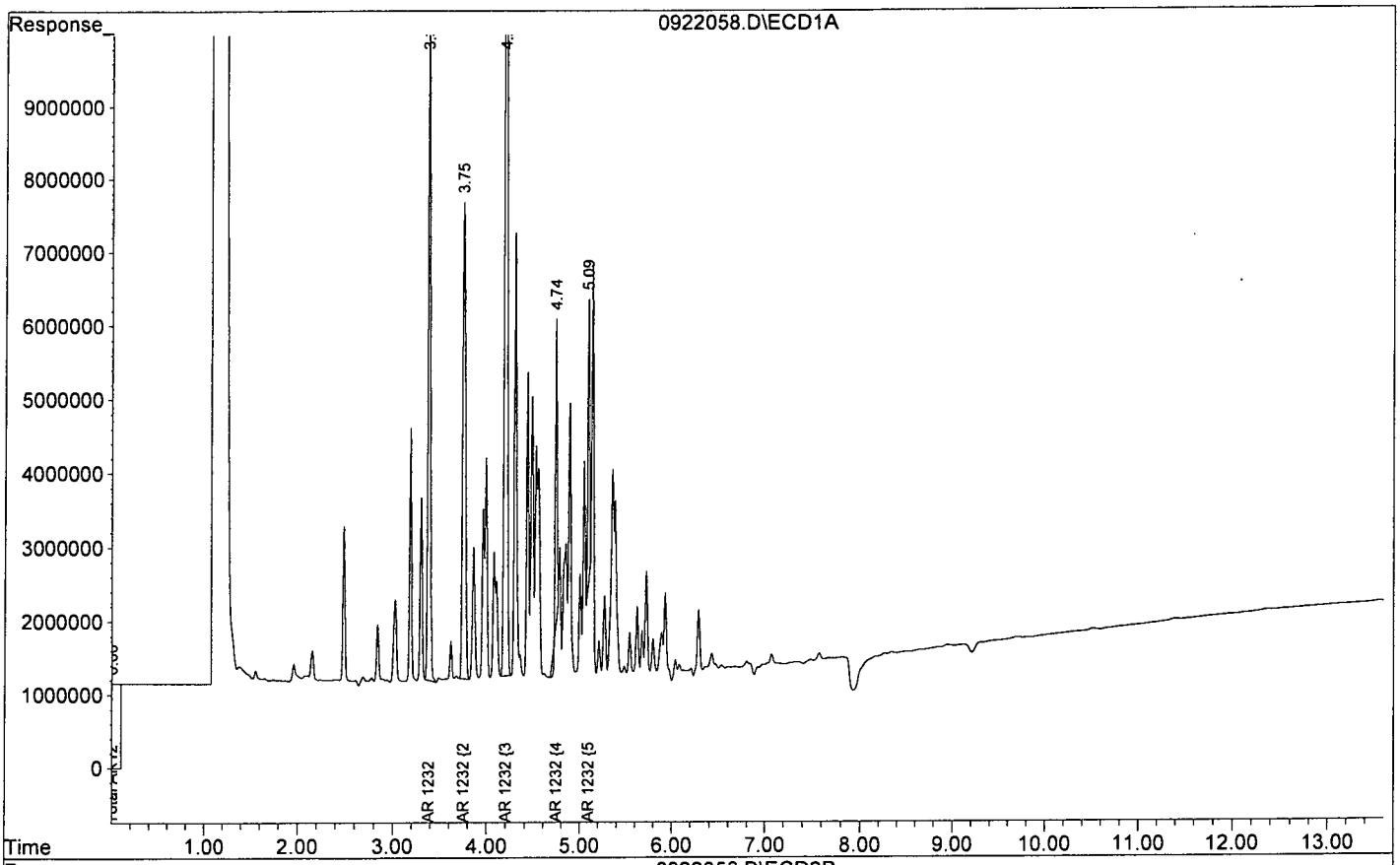
Target Compounds

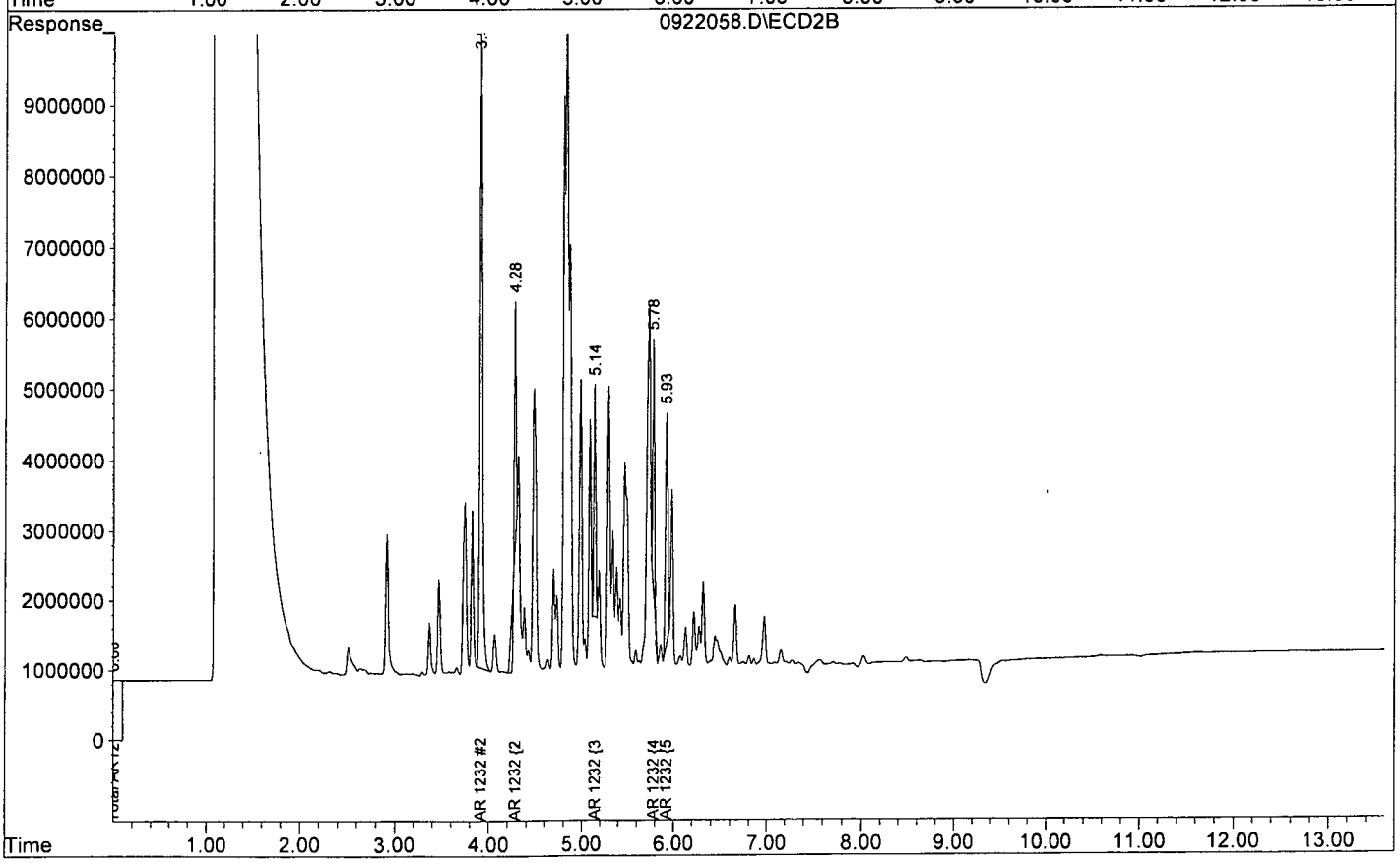
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922058.D
Acq On : 9-23-14 2:51:43
Sample : AR 1232 4/11/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\AR1232.M

Vial: 58
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922059.D\ECD1A.CH Vial: 59
Signal #2 : G:\LUCY\DATA\140922\0922059.D\ECD2B.CH
Acq On : 9-23-14 3:08:05 Operator: MA
Sample : AR 1242 4/11/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 11:48 2014 Quant Results File: AR1242.RES

Quant Method : G:\LUCY\DATA\140922\AR1242.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 11:48:00 2014
Response via : Continuing Cal File: G:\LUCY\DATA\140922\0922059.D
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	BNMC Total AR1242	0.00	0.00	58187511	34255904	1.000m	1.000m
2)	L3BKC AR 1242	3.38	3.92	6719943	6335478	1.000	1.000
3)	L3BKC AR 1242 {2}	3.75	4.28	11498093	6512803	1.000	1.000
4)	L3BKC AR 1242 {3}	4.20	5.14	24768459	6785337	1.000	1.000
5)	L3BKC AR 1242 {4}	4.74	5.29	8361506	7176315	1.000	1.000
6)	L3BKC AR 1242 {5}	4.89	5.78	6839510	7445971	1.000	1.000

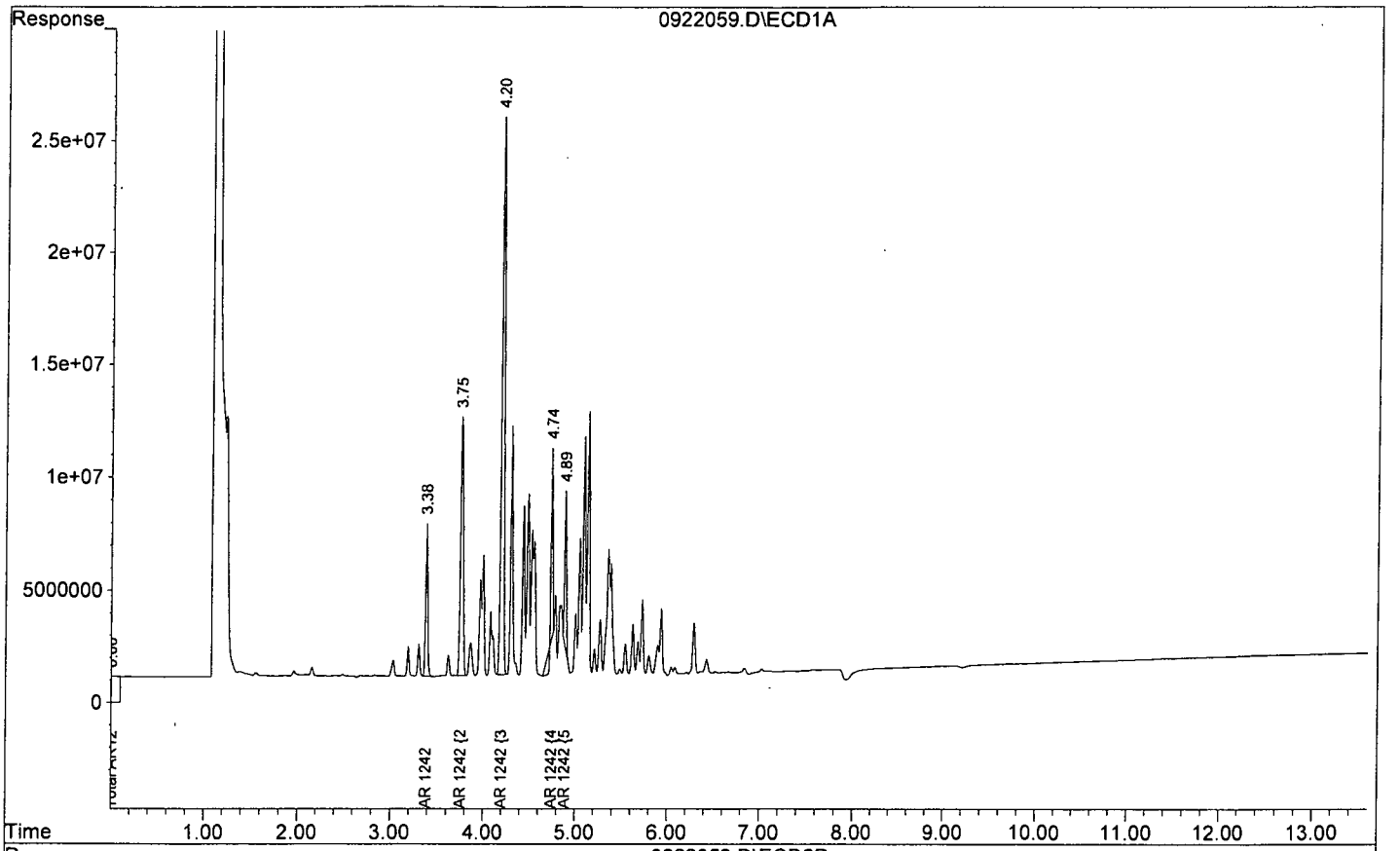
Target Compounds

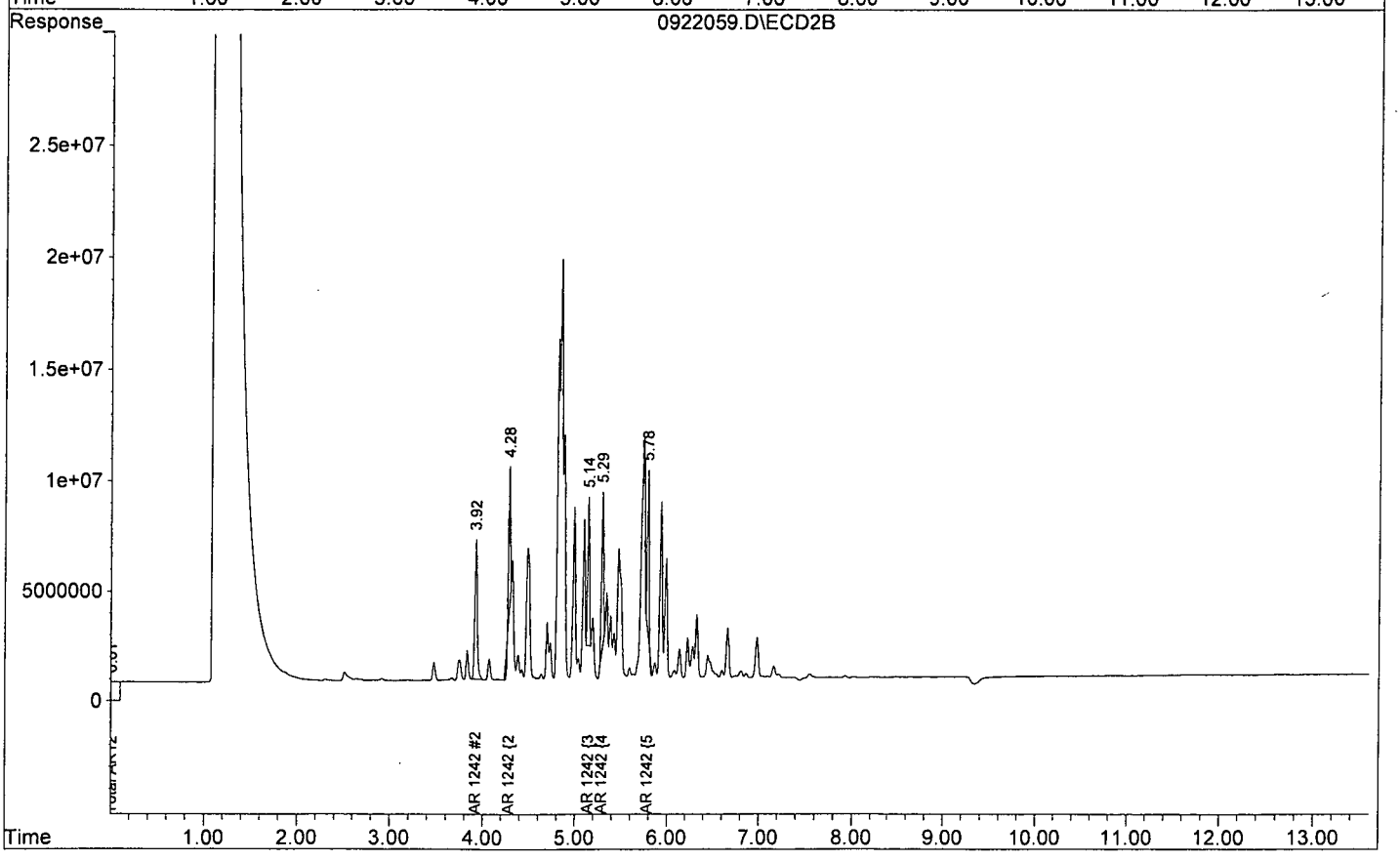
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922059.D
Acq On : 9-23-14 3:08:05
Sample : AR 1242 4/11/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\AR1242.M

Vial: 59
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922060.D\ECD1A.CH Vial: 60
Signal #2 : G:\LUCY\DATA\140922\0922060.D\ECD2B.CH
Acq On : 9-23-14 3:24:37 Operator: MA
Sample : AR 1248 4/11/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 11:49 2014 Quant Results File: AR1248.RES

Quant Method : G:\LUCY\DATA\140922\AR1248.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 11:49:19 2014
Response via : Continuing Cal File: G:\LUCY\DATA\140922\0922060.D
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	BNMC Total AR1248	0.00	0.00	61860425	51769790	1.000m	1.000m
2)	L3BKC AR 1248	4.74	5.09	13435836	11080174	1.000	1.000
3)	L3BKC AR 1248 {2}	4.89	5.14	10765936	9291177	1.000	1.000
4)	L3BKC AR 1248 {3}	5.10	5.29	13661917	11839648	1.000	1.000
5)	L3BKC AR 1248 {4}	5.14	5.78	15987504	11951410	1.000	1.000
6)	L3BKC AR 1248 {5}	5.72	5.98	8009233	7607381	1.000	1.000

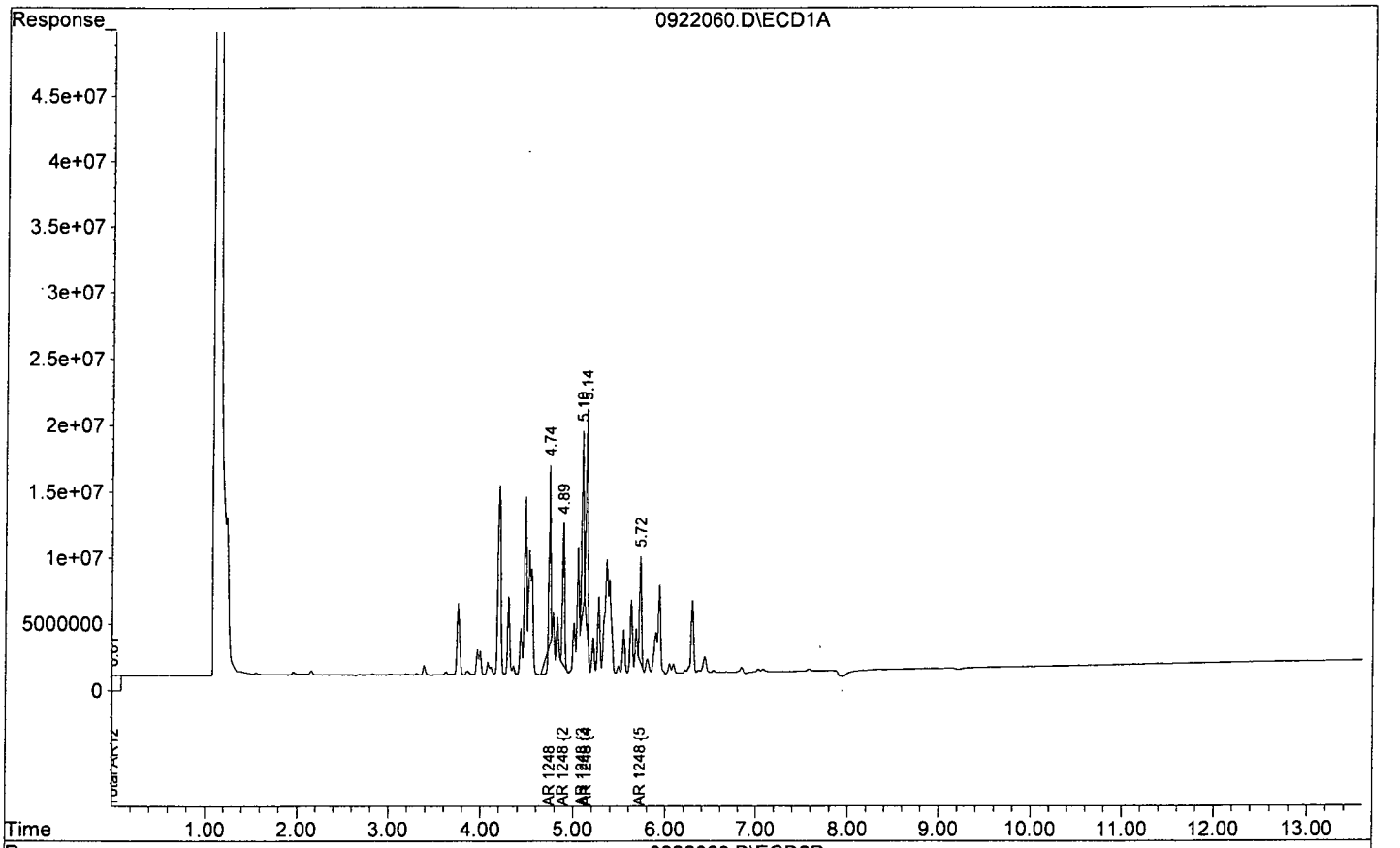
Target Compounds

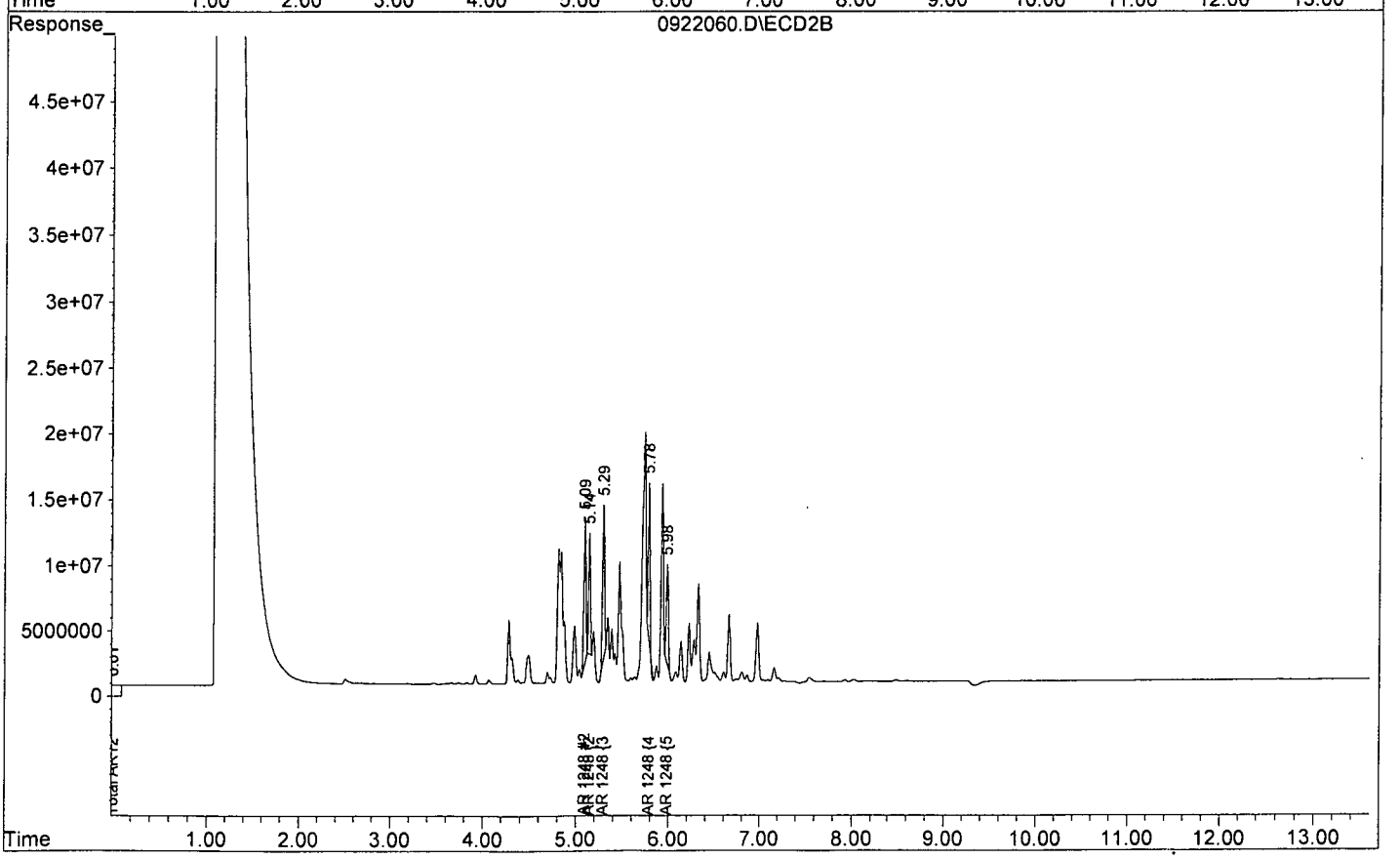
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922060.D
Acq On : 9-23-14 3:24:37
Sample : AR 1248 4/11/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\AR1248.M

Vial: 60
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922061.D\ECD1A.CH Vial: 61
Signal #2 : G:\LUCY\DATA\140922\0922061.D\ECD2B.CH
Acq On : 9-23-14 3:41:01 Operator: MA
Sample : AR 1254 4/11/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 11:50 2014 Quant Results File: AR1254.RES

Quant Method : G:\LUCY\DATA\140922\AR1254.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 11:50:25 2014
Response via : Continuing Cal File: G:\LUCY\DATA\140922\0922061.D
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	BNMC Total AR1254	0.00	0.00	91325808	87952848	1.000m	1.000m
2)	L3BKC AR 1254	4.48	5.09	8851460	8957484	1.000	1.000
3)	L3BKC AR 1254 {2}	5.27	5.93	18759905	24285927	1.000	1.000
4)	L3BKC AR 1254 {3}	5.63	6.32	14617817	23170790	1.000	1.000
5)	L3BKC AR 1254 {4}	5.72	6.66	30302979	17159367	1.000	1.000
6)	L3BKC AR 1254 {5}	6.42	7.16	18793646	14379279	1.000	1.000

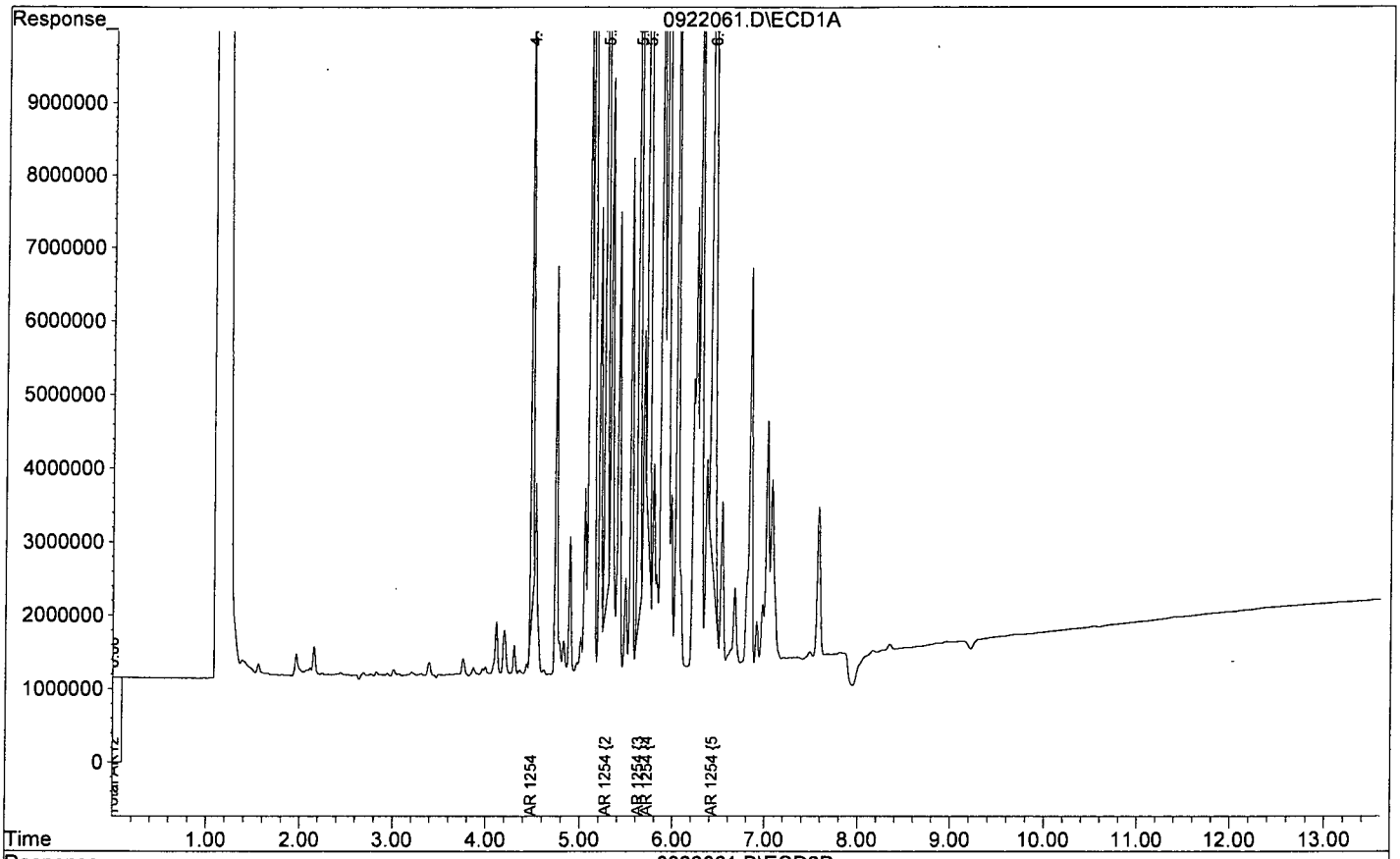
Target Compounds

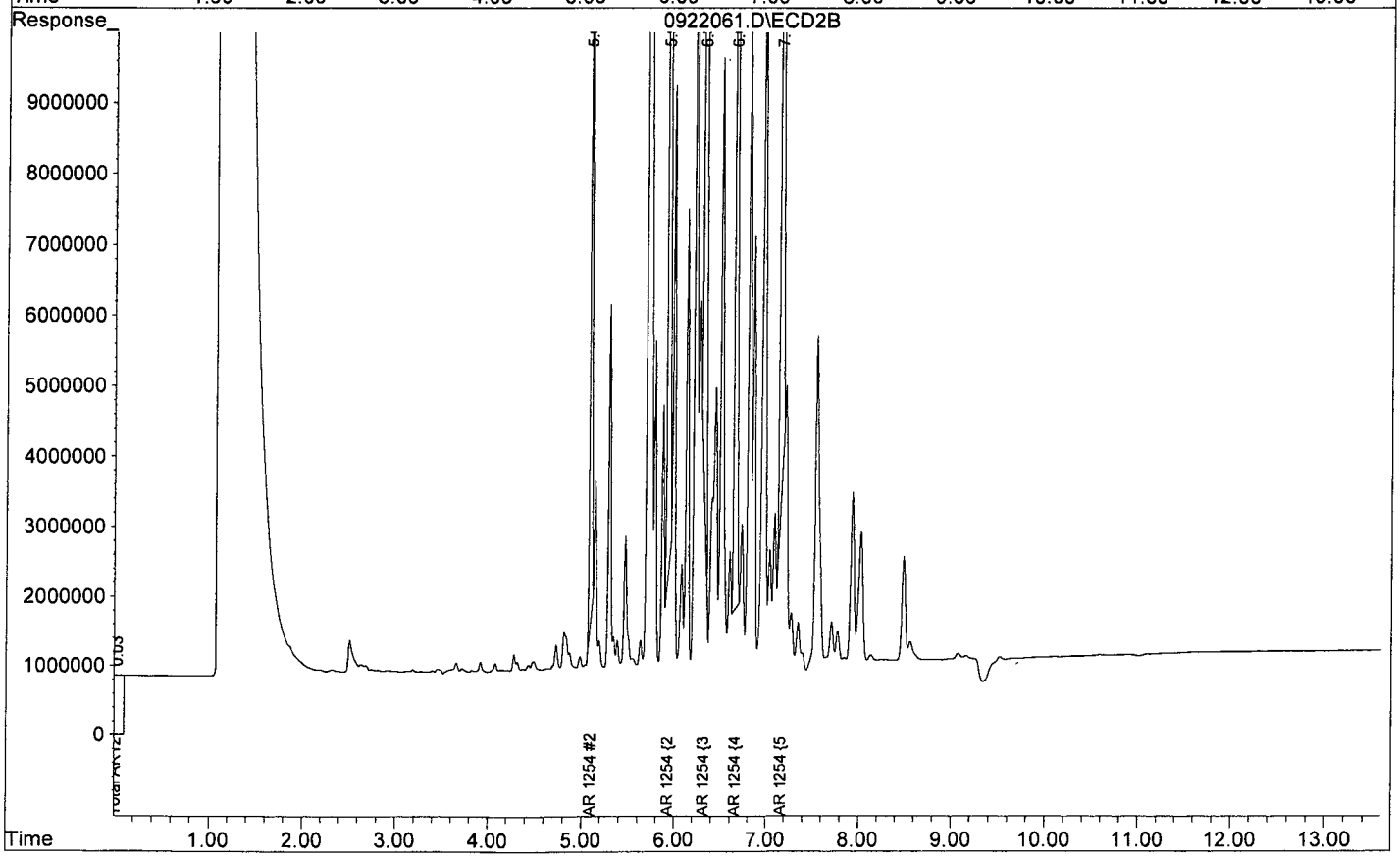
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922061.D
Acq On : 9-23-14 3:41:01
Sample : AR 1254 4/11/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\AR1254.M

Vial: 61
Operator: MA
Inst : Lucy
Multiplr: 1.00





EPA 8082
PSX0922

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/23/14
Instrument: Lucy
Initial Cal. Date: 09/23/14
Data File: 0922093.D

		Compound	MEAN	CCRF	%D		%Drift
1	SA	TCmX	243887000	245115000	0.50	SA	
2	SA	DBC	141505000	134674000	4.8	SA	
3	SA	DECA	123202000	124358000	0.94	SA	
4	BNMC	Total AR1016	37512300	38010500	1.3	BNMC	
5	L3BKC	AR 1016	16624500	16699000	0.45	L3BKC	
6	L3BKC	AR 1016 {2}	7423910	7523190	1.3	L3BKC	
7	L3BKC	AR 1016 {3}	4188070	4359810	4.1	L3BKC	
8	L3BKC	AR 1016 {4}	5582370	5673550	1.6	L3BKC	
9	L3BKC	AR 1016 {5}	3693510	3754910	1.7	L3BKC	
10	BNMC	Total AR1260	53761900	52328200	2.7	BNMC	
11	L9BKC	AR 1260	11800500	11581900	1.9	L9BKC	
12	L9BKC	AR 1260 {2}	4243020	4199060	1.0	L9BKC	
13	L9BKC	AR 1260 {3}	8053980	7688030	4.5	L9BKC	
14	L9BKC	AR 1260 {4}	17890300	17377200	2.9	L9BKC	
15	L9BKC	AR 1260 {5}	11774200	11482000	2.5	L9BKC	
16	signal #2						
17	SA	TCmX	234966000	228224000	2.9	SA	
18	SA	DBC	113381000	103987000	8.3	SA	
19	SA	DECA	103830000	103932000	0.10	SA	
20	BNMC	Total AR1016	23366500	23661900	1.3	BNMC	
21	L3BKC	AR 1016	4935300	4983860	0.98	L3BKC	
22	L3BKC	AR 1016 {2}	3602360	3656540	1.5	L3BKC	
23	L3BKC	AR 1016 {3}	5096860	5061420	0.70	L3BKC	
24	L3BKC	AR 1016 {4}	4804760	4926940	2.5	L3BKC	
25	L3BKC	AR 1016 {5}	4927220	5033160	2.2	L3BKC	
26	BNMC	Total AR1260	43457100	42727800	1.7	BNMC	
27	L9BKC	AR 1260	4923130	4901040	0.45	L9BKC	
28	L9BKC	AR 1260 {2}	11732500	11504200	1.9	L9BKC	
29	L9BKC	AR 1260 {3}	6205370	6177260	0.45	L9BKC	
30	L9BKC	AR 1260 {4}	12557600	12415800	1.1	L9BKC	
31	L9BKC	AR 1260 {5}	8038510	7729360	3.8	L9BKC	
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			#REF!		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922093.D\ECD1A.CH Vial: 93
Signal #2 : G:\LUCY\DATA\140922\0922093.D\ECD2B.CH
Acq On : 9-23-14 13:42:49 Operator: MA
Sample : PCB 1 8/1/14 Inst : Lucy
Misc : water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 23 14:26 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.90	3.58	9804592	9128963	0.020	0.019
Spiked Amount 0.150			Recovery =		13.33%	12.67%
2) SA DBC	6.92	7.93	5386967	4159489	0.019	0.018
Spiked Amount 0.150			Recovery =		12.67%	12.00%
3) SA DECA	9.28	10.58	4974318	4157281	0.020	0.020
Spiked Amount 0.150			Recovery =		13.33%	13.33%
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	7602100	4732386	0.101m	0.101m
5) L3BKC AR 1016	4.20	4.28	3339808	996772	0.100	0.101
6) L3BKC AR 1016 {2}	4.30	4.81	1504638	731308	0.101	0.102
7) L3BKC AR 1016 {3}	4.43	4.99	871961	1012285	0.104	0.099
8) L3BKC AR 1016 {4}	4.74	5.09	1134710	985388	0.102	0.103
9) L3BKC AR 1016 {5}	4.89	5.29	750983	1006633	0.102	0.102
10) BNMC Total AR1260	0.00	0.00	10465636	8545550	0.097m	0.098m
11) L9BKC AR 1260	5.87	6.39	2316379	980209	0.098	0.100
12) L9BKC AR 1260 {2}	6.53	7.16	839812	2300847	0.099	0.098
13) L9BKC AR 1260 {3}	6.80	7.27	1537606	1235453	0.095	0.100
14) L9BKC AR 1260 {4}	7.07	8.02	3475446	2483170	0.097	0.099
15) L9BKC AR 1260 {5}	7.58	8.48	2296392	1545872	0.098	0.096

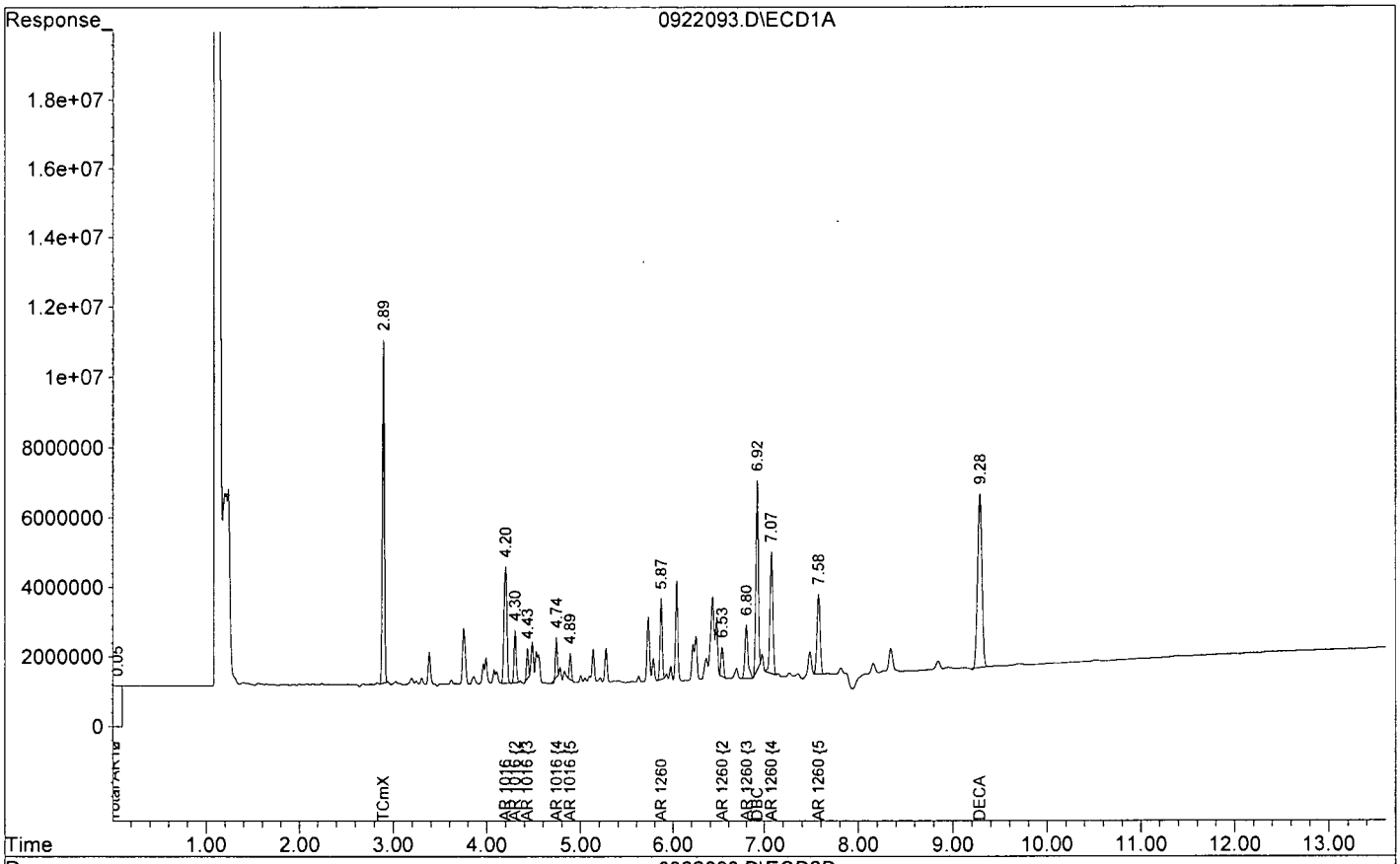
Target Compounds

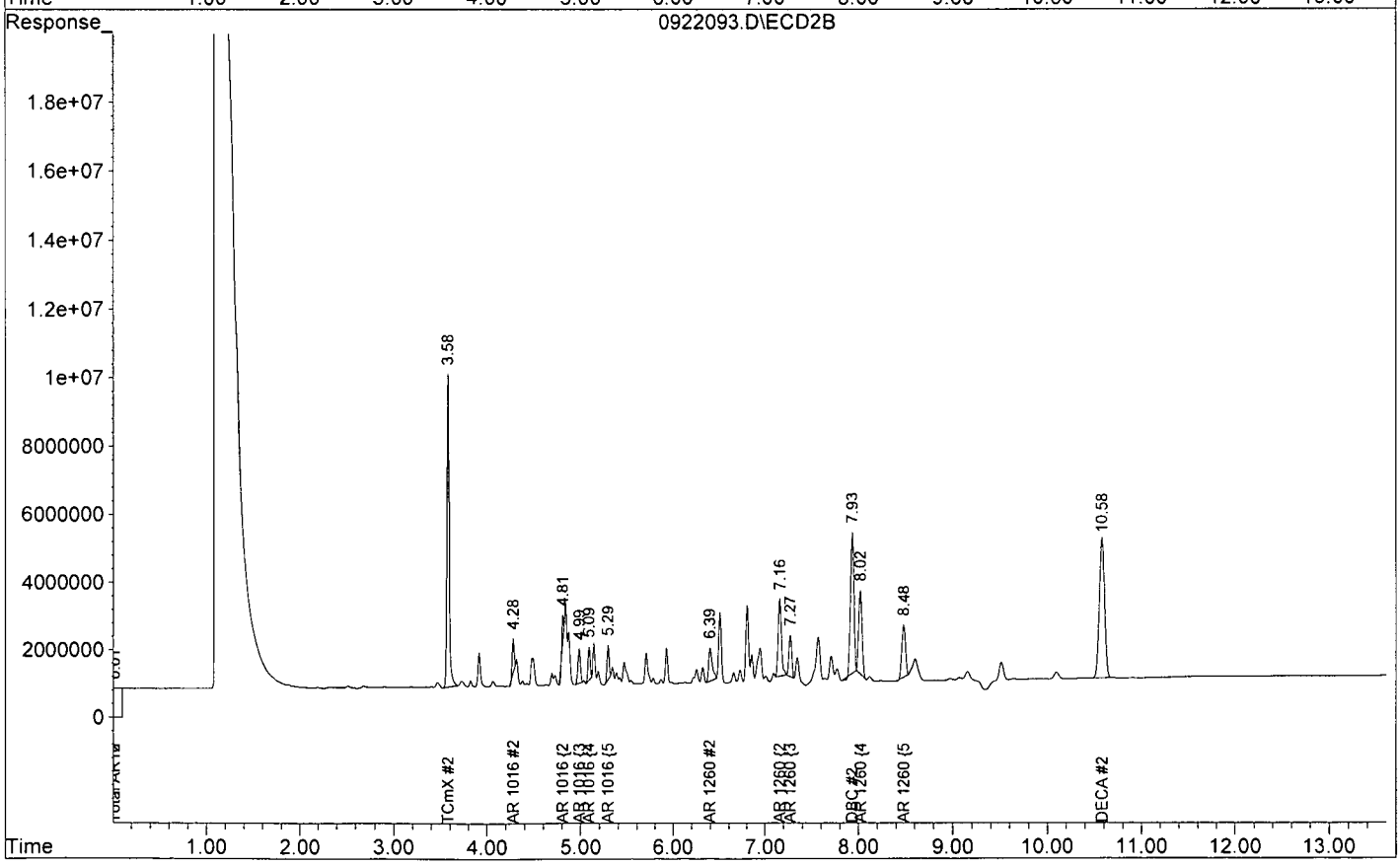
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922093.D
Acq On : 9-23-14 13:42:49
Sample : PCB 1 8/1/14
Misc : water
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 93
Operator: MA
Inst : Lucy
Multiplr: 1.00





EPA 8082
PSX0922

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 14218
Date Analyzed: 09/24/14
Instrument: Lucy
Initial Cal. Date: 09/22/14
Data File: 0922130.D

		Compound	MEAN	CCRF	%D		%Drift
1	SA	TCmX	243887000	257167000	5.4	SA	
2	SA	DBC	141505000	121707000	14	SA	
3	SA	DECA	123202000	96415300	22	SA	*
4	BNMC	Total AR1016	37512300	36228100	3.4	BNMC	
5	L3BKC	AR 1016	16624500	16386400	1.4	L3BKC	
6	L3BKC	AR 1016 {2}	7423910	7043930	5.1	L3BKC	
7	L3BKC	AR 1016 {3}	4188070	4123230	1.5	L3BKC	
8	L3BKC	AR 1016 {4}	5582370	5125070	8.2	L3BKC	
9	L3BKC	AR 1016 {5}	3693510	3549470	3.9	L3BKC	
10	BNMC	Total AR1260	53761900	42672600	21	BNMC	*
11	L9BKC	AR 1260	11800500	9551350	19	L9BKC	
12	L9BKC	AR 1260 {2}	4243020	3455310	19	L9BKC	
13	L9BKC	AR 1260 {3}	8053980	6081050	24	L9BKC	
14	L9BKC	AR 1260 {4}	17890300	14274200	20	L9BKC	
15	L9BKC	AR 1260 {5}	11774200	9310730	21	L9BKC	
16	signal #2						
17	SA	TCmX	234966000	243273000	3.5	SA	
18	SA	DBC	113381000	100641000	11	SA	
19	SA	DECA	103830000	87786300	15	SA	
20	BNMC	Total AR1016	23366500	21112800	9.6	BNMC	
21	L3BKC	AR 1016	4935300	4507710	8.7	L3BKC	
22	L3BKC	AR 1016 {2}	3602360	3220830	11	L3BKC	
23	L3BKC	AR 1016 {3}	5096860	4724260	7.3	L3BKC	
24	L3BKC	AR 1016 {4}	4804760	4322490	10	L3BKC	
25	L3BKC	AR 1016 {5}	4927220	4337550	12	L3BKC	
26	BNMC	Total AR1260	43457100	37231300	14	BNMC	
27	L9BKC	AR 1260	4923130	4215340	14	L9BKC	
28	L9BKC	AR 1260 {2}	11732500	10062800	14	L9BKC	
29	L9BKC	AR 1260 {3}	6205370	5084020	18	L9BKC	
30	L9BKC	AR 1260 {4}	12557600	11123300	11	L9BKC	
31	L9BKC	AR 1260 {5}	8038510	6745810	16	L9BKC	
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			#REF!		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922130.D\ECD1A.CH Vial: 30
Signal #2 : G:\LUCY\DATA\140922\0922130.D\ECD2B.CH
Acq On : 9-24-14 0:37:05 Operator: MA
Sample : PCB 2 8/1/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 8:23 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	SA TCmX	2.90	3.58	25716651	24327296	0.053	0.052
	Spiked Amount 0.100			Recovery	=	53.00%	52.00%
2)	SA DBC	6.92	7.93	12170663	10064142	0.043	0.044
	Spiked Amount 0.100			Recovery	=	43.00%	44.00%
3)	SA DECA	9.28	10.58	9641534	8778629	0.039	0.042
	Spiked Amount 0.100			Recovery	=	39.00%	42.00%
	Target Compounds						
4)	BNMC Total AR1016	0.00	0.00	18114054	10556422	0.241m	0.226m
5)	L3BKC AR 1016	4.20	4.28	8193207	2253856	0.246	0.228
6)	L3BKC AR 1016 {2}	4.30	4.81	3521964	1610415	0.237	0.224
7)	L3BKC AR 1016 {3}	4.43	4.99	2061614	2362130	0.246	0.232
8)	L3BKC AR 1016 {4}	4.74	5.09	2562536	2161246	0.230	0.225
9)	L3BKC AR 1016 {5}	4.89	5.29	1774733	2168776	0.240	0.220
10)	BNMC Total AR1260	0.00	0.00	21336305	18615642	0.198m	0.214m
11)	L9BKC AR 1260	5.87	6.40	4775676	2107670	0.202	0.214
12)	L9BKC AR 1260 {2}	6.53	7.16	1727653	5031414	0.204	0.214
13)	L9BKC AR 1260 {3}	6.80	7.27	3040525	2542008	0.189	0.205
14)	L9BKC AR 1260 {4}	7.07	8.02	7137085	5561643	0.199	0.221
15)	L9BKC AR 1260 {5}	7.58	8.49	4655365	3372906	0.198	0.210

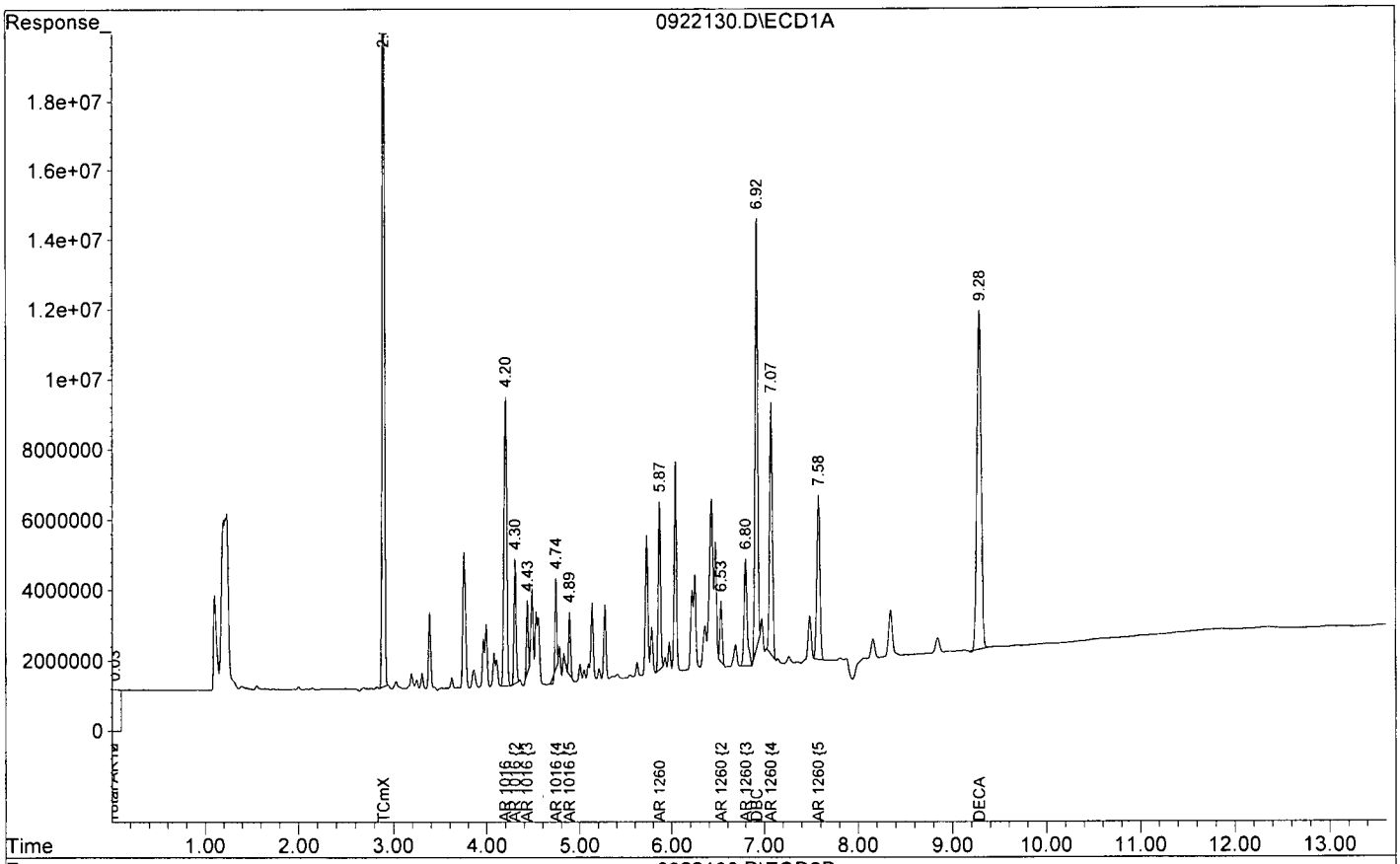
Target Compounds

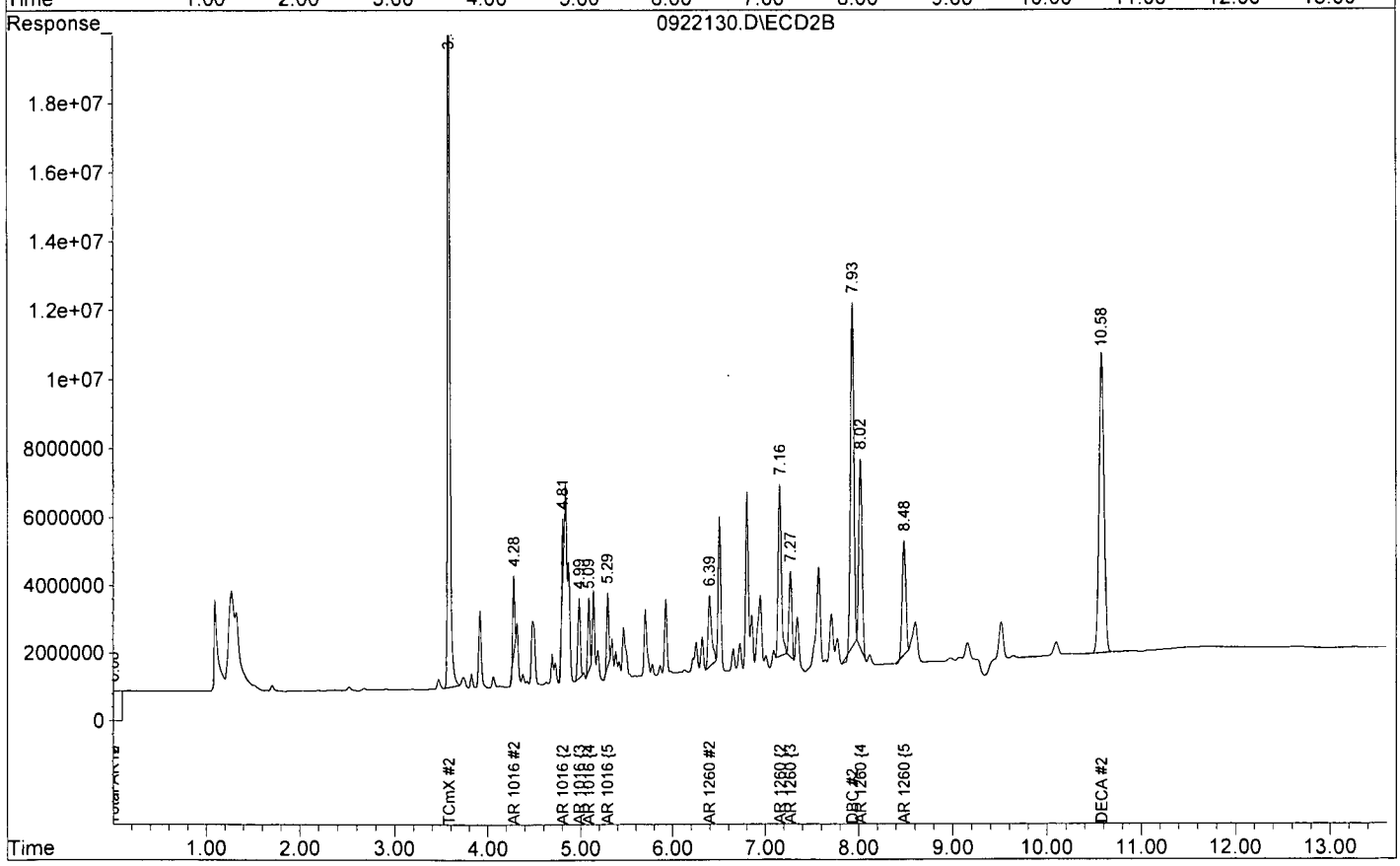
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922130.D
Acq On : 9-24-14 0:37:05
Sample : PCB 2 8/1/14
Misc : soil
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 30
Operator: MA
Inst : Lucy
Multiplr: 1.00





EPA 8082
PSX0922

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 09/29/14
Instrument: Lucy
Initial Cal. Date: 09/23/14
Data File: 0927062.D

		Compound	MEAN	CCRF	%D		%Drift
1	SA	TCmX	243887000	260693000	6.9	SA	
2	SA	DBC	141505000	131028000	7.4	SA	
3	SA	DECA	123202000	115643000	6.1	SA	
4	BNMC	Total AR1016	37512300	38388000	2.3	BNMC	
5	L3BKC	AR 1016	16624500	17646600	6.1	L3BKC	
6	L3BKC	AR 1016 {2}	7423910	7667260	3.3	L3BKC	
7	L3BKC	AR 1016 {3}	4188070	4398370	5.0	L3BKC	
8	L3BKC	AR 1016 {4}	5582370	5324680	4.6	L3BKC	
9	L3BKC	AR 1016 {5}	3693510	3351060	9.3	L3BKC	
10	BNMC	Total AR1260	53761900	50232600	6.6	BNMC	
11	L9BKC	AR 1260	11800500	11358400	3.7	L9BKC	
12	L9BKC	AR 1260 {2}	4243020	4136900	2.5	L9BKC	
13	L9BKC	AR 1260 {3}	8053980	7478830	7.1	L9BKC	
14	L9BKC	AR 1260 {4}	17890300	16454700	8.0	L9BKC	
15	L9BKC	AR 1260 {5}	11774200	10803800	8.2	L9BKC	
16	signal #2						
17	SA	TCmX	234966000	249927000	6.4	SA	
18	SA	DBC	113381000	101264000	11	SA	
19	SA	DECA	103830000	99302200	4.4	SA	
20	BNMC	Total AR1016	23366500	24499100	4.8	BNMC	
21	L3BKC	AR 1016	4935300	5272770	6.8	L3BKC	
22	L3BKC	AR 1016 {2}	3602360	3650520	1.3	L3BKC	
23	L3BKC	AR 1016 {3}	5096860	5333170	4.6	L3BKC	
24	L3BKC	AR 1016 {4}	4804760	5138310	6.9	L3BKC	
25	L3BKC	AR 1016 {5}	4927220	5104350	3.6	L3BKC	
26	BNMC	Total AR1260	43457100	41709100	4.0	BNMC	
27	L9BKC	AR 1260	4923130	4945400	0.45	L9BKC	
28	L9BKC	AR 1260 {2}	11732500	11303000	3.7	L9BKC	
29	L9BKC	AR 1260 {3}	6205370	5977420	3.7	L9BKC	
30	L9BKC	AR 1260 {4}	12557600	12357100	1.6	L9BKC	
31	L9BKC	AR 1260 {5}	8038510	7126230	11	L9BKC	
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			#REF!		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927062.D\ECD1A.CH Vial: 62
Signal #2 : G:\LUCY\DATA\140927\0927062.D\ECD2B.CH
Acq On : 9-29-14 17:57:22 Operator: MA
Sample : PCB 1 8/1/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 8:41 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	10427713	9997094	0.021	0.021
Spiked Amount 0.100			Recovery =		21.00%	21.00%
2) SA DBC	6.92	7.93	5241100	4050546	0.019	0.018
Spiked Amount 0.100			Recovery =		19.00%	18.00%
3) SA DECA	9.28	10.58	4625717	3972089	0.019	0.019
Spiked Amount 0.100			Recovery =		19.00%	19.00%
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	7677598	4899825	0.102m	0.105m
5) L3BKC AR 1016	4.20	4.28	3529322	1054554	0.106	0.107
6) L3BKC AR 1016 {2}	4.30	4.81	1533453	730104	0.103	0.101
7) L3BKC AR 1016 {3}	4.43	4.99	879675	1066635	0.105	0.105
8) L3BKC AR 1016 {4}	4.74	5.09	1064936	1027661	0.095	0.107
9) L3BKC AR 1016 {5}	4.89	5.29	670212	1020871	0.091	0.104
10) BNMC Total AR1260	0.00	0.00	10046520	8341829	0.093m	0.096m
11) L9BKC AR 1260	5.87	6.39	2271673	989081	0.096	0.100
12) L9BKC AR 1260 {2}	6.53	7.16	827379	2260592	0.097	0.096
13) L9BKC AR 1260 {3}	6.80	7.27	1495766	1195484	0.093	0.096
14) L9BKC AR 1260 {4}	7.07	8.02	3290950	2471425	0.092	0.098
15) L9BKC AR 1260 {5}	7.58	8.48	2160753	1425246	0.092	0.089

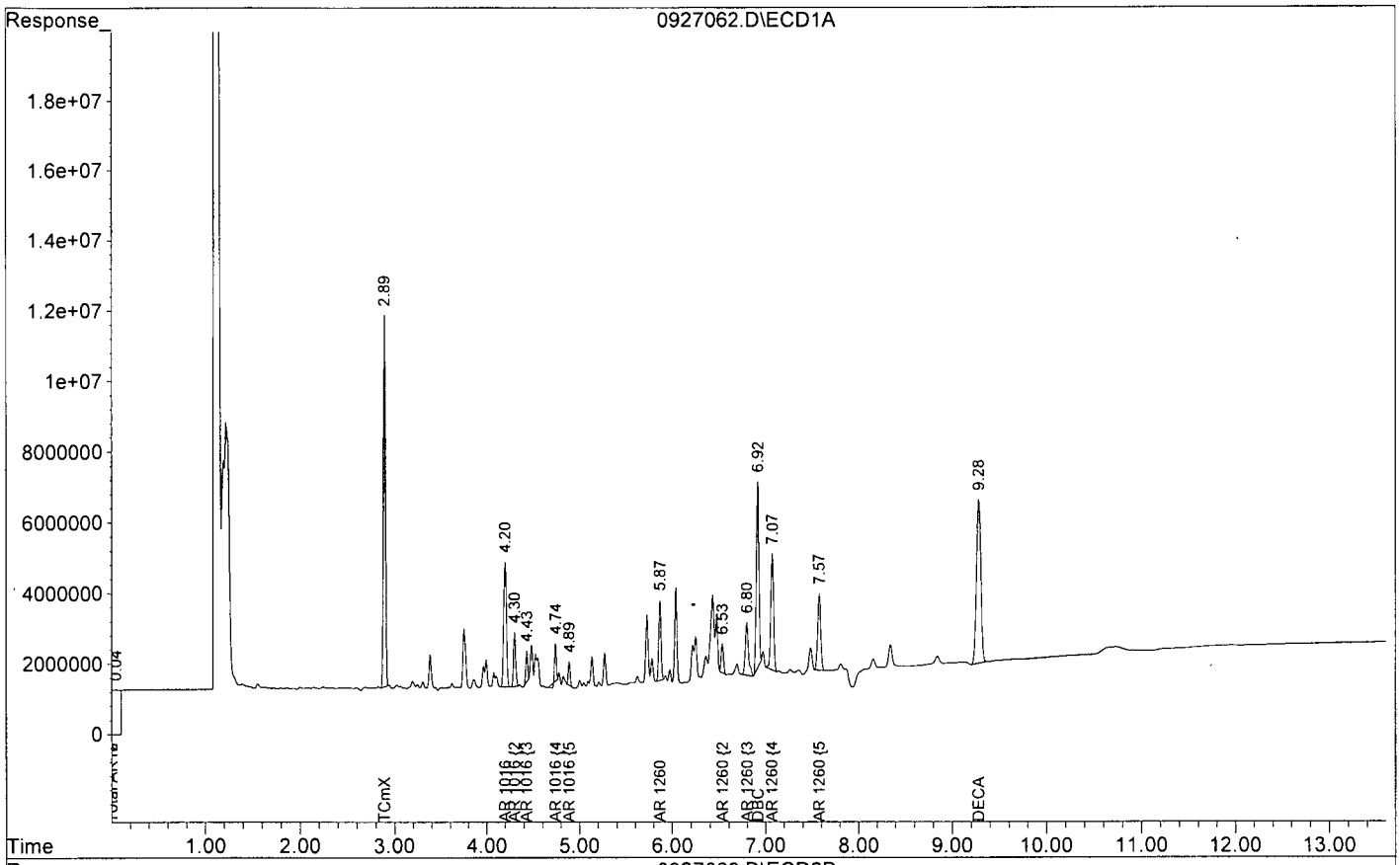
Target Compounds

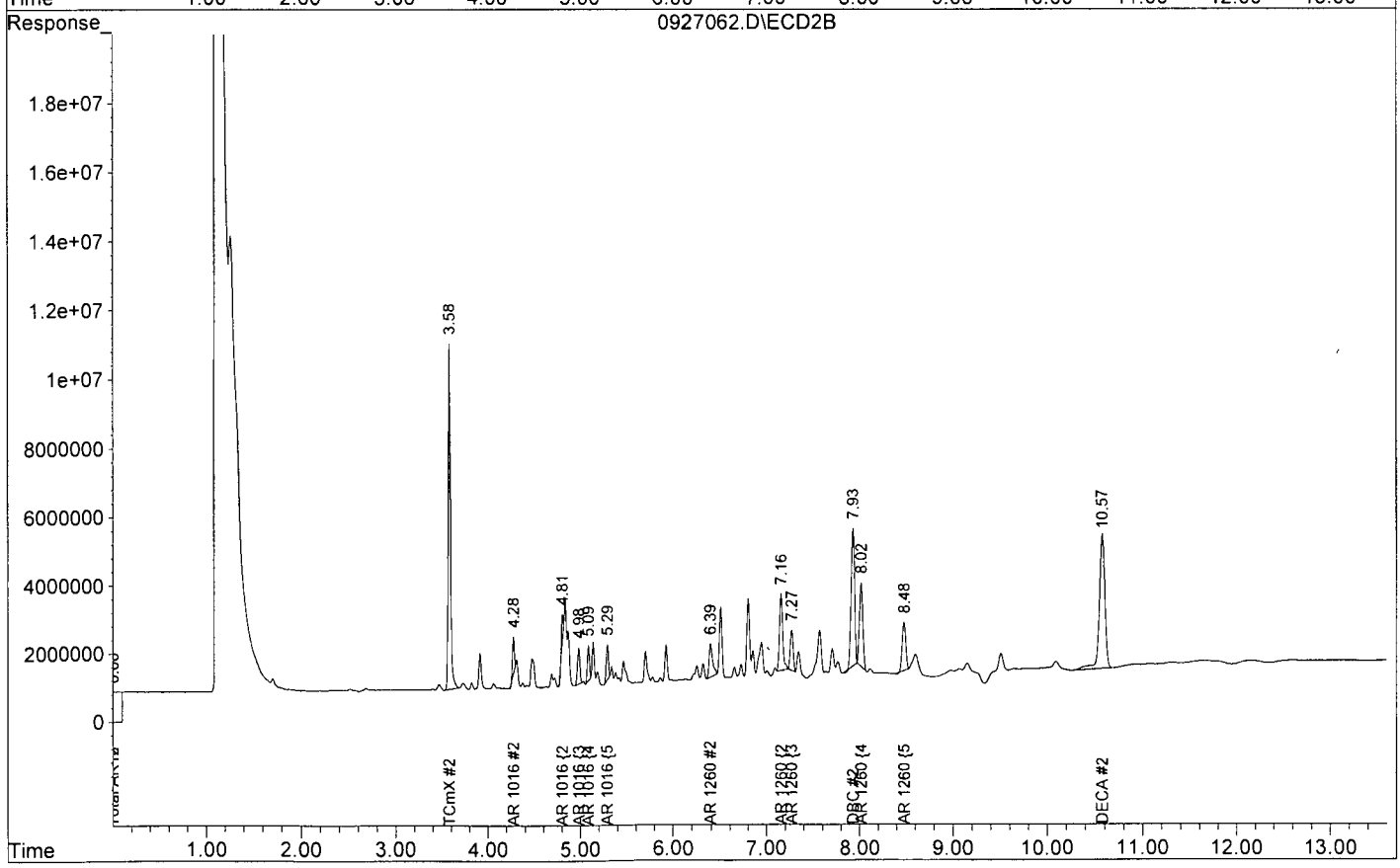
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927062.D
Acq On : 9-29-14 17:57:22
Sample : PCB 1 8/1/14
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 62
Operator: MA
Inst : Lucy
Multiplr: 1.00





EPA 8082
AR1254

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 14218
Case No: Initial Cal. Date: 09/29/14
Matrix: Soil Instrument: Lucy Initials: MA

0927064 D 0927065.D 0927066 D 0927067.D 0927068.D

		Compound	1	2	3	4	5						Avg	%RSD		
1	BNMC	Total AR1254	111769197	100881786	98264853	94546556	92639580						99620394	7.5	BNMC	
2	L3BKC	AR 1254	37290584	33278715	32658634	31656533	31256299						33228153	7.2	L3BKC	
3	L3BKC	AR 1254 {2}	24867943	22140247	21528720	19848411	19855775						21648219	9.5	L3BKC	
4	L3BKC	AR 1254 {3}	15329678	14610082	14055025	13212446	12318049						13905056	8.5	L3BKC	
5	L3BKC	AR 1254 {4}	11266042	10972448	10521393	10347451	10197030						10660873	4.2	L3BKC	
6	L3BKC	AR 1254 {5}	23014949	19880295	19501080	19481714	19012428						20178093	8.0	L3BKC	
7		Signal #2														
8	BNMC	Total AR1254 #2	98657323	90941715	88150253	80705028	79606192						87612102	8.9	BNMC	
9	L3BKC	AR 1254 #2	11688450	12295050	11915126	10406338	9565812						11174155	10	L3BKC	
10	L3BKC	AR 1254 {2} #2	33219275	30111089	29153412	26798850	25798565						29016238	10	L3BKC	
11	L3BKC	AR 1254 {3} #2	25229739	21081662	20204577	18657799	18915550						20817865	13	L3BKC	
12	L3BKC	AR 1254 {4} #2	10398605	10695819	10617061	9805245	9879807						10279307	4.0	L3BKC	
13	L3BKC	AR 1254 {5} #2	18121254	16758095	16260076	15036797	15446458						16324536	7.4	L3BKC	
14																
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2.8123519

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927064.D\ECD1A.CH Vial: 64
Signal #2 : G:\LUCY\DATA\140927\0927064.D\ECD2B.CH
Acq On : 9-29-14 18:25:47 Operator: MA
Sample : AR1254 1 5/20/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:02 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:01:38 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

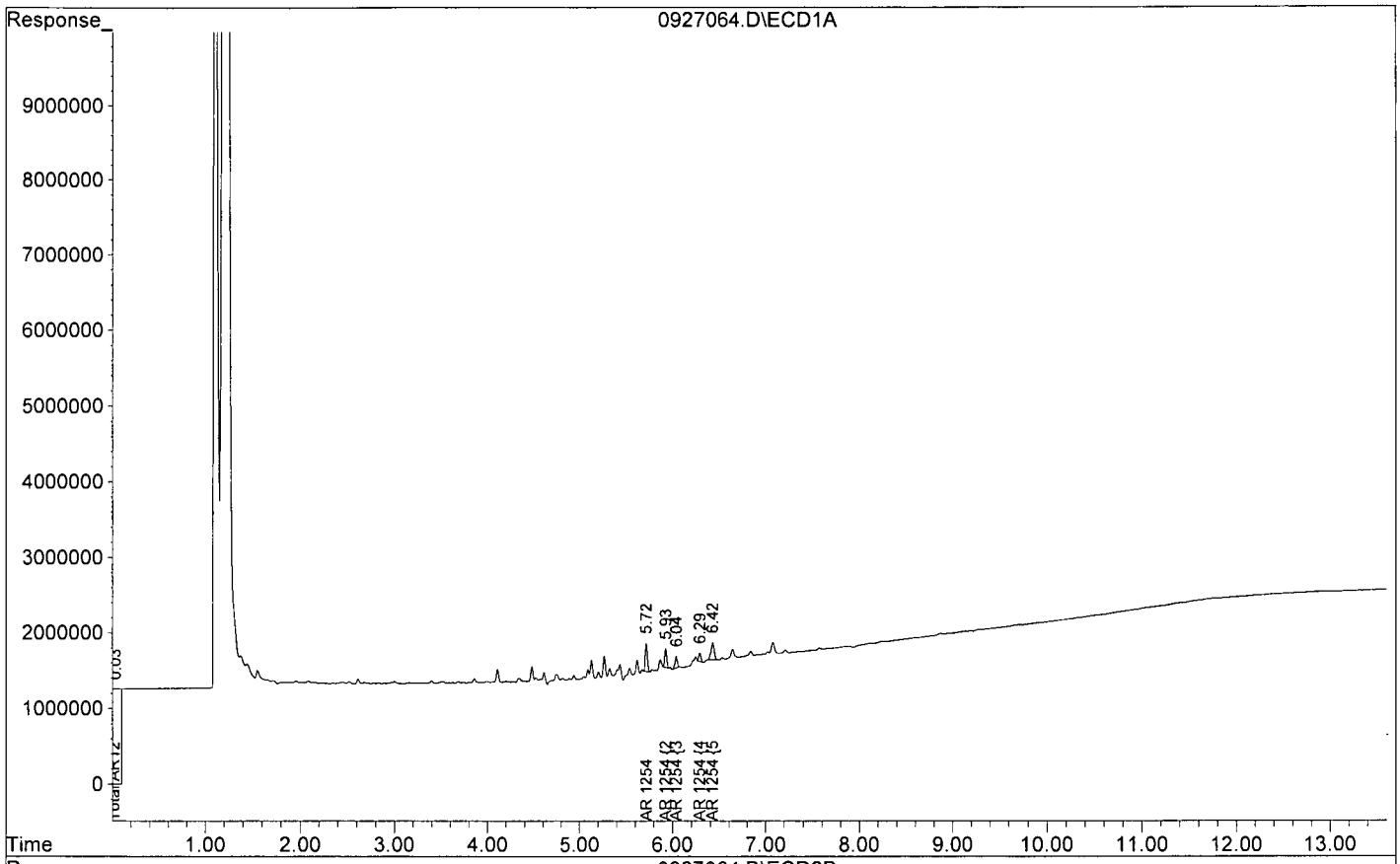
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	1117692	986573	0.012m	0.011m	
2)	L3BKC AR 1254	5.72	5.09	372906	116884	0.030	0.010	#
3)	L3BKC AR 1254 {2}	5.93	5.93	248679	332193	0.007	0.011	#
4)	L3BKC AR 1254 {3}	6.04	6.65	153297	252297	0.011	0.012	
5)	L3BKC AR 1254 {4}	6.29	6.97	112660	103986	0.011	0.010	
6)	L3BKC AR 1254 {5}	6.42	7.16	230149	181213	0.011	0.011	

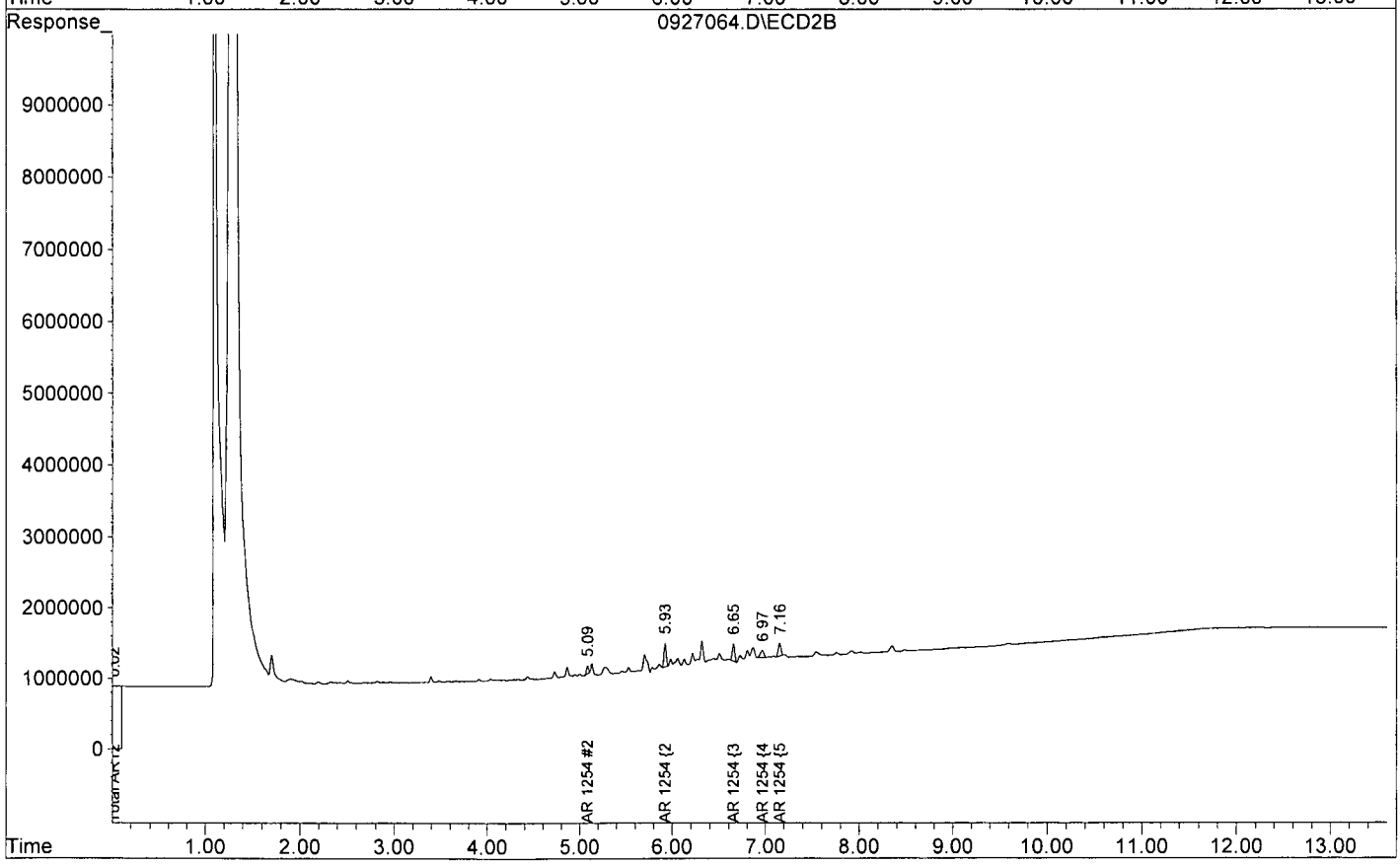
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927064.D Vial: 64
Acq On : 9-29-14 18:25:47 Operator: MA
Sample : AR1254 1 5/20/14 Inst : Lucy
Misc : soil Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140927\12540927.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927065.D\ECD1A.CH Vial: 65
Signal #2 : G:\LUCY\DATA\140927\0927065.D\ECD2B.CH
Acq On : 9-29-14 18:42:12 Operator: MA
Sample : AR1254 2 5/20/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:02 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:01:38 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	5044089	4547086	0.056m	0.052m	
2)	L3BKC AR 1254	5.72	5.09	1663936	614752	0.135	0.055	#
3)	L3BKC AR 1254 {2}	5.93	5.93	1107012	1505554	0.033	0.052	#
4)	L3BKC AR 1254 {3}	6.04	6.65	730504	1054083	0.053	0.051	
5)	L3BKC AR 1254 {4}	6.29	6.97	548622	534791	0.051	0.052	
6)	L3BKC AR 1254 {5}	6.42	7.16	994015	837905	0.049	0.051	

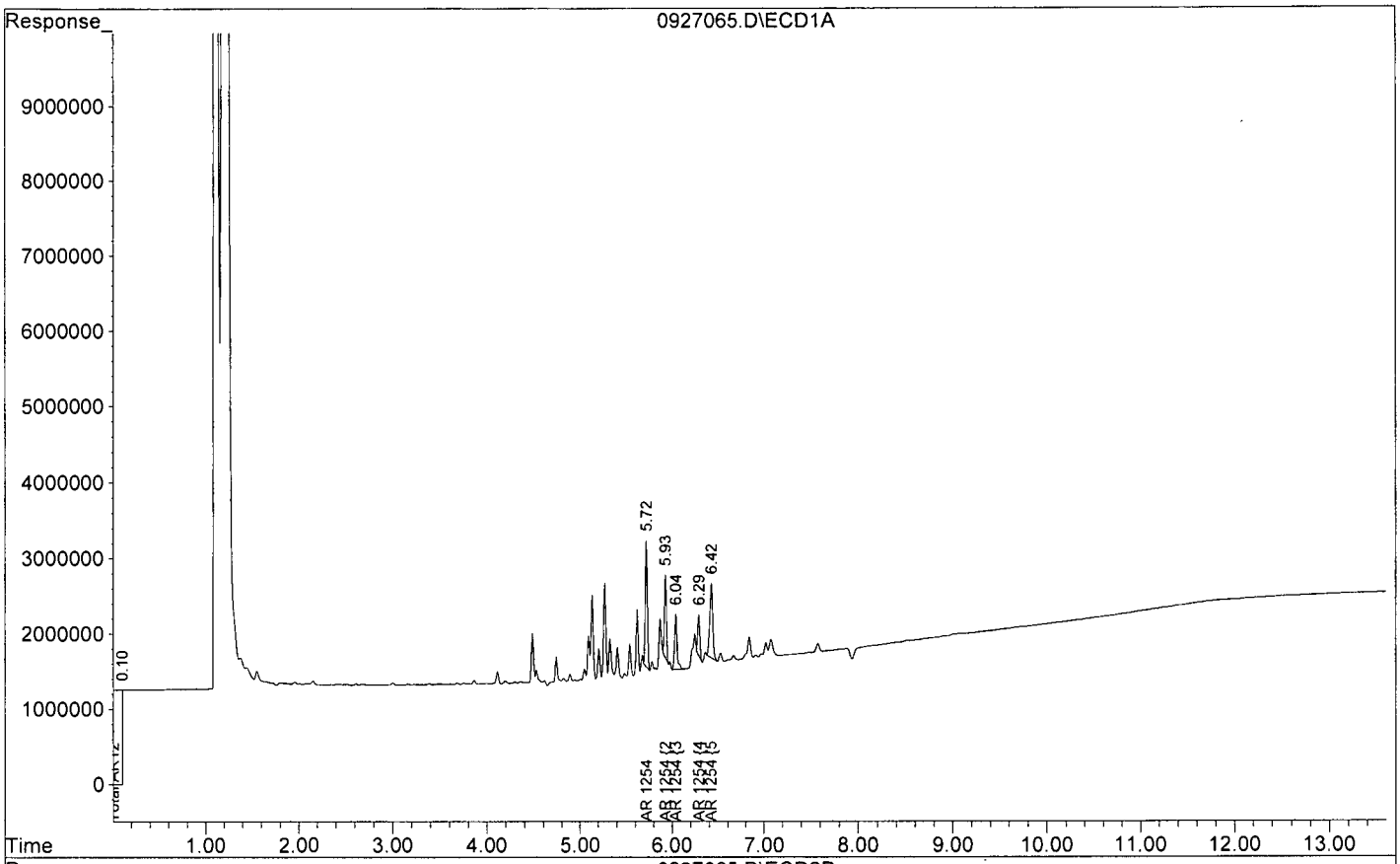
Target Compounds

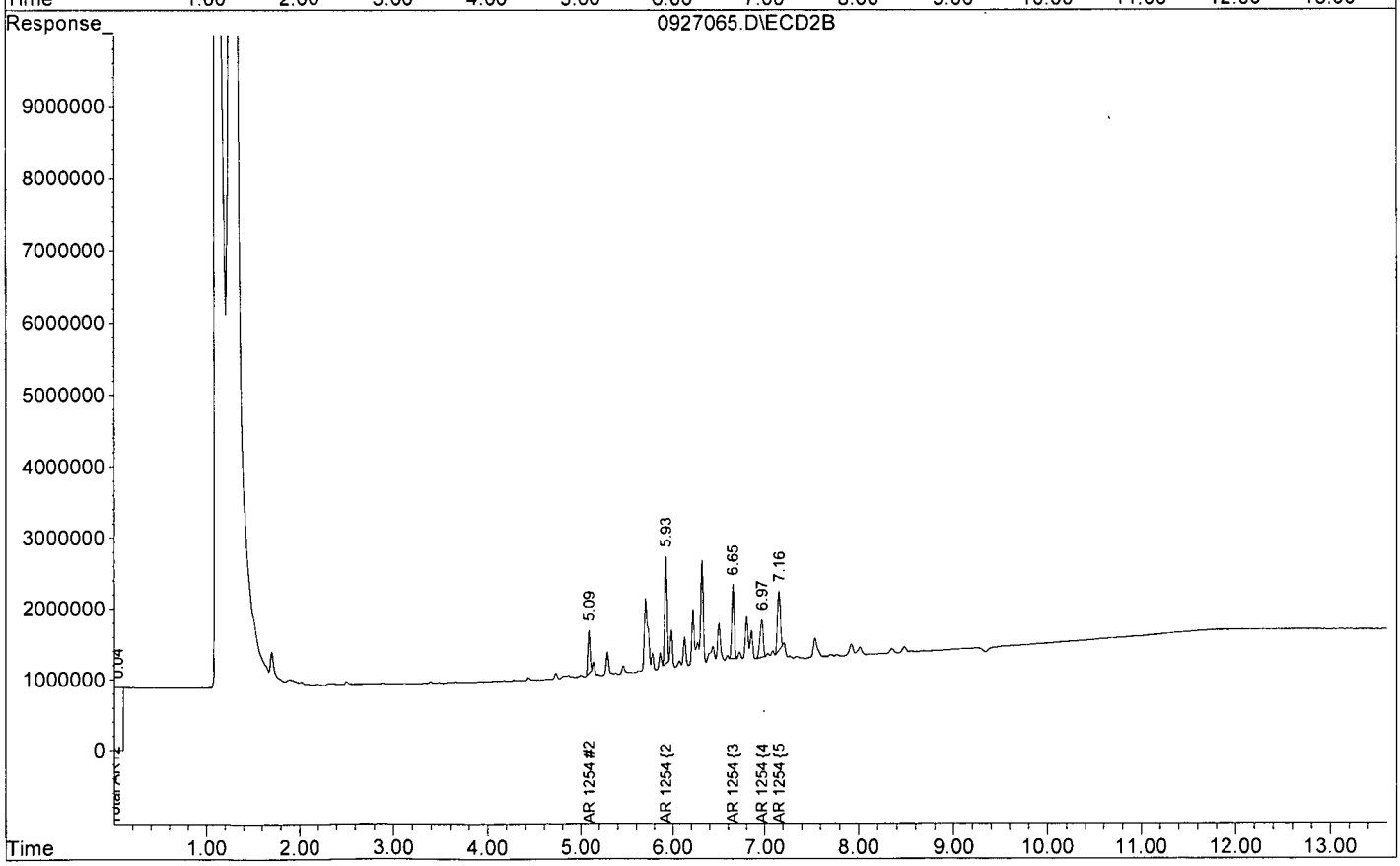
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927065.D
Acq On : 9-29-14 18:42:12
Sample : AR1254 2 5/20/14
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 65
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927066.D\ECD1A.CH Vial: 66
Signal #2 : G:\LUCY\DATA\140927\0927066.D\ECD2B.CH
Acq On : 9-29-14 18:58:44 Operator: MA
Sample : AR1254 3 5/20/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:02 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:01:38 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

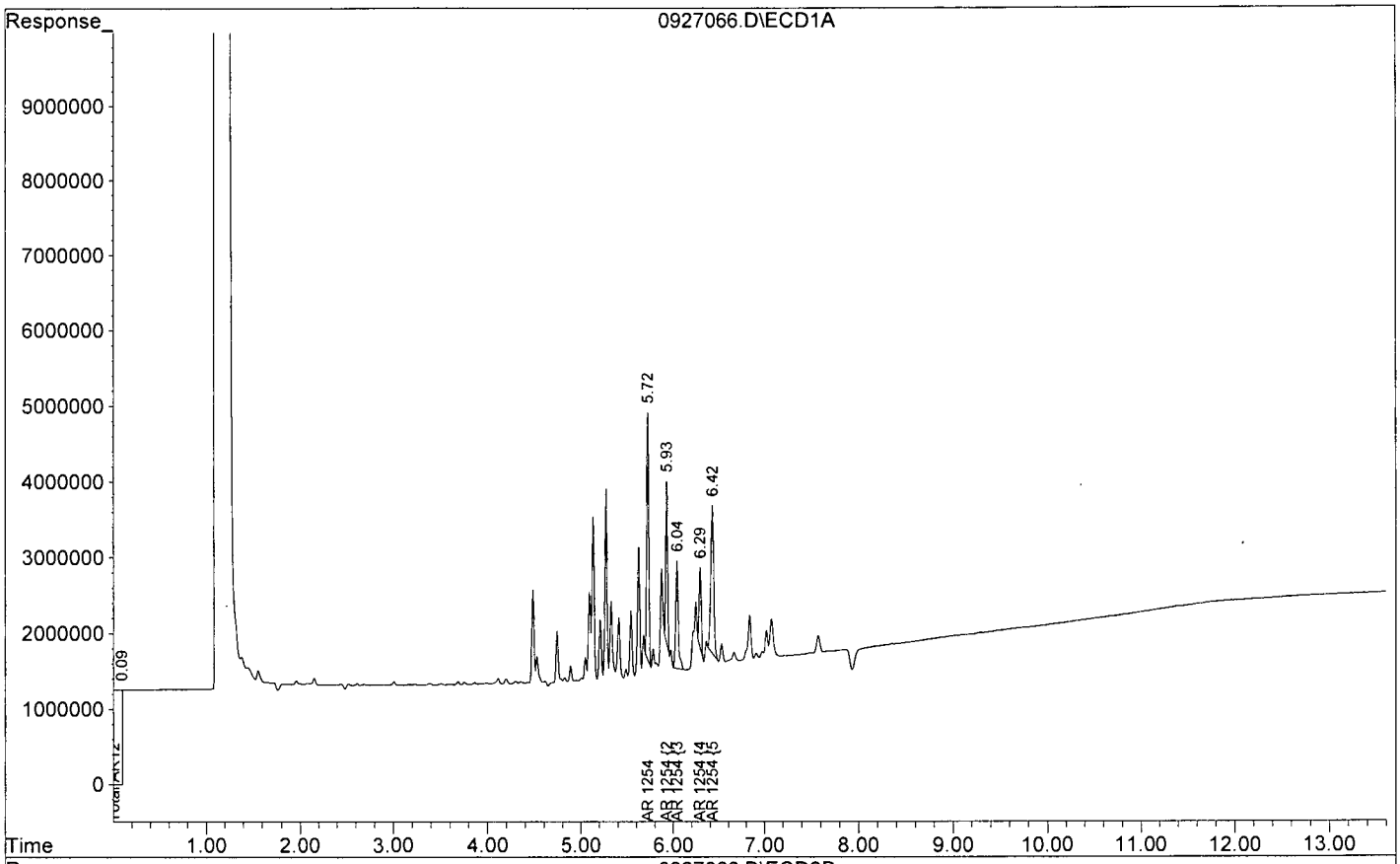
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	9826485	8815025	0.109m	0.101m	
2)	L3BKC AR 1254	5.72	5.09	3265863	1191513	0.266	0.107	#
3)	L3BKC AR 1254 {2}	5.93	5.93	2152872	2915341	0.065	0.100	#
4)	L3BKC AR 1254 {3}	6.04	6.65	1405502	2020458	0.101	0.097	
5)	L3BKC AR 1254 {4}	6.29	6.97	1052139	1061706	0.099	0.103	
6)	L3BKC AR 1254 {5}	6.42	7.16	1950108	1626008	0.097	0.100	

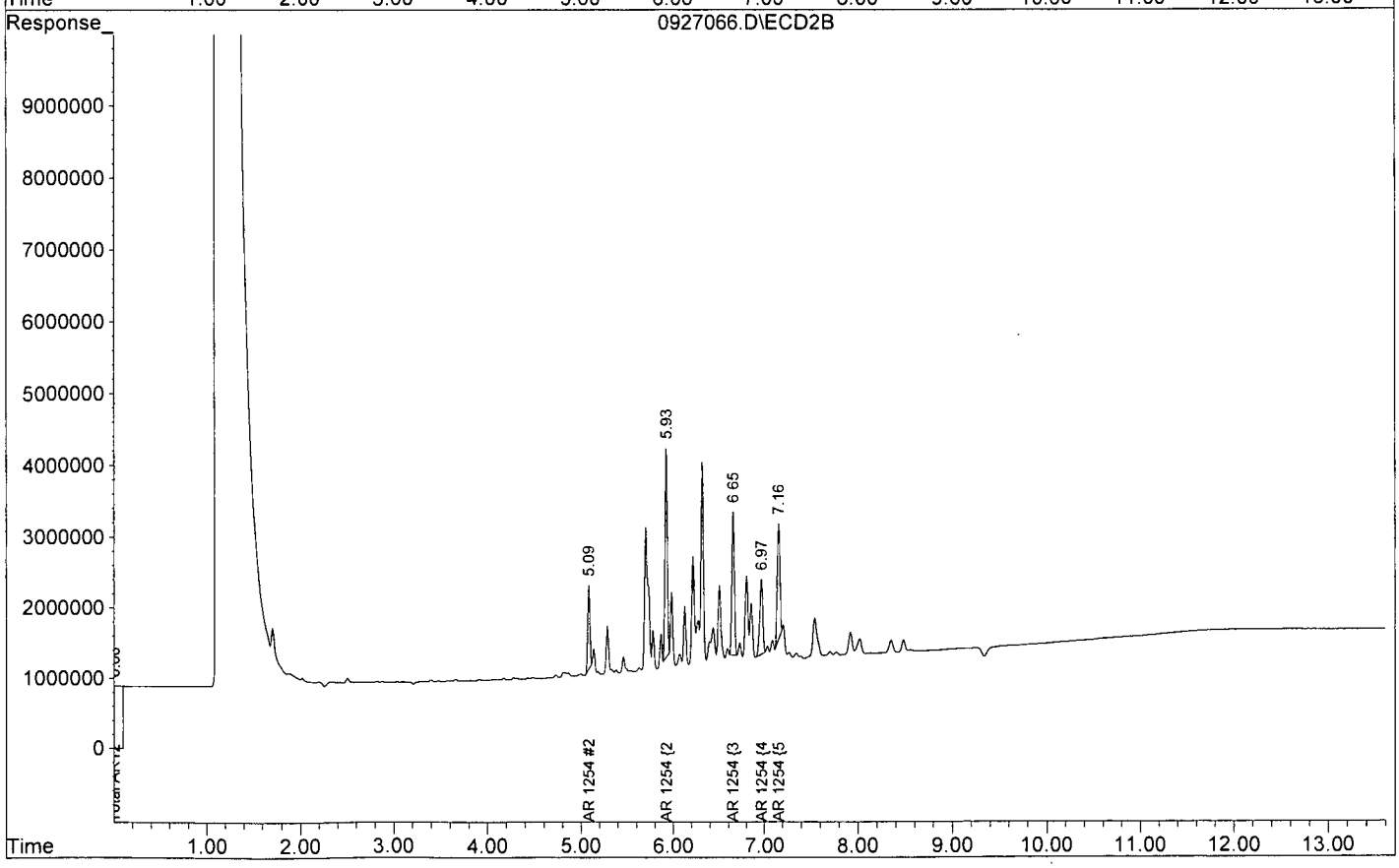
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927066.D Vial: 66
Acq On : 9-29-14 18:58:44 Operator: MA
Sample : AR1254 3 5/20/14 Inst : Lucy
Misc : soil Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140927\12540927.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927067.D\ECD1A.CH Vial: 67
Signal #2 : G:\LUCY\DATA\140927\0927067.D\ECD2B.CH
Acq On : 9-29-14 19:15:10 Operator: MA
Sample : AR1254 4 5/20/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:02 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:01:38 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	23636639	20176257	0.262m	0.230m	
2)	L3BKC AR 1254	5.72	5.09	7914133	2601584	0.644	0.233	#
3)	L3BKC AR 1254 {2}	5.93	5.93	4962103	6699712	0.149	0.231	#
4)	L3BKC AR 1254 {3}	6.04	6.65	3303111	4664450	0.238	0.224	
5)	L3BKC AR 1254 {4}	6.29	6.97	2586863	2451311	0.243	0.238	
6)	L3BKC AR 1254 {5}	6.42	7.16	4870429	3759199	0.241	0.230	

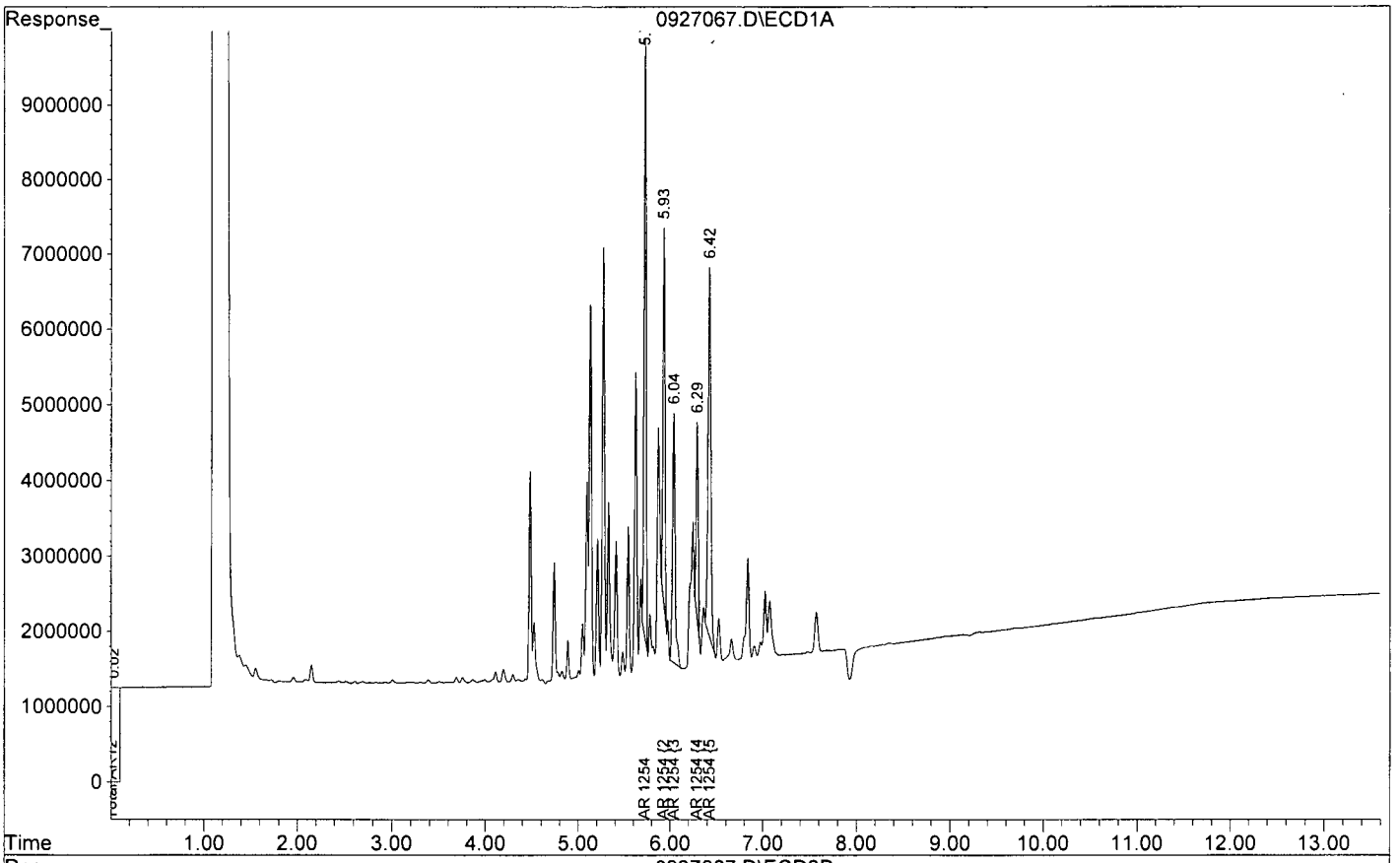
Target Compounds

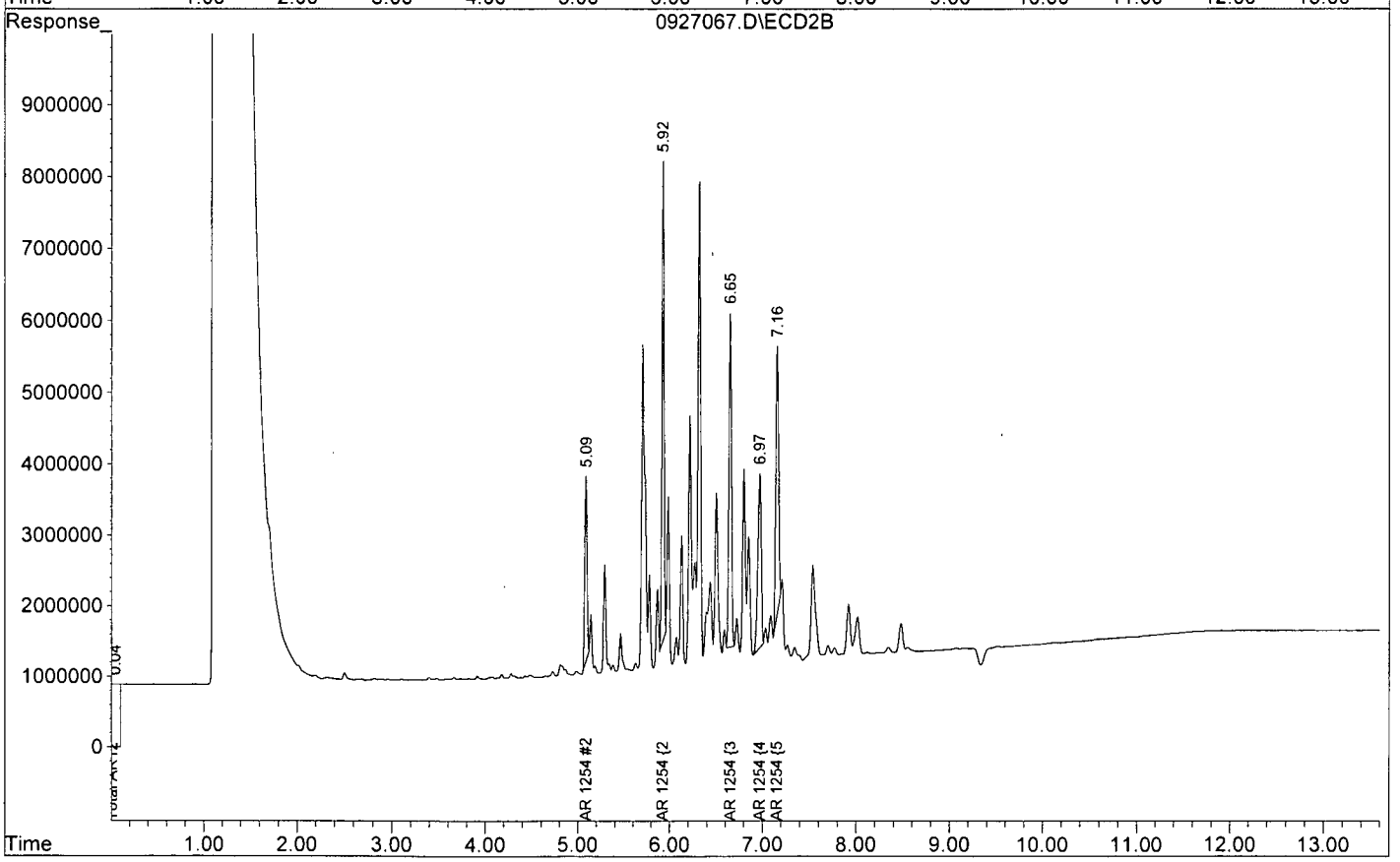
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927067.D
Acq On : 9-29-14 19:15:10
Sample : AR1254 4 5/20/14
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 67
Operator: MA
Inst : Lucy
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927068.D\ECD1A.CH Vial: 68
Signal #2 : G:\LUCY\DATA\140927\0927068.D\ECD2B.CH
Acq On : 9-29-14 19:31:35 Operator: MA
Sample : AR1254 5 5/20/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:02 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:01:38 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	Target Compounds							
1)	BNMC Total AR1254	0.00	0.00	92639580	79606192	1.026m	0.909m	
2)	L3BKC AR 1254	5.72	5.09	31256299	9565812	2.544	0.856	#
3)	L3BKC AR 1254 {2}	5.93	5.93	19855775	25798565	0.598	0.889	#
4)	L3BKC AR 1254 {3}	6.04	6.65	12318049	18915550	0.886	0.909	
5)	L3BKC AR 1254 {4}	6.29	6.97	10197030	9879807	0.956	0.961	
6)	L3BKC AR 1254 {5}	6.42	7.16	19012428	15446458	0.942	0.946	

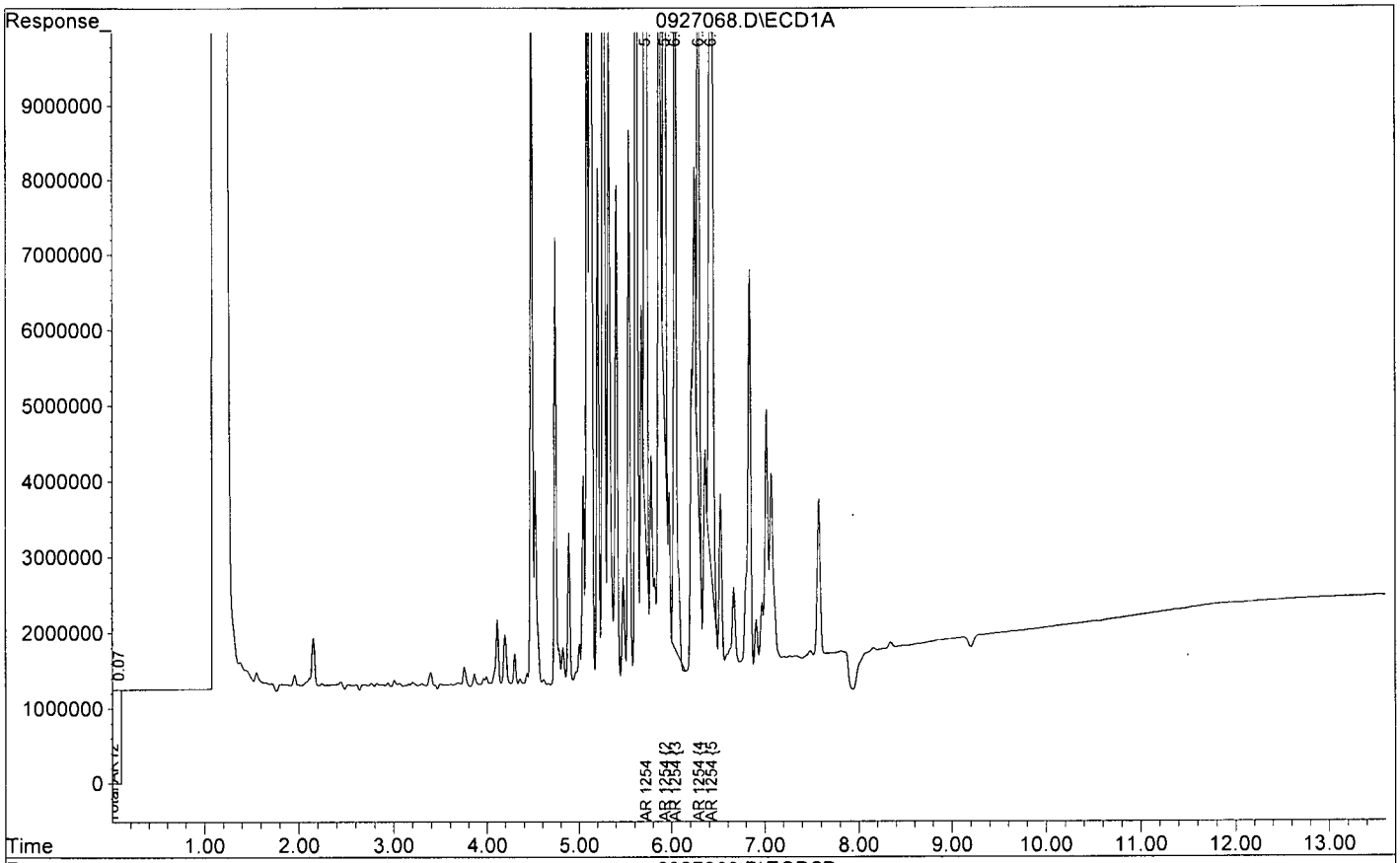
Target Compounds

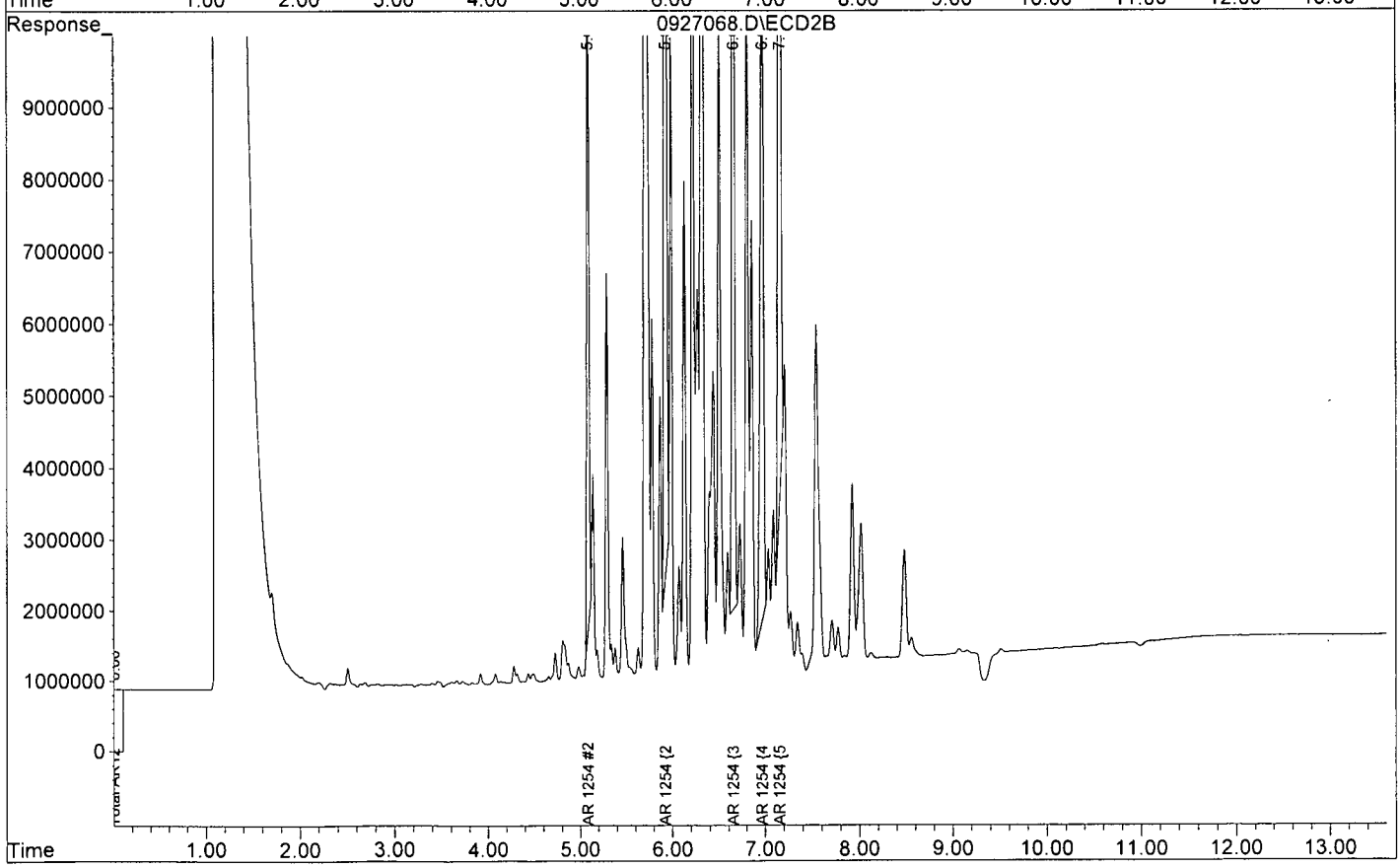
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927068.D
Acq On : 9-29-14 19:31:35
Sample : AR1254 5 5/20/14
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 68
Operator: MA
Inst : Lucy
Multiplr: 1.00





EPA 8082
PSX0922

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 09/29/14
Instrument: Lucy
Initial Cal. Date: 09/23/14
Data File: 0927082.D

		Compound	MEAN	CCRF	%D		%Drift
1	SA	TCmX	243887000	276856000	14	SA	
2	SA	DBC	141505000	147999000	4.6	SA	
3	SA	DECA	123202000	119293000	3.2	SA	
4	BNMC	Total AR1016	37512300	40197500	7.2	BNMC	
5	L3BKC	AR 1016	16624500	17913100	7.8	L3BKC	
6	L3BKC	AR 1016 {2}	7423910	7791320	4.9	L3BKC	
7	L3BKC	AR 1016 {3}	4188070	4566880	9.0	L3BKC	
8	L3BKC	AR 1016 {4}	5582370	5863730	5.0	L3BKC	
9	L3BKC	AR 1016 {5}	3693510	4062430	10	L3BKC	
10	BNMC	Total AR1260	53761900	54022300	0.48	BNMC	
11	L9BKC	AR 1260	11800500	11920300	1.0	L9BKC	
12	L9BKC	AR 1260 {2}	4243020	4310700	1.6	L9BKC	
13	L9BKC	AR 1260 {3}	8053980	7857430	2.4	L9BKC	
14	L9BKC	AR 1260 {4}	17890300	18278500	2.2	L9BKC	
15	L9BKC	AR 1260 {5}	11774200	11655300	1.0	L9BKC	
16	signal #2						
17	SA	TCmX	234966000	261285000	11	SA	
18	SA	DBC	113381000	111111000	2.0	SA	
19	SA	DECA	103830000	98626500	5.0	SA	
20	BNMC	Total AR1016	23366500	23192400	0.74	BNMC	
21	L3BKC	AR 1016	4935300	4629930	6.2	L3BKC	
22	L3BKC	AR 1016 {2}	3602360	3658860	1.6	L3BKC	
23	L3BKC	AR 1016 {3}	5096860	5300580	4.0	L3BKC	
24	L3BKC	AR 1016 {4}	4804760	4741890	1.3	L3BKC	
25	L3BKC	AR 1016 {5}	4927220	4861180	1.3	L3BKC	
26	BNMC	Total AR1260	43457100	41999000	3.4	BNMC	
27	L9BKC	AR 1260	4923130	4806590	2.4	L9BKC	
28	L9BKC	AR 1260 {2}	11732500	11256500	4.1	L9BKC	
29	L9BKC	AR 1260 {3}	6205370	5799020	6.5	L9BKC	
30	L9BKC	AR 1260 {4}	12557600	12629100	0.57	L9BKC	
31	L9BKC	AR 1260 {5}	8038510	7507810	6.6	L9BKC	
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			#REF!		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927082.D\ECD1A.CH Vial: 82
Signal #2 : G:\LUCY\DATA\140927\0927082.D\ECD2B.CH
Acq On : 9-29-14 23:17:39 Operator: MA
Sample : PCB-2 8/1/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 8:42 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	27685609	26128508	0.057	0.056
Spiked Amount 0.100			Recovery	=	57.00%	56.00%
2) SA DBC	6.92	7.93	14799859	11111105	0.052	0.049
Spiked Amount 0.100			Recovery	=	52.00%	49.00%
3) SA DECA	9.28	10.58	11929258	9862647	0.048	0.047
Spiked Amount 0.100			Recovery	=	48.00%	47.00%
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	20098728	11596219	0.268m	0.248m
5) L3BKC AR 1016	4.20	4.28	8956547	2314964	0.269	0.235
6) L3BKC AR 1016 {2}	4.30	4.81	3895660	1829432	0.262	0.254
7) L3BKC AR 1016 {3}	4.43	4.99	2283442	2650291	0.273	0.260
8) L3BKC AR 1016 {4}	4.74	5.09	2931863	2370944	0.263	0.247
9) L3BKC AR 1016 {5}	4.89	5.29	2031217	2430589	0.275	0.247
10) BNMC Total AR1260	0.00	0.00	27011135	20999523	0.251m	0.242m
11) L9BKC AR 1260	5.87	6.39	5960154	2403295	0.253	0.244
12) L9BKC AR 1260 {2}	6.53	7.16	2155350	5628254	0.254	0.240
13) L9BKC AR 1260 {3}	6.80	7.27	3928717	2899511	0.244	0.234
14) L9BKC AR 1260 {4}	7.07	8.02	9139245	6314559	0.255	0.251
15) L9BKC AR 1260 {5}	7.57	8.48	5827669	3753904	0.247	0.233

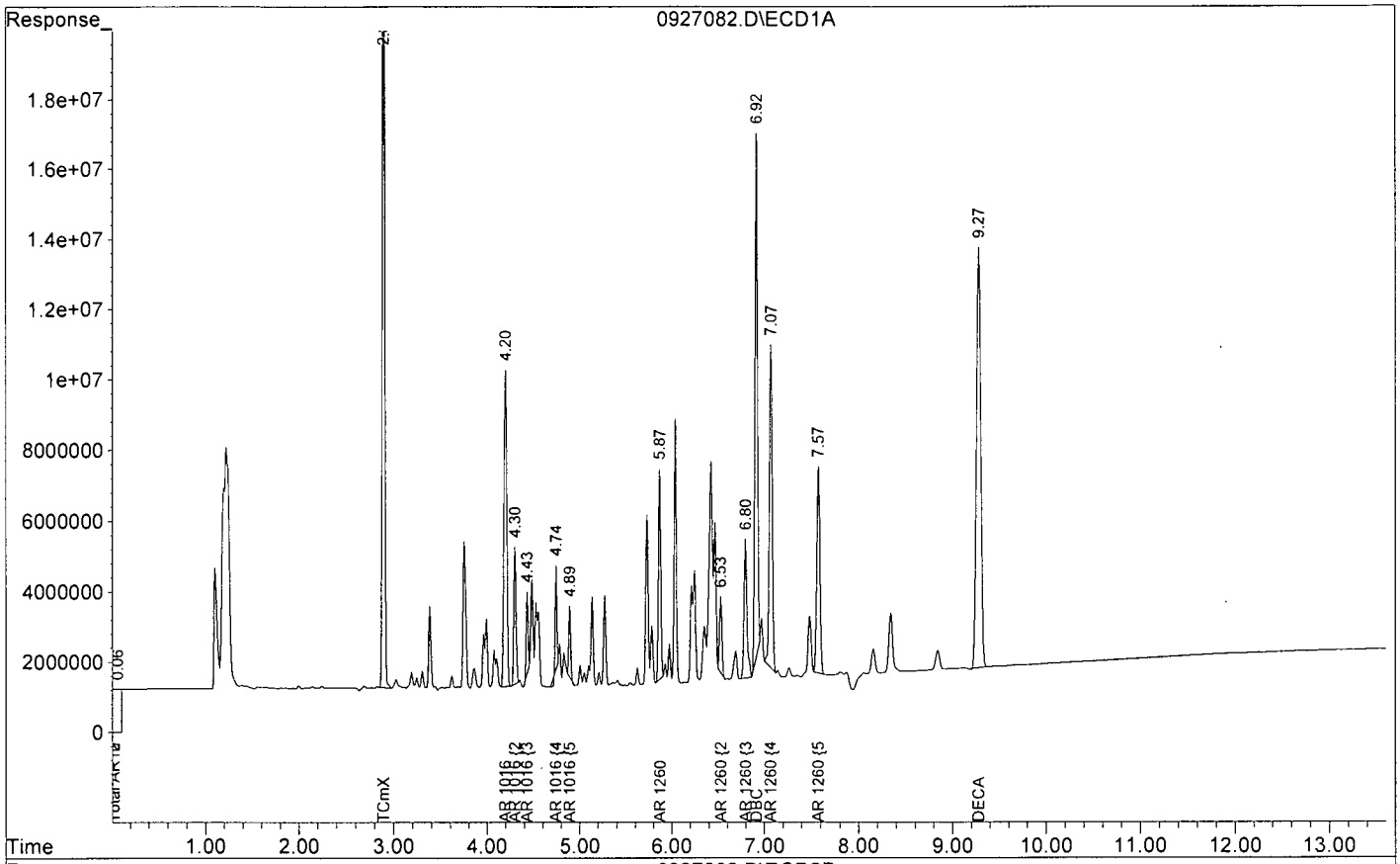
Target Compounds

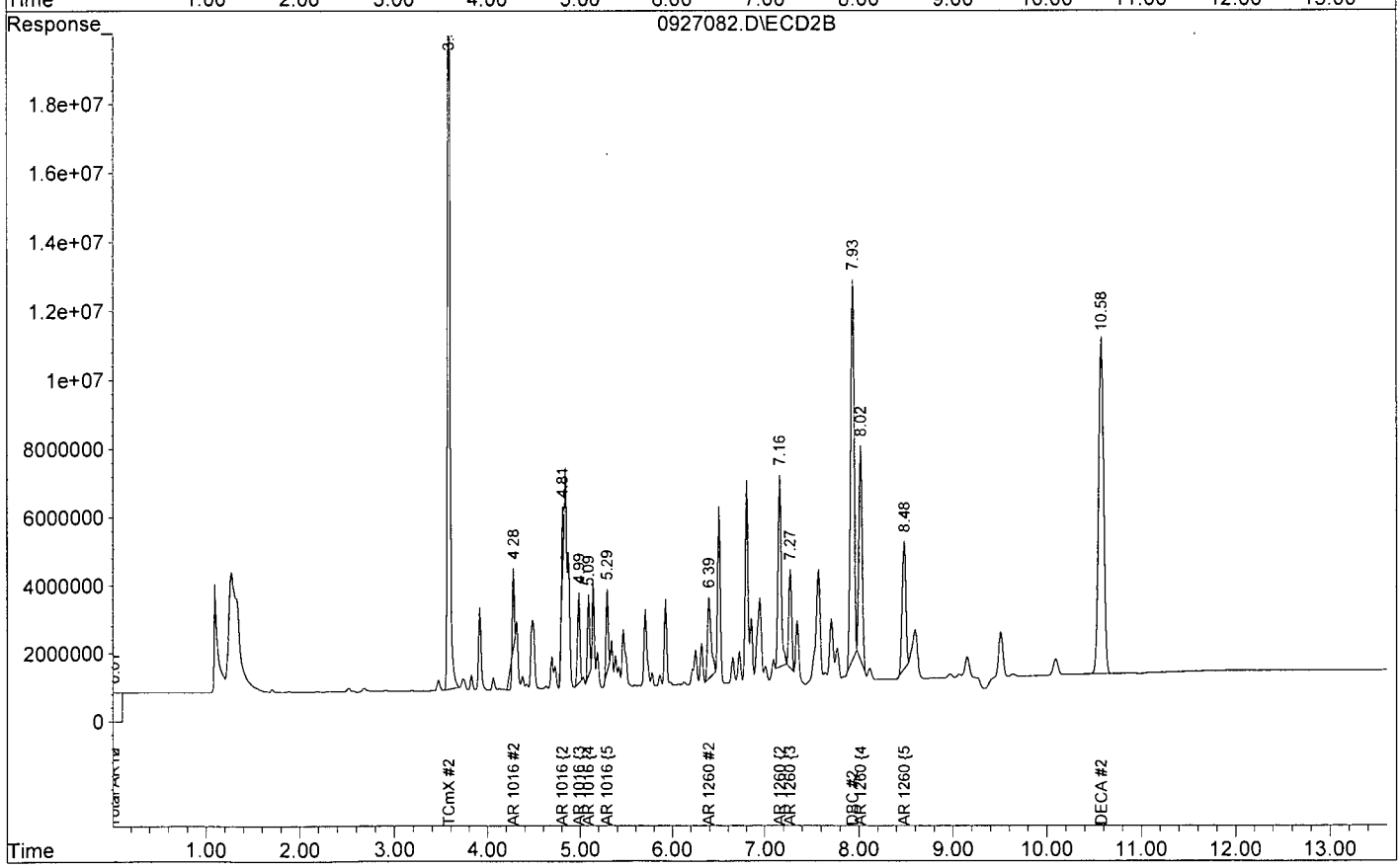
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927082.D
Acq On : 9-29-14 23:17:39
Sample : PCB-2 8/1/14
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 82
Operator: MA
Inst : Lucy
Multiplr: 1.00





EPA 8082
AR1254

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 09/29/14
Instrument: Lucy
Initial Cal. Date: 09/29/14
Data File: 0927083.D

		Compound	MEAN	CCRF	%D		%Drift
1	BNMC	Total AR1254	99620400	107849000	8.3	BNMC	
2	L3BKC	AR 1254	33228200	36107400	8.7	L3BKC	
3	L3BKC	AR 1254 {2}	21648200	23308600	7.7	L3BKC	
4	L3BKC	AR 1254 {3}	13905100	14899600	7.2	L3BKC	
5	L3BKC	AR 1254 {4}	10660900	11857300	11	L3BKC	
6	L3BKC	AR 1254 {5}	20178100	21676400	7.4	L3BKC	
7	signal #2						
8	BNMC	Total AR1254	87612100	91141700	4.0	BNMC	
9	L3BKC	AR 1254	11174200	12213100	9.3	L3BKC	
10	L3BKC	AR 1254 {2}	29016200	29657500	2.2	L3BKC	
11	L3BKC	AR 1254 {3}	20817900	21048500	1.1	L3BKC	
12	L3BKC	AR 1254 {4}	10279300	11280600	9.7	L3BKC	
13	L3BKC	AR 1254 {5}	16324500	16942000	3.8	L3BKC	
14							
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		Average			#REF!		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927083.D\ECD1A.CH Vial: 83
Signal #2 : G:\LUCY\DATA\140927\0927083.D\ECD2B.CH
Acq On : 9-29-14 23:34:04 Operator: MA
Sample : AR1254-3 5/20/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:19 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

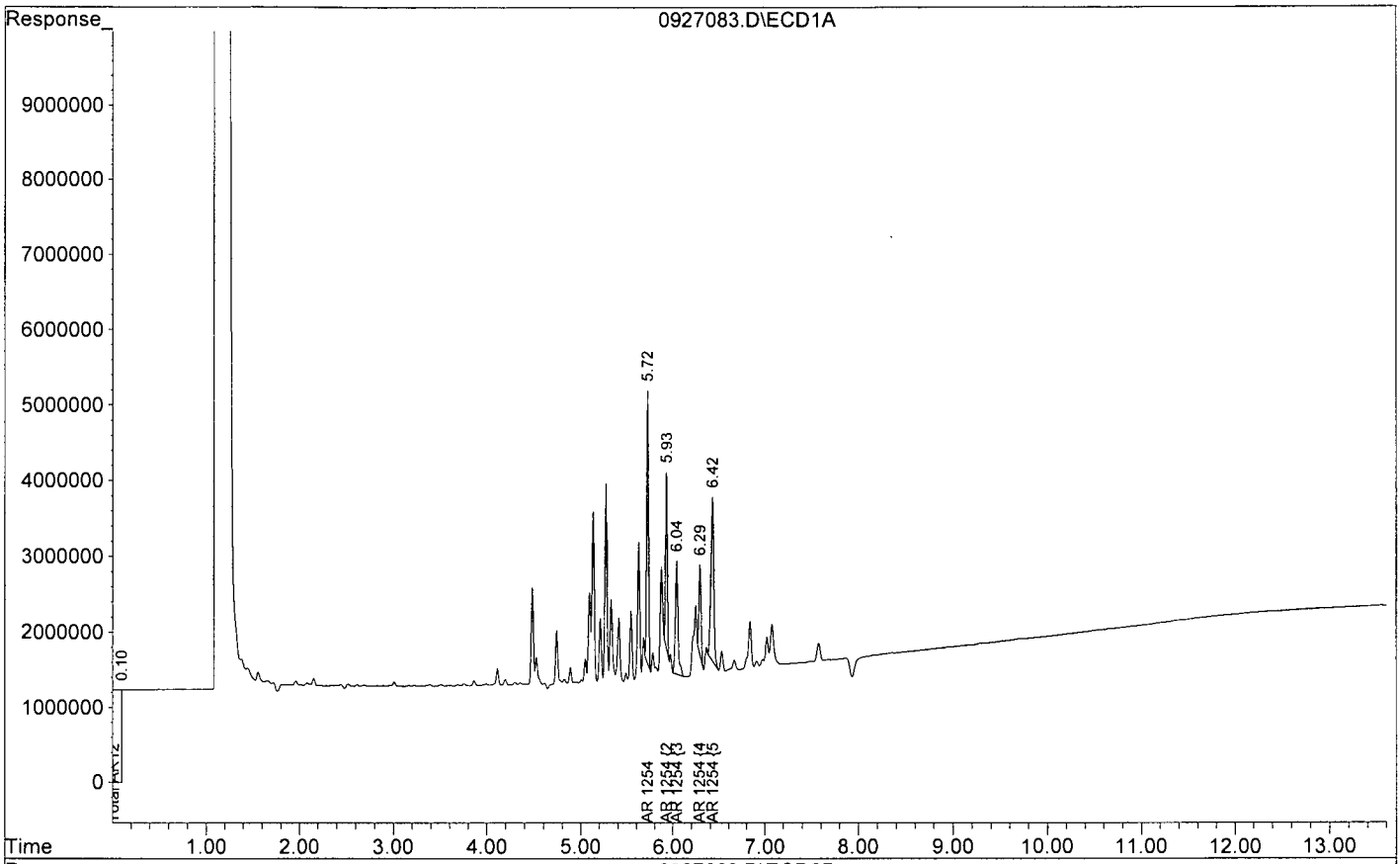
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	BNMC Total AR1254	0.00	0.00	10784929	9114174	0.108m	0.104m
2)	L3BKC AR 1254	5.72	5.09	3610739	1221313	0.109	0.109
3)	L3BKC AR 1254 {2}	5.93	5.93	2330860	2965749	0.108	0.102
4)	L3BKC AR 1254 {3}	6.04	6.65	1489960	2104845	0.107	0.101
5)	L3BKC AR 1254 {4}	6.29	6.97	1185730	1128062	0.111	0.110
6)	L3BKC AR 1254 {5}	6.42	7.16	2167640	1694204	0.107	0.104

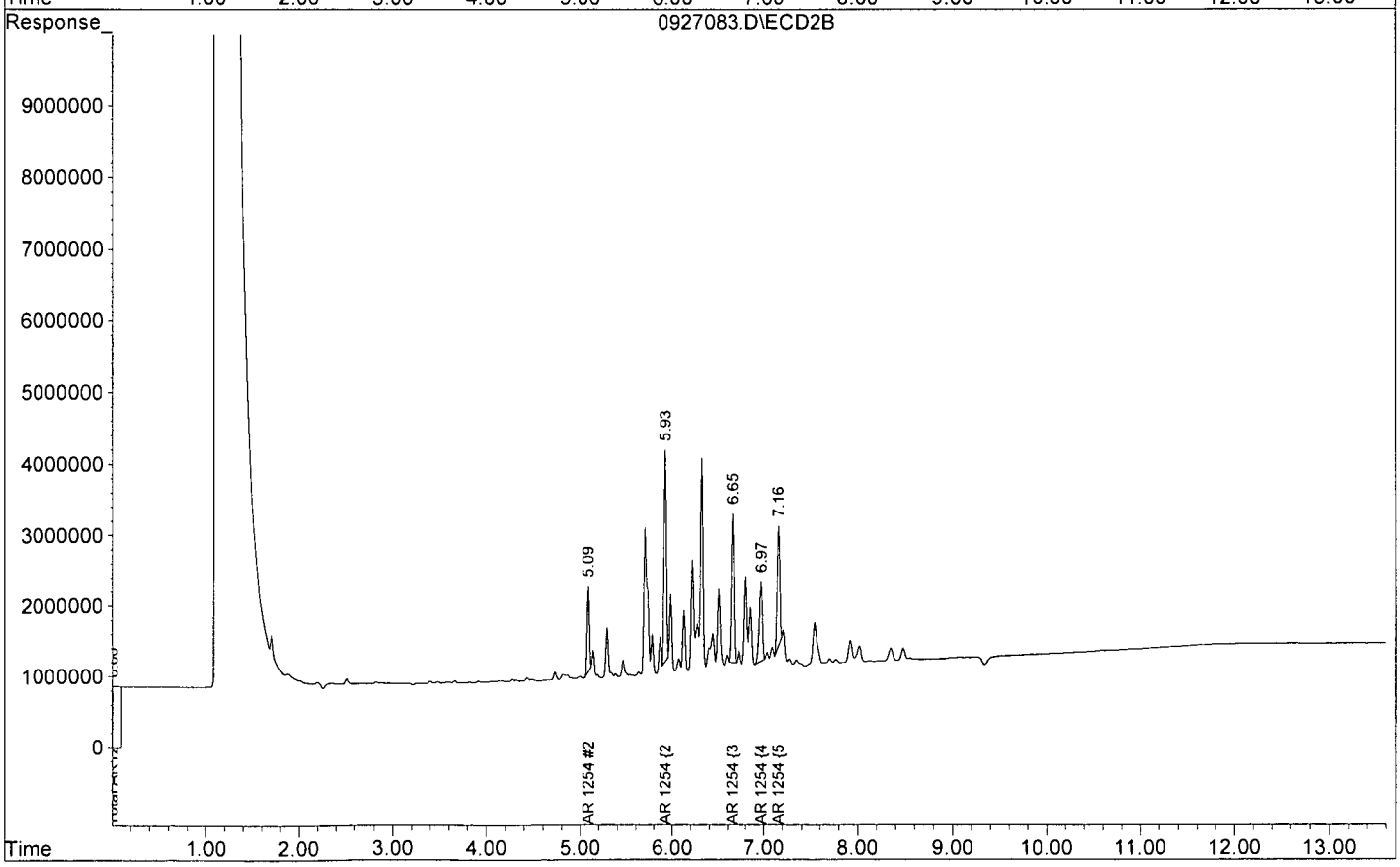
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927083.D Vial: 83
Acq On : 9-29-14 23:34:04 Operator: MA
Sample : AR1254-3 5/20/14 Inst : Lucy
Misc : soil Multiplr: 1.00
Quant Method : G:\LUCY\DATA\140927\12540927.M





EPA 8082
PSX0922

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 14218
Date Analyzed: 09/30/14
Instrument: Lucy
Initial Cal. Date: 09/23/14
Data File: 0927092.D

		Compound	MEAN	CCRF	%D		%Drift
1	SA	TCmX	243887000	287187000	18	SA	
2	SA	DBC	141505000	152063000	7.5	SA	
3	SA	DECA	123202000	130329000	5.8	SA	
4	BNMC	Total AR1016	37512300	43889500	17	BNMC	
5	L3BKC	AR 1016	16624500	19695700	18	L3BKC	
6	L3BKC	AR 1016 {2}	7423910	8517650	15	L3BKC	
7	L3BKC	AR 1016 {3}	4188070	4946320	18	L3BKC	
8	L3BKC	AR 1016 {4}	5582370	6361140	14	L3BKC	
9	L3BKC	AR 1016 {5}	3693510	4368660	18	L3BKC	
10	BNMC	Total AR1260	53761900	57062800	6.1	BNMC	
11	L9BKC	AR 1260	11800500	12988400	10	L9BKC	
12	L9BKC	AR 1260 {2}	4243020	4723020	11	L9BKC	
13	L9BKC	AR 1260 {3}	8053980	8336020	3.5	L9BKC	
14	L9BKC	AR 1260 {4}	17890300	19034900	6.4	L9BKC	
15	L9BKC	AR 1260 {5}	11774200	11980500	1.8	L9BKC	
16	signal #2						
17	SA	TCmX	234966000	258058000	9.8	SA	
18	SA	DBC	113381000	107922000	4.8	SA	
19	SA	DECA	103830000	108810000	4.8	SA	
20	BNMC	Total AR1016	23366500	25866700	11	BNMC	
21	L3BKC	AR 1016	4935300	5551370	12	L3BKC	
22	L3BKC	AR 1016 {2}	3602360	4158410	15	L3BKC	
23	L3BKC	AR 1016 {3}	5096860	5422890	6.4	L3BKC	
24	L3BKC	AR 1016 {4}	4804760	5302980	10	L3BKC	
25	L3BKC	AR 1016 {5}	4927220	5431090	10	L3BKC	
26	BNMC	Total AR1260	43457100	44291300	1.9	BNMC	
27	L9BKC	AR 1260	4923130	5237860	6.4	L9BKC	
28	L9BKC	AR 1260 {2}	11732500	11782300	0.42	L9BKC	
29	L9BKC	AR 1260 {3}	6205370	6338570	2.1	L9BKC	
30	L9BKC	AR 1260 {4}	12557600	12951100	3.1	L9BKC	
31	L9BKC	AR 1260 {5}	8038510	7981520	0.71	L9BKC	
32							
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36							
37							
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40							
		Average			#REF!		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927092.D\ECD1A.CH Vial: 92
Signal #2 : G:\LUCY\DATA\140927\0927092.D\ECD2B.CH
Acq On : 9-30-14 1:57:45 Operator: MA
Sample : PCB-1 8/1/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 8:43 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	11487471	10322304	0.024	0.022
Spiked Amount 0.100			Recovery	=	24.00%	22.00%
2) SA DBC	6.92	7.93	6082534	4316894	0.021	0.019
Spiked Amount 0.100			Recovery	=	21.00%	19.00%
3) SA DECA	9.28	10.58	5213167	4352412	0.021	0.021
Spiked Amount 0.100			Recovery	=	21.00%	21.00%
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	8777891	5173349	0.117m	0.111m
5) L3BKC AR 1016	4.20	4.28	3939137	1110275	0.118	0.112
6) L3BKC AR 1016 {2}	4.30	4.81	1703530	831681	0.115	0.115
7) L3BKC AR 1016 {3}	4.43	4.99	989263	1084578	0.118	0.106
8) L3BKC AR 1016 {4}	4.74	5.09	1272228	1060596	0.114	0.110
9) L3BKC AR 1016 {5}	4.89	5.29	873732	1086219	0.118	0.110
10) BNMC Total AR1260	0.00	0.00	11412556	8858265	0.106m	0.102m
11) L9BKC AR 1260	5.87	6.39	2597671	1047573	0.110	0.106
12) L9BKC AR 1260 {2}	6.53	7.16	944604	2356460	0.111	0.100
13) L9BKC AR 1260 {3}	6.80	7.27	1667204	1267714	0.104	0.102
14) L9BKC AR 1260 {4}	7.07	8.02	3806970	2590214	0.106	0.103
15) L9BKC AR 1260 {5}	7.57	8.48	2396107	1596304	0.102	0.099

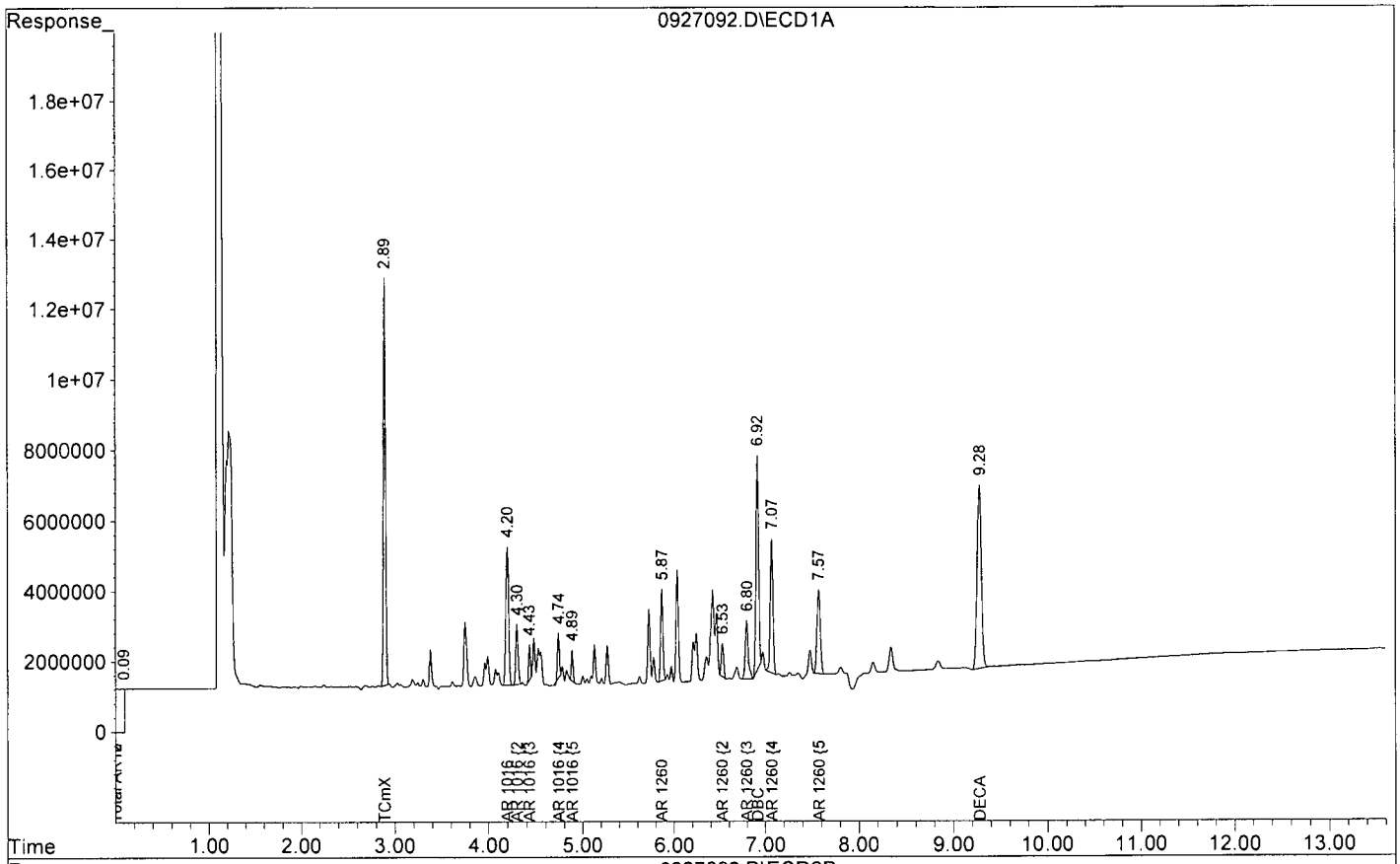
Target Compounds

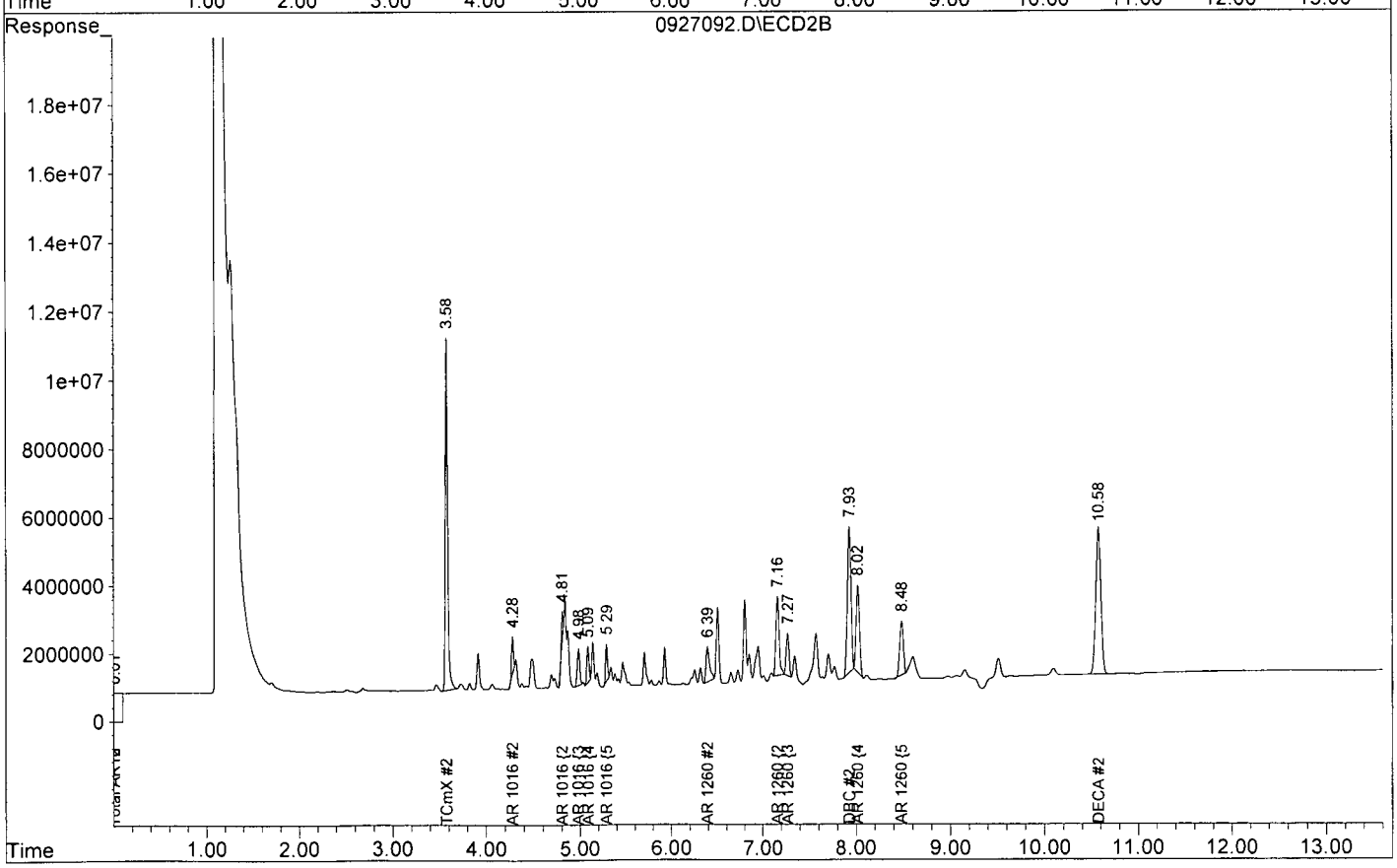
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927092.D
Acq On : 9-30-14 1:57:45
Sample : PCB-1 8/1/14
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 92
Operator: MA
Inst : Lucy
Multiplr: 1.00





EPA 8082
AR1254

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 09/30/14
Instrument: Lucy
Initial Cal. Date: 09/29/14
Data File: 0927093.D

		Compound	MEAN	CCRF	%D		%Drift
1	BNMC	Total AR1254	99620400	114053000	14	BNMC	
2	L3BKC	AR 1254	33228200	37913300	14	L3BKC	
3	L3BKC	AR 1254 {2}	21648200	24445800	13	L3BKC	
4	L3BKC	AR 1254 {3}	13905100	16244100	17	L3BKC	
5	L3BKC	AR 1254 {4}	10660900	12143300	14	L3BKC	
6	L3BKC	AR 1254 {5}	20178100	23306600	16	L3BKC	
7	signal #2						
8	BNMC	Total AR1254	87612100	94151900	7.5	BNMC	
9	L3BKC	AR 1254	11174200	12555300	12	L3BKC	
10	L3BKC	AR 1254 {2}	29016200	30836200	6.3	L3BKC	
11	L3BKC	AR 1254 {3}	20817900	21842100	4.9	L3BKC	
12	L3BKC	AR 1254 {4}	10279300	11295100	9.9	L3BKC	
13	L3BKC	AR 1254 {5}	16324500	17623200	8.0	L3BKC	
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		Average			#REF!		

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927093.D\ECD1A.CH Vial: 93
Signal #2 : G:\LUCY\DATA\140927\0927093.D\ECD2B.CH
Acq On : 9-30-14 2:14:09 Operator: MA
Sample : AR1254-3 5/20/14 Inst : Lucy
Misc : soil Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:20 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	BNMC Total AR1254	0.00	0.00	11405311	9415187	0.114m	0.107m
2)	L3BKC AR 1254	5.72	5.09	3791330	1255533	0.114	0.112
3)	L3BKC AR 1254 {2}	5.93	5.93	2444580	3083615	0.113	0.106
4)	L3BKC AR 1254 {3}	6.04	6.65	1624411	2184215	0.117	0.105
5)	L3BKC AR 1254 {4}	6.29	6.97	1214330	1129507	0.114	0.110
6)	L3BKC AR 1254 {5}	6.42	7.16	2330658	1762317	0.116	0.108

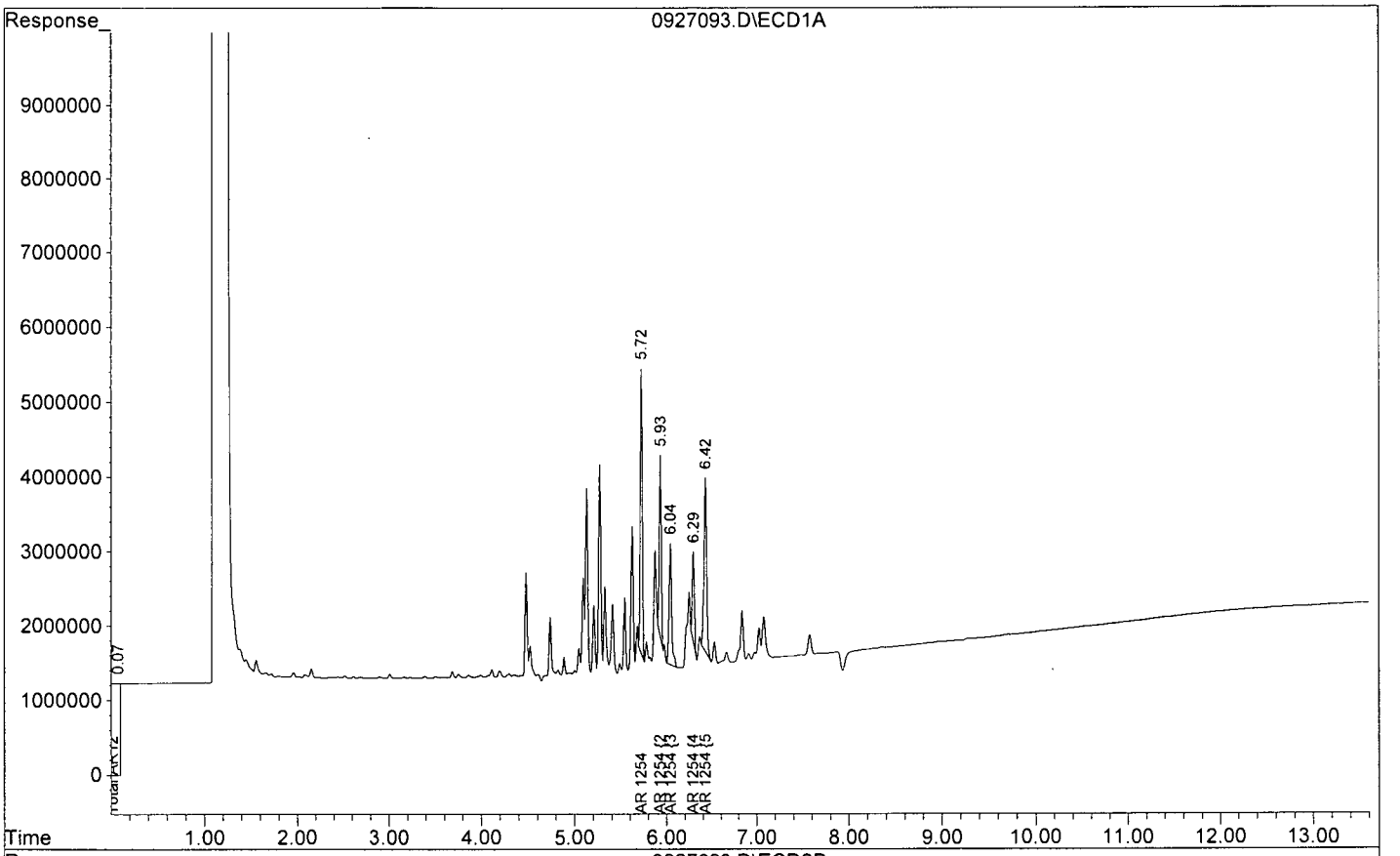
Target Compounds

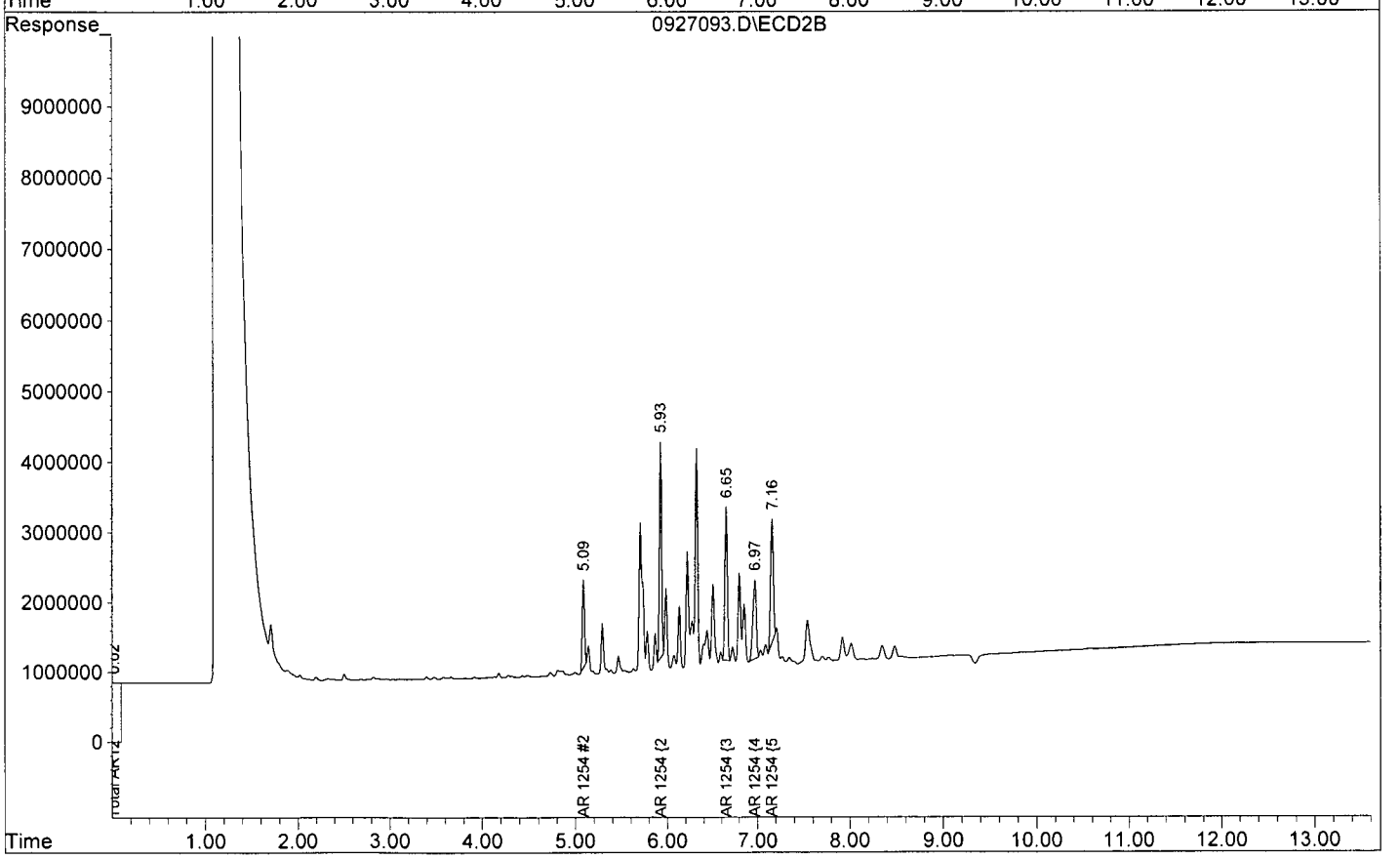
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927093.D
Acq On : 9-30-14 2:14:09
Sample : AR1254-3 5/20/14
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 93
Operator: MA
Inst : Lucy
Multiplr: 1.00





EPA METHOD 8082
PCBs
Raw Data

APPL, INC.

Method Blank
EPA 8082A PCB WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **140909W-02108 - 190310**
Batch ID: #82ACA-140909A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	AROCLOR 1016	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
BLANK	AROCLOR 1221	0.250 U	0.50	0.250	0.080	ug/L	09/09/14	09/23/14
BLANK	AROCLOR 1232	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
BLANK	AROCLOR 1242	0.250 U	0.50	0.250	0.120	ug/L	09/09/14	09/23/14
BLANK	AROCLOR 1248	0.250 U	0.50	0.250	0.090	ug/L	09/09/14	09/23/14
BLANK	AROCLOR 1254	0.250 U	0.50	0.250	0.200	ug/L	09/09/14	09/23/14
BLANK	AROCLOR 1260	0.250 U	0.50	0.250	0.090	ug/L	09/09/14	09/23/14
BLANK	TOTAL PCBS	0.250 U	0.50	0.250	0.200	ug/L	09/09/14	09/23/14
BLANK	SURROGATE: DECACHLOROBIP	83.0	40-135			%	09/09/14	09/23/14

Quant Method: PSX0922.M
Run #: 0922099
Instrument: Lucy
Sequence: 140922
Initials: MA

GC SC-Blank-REG MDLs
Printed: 09/30/14 11:01:16 AM

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922099.D\ECD1A.CH Vial: 99
Signal #2 : G:\LUCY\DATA\140922\0922099.D\ECD2B.CH
Acq On : 9-23-14 16:06:19 Operator: MA
Sample : 140909A BLK 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 12:18 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

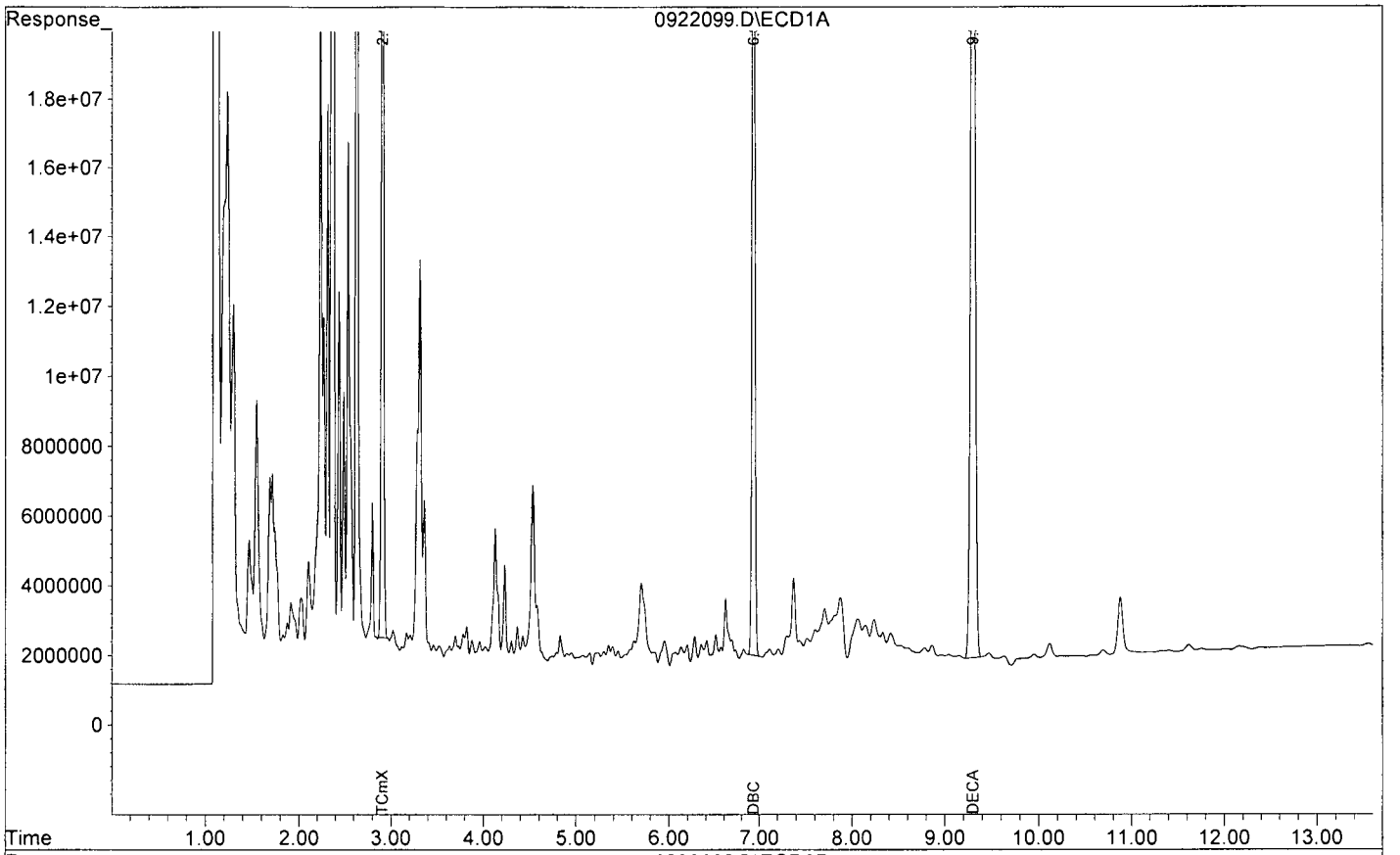
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.91	3.58	38536946	39786180	0.158	0.169
Spiked Amount 0.300			Recovery	=	52.67%	56.33%
2) SA DBC	6.94	7.94	31323701	35112414	0.221	0.310 #
Spiked Amount 0.300			Recovery	=	73.67%	103.33%
3) SA DECA	9.30	10.58	31187645	25884919	0.253	0.249
Spiked Amount 0.300			Recovery	=	84.33%	83.00%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

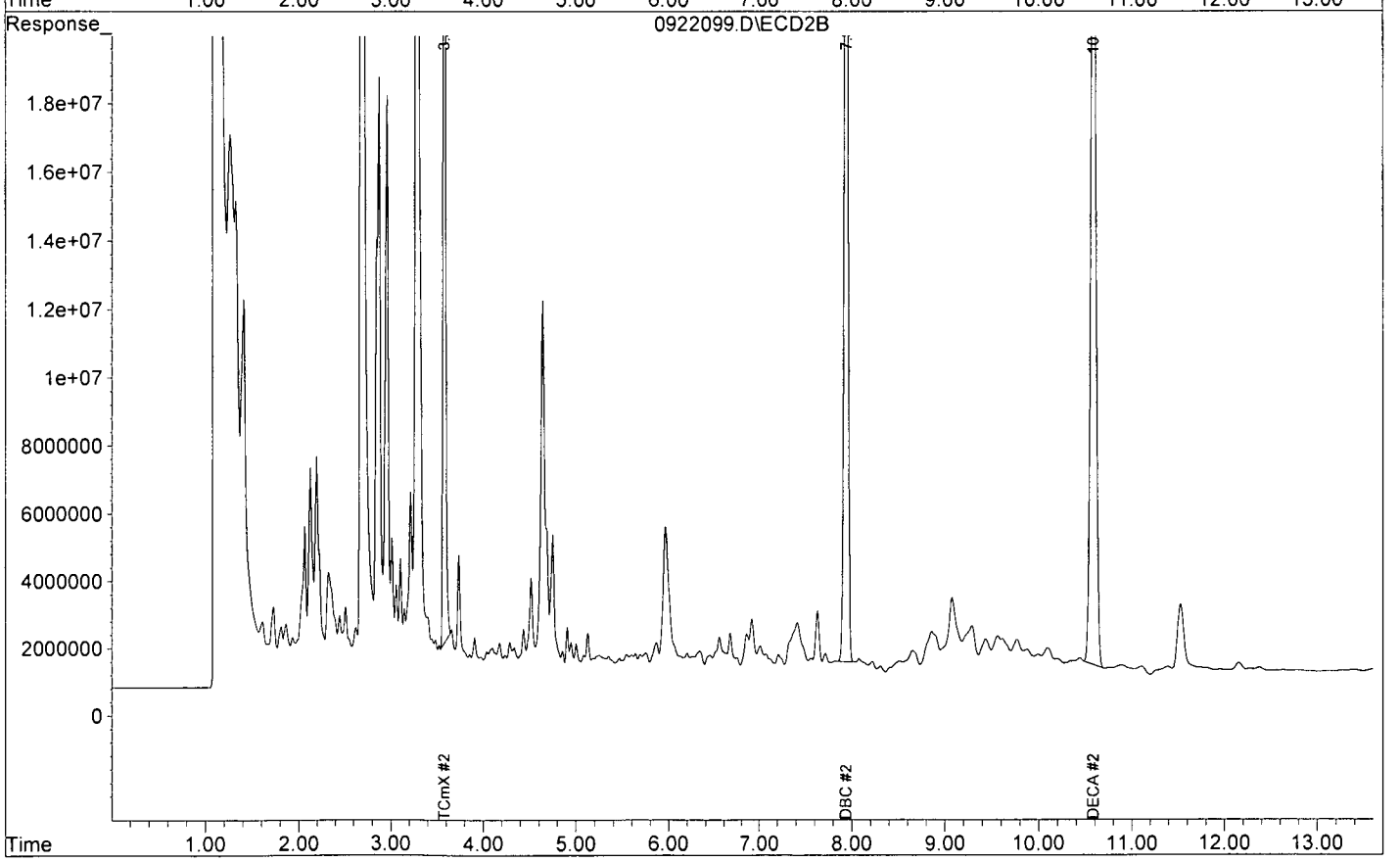
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140922\0922099.D
Acq On : 9-23-14 16:06:19
Sample : 140909A BLK 1/500
Misc : water
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 99
Operator: MA
Inst : Lucy
Multiplr: 2.00





Method Blank
EPA 8082A SOIL MIS

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **140916S-02100 - 190311**
Batch ID: #82HC4-140916A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	AROCLOR 1016	0.020 U	0.05	0.020	0.010	mg/kg	09/16/14	09/29/14
BLANK	AROCLOR 1221	0.020 U	0.05	0.020	0.006	mg/kg	09/16/14	09/29/14
BLANK	AROCLOR 1232	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
BLANK	AROCLOR 1242	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
BLANK	AROCLOR 1248	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
BLANK	AROCLOR 1254	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
BLANK	AROCLOR 1260	0.010 U	0.05	0.010	0.004	mg/kg	09/16/14	09/29/14
BLANK	TOTAL PCBS	0.020 U	0.05	0.020	0.004	mg/kg	09/16/14	09/29/14
BLANK	SURROGATE: DECACHLOROBIP	82.7	60-125			%	09/16/14	09/29/14

Quant Method: PSX0922.M
Run #: 0927069
Instrument: Lucy
Sequence: 140927
Initials: MA

GC SC-Blank-REG MDLs
Printed: 09/30/14 11:01:16 AM

Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927069.D\ECD1A.CH Vial: 69
Signal #2 : G:\LUCY\DATA\140927\0927069.D\ECD2B.CH
Acq On : 9-29-14 19:48:01 Operator: MA
Sample : 140916A BLK 5X1/0.05/30.20G Inst : Lucy
Misc : soil Multiplr: 3311.26
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:31 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

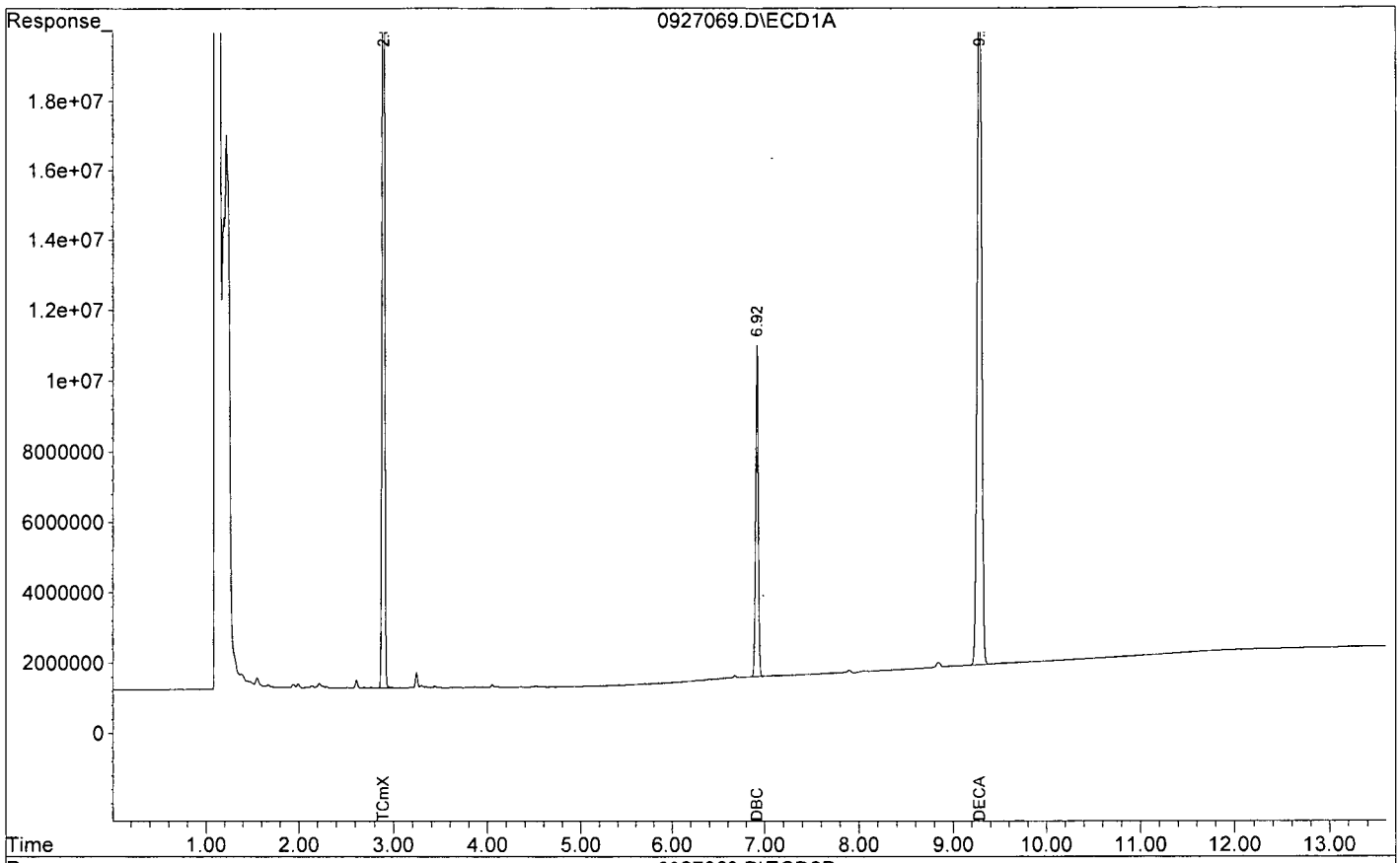
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	42982752	42126551	291.789	296.834
Spiked Amount 331.126			Recovery	=	88.12%	89.64%
2) SA DBC	6.92	7.93	9399388	7675222	109.974	112.077
Spiked Amount 331.126			Recovery	=	33.21%	33.85%
3) SA DECA	9.28	10.58	20999487	17177038	282.198	273.897
Spiked Amount 331.126			Recovery	=	85.22%	82.72%
Target Compounds						
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1016	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1016 {2}	0.00	0.00	0	0	N.D. d	N.D. d
7) L3BKC AR 1016 {3}	0.00	0.00	0	0	N.D. d	N.D. d
8) L3BKC AR 1016 {4}	0.00	0.00	0	0	N.D. d	N.D. d
9) L3BKC AR 1016 {5}	0.00	0.00	0	0	N.D. d	N.D. d
10) BNMC Total AR1260	0.00	0.00	0	0	N.D. d	N.D. d
11) L9BKC AR 1260	0.00	0.00	0	0	N.D. d	N.D. d
12) L9BKC AR 1260 {2}	0.00	0.00	0	0	N.D. d	N.D. d
13) L9BKC AR 1260 {3}	0.00	0.00	0	0	N.D. d	N.D. d
14) L9BKC AR 1260 {4}	0.00	0.00	0	0	N.D. d	N.D. d
15) L9BKC AR 1260 {5}	0.00	0.00	0	0	N.D. d	N.D. d

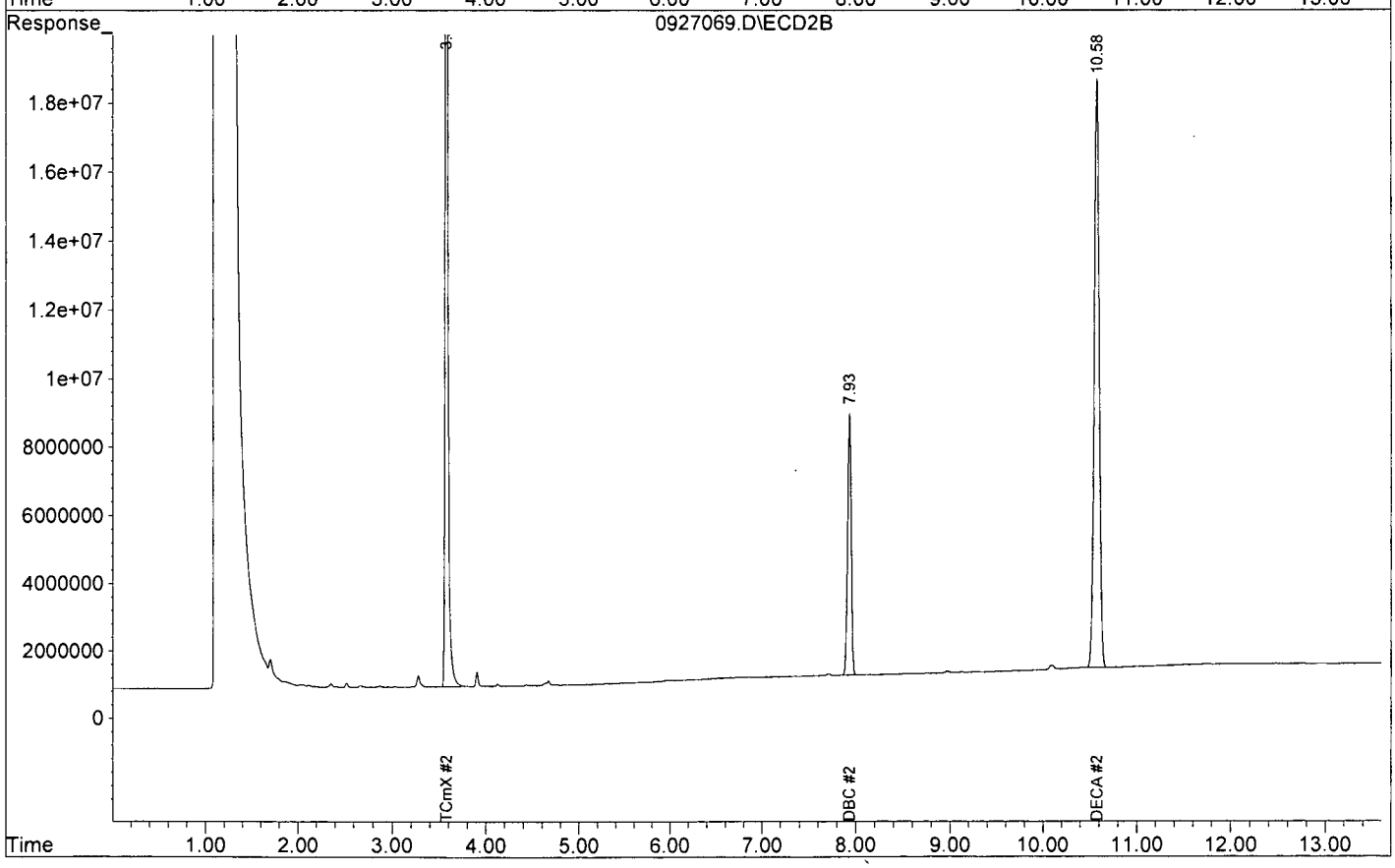
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927069.D
Acq On : 9-29-14 19:48:01
Sample : 140916A BLK 5X1/0.05/30.20G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 69
Operator: MA
Inst : Lucy
Multiplr: 3311.26





Quantitation Report (QT Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927069.D\ECD1A.CH Vial: 69
Signal #2 : G:\LUCY\DATA\140927\0927069.D\ECD2B.CH
Acq On : 9-29-14 19:48:01 Operator: MA
Sample : 140916A BLK 5X1/0.05/30.20G Inst : Lucy
Misc : soil Multiplr: 3311.26
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:25 2014 Quant Results File: 12540927.RES

Quant Method : G:\LUCY\DATA\140927\12540927.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 30 09:02:29 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 1uL
Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

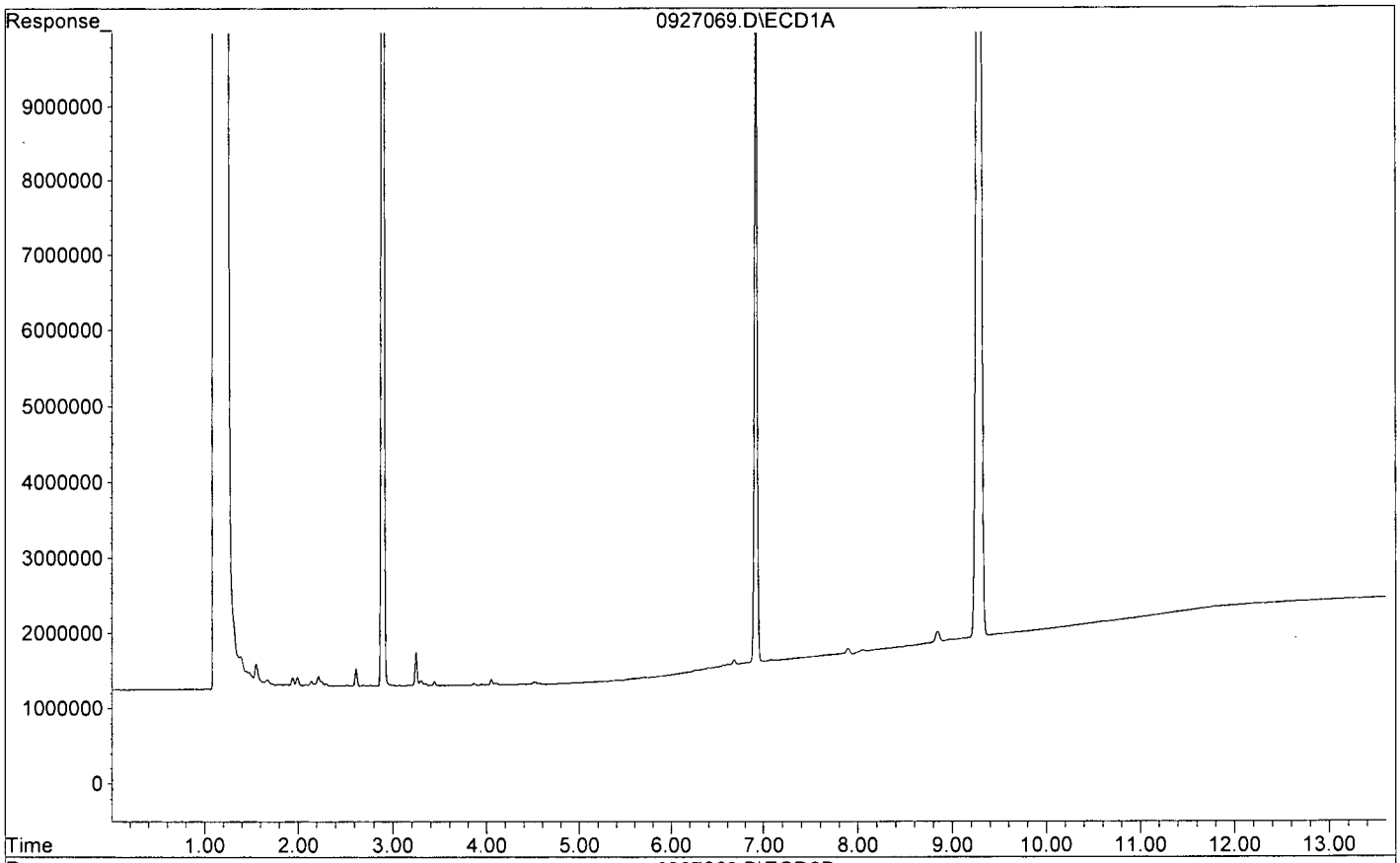
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
Target Compounds						
1) BNMC Total AR1254	0.00	0.00	0	0	N.D. d	N.D. d
2) L3BKC AR 1254	0.00	0.00	0	0	N.D. d	N.D. d
3) L3BKC AR 1254 {2}	0.00	0.00	0	0	N.D. d	N.D. d
4) L3BKC AR 1254 {3}	0.00	0.00	0	0	N.D. d	N.D. d
5) L3BKC AR 1254 {4}	0.00	0.00	0	0	N.D. d	N.D. d
6) L3BKC AR 1254 {5}	0.00	0.00	0	0	N.D. d	N.D. d

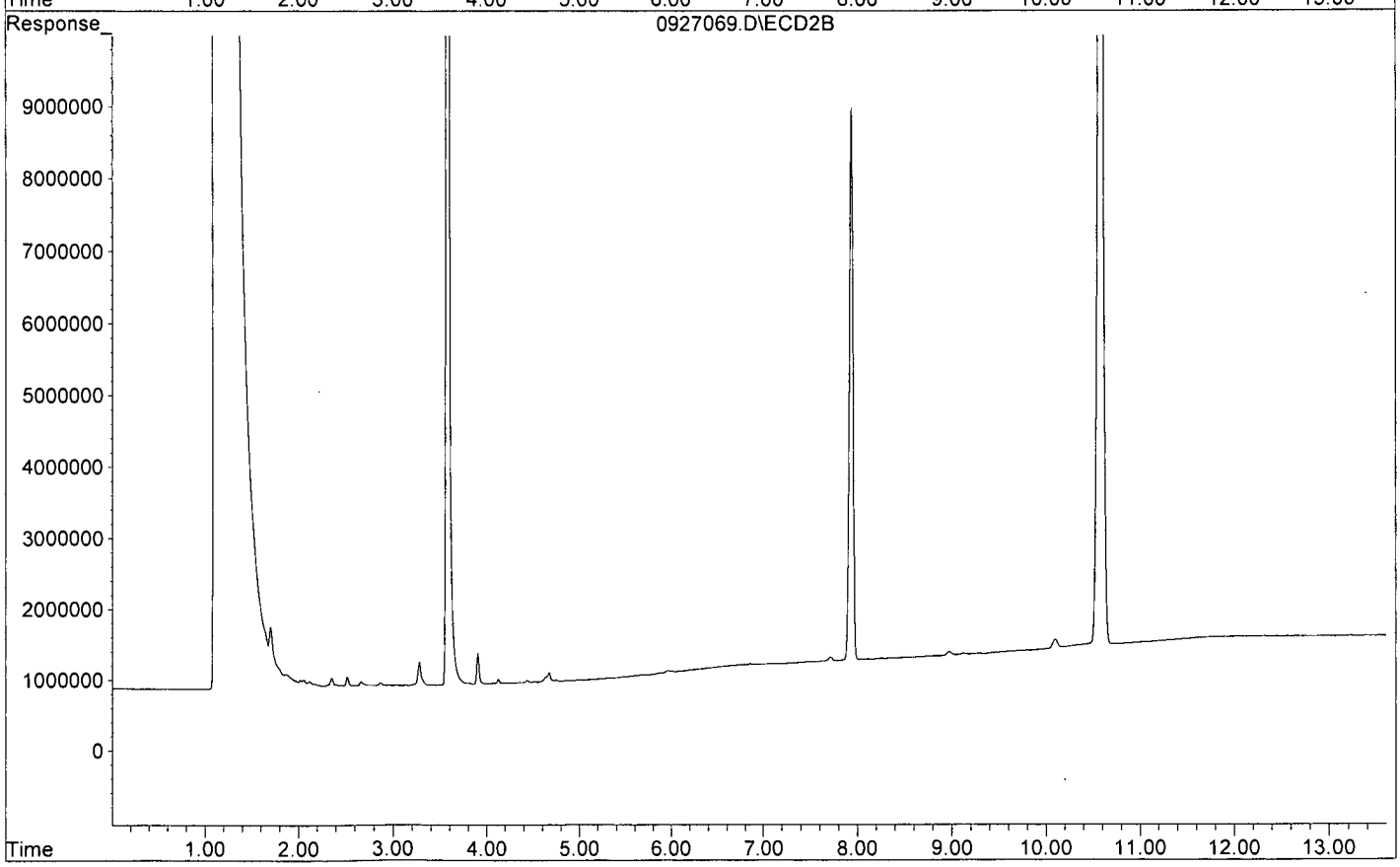
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\LUCY\DATA\140927\0927069.D
Acq On : 9-29-14 19:48:01
Sample : 140916A BLK 5X1/0.05/30.20G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\12540927.M

Vial: 69
Operator: MA
Inst : Lucy
Multiplr: 3311.26





Laboratory Control Spike Recovery
EPA 8082A PCB WATER

APPL ID: **140909W-02108 LCS - 190310**
Batch ID: #82ACA-140909A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
AROCLOR 1016	1.0	0.593	59.3	25-145
AROCLOR 1260	1.0	0.674	67.4	30-145
SURROGATE: DECACHLOROBIPHENYL	0.300	0.266	88.7	40-135

Comments: _____

Primary	SPK
Quant Method :	PSX0922.M
Extraction Date :	09/09/14
Analysis Date :	09/23/14
Instrument :	Lucy
Run :	0922102
Initials :	MA

Printed: 09/30/14 11:01:17 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140922\0922102.D\ECD1A.CH Vial: 2
Signal #2 : G:\LUCY\DATA\140922\0922102.D\ECD2B.CH
Acq On : 9-23-14 17:01:11 Operator: MA
Sample : 140909A LCS-3 1/500 Inst : Lucy
Misc : water Multiplr: 2.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 24 12:16 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140922\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	SA TCmX	2.90	3.58	42067790	44098303	0.172	0.188
	Spiked Amount 0.300			Recovery	=	57.33%	62.67%
2)	SA DBC	6.93	7.94	32920331	33913493	0.233	0.299 #
	Spiked Amount 0.300			Recovery	=	77.67%	99.67%
3)	SA DECA	9.29	10.59	30823621	27660667	0.250	0.266
	Spiked Amount 0.300			Recovery	=	83.33%	88.67%
	Target Compounds						
4)	BNMC Total AR1016	0.00	0.00	20113773	13857400	0.536m	0.593m
5)	L3BKC AR 1016	4.21	4.28	9289859	3664725	0.559	0.743 #
6)	L3BKC AR 1016 {2}	4.31	4.81	3790066	2349361	0.511	0.652 #
7)	L3BKC AR 1016 {3}	4.44	4.99	2338610	2933016	0.558	0.575
8)	L3BKC AR 1016 {4}	4.75	5.09	2703149	2240679	0.484	0.466
9)	L3BKC AR 1016 {5}	4.90	5.29	1992089	2669619	0.539	0.542
10)	BNMC Total AR1260	0.00	0.00	34585331	29304293	0.643m	0.674m
11)	L9BKC AR 1260	5.88	6.40	5634993	2784305	0.478	0.566
12)	L9BKC AR 1260 {2}	6.54	7.16	2791085	7148099	0.658	0.609
13)	L9BKC AR 1260 {3}	6.81	7.28	5329021	3411322	0.662	0.550
14)	L9BKC AR 1260 {4}	7.08	8.02	12682508	10018392	0.709	0.798
15)	L9BKC AR 1260 {5}	7.59	8.49	8147725	5942176	0.692	0.739

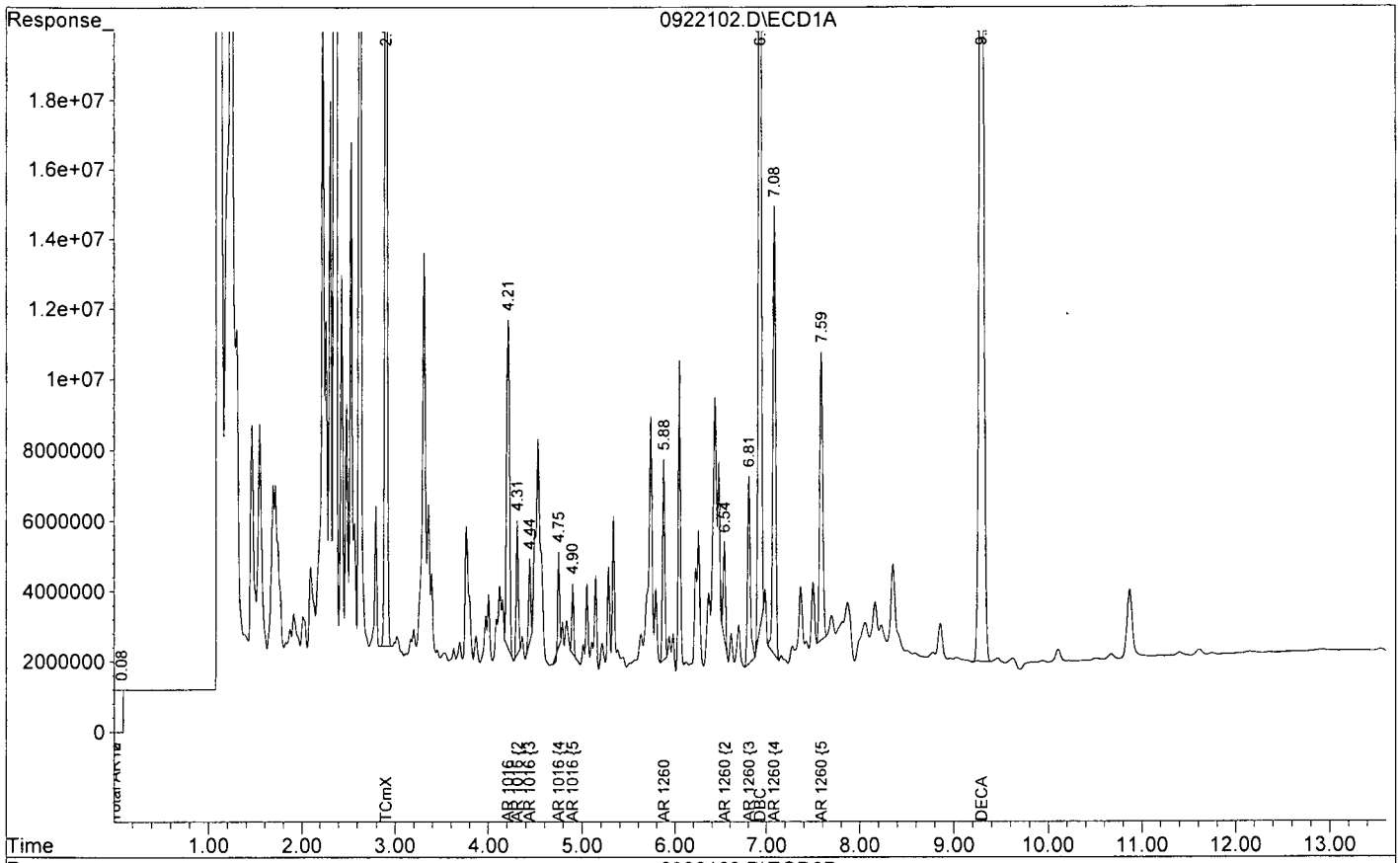
Target Compounds

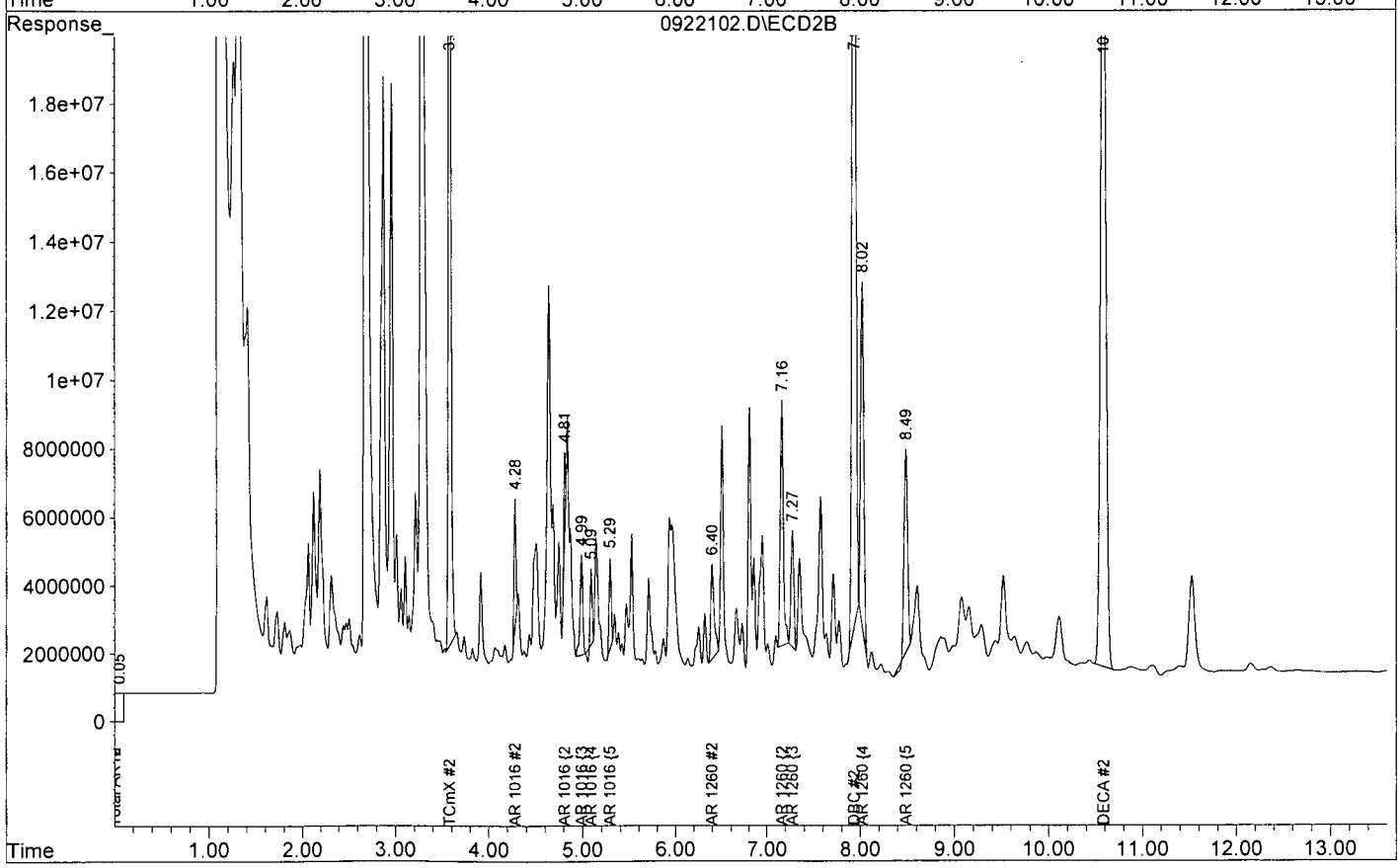
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140922\0922102.D
Acq On : 9-23-14 17:01:11
Sample : 140909A LCS-3 1/500
Misc : water
Quant Method : G:\LUCY\DATA\140922\PSX0922.M

Vial: 2
Operator: MA
Inst : Lucy
Multiplr: 2.00





Laboratory Control Spike Recovery
EPA 8082A SOIL MIS

APPL ID: **140916S-02100 LCS - 190311**
Batch ID: #82HC4-140916A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
AROCLOR 1016	0.417	0.434	104	40-140
AROCLOR 1260	0.417	0.411	98.6	60-130
SURROGATE: DECACHLOROBIPHENYL	0.333	0.271	81.4	60-125

Comments: _____

Primary	SPK
Quant Method :	PSX0922.M
Extraction Date :	09/16/14
Analysis Date :	09/29/14
Instrument :	Lucy
Run :	0927070
Initials :	MA

Printed: 09/30/14 11:01:17 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927070.D\ECD1A.CH Vial: 70
Signal #2 : G:\LUCY\DATA\140927\0927070.D\ECD2B.CH
Acq On : 9-29-14 20:04:33 Operator: MA
Sample : 140916A LCS-3 5X1/0.05/30.48G Inst : Lucy
Misc : soil Multiplr: 3280.84
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:28 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
1) SA TCmX	2.89	3.58	43745938	42288927	294.242	295.241
Spiked Amount 328.084			Recovery	=	89.68%	89.99%
2) SA DBC	6.92	7.93	9366698	7283066	108.585	105.373
Spiked Amount 328.084			Recovery	=	33.10%	32.12%
3) SA DECA	9.28	10.58	20760331	17135751	276.422	270.728
Spiked Amount 328.084			Recovery	=	84.25%	82.52%
Target Compounds						
4) BNMC Total AR1016	0.00	0.00	10075232	6185170	440.591m	434.223m
5) L3BKC AR 1016	4.20	4.28	4469597	1250946	441.037	415.796
6) L3BKC AR 1016 (2)	4.30	4.81	1962473	928728	433.637	422.918
7) L3BKC AR 1016 (3)	4.43	4.99	1115842	1378051	437.063	443.525
8) L3BKC AR 1016 (4)	4.74	5.09	1490037	1301466	437.858	444.341
9) L3BKC AR 1016 (5)	4.89	5.29	1037284	1325979	460.695	441.458
10) BNMC Total AR1260	0.00	0.00	13644637	10890920	416.334m	411.111m
11) L9BKC AR 1260	5.87	6.39	3109995	1292284	432.330	430.598
12) L9BKC AR 1260 (2)	6.53	7.16	1113331	2934320	430.431	410.274
13) L9BKC AR 1260 (3)	6.80	7.27	1932662	1545570	393.641	408.579
14) L9BKC AR 1260 (4)	7.07	8.02	4529881	3142338	415.361	410.488
15) L9BKC AR 1260 (5)	7.58	8.48	2958767	1976409	412.225	403.326

Target Compounds

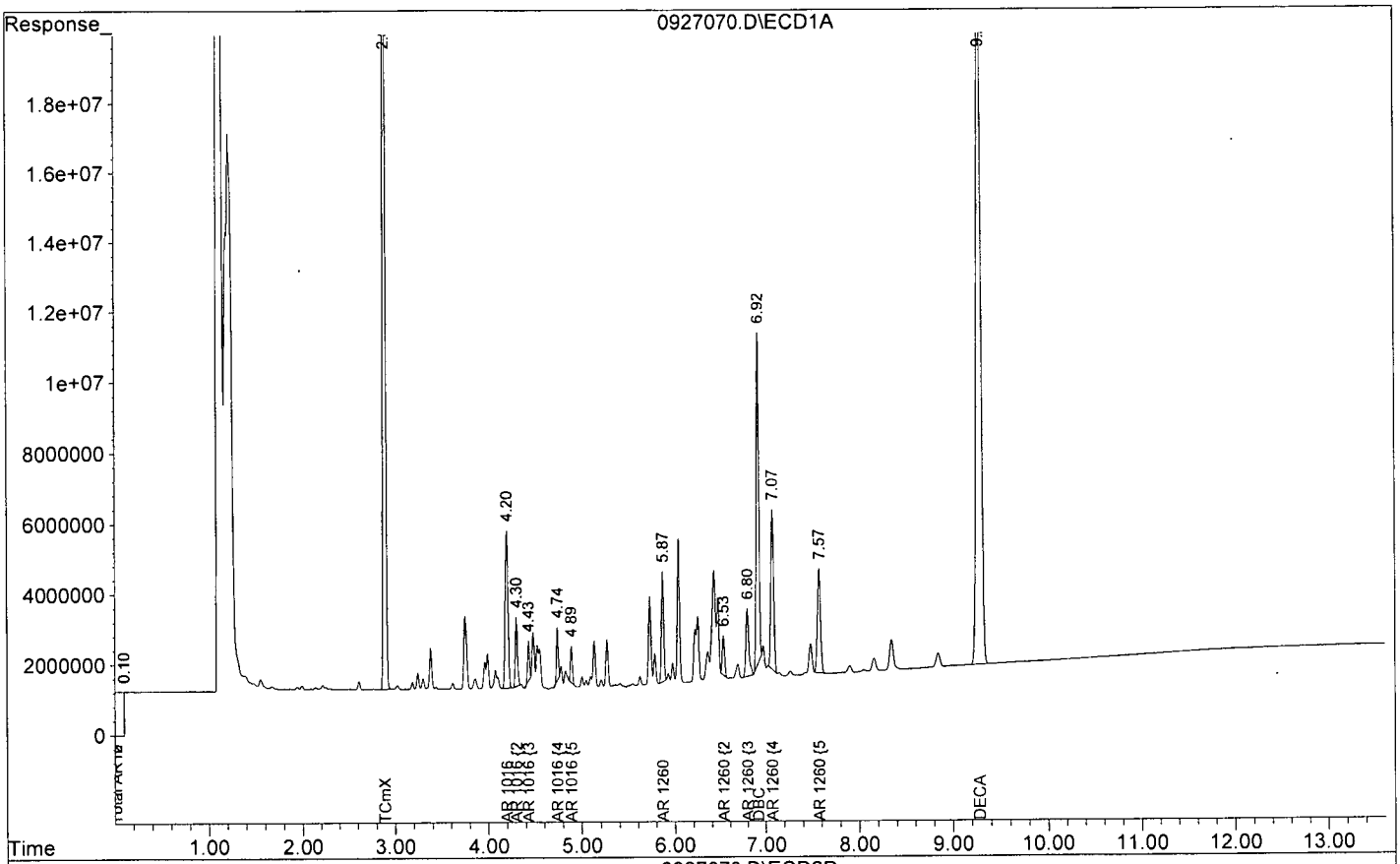
$$\text{Algorithm} = \frac{10075232 \times 3280.84}{2 \times 375\,12300} = 440.59$$ MA 9/30/14

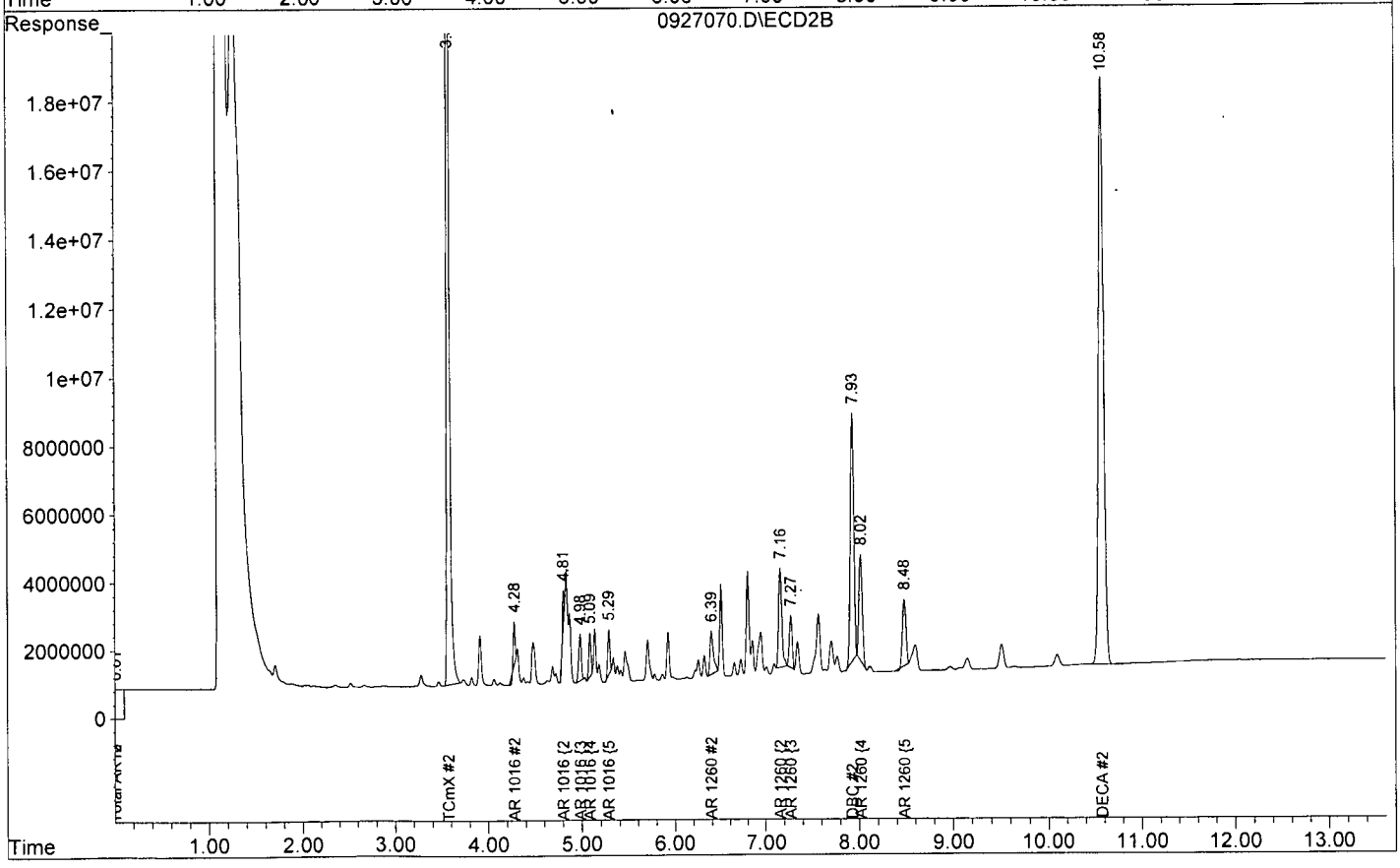
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927070.D
Acq On : 9-29-14 20:04:33
Sample : 140916A LCS-3 5X1/0.05/30.48G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 70
Operator: MA
Inst : Lucy
Multiplr: 3280.84





Matrix Spike Recoveries
EPA 8082A SOIL MIS

APPL ID: **140916S-02100 MS - 190311**
Batch ID: #82HC4-140916A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
AROCLOR 1016	0.417	ND	0.531	0.566	127	136	40-140	6.4	30
AROCLOR 1260	0.417	ND	0.535	0.513	128	123	60-130	4.2	30
SURROGATE: DECACHLOROBIPHENYL	0.333	NA	0.281	0.274	84.4	82.3	60-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	PSX0922.M	PSX0922.M
Extraction Date :	09/16/14	09/16/14
Analysis Date :	09/29/14	09/29/14
Instrument :	Lucy	Lucy
Run :	0927073	0927074
Initials :	MA	

Printed: 09/30/14 11:11:32 AM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927073.D\ECD1A.CH Vial: 73
Signal #2 : G:\LUCY\DATA\140927\0927073.D\ECD2B.CH
Acq On : 9-29-14 20:53:47 Operator: MA
Sample : AZ02100S11 MS-3 5X1/0.05/30.68G Inst : Lucy
Misc : soil Multiplr: 3259.45
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:28 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
1)	SA TCmX	2.89	3.58	52058454	49519927	347.870	343.471	
	Spiked Amount 325.945			Recovery	=	106.73%	105.38%	
2)	SA DBC	6.92	7.93	9655713	7799306	111.206	112.107	
	Spiked Amount 325.945			Recovery	=	34.12%	34.39%	
3)	SA DECA	9.28	10.58	21633900	17928649	286.175	281.409	
	Spiked Amount 325.945			Recovery	=	87.80%	86.34%	
	Target Compounds							
4)	BNMC Total AR1016	0.00	0.00	11951576	7608983	519.237m	530.698m	
5)	L3BKC AR 1016	4.20	4.28	5228562	1288988	512.565	425.648	
6)	L3BKC AR 1016 {2}	4.30	4.81	2341077	992843	513.923	449.167	
7)	L3BKC AR 1016 {3}	4.43	4.99	1229313	1593054	478.369	509.381	
8)	L3BKC AR 1016 {4}	4.74	5.09	1826499	1929188	533.231	654.362	
9)	L3BKC AR 1016 {5}	4.89	5.29	1326125	1804910	585.140	596.991	
10)	BNMC Total AR1260	0.00	0.00	15984822	14261123	484.560m	534.820m	
11)	L9BKC AR 1260	5.87	6.39	4260252	1574994	588.370	521.378	
12)	L9BKC AR 1260 {2}	6.53	7.16	1412108	4936957	542.384	685.780	#
13)	L9BKC AR 1260 {3}	6.80	7.27	1667649	1723245	337.449	452.579	#
14)	L9BKC AR 1260 {4}	7.07	8.02	5056146	3735351	460.593	484.773	
15)	L9BKC AR 1260 {5}	7.58	8.48	3588667	2290575	496.725	464.391	

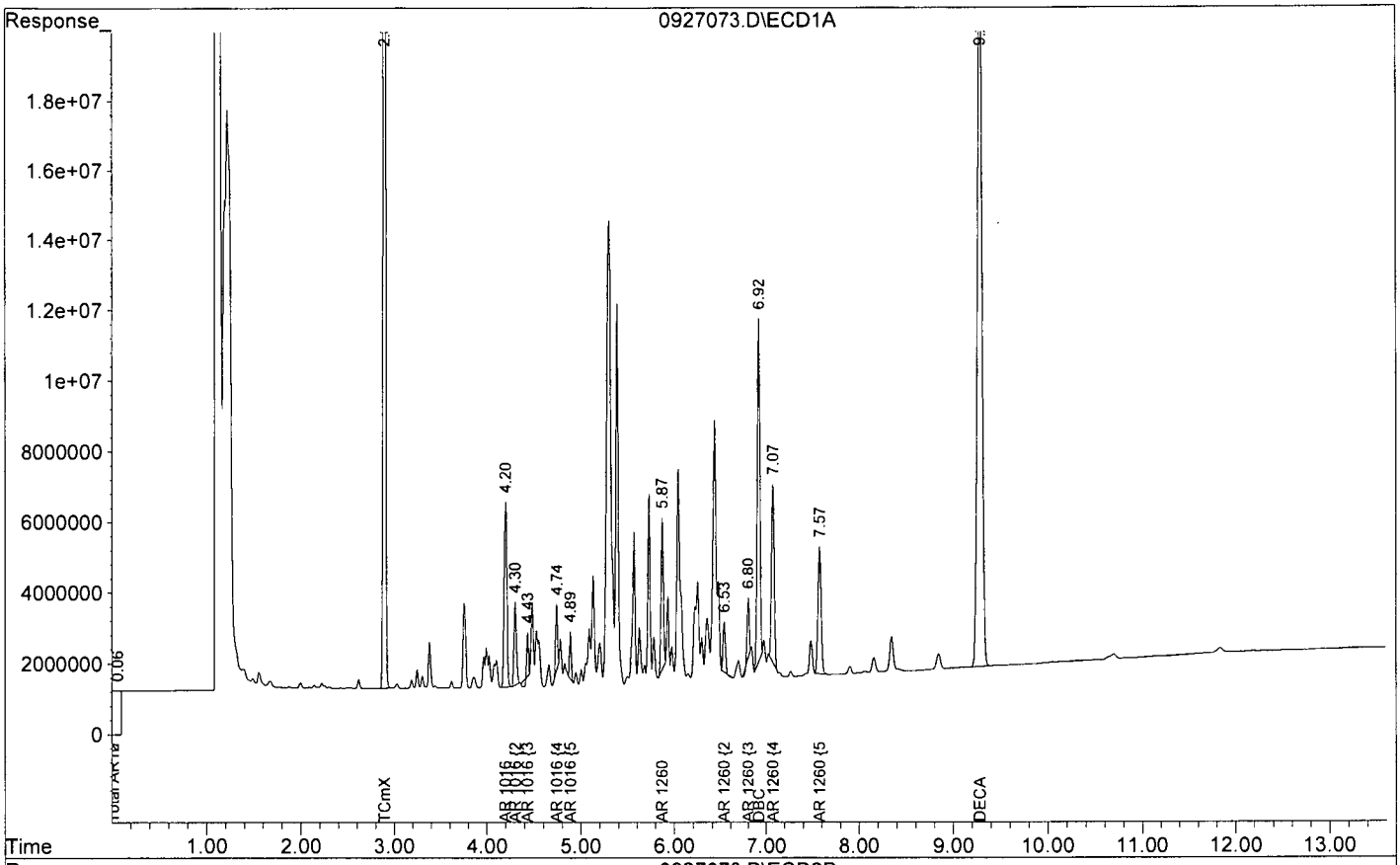
Target Compounds

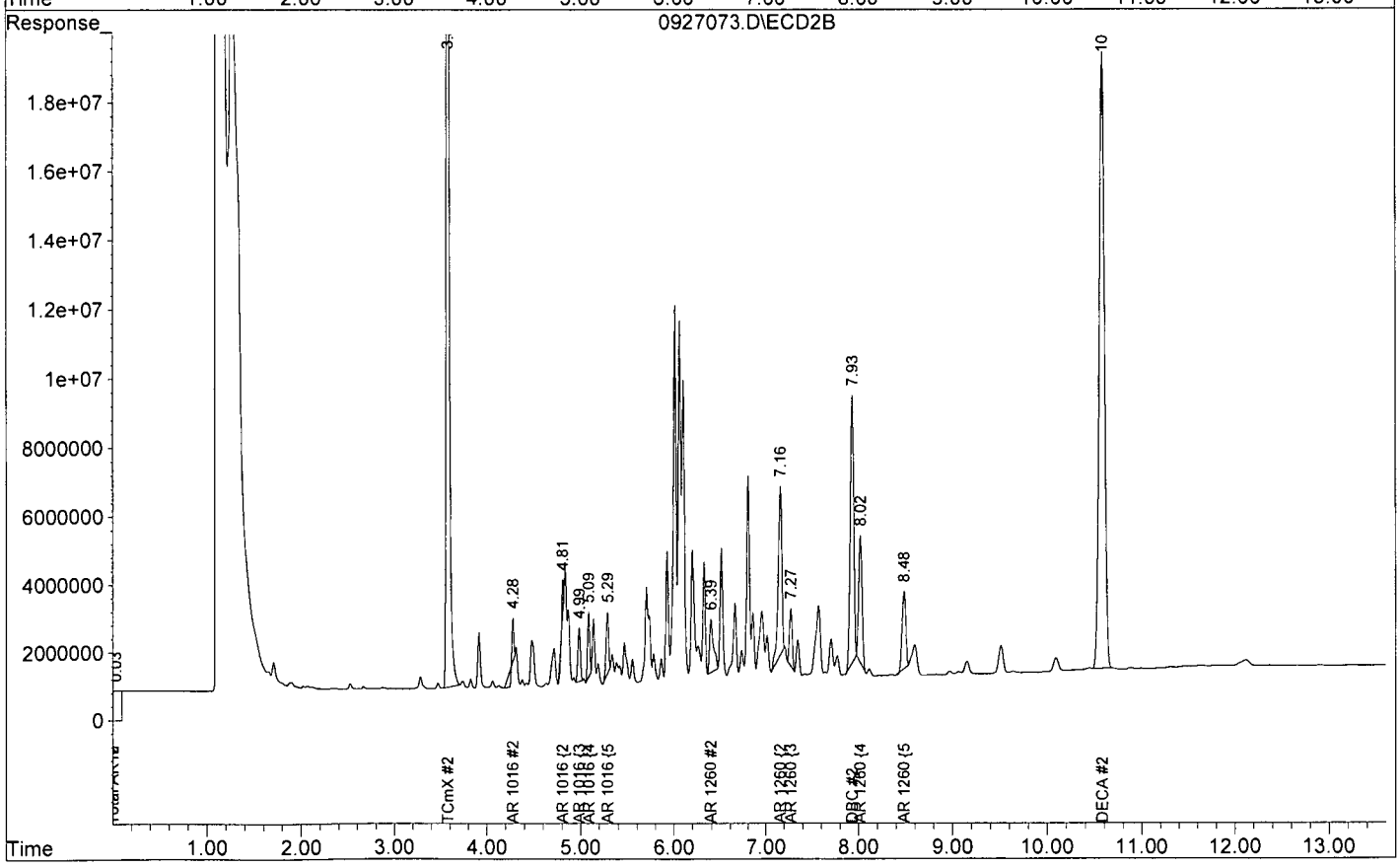
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927073.D
Acq On : 9-29-14 20:53:47
Sample : AZ02100S11 MS-3 5X1/0.05/30.68G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 73
Operator: MA
Inst : Lucy
Multiplr: 3259.45





Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\140927\0927074.D\ECD1A.CH Vial: 74
Signal #2 : G:\LUCY\DATA\140927\0927074.D\ECD2B.CH
Acq On : 9-29-14 21:10:18 Operator: MA
Sample : AZ02100S11 MSD-3 5X1/0.05/30.68G Inst : Lucy
Misc : soil Multiplr: 3259.45
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Sep 30 9:28 2014 Quant Results File: PSX0922.RES

Quant Method : G:\LUCY\DATA\140927\PSX0922.M (Chemstation Integrator)
Title : 8082
Last Update : Tue Sep 23 09:06:58 2014
Response via : Initial Calibration
DataAcq Meth : EPA8081N.M

Volume Inj. : 2uL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 Signal #2 Info : 0.32

	Compound		RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds								
1)	SA TCmX		2.89	3.58	50154804	47998385	335.150	332.917	
	Spiked Amount	325.945			Recovery	=	102.82%	102.14%	
2)	SA DBC		6.92	7.93	8991082	7339449	103.551	105.497	
	Spiked Amount	325.945			Recovery	=	31.77%	32.37%	
3)	SA DECA		9.28	10.58	20359846	17438924	269.322	273.722	
	Spiked Amount	325.945			Recovery	=	82.63%	83.98%	
	Target Compounds								
4)	BNMC Total AR1016		0.00	0.00	13028616	8835719	566.029m	616.259m	
5)	L3BKC AR 1016		4.20	4.28	5537272	1333695	542.828	440.411	
6)	L3BKC AR 1016 {2}		4.30	4.81	2490331	1103051	546.688	499.025	
7)	L3BKC AR 1016 {3}		4.43	4.99	1340069	1708720	521.468	546.365	
8)	L3BKC AR 1016 {4}		4.74	5.09	2171172	2520765	633.856	855.019	#
9)	L3BKC AR 1016 {5}		4.89	5.29	1489772	2169488	657.348	717.579	
10)	BNMC Total AR1260		0.00	0.00	16923768	15571009	513.023m	583.943m	
11)	L9BKC AR 1260		5.87	6.39	4823016	1667213	666.091	551.905	
12)	L9BKC AR 1260 {2}		6.53	7.16	1566712	5696778	601.767	791.325	#
13)	L9BKC AR 1260 {3}		6.80	7.27	1586248	1727532	320.978	453.705	#
14)	L9BKC AR 1260 {4}		7.07	8.02	5264007	3923462	479.529	509.186	
15)	L9BKC AR 1260 {5}		7.58	8.48	3683785	2556025	509.891	518.208	

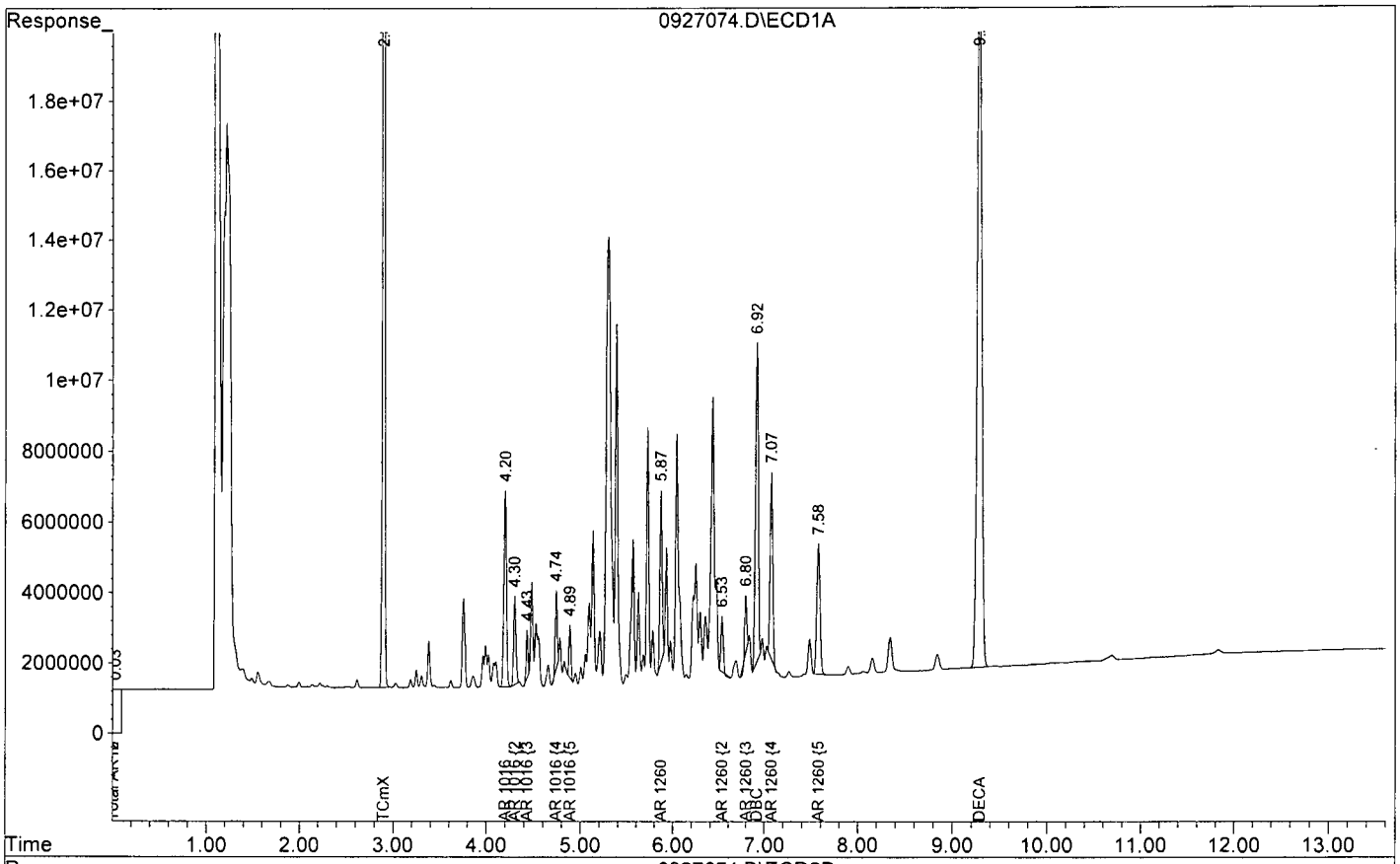
Target Compounds

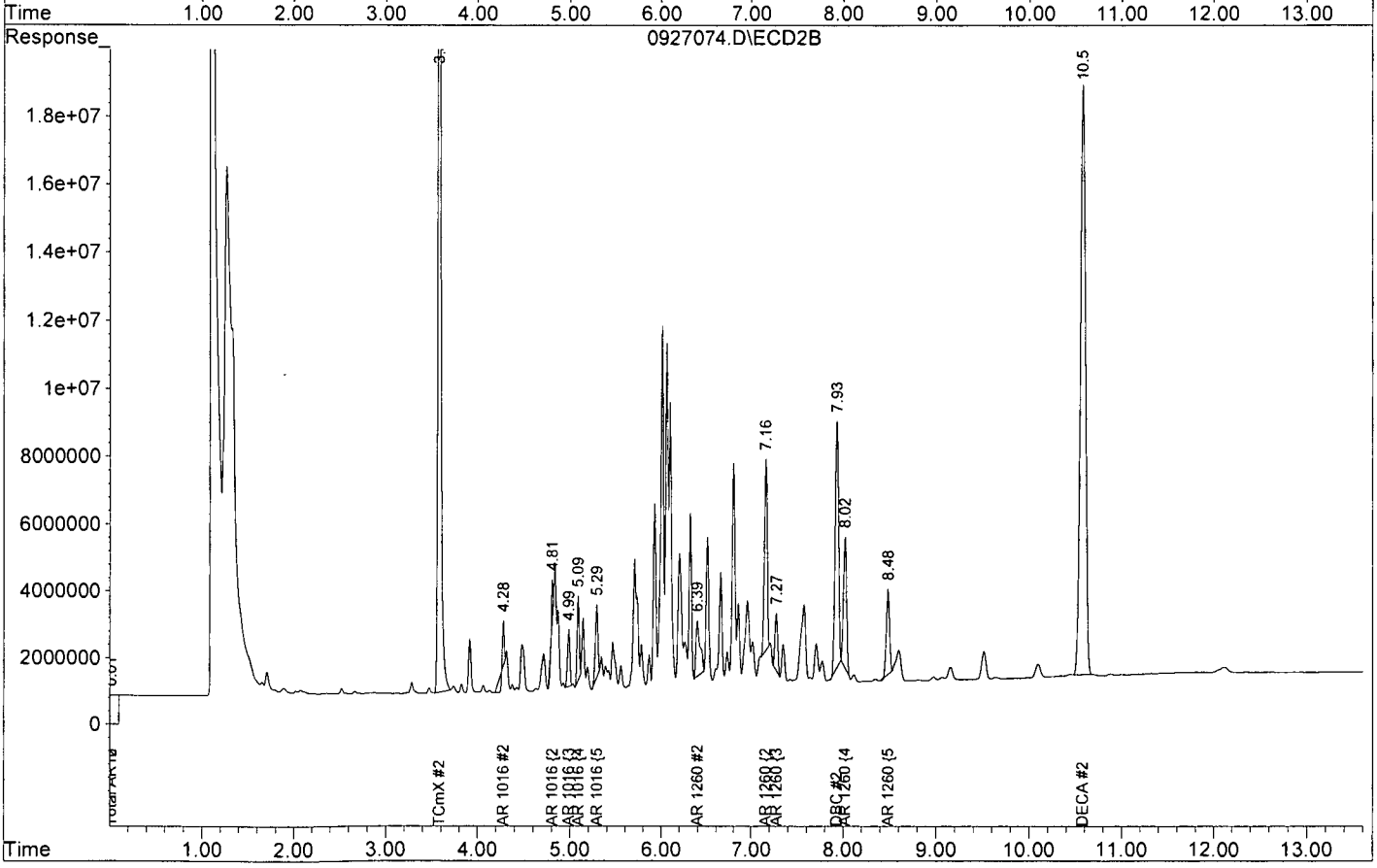
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\140927\0927074.D
Acq On : 9-29-14 21:10:18
Sample : AZ02100S11 MSD-3 5X1/0.05/30.68G
Misc : soil
Quant Method : G:\LUCY\DATA\140927\PSX0922.M

Vial: 74
Operator: MA
Inst : Lucy
Multiplr: 3259.45





LOG BOOK #41

083

MOTOR OIL CCV 1000ppm						
STANDARD	CONC.	DATE	ALIQUOT	VOL	CONC.	/LOT#
MO STD.	2000 µg/mL	MO Std.	3000µL	5mL	1000 µg/ml	MC
	PREP:	05/19/14				54024
	Exp:	05/19/15				

GA 7/31/14

GA 7/31/14

DIESEL CCV 400ug/ml						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
	PREP:	05/16/14				54024
	Exp:	05/03/15				

GA 7/31/14

GA 7/31/14

7/31/14 GA 7/31/14 ~~7/31/15~~ 10/31/14

GA 7/31/14

10/31/14

INDOXACARB STD

100µg/mL O2SI 100µL 10mL 1µg/mL Hexane 080613A

032170-06

Lot# 193215-31232

Open 7/31/14

Exp 7/31/15

7/31/14 MA

Exp 7/31/15

OP/F CURVE													
							IA	18	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE		mL	mL	mL	mL	mL	mL	mL	mL
	OP/F STD	5		06/24/14	08/10/14		2	5	10	50	20	100	70	100
VWR	Hexane		080613A				998	995	990	950	80	100	30	NA
						Final VOL	1000	1000	1000	1000	100	200	100	100

GA 7/31/14

GA 7/31/14

8/10/14

OPF 100/200 CCV						
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL
	OPF STD	5		06/24/14	08/10/14	100
VWR	HEXANE		080613A			100
					Final VOL.	200

GA 7/31/14

GA 7/31/14

8/10/14

PCB Standard						
STANDARD	INIT CONC.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT
AR1260	1000 µg/mL	O2SI	250 µL	25 mL	10 µg/mL	Hexane
AR1016	CAT:	130011-03				Lot#
	LOT:	215229-32891				080613A
	OP:	08/01/14				
	EXP:	08/01/15				
TCMX	5000 µg/mL	O2SI	10µL		2 µg/mL	
DECA	CAT:	130070-02				
DBC	LOT:	213973-32853				
	OP:	07/15/14				
	EXP:	07/15/15				

GA 8/1/14

GA 8/1/14

7/15/14

PCB Curve					
Compound	Initial Conc.	Source Date	Aliquot	Final Vol.	Final Conc.	SOLVENT
AR1260	10/2 µg/mL	PCB Std. 1D	10 µL	10 mL	0.01/0.002 µg/mL	Hexane
AR1016	10/2 µg/mL Prep:	08/01/14 1C	25 µL	10 mL	0.025 / 0.005	Lot#
TCMX	10/2 µg/mL Exp:	07/15/15 1B	50 µL	10 mL	0.05 / 0.01	080613A
DECA	10/2 µg/mL	1	500 µL	50 mL	0.1 / 0.02	
DBC	10/2 µg/mL	2	1250 µL	50 mL	0.25 / 0.05	
		3	500 µL	10 mL	0.5 / 0.10	
		4	750 µL	10 mL	0.75 / 0.15	
		5	1000 µL	10 mL	1.0 / 0.20	

GA 8/1/14

GA 8/1/14

2/1/15

STANDARD 062

INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOLVENT / LOT # | DATE / INITIALS

106 Book #4 GA 6/6/14

OP/F CURVE													
						2A	2B	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	OP/F STD	5		05/30/14	08/10/14	2	5	10	50	20	200	70	100
VWR	Hexane		080613A			998	995	990	950	80	200	30	NA
					Final VOL.	1000	1000	1000	1000	100	400	100	100

GA 6/6/14
GA 6/6/14
9/10/14

GA 6/6/14

Vel\Fen Curve						1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
VEL/FEN STD		10		03/26/14	01/28/15	10	50	20	200	70	100
	Hexane		080613A			990	950	80	200	30	N/A
					Final VOL.	1000	1000	100	400	100	100

GA
6/6/14
12/6/14

GA 6/6/14

DIESEL CCV 400ug/ml						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
	PREP:	05/16/14				52312
	Exp:	05/03/15				

GA
6/6/14
9/6/14

GA 6/6/14

MOTOR OIL CCV 1000ppm						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MOTOR OIL STD	2000UG/ML	MO STD	3000µL	5mL	1000 µg/ml	MC
		prep: 5/19/14	exp 5/19/15			52312

GA
6/6/14
9/6/14

GA 6/7/14

PAC ECO CURVE						1a	1b	1	2	3	4	5	6
	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	PAC ECO CAL STD	5		06/03/14	06/15/14	2	5	10	50	20	200	70	1000
						998	995	990	950	80	200	30	N/A
	Hexane		080613A		Final VOL.	1000	1000	1000	1000	100	400	100	N/A

GA
6/7/14
6/15/14

GA 6/9/14

PCB 2nd Src Stock						
STANDARD	INIT CONC.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT
AR1260	200 µg/mL	O2SI	500 µL	10 mL	10 µg/mL	Hexane
AR1016	CAT:	130011-01				Lot#
	LOT:	163605-27186				080613A
	OP:	06/09/14				
	EXP:	06/09/15				

GA
6/9/14
6/9/15

GA 6/9/14

PCB 2nd Src						
STANDARD	INIT CONC.	SOURCE DATE	ALIQUOT	FINAL VOL.	FINAL CONC.	SOLVENT
AR1260	10 µg/mL	PCB 2nd SRC STK	500 µL	10 mL	0.5 µg/mL	Hexane
AR1016	Prep:	06/09/14				Lot#
	Exp:	06/09/15				080613A

GA
6/9/14
12/9/14

GA 6/9/14

EE SOIL 1 Curve					
COMPOUND	CONC IN MIX	CONC OF STOCK	ALIQUOT	STK SRCE	FINAL VOL.
CAPTAN	0.005 ug/ml	1 ug/ml	5 ul	EE Soil 1 Std.	1 ml
FOLPET	0.050 ug/ml	1 ug/ml	50 ul	Prep: 05/27/14	Hexane
IPRODIONE	0.100 ug/ml	1 ug/ml	100 ul	EXP: 11/27/14	Lot: 080613A
DICOFOL	0.150 ug/ml	1 ug/ml	150 ul		
NORFLURAZON	0.200 ug/ml	1 ug/ml	200 ul		
PCNB	0.250 ug/ml	1 ug/ml	250 µl		
PERMETHRIN					
PERTHANE					
TETRADIFON					
OXYFLUORFEN					
OXADIAZON					
TEBUCONAZOLE					

GA
6/9/14
12/9/14

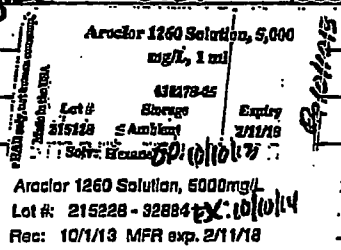
LOG BOOK #41

DATE / INITIALS	STANDARD	INITIAL CONC	SOURCE	DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT / LOT#	DATE / INITIALS
	OCL/OP Water Surrogate								
4/8/14 MA	TCMX	5000 µg/mL	02SI						
4/2/14	DBC		CAT: 130070-02		30µL	100mL	1.5µg/mL	Acetone	4/11/14
	Deca		LOT: 180787-328414					LOT: 090536 EXP: 7/5/14	GA
			OP: 9/5/13						
			EXP: 9/5/14						
	TBP	1000 µg/mL	02SI		500µL		5µg/mL		
4/4 MA	TRP		CAT: 130162-02						
4/2/14			LOT: 187462-325716						
			OP: 2/20/14						
			EXP: 2/20/15						
	AR 1221 (1µg/mL)								
4/10/14									GA 4/11/14
EXP: 6/19/14	AR1221	20µg/mL	AR1221STK		500µL	10mL	µg/mL	Hexane	4/11/14
GA			Prep: 10/11/13					#403133	10/11/14
			EXP: 10/11/14						GA
	AR 1232 (1µg/mL)								
	AR1232	20µg/mL	AR1232STK		500µL	10mL	µg/mL	Hexane	4/11/14
			Prep: 10/11/13					#403133	10/11/14
			EXP: 10/11/14						GA
	AR 1242 (1µg/mL)								
	AR1242	20µg/mL	AR1242STK		500µL	10mL	µg/mL	Hexane	4/11/14
			Prep: 10/11/13					#403133	10/11/14
			EXP: 10/11/14						GA
4/10/14	**AR 1248 (1µg/mL)**								
EXP. 5/3/14	AR1248	20µg/mL	AR1248STK		500µL	10mL	µg/mL	Hexane	4/11/14
GA			Prep: 10/11/13					#403133	10/11/14
Exp 6/2/14			EXP: 10/11/14						GA
	AR 1254 (1µg/mL)								
	AR1254	20µg/mL	AR1254STK		500µL	10mL	µg/mL	Hexane	4/11/14
			Prep: 10/11/13					#403133	10/11/14
			EXP: 10/11/14						GA

STANDARD	INITIAL CONC	SOURCE	DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N. LOT #	DATE

AR 1260 SPIKE

1260	5000ng/ml	0251	1000ml	5ML	1000ng/ml	Acetone	# 031813B	10/10/13 EX: 10/10/14



AR 1221 (20ng/ml) STK

1221	1000ng/ml	RESTEK CAT: 32007 LOT: A078067-29900 OP: 10/11/13 EX: 10/11/14	200ml	10ML	20ng/ml	Hexane # 030713A	10/11/13 EX: 10/11/14

AR 1232 (20ng/ml) STK

2	1000ng/ml	RESTEK CAT: 32008 LOT: A076704-29902 OP: 10/11/13 EX: 10/11/14	200ml	10ML	20ng/ml	Hexane # 030713A	10/11/13 EX: 10/11/14

AR 1242 (20ng/ml) STK

	1000ng/ml	RESTEK CAT: 32009 LOT: A0605783-26013 OP: 10/11/13 EX: 10/11/14	200ml	10ML	20ng/ml	Hexane # 030713A	10/11/13 EX: 10/11/14

AR 1248 (20ng/ml) STK

	1000ng/ml	RESTEK CAT: 32010 LOT: A078612-29906 OP: 10/11/13 EX: 10/11/14	200 ml	10ML	20ng/ml	Hexane # 030713A	10/11/13 EX: 10/11/14

GCMS STANDARD PREP LOG# _____ PAGE _____

094

STANDARD

	INITIAL CONC	SOURCE	DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N LOT #	EXP'N INITIALS
AR1254 (20ng/µl) STK								
AR1254	100ng/µl	RESTEK CAT: 32011 LOT: A0823B3-299091 OP: 10/11/13 EX: 10/11/14		200µl	10ml	20ng/µl	Hexane # 030713A	10/11/13 EX: 10/11/14
AR1221 (1ng/µl)								
AR1221	20ng/µl	AR1221 STK Prep: 10/11/13 EX: 10/11/14		500µl	10ml	1ng/µl	Hexane # 030713A	10/11/13 EX: 4/11/14
AR1232 (1ng/µl)								
AR1232	20ng/µl	AR1232 STK Prep: 10/11/13 EX: 10/11/14		500µl	10ml	1ng/µl	Hexane # 030713A	10/11/13 EX: 4/11/14
AR1242 (1ng/µl)								
AR1242	20ng/µl	AR1242 STK Prep: 10/11/13 EX: 10/11/14		500µl	10ml	1ng/µl	Hexane # 030713A	10/11/13 EX: 4/11/14
AR1248 (1ng/µl)								
AR1248	20ng/µl	AR1248 STK Prep: 10/11/13 EX: 10/11/14		500µl	10ml	1ng/µl	Hexane # 030713A	10/11/13 EX: 4/11/14
AR1254 (1ng/µl)								
AR1254	20ng/µl	AR1254 STK Prep: 10/11/13 EX: 10/11/14		500µl	10ml	1ng/µl	Hexane # 030713A	10/11/13 EX: 4/11/14

LOG BOOK #4

OP + FAMPHUR STD					
COMPOUNDS	FINAL CONC.	INITIAL CONC.	ALIQUOT	SOURCE	FINAL VOL
COUMAPHOS	5ug/ml	200ug/ml	250ul	O2SI	10ml
FENSULFOTHION	5	200	each of:		HEXANE
DEMETON	5	200			LOT#
DICHLORVOS	5	200		MIX A	060613A
DISULFOTON	5	200	CAT:	130205-01	
EPN	5	200	LOT:	222299-33330	
ETHION	5	200	OP:	05/30/14	
RONNEL	5	200	EXP:	08/10/14	
FENTHION	5	200			
MALATHION	5	200		MIX B	
PARATHION	5	200	CAT:	132380-01	
EPTC	5	200	LOT:	201875-32386	
SULFOTEPP	5	200	OP:	05/30/14	
TRICHOLORONATE	5	200	EXP:	01/08/15	
MERPHOS	5	200			
STIROPHOS	5	200			
CHLOPYRIFOS	5	200		MIX 9-14	
DEF	5	200		(MIX C)	
DIMETHOATE	5	200	CAT:	130164-01	
AZINPHOS METHYL	5	200	LOT:	197631-32356	
METHYL PARATHION	5	200	OP:	05/30/14	
MEVINPHOS	5	200	EXP:	10/18/14	
NALED	5	200			
PHORATE	5	200			
ETHOPROP	5	200			
TOKUTHION	5	200			
PROWL	5	200			
BOLSTAR	10	200*2			
TRIFLURALIN	5	200			
DIAZINON	5	200			
TEPP	5	200			
MONOCROTOPHOS	5	200			
DIPHENAMID	5	200			
TBP	5	200			
TPP	5	200			
FAMPHUR	10	1000	100ul	ABSOLUTE	
			PART:	70387	
			LOT:	060313-32654	
			OP:	05/09/14	
			EXP:	05/09/15	

GA 5/30/14 8/10/14

PCB SOIL SPIKE

AR1016 + 1260

1000ug/ml O2SI

~~Lot~~ CAT: 130011-03

LOT: 215229-32888 OP 12/9/13 EXP 12/9/14

215229-32889 OP 5/30/14 EXP 5/30/15

215229-32890 OP 5/30/14 EXP 5/30/15

2500uL 50 mL 50ug/ml Acetone

Lot: 090536

GA 5/30/14 ~~12/9/14~~ 5/30/14 GA 11/30/14

Quinclorac Surrogate						
STD	Init. Conc.	Src Date	Aliquot	Fin. Vol.	Fin. Conc.	Solvent#
Quinclorac	1000 ug/mL	O2SI	25µL	25 mL	1µg/mL	MTBE
	Cat	031921-01				#50223
	Lot	222287-33296				
	Op	06/02/14				
	Exp	06/02/15				

GA 6/2/14

GA 6/2/14 9/2/14

INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | LOT

STANDARD

099

STANDARD PREPARATION BOOK # GA 9/12/14

MOTOR OIL CCV 1000ppm						
STANDARD	CONC.	DATE	ALIQUOT	VOL	CONC.	/LOT#
MO STD.	2000 µg/mL	MO Std.	3000µL	5mL	1000 µg/ml	MC
	PREP:	08/05/14				54024
	Exp:	08/05/15				

GA 9/12/14
12/12/14

PCB CONG LVL4

Various 10ug/mL PCB CONG STK 10uL 10mL 0.01ug/mL GA 9/12/14

Prep: 9/5/14 Hexane

EXP: 4/30/15 #080613A 3/12/15

GA 9/12/14

		FIN PT CURVE			
COMPOUND	INITIAL CONC	FINAL CONC	ALIQUOT	STK SRCE	FINAL VOL.
FOLPET	5 ug/ml	VARIOUS	5 ul	FIN PT Std.	1 ml
IPRODIONE	25 ug/ml		50 ul	Prep: 07/01/14	Hexane
NORFLURAZON	5 ug/ml		100 ul	EXP: 07/01/15	Lot: 080613A
PERTHANE	50 ug/ml		150 ul		
TETRADIFON	5 ug/ml		250 ul		

GA 9/12/14
3/12/15

GA 9/12/14

PAC ECO CURVE													
						1a	1b	1	2	3	4	5	6
	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	PAC ECO CAL STD	5		06/23/14	11/09/14	2	5	10	50	20	100	70	1000
						998	995	990	950	80	100	30	N/A
	Hexane		080613A		Final VOL.	1000	1000	1000	1000	100	200	100	1000

GA 9/12/14
~~3/12/15~~ GA 9/15/14
11/9/14

GA 9/15/14

PAC ECO CURVE													
						1a	1b	1	2	3	4	5	6
	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	PAC ECO CAL STD	5		06/23/14	11/09/14	2	5	10	50	20	100	70	1000
						998	995	990	950	80	100	30	N/A
	Hexane		080613A		Final VOL.	1000	1000	1000	1000	100	200	100	1000

GA 9/15/14
11/9/14

OCL-OP Soil Surrogate						
Standard	Initial conc ug/ml	Source date	Aliquot	Final VOL	Final conc	Solvent LOT#
TCMX	5000	O2SI	400ul	100ml	20ug/ml	ACETONE
DBC		cat:130070-02				090513C
DECA		lot: 213973-32853				
		open:07/5/14				
		EX:7/5/15				
TBP	1000	O2SI	500ul		5ug/ml	
TPP		cat:130161-02				
		lot:199464-31892				
		open: 08/5/14				
		EX: 08/5/15				

LH
9/16/14
ex. 12/16/14

GC STANDARD PREPARATION BOOK # 10 PAGE # 119

STANDARD	INITIAL CONC	SOURCE	DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	QCL EN. LOT #	DATE INITIALS

RS 12/5/13 RS

OP/F CURVE													
PREP:	12/05/13	EXP:	01/05/14			1A	1B	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL	µL
	OP/F STD	5		10/22/13	01/12/14	2	5	10	50	200	500	700	1000
VWR	Hexane		030713A			998	995	990	950	800	500	300	NA
					Final VOL.	1000	1000	1000	1000	1000	1000	1000	1000

Prep: 12/5/13 RS
Exp: 1/5/14 RS 1-20-14
Exp: 1/12/14

RS 12/5/13

PREP DATE:	07/26/13						1	2	3	4	5	6
Vel\Fen Std												
EXP:	01/26/14											
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	
VEL/FEN STD		10		07/26/13	01/26/14	10	50	200	500	700	1000	
	Hexane		030713A			900	950	800	500	300	N/A	
					Final VOL.	1000	1000	1000	1000	1000	1000	

Prep: 12/5/13 RS
Exp: 1/5/14 RS 1-20-14
Exp: 1/26/14

RS 12/5/13

PREP DATE:	08/28/13										
507B CURVE											
EXP:	01/16/14										
SUPPLIER	ID#	µg/mL	LOT #	DATE	EXP.	µL	µL	µL	µL	µL	µL
	507B STD	5		08/28/13	01/16/14	10	50	200	500	700	1000
	MTBE		50223			990	950	800	500	300	NA
					Final VOL.	1000	1000	1000	1000	1000	1000

RS
Prep: 12/5/13
Exp: 1/5/14 RS 1-20-14
Exp: 1/16/14

1000ug/ml PCB ~~Soil~~ water Spike RS

AR1016
AR1260

0251 130011-03
Cat: ~~130H~~ RS 12/9/13
Lot: 177283-32413
Op: 8/13/13
Exp: 8/13/14

250ml 50ml 5ug/ml Acetone #031803B Prep: 12/9/13
~~Exp: 6/9/14~~ Exp: 3/9/14 RS 1-20-14
Exp 9/6/14 RS
Exp 12/2/14

It passed QC limits for spike on 3/18/14. It was QC'd on 6/6/14 MA. It was QC'd 9/2/14

PCB Soil Spike RS

1000ug/ml 0251 1250ml 25ml 50ug/ml Acetone #031803B Prep: 12/9/13
Cat: 130011-03
Lot: 177283-32414
Op: 9/6/13
ex: 9/6/14
Ex: 6/9/14

AR1016
AR1260

RS 12/12/13

RS 12/9/13.

* QCL/op Surrogate
std Prep # 41 pg. 1 RS
PCB Soil Spike Book # 41 pg. 1

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE INITIAL

GC STANDARD PREPARATION BOOK # 41 PAGE # 089

		OCL-OP water Surrogate				
Standard	Initial conc ug/ml	Source date	Aliquot	Final VOL	Final conc	Solvent LOT#
TCMX	5000	O2SI	30ul	100ml	1.5ug/ml	ACETONE
DBC		cat:130070-02				090513C
DECA		lot: 213973-32853				
		open:07/15/14				
		EX: 07/15/15	MA 8/20/14			
TBP	1000	O2SI	500ul		5ug/ml	
TPP		cat:130161-02				
		lot:199464-31892				
		open: 08/5/14				
		EX: 08/5/15		MA 8/20/14		

8/20/14 MA
Exp
11/20/14

OP/F CURVE						IA	1B	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	mL	mL	mL	mL	mL	mL	mL	mL
	OP/F STD	5		08/18/14	12/08/14	2	5	10	50	20	100	70	100
VWR	Hexane		080613A			998	995	990	950	80	100	30	NA
					Final VOL	1000	1000	1000	1000	100	200	100	100

GA
8/22/14
12/8/14

OPC CURVE						1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
	OPC STD	5		08/04/14	07/19/15	10	50	20	100	70	1000
	Hexane		080613A			990	950	80	100	30	NA
					Final VOL.	1000	1000	100	200	100	1000

GA
8/22/14
2/22/15

TERBACIL CURVE						0.05	0.25	1	2.5	3.5	5
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
	TERBACIL STD	5		08/18/14	08/18/15	10	50	20	100	70	100
VWR	HEXANE		080613A			990	950	80	100	30	NA
					Final VOL.	1000	1000	100	200	100	100

GA
8/22/14
2/22/15

8141 Surrogate 1000 ng/ml 08-26-14 JP

Tributyl and Triphenylphosphate Solution, 1,000 mg/L, 1 ml
L38161-02
Lot # 199464 Storage 5 -10 Degrees C Expiry 11/19/15
Solv: Acetone
Made in the USA

Tributyl and Triphenyl phosphate
Lot #: 199464 - 31893
Rec: 1/15/13 MFR exp. 11/19/15

I broke open the vial labeled to the left and transferred to an amber 1.8ml Injection vial.
→ 8141 Surr 1000ng/ml 08-26-14

Incremental Sampling Preparation Log Book # 1 Page # 1827

ARF # / Project	Sample #	1st Weight *	2nd Weight *	3rd Weight *	4th Weight * (If Needed)	Passing Sample (weight of foil negligible)	Tarred Container + Non-passing Sample	I.S. before grind (Initial Box when Complete)
	AZ 02222 NG sticker verified Date/Initials	Weight: 78.92 g Date: 9-9-14 Time: 15:25 Initials: CFM	Weight: 75.08 g Date: 9-10-14 Time: 07:25 Initials: CFM	Weight: 75.09 g Date: 9-10-14 Time: 10:20 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02223 NG sticker verified Date/Initials	Weight: 75.81 g Date: 9-9-14 Time: 15:25 Initials: CFM	Weight: 72.51 g Date: 9-10-14 Time: 07:25 Initials: CFM	Weight: 72.50 g Date: 9-10-14 Time: 10:20 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
714218 Element	AZ 02099 NG sticker verified Date/Initials	Weight: 2.004 Kg Date: 9-10-14 Time: 8:41 Initials: Rmm	Weight: 2.498 Kg Date: 9-11-14 Time: 8:35 Initials: E.R.	Weight: 2.494 Kg Date: 9-12-14 Time: 8:08 Initials: E.R Rmm	Weight: g Date: Time: Initials:	0.754 Kg Initials: Rmm	250.62 g Initials: Rmm	Metals: NM 8270: 8290: Other:
	AZ 02100 NG sticker verified Date/Initials	Weight: 2.144 Kg Date: 9-10-14 Time: 8:51 Initials: Rmm	Weight: 2.0160 Kg Date: 9-11-14 Time: 8:36 Initials: E.R.	Weight: 2.0102 Kg Date: 9-12-14 Time: 8:10 Initials: Rmm	Weight: g Date: Time: Initials:	0.568 Kg Initials: E.R.	226.64 g Initials: E.R.	Metals: NM 8270: 8290: Other:
	AZ 02101 NG sticker verified Date/Initials	Weight: 2.724 Kg Date: 9-10-14 Time: 8:56 Initials: Rmm	Weight: 2.612 Kg Date: 9-11-14 Time: 8:38 Initials: E.R	Weight: 2.602 Kg Date: 9-12-14 Time: 8:12 Initials: Rmm	Weight: g Date: Time: Initials:	0.834 Kg Initials: Rmm	279.68 g Initials: Rmm	Metals: NM 8270: 8290: Other:
	AZ 02102 NG sticker verified Date/Initials	Weight: 2.788 Kg Date: 9-10-14 Time: 9:02 Initials: Rmm	Weight: 2.636 Kg Date: 9-11-14 Time: 8:39 Initials: E.R	Weight: 2.626 Kg Date: 9-12-14 Time: 8:15 Initials: Rmm	Weight: g Date: Time: Initials:	0.890 Kg Initials: E.R	282.97 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02103 NG sticker verified Date/Initials	Weight: 2.830 Kg Date: 9-10-14 Time: 9:08 Initials: Rmm	Weight: 2.672 Kg Date: 9-11-14 Time: 8:40 Initials: E.R	Weight: 2.6600 Kg Date: 9.12.14 Time: 8:16 Initials: RMM	Weight: g Date: Time: Initials:	0.924 Kg Initials: E.R	264.59 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02104 NG sticker verified Date/Initials	Weight: 2.796 Kg Date: 9-10-14 Time: 9:12 Initials: Rmm	Weight: 2.636 Kg Date: 9-11-14 Time: 8:41 Initials: E.R	Weight: 2.624 Kg Date: 9-12-14 Time: 8:17 Initials: Rmm	Weight: g Date: Time: Initials:	0.894 Kg Initials: Rmm	318.83 g Initials: Rmm	Metals: NM 8270: 8290: Other:

* Each recorded weight includes the foil-lined tray + the sample.

NG = No Grind (applies to metals, PAH, Perchlorate, other methods etc.)

Incremental Sampling Preparation Log Book # 1 Page # 1828

ARF # / Project	Sample #	1st Weight *	2nd Weight *	3rd Weight *	4th Weight * (If Needed)	Passing Sample (weight of foil negligible)	Tarred Container + Non-passing Sample	I.S. before grind (Initial Box when Complete)
	AZ 02105 NG sticker verified Date/Initials	Weight: 2.814 Kg Date: 9-10-14 Time: 9:15 Initials: RMM	Weight: 2.572 Kg Date: 9-11-14 Time: 8:42 Initials: E.R.	Weight: 2.508 Kg Date: 9-12-14 Time: 8:18 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.978 Kg Initials: J.R	163.14 g Initials: J.R	Metals: NM 8270: 8290: Other:
	AZ 02106 NG sticker verified Date/Initials	Weight: 2.862 Kg Date: 9-10-14 Time: 9:19 Initials: RMM	Weight: 2.600 Kg Date: 9-11-14 Time: 8:43 Initials: E.R.	Weight: 2.546 Kg Date: 9-12-14 Time: 8:18 Initials: RMM	Weight: ____ g Date: Time: Initials:	E.R. 1.000 Kg Initials: E.R	136.28 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02107 NG sticker verified Date/Initials	Weight: 2.834 Kg Date: 9-10-14 Time: 9:19 Initials: RMM	Weight: 2.586 Kg Date: 9-11-14 Time: 8:44 Initials: E.R	Weight: 2.530 Kg Date: 9-12-14 Time: 8:19 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.924 Kg Initials: JR	219.20 g Initials: J.R	Metals: NM 8270: 8290: Other:
	AZ 02110 NG sticker verified Date/Initials	Weight: 2.720 Kg Date: 9-10-14 Time: 9:22 Initials: RMM	Weight: 2.584 Kg Date: 9-11-14 Time: 8:45 Initials: E.R	Weight: 2.574 Kg Date: 9-12-14 Time: 8:19 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.902 Kg Initials: E.R	282.40 g Initials: ER	Metals: NM 8270: 8290: Other:
	AZ 02111 NG sticker verified Date/Initials	Weight: 2.642 Kg Date: 9-10-14 Time: 9:30 Initials: RMM	Weight: 2.468 g Date: 9-11-14 Time: 8:45 Initials: E.R	Weight: 2.450 Kg Date: 9-12-14 Time: 8:21 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.892 Kg Initials: ER	302.54 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02112 NG sticker verified Date/Initials	Weight: 2.780 Kg Date: 9-10-14 Time: 9:35 Initials: RMM	Weight: 2.520 Kg Date: 9-11-14 Time: 8:46 Initials: ER	Weight: 2.486 Kg Date: 9-12-14 Time: 8:22 Initials: RMM	Weight: 2.482 Kg Date: 9/12/14 Time: 11:20 Initials: KY	0.980 Kg Initials: E.R	129.53 g Initials: ER.	Metals: NM 8270: 8290: Other:
	AZ 02113 NG sticker verified Date/Initials	Weight: 2.596 Kg Date: 9-10-14 Time: 9:39 Initials: RMM	Weight: 2.464 Kg Date: 9-11-14 Time: 8:46 Initials: ER	Weight: 2.458 Kg Date: 9-12-14 Time: 8:23 Initials: RMM	Weight: ____ g Date: Time: Initials:	0884 Kg Initials: JR	167.65 g Initials: J.R	Metals: NM 8270: 8290: Other:
	AZ 02114 NG sticker verified Date/Initials	Weight: 2.856 Kg Date: 9-10-14 Time: 9:45 Initials: RMM	Weight: 2.666 Kg Date: 9-11-14 Time: 8:47 Initials: ER	Weight: 2.654 Kg Date: 9-12-14 Time: 8:23 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.998 Kg Initials: E.R	241.29 g Initials: ER	Metals: NM 8270: 8290: Other:

* Each recorded weight includes the foil-lined tray + the sample.

NG = No Grind (applies to metals, PAH, Perchlorate, other methods etc.)

Incremental Sampling Preparation Log Book # 1 Page # 1829

ARF # / Project	Sample #	1st Weight *	2nd Weight *	3rd Weight *	4th Weight * (If Needed)	Passing Sample (weight of foil negligible)	Tarred Container + Non-passing Sample	I.S. before grind (Initial Box when Complete)
	AZ 02115 NG sticker verified Date/Initials	Weight: 2.8301 g Date: 9-10-14 Time: 9:49 Initials: RMM	Weight: 2.594 g Date: 9-11-14 Time: 8:47 Initials: E.R	Weight: 2.5060 Kg Date: 9-12-14 Time: 8:23 Initials: RMM	Weight: g Date: Time: Initials:	0.9921 g Initials: E.R	139.57 g Initials: E.R	Metals: DM 8270: 8290: Other:
74237 UPS, Group	AZ 02231 NG sticker verified Date/Initials	Weight: 77.92 g Date: 9-10-14 Time: 14:54 Initials: CFM	Weight: 74.08 g Date: 9-11-14 Time: 08:14 Initials: CFM	Weight: 74.09 g Date: 9-12-14 Time: 11:36 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02232 NG sticker verified Date/Initials	Weight: 68.64 g Date: 9-10-14 Time: 14:54 Initials: CFM	Weight: 65.11 g Date: 9-11-14 Time: 08:14 Initials: CFM	Weight: 65.11 g Date: 9-12-14 Time: 11:36 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02233 NG sticker verified Date/Initials	Weight: 75.27 g Date: 9-10-14 Time: 14:54 Initials: CFM	Weight: 71.63 g Date: 9-11-14 Time: 08:14 Initials: CFM	Weight: 71.64 g Date: 9-12-14 Time: 11:36 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
74278 UPS, Group	AZ 02584 ms/msd NG sticker verified Date/Initials	Weight: 75.59 g Date: 9-12-14 Time: 14:18 Initials: CFM	Weight: 72.47 g Date: 9-15-14 Time: 07:03 Initials: CFM	Weight: 72.48 g Date: 9-15-14 Time: 09:13 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02585 NG sticker verified Date/Initials	Weight: 74.17 g Date: 9-12-14 Time: 14:18 Initials: CFM	Weight: 70.92 g Date: 9-15-14 Time: 07:07 Initials: CFM	Weight: 70.91 g Date: 9-15-14 Time: 09:13 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
74297 UPS, Group	AZ 02668 NG sticker verified Date/Initials	Weight: 69.36 g Date: 9-16-14 Time: 13:31 Initials: CFM	Weight: 66.29 g Date: 9-17-14 Time: 07:54 Initials: CFM	Weight: 66.31 g Date: 9-17-14 Time: 15:33 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02669 NG sticker verified Date/Initials	Weight: 68.28 g Date: 9-16-14 Time: 13:31 Initials: CFM	Weight: 65.43 g Date: 9-17-14 Time: 07:54 Initials: CFM	Weight: 65.44 g Date: 9-17-14 Time: 15:33 Initials: 743 CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:

* Each recorded weight includes the foil-lined tray + the sample.

NG = No Grind (applies to metals, PAH, Perchlorate, other methods etc.)

_SEP025

Organic Extraction Worksheet

Method	OCL OP/Triazine Sep Funnel Low 3510C	Extraction Set	140909A	Extraction Method	SEP025	Units	mL

Spiked ID 1	OCL Water Spike 9-4-4 EXP 6-26-15		Surrogate ID 1	OCL/OP Water Surrogate 8-20-14 EXP 11-20-14	
Spiked ID 2	TOX Water Spike 6-13-14 EXP 11-12-14		Surrogate ID 2		
Spiked ID 3	PCB Water Spike 12-9-13 EXP 12-2-14		Surrogate ID 3		
Spiked ID 4	Tech Chlordane Stk 11-8-13 EXP 11-8-14		Surrogate ID 4		
Spiked ID 5	5 ES Std 3-24-14 EXP 3-24-15		Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	09/09/14 9:50	
Spiked ID 8			Ext. End Time:	09/10/14 15:30	
			GC Requires Extract By:	**09/19/14 0:00**	

pH1	2	9/09/14 10:00:00 AM	Water Bath Temp Criteria 35,35,35,3
pH2			
pH3			

Spiked By: IC **Date** 09/09/14 **Witnessed By:** DL **Date** 09/09/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	140909A Blk				0.1	1 equip	500 E-WB1	1	2	09/09/14 9:50	
2	140909A LCS-1		0.1	1	0.1	1 equip	500 E-WB2	1	2	09/09/14 9:50	
3	140909A LCS-2		0.1	2	0.1	1 equip	500 E-WB3	1	2	09/09/14 9:50	
4	140909A LCS-3		0.1	3	0.1	1 equip	500 E-WB4	1	2	09/09/14 9:50	
5	140909A LCS-4		0.2	4	0.1	1 equip	500 E-WB1	1	2	09/09/14 9:50	
6	140909A LCS-5		0.1	5	0.1	1 equip	500 E-WB2	1	2	09/09/14 9:50	
7	140909A LCSD-1		0.1	1	0.1	1 equip	500 E-WB3	1	2	09/09/14 9:50	
8	140909A LCSD-2		0.1	2	0.1	1 equip	500 E-WB4	1	2	09/09/14 9:50	
9	AZ01347	AZ01347W02			0.1	1 equip	500 E-WB2	1	2	09/09/14 9:50	74100
0	AZ01350	AZ01350W01			0.1	1 equip	500 E-WB3	1	2	09/09/14 9:50	74100
1	AZ02108	AZ02108W09			0.1	1 equip	500 E-WB1	1	2	09/09/14 9:50	74218 RUSH 2 WEEKS
2	AZ02109	AZ02109W08			0.1	1 equip	500 E-WB2	1	2	09/09/14 9:50	74218 RUSH 2 WEEKS
3	AZ02116	AZ02116W04			0.1	1 equip	500 E-WB3	1	2	09/09/14 9:50	74218 RUSH 2 WEEKS
4	AZ02136	AZ02136W02			0.1	1 equip	500 E-WB4	1	2	09/09/14 9:50	74228
5	AZ02137	AZ02137W01			0.1	1 equip	500 E-WB1	1	2	09/09/14 9:50	74228

ent and Lot#	
H2S04	9-5-14
	54128
r Paper	400038
DIFIED Na2SO4	8-28-14
ane	080613A

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	HA
Date	9/10/14
Time	16:00
Refrigerator	Hobart

	Technician's Initials
Scanned By	IC
Sample Preparation	IC
Extraction	IC
Concentration	DL

Modified	09/10/14 3:33:04 PM

Reviewed By: Ky **Date** 9/10/14

0/14 3:33:10 PM Ext_ID 45032

Organic Extraction Worksheet

Method	LOW LEVEL OCL/OP/Triaz So Ext 3550B MIS	Extraction Set	140916A	Extraction Method	SON002LLMIS	Units	mL

Spiked ID 1	OCL Soil Spike 10-22-13 exp 10-22-14		Surrogate ID 1	OCL/OP Soil Surrogate 9-16-14 exp 12-16-14	
Spiked ID 2	TOX SOIL SPIKE 7-16-14 exp 10-16-14		Surrogate ID 2		
Spiked ID 3	PCB SOIL SPIKE 5-30-14 exp 11-30-14		Surrogate ID 3		
Spiked ID 4	Tech Chlordane Amplue 3-18-14 exp 3-18-15		Surrogate ID 4		
Spiked ID 5	5 ES Stock 6-12-14 exp 6-12-15		Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	09/16/14 13:10	
Spiked ID 8			Ext. End Time:	09/18/14 16:05	
			GC Requires Extract By:	09/19/14 0:00	

pH1			Water Bath Temp Criteria	35,35,35,3
pH2				
pH3				

Spiked By: KY **Date** 09/16/14 **Witnessed By:** CFM **Date** 09/16/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	140916A Blk				0.5	1 equip	30.20g	5x1/0.05	NA	09/16/14 13:10	E-S5 E-WB1
2	140916A LCS-1		0.250	1	0.5	1 equip	30.35g	5x1/0.05	NA	09/16/14 13:10	E-S4 E-WB
3	140916A LCS-2		0.250	2	0.5	1 equip	30.20g	5x1/0.05	NA	09/16/14 13:10	E-S3.1 E-WB3
4	140916A LCS-3		0.250	3	0.5	1 equip	30.48g	5x1/0.05	NA	09/16/14 13:10	E-S2 E-WB4
5	140916A LCS-4		0.050	4	0.5	1 equip	30.39g	5x1/0.05	NA	09/16/14 13:10	E-S1.2 E-WB1
6	140916A LCS-5		0.050	5	0.5	1 equip	30.15g	5x1/0.05	NA	09/16/14 13:10	E-S1.1 E-WB2
7	AZ02099	AZ02099S11			0.5	1 equip	30.21g	5x1/0.05	NA	09/16/14 13:10	E-S6 E-WB3 74218 RUSH 2 WEEKS
8	AZ02100 MS-1	AZ02100S11	0.250	1	0.5	1 equip	30.28g	5x1/0.05	NA	09/16/14 13:10	E-S7 E-WB4 74218 RUSH 2 WEEKS
9	AZ02100 MSD-1	AZ02100S11	0.250	1	0.5	1 equip	30.36g	5x1/0.05	NA	09/16/14 13:10	E-S5 E-WB1 74218 RUSH 2 WEEKS
10	AZ02100 MS-2	AZ02100S11	0.250	2	0.5	1 equip	30.11g	5x1/0.05	NA	09/16/14 13:10	E-S5 E-WB2 74218 RUSH 2 WEEKS
11	AZ02100 MSD-2	AZ02100S11	0.250	2	0.5	1 equip	30.16g	5x1/0.05	NA	09/16/14 13:10	E-S3.1 E-WB3 74218 RUSH 2 WEEKS
12	AZ02100	AZ02100S11			0.5	1 equip	30.51g	5x1/0.05	NA	09/16/14 13:10	E-S2 E-WB4 74218 RUSH 2 WEEKS
13	AZ02100 MS-3	AZ02100S11	0.250	3	0.5	1 equip	30.68g	5x1/0.05	NA	09/16/14 13:10	E-S1.2 E-WB1 74218 RUSH 2 WEEKS
14	AZ02100 MS-4	AZ02100S11	0.050	4	0.5	1 equip	30.13g	5x1/0.05	NA	09/16/14 13:10	E-S1.1 E-WB2 74218 RUSH 2 WEEKS
15	AZ02100 MS-5	AZ02100S11	0.050	5	0.5	1 equip	30.07g	5x1/0.05	NA	09/16/14 13:10	E-S6 E-WB3 74218 RUSH 2 WEEKS
16	AZ02100 MSD-3	AZ02100S11	0.250	3	0.5	1 equip	30.68g	5x1/0.05	NA	09/16/14 13:10	E-S7 E-WB4 74218 RUSH 2 WEEKS

lvent and Lot#	
	54128
etone	051314C
kane	080613A
2S04	WE05D
d	WF27C
er Paper	FC010442
furic Acid	60269

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	9/18/14
Time	17:30
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	IC
Concentration	DL

Modified	09/18/14 5:11:28 PM

Reviewed By: [signature] **Date** 9/18/14

8/14 5:11:34 PM

Ext_ID 74589

_SON002LL

Organic Extraction Worksheet

Method	LOW LEVEL OCL/OP/Triaz So Ext 3550B MIS	Extraction Set	140916A	Extraction Method	SON002LLMIS	Units	mL

Spiked ID 1	OCL Soil Spike 10-22-13 exp 10-22-14		Surrogate ID 1	OCL/OP Soil Surrogate 9-16-14 exp 12-16-14	
Spiked ID 2	TOX SOIL SPIKE 7-16-14 exp 10-16-14		Surrogate ID 2		
Spiked ID 3	PCB SOIL SPIKE 5-30-14 exp 11-30-14		Surrogate ID 3		
Spiked ID 4	Tech Chlordane Amplue 3-18-14 exp 3-18-15		Surrogate ID 4		
Spiked ID 5	5 ES Stock 6-12-14 exp 6-12-15		Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	09/16/14 13:10	
Spiked ID 8			Ext. End Time:	09/18/14 16:05	
			GC Requires Extract By:	**09/19/14 0:00**	

pH1			Water Bath Temp Criteria	35,35,35,3
pH2				
pH3				

Spiked By: KY **Date** 09/16/14 **Witnessed By:** CFM **Date** 09/16/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ02100 MSD-4	AZ02100S11	0.050	4	0.5	1 equip	30.32g E-S5 E-WB1	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
18	AZ02100 MSD-5	AZ02100S11	0.050	5	0.5	1 equip	30.42g E-S4 E-WB2	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
19	AZ02101	AZ02101S11			0.5	1 equip	30.26g E-S3.1 E-WB3	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
20	AZ02102	AZ02102S11			0.5	1 equip	30.08g E-S2 E-WB4	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
21	AZ02103	AZ02103S11			0.5	1 equip	30.14g E-S1.2 E-WB1	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
22	AZ02104	AZ02104S11			0.5	1 equip	30.47g E-S1.1 E-WB2	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
23	AZ02105	AZ02105S11			0.5	1 equip	30.51g E-S6 E-WB3	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
24	AZ02106	AZ02106S11			0.5	1 equip	30.38g E-S7 E-WB4	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
25	AZ02107	AZ02107S11			0.5	1 equip	30.65g E-S5 E-WB1	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
26	AZ02110	AZ02110S11			0.5	1 equip	30.30g E-S4 E-WB2	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
27	AZ02111	AZ02111S11			0.5	1 equip	30.28g E-S3.1 E-WB3	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
28	AZ02112	AZ02112S11			0.5	1 equip	30.81g E-S2 E-WB4	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
29	AZ02113	AZ02113S11			0.5	1 equip	30.16g E-S1.2 E-WB1	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
30	AZ02114	AZ02114S11			0.5	1 equip	30.04g E-S1.1 E-WB2	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS
31	AZ02115	AZ02115S11			0.5	1 equip	30.34g E-S6 E-WB3	5x1/0.05	NA	09/16/14 13:10	74218 RUSH 2 WEEKS

Solvent and Lot#	
MC	54128
Acetone	051314C
Hexane	080613A
Na2S04	WE05D
Sand	WF27C
Filter Paper	FC010442
Sulfuric Acid	60269

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	9/18/14
Time	17:30
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	IC
Concentration	DL

Modified	09/18/14 5:11:28 PM

Reviewed By: [signature] **Date** 9/18/14

Injection Log

Directory: G:\LUCY\DATA\140922\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
48	0922048.D	1	PCB 1D 8/1/14	water	9-23-14 0:07:35
49	0922049.D	1	PCB 1C 8/1/14	water	9-23-14 0:23:58
50	0922050.D	1	PCB 1B 8/1/14	water	9-23-14 0:40:23
51	0922051.D	1	PCB 1 8/1/14	water	9-23-14 0:56:44
52	0922052.D	1	PCB 2 8/1/14	water	9-23-14 1:13:13
53	0922053.D	1	PCB 3 8/1/14	water	9-23-14 1:29:36
54	0922054.D	1	PCB 4 8/1/14	water	9-23-14 1:45:59
55	0922055.D	1	PCB 5 8/1/14	water	9-23-14 2:02:24
56	0922056.D	1	PCB 2ND SRC 6/9/14	water	9-23-14 2:18:54
57	0922057.D	1	AR 1221 4/11/14	water	9-23-14 2:35:18
58	0922058.D	1	AR 1232 4/11/14	water	9-23-14 2:51:43
59	0922059.D	1	AR 1242 4/11/14	water	9-23-14 3:08:05
60	0922060.D	1	AR 1248 4/11/14	water	9-23-14 3:24:37
61	0922061.D	1	AR 1254 4/11/14	water	9-23-14 3:41:01
93	0922093.D	1	PCB 1 8/1/14	water	9-23-14 13:42:49
99	0922099.D	2	140909A BLK 1/500	water	9-23-14 16:06:19
2	0922102.D	2	140909A LCS-3 1/500	water	9-23-14 17:01:11
5	0922105.D	2	AZ02108W09 1/500	water	9-23-14 17:50:32
6	0922106.D	2	AZ02109W08 1/500	water	9-23-14 18:06:56
7	0922107.D	2	AZ02116W04 1/500	water	9-23-14 18:23:26
30	0922130.D	1	PCB 2 8/1/14	soil	9-24-14 0:37:05
62	0927062.D	1	PCB 1 8/1/14	soil	9-29-14 17:57:22
64	0927064.D	1	AR1254 1 5/20/14	soil	9-29-14 18:25:47
65	0927065.D	1	AR1254 2 5/20/14	soil	9-29-14 18:42:12
66	0927066.D	1	AR1254 3 5/20/14	soil	9-29-14 18:58:44
67	0927067.D	1	AR1254 4 5/20/14	soil	9-29-14 19:15:10
68	0927068.D	1	AR1254 5 5/20/14	soil	9-29-14 19:31:35
69	0927069.D	3311.26	140916A BLK 5X1/0.05/30.20G	soil	9-29-14 19:48:01
70	0927070.D	3280.84	140916A LCS-3 5X1/0.05/30.48G	soil	9-29-14 20:04:33
71	0927071.D	3310.16	AZ02099S11 5X1/0.05/30.21G	soil	9-29-14 20:20:58
72	0927072.D	3277.61	AZ02100S11 5X1/0.05/30.51G	soil	9-29-14 20:37:23
73	0927073.D	3259.45	AZ02100S11 MS-3 5X1/0.05/30.68G	soil	9-29-14 20:53:47
74	0927074.D	3259.45	AZ02100S11 MSD-3 5X1/0.05/30.68G	soil	9-29-14 21:10:18
75	0927075.D	3304.69	AZ02101S11 5X1/0.05/30.26G	soil	9-29-14 21:26:42
76	0927076.D	3324.47	AZ02102S11 5X1/0.05/30.08G	soil	9-29-14 21:43:04
77	0927077.D	3317.85	AZ02103S11 5X1/0.05/30.14G	soil	9-29-14 21:59:29
78	0927078.D	3281.92	AZ02104S11 5X1/0.05/30.47G	soil	9-29-14 22:16:00
79	0927079.D	3277.61	AZ02105S11 5X1/0.05/30.51G	soil	9-29-14 22:32:24
80	0927080.D	3291.64	AZ02106S11 5X1/0.05/30.38G	soil	9-29-14 22:48:51
82	0927082.D	1	PCB-2 8/1/14	soil	9-29-14 23:17:39
83	0927083.D	1	AR1254-3 5/20/14	soil	9-29-14 23:34:04
84	0927084.D	3262.64	AZ02107S11 5X1/0.05/30.65G	soil	9-29-14 23:50:26
85	0927085.D	3300.33	AZ02110S11 5X1/0.05/30.30G	soil	9-30-14 0:06:51
86	0927086.D	3302.51	AZ02111S11 5X1/0.05/30.28G	soil	9-30-14 0:23:31
87	0927087.D	3245.7	AZ02112S11 5X1/0.05/30.81G	soil	9-30-14 0:39:54
88	0927088.D	3315.65	AZ02113S11 5X1/0.05/30.16G	soil	9-30-14 0:56:16
89	0927089.D	3328.89	AZ02114S11 5X1/0.05/30.04G	soil	9-30-14 1:12:39
90	0927090.D	3295.98	AZ02115S11 5X1/0.05/30.34G	soil	9-30-14 1:29:09
92	0927092.D	1	PCB-1 8/1/14	soil	9-30-14 1:57:45
93	0927093.D	1	AR1254-3 5/20/14	soil	9-30-14 2:14:09

EPA METHOD 8151A
Chlorinated Herbicides

APPL, INC.

EPA METHOD 8151A
Chlorinated Herbicides

QC Summary

APPL, INC.

Method Blank
EPA 8151 WATER

Blank Name/QCG: **140908W-02108 - 190297**
Batch ID: #815E2-140908A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2,4,5-T	0.090 U	0.10	0.090	0.029	ug/L	09/08/14	09/15/14
BLANK	2,4,5-TP	0.090 U	0.10	0.090	0.069	ug/L	09/08/14	09/15/14
BLANK	2,4-D	0.450 U	0.50	0.450	0.152	ug/L	09/08/14	09/15/14
BLANK	DALAPON	0.90 U	1.0	0.90	0.59	ug/L	09/08/14	09/15/14
BLANK	SURROGATE: 2,4-DCAA (S)	82.5	33-154			%	09/08/14	09/15/14

Quant Method: HERB703.M
Run #: 0911033
Instrument: Herbie
Sequence: 140911
Initials: MA

GC SC-Blank-REG MDLs
Printed: 09/29/14 4:36:12 PM

Method Blank
EPA 8151A ISM SOIL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **140916S-02100 - 190299**
Batch ID: #815E2-140916A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/18/14
BLANK	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/18/14
BLANK	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/18/14
BLANK	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/18/14
BLANK	SURROGATE: 2,4-DCAA (S)	75.3	45-140			%	09/16/14	09/18/14

Quant Method:HERB703.M
Run #:0911069
Instrument:Herbie
Sequence:140911
Initials:MA

GC SC-Blank-REG MDLs
Printed: 09/29/14 4:36:12 PM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/15/14

Matrix: WATER Instrument: Herbie

APPL ID.	Client Sample No.	SURROGATE: 2,4-DCAA (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
140908A-LCS	Lab Control Spike	33-154	101				
140908A-BLK	Blank	33-154	82.5				
AZ02108	EN010	33-154	81.4				
AZ02109	EN011	33-154	85.7				
AZ02116	EN018	33-154	81.5				

Comments: Batch: #815E2-140908A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/18/14

Matrix: SOIL Instrument: Herbie

APPL ID.	Client Sample No.	SURROGATE: 2,4-DCAA (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
140916A-BLK	Blank	45-140	75.3				
140916A-LCS	Lab Control Spike	45-140	123				
AZ02105	EN007	45-140	55.7				
AZ02107	EN009	45-140	47.9				
AZ02110	EN012	45-140	67.8				
AZ02111	EN013	45-140	72.2				
AZ02112	EN014	45-140	59.7				
AZ02113	EN015	45-140	76.5				
AZ02114	EN016	45-140	70.7				
AZ02115	EN017	45-140	63.1				
AZ02106	EN008	45-140	55.3				
AZ02099	EN001	45-140	94.7				
AZ02100-MS	Matrix Spike	45-140	113				
AZ02100-MSD	Matrix SpikeD	45-140	105				
AZ02100	EN002	45-140	85.9				
AZ02101	EN003	45-140	78.2				
AZ02102	EN004	45-140	86.4				
AZ02103	EN005	45-140	71.0				
AZ02104	EN006	45-140	69.5				

Comments: Batch: #815E2-140916A

Laboratory Control Spike Recovery

EPA 8151A ISM SOIL

APPL ID: **140916S-02100 LCS - 190299**
Batch ID: #815E2-140916A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
2,4,5-T	0.128	0.132	103	45-135
2,4,5-TP (SILVEX)	0.128	0.125	97.7	45-125
2,4-D	0.640	0.620	96.9	35-145
DALAPON	1.28	0.838	65.5	44-139
SURROGATE: 2,4-DCAA (S)	0.640	0.788	123	45-140

Comments: _____

Primary	SPK
Quant Method :	HERB703.M
Extraction Date :	09/16/14
Analysis Date :	09/18/14
Instrument :	Herbie
Run :	0911070
Initials :	MA

Printed: 09/29/14 4:53:24 PM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8151 WATER

APPL ID: **140908W-02108 LCS - 190297**
Batch ID: #815E2-140908A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2,4,5-T	0.640	0.634	99.1	35-110
2,4,5-TP	0.640	0.544	85.0	50-115
2,4-D	3.20	2.94	91.9	35-115
DALAPON	6.40	3.08	48.1	40-110
SURROGATE: 2,4-DCAA (S)	3.20	3.23	101	33-154

Comments: _____

Primary	SPK
Quant Method :	HERB703.M
Extraction Date :	09/08/14
Analysis Date :	09/15/14
Instrument :	Herbie
Run :	0911032
Initials :	MA

Printed: 09/29/14 4:53:24 PM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8151A ISM SOIL

APPL ID: **140916S-02100 MS - 190299**
Batch ID: #815E2-140916A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2,4,5-T	0.128	ND	0.0982	0.0835	76.7	65.2	45-135	16.2	30
2,4,5-TP (SILVEX)	0.128	ND	0.126	0.114	98.4	89.1	45-125	10.0	30
2,4-D	0.640	ND	0.207	0.175	32.3 #	27.3 #	35-145	16.8	30
DALAPON	1.28	ND	0.186	0.190	14.5 #	14.8 #	44-139	2.1	30
SURROGATE: 2,4-DCAA (S)	0.640	NA	0.721	0.670	113	105	45-140		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	HERB703.M	HERB703.M
Extraction Date :	09/16/14	09/16/14
Analysis Date :	09/19/14	09/19/14
Instrument :	Herbie	Herbie
Run :	0911096	0911097
Initials :	MA	

Printed: 09/29/14 4:53:26 PM
APPL MSD SCII

EPA 8151

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/15/14

Matrix: WATER Instrument: Herbie

Blank ID: 140908A-BLK Time Analyzed: 1027

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140908A-LCS	Lab Control Spike	0911032	09/15/14 1005
140908A-BLK	Blank	0911033	09/15/14 1027
AZ02108	EN010	0911034	09/15/14 1049
AZ02109	EN011	0911035	09/15/14 1112
AZ02116	EN018	0911036	09/15/14 1134

Comments: Batch: #815E2-140908A

EPA 8151

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/18/14

Matrix: SOIL Instrument: Herbie

Blank ID: 140916A-BLK Time Analyzed: 1054

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140916A-BLK	Blank	0911069	09/18/14 1054
140916A-LCS	Lab Control Spike	0911070	09/18/14 1117
AZ02105	EN007	0911079	09/18/14 1439
AZ02107	EN009	0911083	09/18/14 1638
AZ02110	EN012	0911084	09/18/14 1701
AZ02111	EN013	0911085	09/18/14 1723
AZ02112	EN014	0911086	09/18/14 1746
AZ02113	EN015	0911087	09/18/14 1808
AZ02114	EN016	0911088	09/18/14 1830
AZ02115	EN017	0911089	09/18/14 1853
AZ02106	EN008	0911090	09/18/14 1915
AZ02099	EN001	0911095	09/19/14 1004
140916A-MS	Matrix Spike	0911096	09/19/14 1027
140916A-MSD	Matrix SpikeD	0911097	09/19/14 1049
AZ02100	EN002	0911098	09/19/14 1112
AZ02101	EN003	0911099	09/19/14 1134
AZ02102	EN004	0911100	09/19/14 1156
AZ02103	EN005	0911101	09/19/14 1219
AZ02104	EN006	0911102	09/19/14 1241

Comments: Batch: #815E2-140916A

EPA METHOD 8151A
Chlorinated Herbicides

Sample Data

APPL, INC.

EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN001

APPL ID: AZ02099

Sample Collection Date: 09/02/14

QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/19/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/19/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/19/14
EPA 8151	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/19/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	94.7	45-140			%	09/16/14	09/19/14

Quant Method: HERB703.M
Run #: 0911095
Instrument: Herbie
Sequence: 140911
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 4:36:17 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911095.D\ECD1A.CH Vial: 95
Signal #2 : G:\HERBIE\DATA\140911\0911095.D\ECD2B.CH
Acq On : 09-19-14 10:04:54 Operator: MA
Sample : AZ02099 10/5.06 Inst : Herbie
Misc : soil Multiplr: 1976.28
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:09 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

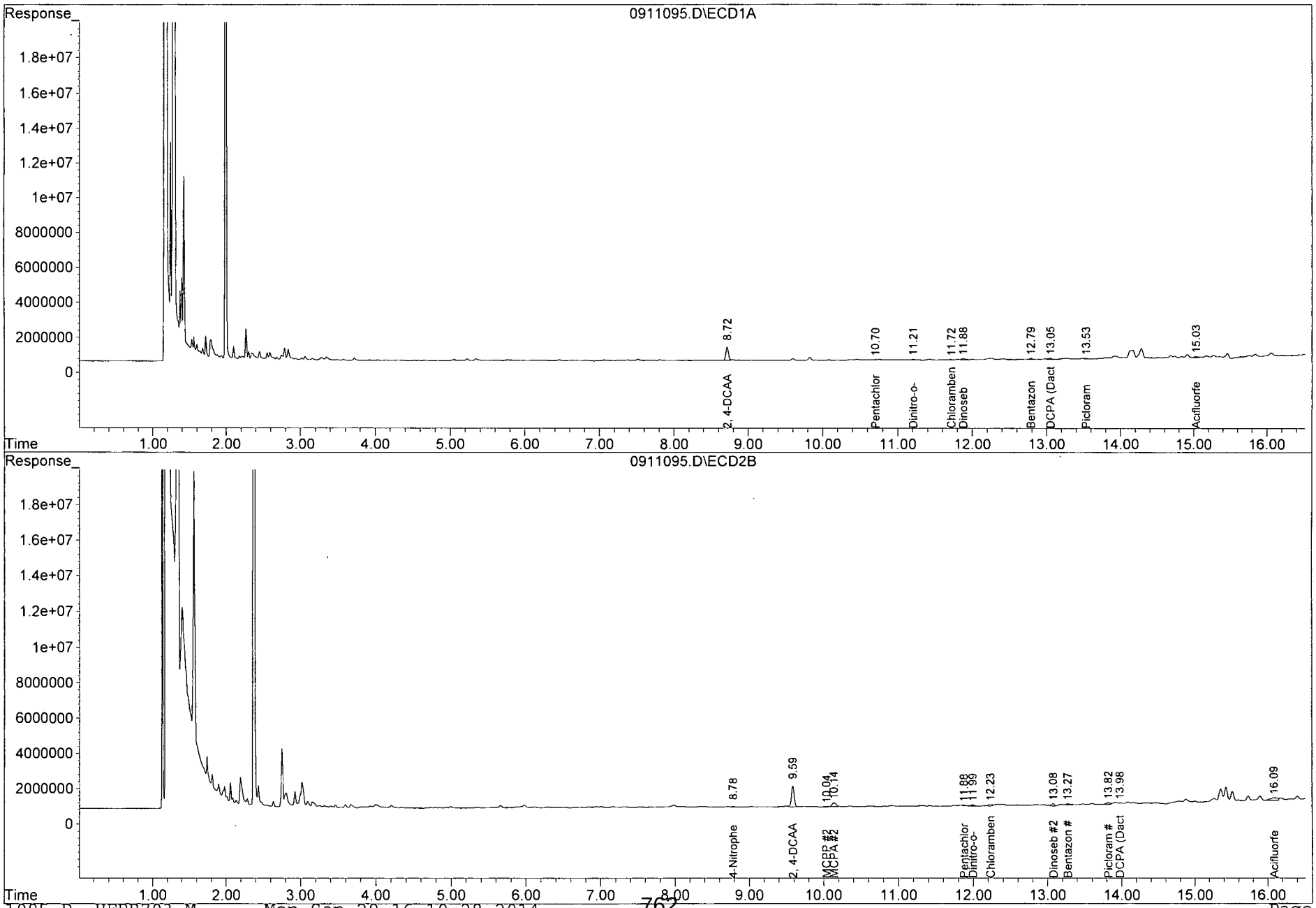
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	760243	1184428	489.673	561.696
	Spiked Amount 592.885			Recovery	=	82.59%	94.74%
	Target Compounds						
3) CM	4-Nitrophenol	0.00	8.78f	0	40859	N.D.	27.807 #
6) TM	MCPP	0.00	10.04f	0	32247	N.D.	3657.170 #
7) TM	MCPA	0.00	10.14f	0	212883	N.D.	29475.875 #
10) TM	Pentachloropheno	10.70	11.88	33378	40445	1.563	1.278
12) TM	Dinitro-o-cresol	11.21	11.99	48952	67798	3.661	3.886
14) TM	Chloramben	11.72	12.23	29018	87791	4.904	10.261 #
15) TM	Dinoseb	11.88	13.08	73259	122136	12.853	15.356
17) TM	Bentazon	12.79f	13.27f	58608	65906	49.647	49.304
18) TM	DCPA (Dacthal)	13.05	13.98	78573	35225	7.988	2.151 #
19) TM	Picloram	13.53	13.82	27398	101780	2.461	6.342 #
20) TM	Acifluorfen	15.03	16.09f	65365	152911	9.003	14.193 #
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	3,5-Dichlorobenz	0.00	0.00	0	0	N.D.	N.D.
5) TM	Dicamba	0.00	0.00	0	0	N.D.	N.D.
8) TM	Dichlorprop	0.00	0.00	0	0	N.D.	N.D.
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d
16) TM	2,4-DB	0.00	0.00	0	0	N.D.	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911095.D
Acq On : 09-19-14 10:04:54
Sample : AZ02099 10/5.06
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 95
Operator: MA
Inst : Herbie
Multiplr: 1976.28



EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN002

APPL ID: AZ02100

Sample Collection Date: 09/02/14

QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/19/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/19/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/19/14
EPA 8151	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/19/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	85.9	45-140			%	09/16/14	09/19/14

Quant Method: HERB703.M
Run #: 0911098
Instrument: Herbie
Sequence: 140911
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 4:36:17 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911098.D\ECD1A.CH Vial: 98
Signal #2 : G:\HERBIE\DATA\140911\0911098.D\ECD2B.CH
Acq On : 09-19-14 11:12:04 Operator: MA
Sample : AZ02100 10/5.30 Inst : Herbie
Misc : soil Multiplr: 1886.79
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:10 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

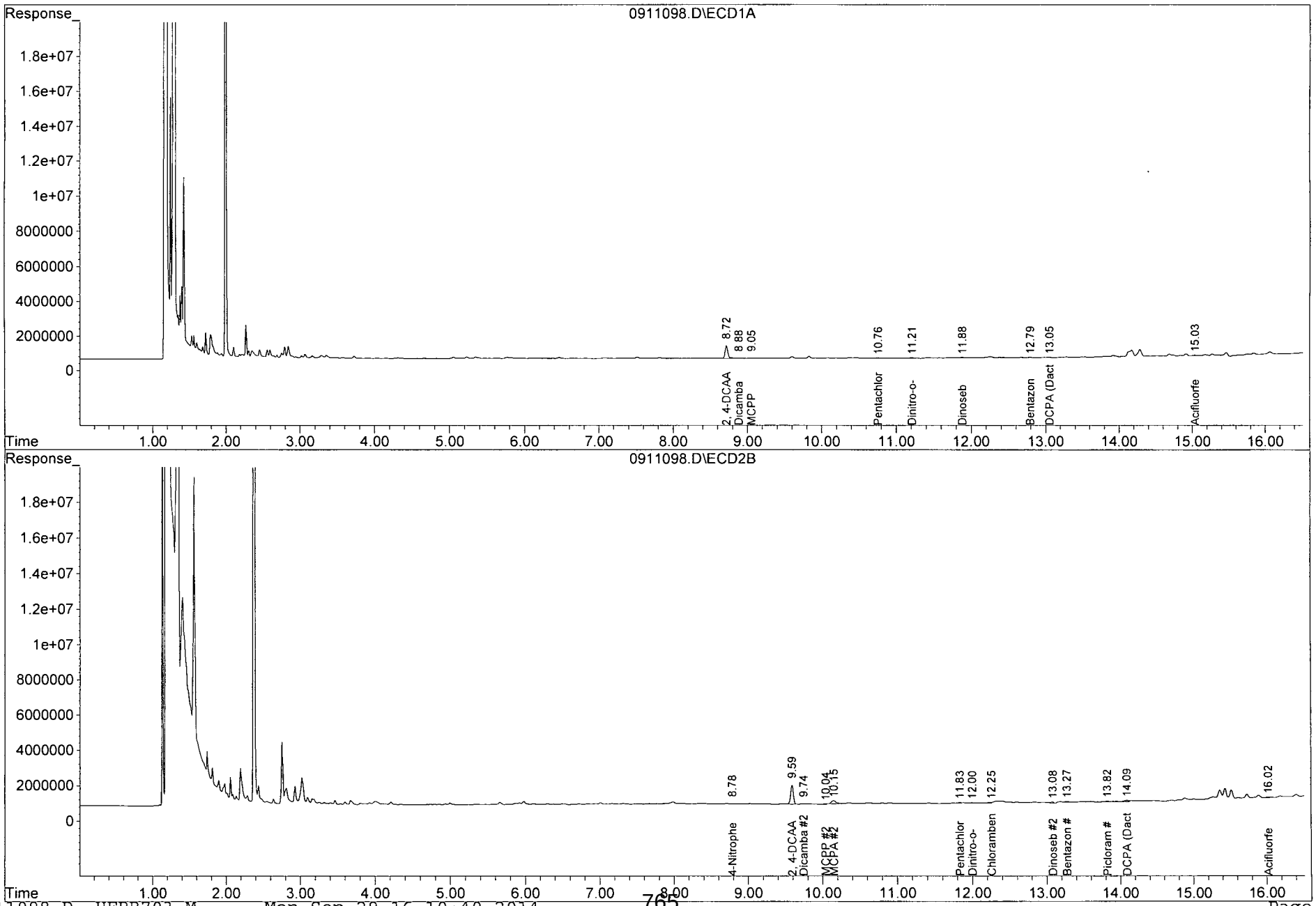
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	751173	1073845	461.921	486.192
	Spiked Amount 566.038			Recovery	=	81.61%	85.89%
	Target Compounds						
3) CM	4-Nitrophenol	0.00	8.78f	0	28298	N.D.	18.387 #
5) TM	Dicamba	8.88	9.74f	22063	27742	3.150	2.945
6) TM	MCPP	9.05f	10.04f	23482	31782	6332.448	3392.860 #
7) TM	MCPA	0.00	10.15f	0	177422	N.D.	23453.480 #
10) TM	Pentachloropheno	10.76f	11.83	23515	46499	1.051	1.403 #
12) TM	Dinitro-o-cresol	11.21	12.00	41074	34738	2.933	1.901 #
14) TM	Chloramben	0.00	12.25	0	41167	N.D.	4.594 #
15) TM	Dinoseb	11.88	13.08	37917	78969	6.351	9.479 #
17) TM	Bentazon	12.79f	13.27f	37139	52874	30.036	37.764 #
18) TM	DCPA (Dacthal)	13.05	14.09f	39099	83721	3.795	4.881 #
19) TM	Picloram	0.00	13.82	0	53031	N.D.	3.155 #
20) TM	Acifluorfen	15.03	16.02	49489	43777	6.508	3.879 #
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	3,5-Dichlorobenz	0.00	0.00	0	0	N.D.	N.D.
8) TM	Dichlorprop	0.00	0.00	0	0	N.D.	N.D.
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d
16) TM	2,4-DB	0.00	0.00	0	0	N.D.	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911098.D
Acq On : 09-19-14 11:12:04
Sample : AZ02100 10/5.30
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 98
Operator: MA
Inst : Herbie
Multiplr: 1886.79



EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN003

APPL ID: AZ02101

Sample Collection Date: 09/02/14

QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/19/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/19/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/19/14
EPA 8151	DALAPON	0.65 J	2.0	0.38	0.12	mg/kg	09/16/14	09/19/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	78.2	45-140			%	09/16/14	09/19/14

J = Estimated value.

Quant Method:	HERB703.M
Run #:	0911099
Instrument:	Herbie
Sequence:	140911
Dilution Factor:	1
Initials:	MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911099.D\ECD1A.CH Vial: 99
Signal #2 : G:\HERBIE\DATA\140911\0911099.D\ECD2B.CH
Acq On : 09-19-14 11:34:32 Operator: MA
Sample : AZ02101 10/5.06 Inst : Herbie
Misc : soil Multiplr: 1976.28
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:10 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

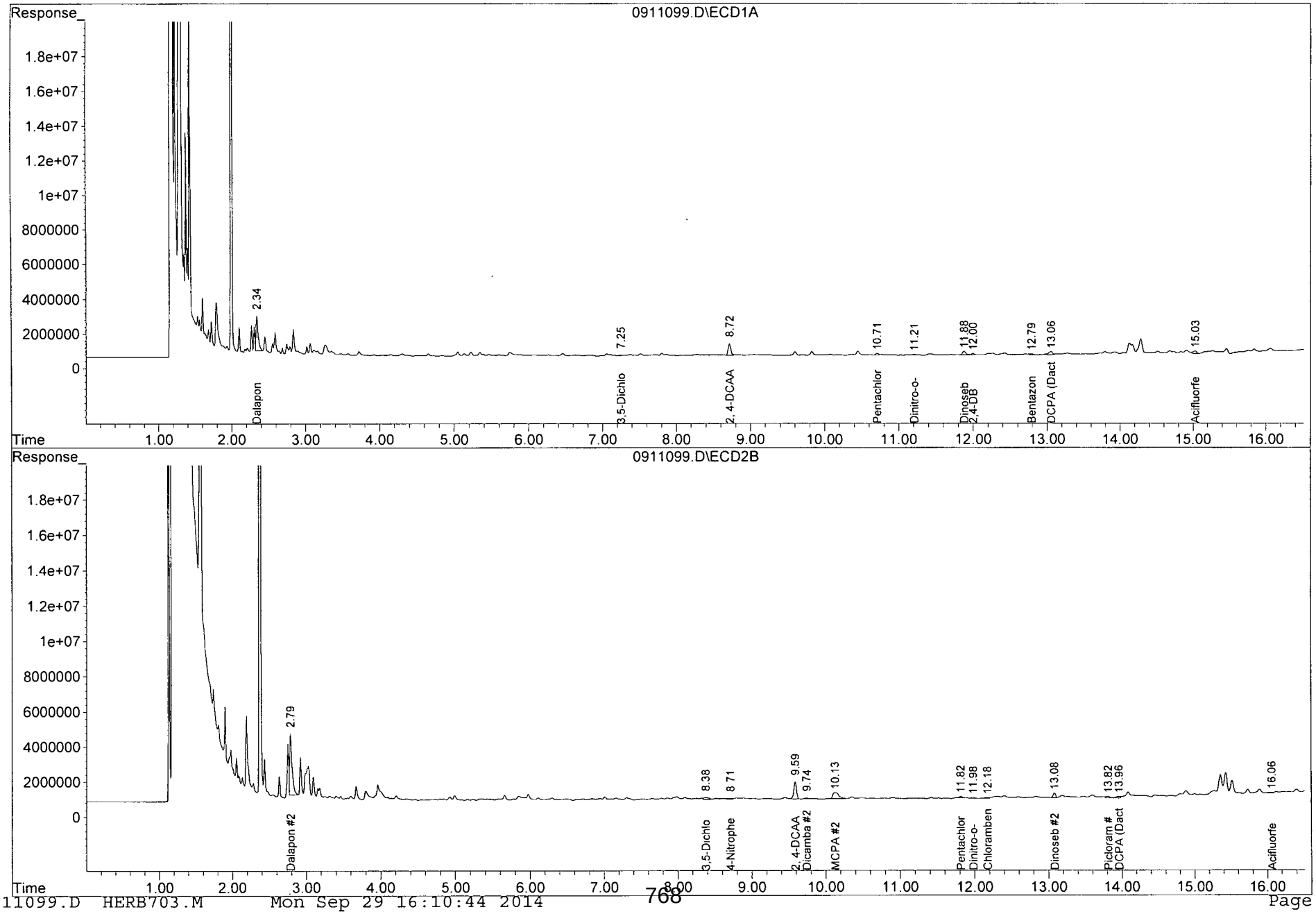
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	681992	977825	439.271	463.717
	Spiked Amount 592.885			Recovery	=	74.09%	78.21%
	Target Compounds						
1) TM	Dalapon	2.34	2.79	2008905	3472893	531.436	650.925
2) TM	3,5-Dichlorobenz	7.25	8.38	47094	100790	19.614	28.211 #
3) CM	4-Nitrophenol	0.00	8.71	0	55468	N.D.	37.750 #
5) TM	Dicamba	0.00	9.74f	0	63563	N.D.	7.067 #
7) TM	MCPA	0.00	10.13f	0	342592	N.D.	47435.332 #
10) TM	Pentachloropheno	10.71	11.82f	98763	83551	4.625	2.640 #
12) TM	Dinitro-o-cresol	11.21	11.98	51331	67062	3.839	3.844
14) TM	Chloramben	0.00	12.18f	0	50487	N.D.	5.901 #
15) TM	Dinoseb	11.88	13.08	211053	272300	37.029	34.235
16) TM	2,4-DB	12.00	0.00	76651	0	73.685	N.D. #
17) TM	Bentazon	12.79f	0.00	65258	0	55.280	N.D. #
18) TM	DCPA (Dacthal)	13.06	13.96	186755	88800	18.986	5.422 #
19) TM	Picloram	0.00	13.82	0	95175	N.D.	5.931 #
20) TM	Acifluorfen	15.03	16.06	148203	52391	20.413	4.863 #
	Target Compounds						
6) TM	MCPP	0.00	0.00	0	0	N.D.	N.D.
8) TM	Dichlorprop	0.00	0.00	0	0	N.D.	N.D.
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911099.D
Acq On : 09-19-14 11:34:32
Sample : AZ02101 10/5.06
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 99
Operator: MA
Inst : Herbie
Multiplr: 1976.28



EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN004
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02102
QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/19/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/19/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/19/14
EPA 8151	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/19/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	86.4	45-140			%	09/16/14	09/19/14

Quant Method: HERB703.M
Run #: 0911100
Instrument: Herbie
Sequence: 140911
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911100.D\ECD1A.CH Vial: 100
Signal #2 : G:\HERBIE\DATA\140911\0911100.D\ECD2B.CH
Acq On : 09-19-14 11:56:51 Operator: MA
Sample : AZ02102 10/5.09 Inst : Herbie
Misc : soil Multiplr: 1964.64
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:11 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

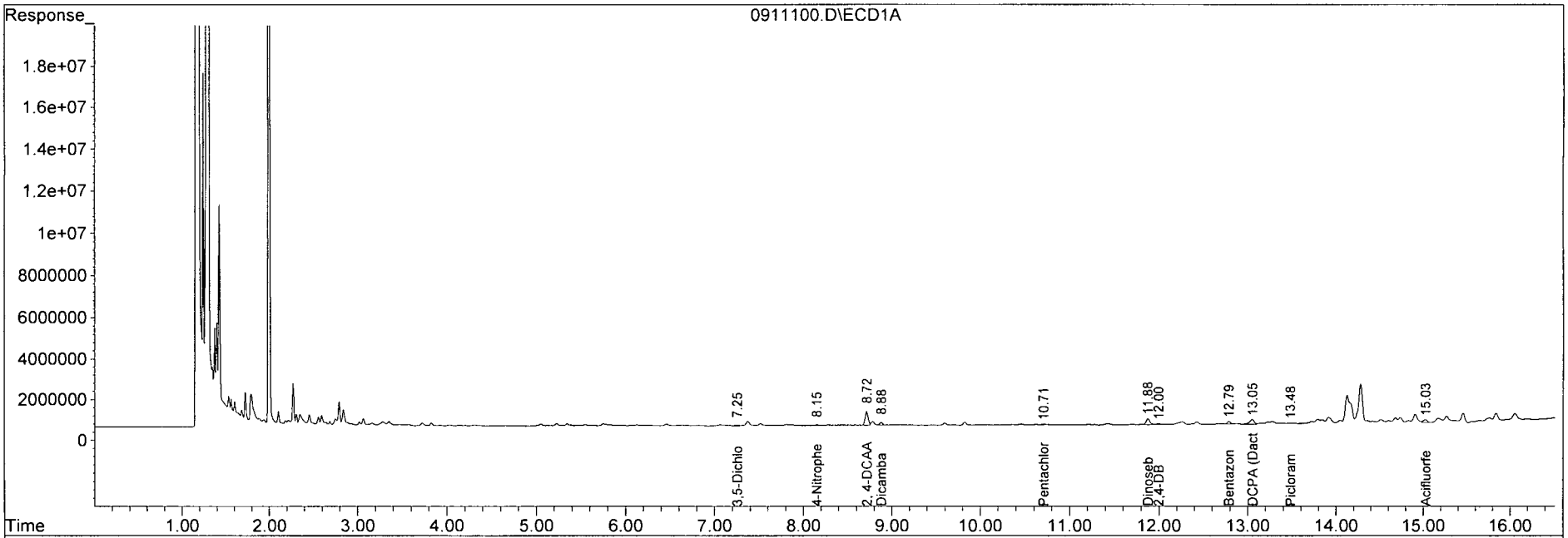
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
4)	S	2, 4-DCAA (S)	8.72	9.59	689750	1080308	441.651	509.300	
		Spiked Amount 589.391			Recovery	=	74.93%	86.41%	
		Target Compounds							
2)	TM	3,5-Dichlorobenz	7.25	8.38	45094	66030	18.670	18.373	
3)	CM	4-Nitrophenol	8.15f	8.78f	42323	275899	38.551	186.662	#
5)	TM	Dicamba	8.88	9.74f	141671	40805	21.060	4.510	#
6)	TM	MCPP	0.00	10.04f	0	26653	N.D.	2399.284	#
7)	TM	MCPA	0.00	10.14f	0	202216	N.D.	27833.944	#
10)	TM	Pentachloropheno	10.71	11.82f	51857	73451	2.414	2.307	
12)	TM	Dinitro-o-cresol	0.00	11.98	0	35373	N.D.	2.015	#
15)	TM	Dinoseb	11.88f	13.08	309422	386108	53.968	48.258	
16)	TM	2,4-DB	12.00	0.00	62455	0	59.685	N.D.	#
17)	TM	Bentazon	12.79f	13.27f	135007	46997	113.691	34.951	#
18)	TM	DCPA (Dacthal)	13.05	13.92f	236819	51873	23.934	3.149	#
19)	TM	Picloram	13.48f	13.82	43198	174702	3.858	10.822	#
20)	TM	Acifluorfen	15.03	16.06	141402	99300	19.361	9.163	#
		Target Compounds							
1)	TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d	
8)	TM	Dichlorprop	0.00	0.00	0	0	N.D.	N.D.	
9)	TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d	
11)	TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d	
13)	TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d	
14)	TM	Chloramben	0.00	0.00	0	0	N.D.	N.D.	

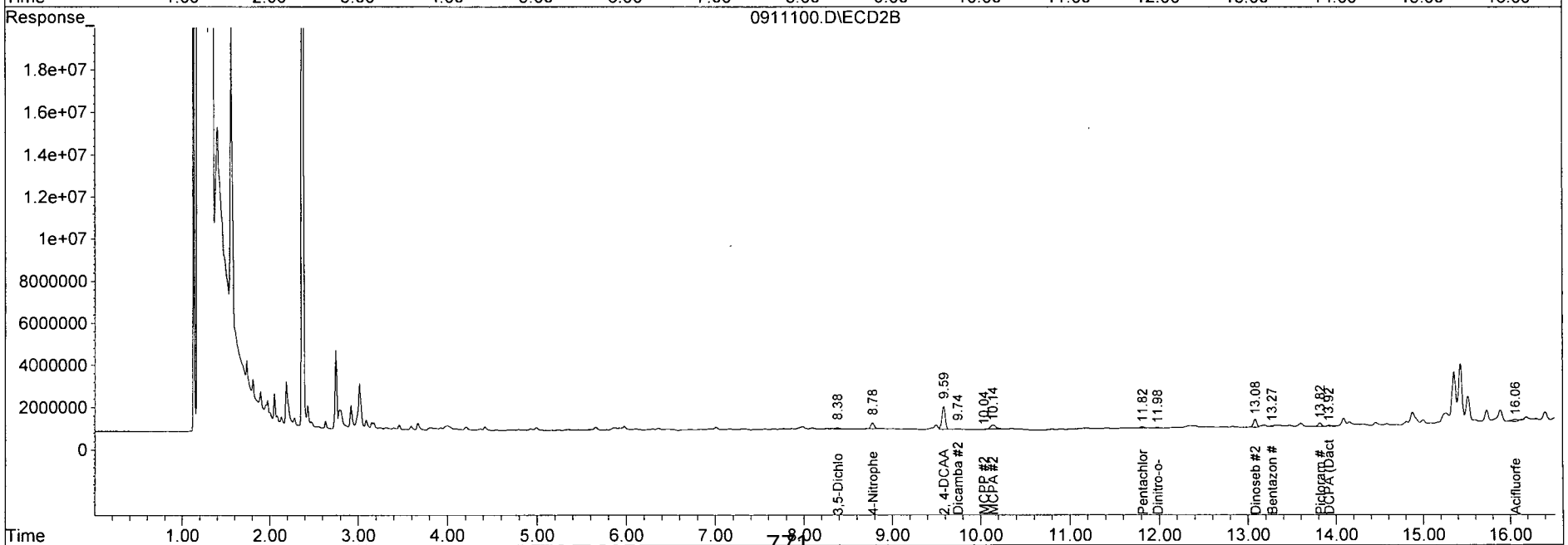
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911100.D
Acq On : 09-19-14 11:56:51
Sample : AZ02102 10/5.09
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 100
Operator: MA
Inst : Herbie
Multiplr: 1964.64





EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN005

APPL ID: AZ02103

Sample Collection Date: 09/02/14

QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/19/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/19/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/19/14
EPA 8151	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/19/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	71.0	45-140			%	09/16/14	09/19/14

Quant Method: HERB703.M
Run #: 0911101
Instrument: Herbie
Sequence: 140911
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911101.D\ECD1A.CH Vial: 1
Signal #2 : G:\HERBIE\DATA\140911\0911101.D\ECD2B.CH
Acq On : 09-19-14 12:19:12 Operator: MA
Sample : AZ02103 10/5.10 Inst : Herbie
Misc : soil Multiplr: 1960.78
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:11 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

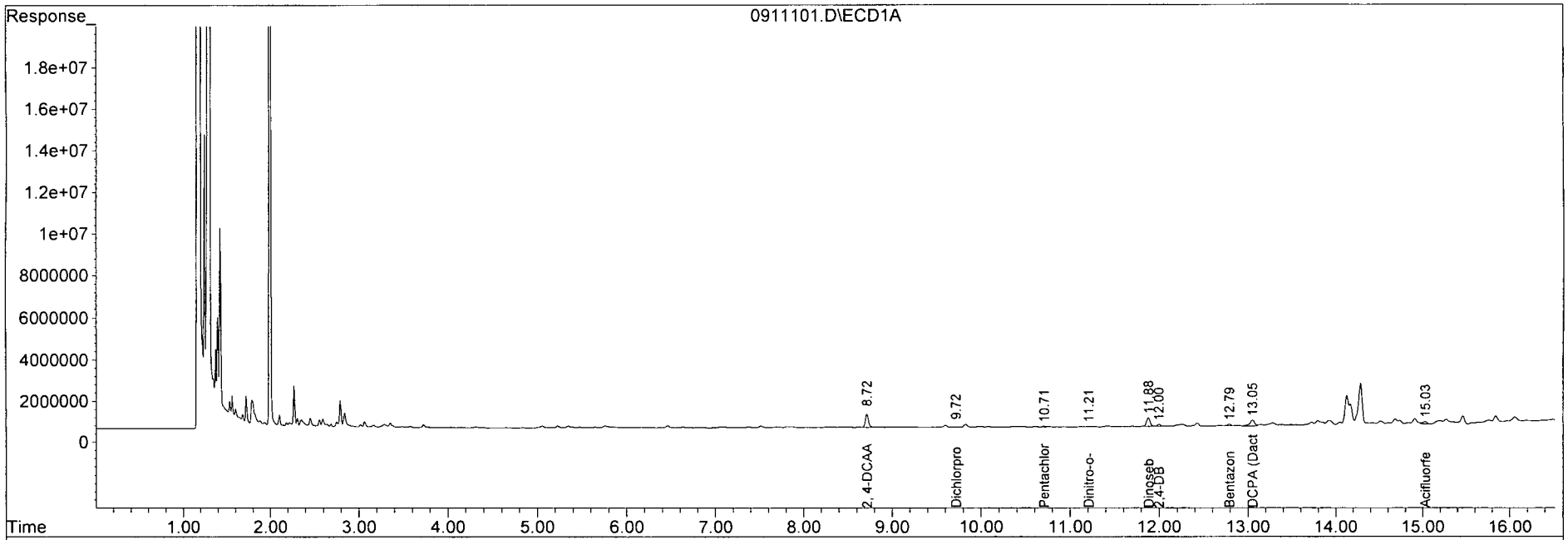
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	649745	887538	415.218	417.598
Spiked Amount	588.235			Recovery	=	70.59%	70.99%
	Target Compounds						
2) TM	3,5-Dichlorobenz	0.00	8.38	0	64031	N.D.	17.781 #
3) CM	4-Nitrophenol	0.00	8.79f	0	36390	N.D.	24.572 #
5) TM	Dicamba	0.00	9.74f	0	30585	N.D.	3.374 #
7) TM	MCPA	0.00	10.14f	0	184938	N.D.	25405.706 #
8) TM	Dichlorprop	9.72	0.00	18304	0	12.101	N.D. #
10) TM	Pentachloropheno	10.71	11.82f	45848	67702	2.130	2.123
12) TM	Dinitro-o-cresol	11.21	11.98	33545	37078	2.489	2.108
14) TM	Chloramben	0.00	12.18f	0	36622	N.D.	4.247 #
15) TM	Dinoseb	11.88	13.08	436268	603386	75.943	75.267
16) TM	2,4-DB	12.00	0.00	95714	0	91.289	N.D. #
17) TM	Bentazon	12.79f	13.27f	85068	38788	71.496	28.790 #
18) TM	DCPA (Dacthal)	13.05	13.93f	294492	44264	29.704	2.682 #
19) TM	Picloram	0.00	13.82	0	107057	N.D.	6.619 #
20) TM	Acifluorfen	15.03	16.06	121701	65497	16.631	6.032 #
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
6) TM	MCPP	0.00	0.00	0	0	N.D.	N.D.
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d

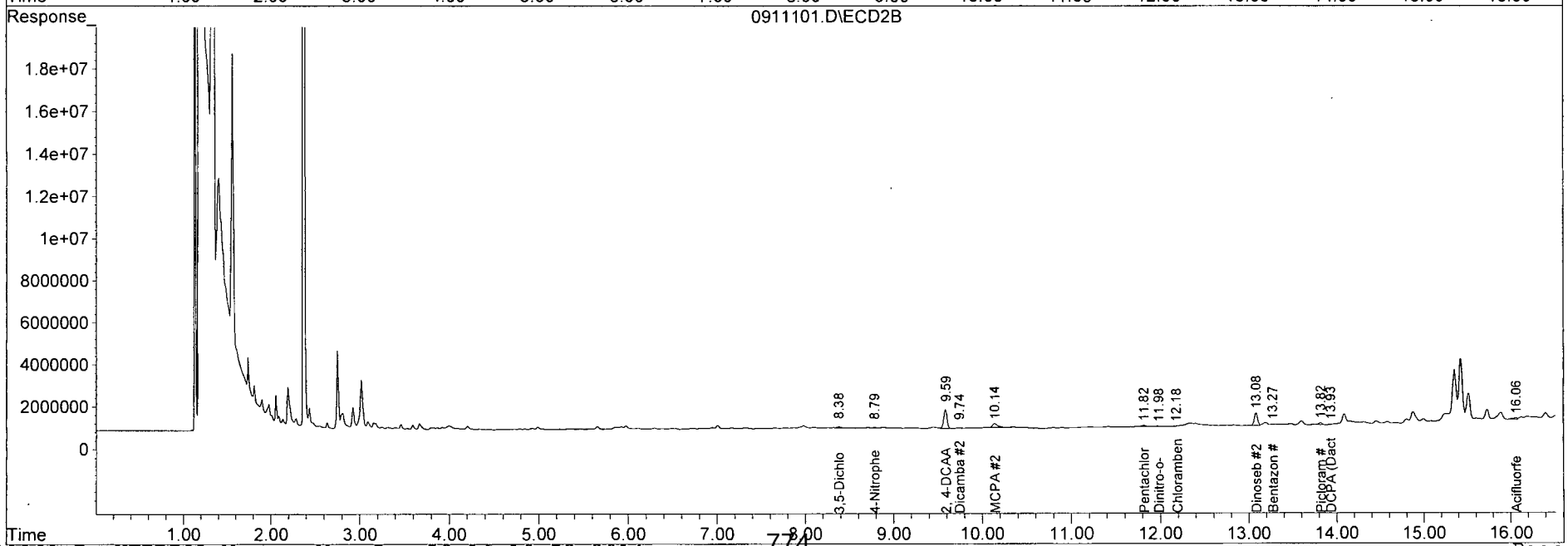
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911101.D
Acq On : 09-19-14 12:19:12
Sample : AZ02103 10/5.10
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 1
Operator: MA
Inst : Herbie
Multiplr: 1960.78





EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN006
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02104
QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/19/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/19/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/19/14
EPA 8151	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/19/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	69.5	45-140			%	09/16/14	09/19/14

Quant Method:	HERB703.M
Run #:	0911102
Instrument:	Herbie
Sequence:	140911
Dilution Factor:	1
Initials:	MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911102.D\ECD1A.CH Vial: 2
Signal #2 : G:\HERBIE\DATA\140911\0911102.D\ECD2B.CH
Acq On : 09-19-14 12:41:38 Operator: MA
Sample : AZ02104 10/5.04 Inst : Herbie
Misc : soil Multiplr: 1984.13
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:12 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

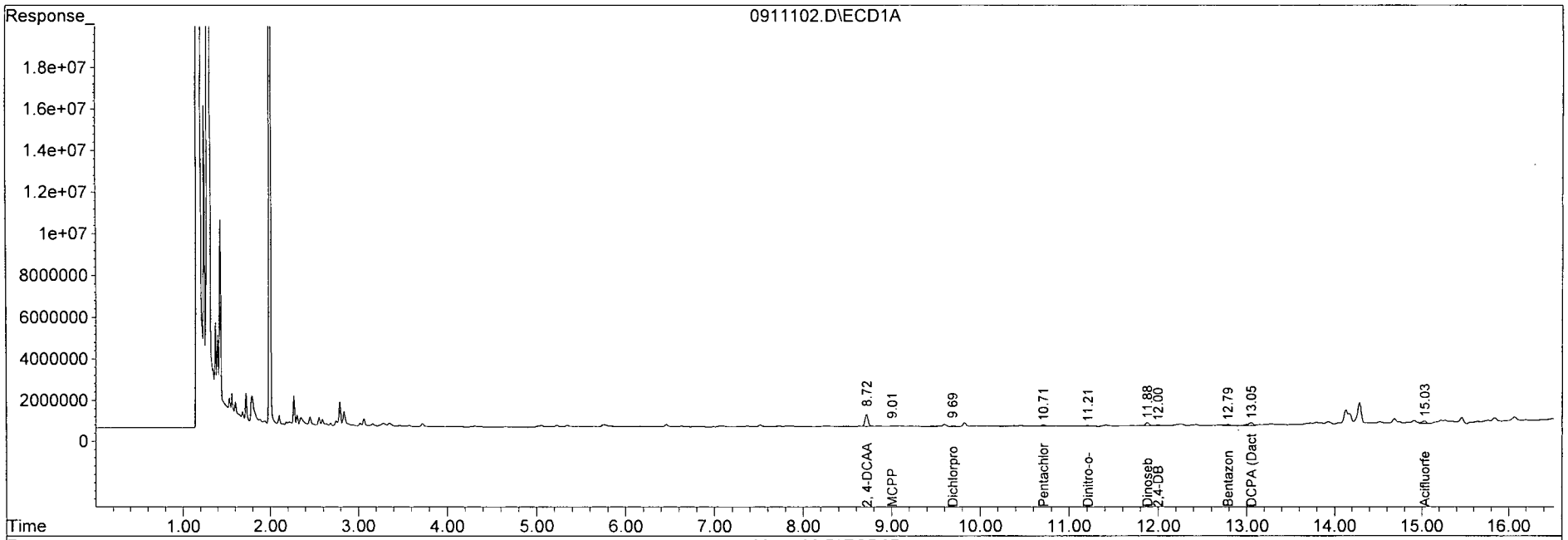
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	601128	869322	388.724	413.898
	Spiked Amount 595.238			Recovery	=	65.31%	69.53%
	Target Compounds						
2) TM	3,5-Dichlorobenz	0.00	8.39	0	63492	N.D.	17.842 #
3) CM	4-Nitrophenol	0.00	8.79f	0	38442	N.D.	26.266 #
5) TM	Dicamba	0.00	9.74f	0	32783	N.D.	3.659 #
6) TM	MCPP	9.01	0.00	33591	0	9525.900	N.D. #
7) TM	MCPA	0.00	10.14f	0	229370	N.D.	31884.748 #
8) TM	Dichlorprop	9.69	0.00	28950	0	19.368	N.D. #
10) TM	Pentachloropheno	10.71	11.81f	75033	124732	3.528	3.957
12) TM	Dinitro-o-cresol	11.21	11.98	29083	59708	2.184	3.436 #
14) TM	Chloramben	0.00	12.18f	0	54720	N.D.	6.421 #
15) TM	Dinoseb	11.88	13.08	154495	223584	27.214	28.222
16) TM	2,4-DB	12.00	12.96	49978	45015	48.235	29.796 #
17) TM	Bentazon	12.79f	13.36	63880	85112	54.328	63.925
18) TM	DCPA (Dacthal)	13.05	13.96	149707	107701	15.280	6.603 #
19) TM	Picloram	0.00	13.82	0	91410	N.D.	5.719 #
20) TM	Acifluorfen	15.03	0.00	132646	0	18.343	N.D. #
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d

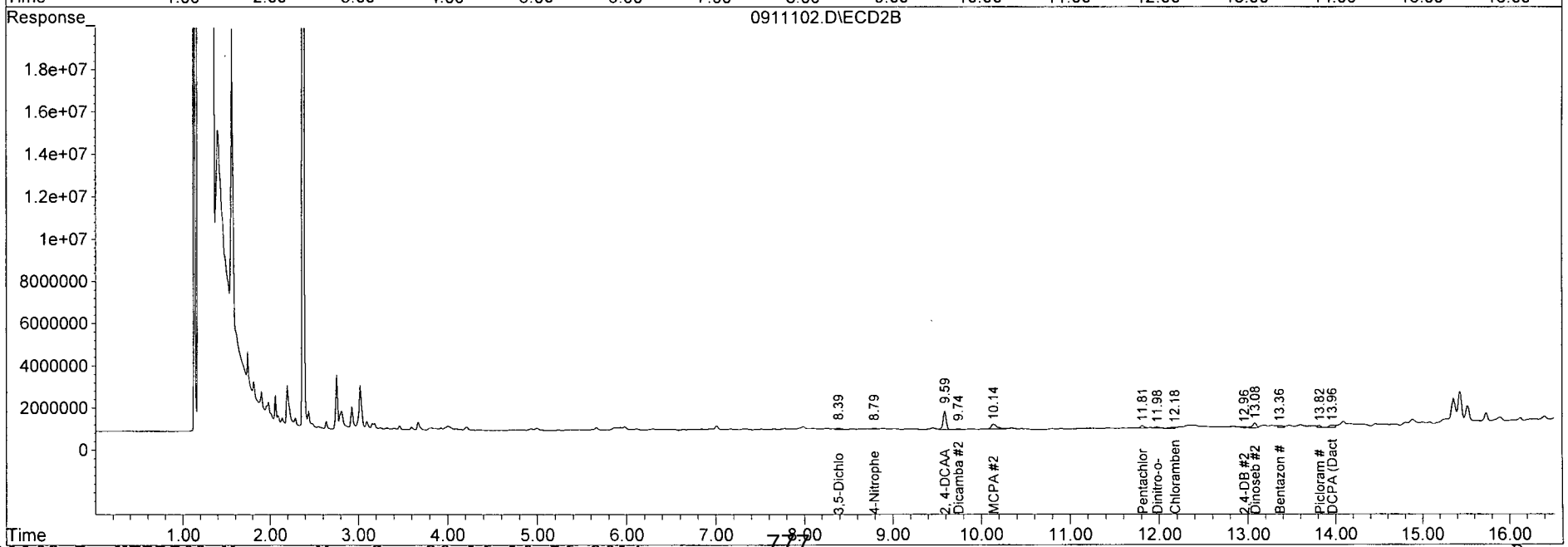
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911102.D
Acq On : 09-19-14 12:41:38
Sample : AZ02104 10/5.04
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 2
Operator: MA
Inst : Herbie
Multiplr: 1984.13





EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN007

Sample Collection Date: 09/02/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02105

QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/18/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/18/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/18/14
EPA 8151	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/18/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	55.7	45-140			%	09/16/14	09/18/14

Quant Method: HERB703.M
Run #: 0911079
Instrument: Herbie
Sequence: 140911
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911079.D\ECD1A.CH Vial: 79
Signal #2 : G:\HERBIE\DATA\140911\0911079.D\ECD2B.CH
Acq On : 09-18-14 14:39:05 Operator: MA
Sample : AZ02105 10/5.04 Inst : Herbie
Misc : soil Multiplr: 1984.13
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:05 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

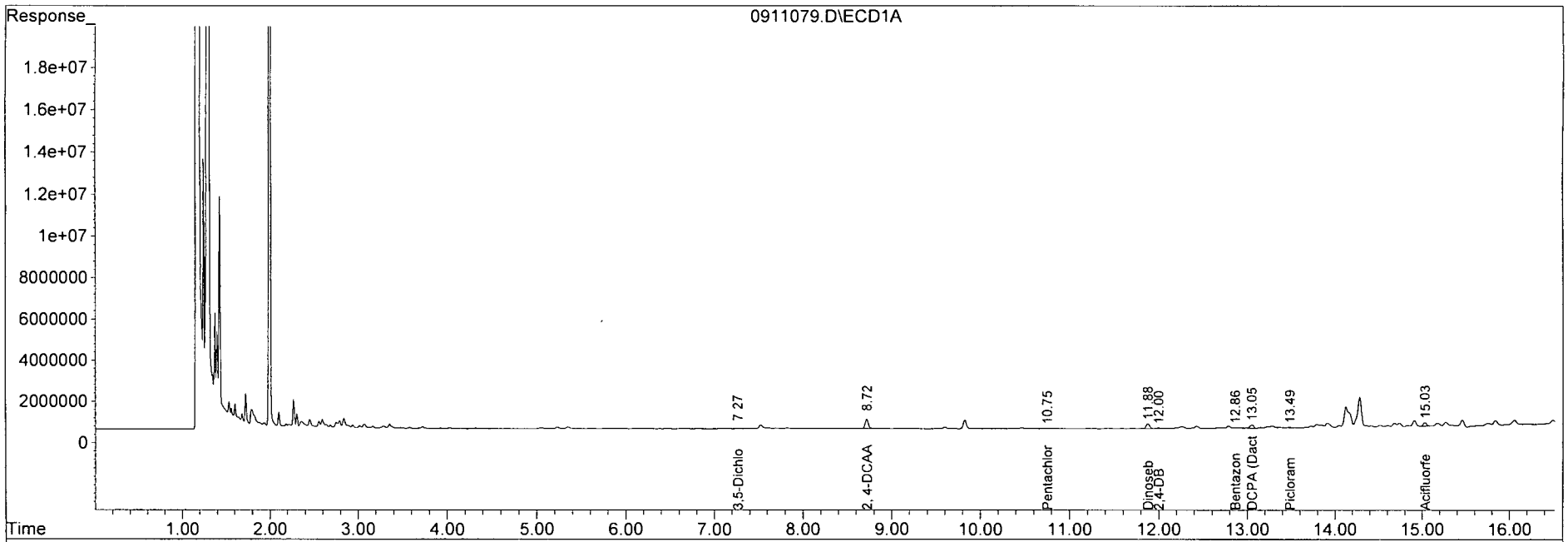
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	468226	696154	302.782	331.450
	Spiked Amount 595.238			Recovery	=	50.87%	55.68%
	Target Compounds						
2) TM	3,5-Dichlorobenz	7.27	8.42	21131	29068	8.836	8.168
3) CM	4-Nitrophenol	0.00	8.78f	0	32955	N.D.	22.517 #
7) TM	MCPA	0.00	10.14f	0	416567	N.D.	57907.023 #
10) TM	Pentachloropheno	10.75	11.84	32999	25694	1.552	0.815 #
15) TM	Dinoseb	11.88	13.09	245605	304298	43.262	38.410
16) TM	2,4-DB	12.00	0.00	39380	0	38.007	N.D. #
17) TM	Bentazon	12.86	13.31	33366	44840	28.377	33.678
18) TM	DCPA (Dacthal)	13.05	14.00	173294	22587	17.688	1.385 #
19) TM	Picloram	13.49	13.82	34642	137409	3.125	8.596 #
20) TM	Acifluorfen	15.03	16.06	171201	75185	23.674	7.006 #
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
5) TM	Dicamba	0.00	0.00	0	0	N.D.	N.D.
6) TM	MCPP	0.00	0.00	0	0	N.D.	N.D.
8) TM	Dichlorprop	0.00	0.00	0	0	N.D.	N.D.
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
12) TM	Dinitro-o-cresol	0.00	0.00	0	0	N.D.	N.D.
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d
14) TM	Chloramben	0.00	0.00	0	0	N.D.	N.D.

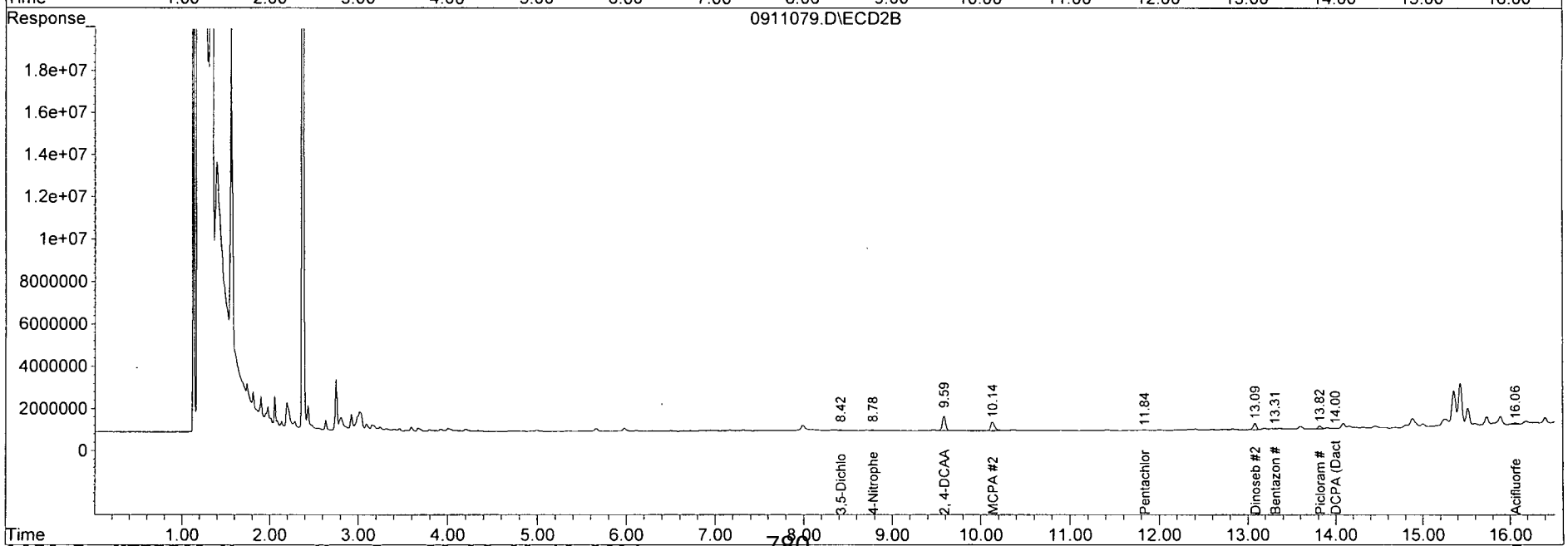
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911079.D
Acq On : 09-18-14 14:39:05
Sample : AZ02105 10/5.04
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 79
Operator: MA
Inst : Herbie
Multiplr: 1984.13





EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN008
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02106
QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/18/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/18/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/18/14
EPA 8151	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/18/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	55.3	45-140			%	09/16/14	09/18/14

Quant Method:	HERB703.M
Run #:	0911090
Instrument:	Herbie
Sequence:	140911
Dilution Factor:	1
Initials:	MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911090.D\ECD1A.CH Vial: 90
Signal #2 : G:\HERBIE\DATA\140911\0911090.D\ECD2B.CH
Acq On : 09-18-14 19:15:57 Operator: MA
Sample : AZ02106 10/5.04 Inst : Herbie
Misc : soil Multiplr: 1984.13
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:09 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

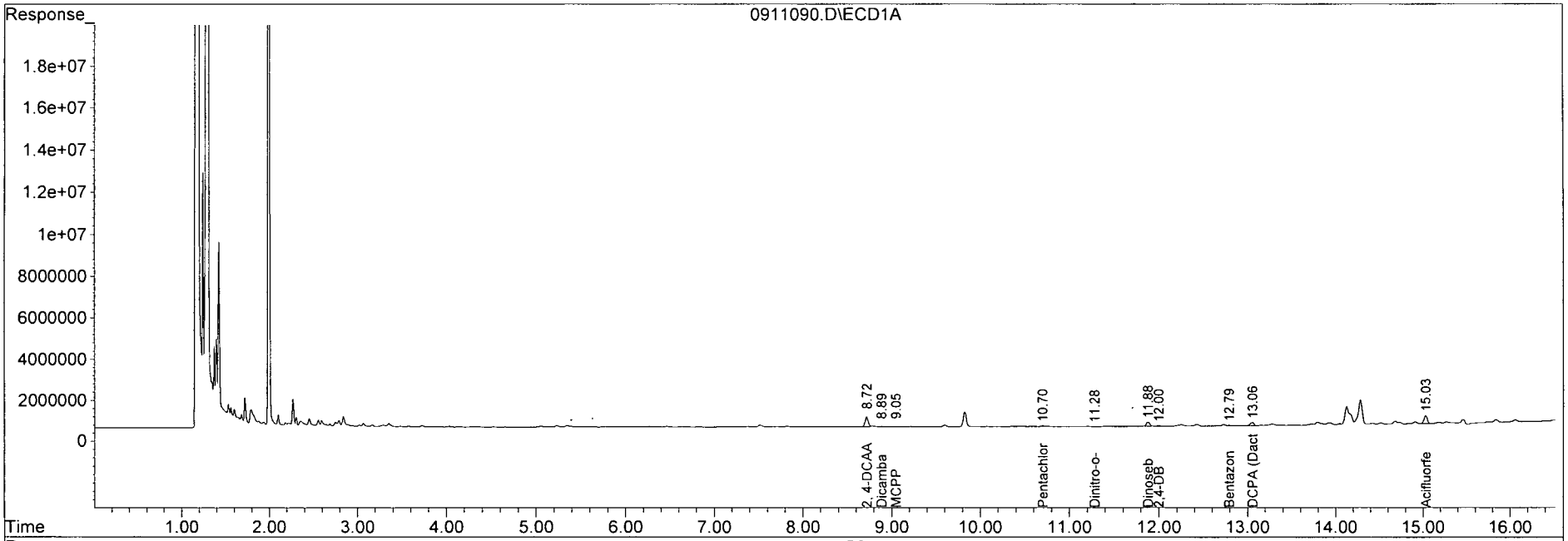
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
4)	S	2, 4-DCAA (S)	8.72	9.59	492294	691179	318.346	329.082
		Spiked Amount 595.238			Recovery	=	53.48%	55.29%
		Target Compounds						
2)	TM	3,5-Dichlorobenz	0.00	8.42	0	29780	N.D.	8.368 #
3)	CM	4-Nitrophenol	0.00	8.78f	0	35918	N.D.	24.542 #
5)	TM	Dicamba	8.89	9.75f	21084	15576	3.165	1.739 #
6)	TM	MCPP	9.05f	10.04f	17345	29034	4918.780	2954.534 #
7)	TM	MCPA	0.00	10.14f	0	837140	N.D.	116370.920 #
10)	TM	Pentachloropheno	10.70	11.88	52656	85293	2.476	2.706
12)	TM	Dinitro-o-cresol	11.28f	12.01	16302	23994	1.224	1.381
15)	TM	Dinoseb	11.88	13.09	215683	273138	37.992	34.477
16)	TM	2,4-DB	12.00	0.00	33935	0	32.752	N.D. #
17)	TM	Bentazon	12.79f	13.27f	38079	60142	32.385	45.171 #
18)	TM	DCPA (Dacthal)	13.06	14.09f	160242	255568	16.355	15.667
19)	TM	Picloram	0.00	13.83	0	50980	N.D.	3.189 #
20)	TM	Acifluorfen	15.03	16.07	401596	29700	55.534	2.768 #
		Target Compounds						
1)	TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
8)	TM	Dichlorprop	0.00	0.00	0	0	N.D.	N.D.
9)	TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11)	TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13)	TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d
14)	TM	Chloramben	0.00	0.00	0	0	N.D.	N.D.

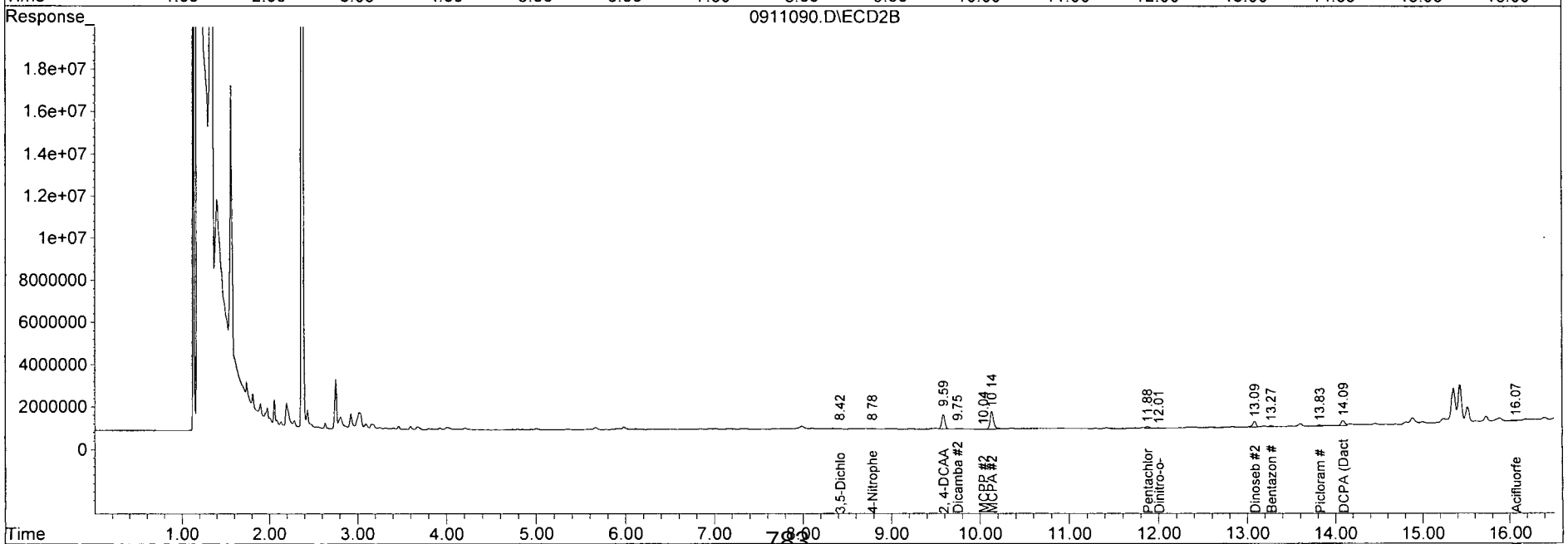
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911090.D
Acq On : 09-18-14 19:15:57
Sample : AZ02106 10/5.04
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 90
Operator: MA
Inst : Herbie
Multiplr: 1984.13





EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN009

APPL ID: AZ02107

Sample Collection Date: 09/02/14

QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/18/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/18/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/18/14
EPA 8151	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/18/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	47.9	45-140			%	09/16/14	09/18/14

Quant Method:	HERB703.M
Run #:	0911083
Instrument:	Herbie
Sequence:	140911
Dilution Factor:	1
Initials:	MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911083.D\ECD1A.CH Vial: 83
Signal #2 : G:\HERBIE\DATA\140911\0911083.D\ECD2B.CH
Acq On : 09-18-14 16:38:49 Operator: MA
Sample : AZ02107 10/5.13 Inst : Herbie
Misc : soil Multiplr: 1949.32
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:06 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

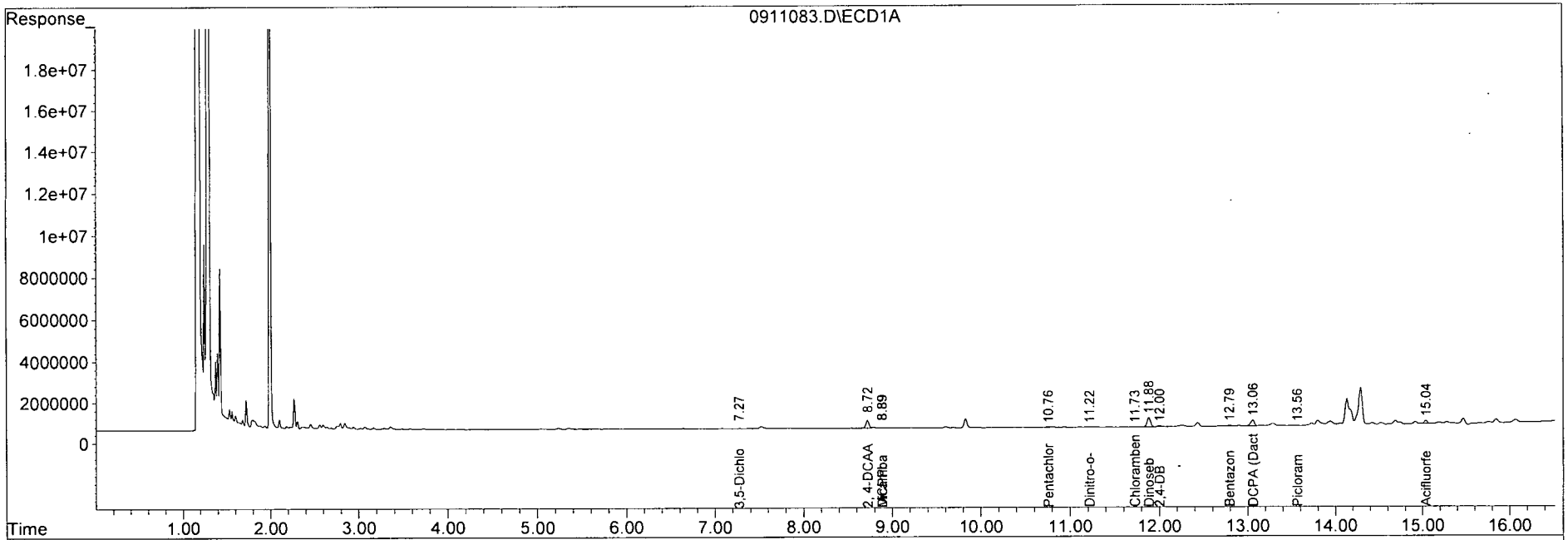
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	396140	598413	251.673	279.916
Spiked Amount	584.795			Recovery	=	43.04%	47.87%
	Target Compounds						
2) TM	3,5-Dichlorobenz	7.27	8.42	11940	21376	4.905	5.901
3) CM	4-Nitrophenol	0.00	8.78f	0	19310	N.D.	12.963 #
5) TM	Dicamba	8.89	0.00	24805	0	3.659	N.D. #
6) TM	MCPP	8.89f	10.04f	24805	20785	6910.911	1093.794 #
7) TM	MCPA	0.00	10.14f	0	405845	N.D.	55426.772 #
8) TM	Dichlorprop	0.00	10.62	0	17542	N.D.	7.740 #
10) TM	Pentachloropheno	10.76f	11.84	21463	32678	0.991	1.019
12) TM	Dinitro-o-cresol	11.22	12.00	18981	53039	1.400	2.999 #
14) TM	Chloramben	11.73	12.24	22647	67622	3.775	7.796 #
15) TM	Dinoseb	11.88	13.09	463245	623779	80.167	77.356
16) TM	2,4-DB	12.00	0.00	59715	0	56.621	N.D. #
17) TM	Bentazon	12.79f	13.28f	64600	37755	53.976	27.859 #
18) TM	DCPA (Dacthal)	13.06	14.00	296305	40544	29.712	2.442 #
19) TM	Picloram	13.56	13.83	21505	73125	1.906	4.495 #
20) TM	Acifluorfen	15.04	16.10f	163454	137263	22.206	12.567 #
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d

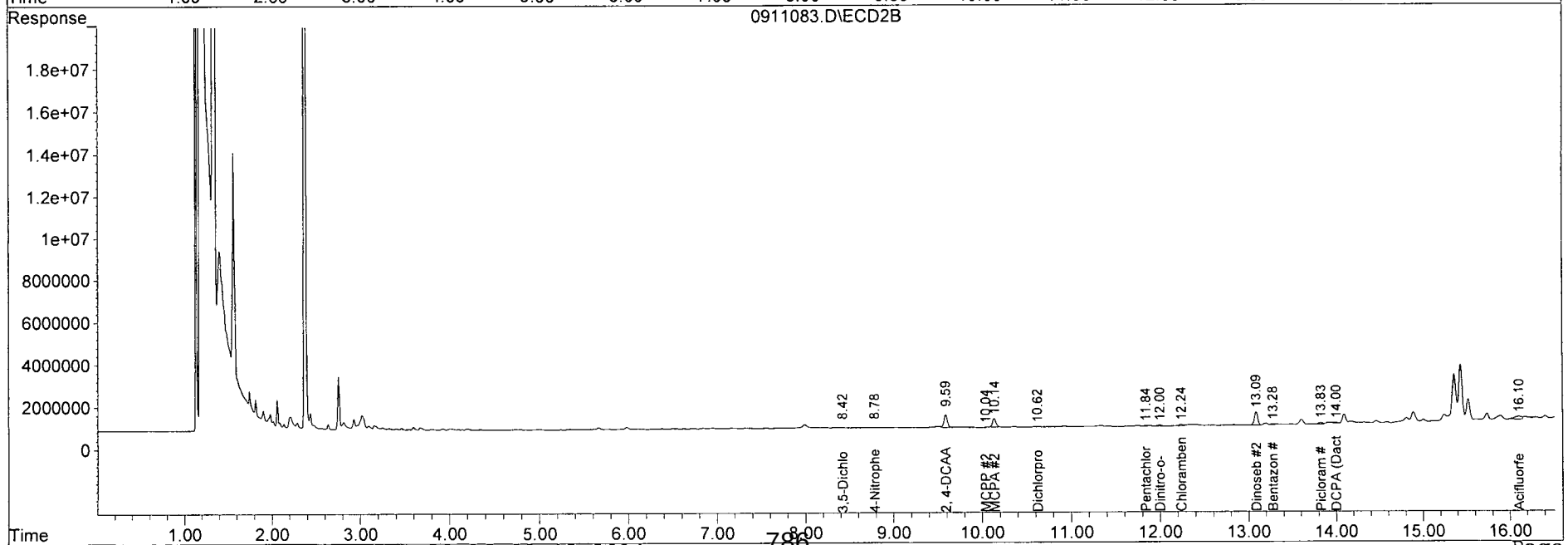
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911083.D
Acq On : 09-18-14 16:38:49
Sample : AZ02107 10/5.13
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 83
Operator: MA
Inst : Herbie
Multiplr: 1949.32





EPA 8151 WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN010
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02108
QCG: #815E2-140908A-190297

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.090 U	0.10	0.090	0.029	ug/L	09/08/14	09/15/14
EPA 8151	2,4,5-TP	0.090 U	0.10	0.090	0.069	ug/L	09/08/14	09/15/14
EPA 8151	2,4-D	0.450 U	0.50	0.450	0.152	ug/L	09/08/14	09/15/14
EPA 8151	DALAPON	0.90 U	1.0	0.90	0.59	ug/L	09/08/14	09/15/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	81.4	33-154			%	09/08/14	09/15/14

Quant Method: HERB703.M
Run #: 0911034
Instrument: Herbie
Sequence: 140911
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911034.D\ECD1A.CH Vial: 34
Signal #2 : G:\HERBIE\DATA\140911\0911034.D\ECD2B.CH
Acq On : 09-15-14 10:49:53 Operator: MA
Sample : AZ02108W06 5/1070 Inst : Herbie
Misc : water Multiplr: 4.67
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:02 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

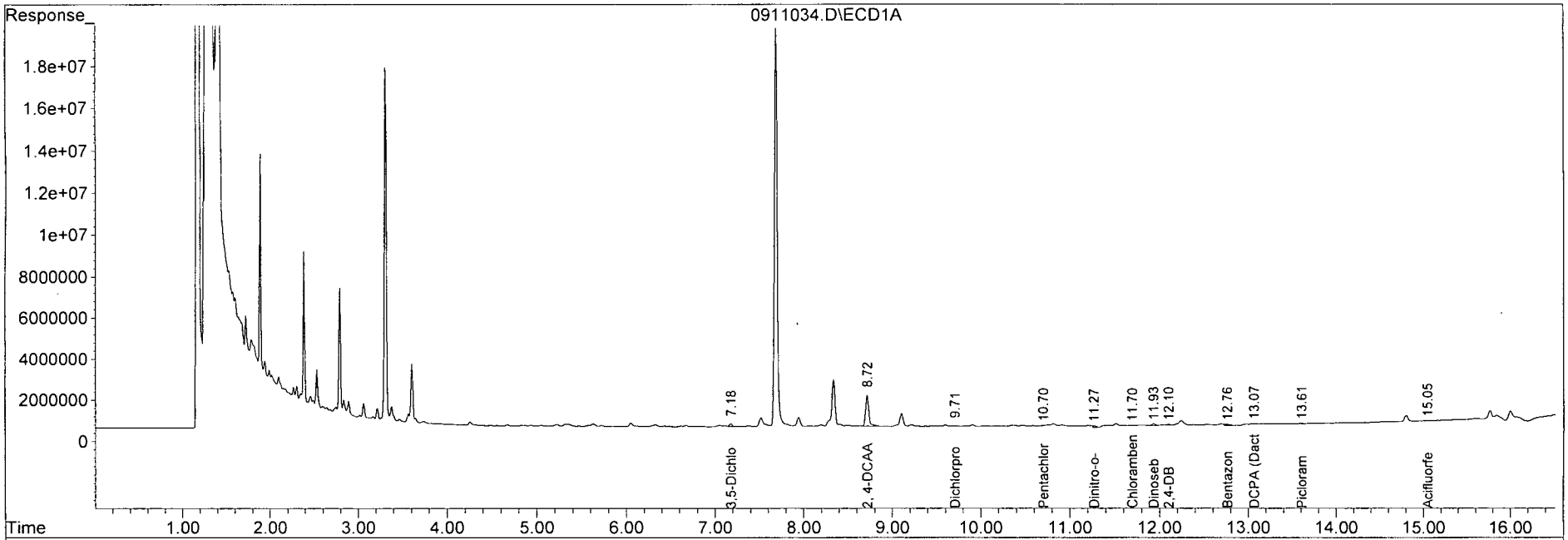
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	1498429	2092115	2.282	2.346
Spiked Amount	2.804			Recovery	=	81.39%	83.67%
	Target Compounds						
2) TM	3,5-Dichlorobenz	7.18f	0.00	139337	0	0.137	N.D. #
3) CM	4-Nitrophenol	0.00	8.71	0	171388	N.D.	0.276 #
5) TM	Dicamba	0.00	9.68	0	246488	N.D.	0.065 #
6) TM	MCPP	0.00	9.85f	0	45542	N.D.	15.636 #
7) TM	MCPA	0.00	10.27	0	110220	N.D.	36.085 #
8) TM	Dichlorprop	9.71	10.63	16863	217781	0.027	0.230 #
10) TM	Pentachloropheno	10.70	0.00	37015	0	0.004	N.D. #
12) TM	Dinitro-o-cresol	11.27f	0.00	77863	0	0.014	N.D. #
14) TM	Chloramben	11.70	12.25	28977	34113	0.012	0.009
15) TM	Dinoseb	11.93	13.03	83457	186549	0.035	0.055 #
16) TM	2,4-DB	12.10f	13.03f	41371	186549	0.094	0.291 #
17) TM	Bentazon	12.76f	13.27f	63539	308110	0.127	0.545 #
18) TM	DCPA (Dacthal)	13.07	13.97	46444	47008	0.011	0.007 #
19) TM	Picloram	13.61f	0.00	32595	0	0.007	N.D. #
20) TM	Acifluorfen	15.05	16.03	25105	70639	0.008	0.016 #
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d

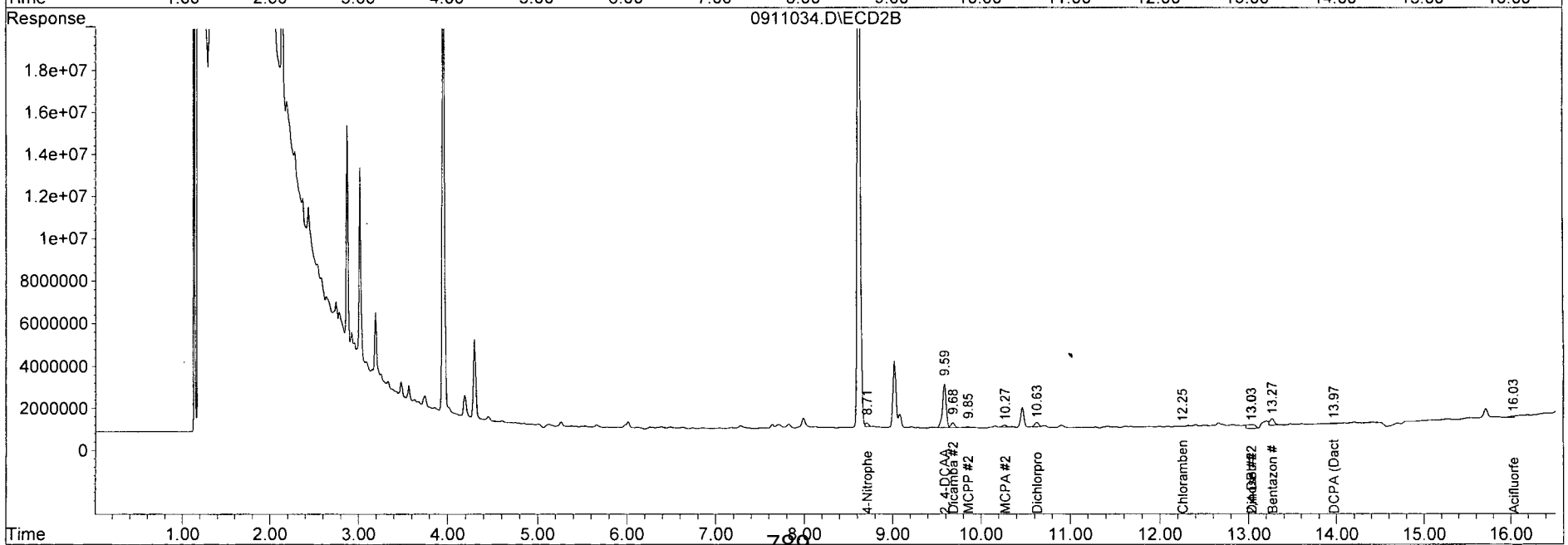
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911034.D
Acq On : 09-15-14 10:49:53
Sample : AZ02108W06 5/1070
Misc : water
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 34
Operator: MA
Inst : Herbie
Multiplr: 4.67





EPA 8151 WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN011

APPL ID: AZ02109

Sample Collection Date: 09/02/14

QCG: #815E2-140908A-190297

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.090 U	0.10	0.090	0.029	ug/L	09/08/14	09/15/14
EPA 8151	2,4,5-TP	0.090 U	0.10	0.090	0.069	ug/L	09/08/14	09/15/14
EPA 8151	2,4-D	0.450 U	0.50	0.450	0.152	ug/L	09/08/14	09/15/14
EPA 8151	DALAPON	0.90 U	1.0	0.90	0.59	ug/L	09/08/14	09/15/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	85.7	33-154			%	09/08/14	09/15/14

Quant Method: HERB703.M
Run #: 0911035
Instrument: Herbie
Sequence: 140911
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911035.D\ECD1A.CH Vial: 35
Signal #2 : G:\HERBIE\DATA\140911\0911035.D\ECD2B.CH
Acq On : 09-15-14 11:12:14 Operator: MA
Sample : AZ02109W06 5/1070 Inst : Herbie
Misc : water Multiplr: 4.67
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:03 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

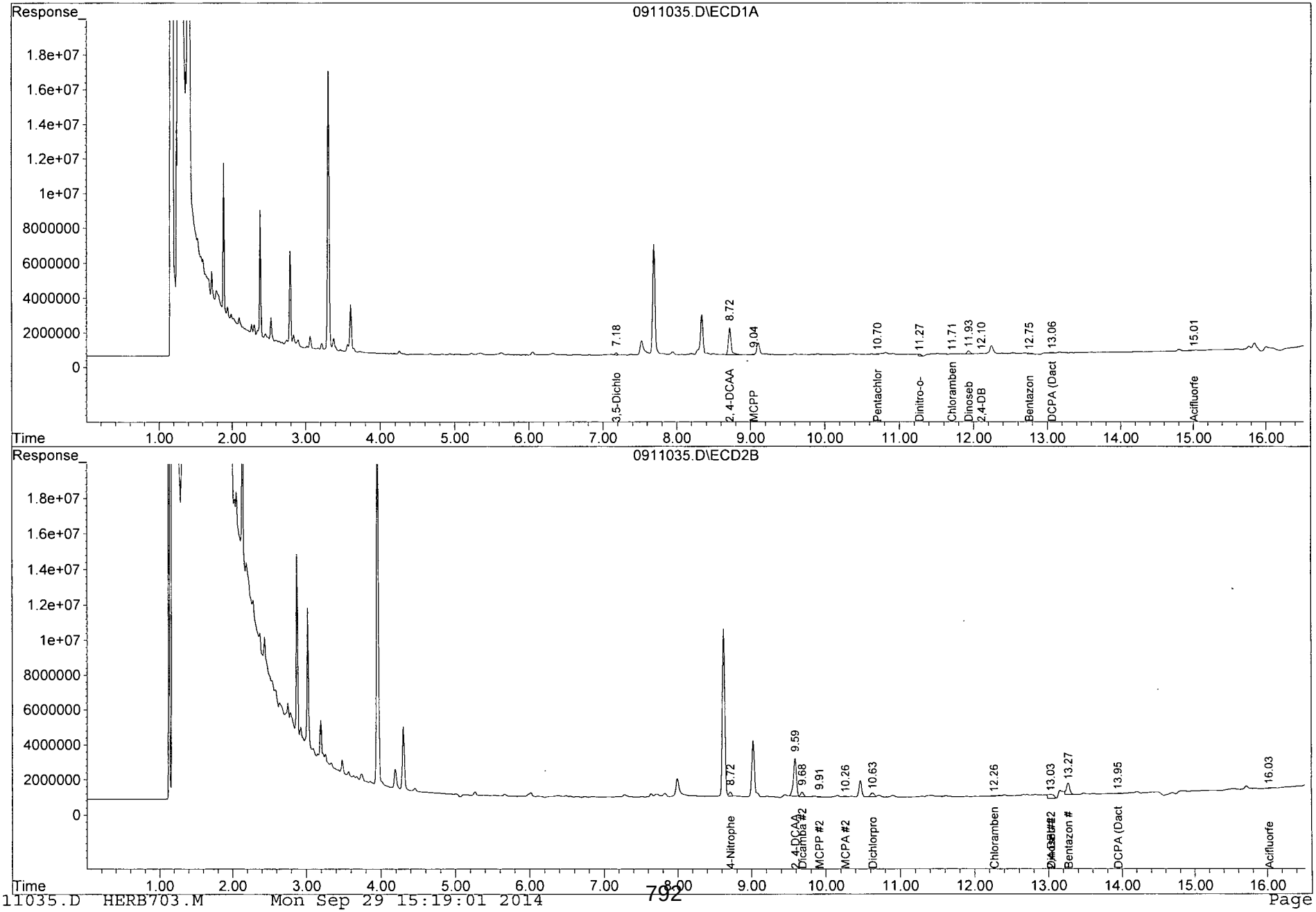
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	1576877	2167456	2.402	2.430
Spiked Amount	2.804			Recovery	=	85.67%	86.67%
	Target Compounds						
2) TM	3,5-Dichlorobenz	7.18f	0.00	136532	0	0.134	N.D. #
3) CM	4-Nitrophenol	0.00	8.72	0	232479	N.D.	0.374 #
5) TM	Dicamba	0.00	9.68	0	273763	N.D.	0.072 #
6) TM	MCPP	9.04f	9.91	40920	40216	27.330	12.836 #
7) TM	MCPA	0.00	10.26	0	40051	N.D.	13.112 #
8) TM	Dichlorprop	0.00	10.63	0	228806	N.D.	0.242 #
10) TM	Pentachloropheno	10.70	0.00	45182	0	0.005	N.D. #
12) TM	Dinitro-o-cresol	11.27f	0.00	100061	0	0.018	N.D. #
14) TM	Chloramben	11.71	12.26	23788	44033	0.010	0.012 #
15) TM	Dinoseb	11.93	13.03	190710	208359	0.079	0.062
16) TM	2,4-DB	12.10f	13.03f	51338	208359	0.117	0.325 #
17) TM	Bentazon	12.75f	13.27f	68654	645885	0.138	1.142 #
18) TM	DCPA (Dacthal)	13.06	13.95f	47806	38038	0.011	0.005 #
20) TM	Acifluorfen	15.01f	16.03	38563	56647	0.013	0.012
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d
19) TM	Picloram	0.00	0.00	0	0	N.D.	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911035.D
Acq On : 09-15-14 11:12:14
Sample : AZ02109W06 5/1070
Misc : water
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 35
Operator: MA
Inst : Herbie
Multiplr: 4.67



EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN012

APPL ID: AZ02110

Sample Collection Date: 09/03/14

QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/18/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/18/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/18/14
EPA 8151	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/18/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	67.8	45-140			%	09/16/14	09/18/14

Quant Method:	HERB703.M
Run #:	0911084
Instrument:	Herbie
Sequence:	140911
Dilution Factor:	1
Initials:	MA

Printed: 09/29/14 4:36:18 PM

APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911084.D\ECD1A.CH Vial: 84
Signal #2 : G:\HERBIE\DATA\140911\0911084.D\ECD2B.CH
Acq On : 09-18-14 17:01:11 Operator: MA
Sample : AZ02110 10/5.17 Inst : Herbie
Misc : soil Multiplr: 1934.24
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:06 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

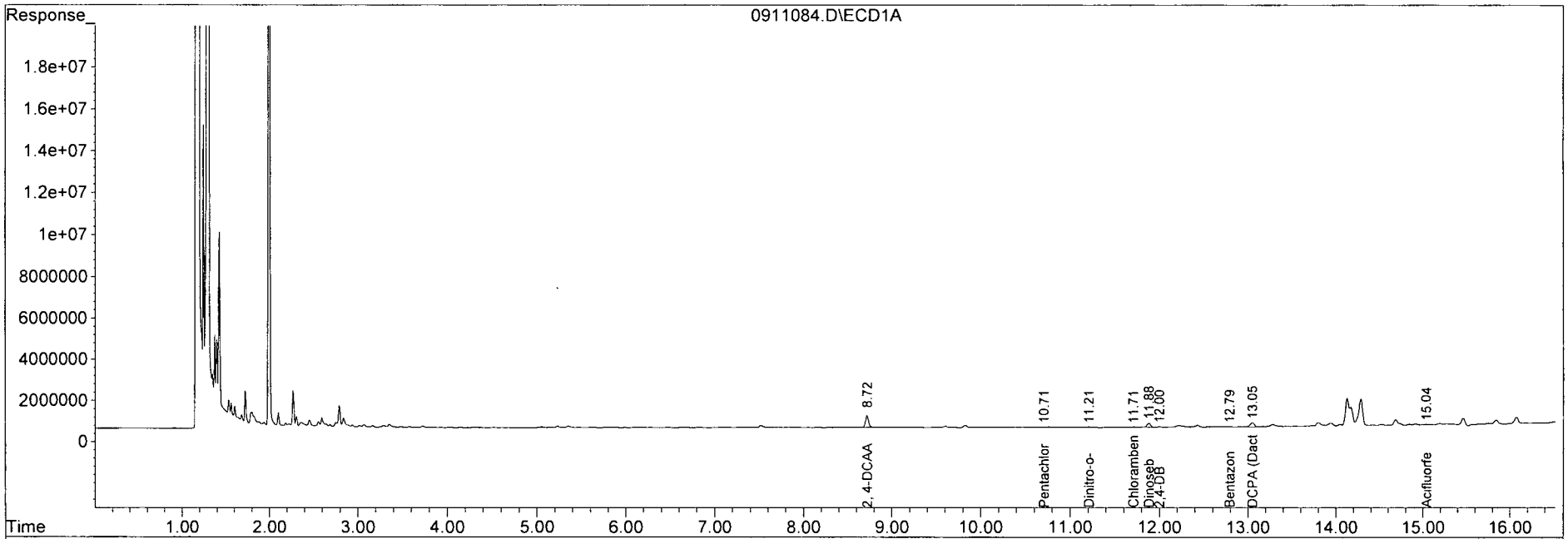
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	591819	847486	373.081	393.355
	Spiked Amount 580.271			Recovery	=	64.29%	67.79%
	Target Compounds						
2) TM	3,5-Dichlorobenz	0.00	8.42	0	47932	N.D.	13.131 #
3) CM	4-Nitrophenol	0.00	8.72	0	38677	N.D.	25.762 #
6) TM	MCPP	0.00	9.90f	0	25388	N.D.	2086.901 #
7) TM	MCPA	0.00	10.15f	0	150436	N.D.	20386.256 #
10) TM	Pentachloropheno	10.71	11.88	28463	38236	1.305	1.183
12) TM	Dinitro-o-cresol	11.21	12.01	33622	32772	2.461	1.838 #
14) TM	Chloramben	11.71	12.33f	16115	43444	2.665	4.970 #
15) TM	Dinoseb	11.88	13.09	205068	269489	35.214	33.161
16) TM	2,4-DB	12.00	0.00	30910	0	29.082	N.D. #
17) TM	Bentazon	12.79f	13.27f	22734	41572	18.848	30.438 #
18) TM	DCPA (Dacthal)	13.05	14.09f	206902	339950	20.587	20.316
19) TM	Picloram	0.00	13.83	0	25371	N.D.	1.547 #
20) TM	Acifluorfen	15.04	16.03	33476	30561	4.513	2.776 #
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
5) TM	Dicamba	0.00	0.00	0	0	N.D.	N.D. d
8) TM	Dichlorprop	0.00	0.00	0	0	N.D.	N.D.
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d

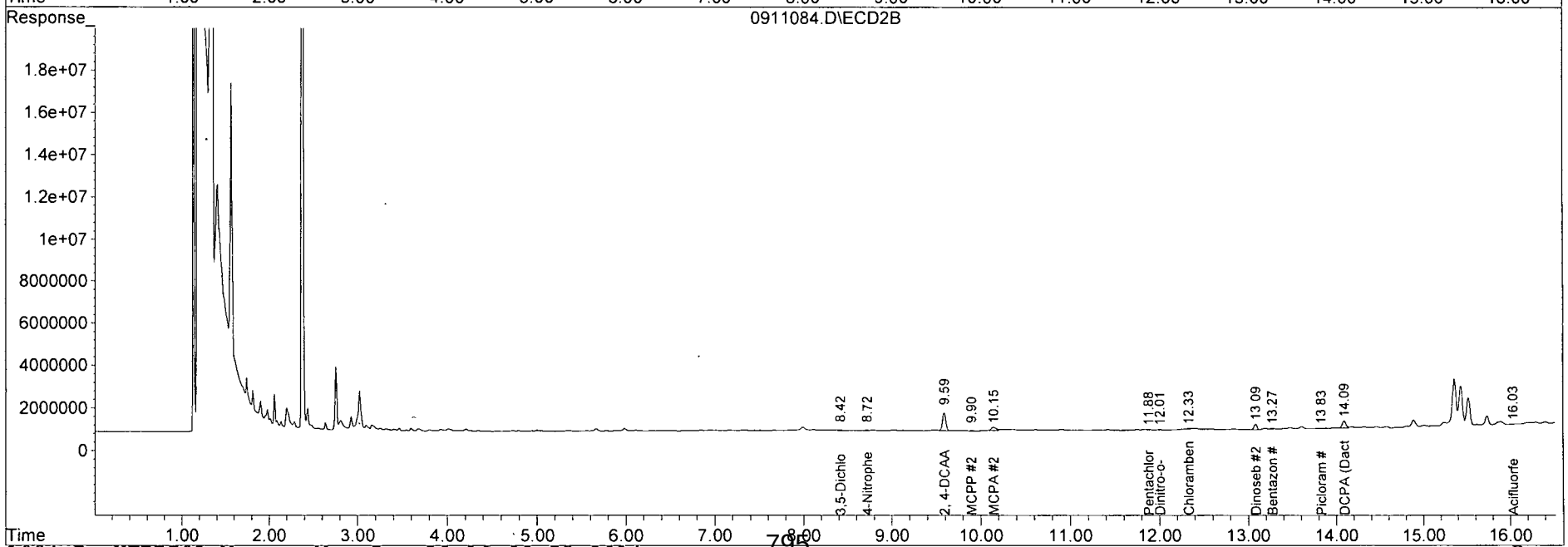
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911084.D
Acq On : 09-18-14 17:01:11
Sample : AZ02110 10/5.17
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 84
Operator: MA
Inst : Herbie
Multiplr: 1934.24





EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN013

APPL ID: AZ02111

Sample Collection Date: 09/03/14

QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/18/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/18/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/18/14
EPA 8151	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/18/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	72.2	45-140			%	09/16/14	09/18/14

Quant Method: HERB703.M
Run #: 0911085
Instrument: Herbie
Sequence: 140911
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911085.D\ECD1A.CH Vial: 85
Signal #2 : G:\HERBIE\DATA\140911\0911085.D\ECD2B.CH
Acq On : 09-18-14 17:23:38 Operator: MA
Sample : AZ02111 10/5.10 Inst : Herbie
Misc : soil Multiplr: 1960.78
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:07 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

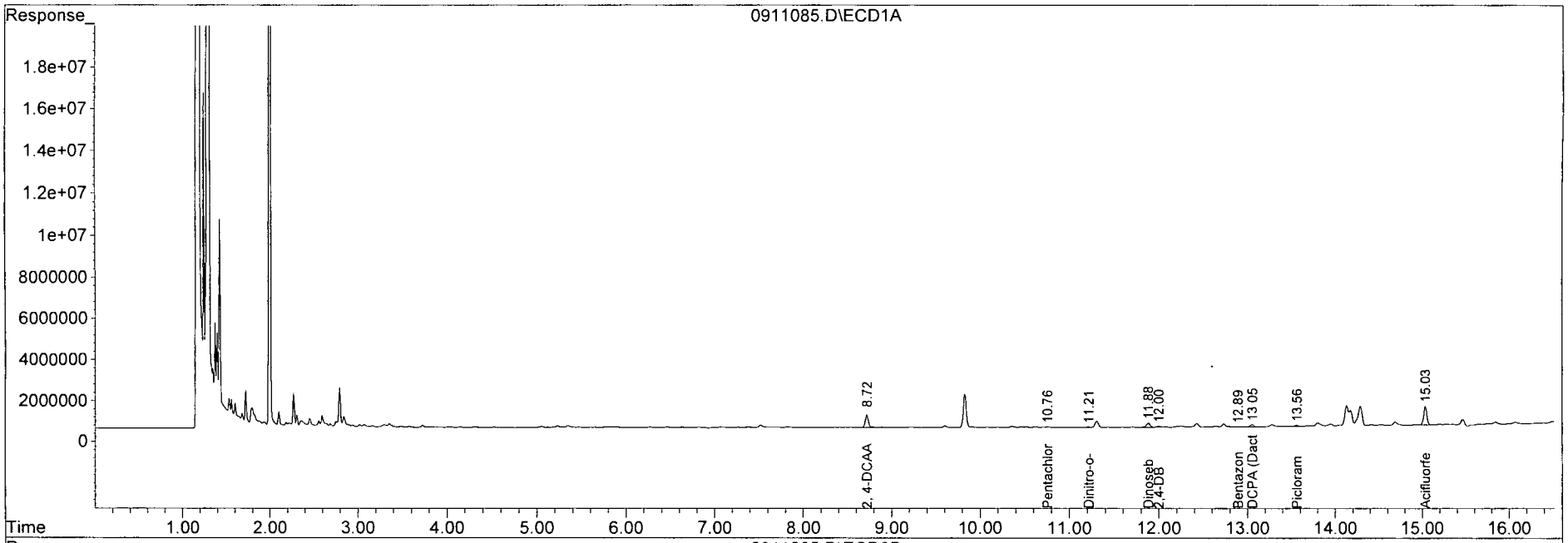
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	632201	902264	404.007	424.527
	Spiked Amount 588.235			Recovery	=	68.68%	72.17%
	Target Compounds						
2) TM	3,5-Dichlorobenz	0.00	8.42	0	31312	N.D.	8.695 #
3) CM	4-Nitrophenol	0.00	8.79f	0	26029	N.D.	17.576 #
6) TM	MCPP	0.00	10.04f	0	31111	N.D.	3377.903 #
7) TM	MCPA	0.00	10.14f	0	1556893	N.D.	213876.901 #
10) TM	Pentachloropheno	10.76f	11.80f	36751	56534	1.708	1.772
12) TM	Dinitro-o-cresol	11.21	12.01	26092	31047	1.936	1.766
14) TM	Chloramben	0.00	12.17f	0	31964	N.D.	3.707 #
15) TM	Dinoseb	11.88	13.08	217907	266895	37.932	33.293
16) TM	2,4-DB	12.00	0.00	52242	0	49.827	N.D. #
17) TM	Bentazon	12.89	13.28f	14883	45130	12.509	33.497 #
18) TM	DCPA (Dacthal)	13.05	14.09f	117302	169505	11.832	10.269
19) TM	Picloram	13.56	13.73f	64301	39336	5.732	2.432 #
20) TM	Acifluorfen	15.03	16.00	931345	21131	127.274	1.946 #
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
5) TM	Dicamba	0.00	0.00	0	0	N.D.	N.D. d
8) TM	Dichlorprop	0.00	0.00	0	0	N.D.	N.D.
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d

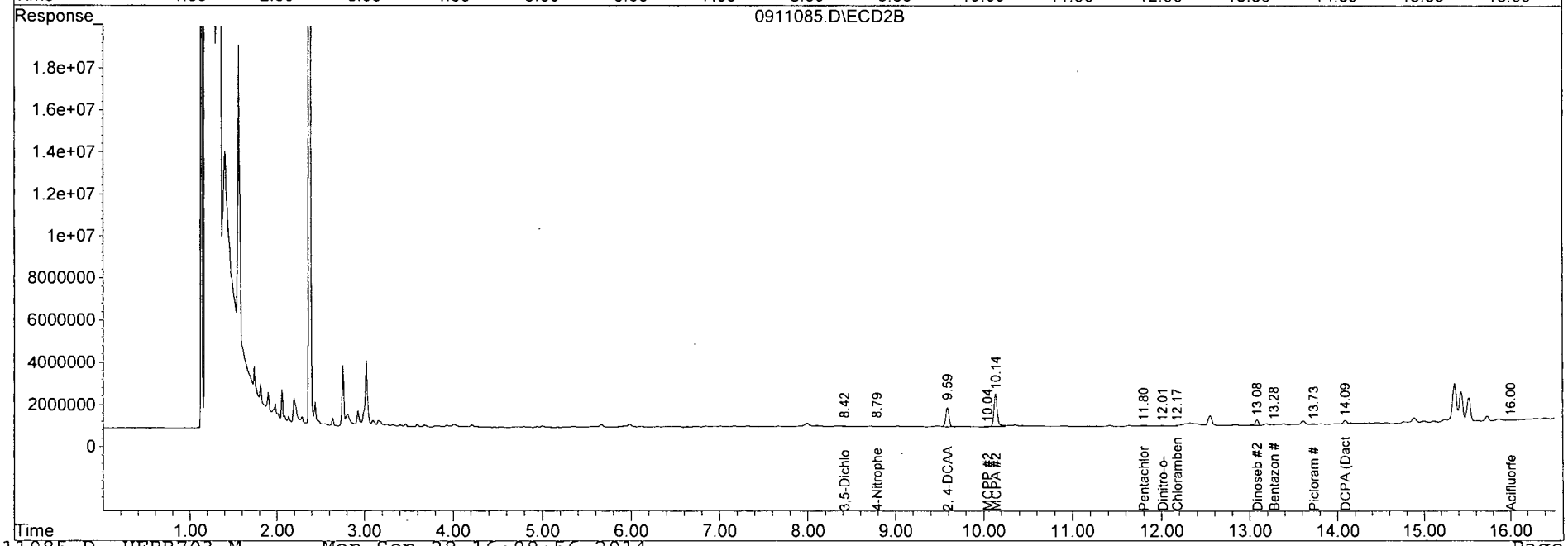
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911085.D
Acq On : 09-18-14 17:23:38
Sample : AZ02111 10/5.10
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 85
Operator: MA
Inst : Herbie
Multiplr: 1960.78





798

EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN014

APPL ID: AZ02112

Sample Collection Date: 09/03/14

QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/18/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/18/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/18/14
EPA 8151	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/18/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	59.7	45-140			%	09/16/14	09/18/14

Quant Method: HERB703.M
Run #: 0911086
Instrument: Herbie
Sequence: 140911
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911086.D\ECD1A.CH Vial: 86
Signal #2 : G:\HERBIE\DATA\140911\0911086.D\ECD2B.CH
Acq On : 09-18-14 17:46:00 Operator: MA
Sample : AZ02112 10/5.04 Inst : Herbie
Misc : soil Multiplr: 1984.13
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:07 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

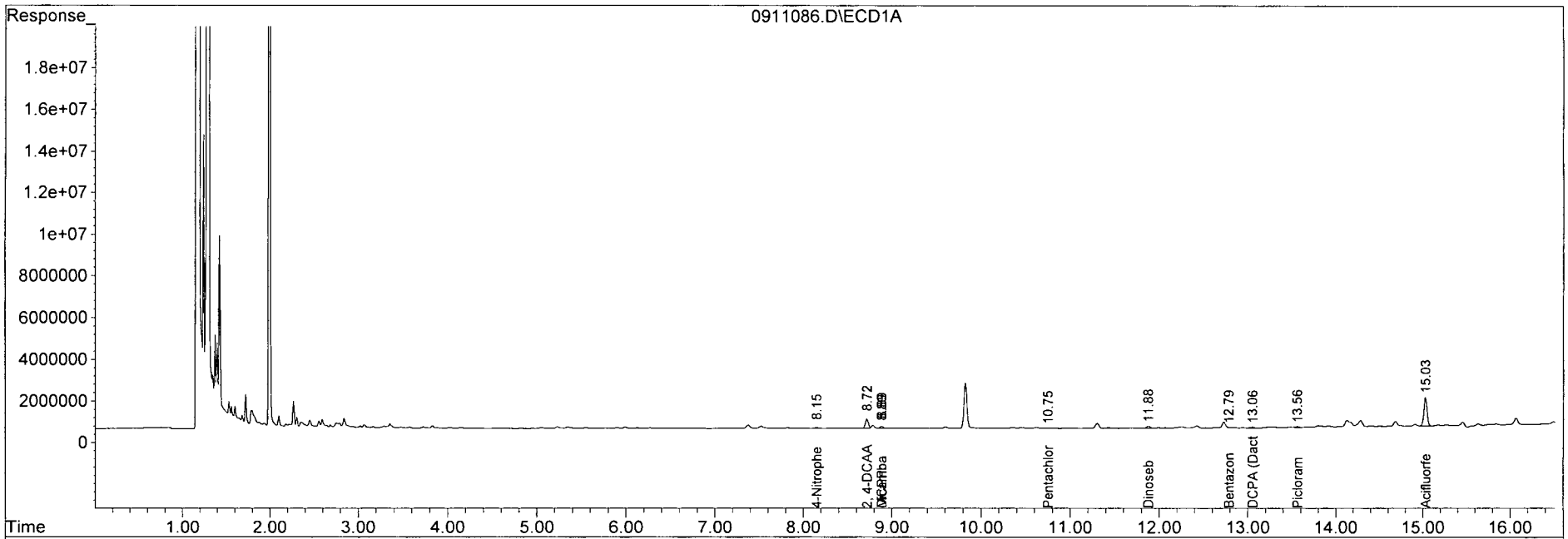
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	463234	746642	299.554	355.488
	Spiked Amount 595.238			Recovery	=	50.33%	59.72%
	Target Compounds						
2) TM	3,5-Dichlorobenz	0.00	8.42	0	26403	N.D.	7.419 #
3) CM	4-Nitrophenol	8.15f	8.78f	45854	246507	42.181	168.431 #
5) TM	Dicamba	8.89	9.75f	107349	22124	16.116	2.470 #
6) TM	MCPP	8.89f	10.04f	107349	24255	30442.507	1887.841 #
7) TM	MCPA	0.00	10.14f	0	2157188	N.D.	299870.475 #
10) TM	Pentachloropheno	10.75	11.80f	27519	52184	1.294	1.656 #
12) TM	Dinitro-o-cresol	0.00	12.01	0	25891	N.D.	1.490 #
14) TM	Chloramben	0.00	12.26	0	28726	N.D.	3.371 #
15) TM	Dinoseb	11.88	13.08	105842	125554	18.644	15.848
16) TM	2,4-DB	0.00	13.03f	0	84232	N.D.	55.755 #
17) TM	Bentazon	12.79f	13.39f	36558	40335	31.091	30.294
18) TM	DCPA (Dacthal)	13.06	14.10f	55008	58303	5.615	3.574 #
19) TM	Picloram	13.56	13.83	43092	42493	3.887	2.658 #
20) TM	Acifluorfen	15.03	16.03	1396796	25910	193.153	2.414 #
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
8) TM	Dichlorprop	0.00	0.00	0	0	N.D.	N.D.
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d

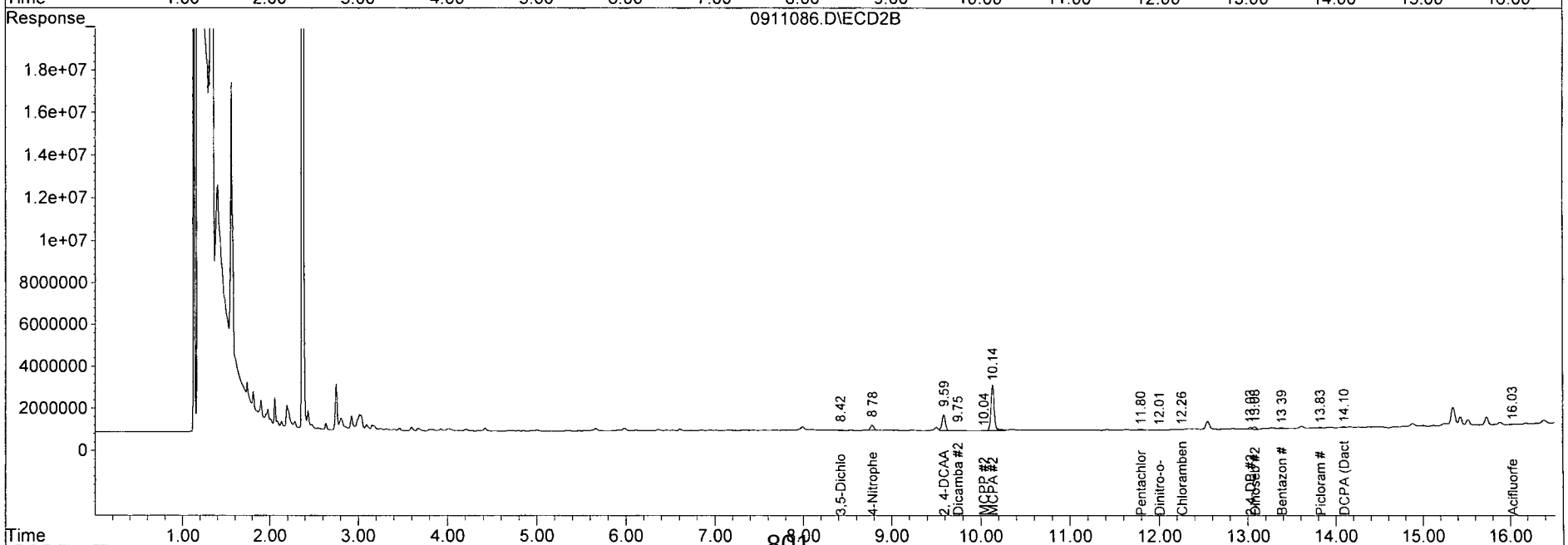
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911086.D
Acq On : 09-18-14 17:46:00
Sample : AZ02112 10/5.04
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 86
Operator: MA
Inst : Herbie
Multiplr: 1984.13





EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN015

APPL ID: AZ02113

Sample Collection Date: 09/03/14

QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/18/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/18/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/18/14
EPA 8151	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/18/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	76.5	45-140			%	09/16/14	09/18/14

Quant Method: HERB703.M
Run #: 0911087
Instrument: Herbie
Sequence: 140911
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911087.D\ECD1A.CH Vial: 87
Signal #2 : G:\HERBIE\DATA\140911\0911087.D\ECD2B.CH
Acq On : 09-18-14 18:08:25 Operator: MA
Sample : AZ02113 10/5.03 Inst : Herbie
Misc : soil Multiplr: 1988.07
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:07 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

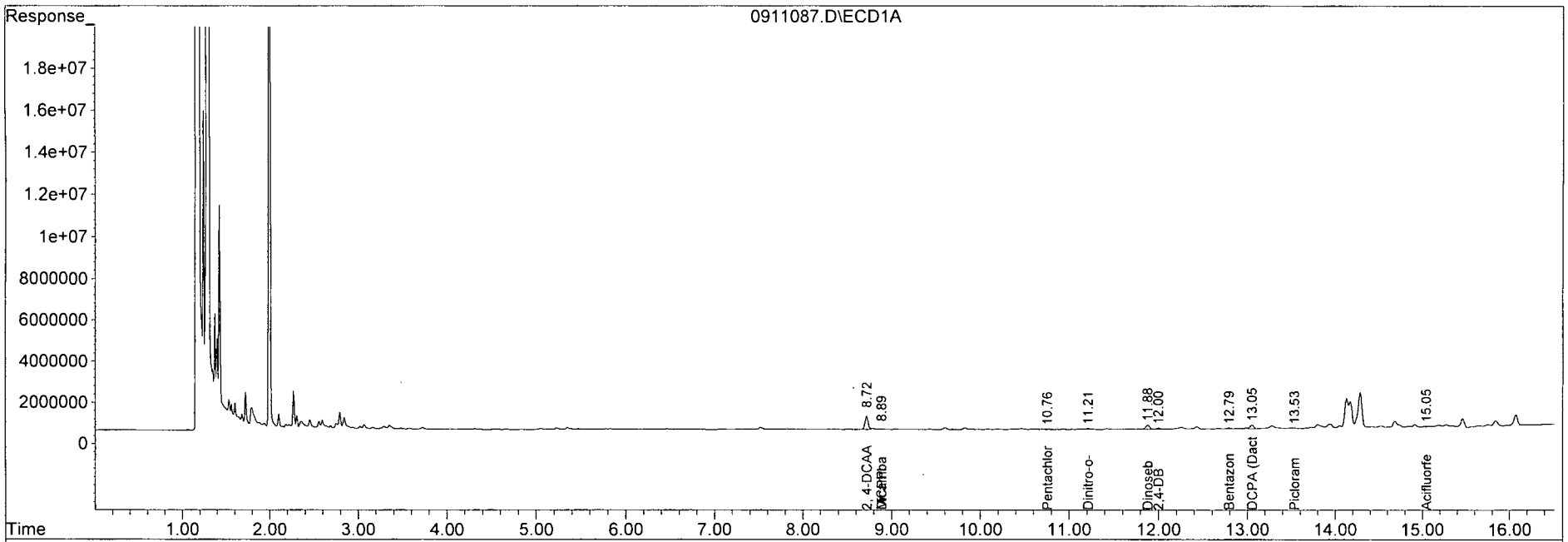
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 2, 4-DCAA (S)	8.72	9.59	666061	956742	431.569	456.425
	Spiked Amount 596.421			Recovery	=	72.36%	76.53%
	Target Compounds						
2)	TM 3,5-Dichlorobenz	0.00	8.42	0	29942	N.D.	8.431 #
3)	CM 4-Nitrophenol	0.00	8.78f	0	41948	N.D.	28.719 #
5)	TM Dicamba	8.89	9.75f	25314	17455	3.808	1.952 #
6)	TM MCPP	8.89f	10.04f	25314	24246	7192.928	1889.581 #
7)	TM MCPA	0.00	10.16f	0	167110	N.D.	23276.126 #
8)	TM Dichlorprop	0.00	10.64	0	27074	N.D.	12.183 #
10)	TM Pentachloropheno	10.76f	11.83	27189	52376	1.281	1.665 #
12)	TM Dinitro-o-cresol	11.21	0.00	47581	0	3.580	N.D. #
14)	TM Chloramben	0.00	12.18f	0	37120	N.D.	4.364 #
15)	TM Dinoseb	11.88	13.09	212614	261024	37.526	33.014
16)	TM 2,4-DB	12.00	13.01f	54861	29257	53.053	19.404 #
17)	TM Bentazon	12.79f	13.27f	53972	47042	45.993	35.402
18)	TM DCPA (Dacthal)	13.05	14.09f	180763	284157	18.487	17.455
19)	TM Picloram	13.53	13.83	21745	56617	1.965	3.549 #
20)	TM Acifluorfen	15.05	0.00	34391	0	4.765	N.D. #
	Target Compounds						
1)	TM Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
9)	TM 2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11)	TM 2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13)	TM 2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d

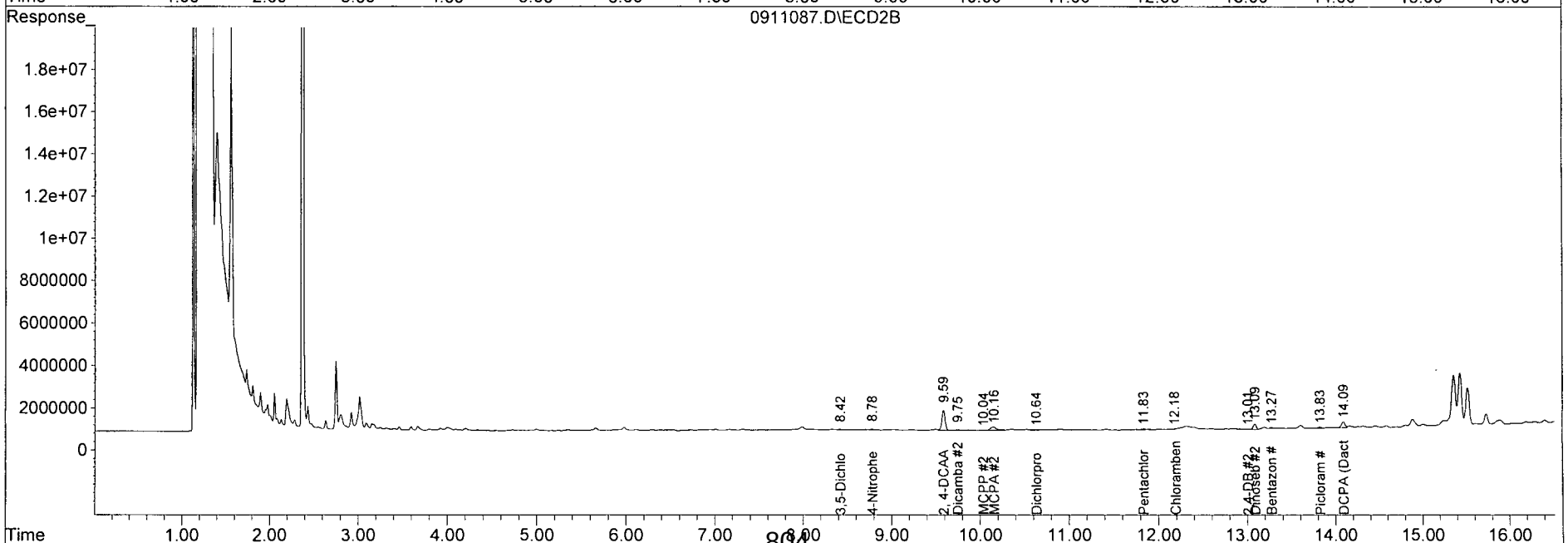
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911087.D
Acq On : 09-18-14 18:08:25
Sample : AZ02113 10/5.03
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 87
Operator: MA
Inst : Herbie
Multiplr: 1988.07





EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN016

APPL ID: AZ02114

Sample Collection Date: 09/03/14

QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/18/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/18/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/18/14
EPA 8151	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/18/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	70.7	45-140			%	09/16/14	09/18/14

Quant Method: HERB703.M
Run #: 0911088
Instrument: Herbie
Sequence: 140911
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911088.D\ECD1A.CH Vial: 88
Signal #2 : G:\HERBIE\DATA\140911\0911088.D\ECD2B.CH
Acq On : 09-18-14 18:30:58 Operator: MA
Sample : AZ02114 10/5.11 Inst : Herbie
Misc : soil Multiplr: 1956.95
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:08 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

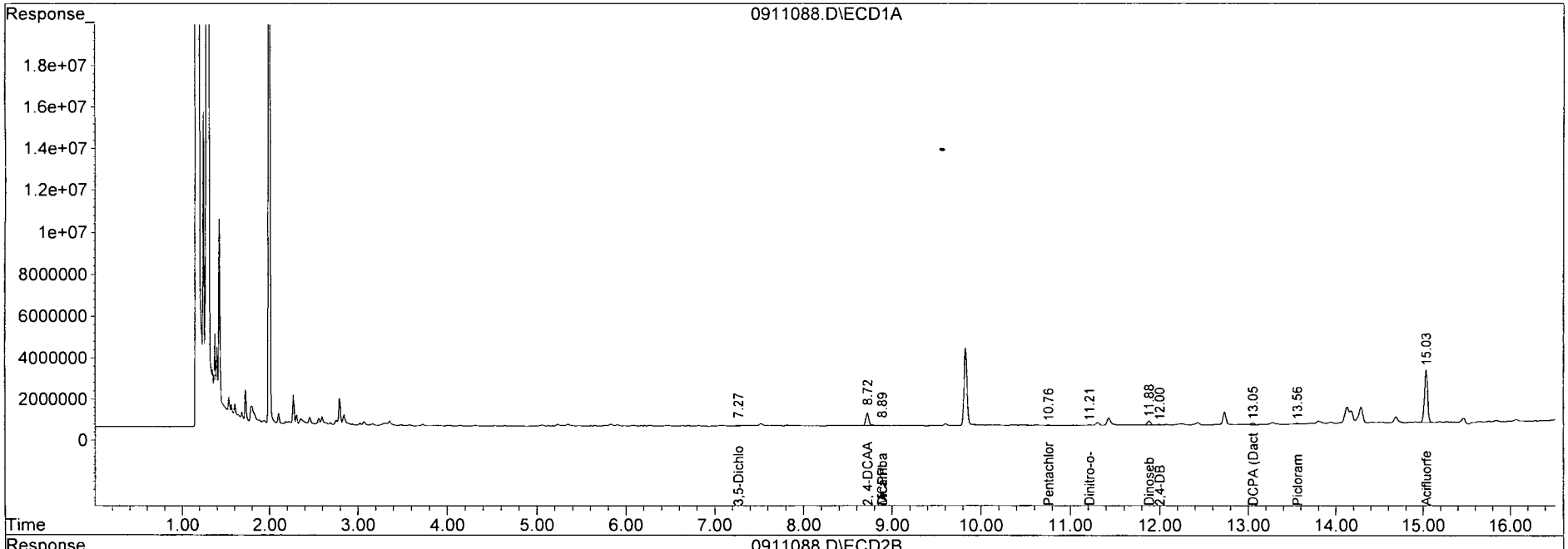
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	628306	883317	400.733	414.800
Spiked Amount	587.084			Recovery	=	68.26%	70.65%
	Target Compounds						
2) TM	3,5-Dichlorobenz	7.27	8.42	14343	37396	5.915	10.365 #
3) CM	4-Nitrophenol	0.00	8.79f	0	42182	N.D.	28.427 #
5) TM	Dicamba	8.89	0.00	17624	0	2.610	N.D. #
6) TM	MCPP	8.89f	10.04f	17624	29043	4929.428	2916.038 #
7) TM	MCPA	0.00	10.14f	0	3823548	N.D.	524230.030 #
10) TM	Pentachloropheno	10.76f	11.82f	27942	511676	1.296	16.010 #
12) TM	Dinitro-o-cresol	11.21	0.00	30789	0	2.280	N.D. #
14) TM	Chloramben	0.00	12.33f	0	241508	N.D.	27.951 #
15) TM	Dinoseb	11.88	13.09	200962	251771	34.914	31.345
16) TM	2,4-DB	12.00	13.03f	36524	264011	34.767	172.360 #
17) TM	Bentazon	0.00	13.27f	0	50215	N.D.	37.198 #
18) TM	DCPA (Dacthal)	13.05	14.09f	88212	119744	8.880	7.240
19) TM	Picloram	13.56	0.00	46718	0	4.156	N.D. #
20) TM	Acifluorfen	15.03	0.00	2566157	0	349.995	N.D. #
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
8) TM	Dichlorprop	0.00	0.00	0	0	N.D.	N.D.
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d

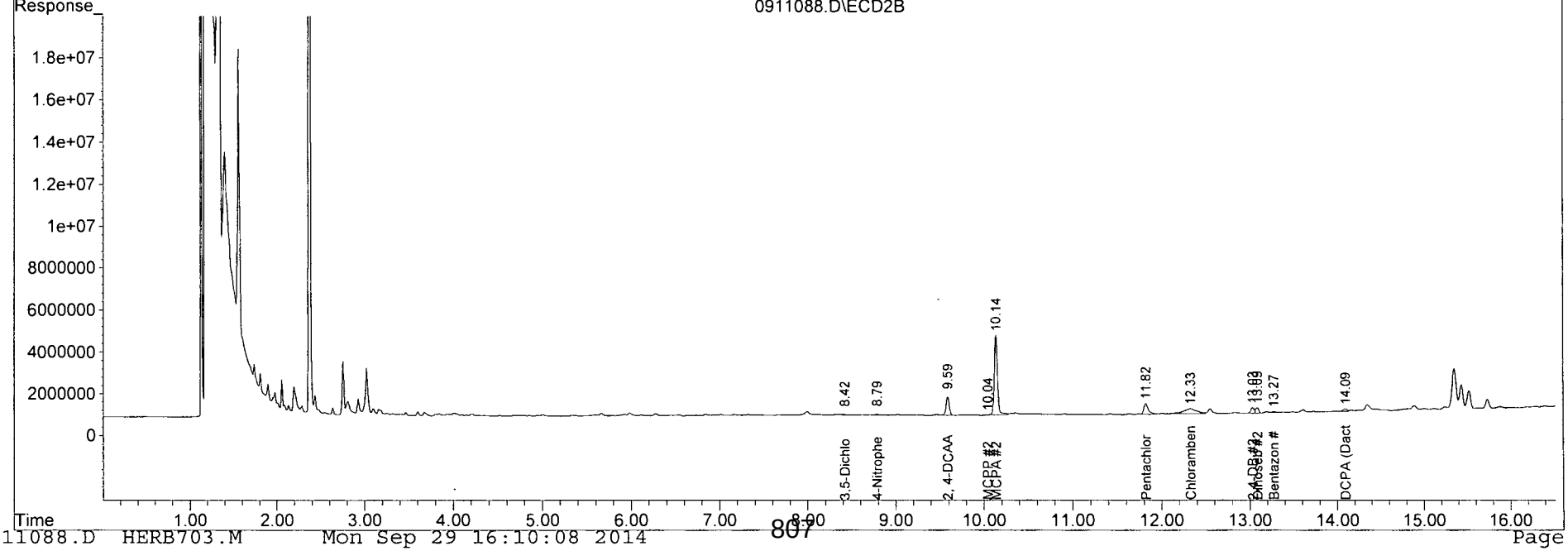
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911088.D
Acq On : 09-18-14 18:30:58
Sample : AZ02114 10/5.11
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 88
Operator: MA
Inst : Herbie
Multiplr: 1956.95





EPA 8151A ISM SOIL

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN017

APPL ID: AZ02115

Sample Collection Date: 09/03/14

QCG: #815E2-140916A-190299

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/18/14
EPA 8151	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/18/14
EPA 8151	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/18/14
EPA 8151	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/18/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	63.1	45-140			%	09/16/14	09/18/14

Quant Method: HERB703.M
Run #: 0911089
Instrument: Herbie
Sequence: 140911
Dilution Factor: 1
Initials: MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911089.D\ECD1A.CH Vial: 89
Signal #2 : G:\HERBIE\DATA\140911\0911089.D\ECD2B.CH
Acq On : 09-18-14 18:53:28 Operator: MA
Sample : AZ02115 10/5.02 Inst : Herbie
Misc : soil Multiplr: 1992.03
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:08 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

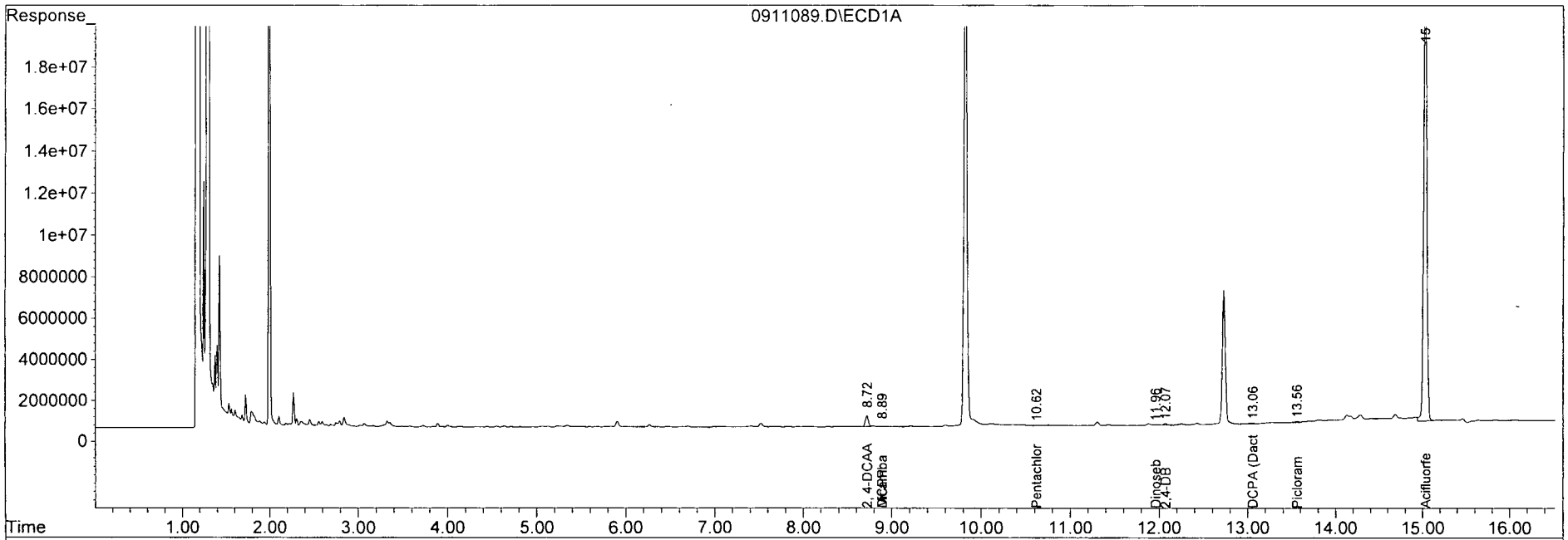
Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

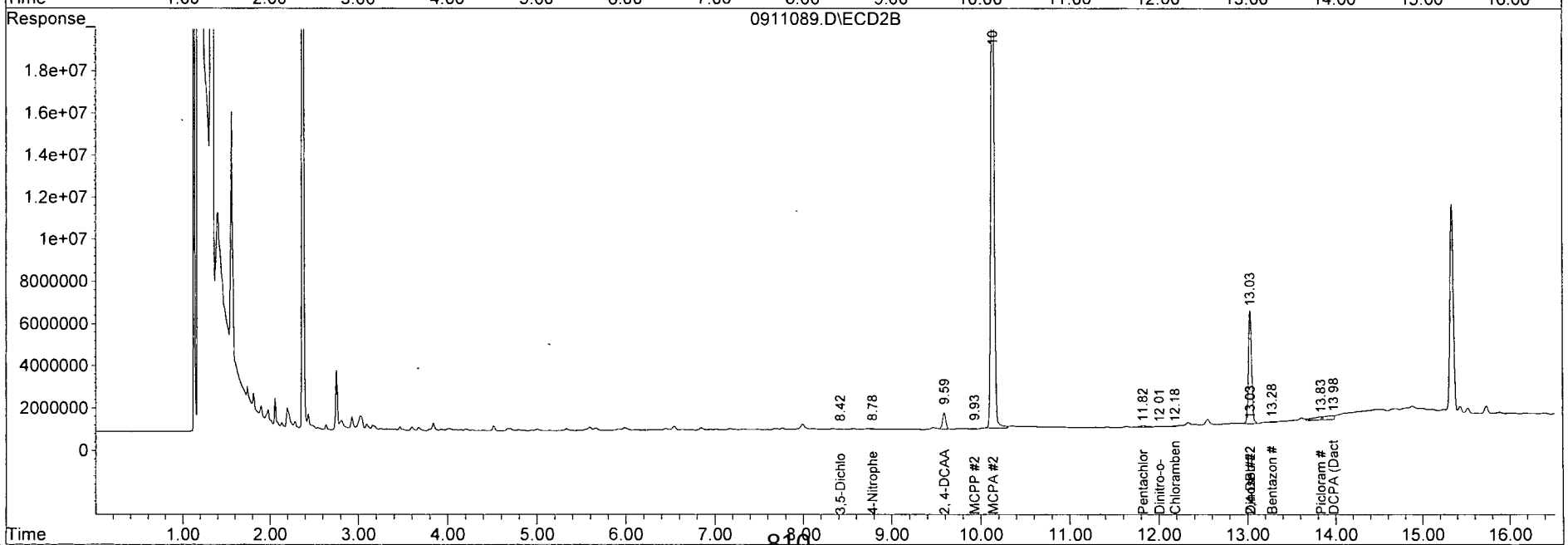
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4) S	2, 4-DCAA (S)	8.72	9.59	556636	788480	361.387	376.903	
Spiked Amount	597.610			Recovery	=	60.47%	63.07%	
	Target Compounds							
2) TM	3,5-Dichlorobenz	0.00	8.42	0	34947	N.D.	9.859	#
3) CM	4-Nitrophenol	0.00	8.78f	0	40122	N.D.	27.523	#
5) TM	Dicamba	8.89	0.00	28352	0	4.273	N.D.	#
6) TM	MCPP	8.89f	9.93	28352	30673	8072.219	3333.589	#
7) TM	MCPA	0.00	10.14f	0	29188990	N.D.	4073723.977	#
10) TM	Pentachloropheno	10.62f	11.82f	33579	77443	1.585	2.467	#
12) TM	Dinitro-o-cresol	0.00	12.01	0	27753	N.D.	1.603	#
14) TM	Chloramben	0.00	12.18f	0	32708	N.D.	3.853	#
15) TM	Dinoseb	11.96	13.03f	24002	5399721	4.245	684.300	#
16) TM	2,4-DB	12.07	13.03f	90032	5399721	87.238	3588.418	#
17) TM	Bentazon	0.00	13.28f	0	59697	N.D.	45.015	#
18) TM	DCPA (Dacthal)	13.06	13.98	60511	193986	6.201	11.940	#
19) TM	Picloram	13.56	13.83	65170	165475	5.902	10.394	#
20) TM	Acifluorfen	15.03	0.00	22149043	0	3075.042	N.D.	#
	Target Compounds							
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d	
8) TM	Dichlorprop	0.00	0.00	0	0	N.D.	N.D.	
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d	
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d	
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911089.D Vial: 89
Acq On : 09-18-14 18:53:28 Operator: MA
Sample : AZ02115 10/5.02 Inst : Herbie
Misc : soil Multiplr: 1992.03
Quant Method : G:\HERBIE\DATA\140911\HERB703.M





EPA 8151 WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN018

APPL ID: AZ02116

Sample Collection Date: 09/03/14

QCG: #815E2-140908A-190297

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8151	2,4,5-T	0.090 U	0.10	0.090	0.029	ug/L	09/08/14	09/15/14
EPA 8151	2,4,5-TP	0.090 U	0.10	0.090	0.069	ug/L	09/08/14	09/15/14
EPA 8151	2,4-D	0.450 U	0.50	0.450	0.152	ug/L	09/08/14	09/15/14
EPA 8151	DALAPON	0.90 U	1.0	0.90	0.59	ug/L	09/08/14	09/15/14
EPA 8151	SURROGATE: 2,4-DCAA (S)	81.5	33-154			%	09/08/14	09/15/14

Quant Method:	HERB703.M
Run #:	0911036
Instrument:	Herbie
Sequence:	140911
Dilution Factor:	1
Initials:	MA

Printed: 09/29/14 4:36:18 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911036.D\ECD1A.CH Vial: 36
Signal #2 : G:\HERBIE\DATA\140911\0911036.D\ECD2B.CH
Acq On : 09-15-14 11:34:41 Operator: MA
Sample : AZ02116W06 5/1000 Inst : Herbie
Misc : water Multiplr: 5.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:03 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

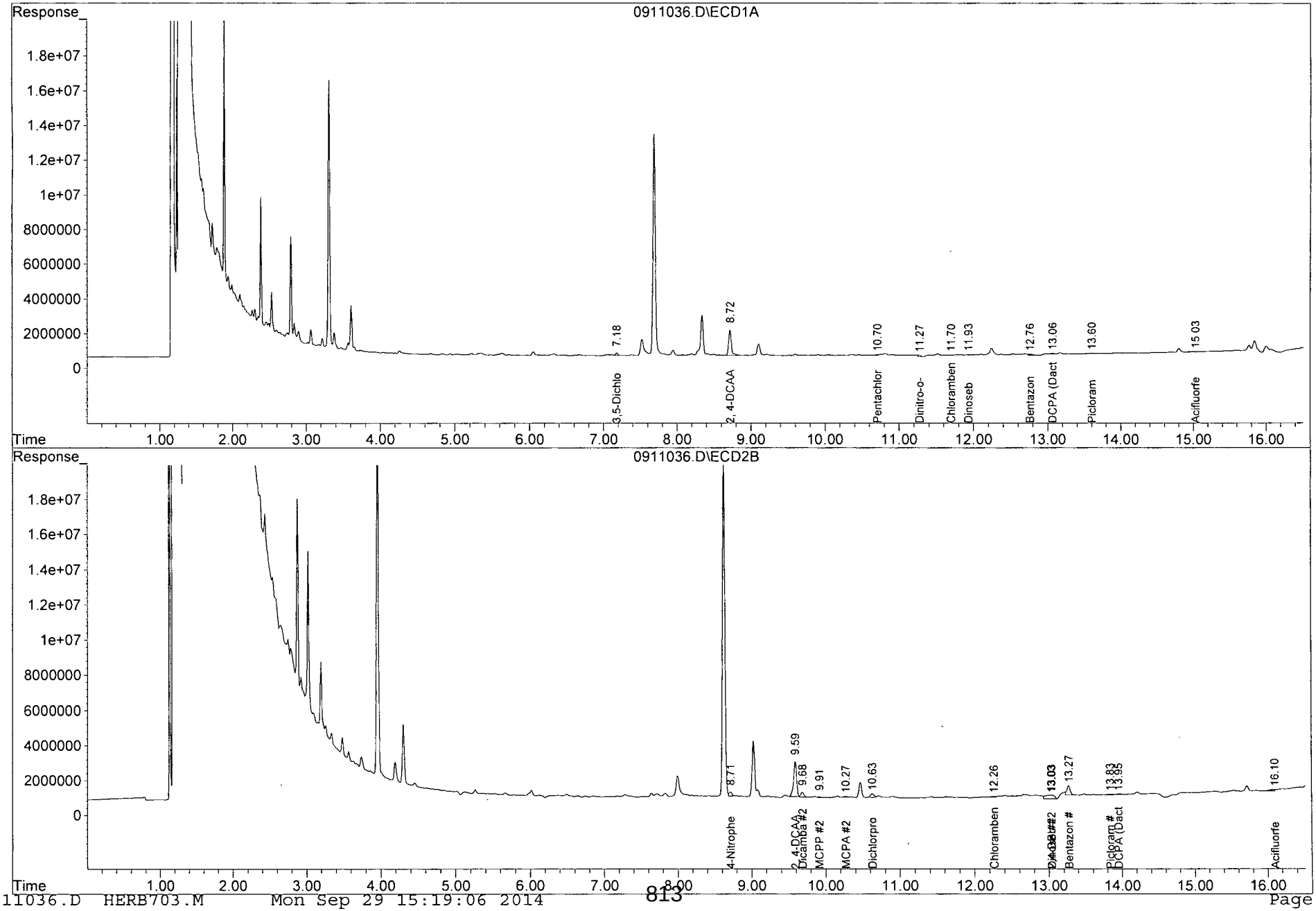
Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	1499968	2018918	2.444	2.422
Spiked Amount	3.000			Recovery	=	81.47%	80.73%
	Target Compounds						
2) TM	3,5-Dichlorobenz	7.18f	0.00	151036	0	0.159	N.D. #
3) CM	4-Nitrophenol	0.00	8.71	0	246250	N.D.	0.424 #
5) TM	Dicamba	0.00	9.68	0	283060	N.D.	0.080 #
6) TM	MCPP	0.00	9.91	0	42210	N.D.	14.857 #
7) TM	MCPA	0.00	10.27	0	62554	N.D.	21.913 #
8) TM	Dichlorprop	0.00	10.63	0	219827	N.D.	0.249 #
10) TM	Pentachloropheno	10.70	0.00	44924	0	0.005	N.D. #
12) TM	Dinitro-o-cresol	11.27f	0.00	89364	0	0.017	N.D. #
14) TM	Chloramben	11.70	12.26	26656	58924	0.011	0.017 #
15) TM	Dinoseb	11.93	13.03	46533	210487	0.021	0.067 #
16) TM	2,4-DB	0.00	13.03f	0	210487	N.D.	0.351 #
17) TM	Bentazon	12.76f	13.27f	67045	536677	0.144	1.016 #
18) TM	DCPA (Dacthal)	13.06	13.95	47900	29950	0.012	0.005 #
19) TM	Picloram	13.60f	13.83	33636	36484	0.008	0.006
20) TM	Acifluorfen	15.03	16.10f	34961	95279	0.012	0.022 #
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911036.D Vial: 36
Acq On : 09-15-14 11:34:41 Operator: MA
Sample : AZ02116W06 5/1000 Inst : Herbie
Misc : water Multiplr: 5.00
Quant Method : G:\HERBIE\DATA\140911\HERB703.M



EPA METHOD 8151A
Chlorinated Herbicides

Calibration Data

APPL, INC.

EPA METHOD 8151/515
HERB 0703

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 14218
Case No. Initial Cal. Date: 07/03/14
Matrix: Water Instrument. Herbie Initials: MA

			0703002 D	0703003.D	0703004 D	0703005.D	0703006 D	0703007 D								
		Compound	1	2	3	4	5	6					Avg	%RSD		
1	TM	Dalapon	3811096	3527545	3798009	3699296	3786927	3788984					3735310	2.9	TM	
2	TM	3,5-Dichlorobenzoic Acid	2814316	2512539	2459293	2274121	2132314	2042998					2372597	12	TM	
3	TM	4-Nitrophenol	1193813	1124309	1144305	1056694	995828	955741					1078448	8.5	TM	
4	S	2, 4-DCAA (S)	1866719	1607361	1577489	1418111	1370702	1364466					1534141	13	S	
5	TM	Dicamba	7763184	6582789	6815250	6291033	6207115	5989003					6608062	9.6	TM	
6	TM	MCPP	3630	3615	3722	3472	3291	3260					3498	5.4	TM	
7	TM	MCPA	7903	6460	6336	5501	5319	5179					6116	17	TM	
8	TM	Dichlorprop	1831615	1562172	1551821	1371105	1317254	1263321					1482881	14	TM	
9	TM	2,4-D	2272385	2104597	2042032	1870972	1808590	1761467					1976674	10.0	TM	
10	TM	Pentachlorophenol (PCP)	20193211	19674469	22170801	21303396	21472477	21779893					21099041	4 6	TM	
11	TM	2,4,5-TP (Silvex)	10381632	9859266	10459863	9583656	9721396	9407771					9902264	4 3	TM	
12	TM	Dinitro-o-cresol (DNOC)	12247816	12839965	13912447	13389061	13641397	13247375					13213010	4.5	TM	
13	TM	2,4,5-T	9620947	8852313	9546578	9105465	9176574	8891924					9198967	3.5	TM	
14	TM	Chloramben	5669797	5596834	5953907	5936097	6014726	5913083					5847407	2.9	TM	
15	TM	Dinoseb	5750219	5583663	6032777	5559178	5521868	5344571					5632046	4.2	TM	
16	TM	2,4-DB	1157372	1039128	1065339	982738	966620	956280					1027913	7.4	TM	
17	TM	Bentazon	1186867	1108009	1212599	1171848	1152142	1167503					1166495	3.0	TM	
18	TM	DCPA (Dacthal)	10194763	9382922	9856934	9795945	9554145	9533546					9719709	3.0	TM	
19	TM	Picloram	9984737	10093852	11592656	11460996	11441786	11419088					10998853	6.8	TM	
20	TM	Acifluorfen	6667438	6702891	7435616	7434838	7540932	7263161					7174146	5.4	TM	
21		Signal #2														
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4.0451211

EPA METHOD 8151/515
HERB 0703

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 74218
Case No: Initial Cal. Date: 07/03/14
Matrix: Water Instrument: Herbie Initials: MA

			0703002 D	0703003 D	0703004 D	0703005 D	0703006 D	0703007 D								
		Compound	1	2	3	4	5	6					Avg	%RSD		
36	TM	Dalapon #2	5233560	4946343	5530050	5327858	5360135	5234315					5272044	3.7	TM	
37	TM	3,5-Dichlorobenzoic Acid #2	4031789	3699602	3706969	3407299	3236753	3099924					3530389	9.8	TM	
38	CM	4-Nitrophenol #2	1643938	1494200	1577933	1401076	1338382	1256064					1451932	10	CM	
39	S	2, 4-DCAA (S) #2	2123698	2232845	2272861	2031457	1949547	1891558					2083661	7.3	S	
40	TM	Dicamba #2	8670895	9275641	9593352	8899145	8759927	8127780					8887790	5.7	TM	
41	TML	MCPP #2	3619	4305	4881	4481	4475	4436					4366	9.5	TML	0.999
42	TM	MCPA #2	8253	7303	7333	6860	6665	6406					7137	9.2	TM	
43	TM	Dichlorprop #2	2649026	2297875	2309601	2063932	2000632	1932552					2208936	12	TM	
44	TM	2,4-D #2	3297839	2851289	2936691	2693139	2619988	2463112					2810343	10	TM	
45	TM	Pentachlorophenol (PCP) #2	31706605	30191555	32714000	32654977	30564930	29794088					31271026	4.1	TM	
46	TM	2,4,5-TP (Silvex) #2	17274763	16553654	18647741	17204175	17181926	16579132					17240232	4.4	TM	
47	TM	Dinitro-o-cresol (DNOC) #2	17274763	16553654	18647741	17204175	17181926	16579132					17240232	4 4	TM	
48	TM	2,4,5-T #2	14506000	13690594	14332203	13735074	13194805	13192547					13775204	4.0	TM	
49	TM	Chloramben #2	8140615	8321938	9134416	8645055	8341176	8143960					8454526	4.5	TM	
50	TM	Dinoseb #2	8417583	7821669	8293239	7748220	7632804	7243045					7859427	5.5	TM	
51	TM	2,4-DB #2	1686401	1521134	1558136	1450278	1407178	1369483					1498768	7.7	TM	
52	TM	Bentazon #2	1466161	1381905	1419541	1260189	1221247	1176196					1320873	8.9	TM	
53	TM	DCPA (Dacthal) #2	17119263	15489016	16378348	16264666	16132128	15712233					16182609	3.5	TM	
54	TM	Picloram #2	13946895	14754609	16308559	16317623	16943220	16874272					15857530	7.7	TM	
55	TM	Acifluorfen #2	10270188	9939006	11019153	10853274	10743188	11050521					10645888	4.2	TM	
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3.905754

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140703\0703002.D\ECD1A.CH Vial: 2
Signal #2 : G:\HERBIE\DATA\140703\0703002.D\ECD2B.CH
Acq On : 07-03-14 14:10:27 Operator: MA
Sample : HERB 15/1000 7/3/14 Inst : Herbie
Misc : WATER Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jul 3 16:08 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140703\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Fri Mar 07 13:59:01 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

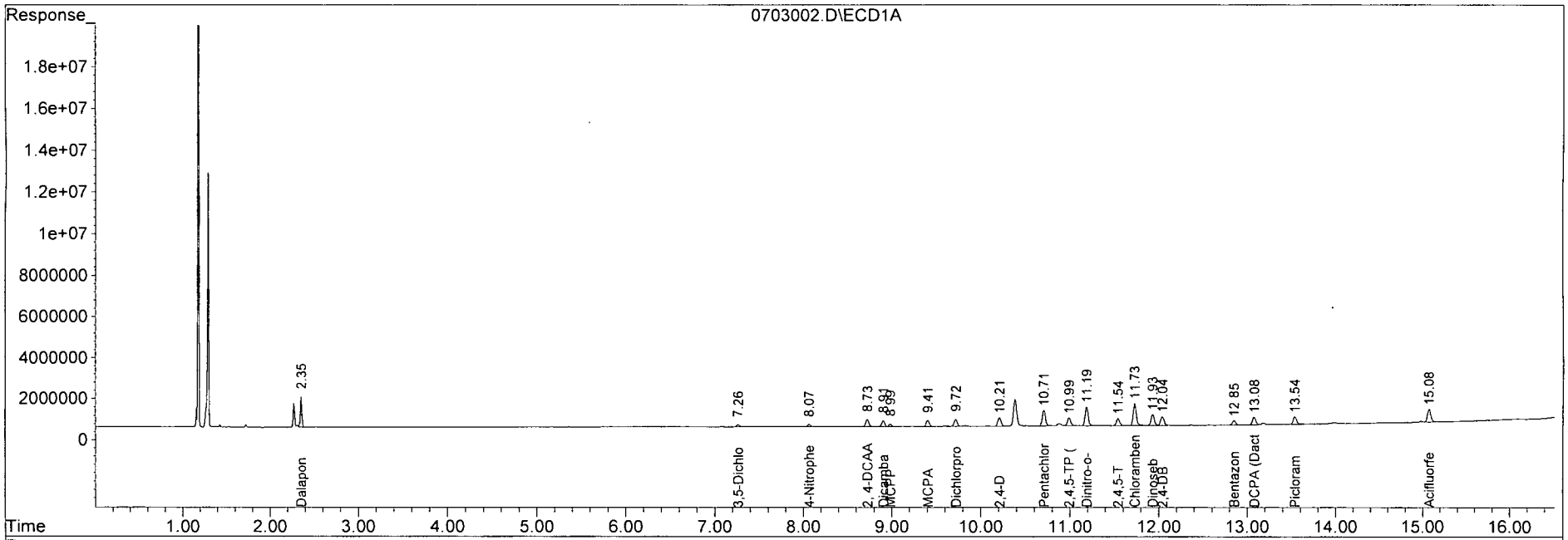
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4) S	2, 4-DCAA (S)	8.73	9.59	358410	407750	0.212	0.181	
Spiked Amount	0.600			Recovery	=	35.33%	30.17%	
	Target Compounds							
1) TM	Dalapon	2.35	2.79	1463461	2009687	0.433	0.439	
2) TM	3,5-Dichlorobenz	7.26	8.43	106944	153208	0.041	0.043	
3) CM	4-Nitrophenol	8.07	8.73	114606	157818	0.096	0.112	
5) TM	Dicamba	8.91	9.69	295001	329494	0.041	0.035	
6) TM	MCPP	8.99	9.95	139389	138968	38.474	35.648	
7) TM	MCPA	9.41	10.22	303476	316911	45.234	45.461	
8) TM	Dichlorprop	9.72	10.64	351670	508613	0.215	0.220	
9) TM	2,4-D	10.21	10.95	436298	633185	0.195	0.209	
10) TM	Pentachloropheno	10.71	11.88	767342	1204851	0.033	0.036	
11) TM	2,4,5-TP (Silvex	10.99	12.00	394502	1969323	0.035	0.118	#
12) TM	Dinitro-o-cresol	11.19	12.00	930834	1969323	0.070	0.118	#
13) TM	2,4,5-T	11.54	12.37	365596	551228	0.036	0.038	
14) TM	Chloramben	11.73	12.23	1088601	1562998	0.191	0.194	
15) TM	Dinoseb	11.93	13.08	552021	808088	0.087	0.093	
16) TM	2,4-DB	12.04	12.95	444431	647578	0.407	0.425	
17) TM	Bentazon	12.85	13.33	232626	281503	0.166	0.201	
18) TM	DCPA (Dacthal)	13.08	14.00	387401	650532	0.039	0.042	
19) TM	Picloram	13.54	13.81	379420	529982	0.030	0.030	
20) TM	Acifluorfen	15.08	16.03	640074	985938	0.079	0.083	

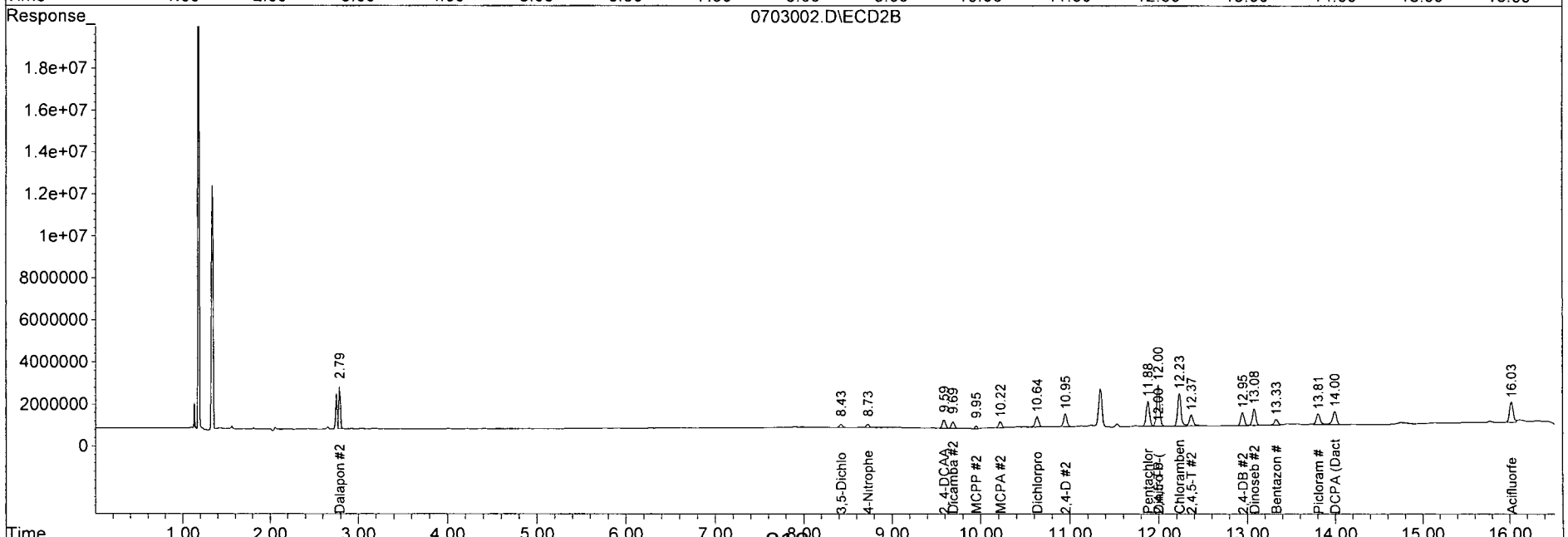
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140703\0703002.D Vial: 2
Acq On : 07-03-14 14:10:27 Operator: MA
Sample : HERB 15/1000 7/3/14 Inst : Herbie
Misc : WATER Multiplr: 1.00
Quant Method : G:\HERBIE\DATA\140703\HERB703.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140703\0703003.D\ECD1A.CH Vial: 3
Signal #2 : G:\HERBIE\DATA\140703\0703003.D\ECD2B.CH
Acq On : 07-03-14 14:32:46 Operator: MA
Sample : HERB 50/1000 Inst : Herbie
Misc : WATER Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jul 3 16:09 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140703\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Fri Mar 07 13:59:01 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

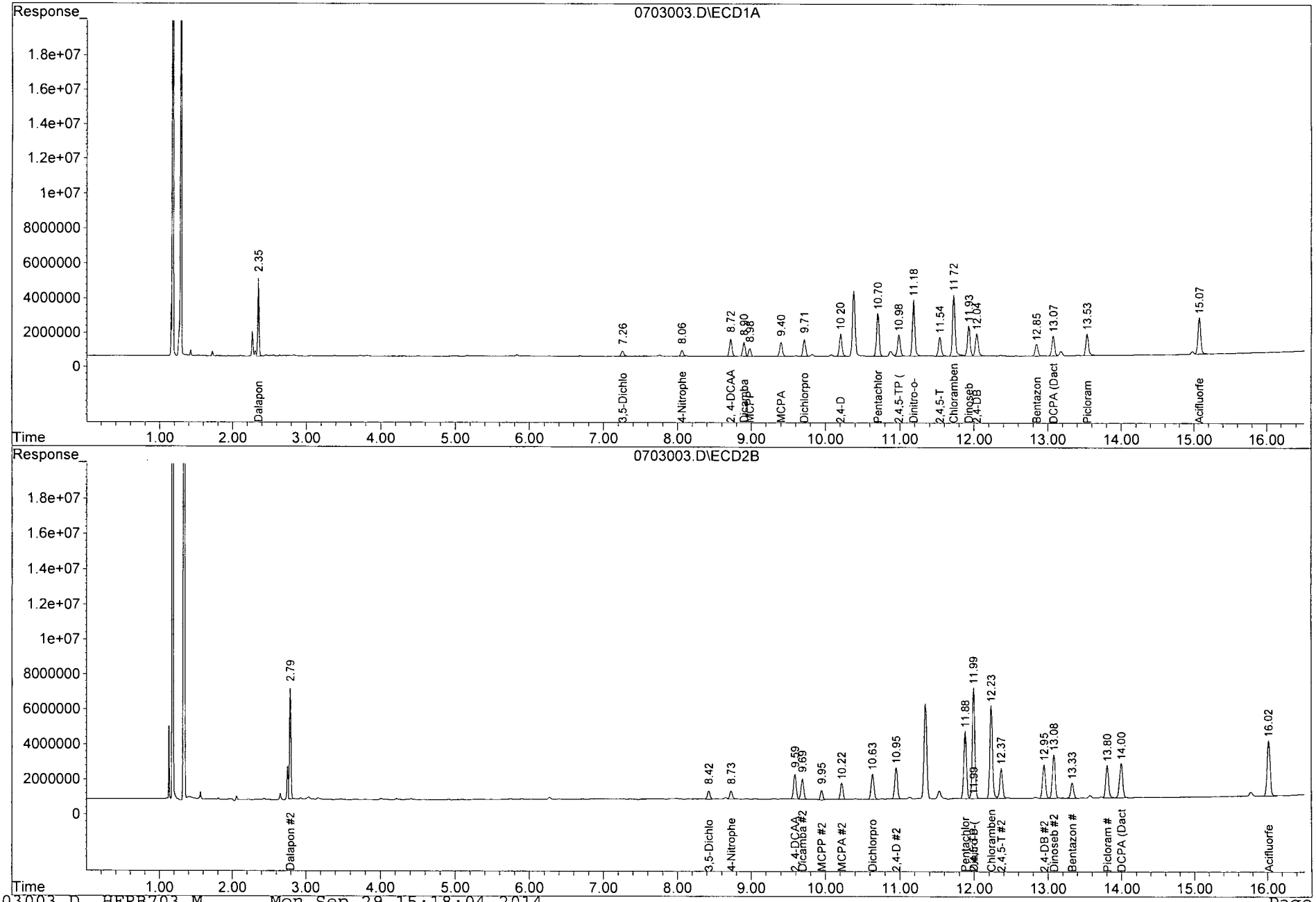
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4) S	2, 4-DCAA (S)	8.72	9.59	1028711	1429021	0.522	0.561	
Spiked Amount	0.600			Recovery	=	87.00%	93.50%	
	Target Compounds							
1) TM	Dalapon	2.35	2.79	4515258	6331319	1.119	1.157	
2) TM	3,5-Dichlorobenz	7.26	8.42	321605	473549	0.104	0.111	
3) CM	4-Nitrophenol	8.06	8.73	359779	478144	0.264	0.279	
5) TM	Dicamba	8.90	9.69	842597	1187282	0.100	0.111	
6) TM	MCPP	8.98	9.95	462726	550987	108.255	121.736	
7) TM	MCPA	9.40	10.22	826831	934797	104.549	108.102	
8) TM	Dichlorprop	9.71	10.63	999790	1470640	0.528	0.532	
9) TM	2,4-D	10.20	10.95	1346942	1824825	0.527	0.512	
10) TM	Pentachloropheno	10.70	11.88	2518332	3864519	0.096	0.100	
11) TM	2,4,5-TP (Silvex	10.98	11.99	1261986	6356603	0.101	0.324	#
12) TM	Dinitro-o-cresol	11.18	11.99	3287031	6356603	0.217	0.324	#
13) TM	2,4,5-T	11.54	12.37	1133096	1752396	0.098	0.104	
14) TM	Chloramben	11.72	12.23	3581974	5326040	0.539	0.566	
15) TM	Dinoseb	11.93	13.08	1786772	2502934	0.252	0.253	
16) TM	2,4-DB	12.04	12.95	1330084	1947052	1.056	1.086	
17) TM	Bentazon	12.85	13.33	709126	884419	0.455	0.540	
18) TM	DCPA (Dacthal)	13.07	14.00	1201014	1982594	0.105	0.106	
19) TM	Picloram	13.53	13.80	1292013	1888590	0.093	0.098	
20) TM	Acifluorfen	15.07	16.02	2144925	3180482	0.240	0.242	

Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140703\0703003.D Vial: 3
Acq On : 07-03-14 14:32:46 Operator: MA
Sample : HERB 50/1000 Inst : Herbie
Misc : WATER Multiplr: 1.00
Quant Method : G:\HERBIE\DATA\140703\HERB703.M



820

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140703\0703004.D\ECD1A.CH Vial: 4
Signal #2 : G:\HERBIE\DATA\140703\0703004.D\ECD2B.CH
Acq On : 07-03-14 14:55:08 Operator: MA
Sample : HERB 100/1000 Inst : Herbie
Misc : WATER Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jul 3 16:09 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140703\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Fri Mar 07 13:59:01 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
4)	S	2, 4-DCAA (S)	8.72	9.59	2019186	2909262	0.915	1.011	
		Spiked Amount 0.600			Recovery	=	152.50%	168.50%	
		Target Compounds							
1)	TM	Dalapon	2.35	2.79	9722903	14156927	2.090	2.221	
2)	TM	3,5-Dichlorobenz	7.26	8.42	629579	948984	0.182	0.194	
3)	CM	4-Nitrophenol	8.06	8.73	732355	1009877	0.479	0.511	
5)	TM	Dicamba	8.90	9.69	1744704	2455898	0.186	0.201	
6)	TM	MCPP	8.98	9.95	952729	1249663	196.632	273.045	#
7)	TM	MCPA	9.40	10.22	1622068	1877244	183.571	190.290	
8)	TM	Dichlorprop	9.72	10.63	1986331	2956289	0.934	0.950	
9)	TM	2,4-D	10.20	10.95	2613801	3758964	0.914	0.948	
10)	TM	Pentachloropheno	10.70	11.88	5675725	8374784	0.196	0.193	
11)	TM	2,4,5-TP (Silvex	10.99	11.99	2677725	14321465	0.192	0.640	#
12)	TM	Dinitro-o-cresol	11.18	11.99	7123173	14321465	0.412	0.640	#
13)	TM	2,4,5-T	11.54	12.37	2443924	3669044	0.190	0.194	
14)	TM	Chloramben	11.72	12.23	7621001	11692052	1.005	1.078	
15)	TM	Dinoseb	11.93	13.08	3860977	5307673	0.491	0.483	
16)	TM	2,4-DB	12.04	12.95	2727269	3988827	1.929	1.967	
17)	TM	Bentazon	12.85	13.33	1552127	1817013	0.916	0.976	
18)	TM	DCPA (Dacthal)	13.07	13.99	2523375	4192857	0.195	0.198	
19)	TM	Picloram	13.53	13.80	2967720	4174991	0.195	0.195	
20)	TM	Acifluorfen	15.07	16.02	4758794	7052258	0.484	0.487	

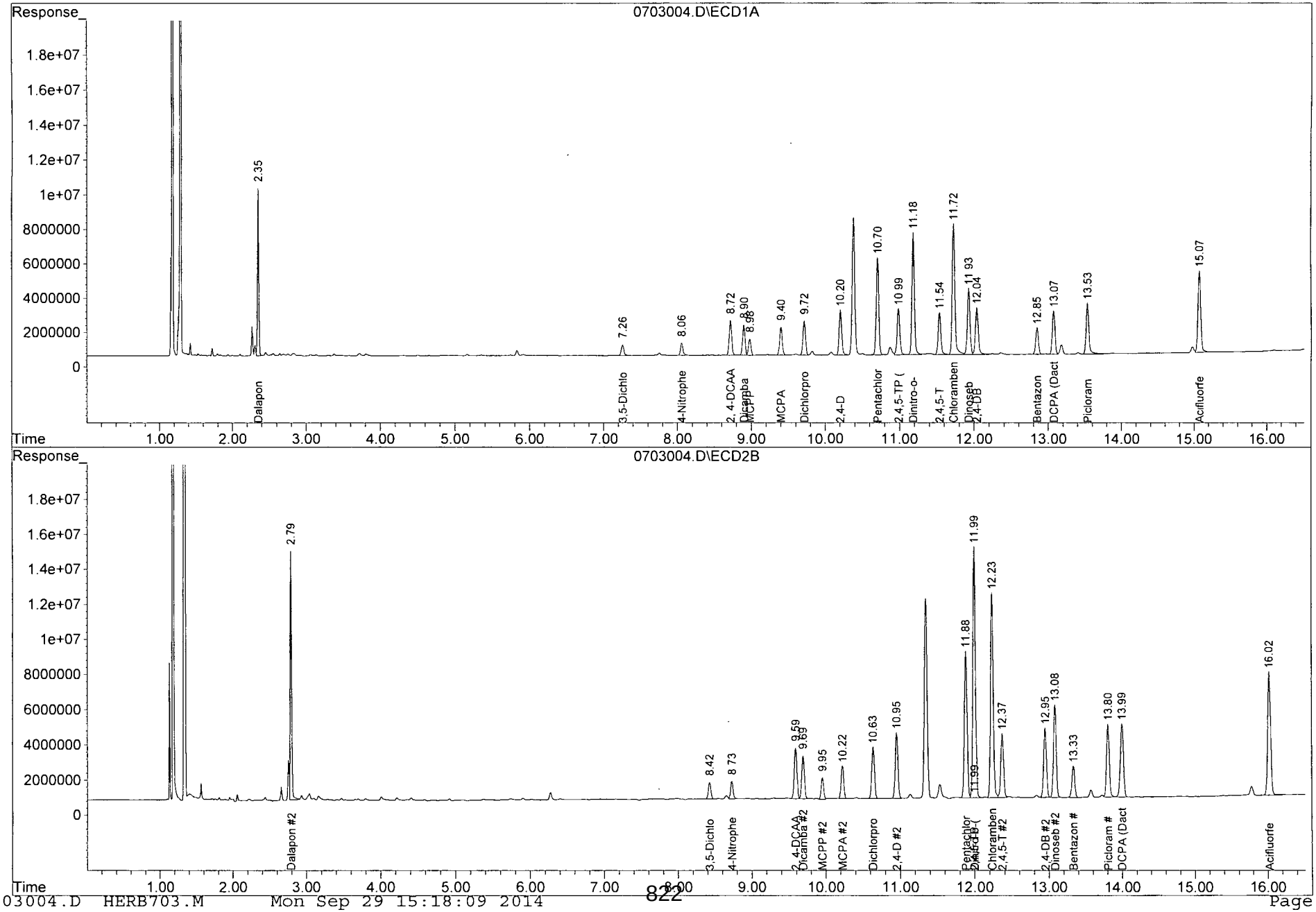
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140703\0703004.D
Acq On : 07-03-14 14:55:08
Sample : HERB 100/1000
Misc : WATER
Quant Method : G:\HERBIE\DATA\140703\HERB703.M

Vial: 4
Operator: MA
Inst : Herbie
Multiplr: 1.00



Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140703\0703005.D\ECD1A.CH Vial: 5
Signal #2 : G:\HERBIE\DATA\140703\0703005.D\ECD2B.CH
Acq On : 07-03-14 15:17:37 Operator: MA
Sample : HERB 200/1000 Inst : Herbie
Misc : WATER Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jul 3 16:09 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140703\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Fri Mar 07 13:59:01 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4) S	2, 4-DCAA (S)	8.72	9.59	3630364	5200530	1.486	1.604	
Spiked Amount	0.600			Recovery	=	247.67%	267.33%	
	Target Compounds							
1) TM	Dalapon	2.35	2.79	18940396	27278632	3.532	3.652	
2) TM	3,5-Dichlorobenz	7.26	8.42	1164350	1744537	0.304	0.315	
3) CM	4-Nitrophenol	8.06	8.72	1352568	1793377	0.793	0.794	
5) TM	Dicamba	8.90	9.69	3221009	4556362	0.309	0.332	
6) TM	MCPP	8.98	9.95	1777784	2294287	326.212	526.709	#
7) TM	MCPA	9.40	10.22	2816448	3512064	286.823	317.131	
8) TM	Dichlorprop	9.72	10.64	3510028	5283666	1.480	1.519	
9) TM	2,4-D	10.20	10.95	4789688	6894437	1.517	1.559	
10) TM	Pentachloropheno	10.70	11.88	10907339	16719348	0.336	0.344	
11) TM	2,4,5-TP (Silvex	10.99	11.99	4906832	26425613	0.314	1.026	#
12) TM	Dinitro-o-cresol	11.18	11.99	13710398	26425613	0.696	1.026	#
13) TM	2,4,5-T	11.54	12.37	4661998	7032358	0.325	0.330	
14) TM	Chloramben	11.73	12.23	15196408	22131340	1.770	1.767	
15) TM	Dinoseb	11.93	13.08	7115748	9917721	0.807	0.807	
16) TM	2,4-DB	12.04	12.95	5031617	7425424	3.166	3.246	
17) TM	Bentazon	12.85	13.33	2999931	3226083	1.608	1.544	
18) TM	DCPA (Dacthal)	13.07	14.00	5015524	8327509	0.344	0.346	
19) TM	Picloram	13.53	13.80	5868030	8354623	0.344	0.349	
20) TM	Acifluorfen	15.07	16.02	9516593	13892191	0.869	0.857	

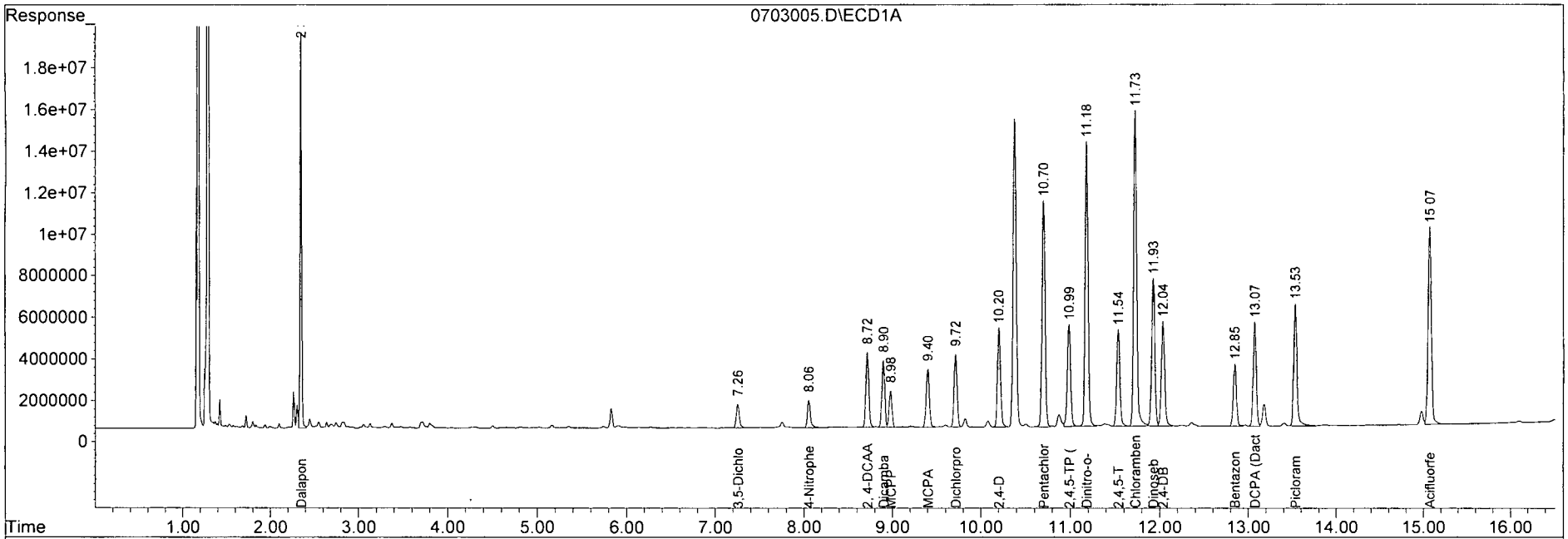
Target Compounds

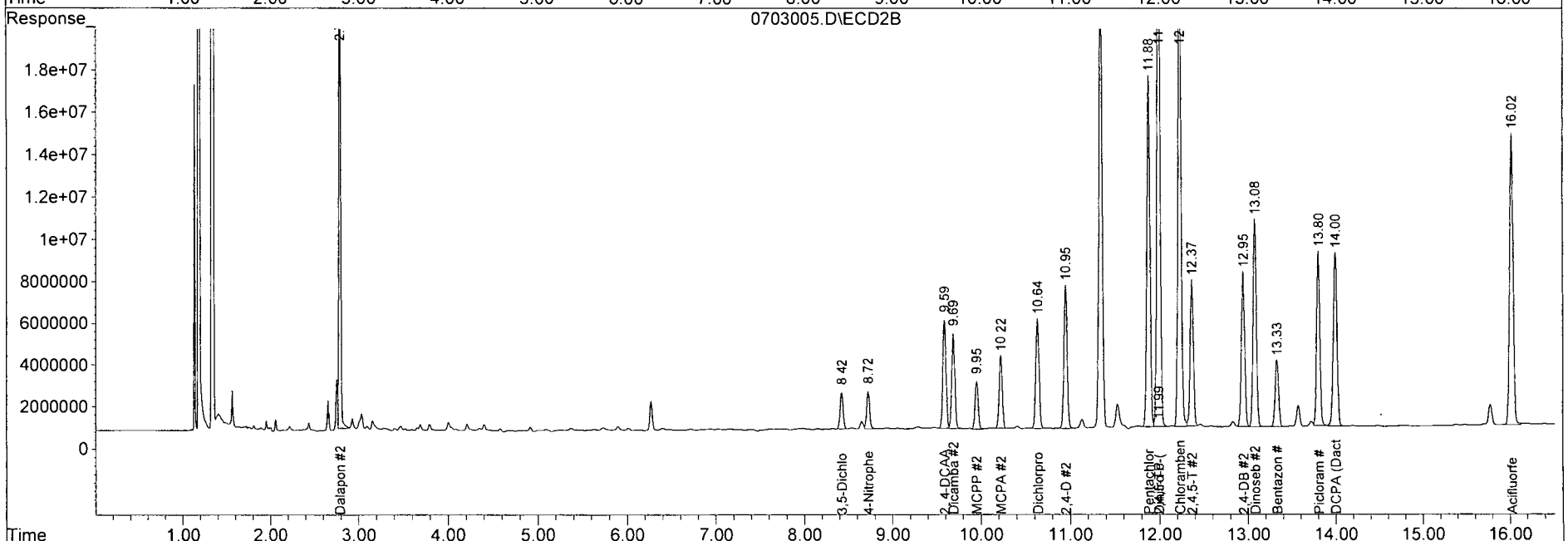
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140703\0703005.D
Acq On : 07-03-14 15:17:37
Sample : HERB 200/1000
Misc : WATER
Quant Method : G:\HERBIE\DATA\140703\HERB703.M

Vial: 5
Operator: MA
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140703\0703006.D\ECD1A.CH Vial: 6
Signal #2 : G:\HERBIE\DATA\140703\0703006.D\ECD2B.CH
Acq On : 07-03-14 15:40:01 Operator: MA
Sample : HERB 300/1000 Inst : Herbie
Misc : WATER Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jul 3 15:58 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140703\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Fri Mar 07 13:59:01 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4) S	2, 4-DCAA (S)	8.72	9.59	5263497	7486259	3.121	3.319	
Spiked Amount	0.600			Recovery	=	520.17%	553.17%	
	Target Compounds							
1) TM	Dalapon	2.35	2.79	29083600	41165839	8.597	8.994	
2) TM	3,5-Dichlorobenz	7.25	8.42	1637617	2485826	0.621	0.695	
3) CM	4-Nitrophenol	8.06	8.72	1911990	2569694	1.609	1.816	
5) TM	Dicamba	8.90	9.69	4767064	6727624	0.660	0.706	
6) TM	MCPP	8.98	9.95	2527594	3436483	697.664	773.204	
7) TM	MCPA	9.40	10.22	4085224	5118998	608.914	734.326	
8) TM	Dichlorprop	9.72	10.63	5058256	7682427	3.087	3.316	
9) TM	2,4-D	10.20	10.95	6944985	10060754	3.104	3.319	
10) TM	Pentachloropheno	10.70	11.88	16490862	23473866	0.707	0.697	
11) TM	2,4,5-TP (Silvex	10.99	11.99	7466032	39587158	0.667	2.376	#
12) TM	Dinitro-o-cresol	11.18	11.99	20953186	39587158	1.572	2.376	#
13) TM	2,4,5-T	11.54	12.37	7047609	10133610	0.687	0.701	
14) TM	Chloramben	11.72	12.23	23096546	32030114	4.061	3.972	
15) TM	Dinoseb	11.93	13.08	10601987	14654984	1.675	1.689	
16) TM	2,4-DB	12.04	12.95	7423642	10807128	6.793	7.098	
17) TM	Bentazon	12.85	13.33	4424225	4689589	3.149	3.350	
18) TM	DCPA (Dacthal)	13.07	14.00	7337583	12389474	0.735	0.796	
19) TM	Picloram	13.53	13.80	8787292	13012393	0.694	0.742	
20) TM	Acifluorfen	15.07	16.02	14478590	20626920	1.783	1.744	

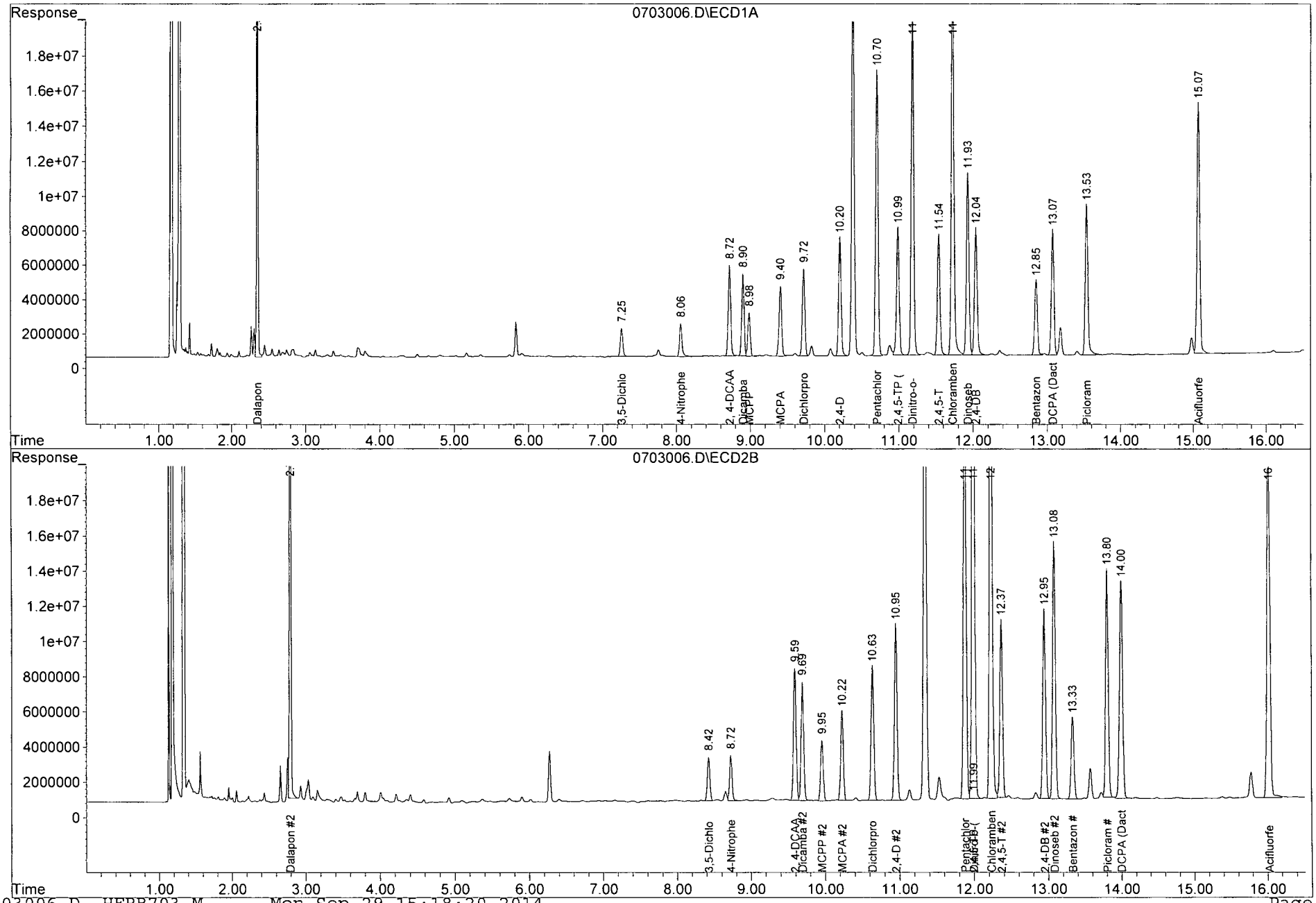
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140703\0703006.D
Acq On : 07-03-14 15:40:01
Sample : HERB 300/1000
Misc : WATER
Quant Method : G:\HERBIE\DATA\140703\HERB703.M

Vial: 6
Operator: MA
Inst : Herbie
Multiplr: 1.00



826

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140703\0703007.D\ECD1A.CH Vial: 7
Signal #2 : G:\HERBIE\DATA\140703\0703007.D\ECD2B.CH
Acq On : 07-03-14 16:02:20 Operator: MA
Sample : HERB 400/1000 Inst : Herbie
Misc : WATER Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jul 3 16:22 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140703\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

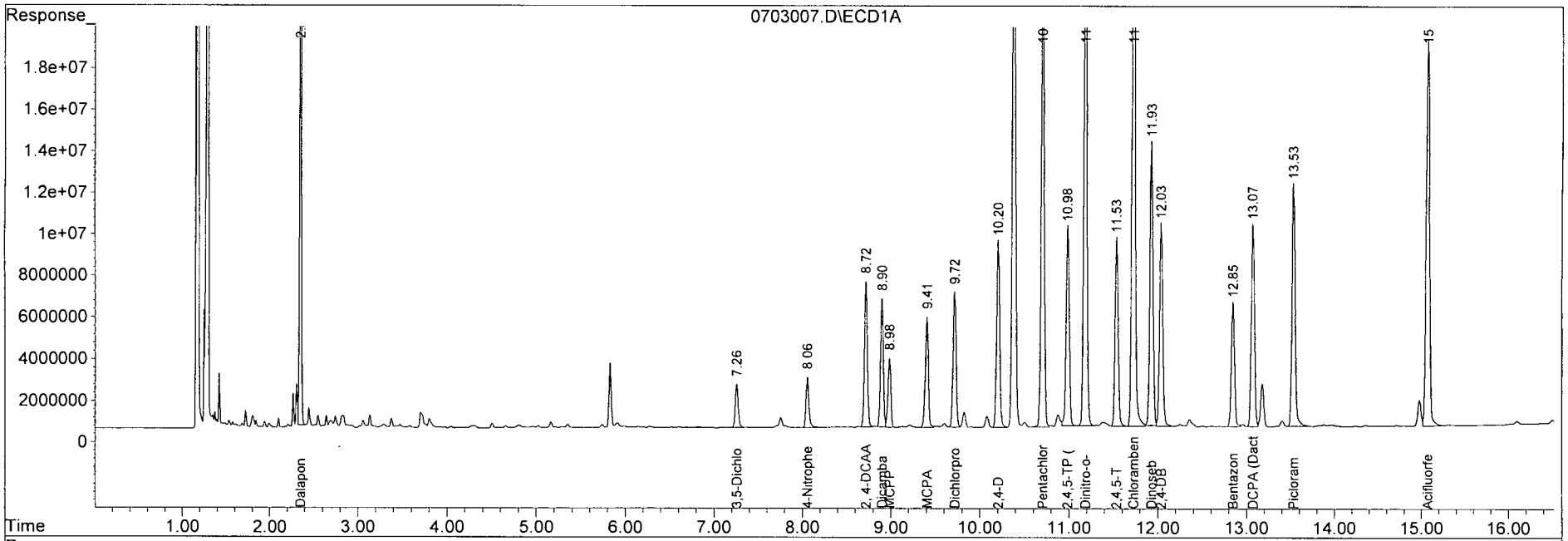
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4) S	2, 4-DCAA (S)	8.72	9.59	6986065	9684776	2.363	2.407	
Spiked Amount	0.600			Recovery	=	393.83%	401.17%	
	Target Compounds							
1) TM	Dalapon	2.35	2.79	38799197	53599390	5.423	5.286	
2) TM	3,5-Dichlorobenz	7.26	8.42	2092030	3174322	0.455	0.464	
3) CM	4-Nitrophenol	8.06	8.72	2446697	3215523	1.172	1.140	
5) TM	Dicamba	8.90	9.69	6132739	8322847	0.480	0.482	
6) TM	MCPP	8.98	9.95	3338098	4542316	495.799	601.051	
7) TM	MCPA	9.41	10.23	5303347	6559742	448.063	475.196	
8) TM	Dichlorprop	9.72	10.64	6468201	9894665	2.251	2.315	
9) TM	2,4-D	10.20	10.95	9018713	12611134	2.362	2.312	
10) TM	Pentachloropheno	10.70	11.88	22302610	30509146	0.553	0.506	
11) TM	2,4,5-TP (Silvex	10.98	11.99	9633558	50931095	0.504	1.532	#
12) TM	Dinitro-o-cresol	11.18	11.99	27130623	50931095	1.067	1.532	#
13) TM	2,4,5-T	11.53	12.37	9105330	13509168	0.514	0.511	
14) TM	Chloramben	11.72	12.23	30274984	41697073	2.697	2.561	
15) TM	Dinoseb	11.93	13.08	13682101	18542194	1.260	1.219	
16) TM	2,4-DB	12.03	12.95	9792304	14023511	4.949	4.848	
17) TM	Bentazon	12.85	13.33	5977617	6022121	2.678	2.357	
18) TM	DCPA (Dacthal)	13.07	13.99	9762351	16089327	0.523	0.516	
19) TM	Picloram	13.53	13.80	11693146	17279255	0.555	0.570	
20) TM	Acifluorfen	15.07	16.02	18593691	28289333	1.346	1.394	

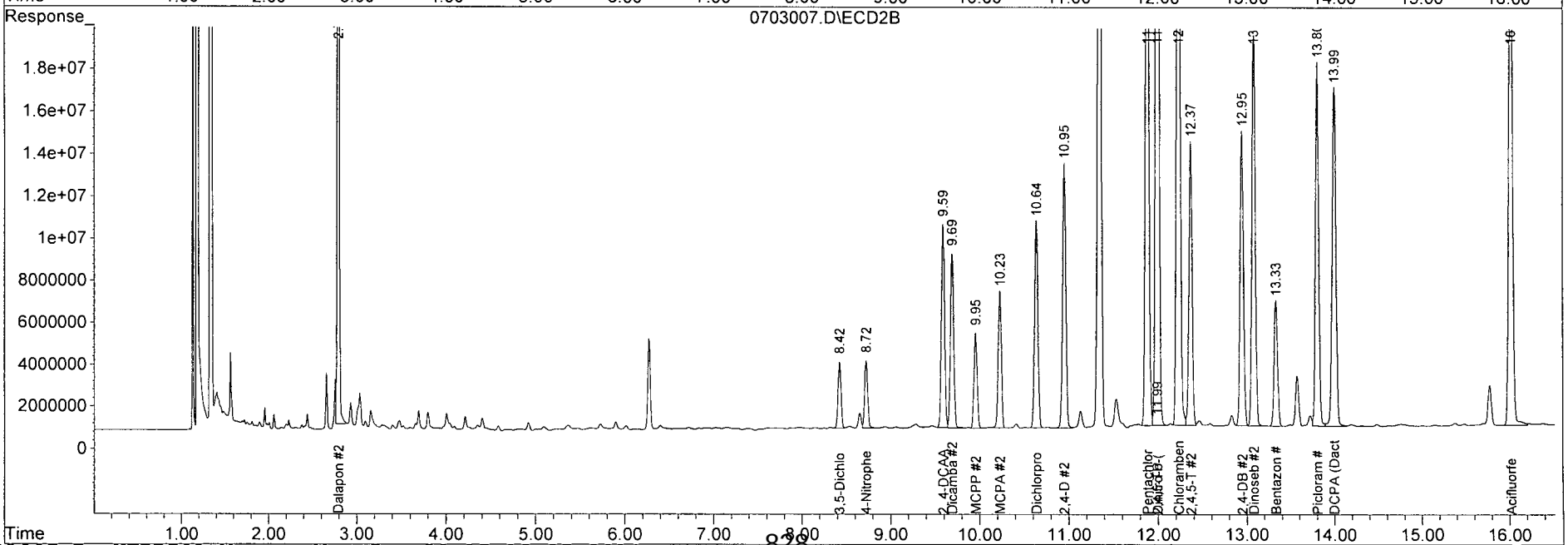
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140703\0703007.D Vial: 7
Acq On : 07-03-14 16:02:20 Operator: MA
Sample : HERB 400/1000 Inst : Herbie
Misc : WATER Multiplr: 1.00
Quant Method : G:\HERBIE\DATA\140703\HERB703.M





EPA METHOD 8151/515
HERB 0703

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 07/03/14
Instrument: Herbie
Initial Cal. Date: 07/03/14
Data File: 0703009.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Dalapon	3735310	3997090	7.0	TM		
2	TM	3,5-Dichlorobenzoic Acid	2372600	2366470	0.26	TM		
3	TM	4-Nitrophenol	1078450	1162410	7.8	TM		
4	S	2, 4-DCAA (S)	1534140	1579770	3.0	S		
5	TM	Dicamba	6608060	6321540	4.3	TM		
6	TM	MCPP	3498	3741	6.9	TM		
7	TM	MCPA	6116	6082	0.56	TM		
8	TM	Dichlorprop	1482880	1523110	2.7	TM		
9	TM	2,4-D	1976670	2042900	3.4	TM		
10	TM	Pentachlorophenol (PCP)	21099000	28401200	35	TM		*
11	TM	2,4,5-TP (Silvex)	9902260	9670440	2.3	TM		
12	TM	Dinitro-o-cresol (DNOC)	13213000	10629200	20	TM		
13	TM	2,4,5-T	9198970	8968980	2.5	TM		
14	TM	Chloramben	5847410	6703930	15	TM		
15	TM	Dinoseb	5632050	5871890	4.3	TM		
16	TM	2,4-DB	1027910	940909	8.5	TM		
17	TM	Bentazon	1166490	1427310	22	TM		*see back
18	TM	DCPA (Dacthal)	9719710	12390000	27	TM		*see back
19	TM	Picloram	10998900	11981000	8.9	TM		
20	TM	Acifluorfen	7174150	8197090	14	TM		
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
		Average			9.8			

EPA METHOD 8151/515
HERB 0703

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 07/03/14
Instrument: Herbie
Cal. Date: 07/03/14
Data File: 0703009.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM	Dalapon	5272040	5559470	5.5	TM		
42	TM	3,5-Dichlorobenzoic Acid	3530390	4813250	36	TM		*see front
43	CM	4-Nitrophenol	1451930	1537950	5.9	CM		
44	S	2, 4-DCAA (S)	2083660	2190240	5.1	S		
45	TM	Dicamba	8887790	8567010	3.6	TM		
46	TML	MCPP	4366	4877	12	TML	9.0	
47	TM	MCPA	7137	7353	3.0	TM		
48	TM	Dichlorprop	2208940	2322070	5.1	TM		
49	TM	2,4-D	2810340	2835450	0.89	TM		
50	TM	Pentachlorophenol (PCP)	31271000	41304100	32	TM		*
51	TM	2,4,5-TP (Silvex)	17240200	14520900	16	TM		
52	TM	Dinitro-o-cresol (DNOC)	17240200	14520900	16	TM		
53	TM	2,4,5-T	13775200	13475000	2.2	TM		
54	TM	Chloramben	8454530	9744480	15	TM		
55	TM	Dinoseb	7859430	8042150	2.3	TM		
56	TM	2,4-DB	1498770	1356770	9.5	TM		
57	TM	Bentazon	1320870	1426470	8.0	TM		
58	TM	DCPA (Dacthal)	16182600	18552800	15	TM		
59	TM	Picloram	15857500	16970400	7.0	TM		
60	TM	Acifluorfen	10645900	11884400	12	TM		
61								
62								
63								
64								
65								
66								
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								
79								
80								
		Average			10.6			

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140703\0703009.D\ECD1A.CH Vial: 9
Signal #2 : G:\HERBIE\DATA\140703\0703009.D\ECD2B.CH
Acq On : 07-03-14 16:57:25 Operator: MA
Sample : HERB SS 200/1000 7/3/14 Inst : Herbie
Misc : WATER Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Jul 7 8:45 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140703\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4) S	2, 4-DCAA (S)	8.73	9.59	4044211	5607025	1.318	1.345	
Spiked Amount	0.600			Recovery	=	219.67%	224.17%	
	Target Compounds							
1) TM	Dalapon	2.35	2.79	20465090	28464475	2.739	2.700	
2) TM	3,5-Dichlorobenz	7.26	8.42	1211633	2464385	0.255	0.349	#
3) CM	4-Nitrophenol	8.06	8.73	1487888	1968579	0.690	0.678	
5) TM	Dicamba	8.91	9.69	3236631	4386308	0.245	0.247	
6) TM	MCPP	8.99	9.96	1915449	2496826	273.769	279.102	
7) TM	MCPA	9.41	10.23	3114059	3764951	254.569	263.776	
8) TM	Dichlorprop	9.72	10.64	3899159	5944501	1.315	1.346	
9) TM	2,4-D	10.21	10.95	5229818	7258743	1.323	1.291	
10) TM	Pentachloropheno	10.71	11.88	14541395	21147709	0.345	0.338	
11) TM	2,4,5-TP (Silvex	10.99	12.00	4951263	22304173	0.250	0.647	#
12) TM	Dinitro-o-cresol	11.19	12.00	10884346	22304173	0.412	0.647	#
13) TM	2,4,5-T	11.54	12.37	4592117	6899175	0.250	0.250	
14) TM	Chloramben	11.73	12.23	17162057	24945868	1.467	1.475	
15) TM	Dinoseb	11.93	13.08	7516024	10293951	0.667	0.655	
16) TM	2,4-DB	12.04	12.95	4817453	6946662	2.343	2.317	
17) TM	Bentazon	12.85	13.33	3653905	3651774	1.566	1.382	
18) TM	DCPA (Dacthal)	13.08	14.00	6343702	9499054	0.326	0.293	
19) TM	Picloram	13.54	13.80	6134290	8688832	0.279	0.274	
20) TM	Acifluorfen	15.08	16.03	10492278	15212067	0.731	0.714	

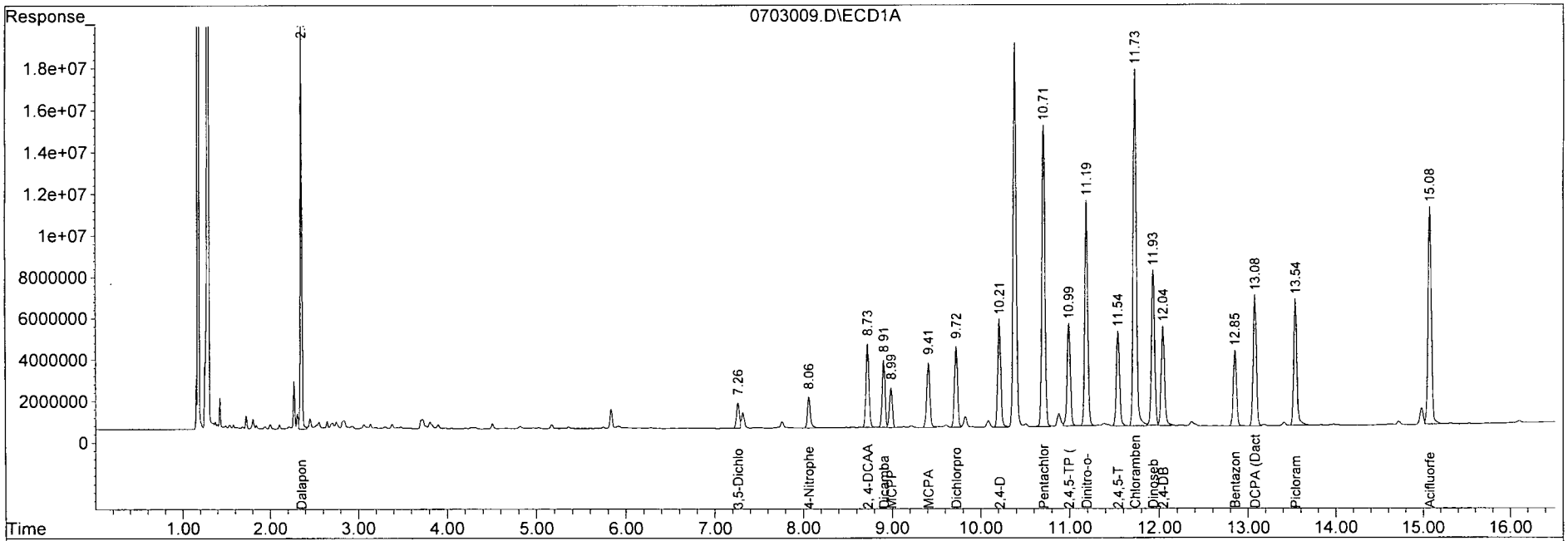
Target Compounds

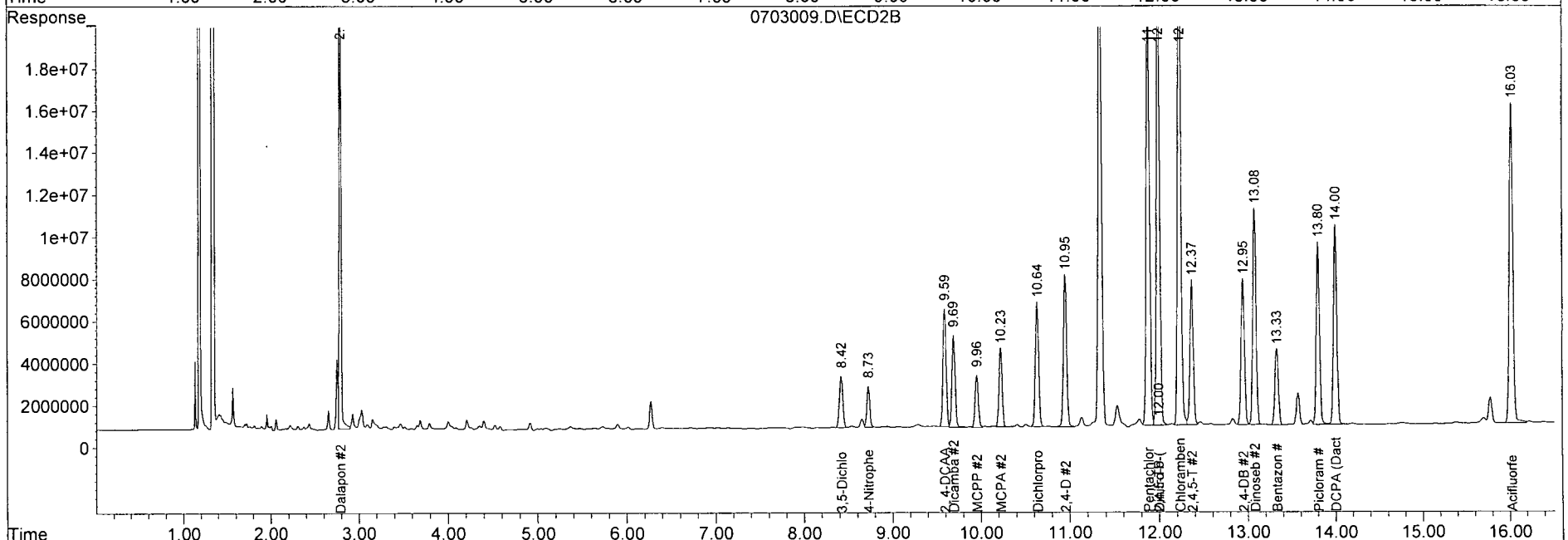
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140703\0703009.D
Acq On : 07-03-14 16:57:25
Sample : HERB SS 200/1000 7/3/14
Misc : WATER
Quant Method : G:\HERBIE\DATA\140703\HERB703.M

Vial: 9
Operator: MA
Inst : Herbie
Multiplr: 1.00





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EPA METHOD 8151/515
HERB 0703

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 74218
Date Analyzed: 09/15/14
Instrument: Herbie
Initial Cal. Date: 07/03/14
Data File: 0911031.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Dalapon	3735310	3586300	4.0	TM		
2	TM	3,5-Dichlorobenzoic Acid	2372600	2076450	12	TM		
3	TM	4-Nitrophenol	1078450	949453	12	TM		
4	S	2, 4-DCAA (S)	1534140	1323730	14	S		
5	TM	Dicamba	6608060	5853390	11	TM		
6	TM	MCPP	3498	3153	9.9	TM		
7	TM	MCPA	6116	5121	16	TM		
8	TM	Dichlorprop	1482880	1264080	15	TM		
9	TM	2,4-D	1976670	1735310	12	TM		
10	TM	Pentachlorophenol (PCP)	21099000	20232000	4.1	TM		
11	TM	2,4,5-TP (Silvex)	9902260	9017230	8.9	TM		
12	TM	Dinitro-o-cresol (DNOC)	13213000	12422800	6.0	TM		
13	TM	2,4,5-T	9198970	8322680	9.5	TM		
14	TM	Chloramben	5847410	5679920	2.9	TM		
15	TM	Dinoseb	5632050	4900780	13	TM		
16	TM	2,4-DB	1027910	914608	11	TM		
17	TM	Bentazon	1166490	833534	29	TM		*NT
18	TM	DCPA (Dacthal)	9719710	8485050	13	TM		
19	TM	Picloram	10998900	9974010	9.3	TM		
20	TM	Acifluorfen	7174150	6264650	13	TM		
21								
22								
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32								
33								
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35								
36								
37								
38								
39								
40								
		Average			11.3			

EPA METHOD 8151/515
HERB 0703

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No: 74218
Date Analyzed: 09/15/14
Instrument: Herbie
Cal. Date: 07/03/14
Data File: 0911031.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Dalapon	5272040	5294540	0.43	TM	
42	TM	3,5-Dichlorobenzoic Acid	3530390	3167920	10	TM	
43	CM	4-Nitrophenol	1451930	1254880	14	CM	
44	S	2, 4-DCAA (S)	2083660	1755510	16	S	
45	TM	Dicamba	8887790	7575160	15	TM	
46	TML	MCPP	4366	4300	1.5	TML	3.7
47	TM	MCPA	7137	6430	9.9	TM	
48	TM	Dichlorprop	2208940	1876070	15	TM	
49	TM	2,4-D	2810340	2266700	19	TM	
50	TM	Pentachlorophenol (PCP)	31271000	28741300	8.1	TM	
51	TM	2,4,5-TP (Silvex)	17240200	15139700	12	TM	
52	TM	Dinitro-o-cresol (DNOC)	17240200	15139700	12	TM	
53	TM	2,4,5-T	13775200	11949400	13	TM	
54	TM	Chloramben	8454530	8210480	2.9	TM	
55	TM	Dinoseb	7859430	6290660	20	TM	
56	TM	2,4-DB	1498770	1256920	16	TM	
57	TM	Bentazon	1320870	1100460	17	TM	
58	TM	DCPA (Dacthal)	16182600	13674300	16	TM	
59	TM	Picloram	15857500	13976200	12	TM	
60	TM	Acifluorfen	10645900	8823100	17	TM	
61							
62							
63							
64							
65							
66							
67							
68							
69							
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72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			12.3		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911031.D\ECD1A.CH Vial: 31
Signal #2 : G:\HERBIE\DATA\140911\0911031.D\ECD2B.CH
Acq On : 09-15-14 9:42:49 Operator: MA
Sample : Herb 300/1000 7/3/14 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 15 10:20 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
4)	S	2, 4-DCAA (S)	8.72	9.59	5083106	6741157	1.657	1.618	
		Spiked Amount 0.600			Recovery	=	276.17%	269.67%	
		Target Compounds							
1)	TM	Dalapon	2.35	2.79	27542746	40662044	3.687	3.856	
2)	TM	3,5-Dichlorobenz	7.26	8.42	1594716	2432961	0.336	0.345	
3)	CM	4-Nitrophenol	8.06	8.72	1822950	2409365	0.845	0.830	
5)	TM	Dicamba	8.90	9.69	4495400	5817726	0.340	0.327	
6)	TM	MCPP	8.98	9.95	2421757	3302230	346.133	369.706	
7)	TM	MCPA	9.40	10.22	3932555	4938227	321.479	345.977	
8)	TM	Dichlorprop	9.71	10.63	4854085	7204092	1.637	1.631	
9)	TM	2,4-D	10.20	10.95	6663572	8704141	1.686	1.549	
10)	TM	Pentachloropheno	10.70	11.88	15538176	22073293	0.368	0.353	
11)	TM	2,4,5-TP (Silvex	10.98	11.99	6925232	34881783	0.350	1.012	#
12)	TM	Dinitro-o-cresol	11.18	11.99	19081353	34881783	0.722	1.012	#
13)	TM	2,4,5-T	11.54	12.36	6391819	9177171	0.347	0.333	
14)	TM	Chloramben	11.72	12.23	21810883	31528235	1.865	1.865	
15)	TM	Dinoseb	11.93	13.08	9409499	12078066	0.835	0.768	
16)	TM	2,4-DB	12.04	12.94	7024188	9653149	3.417	3.220	
17)	TM	Bentazon	12.85	13.33	3200769	4225757	1.372	1.600	
18)	TM	DCPA (Dacthal)	13.07	13.99	6516521	10501838	0.335	0.324	
19)	TM	Picloram	13.53	13.80	7660037	10733705	0.348	0.338	
20)	TM	Acifluorfen	15.07	16.02	12028120	16940357	0.838	0.796	

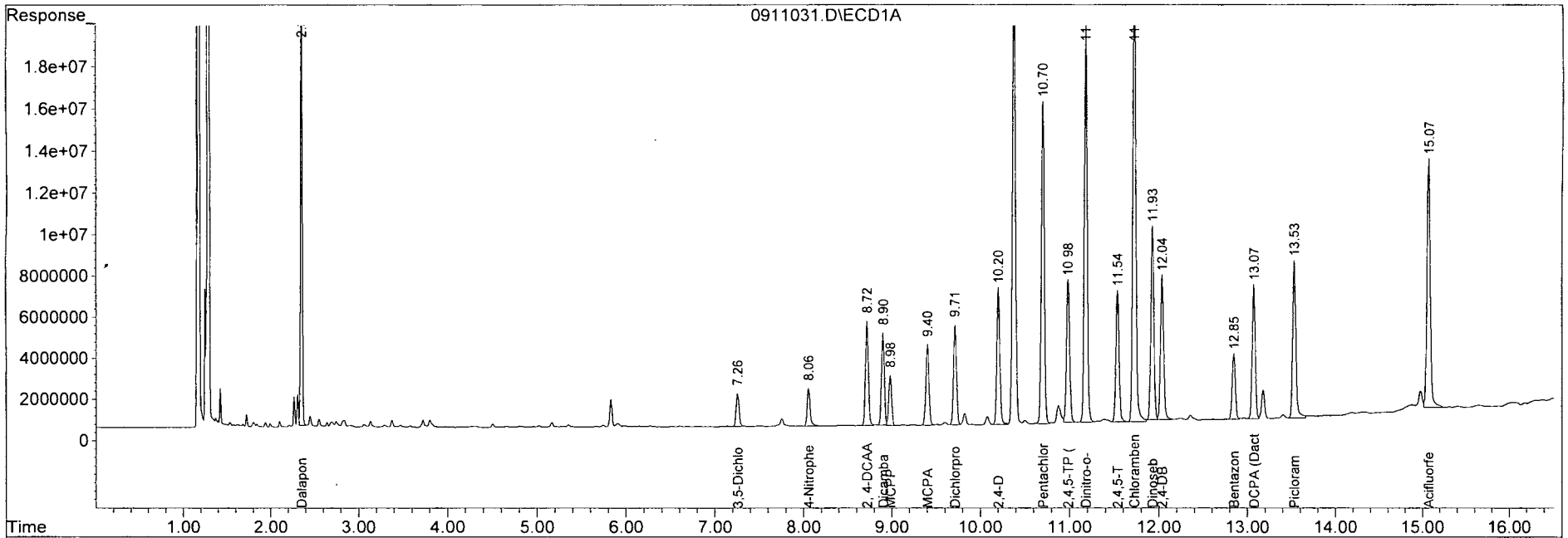
Target Compounds

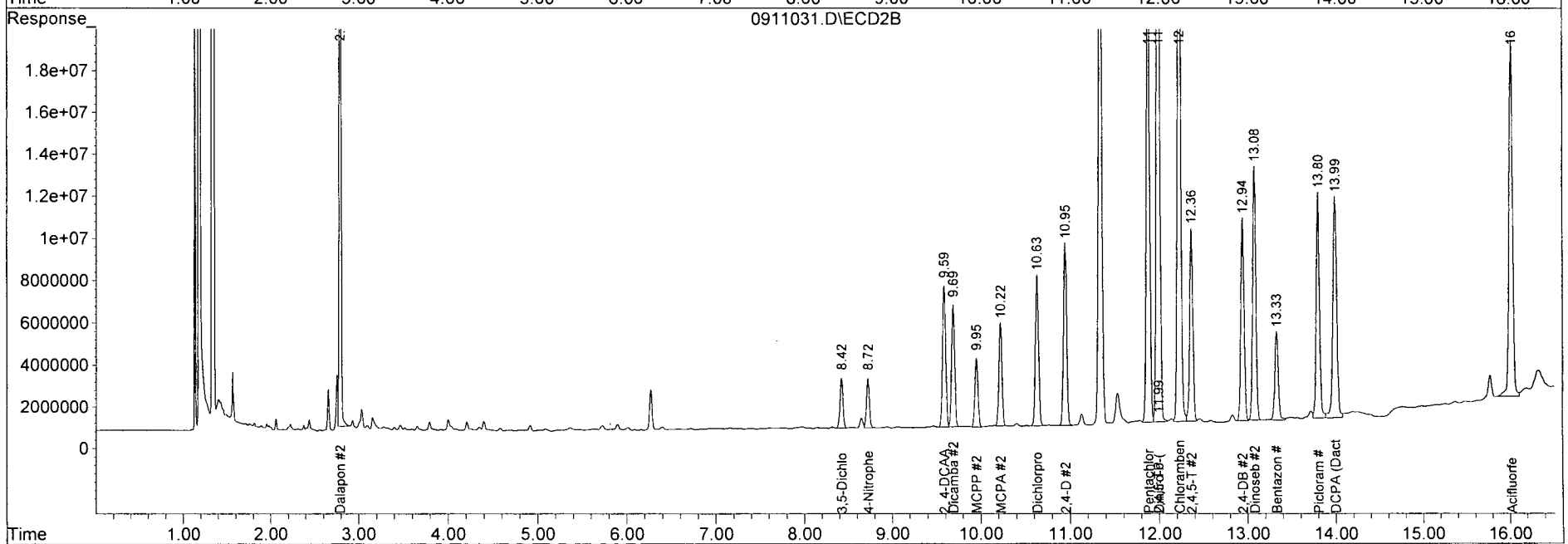
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140911\0911031.D
Acq On : 09-15-14 9:42:49
Sample : Herb 300/1000 7/3/14
Misc :
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 31
Operator: MA
Inst : Herbie
Multiplr: 1.00





836

EPA METHOD 8151/515
HERB 0703

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 74218
Date Analyzed: 09/15/14
Instrument: Herbie
Initial Cal. Date: 07/03/14
Data File: 0911037.D

		Compound	MEAN	CCRF	%D	%Drift		
1	TM	Dalapon	3735310	3588460	3.9	TM		
2	TM	3,5-Dichlorobenzoic Acid	2372600	2127360	10	TM		
3	TM	4-Nitrophenol	1078450	971631	9.9	TM		
4	S	2, 4-DCAA (S)	1534140	1337280	13	S		
5	TM	Dicamba	6608060	5927490	10	TM		
6	TM	MCPP	3498	3212	8.2	TM		
7	TM	MCPA	6116	5146	16	TM		
8	TM	Dichlorprop	1482880	1279080	14	TM		
9	TM	2,4-D	1976670	1786510	9.6	TM		
10	TM	Pentachlorophenol (PCP)	21099000	20553400	2.6	TM		
11	TM	2,4,5-TP (Silvex)	9902260	9365620	5.4	TM		
12	TM	Dinitro-o-cresol (DNOC)	13213000	12798000	3.1	TM		
13	TM	2,4,5-T	9198970	8639840	6.1	TM		
14	TM	Chloramben	5847410	5887540	0.69	TM		
15	TM	Dinoseb	5632050	4933000	12	TM		
16	TM	2,4-DB	1027910	928578	9.7	TM		
17	TM	Bentazon	1166490	878857	25	TM		*NT
18	TM	DCPA (Dacthal)	9719710	9229560	5.0	TM		
19	TM	Picloram	10998900	11142700	1.3	TM		
20	TM	Acifluorfen	7174150	6135010	14	TM		
21								
22								
23								
24								
25								
26								
27								
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30								
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32								
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34								
35								
36								
37								
38								
39								
40								
		Average			9.0			

EPA METHOD 8151/515
HERB 0703

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No: 14218
Date Analyzed: 09/15/14
Instrument: Herbie
Cal. Date: 07/03/14
Data File: 0911037.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Dalapon	5272040	5337750	1.2	TM	
42	TM	3,5-Dichlorobenzoic Acid	3530390	3289410	6.8	TM	
43	CM	4-Nitrophenol	1451930	1308310	9.9	CM	
44	S	2, 4-DCAA (S)	2083660	1909460	8.4	S	
45	TM	Dicamba	8887790	8323140	6.4	TM	
46	TML	MCPP	4366	4344	0.50	TML	2.7
47	TM	MCPA	7137	6516	8.7	TM	
48	TM	Dichlorprop	2208940	1950910	12	TM	
49	TM	2,4-D	2810340	2486100	12	TM	
50	TM	Pentachlorophenol (PCP)	31271000	29114300	6.9	TM	
51	TM	2,4,5-TP (Silvex)	17240200	15831300	8.2	TM	
52	TM	Dinitro-o-cresol (DNOC)	17240200	15831300	8.2	TM	
53	TM	2,4,5-T	13775200	12906800	6.3	TM	
54	TM	Chloramben	8454530	8363970	1.1	TM	
55	TM	Dinoseb	7859430	7144640	9.1	TM	
56	TM	2,4-DB	1498770	1384140	7.6	TM	
57	TM	Bentazon	1320870	1198920	9.2	TM	
58	TM	DCPA (Dacthal)	16182600	15470800	4.4	TM	
59	TM	Picloram	15857500	16159100	1.9	TM	
60	TM	Acifluorfen	10645900	9735990	8.5	TM	
61							
62							
63							
64							
65							
66							
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79							
80							
		Average			6.9		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911037.D\ECD1A.CH Vial: 37
Signal #2 : G:\HERBIE\DATA\140911\0911037.D\ECD2B.CH
Acq On : 09-15-14 11:57:05 Operator: MA
Sample : Herb 300/1000 7/3/14 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 15 12:58 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
4)	S	2, 4-DCAA (S)	8.72	9.59	5135138	7332317	1.674	1.759	
		Spiked Amount 0.600			Recovery	=	279.00%	293.17%	
		Target Compounds							
1)	TM	Dalapon	2.35	2.79	27559381	40993939	3.689	3.888	
2)	TM	3,5-Dichlorobenz	7.26	8.43	1633816	2526265	0.344	0.358	
3)	CM	4-Nitrophenol	8.06	8.73	1865532	2511954	0.865	0.865	
5)	TM	Dicamba	8.90	9.69	4552312	6392174	0.344	0.360	
6)	TM	MCPP	8.98	9.95	2466896	3336264	352.585	373.534	
7)	TM	MCPA	9.41	10.23	3952083	5003997	323.076	350.585	
8)	TM	Dichlorprop	9.72	10.64	4911665	7491482	1.656	1.696	
9)	TM	2,4-D	10.21	10.95	6860208	9546627	1.735	1.698	
10)	TM	Pentachloropheno	10.71	11.88	15785036	22359799	0.374	0.358	
11)	TM	2,4,5-TP (Silvex	10.99	11.99	7192795	36475241	0.363	1.058	#
12)	TM	Dinitro-o-cresol	11.18	11.99	19657682	36475241	0.744	1.058	#
13)	TM	2,4,5-T	11.54	12.37	6635396	9912457	0.361	0.360	
14)	TM	Chloramben	11.72	12.23	22608152	32117662	1.933	1.899	
15)	TM	Dinoseb	11.93	13.08	9471366	13717708	0.841	0.873	
16)	TM	2,4-DB	12.04	12.95	7131476	10630212	3.469	3.546	
17)	TM	Bentazon	12.85	13.33	3374811	4603860	1.447	1.743	
18)	TM	DCPA (Dacthal)	13.07	14.00	7088304	11881549	0.365	0.367	
19)	TM	Picloram	13.53	13.80	8557631	12410185	0.389	0.391	
20)	TM	Acifluorfen	15.07	16.02	11779222	18693098	0.821	0.878	

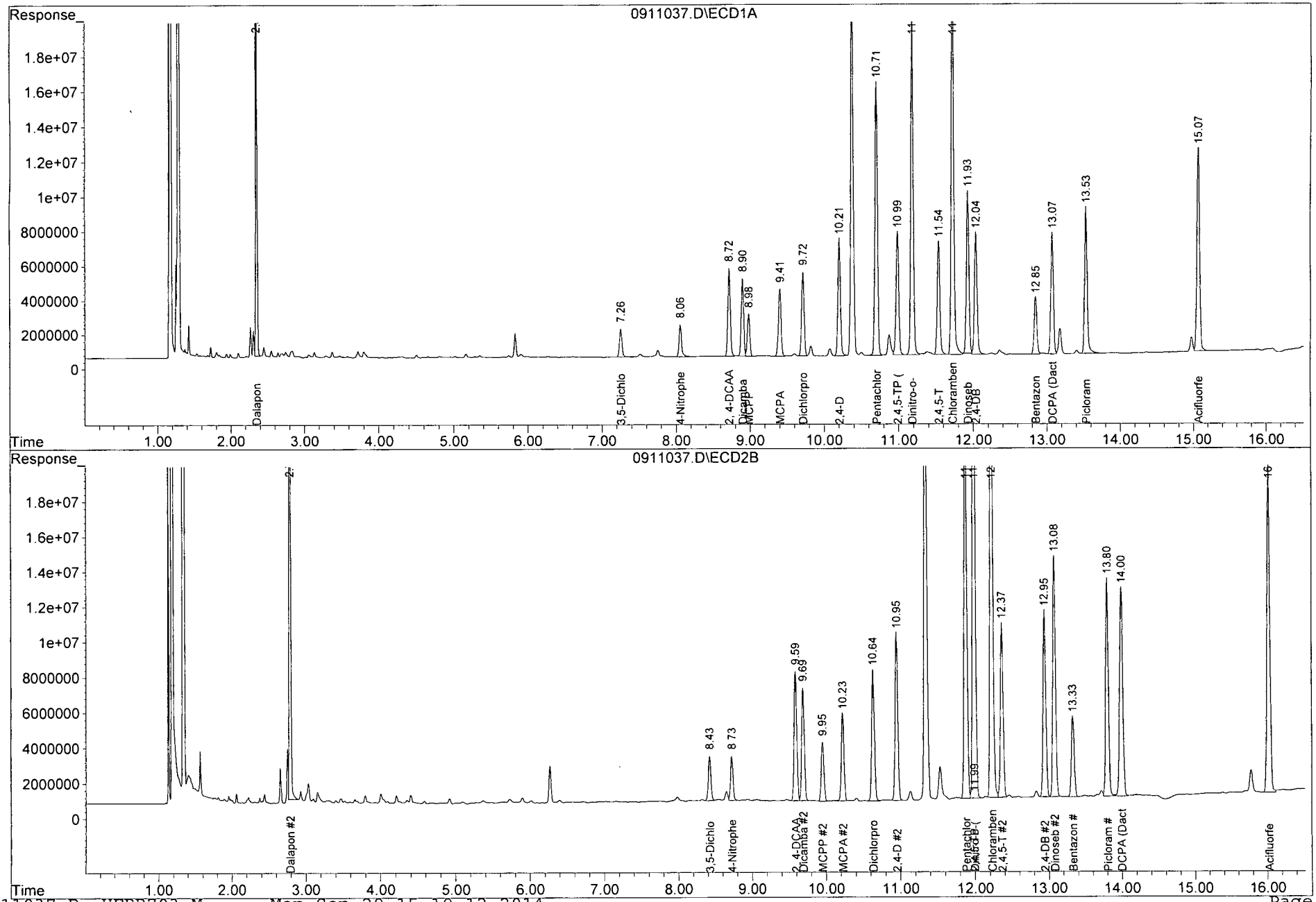
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140911\0911037.D
Acq On : 09-15-14 11:57:05
Sample : Herb 300/1000 7/3/14
Misc :
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 37
Operator: MA
Inst : Herbie
Multiplr: 1.00



EPA METHOD 8151/515
HERB 0703

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 74218
Date Analyzed: 09/18/14
Instrument: Herbie
Initial Cal. Date: 07/03/14
Data File: 0911068.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Dalapon	3735310	3597260	3.7	TM		
2	TM	3,5-Dichlorobenzoic Acid	2372600	2126980	10	TM		
3	TM	4-Nitrophenol	1078450	952809	12	TM		
4	S	2, 4-DCAA (S)	1534140	1374840	10	S		
5	TM	Dicamba	6608060	6049470	8.5	TM		
6	TM	MCPP	3498	3235	7.5	TM		
7	TM	MCPA	6116	5123	16	TM		
8	TM	Dichlorprop	1482880	1294550	13	TM		
9	TM	2,4-D	1976670	1750700	11	TM		
10	TM	Pentachlorophenol (PCP)	21099000	20525800	2.7	TM		
11	TM	2,4,5-TP (Silvex)	9902260	9202730	7.1	TM		
12	TM	Dinitro-o-cresol (DNOC)	13213000	12393800	6.2	TM		
13	TM	2,4,5-T	9198970	8642600	6.0	TM		
14	TM	Chloramben	5847410	5761700	1.5	TM		
15	TM	Dinoseb	5632050	4979560	12	TM		
16	TM	2,4-DB	1027910	939771	8.6	TM		
17	TM	Bentazon	1166490	854822	27	TM		*NT
18	TM	DCPA (Dacthal)	9719710	8977040	7.6	TM		
19	TM	Picloram	10998900	10649600	3.2	TM		
20	TM	Acifluorfen	7174150	6387040	11	TM		
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38								
39								
40								
		Average			9.2			

EPA METHOD 8151/515
HERB 0703

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No: TA218
Date Analyzed: 09/18/14
Instrument: Herbie
Cal. Date: 07/03/14
Data File: 0911068.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Dalapon	5272040	5290340	0.35	TM	
42	TM	3,5-Dichlorobenzoic Acid	3530390	3045850	14	TM	
43	CM	4-Nitrophenol	1451930	1214310	16	CM	
44	S	2, 4-DCAA (S)	2083660	1817960	13	S	
45	TM	Dicamba	8887790	8006520	9.9	TM	
46	TML	MCPP	4366	4431	1.5	TML	0.76
47	TM	MCPA	7137	6576	7.9	TM	
48	TM	Dichlorprop	2208940	1938840	12	TM	
49	TM	2,4-D	2810340	2489760	11	TM	
50	TM	Pentachlorophenol (PCP)	31271000	30041400	3.9	TM	
51	TM	2,4,5-TP (Silvex)	17240200	16458900	4.5	TM	
52	TM	Dinitro-o-cresol (DNOC)	17240200	16458900	4.5	TM	
53	TM	2,4,5-T	13775200	12661700	8.1	TM	
54	TM	Chloramben	8454530	8501410	0.55	TM	
55	TM	Dinoseb	7859430	6886460	12	TM	
56	TM	2,4-DB	1498770	1354380	9.6	TM	
57	TM	Bentazon	1320870	1165190	12	TM	
58	TM	DCPA (Dacthal)	16182600	14486100	10	TM	
59	TM	Picloram	15857500	14411200	9.1	TM	
60	TM	Acifluorfen	10645900	8994280	16	TM	
61							
62							
63							
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77							
78							
79							
80							
		Average			8.8		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911068.D\ECD1A.CH Vial: 68
Signal #2 : G:\HERBIE\DATA\140911\0911068.D\ECD2B.CH
Acq On : 09-18-14 10:32:35 Operator: MA
Sample : HERB 300/1000 7/3/14 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 18 11:01 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4) S	2, 4-DCAA (S)	8.72	9.59	5279384	6980985	1.721	1.675	
Spiked Amount	0.600			Recovery	=	286.83%	279.17%	
	Target Compounds							
1) TM	Dalapon	2.35	2.79	27626945	40629801	3.698	3.853	
2) TM	3,5-Dichlorobenz	7.26	8.42	1633517	2339216	0.344	0.331	
3) CM	4-Nitrophenol	8.06	8.72	1829394	2331467	0.848	0.803	
5) TM	Dicamba	8.90	9.69	4645993	6149011	0.352	0.346	
6) TM	MCPP	8.98	9.95	2484176	3403246	355.055	381.070	
7) TM	MCPA	9.41	10.22	3934329	5050350	321.624	353.833	
8) TM	Dichlorprop	9.72	10.64	4971060	7445157	1.676	1.685	
9) TM	2,4-D	10.21	10.95	6722691	9560661	1.701	1.701	
10) TM	Pentachloropheno	10.71	11.88	15763814	23071763	0.374	0.369	
11) TM	2,4,5-TP (Silvex	10.99	11.99	7067698	37921293	0.357	1.100	#
12) TM	Dinitro-o-cresol	11.19	11.99	19036922	37921293	0.720	1.100	#
13) TM	2,4,5-T	11.54	12.37	6637518	9724154	0.361	0.353	
14) TM	Chloramben	11.73	12.23	22124941	32645396	1.892	1.931	
15) TM	Dinoseb	11.93	13.08	9560749	13221997	0.849	0.841	
16) TM	2,4-DB	12.04	12.95	7217444	10401608	3.511	3.470	
17) TM	Bentazon	12.85	13.33	3282516	4474341	1.407	1.694	
18) TM	DCPA (Dacthal)	13.07	14.00	6894368	11125345	0.355	0.344	
19) TM	Picloram	13.53	13.80	8178869	11067766	0.372	0.349	
20) TM	Acifluorfen	15.07	16.02	12263113	17269013	0.855	0.811	

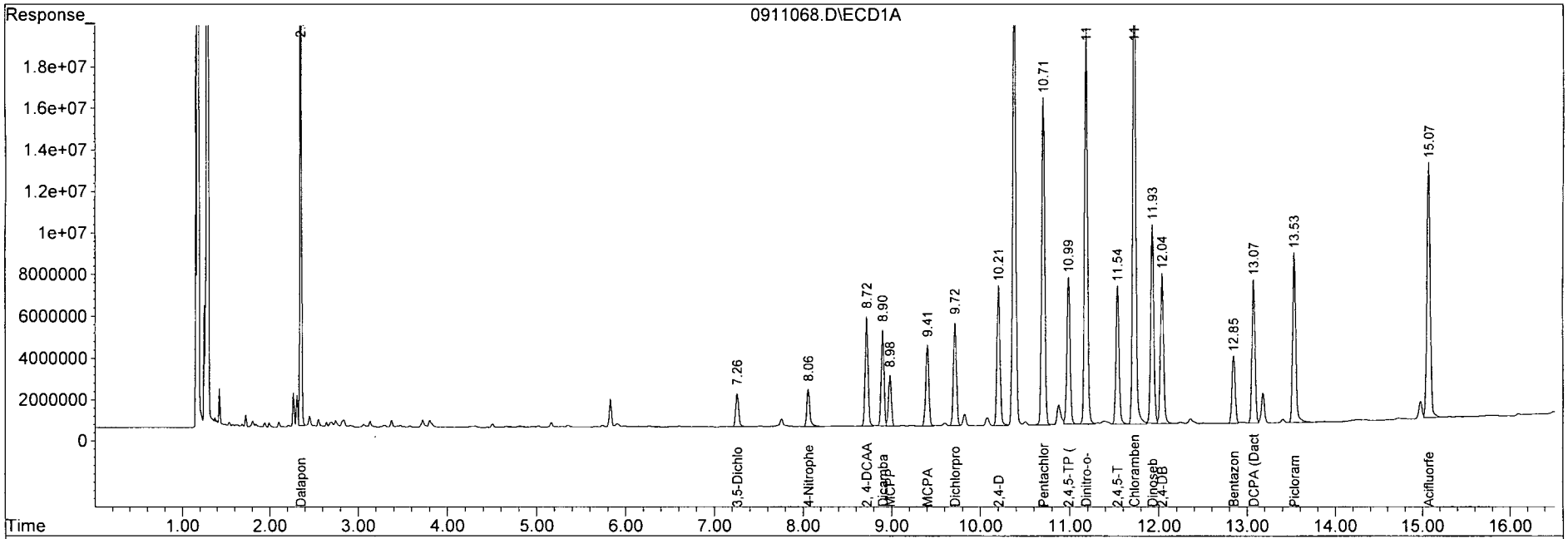
Target Compounds

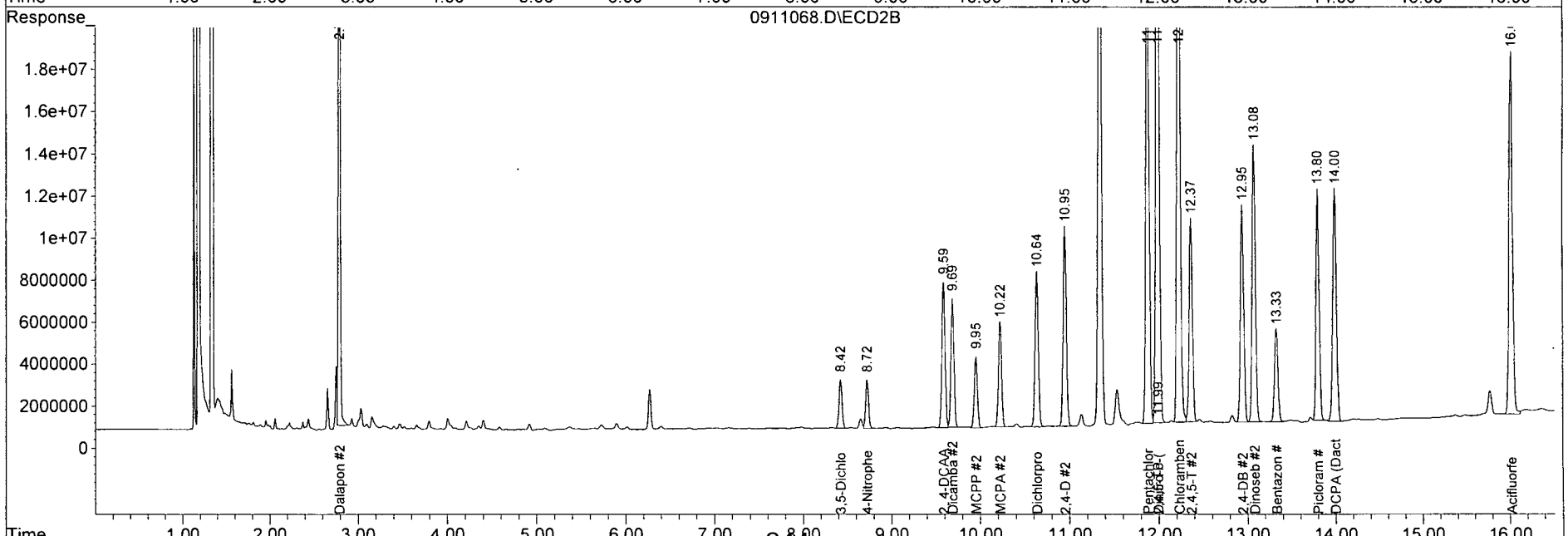
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140911\0911068.D
Acq On : 09-18-14 10:32:35
Sample : HERB 300/1000 7/3/14
Misc :
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 68
Operator: MA
Inst : Herbie
Multiplr: 1.00





EPA METHOD 8151/515
HERB 0703

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/18/14
Instrument: Herbie
Initial Cal. Date: 07/03/14
Data File: 0911082.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Dalapon	3735310	3624010	3.0	TM	
2	TM	3,5-Dichlorobenzoic Acid	2372600	2133770	10	TM	
3	TM	4-Nitrophenol	1078450	980967	9.0	TM	
4	S	2, 4-DCAA (S)	1534140	1324600	14	S	
5	TM	Dicamba	6608060	6099480	7.7	TM	
6	TM	MCPP	3498	3201	8.5	TM	
7	TM	MCPA	6116	5273	14	TM	
8	TM	Dichlorprop	1482880	1300870	12	TM	
9	TM	2,4-D	1976670	1762100	11	TM	
10	TM	Pentachlorophenol (PCP)	21099000	21371500	1.3	TM	
11	TM	2,4,5-TP (Silvex)	9902260	9484030	4.2	TM	
12	TM	Dinitro-o-cresol (DNOC)	13213000	12611700	4.6	TM	
13	TM	2,4,5-T	9198970	8742970	5.0	TM	
14	TM	Chloramben	5847410	5884830	0.64	TM	
15	TM	Dinoseb	5632050	4991590	11	TM	
16	TM	2,4-DB	1027910	942939	8.3	TM	
17	TM	Bentazon	1166490	887677	24	TM	*NT
18	TM	DCPA (Dacthal)	9719710	9511210	2.1	TM	
19	TM	Picloram	10998900	10748200	2.3	TM	
20	TM	Acifluorfen	7174150	6404050	11	TM	
21							
22							
23							
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35							
36							
37							
38							
39							
40							
		Average			8.2		

EPA METHOD 8151/515
HERB 0703

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/18/14
Instrument: Herbie
Cal. Date: 07/03/14
Data File: 0911082.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Dalapon	5272040	5321850	0.94	TM	
42	TM	3,5-Dichlorobenzoic Acid	3530390	3313560	6.1	TM	
43	CM	4-Nitrophenol	1451930	1339240	7.8	CM	
44	S	2, 4-DCAA (S)	2083660	1986790	4.6	S	
45	TM	Dicamba	8887790	8560590	3.7	TM	
46	TML	MCPP	4366	4464	2.2	TML	0.04
47	TM	MCPA	7137	6590	7.7	TM	
48	TM	Dichlorprop	2208940	2031120	8.0	TM	
49	TM	2,4-D	2810340	2602890	7.4	TM	
50	TM	Pentachlorophenol (PCP)	31271000	31126500	0.46	TM	
51	TM	2,4,5-TP (Silvex)	17240200	16862700	2.2	TM	
52	TM	Dinitro-o-cresol (DNOC)	17240200	16862700	2.2	TM	
53	TM	2,4,5-T	13775200	13260900	3.7	TM	
54	TM	Chloramben	8454530	8821110	4.3	TM	
55	TM	Dinoseb	7859430	7252300	7.7	TM	
56	TM	2,4-DB	1498770	1414790	5.6	TM	
57	TM	Bentazon	1320870	1205590	8.7	TM	
58	TM	DCPA (Dacthal)	16182600	16127100	0.34	TM	
59	TM	Picloram	15857500	16248000	2.5	TM	
60	TM	Acifluorfen	10645900	9905610	7.0	TM	
61							
62							
63							
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			4.7		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911082.D\ECD1A.CH Vial: 82
Signal #2 : G:\HERBIE\DATA\140911\0911082.D\ECD2B.CH
Acq On : 09-18-14 16:13:23 Operator: MA
Sample : HERB 300/1000 7/3/14 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 18 16:35 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4) S	2, 4-DCAA (S)	8.72	9.59	5086474	7629287	1.658	1.831	
Spiked Amount	0.600			Recovery	=	276.33%	305.17%	
	Target Compounds							
1) TM	Dalapon	2.35	2.79	27832376	40871845	3.726	3.876	
2) TM	3,5-Dichlorobenz	7.26	8.43	1638733	2544812	0.345	0.360	
3) CM	4-Nitrophenol	8.06	8.73	1883456	2571346	0.873	0.885	
5) TM	Dicamba	8.90	9.69	4684397	6574532	0.354	0.370	
6) TM	MCPP	8.99	9.96	2458187	3428012	351.340	383.856	
7) TM	MCPA	9.41	10.23	4049460	5061152	331.036	354.589	
8) TM	Dichlorprop	9.72	10.64	4995345	7799517	1.684	1.765	
9) TM	2,4-D	10.21	10.95	6766460	9995111	1.712	1.778	
10) TM	Pentachloropheno	10.71	11.88	16413345	23905189	0.389	0.382	
11) TM	2,4,5-TP (Silvex	10.99	12.00	7283735	38851629	0.368	1.127	#
12) TM	Dinitro-o-cresol	11.19	12.00	19371619	38851629	0.733	1.127	#
13) TM	2,4,5-T	11.54	12.37	6714601	10184408	0.365	0.370	
14) TM	Chloramben	11.73	12.23	22597743	33873045	1.932	2.003	
15) TM	Dinoseb	11.93	13.08	9583847	13924419	0.851	0.886	
16) TM	2,4-DB	12.04	12.95	7241770	10865616	3.523	3.625	
17) TM	Bentazon	12.85	13.33	3408680	4629454	1.461	1.752	
18) TM	DCPA (Dacthal)	13.08	14.00	7304613	12385595	0.376	0.383	
19) TM	Picloram	13.54	13.80	8254617	12478477	0.375	0.393	
20) TM	Acifluorfen	15.07	16.02	12295775	19018775	0.857	0.893	

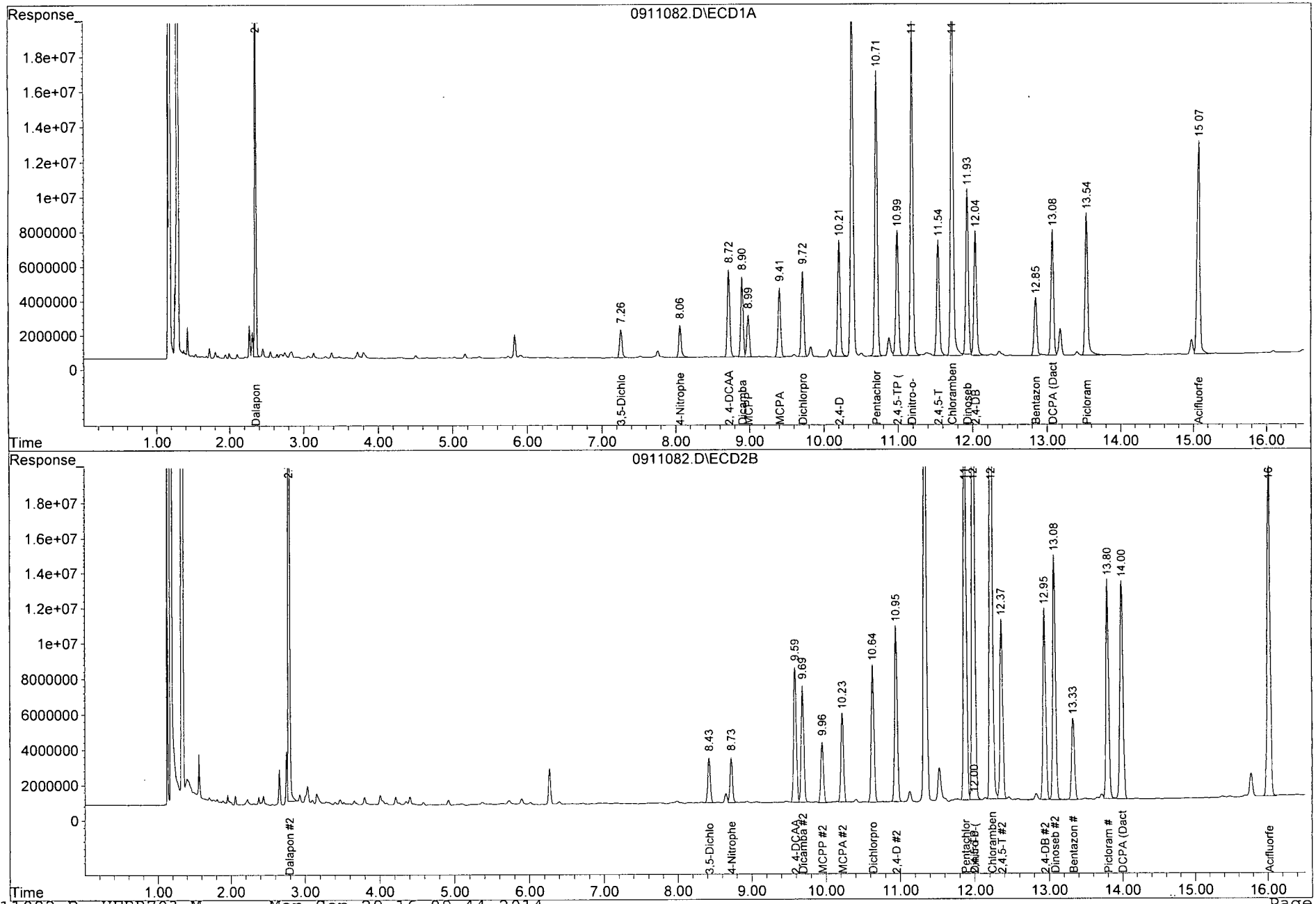
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140911\0911082.D
Acq On : 09-18-14 16:13:23
Sample : HERB 300/1000 7/3/14
Misc : water
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 82
Operator: MA
Inst : Herbie
Multiplr: 1.00



EPA METHOD 8151/515
HERB 0703

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 09/18/14
Instrument: Herbie
Initial Cal. Date: 07/03/14
Data File: 0911092.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Dalapon	3735310	3911180	4.7	TM	
2	TM	3,5-Dichlorobenzoic Acid	2372600	2275060	4.1	TM	
3	TM	4-Nitrophenol	1078450	1027610	4.7	TM	
4	S	2, 4-DCAA (S)	1534140	1466690	4.4	S	
5	TM	Dicamba	6608060	6682290	1.1	TM	
6	TM	MCPP	3498	3452	1.3	TM	
7	TM	MCPA	6116	5541	9.4	TM	
8	TM	Dichlorprop	1482880	1375420	7.2	TM	
9	TM	2,4-D	1976670	1902210	3.8	TM	
10	TM	Pentachlorophenol (PCP)	21099000	22453100	6.4	TM	
11	TM	2,4,5-TP (Silvex)	9902260	9923290	0.21	TM	
12	TM	Dinitro-o-cresol (DNOC)	13213000	13654400	3.3	TM	
13	TM	2,4,5-T	9198970	9460540	2.8	TM	
14	TM	Chloramben	5847410	6371060	9.0	TM	
15	TM	Dinoseb	5632050	5327510	5.4	TM	
16	TM	2,4-DB	1027910	1013810	1.4	TM	
17	TM	Bentazon	1166490	952241	18	TM	
18	TM	DCPA (Dacthal)	9719710	10001100	2.9	TM	
19	TM	Picloram	10998900	12014900	9.2	TM	
20	TM	Acifluorfen	7174150	7381500	2.9	TM	
21							
22							
23							
24							
25							
26							
27							
28							
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30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.1		

EPA METHOD 8151/515
HERB 0703

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 09/18/14
Instrument: Herbie
Cal. Date: 07/03/14
Data File: 0911092.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Dalapon	5272040	5713080	8.4	TM	
42	TM	3,5-Dichlorobenzoic Acid	3530390	3542970	0.36	TM	
43	CM	4-Nitrophenol	1451930	1412240	2.7	CM	
44	S	2, 4-DCAA (S)	2083660	2134180	2.4	S	
45	TM	Dicamba	8887790	9226020	3.8	TM	
46	TML	MCPP	4366	4872	12	TML	9.1
47	TM	MCPA	7137	7189	0.73	TM	
48	TM	Dichlorprop	2208940	2141940	3.0	TM	
49	TM	2,4-D	2810340	2754770	2.0	TM	
50	TM	Pentachlorophenol (PCP)	31271000	34338400	9.8	TM	
51	TM	2,4,5-TP (Silvex)	17240200	17941600	4.1	TM	
52	TM	Dinitro-o-cresol (DNOC)	17240200	17941600	4.1	TM	
53	TM	2,4,5-T	13775200	14762100	7.2	TM	
54	TM	Chloramben	8454530	9379460	11	TM	
55	TM	Dinoseb	7859430	7932430	0.93	TM	
56	TM	2,4-DB	1498770	1476630	1.5	TM	
57	TM	Bentazon	1320870	1298130	1.7	TM	
58	TM	DCPA (Dacthal)	16182600	17495700	8.1	TM	
59	TM	Picloram	15857500	17879800	13	TM	
60	TM	Acifluorfen	10645900	11094800	4.2	TM	
61							
62							
63							
64							
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67							
68							
69							
70							
71							
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73							
74							
75							
76							
77							
78							
79							
80							
		Average			5.1		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911092.D\ECD1A.CH Vial: 92
Signal #2 : G:\HERBIE\DATA\140911\0911092.D\ECD2B.CH
Acq On : 09-18-14 20:01:04 Operator: MA
Sample : HERB 300/1000 7/3/14 Inst : Herbie
Misc : soil Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 19 8:58 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4) S	2, 4-DCAA (S)	8.72	9.59	5632085	8195266	1.836	1.967	
Spiked Amount	0.300			Recovery	=	612.00%	655.67%	
	Target Compounds							
1) TM	Dalapon	2.35	2.79	30037867	43876420	4.021	4.161	
2) TM	3,5-Dichlorobenz	7.26	8.43	1747249	2720998	0.368	0.385	
3) CM	4-Nitrophenol	8.06	8.73	1973020	2711506	0.915	0.934	
5) TM	Dicamba	8.90	9.69	5131998	7085584	0.388	0.399	
6) TM	MCPP	8.98	9.96	2651024	3741457	378.902	419.116	
7) TM	MCPA	9.41	10.23	4255457	5521046	347.876	386.810	
8) TM	Dichlorprop	9.72	10.64	5281628	8225049	1.781	1.862	
9) TM	2,4-D	10.21	10.95	7304497	10578327	1.848	1.882	
10) TM	Pentachloropheno	10.71	11.88	17243985	26371929	0.409	0.422	
11) TM	2,4,5-TP (Silvex	10.99	12.00	7621089	41337494	0.385	1.199	#
12) TM	Dinitro-o-cresol	11.18	12.00	20973175	41337494	0.794	1.199	#
13) TM	2,4,5-T	11.54	12.37	7265698	11337256	0.395	0.412	
14) TM	Chloramben	11.73	12.23	24464871	36017127	2.092	2.130	
15) TM	Dinoseb	11.93	13.08	10228815	15230257	0.908	0.969	
16) TM	2,4-DB	12.04	12.95	7786069	11340518	3.787	3.783	
17) TM	Bentazon	12.85	13.33	3656606	4984818	1.567	1.887	
18) TM	DCPA (Dacthal)	13.07	14.00	7680852	13436720	0.395	0.415	
19) TM	Picloram	13.53	13.80	9227424	13731685	0.419	0.433	
20) TM	Acifluorfen	15.07	16.02	14172483	21302025	0.988	1.000	

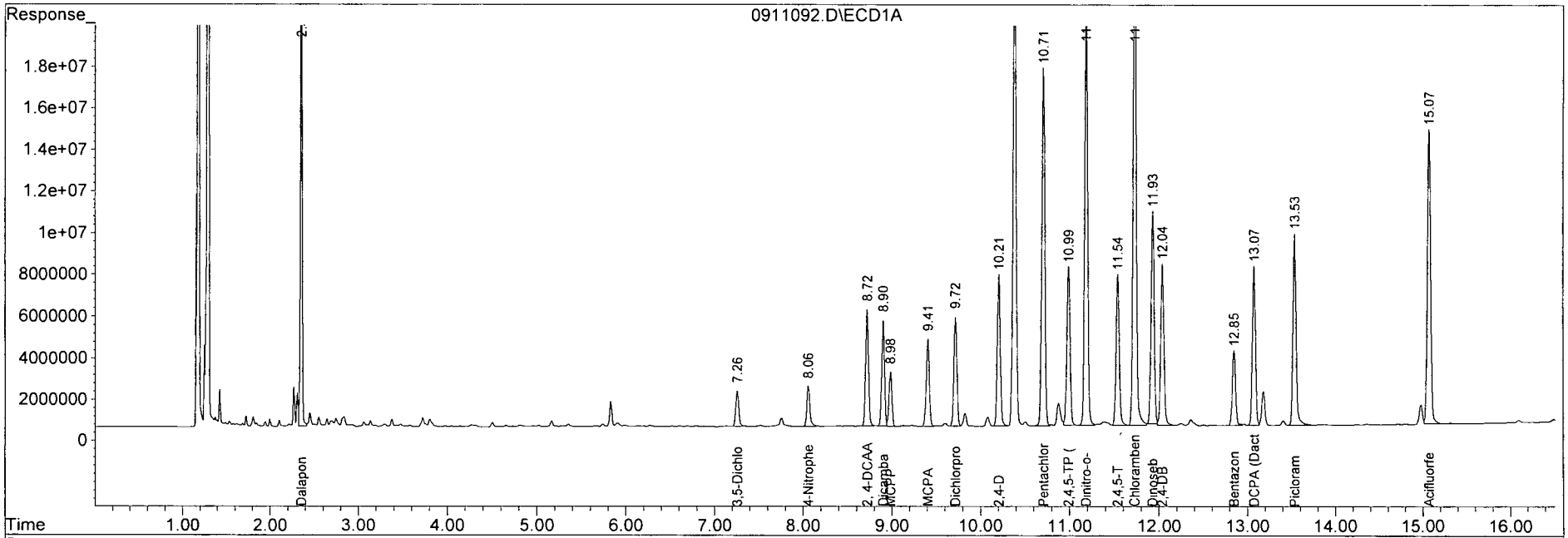
Target Compounds

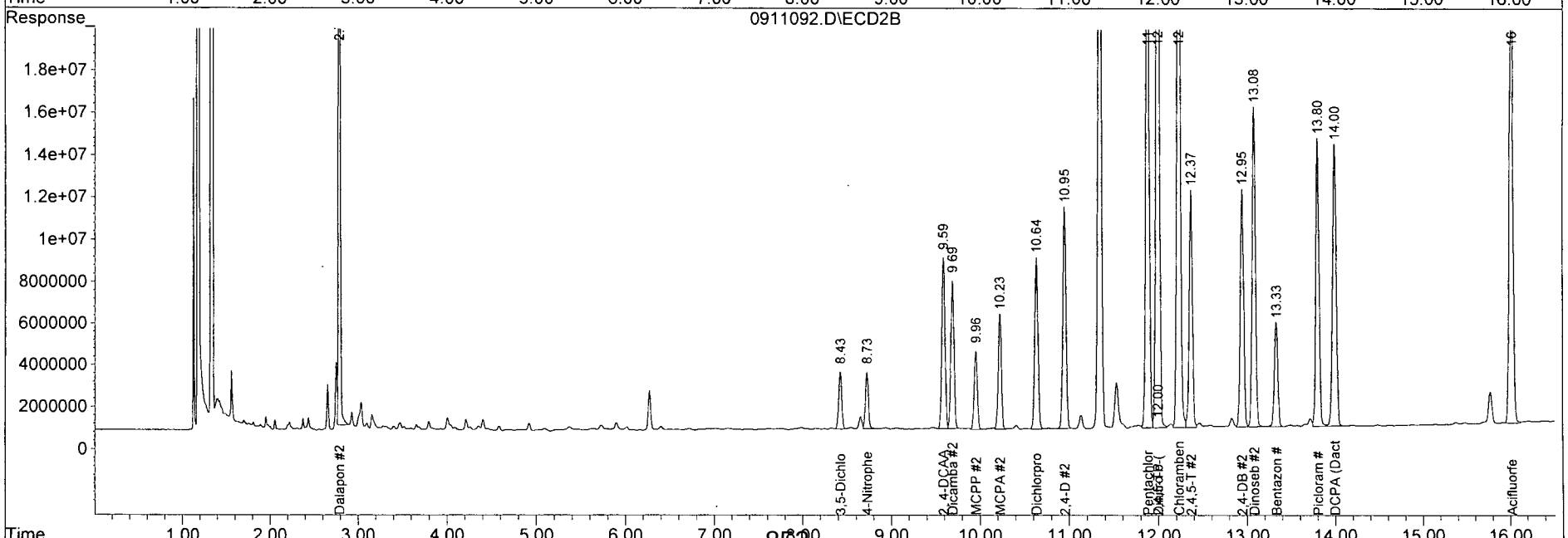
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140911\0911092.D
Acq On : 09-18-14 20:01:04
Sample : HERB 300/1000 7/3/14
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 92
Operator: MA
Inst : Herbie
Multiplr: 1.00





EPA METHOD 8151/515
HERB 0703

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 14-218
Date Analyzed: 09/19/14
Instrument: Herbie
Initial Cal. Date: 07/03/14
Data File: 0911094.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Dalapon	3735310	3643430	2.5	TM		
2	TM	3,5-Dichlorobenzoic Acid	2372600	2173810	8.4	TM		
3	TM	4-Nitrophenol	1078450	1007530	6.6	TM		
4	S	2, 4-DCAA (S)	1534140	1377230	10	S		
5	TM	Dicamba	6608060	6225880	5.8	TM		
6	TM	MCPP	3498	3237	7.5	TM		
7	TM	MCPA	6116	5302	13	TM		
8	TM	Dichlorprop	1482880	1317370	11	TM		
9	TM	2,4-D	1976670	1781540	9.9	TM		
10	TM	Pentachlorophenol (PCP)	21099000	20968300	0.62	TM		
11	TM	2,4,5-TP (Silvex)	9902260	9587320	3.2	TM		
12	TM	Dinitro-o-cresol (DNOC)	13213000	12682900	4.0	TM		
13	TM	2,4,5-T	9198970	8774390	4.6	TM		
14	TM	Chloramben	5847410	6066690	3.8	TM		
15	TM	Dinoseb	5632050	5046640	10	TM		
16	TM	2,4-DB	1027910	937714	8.8	TM		
17	TM	Bentazon	1166490	889267	24	TM		*NT
18	TM	DCPA (Dacthal)	9719710	9262110	4.7	TM		
19	TM	Picloram	10998900	10939700	0.54	TM		
20	TM	Acifluorfen	7174150	6663570	7.1	TM		
21								
22								
23								
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27								
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29								
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32								
33								
34								
35								
36								
37								
38								
39								
40								
		Average			7.3			

EPA METHOD 8151/515
HERB 0703

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No: 74218
Date Analyzed: 09/19/14
Instrument: Herbie
Cal. Date: 07/03/14
Data File: 0911094.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Dalapon	5272040	5393140	2.3	TM	
42	TM	3,5-Dichlorobenzoic Acid	3530390	3283320	7.0	TM	
43	CM	4-Nitrophenol	1451930	1341470	7.6	CM	
44	S	2, 4-DCAA (S)	2083660	1922940	7.7	S	
45	TM	Dicamba	8887790	8309180	6.5	TM	
46	TML	MCPP	4366	4470	2.4	TML	0.11
47	TM	MCPA	7137	6547	8.3	TM	
48	TM	Dichlorprop	2208940	2015280	8.8	TM	
49	TM	2,4-D	2810340	2532890	9.9	TM	
50	TM	Pentachlorophenol (PCP)	31271000	31484300	0.68	TM	
51	TM	2,4,5-TP (Silvex)	17240200	16786100	2.6	TM	
52	TM	Dinitro-o-cresol (DNOC)	17240200	16786100	2.6	TM	
53	TM	2,4,5-T	13775200	13113800	4.8	TM	
54	TM	Chloramben	8454530	8540970	1.0	TM	
55	TM	Dinoseb	7859430	7373080	6.2	TM	
56	TM	2,4-DB	1498770	1395670	6.9	TM	
57	TM	Bentazon	1320870	1235000	6.5	TM	
58	TM	DCPA (Dacthal)	16182600	15961700	1.4	TM	
59	TM	Picloram	15857500	16338100	3.0	TM	
60	TM	Acifluorfen	10645900	10701600	0.52	TM	
61							
62							
63							
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72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			4.8		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911094.D\ECD1A.CH Vial: 94
Signal #2 : G:\HERBIE\DATA\140911\0911094.D\ECD2B.CH
Acq On : 09-19-14 9:42:33 Operator: MA
Sample : Herb 300/1000 Inst : Herbie
Misc : Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 19 10:58 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
4)	S	2, 4-DCAA (S)	8.72	9.59	5288555	7384074	1.724	1.772	
		Spiked Amount 0.600			Recovery	=	287.33%	295.33%	
		Target Compounds							
1)	TM	Dalapon	2.35	2.79	27981525	41419279	3.746	3.928	
2)	TM	3,5-Dichlorobenz	7.26	8.42	1669486	2521593	0.352	0.357	
3)	CM	4-Nitrophenol	8.06	8.72	1934462	2575614	0.897	0.887	
5)	TM	Dicamba	8.90	9.69	4781475	6381450	0.362	0.359	
6)	TM	MCPP	8.98	9.95	2485706	3433169	355.273	384.436	
7)	TM	MCPA	9.41	10.23	4071879	5028295	332.869	352.287	
8)	TM	Dichlorprop	9.72	10.63	5058685	7738676	1.706	1.752	
9)	TM	2,4-D	10.21	10.95	6841114	9726288	1.730	1.730	
10)	TM	Pentachloropheno	10.71	11.88	16103648	24179931	0.382	0.387	
11)	TM	2,4,5-TP (Silvex	10.99	11.99	7363061	38675078	0.372	1.122	#
12)	TM	Dinitro-o-cresol	11.18	11.99	19480892	38675078	0.737	1.122	#
13)	TM	2,4,5-T	11.54	12.37	6738729	10071421	0.366	0.366	
14)	TM	Chloramben	11.72	12.23	23296103	32797325	1.992	1.940	
15)	TM	Dinoseb	11.93	13.08	9689542	14156315	0.860	0.901	
16)	TM	2,4-DB	12.04	12.95	7201642	10718727	3.503	3.576	
17)	TM	Bentazon	12.85	13.33	3414785	4742381	1.464	1.795	
18)	TM	DCPA (Dacthal)	13.07	14.00	7113304	12258593	0.366	0.379	
19)	TM	Picloram	13.53	13.80	8401703	12547642	0.382	0.396	
20)	TM	Acifluorfen	15.07	16.02	12794054	20547010	0.892	0.965	

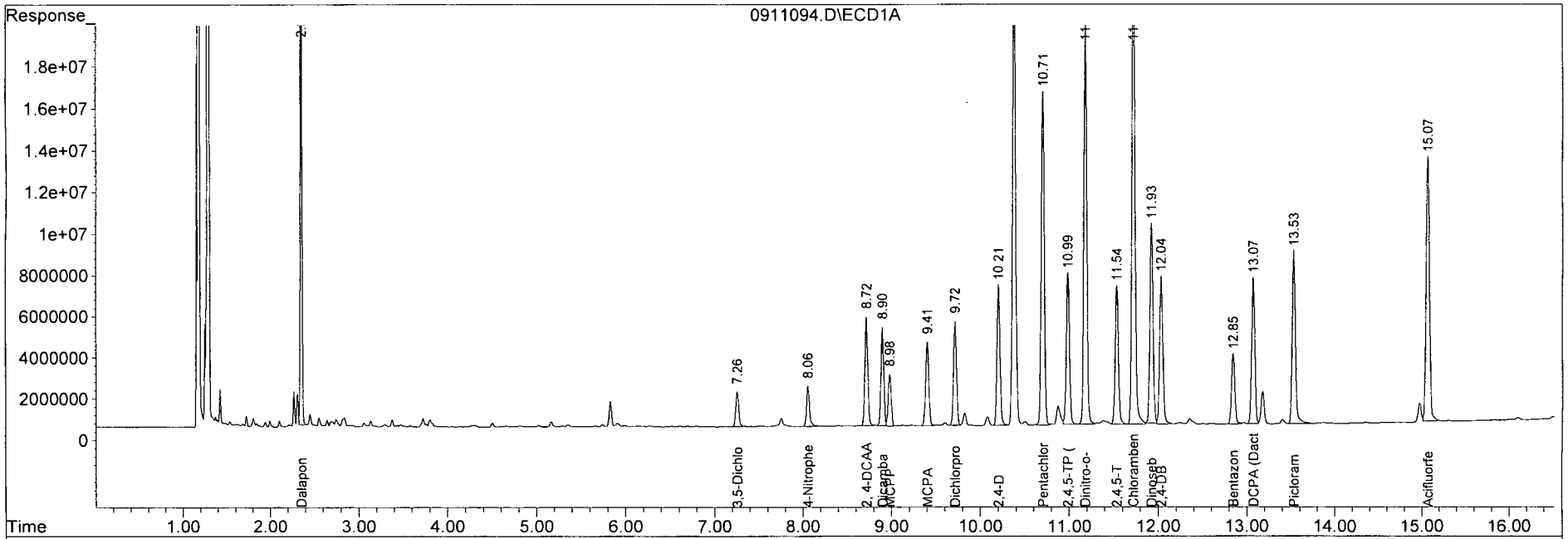
Target Compounds

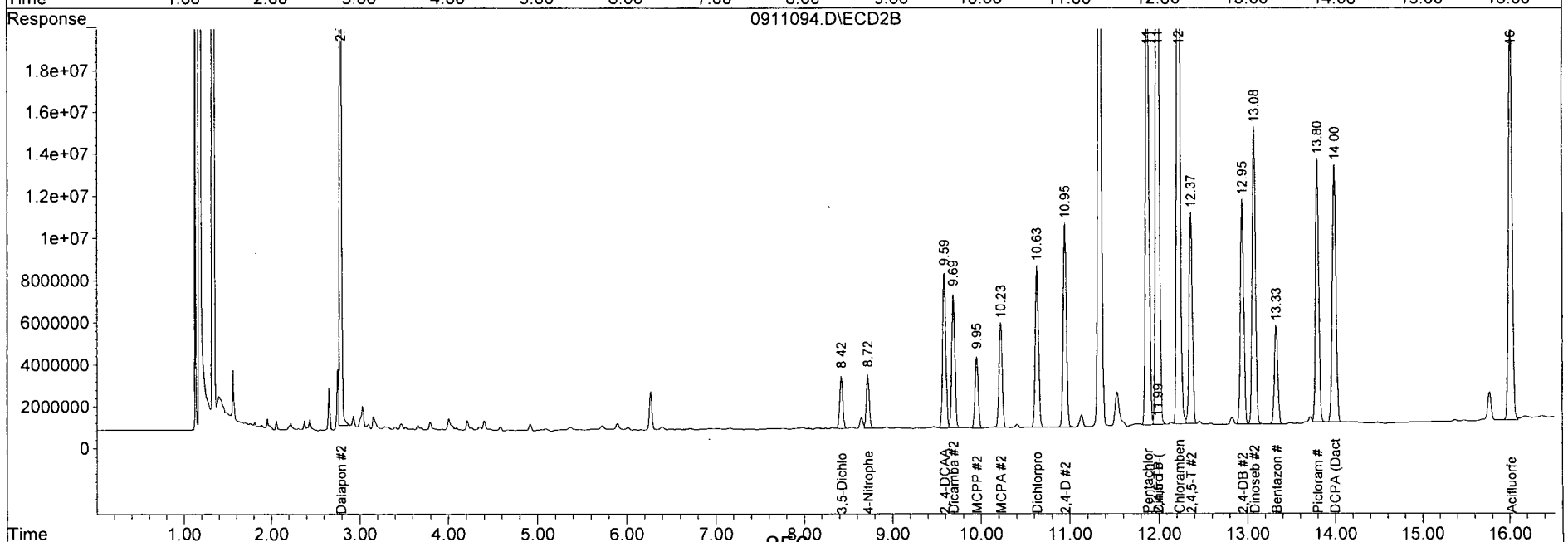
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140911\0911094.D
Acq On : 09-19-14 9:42:33
Sample : Herb 300/1000
Misc :
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 94
Operator: MA
Inst : Herbie
Multiplr: 1.00





EPA METHOD 8151/515
HERB 0703

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/19/14
Instrument: Herbie
Initial Cal. Date: 07/03/14
Data File: 0911104.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Dalapon	3735310	3707910	0.73	TM		
2	TM	3,5-Dichlorobenzoic Acid	2372600	2172760	8.4	TM		
3	TM	4-Nitrophenol	1078450	1001360	7.1	TM		
4	S	2, 4-DCAA (S)	1534140	1360300	11	S		
5	TM	Dicamba	6608060	6356620	3.8	TM		
6	TM	MCPP	3498	3295	5.8	TM		
7	TM	MCPA	6116	5326	13	TM		
8	TM	Dichlorprop	1482880	1312950	11	TM		
9	TM	2,4-D	1976670	1812050	8.3	TM		
10	TM	Pentachlorophenol (PCP)	21099000	21369300	1.3	TM		
11	TM	2,4,5-TP (Silvex)	9902260	9503920	4.0	TM		
12	TM	Dinitro-o-cresol (DNOC)	13213000	12921500	2.2	TM		
13	TM	2,4,5-T	9198970	9072060	1.4	TM		
14	TM	Chloramben	5847410	6018580	2.9	TM		
15	TM	Dinoseb	5632050	5232160	7.1	TM		
16	TM	2,4-DB	1027910	957944	6.8	TM		
17	TM	Bentazon	1166490	910004	22	TM		*NT
18	TM	DCPA (Dacthal)	9719710	9355850	3.7	TM		
19	TM	Picloram	10998900	11653300	6.0	TM		
20	TM	Acifluorfen	7174150	7242780	0.96	TM		
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
		Average			6.4			

EPA METHOD 8151/515
HERB 0703

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 09/19/14
Instrument: Herbie
Cal. Date: 07/03/14
Data File: 0911104.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Dalapon	5272040	5403240	2.5	TM	
42	TM	3,5-Dichlorobenzoic Acid	3530390	3351890	5.1	TM	
43	CM	4-Nitrophenol	1451930	1371920	5.5	CM	
44	S	2, 4-DCAA (S)	2083660	2009830	3.5	S	
45	TM	Dicamba	8887790	8748680	1.6	TM	
46	TML	MCPP	4366	4609	5.6	TML	3.2
47	TM	MCPA	7137	6728	5.7	TM	
48	TM	Dichlorprop	2208940	2044320	7.5	TM	
49	TM	2,4-D	2810340	2575920	8.3	TM	
50	TM	Pentachlorophenol (PCP)	31271000	32539500	4.1	TM	
51	TM	2,4,5-TP (Silvex)	17240200	17018600	1.3	TM	
52	TM	Dinitro-o-cresol (DNOC)	17240200	17018600	1.3	TM	
53	TM	2,4,5-T	13775200	13991400	1.6	TM	
54	TM	Chloramben	8454530	8877360	5.0	TM	
55	TM	Dinoseb	7859430	7479170	4.8	TM	
56	TM	2,4-DB	1498770	1412870	5.7	TM	
57	TM	Bentazon	1320870	1219150	7.7	TM	
58	TM	DCPA (Dacthal)	16182600	15633300	3.4	TM	
59	TM	Picloram	15857500	16807500	6.0	TM	
60	TM	Acifluorfen	10645900	11033400	3.6	TM	
61							
62							
63							
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			4.5		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911104.D\ECD1A.CH Vial: 4
Signal #2 : G:\HERBIE\DATA\140911\0911104.D\ECD2B.CH
Acq On : 09-19-14 13:26:18 Operator: MA
Sample : HERB 300/1000 7/3/14 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 19 14:31 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

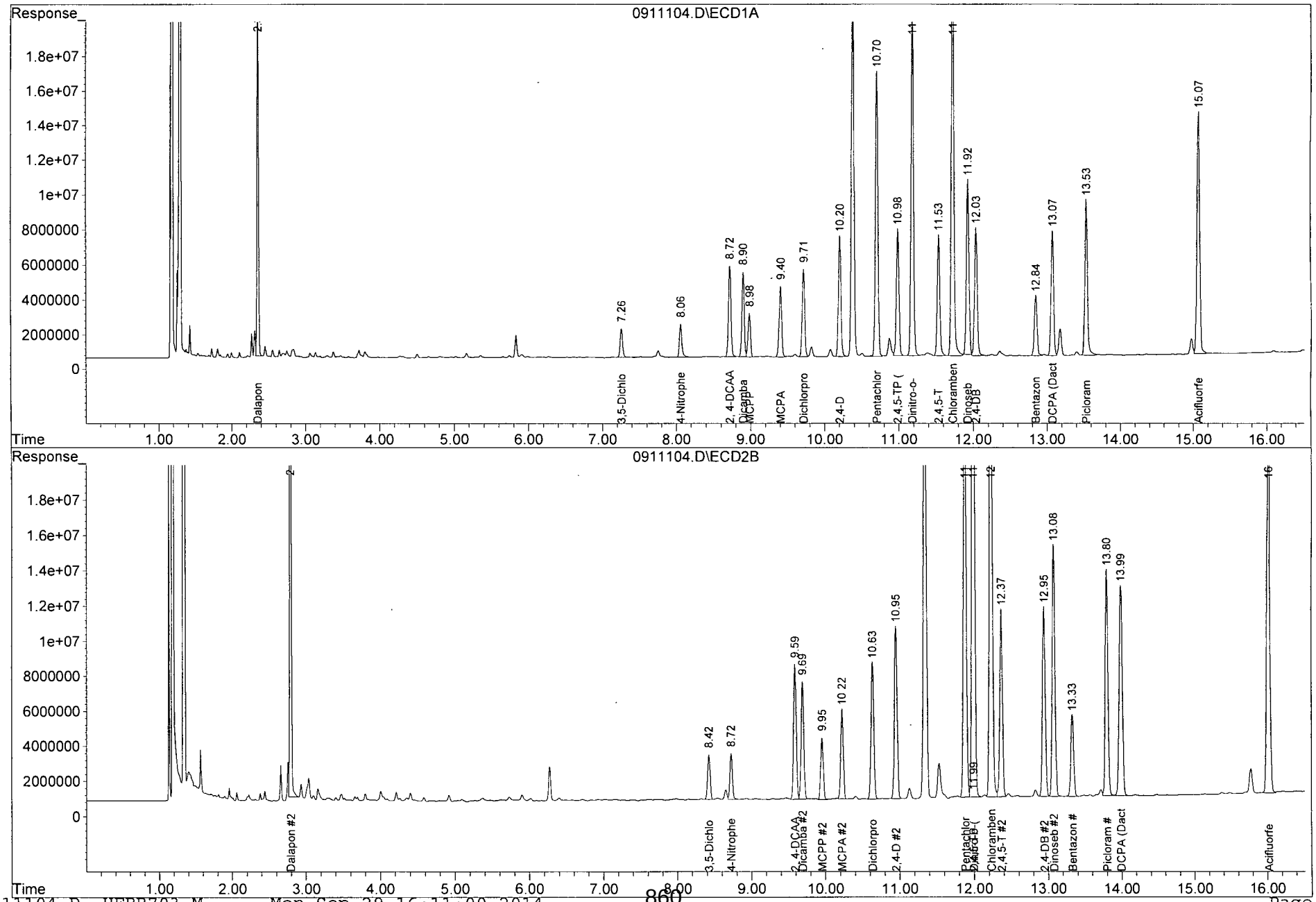
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4) S	2, 4-DCAA (S)	8.72	9.59	5223570	7717752	1.702	1.852	
Spiked Amount	0.600			Recovery	=	283.67%	308.67%	
	Target Compounds							
1) TM	Dalapon	2.35	2.79	28476759	41496882	3.812	3.936	
2) TM	3,5-Dichlorobenz	7.26	8.42	1668678	2574253	0.352	0.365	
3) CM	4-Nitrophenol	8.06	8.72	1922619	2634095	0.891	0.907	
5) TM	Dicamba	8.90	9.69	4881883	6718988	0.369	0.378	
6) TM	MCPP	8.98	9.95	2530690	3539693	361.703	396.419	
7) TM	MCPA	9.40	10.22	4090257	5167423	334.371	362.035	
8) TM	Dichlorprop	9.71	10.63	5041723	7850191	1.700	1.777	
9) TM	2,4-D	10.20	10.95	6958262	9891530	1.760	1.760	
10) TM	Pentachloropheno	10.70	11.88	16411604	24990365	0.389	0.400	
11) TM	2,4,5-TP (Silvex	10.98	11.99	7299014	39210828	0.369	1.137	#
12) TM	Dinitro-o-cresol	11.18	11.99	19847372	39210828	0.751	1.137	#
13) TM	2,4,5-T	11.53	12.37	6967342	10745394	0.379	0.390	
14) TM	Chloramben	11.72	12.23	23111366	34089044	1.976	2.016	
15) TM	Dinoseb	11.92	13.08	10045747	14360000	0.892	0.914	
16) TM	2,4-DB	12.03	12.95	7357012	10850804	3.579	3.620	
17) TM	Bentazon	12.84	13.33	3494417	4681526	1.498	1.772	
18) TM	DCPA (Dacthal)	13.07	13.99	7185296	12006341	0.370	0.371	
19) TM	Picloram	13.53	13.80	8949754	12908135	0.407	0.407	
20) TM	Acifluorfen	15.07	16.02	13906136	21184125	0.969	0.995	

Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140911\0911104.D Vial: 4
Acq On : 09-19-14 13:26:18 Operator: MA
Sample : HERB 300/1000 7/3/14 Inst : Herbie
Misc : water Multiplr: 1.00
Quant Method : G:\HERBIE\DATA\140911\HERB703.M



EPA METHOD 8151A
Chlorinated Herbicides

Raw Data

APPL, INC.

Method Blank
EPA 8151 WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **140908W-02108 - 190297**
Batch ID: #815E2-140908A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2,4,5-T	0.090 U	0.10	0.090	0.029	ug/L	09/08/14	09/15/14
BLANK	2,4,5-TP	0.090 U	0.10	0.090	0.069	ug/L	09/08/14	09/15/14
BLANK	2,4-D	0.450 U	0.50	0.450	0.152	ug/L	09/08/14	09/15/14
BLANK	DALAPON	0.90 U	1.0	0.90	0.59	ug/L	09/08/14	09/15/14
BLANK	SURROGATE: 2,4-DCAA (S)	82.5	33-154			%	09/08/14	09/15/14

Quant Method: HERB703.M
Run #: 0911033
Instrument: Herbie
Sequence: 140911
Initials: MA

GC SC-Blank-REG MDLs
Printed: 09/29/14 4:36:19 PM

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911033.D\ECD1A.CH Vial: 33
Signal #2 : G:\HERBIE\DATA\140911\0911033.D\ECD2B.CH
Acq On : 09-15-14 10:27:34 Operator: MA
Sample : 140908A BLK 5/1000 Inst : Herbie
Misc : water Multiplr: 5.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:01 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

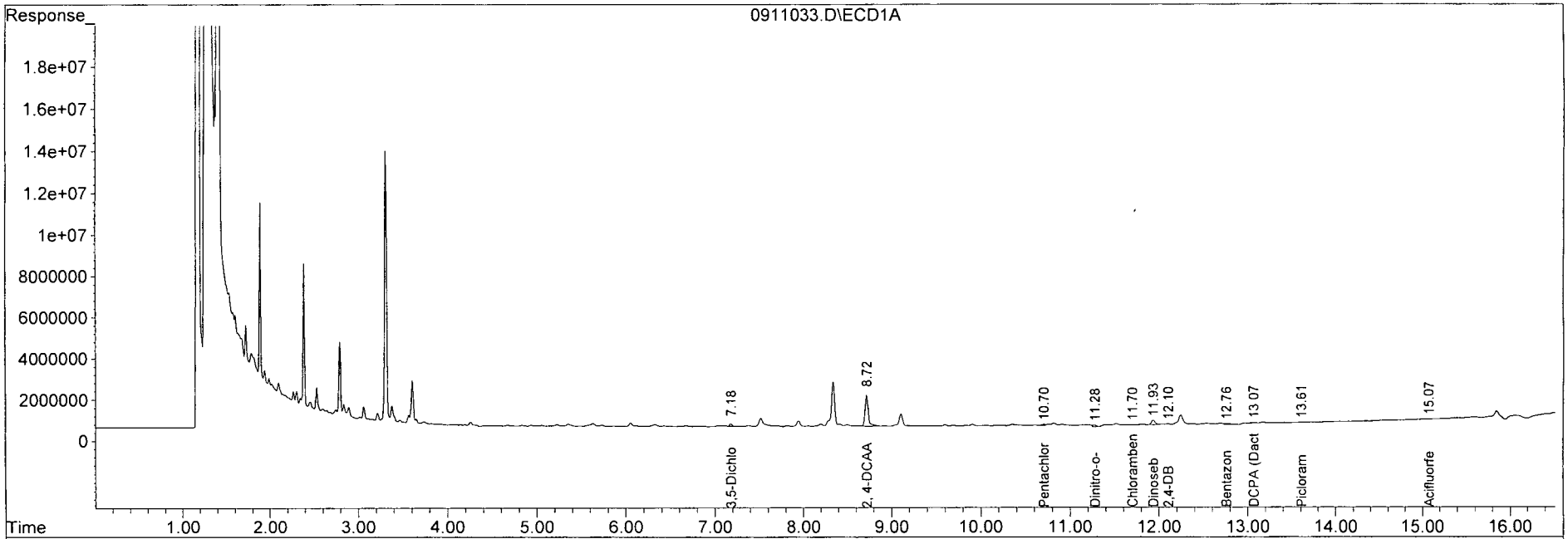
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	1518442	2045716	2.474	2.454
	Spiked Amount 3.000			Recovery	=	82.47%	81.80%
	Target Compounds						
2) TM	3,5-Dichlorobenz	7.18f	8.42	128315	79202	0.135	0.056 #
3) CM	4-Nitrophenol	0.00	8.72	0	261296	N.D.	0.450 #
5) TM	Dicamba	0.00	9.68	0	299116	N.D.	0.084 #
8) TM	Dichlorprop	0.00	10.63	0	220217	N.D.	0.249 #
10) TM	Pentachloropheno	10.70	0.00	47721	0	0.006	N.D. #
12) TM	Dinitro-o-cresol	11.28f	0.00	85517	0	0.016	N.D. #
14) TM	Chloramben	11.70	0.00	23119	0	0.010	N.D. #
15) TM	Dinoseb	11.93	13.04	221084	195987	0.098	0.062 #
16) TM	2,4-DB	12.10f	13.04f	38479	195987	0.094	0.327 #
17) TM	Bentazon	12.76f	13.27f	47625	670299	0.102	1.269 #
18) TM	DCPA (Dacthal)	13.07	0.00	45112	0	0.012	N.D. #
19) TM	Picloram	13.61f	0.00	34677	0	0.008	N.D. #
20) TM	Acifluorfen	15.07	16.02	30759	88600	0.011	0.021 #
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
6) TM	MCPP	0.00	0.00	0	0	N.D.	N.D.
7) TM	MCPA	0.00	0.00	0	0	N.D.	N.D.
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d

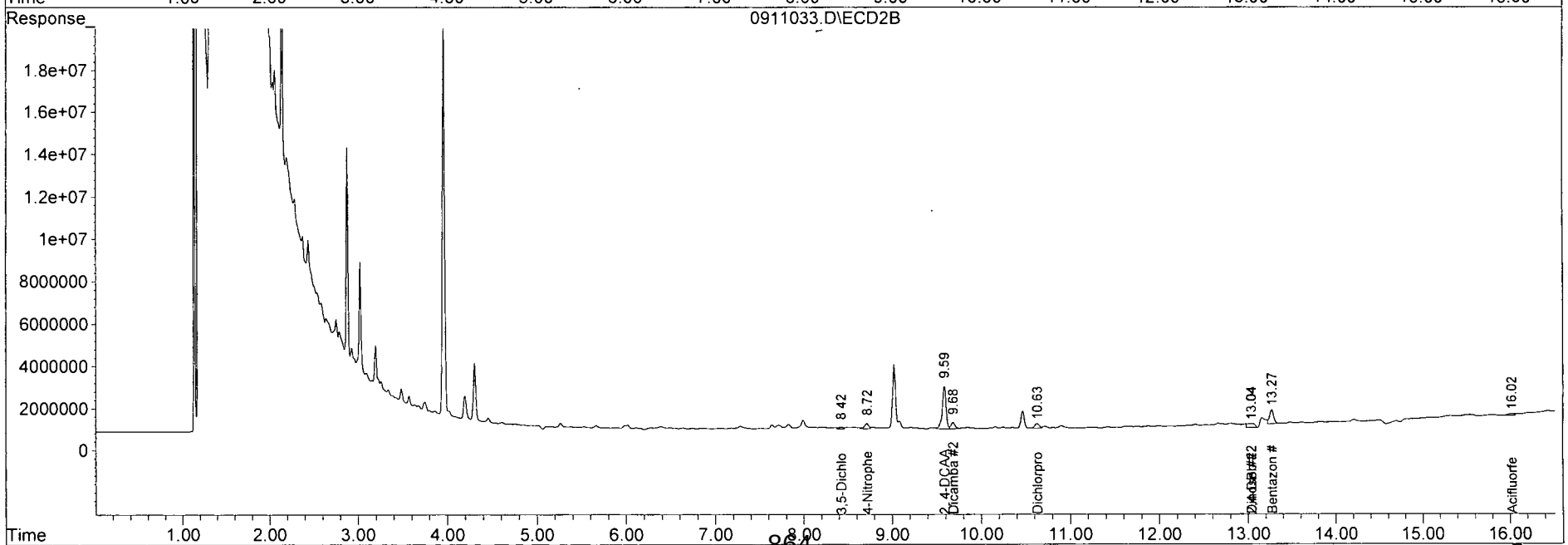
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911033.D
Acq On : 09-15-14 10:27:34
Sample : 140908A BLK 5/1000
Misc : water
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 33
Operator: MA
Inst : Herbie
Multiplr: 5.00





Method Blank
EPA 8151A ISM SOIL

Blank Name/QCG: **140916S-02100 - 190299**
Batch ID: #815E2-140916A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2,4,5-T	0.038 U	0.04	0.038	0.022	mg/kg	09/16/14	09/18/14
BLANK	2,4,5-TP (SILVEX)	0.038 U	0.04	0.038	0.014	mg/kg	09/16/14	09/18/14
BLANK	2,4-D	0.192 U	0.20	0.192	0.085	mg/kg	09/16/14	09/18/14
BLANK	DALAPON	0.38 U	2.0	0.38	0.12	mg/kg	09/16/14	09/18/14
BLANK	SURROGATE: 2,4-DCAA (S)	75.3	45-140			%	09/16/14	09/18/14

Quant Method:HERB703.M
Run #:0911069
Instrument:Herbie
Sequence:140911
Initials:MA

GC SC-Blank-REG MDLs
Printed: 09/29/14 4:36:19 PM

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911069.D\ECD1A.CH Vial: 69
Signal #2 : G:\HERBIE\DATA\140911\0911069.D\ECD2B.CH
Acq On : 09-18-14 10:54:57 Operator: MA
Sample : 140916A BLK 10/5.04 Inst : Herbie
Misc : soil Multiplr: 1984.13
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:04 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

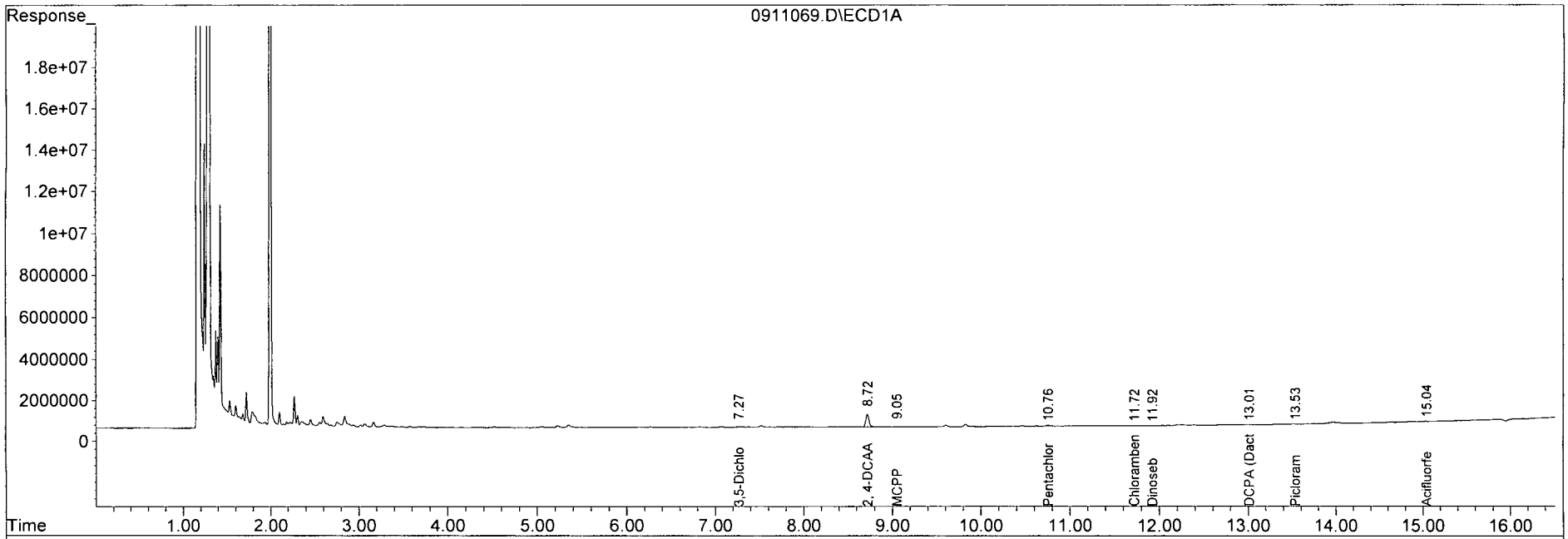
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	630201	941597	407.525	448.310
	Spiked Amount 595.238			Recovery	=	68.46%	75.32%
	Target Compounds						
2) TM	3,5-Dichlorobenz	7.27	8.42	28768	27264	12.029	7.661 #
6) TM	MCPP	9.05f	10.03f	13953	14630	3956.860	N.D. #
7) TM	MCPA	0.00	10.14f	0	152375	N.D.	21181.665 #
8) TM	Dichlorprop	0.00	10.63	0	17964	N.D.	8.068 #
10) TM	Pentachloropheno	10.76f	11.88	55132	25209	2.592	0.800 #
12) TM	Dinitro-o-cresol	0.00	12.00	0	54948	N.D.	3.162 #
14) TM	Chloramben	11.72	12.24	27148	73477	4.606	8.622 #
15) TM	Dinoseb	11.92	13.08	8329	24260	1.467	3.062 #
17) TM	Bentazon	0.00	13.28f	0	67824	N.D.	50.940 #
18) TM	DCPA (Dacthal)	13.01f	13.98	6399	22910	0.653	1.404 #
19) TM	Picloram	13.53	13.82	12356	22468	1.114	1.406 #
20) TM	Acifluorfen	15.04	16.04	25014	46870	3.459	4.368 #
	Target Compounds						
1) TM	Dalapon	0.00	0.00	0	0	N.D. d	N.D. d
3) CM	4-Nitrophenol	0.00	0.00	0	0	N.D.	N.D.
5) TM	Dicamba	0.00	0.00	0	0	N.D.	N.D.
9) TM	2,4-D	0.00	0.00	0	0	N.D. d	N.D. d
11) TM	2,4,5-TP (Silvex	0.00	0.00	0	0	N.D. d	N.D. d
13) TM	2,4,5-T	0.00	0.00	0	0	N.D. d	N.D. d
16) TM	2,4-DB	0.00	0.00	0	0	N.D.	N.D.

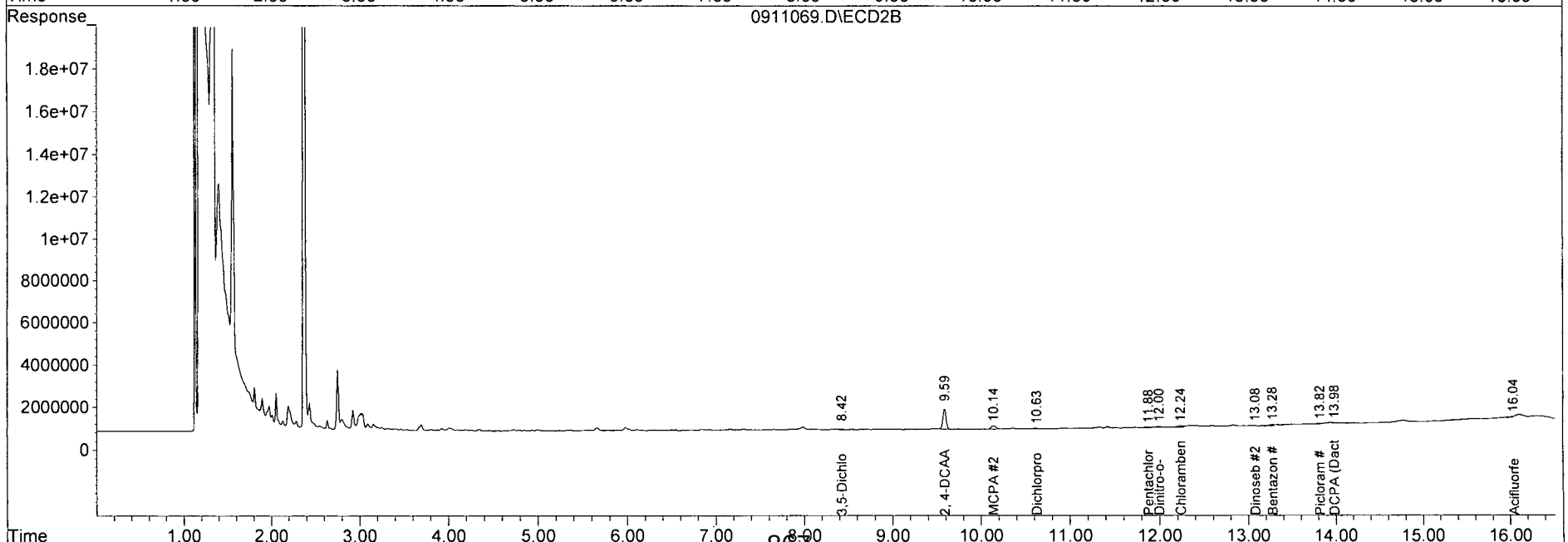
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\140911\0911069.D
Acq On : 09-18-14 10:54:57
Sample : 140916A BLK 10/5.04
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 69
Operator: MA
Inst : Herbie
Multiplr: 1984.13





Laboratory Control Spike Recovery
EPA 8151A ISM SOIL

APPL ID: **140916S-02100 LCS - 190299**
Batch ID: #815E2-140916A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
2,4,5-T	0.128	0.132	103	45-135
2,4,5-TP (SILVEX)	0.128	0.125	97.7	45-125
2,4-D	0.640	0.620	96.9	35-145
DALAPON	1.28	0.838	65.5	44-139
SURROGATE: 2,4-DCAA (S)	0.640	0.788	123	45-140

Comments: _____

Primary	SPK
Quant Method :	HERB703.M
Extraction Date :	09/16/14
Analysis Date :	09/18/14
Instrument :	Herbie
Run :	0911070
Initials :	MA

Printed: 09/29/14 4:53:24 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911070.D\ECD1A.CH Vial: 70
Signal #2 : G:\HERBIE\DATA\140911\0911070.D\ECD2B.CH
Acq On : 09-18-14 11:17:27 Operator: MA
Sample : 140916A LCS-1 10/5.01 Inst : Herbie
Misc : soil Multiplr: 1996.01
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 18 15:36 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	1144962	1645427	744.832	788.105
Spiked Amount	598.802			Recovery	=	124.39%	131.61%
	Target Compounds						
1) TM	Dalapon	2.35	2.79	3041316	4427376	812.583	838.108
2) TM	3,5-Dichlorobenz	7.26	8.42	408540	599511	171.848	169.476
3) CM	4-Nitrophenol	8.06	8.73	420148	565376	388.808	388.619
5) TM	Dicamba	8.90	9.69	759192	1116962	114.660	125.423
6) TM	MCPP	8.98	9.95	516657	617273	147393.381	135055.541
7) TM	MCPA	9.40	10.22	884683	1015289	144353.876	141980.481
8) TM	Dichlorprop	9.72	10.64	1111497	1566873	748.057	707.919
9) TM	2,4-D	10.21	10.95	1211730	1745442	611.792	619.839
10) TM	Pentachloropheno	10.70	11.88	3143978	4743275	148.713	151.380
11) TM	2,4,5-TP (Silvex	10.99	11.99	1243468	5516864	125.324	319.361 #
12) TM	Dinitro-o-cresol	11.18	11.99	2481734	5516864	187.450	319.361 #
13) TM	2,4,5-T	11.54	12.37	1214780	1816174	131.793	131.581
14) TM	Chloramben	11.73	12.23	4650410	7110610	793.708	839.364
15) TM	Dinoseb	11.93	13.08	1912476	2705923	338.893	343.603
16) TM	2,4-DB	12.04	12.95	1321495	1947984	1283.045	1297.130
17) TM	Bentazon	12.85	13.33	729030	1003904	623.728	758.514
18) TM	DCPA (Dacthal)	13.07	14.00	78944	104321	8.106	6.434
19) TM	Picloram	13.54	13.81	266139	376499	24.149	23.695
20) TM	Acifluorfen	15.07	16.02	1959406	2940616	272.576	275.670

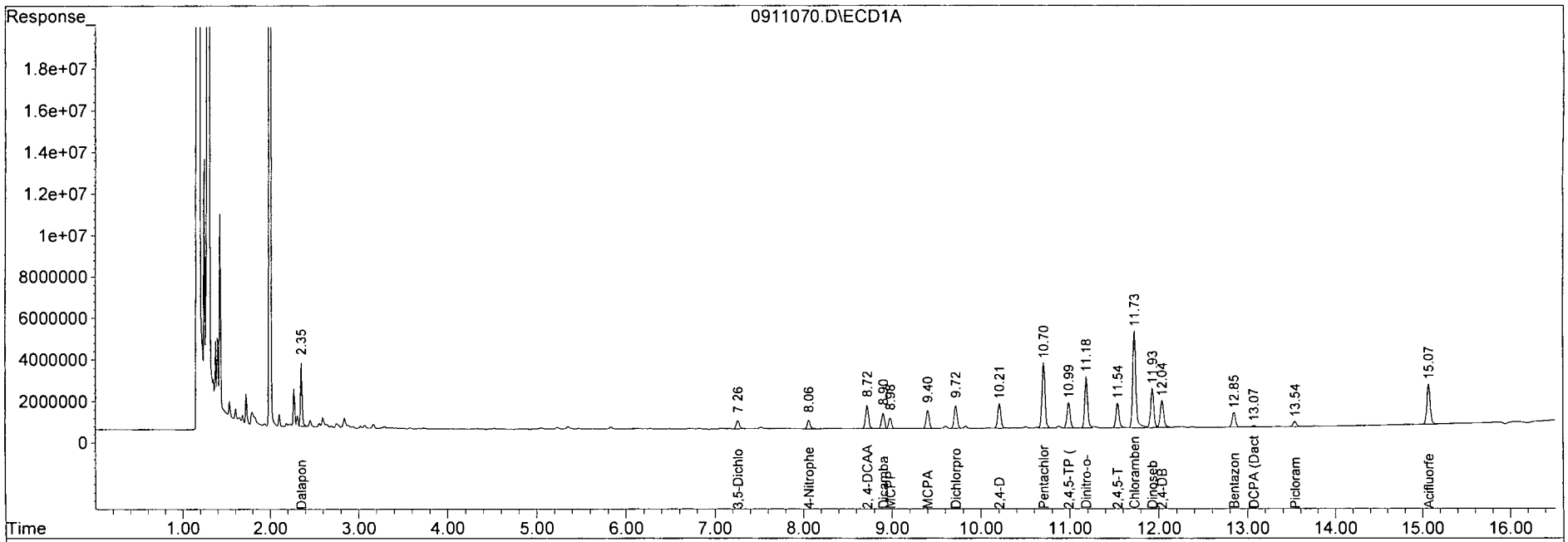
Target Compounds

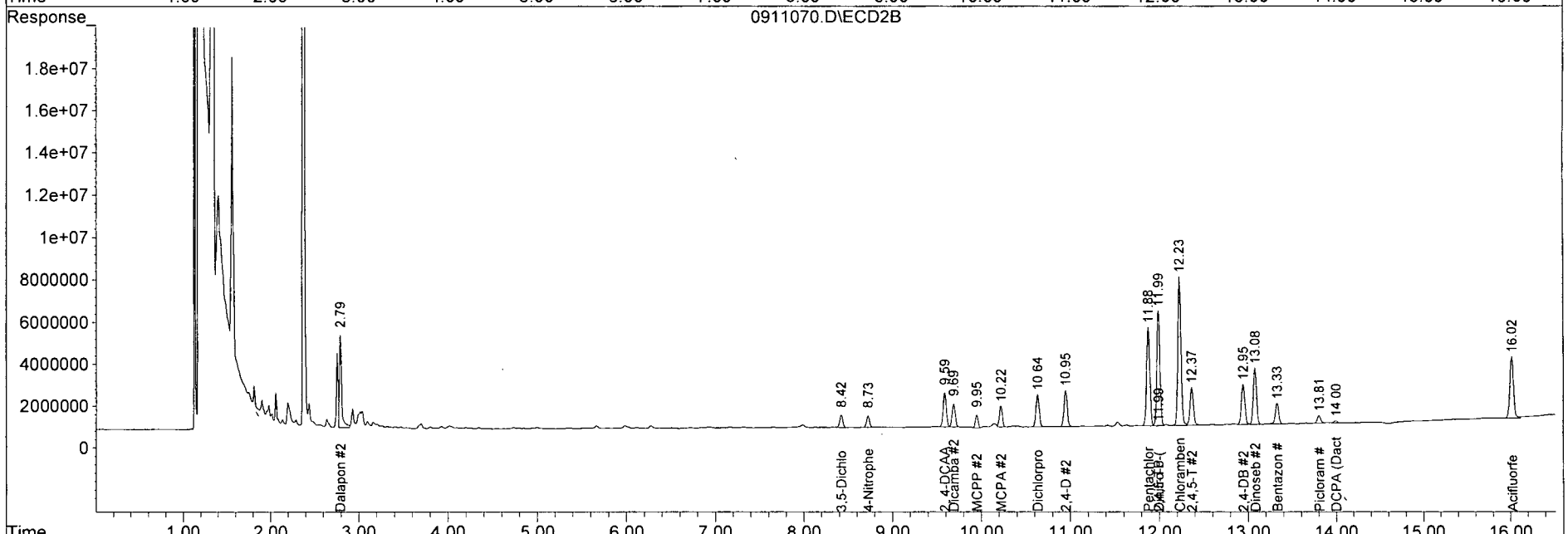
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140911\0911070.D
Acq On : 09-18-14 11:17:27
Sample : 140916A LCS-1 10/5.01
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 70
Operator: MA
Inst : Herbie
Multiplr: 1996.01





870

Laboratory Control Spike Recovery
EPA 8151 WATER

APPL ID: **140908W-02108 LCS - 190297**
Batch ID: #815E2-140908A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2,4,5-T	0.640	0.634	99.1	35-110
2,4,5-TP	0.640	0.544	85.0	50-115
2,4-D	3.20	2.94	91.9	35-115
DALAPON	6.40	3.08	48.1	40-110
SURROGATE: 2,4-DCAA (S)	3.20	3.23	101	33-154

Comments: _____

Primary	SPK
Quant Method :	HERB703.M
Extraction Date :	09/08/14
Analysis Date :	09/15/14
Instrument :	Herbie
Run :	0911032
Initials :	MA

Printed: 09/29/14 4:53:24 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911032.D\ECD1A.CH Vial: 32
Signal #2 : G:\HERBIE\DATA\140911\0911032.D\ECD2B.CH
Acq On : 09-15-14 10:05:06 Operator: MA
Sample : 140908A LCS-1 5/1000 Inst : Herbie
Misc : water Multiplr: 5.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 29 15:01 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4) S	2, 4-DCAA (S)	8.72	9.59	1984832	2670964	3.234	3.205	
Spiked Amount	3.000			Recovery	=	107.80%	106.83%	
	Target Compounds							
1) TM	Dalapon	2.35	2.79	3788056	6484542	2.535	3.075	
2) TM	3,5-Dichlorobenz	7.26	8.42	659301	1012861	0.695	0.717	
3) CM	4-Nitrophenol	8.06	8.73	549945	811533	1.275	1.397	
5) TM	Dicamba	8.90	9.69	1427514	2236379	0.540	0.629	
6) TM	MCPP	8.98	9.95	890890	1125003	636.659	623.898	
7) TM	MCPA	9.40	10.22	1510847	1735677	617.545	608.016	
8) TM	Dichlorprop	9.72	10.64	1870707	2843206	3.154	3.218	
9) TM	2,4-D	10.20	10.95	2323585	3410913	2.939	3.034	
10) TM	Pentachloropheno	10.70	11.88	5624770	8471411	0.666	0.677	
11) TM	2,4,5-TP (Silvex	10.99	11.99	2156663	10287776	0.544	1.492	#
12) TM	Dinitro-o-cresol	11.18	11.99	5084789	10287776	0.962	1.492	#
13) TM	2,4,5-T	11.54	12.37	2333553	3398144	0.634	0.617	
14) TM	Chloramben	11.72	12.23	305856	437473	0.131	0.129	
15) TM	Dinoseb	11.93	13.08	3548023	4842202	1.575	1.540	
16) TM	2,4-DB	12.04	12.95	2319245	3172689	5.641	5.292	
17) TM	Bentazon	12.85	13.33	1132414	1529731	2.427	2.895	
18) TM	DCPA (Dacthal)	13.07	14.00	264514	384505	0.068	0.059	
19) TM	Picloram	13.53	13.80	1830887	2627944	0.416	0.414	
20) TM	Acifluorfen	15.07	16.02	4510381	6058477	1.572	1.423	

Target Compounds

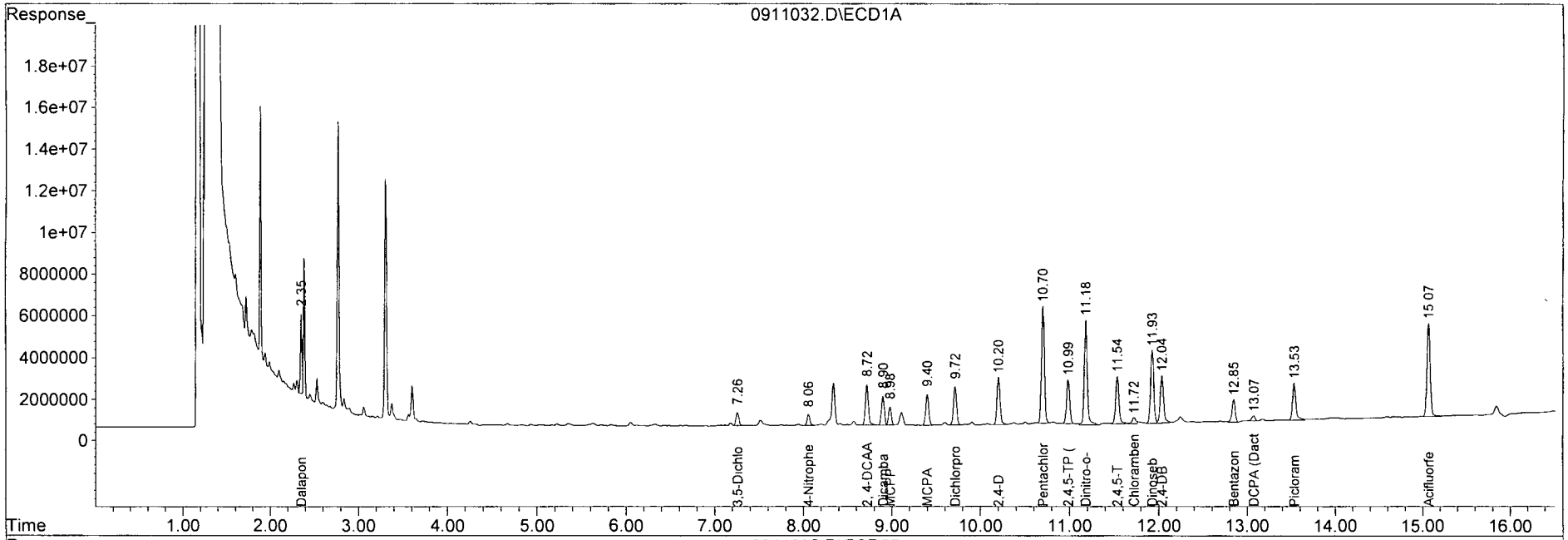
Algorithm = $\frac{3788056 \times 5}{2 \times 3733510} = 2.535$ HA 9/29/14

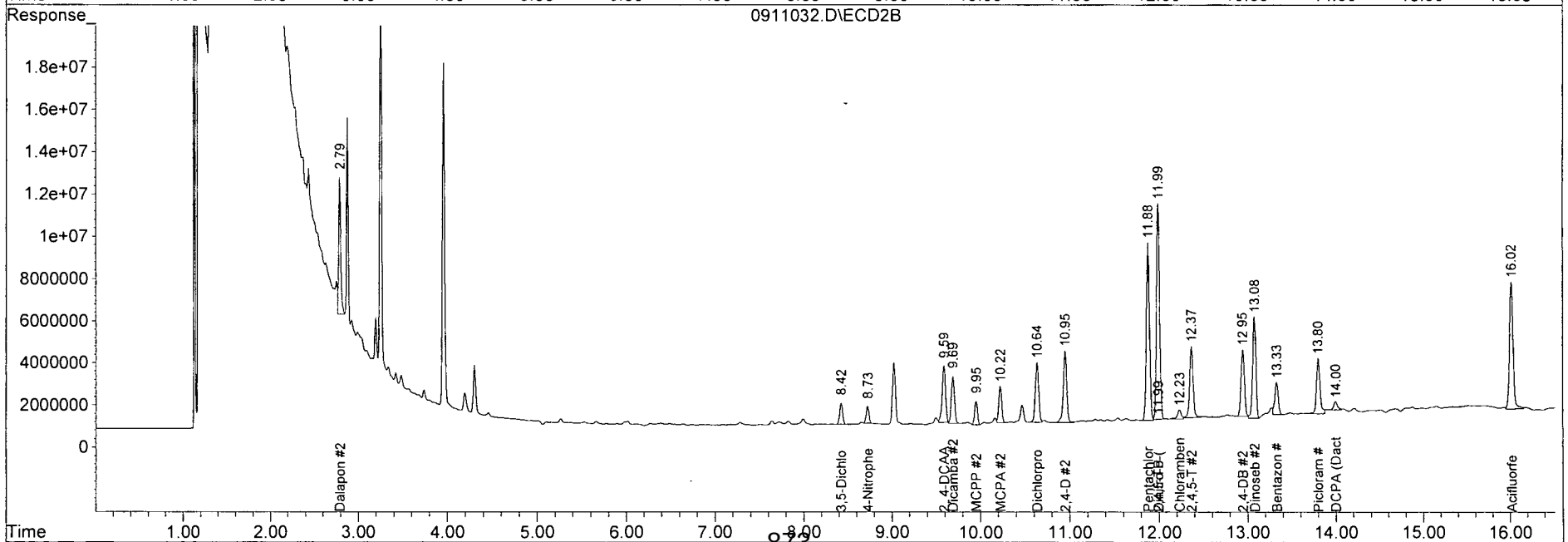
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140911\0911032.D
Acq On : 09-15-14 10:05:06
Sample : 140908A LCS-1 5/1000
Misc : water
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 32
Operator: MA
Inst : Herbie
Multiplr: 5.00





Matrix Spike Recoveries

EPA 8151A ISM SOIL

APPL ID: **140916S-02100 MS - 190299**
Batch ID: #815E2-140916A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2,4,5-T	0.128	ND	0.0982	0.0835	76.7	65.2	45-135	16.2	30
2,4,5-TP (SILVEX)	0.128	ND	0.126	0.114	98.4	89.1	45-125	10.0	30
2,4-D	0.640	ND	0.207	0.175	32.3 #	27.3 #	35-145	16.8	30
DALAPON	1.28	ND	0.186	0.190	14.5 #	14.8 #	44-139	2.1	30
SURROGATE: 2,4-DCAA (S)	0.640	NA	0.721	0.670	113	105	45-140		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	HERB703.M	HERB703.M
Extraction Date :	09/16/14	09/16/14
Analysis Date :	09/19/14	09/19/14
Instrument :	Herbie	Herbie
Run :	0911096	0911097
Initials :	MA	

Printed: 09/29/14 4:53:26 PM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911096.D\ECD1A.CH Vial: 96
Signal #2 : G:\HERBIE\DATA\140911\0911096.D\ECD2B.CH
Acq On : 09-19-14 10:27:23 Operator: MA
Sample : AZ02100 MS-1 10/5.13 Inst : Herbie
Misc : soil Multiplr: 1949.32
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 19 11:29 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	1120518	1541548	711.879	721.079
	Spiked Amount 584.795			Recovery	=	121.73%	123.30%
	Target Compounds						
1) TM	Dalapon	2.35	2.81	364125	1007741	95.012	186.304 #
2) TM	3,5-Dichlorobenz	7.26	8.42	418814	666798	172.048	184.088
3) CM	4-Nitrophenol	8.06	8.72	513084	719831	463.705	483.211
5) TM	Dicamba	8.89	0.00	44545	0	6.570	N.D. #
6) TM	MCPP	8.98	9.95	478894	536921	133424.315	114276.017
7) TM	MCPA	9.40	10.22	497307	535685	79247.443	73159.103
8) TM	Dichlorprop	9.71	10.63	790155	1168440	519.348	515.556
9) TM	2,4-D	10.20	10.95	438292	597972	216.113	207.383
10) TM	Pentachloropheno	10.70	11.88	3098815	4626671	143.148	144.205
11) TM	2,4,5-TP (Silvex	10.98	11.99	1275587	5574360	125.553	315.141 #
12) TM	Dinitro-o-cresol	11.18	11.99	2493170	5574360	183.909	315.141 #
13) TM	2,4,5-T	11.53	12.36	869289	1387765	92.104	98.191
14) TM	Chloramben	11.72	12.23	303218	434643	50.541	50.107
15) TM	Dinoseb	11.93	13.08	2273845	3243017	393.502	402.171
16) TM	2,4-DB	12.03	12.94	1563971	2246123	1482.945	1460.668
17) TM	Bentazon	12.85	13.33	216746	275107	181.101	202.999
18) TM	DCPA (Dacthal)	13.05	14.09f	40243	69493	4.035	4.185
19) TM	Picloram	0.00	13.82	0	60404	N.D.	3.713 #
20) TM	Acifluorfen	15.07	16.02	2759039	4194512	374.835	384.019

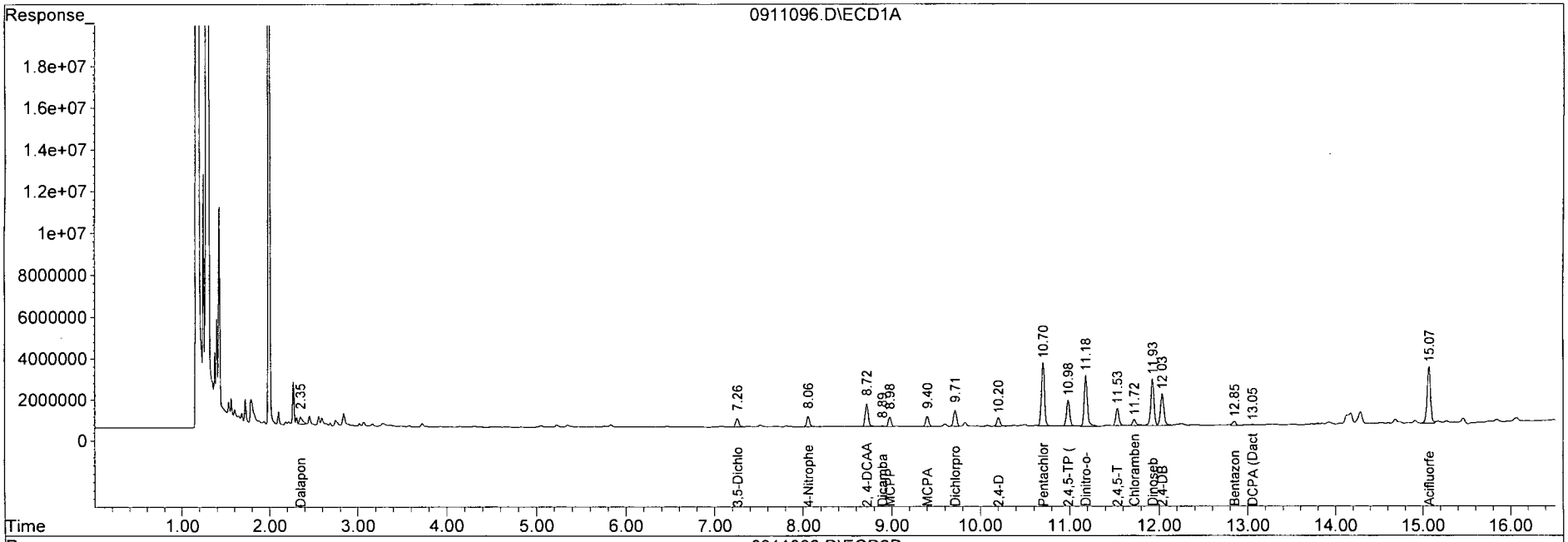
Target Compounds

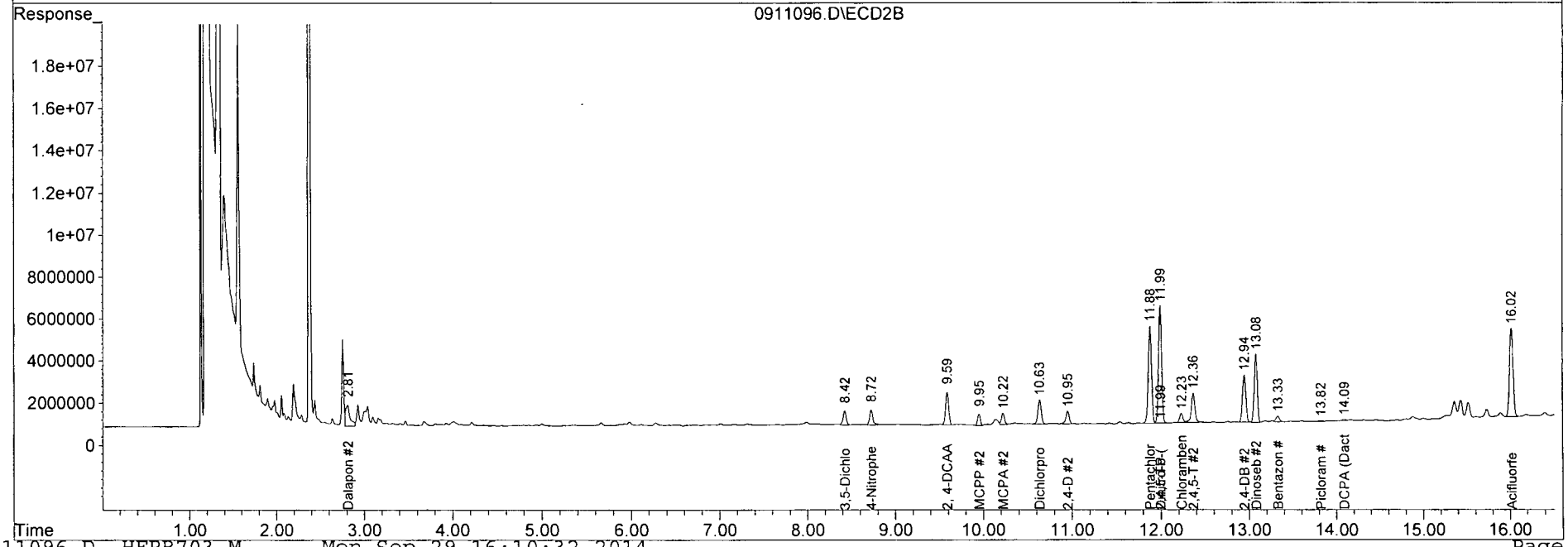
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140911\0911096.D
Acq On : 09-19-14 10:27:23
Sample : AZ02100 MS-1 10/5.13
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 96
Operator: MA
Inst : Herbie
Multiplr: 1949.32





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\140911\0911097.D\ECD1A.CH Vial: 97
Signal #2 : G:\HERBIE\DATA\140911\0911097.D\ECD2B.CH
Acq On : 09-19-14 10:49:46 Operator: MA
Sample : AZ02100 MSD-1 10/5.33 Inst : Herbie
Misc : soil Multiplr: 1876.17
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Sep 19 11:29 2014 Quant Results File: HERB703.RES

Quant Method : G:\HERBIE\DATA\140911\HERB703.M (RTE Integrator)
Title : 8151/515
Last Update : Thu Jul 03 16:12:53 2014
Response via : Initial Calibration
DataAcq Meth : 8151N2.M

Volume Inj. : 2 ul
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.32 mm Signal #2 Info : 0.32 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	2, 4-DCAA (S)	8.72	9.59	1082384	1488116	661.849	669.966
Spiked Amount	562.852			Recovery	=	117.59%	119.03%
	Target Compounds						
1) TM	Dalapon	2.35	2.81	315911	1070319	79.338	190.448 #
2) TM	3,5-Dichlorobenz	7.25	8.42	391102	593013	154.635	157.574
3) CM	4-Nitrophenol	8.06	8.72	473075	667236	411.503	431.098
5) TM	Dicamba	8.89	0.00	45749	0	6.495	N.D. #
6) TM	MCPP	8.98	9.95	449642	507411	120573.707	103759.630
7) TM	MCPA	9.40	10.22	456272	470138	69980.117	61797.997
8) TM	Dichlorprop	9.71	10.63	758480	1096014	479.822	465.453
9) TM	2,4-D	10.20	10.95	380718	523311	180.680	174.680
10) TM	Pentachloropheno	10.70	11.88	2829362	4428025	125.797	132.834
11) TM	2,4,5-TP (Silvex	10.98	11.99	1203587	5229567	114.021	284.554 #
12) TM	Dinitro-o-cresol	11.18	11.99	2395968	5229567	170.107	284.554 #
13) TM	2,4,5-T	11.53	12.36	764668	1226731	77.979	83.540
14) TM	Chloramben	11.72	12.23	271818	363616	43.607	40.346
15) TM	Dinoseb	11.92	13.08	2100002	3023570	349.781	360.888
16) TM	2,4-DB	12.03	12.94	1425042	2134789	1300.511	1336.175
17) TM	Bentazon	12.84	13.33	200976	256946	161.623	182.483
18) TM	DCPA (Dacthal)	13.05	14.09f	50968	85140	4.919	4.935
19) TM	Picloram	0.00	13.82	0	90271	N.D.	5.340 #
20) TM	Acifluorfen	15.07	16.02	2459168	3872256	321.559	341.213

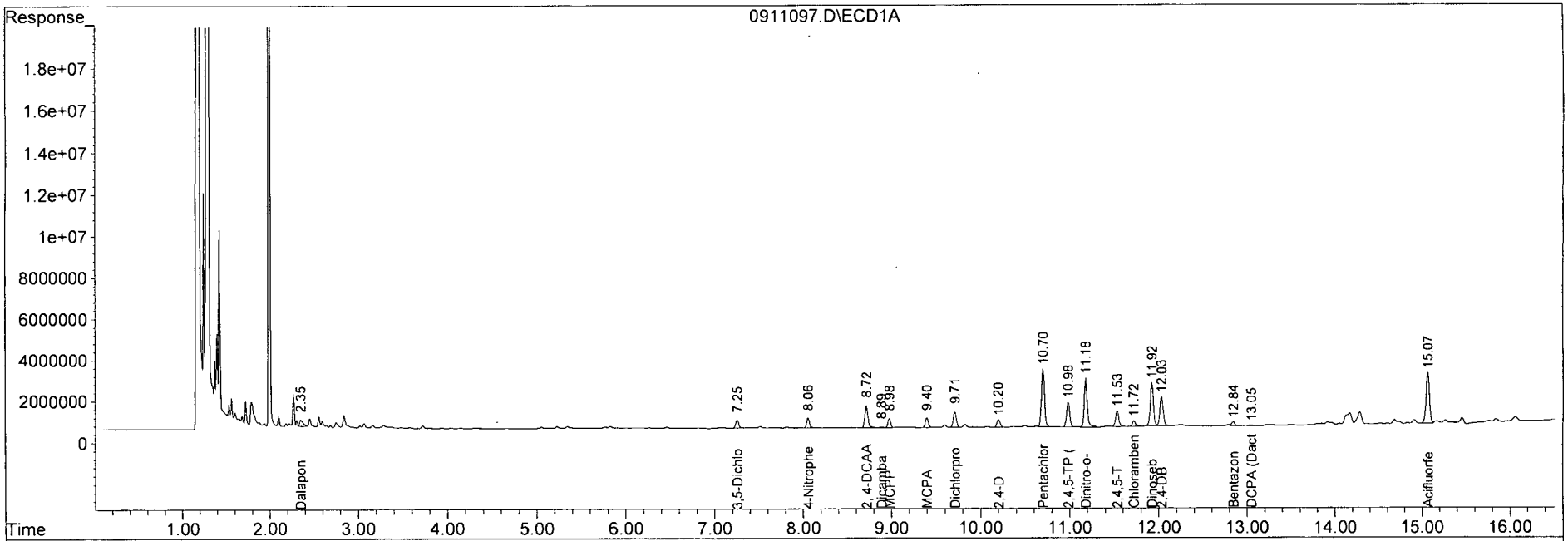
Target Compounds

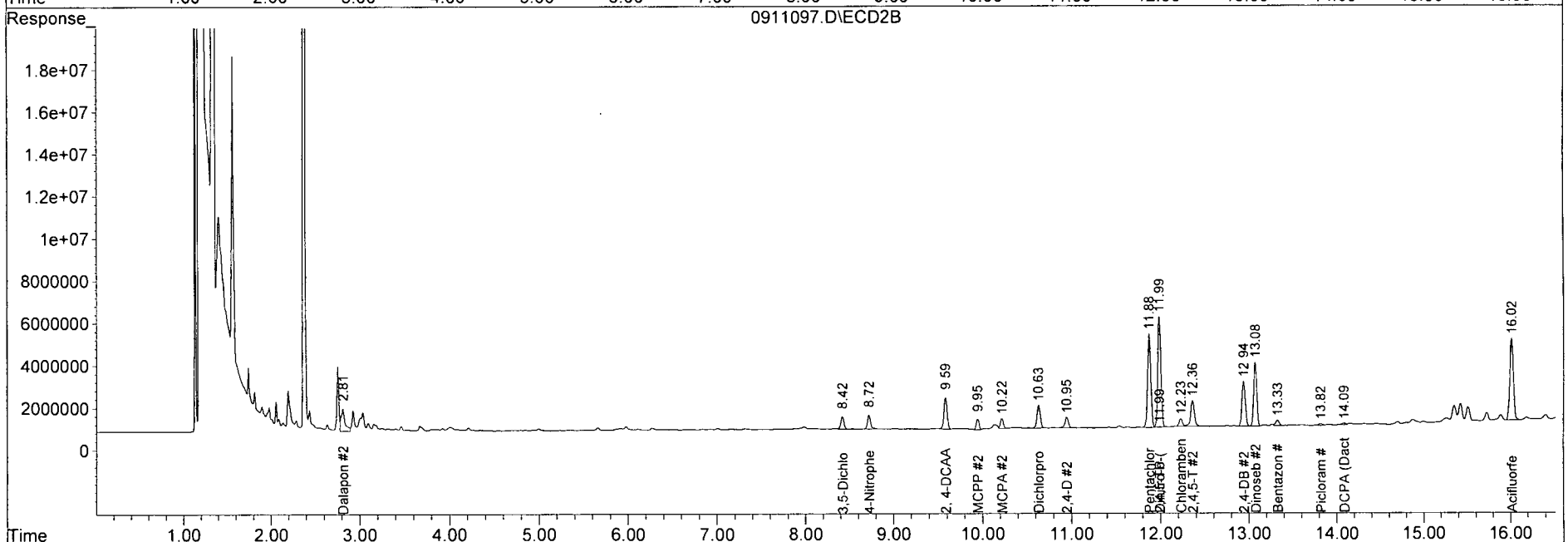
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\140911\0911097.D
Acq On : 09-19-14 10:49:46
Sample : AZ02100 MSD-1 10/5.33
Misc : soil
Quant Method : G:\HERBIE\DATA\140911\HERB703.M

Vial: 97
Operator: MA
Inst : Herbie
Multiplr: 1876.17





878

DATE/INITIALS	STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOURCE LOT#	

075

LOG BOOK #41

GA 7/3/14

HERBICIDE CALIBRATION CURVE

COMPOUND	FINAL CONC (ug/ml)	INITIAL CONC (ug/ml)	ALIQUOT (uL)	STOCK SOURCE	FINAL VOL SOLVENT
HERBICIDE CURVE	VARIOUS	VARIOUS	15 µL	HERB STD	1 mL
			50 µL	PREP: 01/28/14	MTBE
			100 µL	EXP: 01/28/15	
			200 µL	CON.: VARIOUS	Lot#
			300 µL		50223
			400 µL		
HERBICIDE 2ND SRC	VARIOUS	VARIOUS	200 µL	HERB STD PREP	1 mL
				PREP: 01/28/14	MTBE
				EXP:01/28/15	Lot# 50223

GA 7/3/14
9/10/14

GA 7/1/14
1/1/14

GA
1/1/14
1/1/15

GA 7/1/14

OPF 100/200 CCV

SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL
	OPF STD	5		06/24/14	08/10/14	100
VWR	HEXANE		080613A			100
					Final VOL.	200

GA 7/2/14 7/3/14
8/10/14

GA 7/7/14

PAC ECO CURVE

	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	1a µL	1b µL	1 µL	2 µL	3 µL	4 µL	5 µL	8 µL
	PAC ECO CAL STD	5		06/23/14	11/09/14	2	5	10	50	20	100	70	1000
						998	995	990	950	80	100	30	N/A
	Hexane		080613A		Final VOL.	1000	1000	1000	1000	100	200	100	N/A

GA 7/7/14
11/9/14

GA 7/7/14

PYRAFLUFEN CURVE

SUPPLIER	ID#	µg/mL	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
PYRAFLUFEN STD		5		06/24/14	06/20/15	5	50	100	150	200	250
	HEXANE		080613A				995	950	900	850	800	750
					Final VOL.	1000	1000	1000	1000	1000	1000

GA 7/7/14
1/7/15

DIESEL 2nd SRC

1000ug/mL Diesel 2nd SRC STD 400uL 1mL 400ug/mL MC #54024 Prep 8/22/13 EXP 8/22/14

GA 7/7/14
8/22/14

GA 7/8/14

OP/F CURVE

SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	1A mL	1B mL	1 mL	2 mL	3 mL	4 mL	5 mL	6 mL
	OP/F STD	5		06/24/14	08/10/14	2	5	10	50	20	100	70	100
VWR	Hexane		080613A			998	995	990	950	80	100	30	NA
					Final VOL.	1000	1000	1000	1000	100	200	100	100

GA 7/8/14
8/10/14

GA 7/8/14

OPF 100/200 CCV

SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL
	OPF STD	5		06/24/14	08/10/14	100
VWR	HEXANE		080613A			100
					Final VOL.	200

GA 7/8/14
8/10/14

GA 7/8/14

OPC CURVE

SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	1 µL	2 µL	3 µL	4 µL	5 µL	6 µL
	OPC STD	5		05/19/14	07/22/14	10	50	20	100	70	1000
	Hexane		080613A			990	950	80	100	30	NA
					Final VOL.	1000	1000	100	200	100	1000

GA 7/8/14
7/22/14

STANDARD	INITIAL CONC	SOURCE	FINAL ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE INITIALS
014		LOG BOOK #41					

Velpar/ Fenamiphos Standard GA 1/28/14

ANALYTES	INIT. CONC	SOURCE	ALIQUOT	FIN CONC.	SOLVENT
Velpar	1000µg/ml	O2SI	100µL	10µg/ml	10 ml
	CAT	031176-01			Acetone
	LOT	210104-32704			LOT#
	OPEN	01/28/14			090513C
	EXP	01/28/15			
Fenamiphos	1000µg/ml	O2SI	100µL	10µg/ml	
	Cat:	031189-02			
	Lot:	210105-32707			
	Op:	01/28/14			
	Exp:	01/28/15			

Prep 1/28/14
EXP 1/28/15
GA

GA 1/28/14

VELPAR CALIBRATION CURVE											
Prep.	01/28/14										
EXP:	07/28/14										
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	1 µL	2 µL	3 µL	4 µL	5 µL	6 µL
VELPAR STD		10		01/28/14	01/28/15	10	50	200	500	700	1000
VWR	Hexane		0403138			900	950	800	500	300	N/A
					Final VOL.	1000	1000	1000	1000	1000	1000

Prep 1/28/14
EXP 7/28/14
GA

GA 1/28/14

PAC ECO CURVE						1a	1b	1	2	3	4	5	6
EXP:	01/12/14					µL	µL	µL	µL	µL	µL	µL	µL
	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	2	5	10	50	200	500	700	1000
	PAC ECO CAL STD	5	~~0403138~~	01/10/14	06/15/14	998	995	990	950	800	500	300	N/A
	Hexane		-0307138		Final VOL.	1000	1000	1000	1000	1000	1000	1000	1000

Prep. 1/28/14
EXP: ~~7/28~~ GA 1/28/14
6/15/14
GA

HERBICIDE CALIBRATION STD PREP

Analytes:	Conc. in mix (ug/ml)	Conc. In Stock (ug/ml)	Aliqoute (uL)	STOCK SOURCE	Final Vol. Solvent (ml)
Dalapon	12.8	64	1000	O2SI	5
3,5 Dichlorobenzoic Acid	1.28	6.4		Cat: 132070-01	MTBE
4-Nitrophenol	3.2	16		Lot: 207738-32349	Lot #
2,4-DCAA (S)	6.4	32		OP: 1/28/14	50223
Dicamba	1.28	6.4		EXP:1/28/15	
MCPP	1280	6400			
MCPA	1280	6400			
2,4-DP	6.4	32			
2,4-D	6.4	32			
DNOC	2.56	12.8			
PCP	1.28	6.4			
2,4,5-TP	1.28	6.4			
Chloramben	6.4	32			
2,4,5-T	1.28	6.4			
Dinoseb	3.2	16			
2,4-DB	12.8	64			
Bentazon	6.4	32			
Picloram	1.28	6.4			
Dacthal	1.28	6.4			
Acifluorfen	3.2	16			

Custom Herbicide Mix, Underivatized Acids, EPA Method 515, 20-1, Various
132070-01
Lot # 207738 Storage ≤ 6 Degrees C Expiry 4/27/16
Solv: Tol.:Hex.:MtBE
For R&D only, not for resale or consumption. Made in the USA

Custom Herbicide Mix
Lot #: 207738 - 32349
Rec: 4/25/13 MFR exp. 4/27/16

1/28/14 MA
Ex
1/28/15

***1 ml ampule is derivitized by extraction and brought up to 5ml in MTBE* MA 1/28/14

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	DATE INITIALS

015

Log Book #41

HERB SECOND SOURCE

Analytes:	Conc. in mix (ug/ml)	Conc. In Stock (ug/ml)	Aliqout (uL)	STOCK SOUIRCE O2SI	Final Vol. Solvent (ml)
Dalapon	12.8	64	1000	CAT: 132070-01-SS	5
3,5 Dichlorobenzoic Acid	1.28	6.4		Lot: 216092-33003	MTBE
4-Nitrophenol	3.2	16		OP: 1/28/14	Lot #
2,4-DCAA (S)	6.4	32		Exp:1/28/15	50223
Dicamba	1.28	6.4			
MCPP	1280	6400			
MCPA	1280	6400			
2,4-DP	6.4	32			
2,4-D	6.4	32			
DNOC	2.56	12.8			
PCP	1.28	6.4			
2,4,5-TP	1.28	6.4			
Chloramben	6.4	32			
2,4,5-T	1.28	6.4			
Dinoseb	3.2	16			
2,4-DB	12.8	64			
Bentazon	6.4	32			
Picloram	1.28	6.4			
Dacthal	1.28	6.4			
Acifluorfen	3.2	16			

Custom Herbicide Mix (Second Source), Underivatized Acids, EPA
132070-01-SS
Lot # 216092 | Storage ≤ 6 Degrees C | Expiry 10/18/16
Solv: Tol.:Hex.:MtBE
R&D only, not human consump. Made in the USA

Custom Herbicide Mix (SS)
Lot #: 216092 - 33003
Rec: 10/15/13 MFR exp. 10/18/16

**1 ml ampule is derivitized by extraction and brought up to 5ml in MTBE

MA 1/28/14

1/28/14 MA
Ex
1/28/15

504/8011 SURROGATE

Compound	Initial Conc. (ug/ml)	Source	Aliquot (uL)	Final Vol. (mL)	Final Conc. (ug/ml)	Solvent Lot #
1,3 DBP	100	1,3 DBP STOCK prep. 4/25/13 exp. 4/25/14	35ul	10	0.35	Methanol 031313A

1/29/14 MA
Ex
3/1/14

504/8011 HIGH M STD

Compound	Initial Conc. (ug/ml)	Source	Aliquot (uL)	Final Vol. (mL)	Final Conc. (ug/ml)	Solvent Lot #
EDB TCP DBCP	20	504/DOHS STOCK prep. 3/13/13 exp 3/13/14	500	25	0.4	Methanol 031313A
1,3 DBP	100	1,3 DBP STOCK prep. 4/25/13 exp. 4/25/14	100		0.4	

1/29/14 MA
Ex
3/1/14

504/8011 LOW M STD

Compound	Initial Conc. (ug/ml)	Source	Aliquot (uL)	Final Vol. (mL)	Final Conc. (ug/ml)	Solvent Lot #
EDB TCP DBCP 1,3 DBP	0.4	504/8011 HIGH M STD prep.1/29/14 exp 3/1/14	750	10	0.03	Methanol 031313A

MA 1/29/14

1/29/14 MA
Ex
3/1/14

STANDARD
098

INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOL'N

QC STANDARD PREPARATION BOOK # 41 PAGE #

DIESEL SPIKE

Diesel Fuel #2 Composite
(Second Source), 50,000
mg/L, 2 x 5 ml
011593-01-SS
Lot # 207839 | Storage ≤ -10 Degrees C | Expiry 4/28/16
Solv: Methylene Chloride
Made in the USA. For laboratory use only. Not for human consumption.

Diesel Fuel #2 Composite (SS)
Lot #: 207839 - 32381
Rec: 4/25/13 MFR exp. 4/28/16

9/10/14 HA
Ex 9/10/15

THC SURROGATE

9/10/14 KM
Exp: 9/10/15

CAT NO: 11636-C5
LOT NO: 229803-33706
Open Date: 9/10/14
Expire Date: 9/10/15

HERB SPIKE

Analytes:	Conc. in mix (ug/ml)	Conc. In Stock (ug/ml)	Aliqoute (uL)
Dalapon	6.4	320	500
3,5 Dichlorobenzoic Acid	0.64	32	
4-Nitrophenol	1.6	80	
2,4-DCAA (S)	3.2	160	
Dicamba	0.64	32	
MCPP	640	32000	
MCPA	640	32000	
2,4-DP	3.2	160	
2,4-D	3.2	160	
DNOC	1.28	64	
PCP	0.64	32	
2,4,5-TP	0.64	32	
Chloramben	3.2	160	
2,4,5-T	0.64	32	
Dinoseb	1.6	80	
2,4-DB	6.4	320	
Bentazon	3.2	160	
Picloram	0.64	32	
Dacthal	0.64	32	
Acifluorfen	1.6	80	

Final Vol. STOCK SOURCE (ml)	Final Vol. Solvent (ml)
	25
Source: Accustandard	MTBE
Catalog #: S-8254A-R1	Lot #
LOT#: 212061185-01 34005	50223
OPEN: 9/11/14	
EXP ~~12/11/14~~ 9/11/15	
HA 9/11/14	

9/11/14
ex. 12/11/14
LH

AccuStandard®
S-8254A-R1
Custom Herbicide Standard
Varied conc. in Hexane:Toluene:MtBE
Lot: 212061185-01
Exp: Aug 22, 2016

Custom Herbicide Standard
Lot # 212061185-01 - 34005
Rec: 9/4/14 MFR exp. 8/22/16

20 comp(s)
HIGHLY FLAMMABLE

FOR LABORATORY USE ONLY
225 H313 H335
302 P338 P352
404 P262 P202
281 P280

Storage: Freeze (<-10° C)
2 Danger

STANDARD

	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	DATE INITIALS

GC STANDARD PREPARATION BOOK # 4 PAGE # 091

THC SURROGATE

CAT NO: 110316-05
LOT NO: 216091-33703
OPEN DATE: 08/26/2014
EXPIRE DATE: 08/26/2015

KA 08/26/2014
Exp. 08/26/2015

GA 8/27/14

CARBON ~~MARKER~~ MARKER

Carbon Marker (CG-140 even only) 500ug/mL 02SI 500uL 5mL 50ug/mL GA 8/27/14

CAT: 110400-05-01-5PAK
LOT: 180048-32279
OP: 4/25/14
EXP: 4/25/15

4/25/15

MC
#54024

GA 8/27/14

OP + FAMPHUR STD

COMPOUNDS	FINAL CONC.	INITIAL CONC.	ALIQUOT	SOURCE	FINAL VOL
COUMAPHOS	5ug/ml	200ug/ml	250ul	O2SI	10ml
FENSULFOTHION	5	200	each of:		HEXANE
DEMETON	5	200			LOT#
DICHLORVOS	5	200		MIX A	080613A
DISULFOTON	5	200	CAT:	130205-01	
EPN	5	200	LOT:	222299-33331	
ETHION	5	200	OP:	08/18/14	
RONNEL	5	200	EXP:	12/08/14	
FENTHION	5	200			
MALATHION	5	200		MIX B	
PARATHION	5	200	CAT:	132380-01-SS	
EPTC	5	200	LOT:	201875-31839	
SULFOTEPP	5	200	OP:	08/18/14	
TRICHLORONATE	5	200	EXP:	01/08/15	
MERPHOS	5	200			
STIROPHOS	5	200			
CHLOPYRIFOS	5	200		MIX 9-14	
DEF	5	200		(MIX C)	
DIMETHOATE	5	200	CAT:	130164-01-SS	
AZINPHOS METHYL	5	200	LOT:	201876-31844	
METHYL PARATHION	5	200	OP:	08/18/14	
MEVINPHOS	5	200	EXP:	01/08/15	
NALED	5	200			
PHORATE	5	200			
ETHOPROP	5	200			
TOKUTHION	5	200			
PROWL	5	200			
BOLSTAR	10	200*2			
TRIFLURALIN	5	200			
DIAZINON	5	200			
TEPP	5	200			
MONOCROTOPHOS	5	200			
DIPHENAMID	5	200			
TBP	5	200			
TPP	5	200			
FAMPHUR	10	1000	100ul	ABSOLUTE	
			PART:	70387	
			LOT:	060313-32654	
			OP:	05/09/14	
			EXP:	05/09/15	

GA 8/27/14
12/8/14

STANDARD 090

GC STANDARD PREPARATION BOOK # 4 PAGE # ____

	INITIAL CONC	SOURCE	DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE / INITIALS
	Od Of Soil Surrogate		08-26-14					08-26-14 MP
Past Surr	5000		07-15-14	0.40	100	20	Acetone 090513C	
	Lot 213973-32853							
8141 Surr	1000		08-26-14	0.50	5.0			

2,4-DCAA 200 ug/mL 08-26-14 MP

2,4 Dichlorophenylacetic Acid (2,4-DCAA), 200 mg/L, 1 mL
011025-03
Lot # 216680 Storage ≤ -10 Degrees C Expiry 10/25/16
Solv: Methanol
R&D only, not for human consumption. Made in the USA

2,4-Dichlorophenylacetic Acid
Lot #: 216680 - 33074
Rec: 10/24/13 MFR exp. 10/25/16

I broke open the vial labeled to the left and transferred to an amber 1.8mL injection vial → 2,4-DCAA 200ug/mL 08-26-14

carbon (C8-(ve

2,4-DCAA #2 200ug/mL MP 08-26-14

2,4 Dichlorophenylacetic Acid (2,4-DCAA), 200 mg/L, 1 mL
011025-03
Lot # 216680 Storage ≤ -10 Degrees C Expiry 10/25/16
Solv: Methanol
R&D only, not for human consumption. Made in the USA

2,4-Dichlorophenylacetic Acid
Lot #: 216680 - 33075
Rec: 10/24/13 MFR exp. 10/25/16

I broke open the vial labeled to the left and transferred to an amber 1.8mL Injection vial 2,4-DCAA #2 200ug/mL 08-26-14

	Herb Surrogate 3.0 ug/mL						08-26-14 MP
2,4-DCAA	#2 200	08-26-14	1.0	100	Acetone		
2,4-DCAA	200	08-26-14	0.5		090513C		
					3.0 ug/mL total		

Incremental Sampling Preparation Log Book # 1 Page # 1827

ARF # / Project	Sample #	1st Weight *	2nd Weight *	3rd Weight *	4th Weight * (If Needed)	Passing Sample (weight of foil negligible)	Tarred Container + Non-passing Sample	I.S. before grind (Initial Box when Complete)
	AZ 02222 NG sticker verified Date/Initials	Weight: 78.92 g Date: 9-9-14 Time: 15:25 Initials: CFM	Weight: 75.08 g Date: 9-10-14 Time: 07:75 Initials: CFM	Weight: 75.09 g Date: 9-10-14 Time: 10:20 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02223 NG sticker verified Date/Initials	Weight: 75.81 g Date: 9-9-14 Time: 15:25 Initials: CFM	Weight: 72.51 g Date: 9-10-14 Time: 07:25 Initials: CFM	Weight: 72.50 g Date: 9-10-14 Time: 10:20 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
74218 Element	AZ 02099 NG sticker verified Date/Initials	Weight: 2.104 Kg Date: 9.10.14 Time: 8:41 Initials: Rmm	Weight: 2.498 Kg Date: 9.11.14 Time: 8:35 Initials: E.R.	Weight: 2.494 Kg Date: 9-12-14 Time: 8:08 Initials: E.R Rmm	Weight: g Date: Time: Initials:	0.754 Kg Initials: Rmm	250.62 g Initials: Rmm	Metals: NM 8270: 8290: Other:
	AZ 02100 NG sticker verified Date/Initials	Weight: 2.144 Kg Date: 9.10.14 Time: 8:51 Initials: Rmm	Weight: 2.06de Kg Date: 9-11-14 Time: 8:36 Initials: E.R.	Weight: 2.0102 Kg Date: 9.12.14 Time: 8:10 Initials: Rmm	Weight: g Date: Time: Initials:	0.568 Kg Initials: E.R.	226.64 g Initials: E.R.	Metals: NM 8270: 8290: Other:
	AZ 02101 NG sticker verified Date/Initials	Weight: 2.724 Kg Date: 9.10.14 Time: 8:56 Initials: Rmm	Weight: 2.012 Kg Date: 9-11-14 Time: 8:38 Initials: E.R	Weight: 2.002 Kg Date: 9.12.14 Time: 8:12 Initials: Rmm	Weight: g Date: Time: Initials:	0.834 Kg Initials: Rmm	279.08 g Initials: Rmm	Metals: NM 8270: 8290: Other:
	AZ 02102 NG sticker verified Date/Initials	Weight: 2.788 Kg Date: 9.10.14 Time: 9:02 Initials: Rmm	Weight: 2.636 Kg Date: 9-11-14 Time: 8:39 Initials: E.R	Weight: 2.626 Kg Date: 9.12.14 Time: 8:15 Initials: Rmm	Weight: g Date: Time: Initials:	0.890 Kg Initials: E.R	282.97 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02103 NG sticker verified Date/Initials	Weight: 2.830 Kg Date: 9-10-14 Time: 9:08 Initials: Rmm	Weight: 2.672 Kg Date: 9-11-14 Time: 8:40 Initials: E.R	Weight: 2.6600 Kg Date: 9.12.14 Time: 8:16 Initials: Rmm	Weight: g Date: Time: Initials:	0.924 Kg Initials: E.R	264.59 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02104 NG sticker verified Date/Initials	Weight: 2.796 Kg Date: 9.10.14 Time: 9:12 Initials: Rmm	Weight: 2.636 Kg Date: 9-11-14 Time: 8:41 Initials: E.R	Weight: 2.624 Kg Date: 9.12.14 Time: 8:17 Initials: Rmm	Weight: g Date: Time: Initials:	0.894 Kg Initials: Rmm	318.83 g Initials: Rmm	Metals: NM 8270: 8290: Other:

* Each recorded weight includes the foil-lined tray + the sample.

NG = No Grind (applies to metals, PAH, Perchlorate, other methods etc.)

Incremental Sampling Preparation Log Book # 1 Page # 1828

ARF # / Project	Sample #	1st Weight *	2nd Weight *	3rd Weight *	4th Weight * (If Needed)	Passing Sample (weight of foil negligible)	Tarred Container + Non-passing Sample	I.S. before grind (Initial Box when Complete)
	AZ 02105 NG sticker verified Date/Initials	Weight: 2.814 Kg Date: 9-10-14 Time: 9:15 Initials: RMM	Weight: 2.572 Kg Date: 9-11-14 Time: 8:42 Initials: E.R.	Weight: 2.508 Kg Date: 9-12-14 Time: 8:18 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.978 Kg Initials: J.R	163.14 g Initials: J.R	Metals: NM 8270: 8290: Other:
	AZ 02106 NG sticker verified Date/Initials	Weight: 2.862 Kg Date: 9-10-14 Time: 9:19 Initials: RMM	Weight: 2.600 Kg Date: 9-11-14 Time: 8:43 Initials: E.R.	Weight: 2.546 Kg Date: 9-12-14 Time: 8:18 Initials: RMM	Weight: ____ g Date: Time: Initials:	E.R. 1.000 Kg Initials: E.R	136.28 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02107 NG sticker verified Date/Initials	Weight: 2.834 Kg Date: 9-10-14 Time: 9:19 Initials: RMM	Weight: 2.586 Kg Date: 9-11-14 Time: 8:44 Initials: E.R	Weight: 2.530 Kg Date: 9-12-14 Time: 8:19 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.924 Kg Initials: JR	219.20 g Initials: J.R	Metals: NM 8270: 8290: Other:
	AZ 02110 NG sticker verified Date/Initials	Weight: 2.720 Kg Date: 9-10-14 Time: 9:22 Initials: RMM	Weight: 2.584 Kg Date: 9-11-14 Time: 8:45 Initials: E.R	Weight: 2.574 Kg Date: 9-12-14 Time: 8:19 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.902 Kg Initials: E.R	282.40 g Initials: ER	Metals: NM 8270: 8290: Other:
	AZ 02111 NG sticker verified Date/Initials	Weight: 2.642 Kg Date: 9-10-14 Time: 9:30 Initials: RMM	Weight: 2.468 g Date: 9-11-14 Time: 8:45 Initials: E.R	Weight: 2.456 Kg Date: 9-12-14 Time: 8:21 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.892 Kg Initials: ER	302.54 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02112 NG sticker verified Date/Initials	Weight: 2.780 Kg Date: 9-10-14 Time: 9:35 Initials: RMM	Weight: 2.520 Kg Date: 9-11-14 Time: 8:46 Initials: ER	Weight: 2.486 Kg Date: 9-12-14 Time: 8:22 Initials: RMM	Weight: 2.482 Kg Date: 9/12/14 Time: 11:20 Initials: KY	0.980 Kg Initials: E.R	129.53 g Initials: ER.	Metals: NM 8270: 8290: Other:
	AZ 02113 NG sticker verified Date/Initials	Weight: 2.596 Kg Date: 9-10-14 Time: 9:39 Initials: RMM	Weight: 2.464 Kg Date: 9-11-14 Time: 8:46 Initials: ER	Weight: 2.458 Kg Date: 9-12-14 Time: 8:23 Initials: RMM	Weight: ____ g Date: Time: Initials:	0884 Kg Initials: J.R	167.65 g Initials: J.R	Metals: NM 8270: 8290: Other:
	AZ 02114 NG sticker verified Date/Initials	Weight: 2.856 Kg Date: 9-10-14 Time: 9:45 Initials: RMM	Weight: 2.666 Kg Date: 9-11-14 Time: 8:47 Initials: ER	Weight: 2.654 Kg Date: 9-12-14 Time: 8:23 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.998 Kg Initials: E.R	241.29 g Initials: ER	Metals: NM 8270: 8290: Other:

* Each recorded weight includes the foil-lined tray + the sample.

NG = No Grind (applies to metals, PAH, Perchlorate, other methods etc.)

Incremental Sampling Preparation Log Book # 1 Page # 1829

ARF # / Project	Sample #	1st Weight *	2nd Weight *	3rd Weight *	4th Weight * (If Needed)	Passing Sample (weight of foil negligible)	Tarred Container + Non-passing Sample	I.S. before grind (Initial Box when Complete)
	AZ 02115 NG sticker verified Date/Initials	Weight: 2.8301 kg Date: 9-10-14 Time: 9:49 Initials: RMM	Weight: 2.594 g Date: 9-11-14 Time: 8:47 Initials: E.R	Weight: 2.5016 kg Date: 9-12-14 Time: 8:23 Initials: RMM	Weight: g Date: Time: Initials:	0.9921 kg Initials: E.R	139.57 g Initials: E.R	Metals: DM 8270: 8290: Other:
74237 UBS, Grnp	AZ 02231 NG sticker verified Date/Initials	Weight: 77.92 g Date: 9-10-14 Time: 14:54 Initials: CFM	Weight: 74.08 g Date: 9-11-14 Time: 08:14 Initials: CFM	Weight: 74.09 g Date: 9-12-14 Time: 11:36 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02232 NG sticker verified Date/Initials	Weight: 68.64 g Date: 9-10-14 Time: 14:54 Initials: CFM	Weight: 65.11 g Date: 9-11-14 Time: 08:14 Initials: CFM	Weight: 65.11 g Date: 9-12-14 Time: 11:36 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02233 NG sticker verified Date/Initials	Weight: 75.27 g Date: 9-10-14 Time: 14:54 Initials: CFM	Weight: 71.63 g Date: 9-11-14 Time: 08:14 Initials: CFM	Weight: 71.64 g Date: 9-12-14 Time: 11:36 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
74278 UBS, Grnp	AZ 02584 MS/MSD NG sticker verified Date/Initials	Weight: 75.59 g Date: 9-12-14 Time: 14:18 Initials: CFM	Weight: 72.47 g Date: 9-15-14 Time: 07:03 Initials: CFM	Weight: 72.48 g Date: 9-15-14 Time: 09:13 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02585 NG sticker verified Date/Initials	Weight: 74.17 g Date: 9-12-14 Time: 14:18 Initials: CFM	Weight: 70.92 g Date: 9-15-14 Time: 07:07 Initials: CFM	Weight: 70.91 g Date: 9-15-14 Time: 09:13 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
74297 UBS, Grnp	AZ 02668 NG sticker verified Date/Initials	Weight: 69.36 g Date: 9-16-14 Time: 13:31 Initials: CFM	Weight: 66.29 g Date: 9-17-14 Time: 07:54 Initials: CFM	Weight: 66.31 g Date: 9-17-14 Time: 15:33 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02669 NG sticker verified Date/Initials	Weight: 68.28 g Date: 9-16-14 Time: 13:31 Initials: CFM	Weight: 65.43 g Date: 9-17-14 Time: 07:54 Initials: CFM	Weight: 65.44 g Date: 9-17-14 Time: 15:33 Initials: 887 CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:

* Each recorded weight includes the foil-lined tray + the sample.

NG = No Grind (applies to metals, PAH, Perchlorate, other methods etc.)

_SEP002

Organic Extraction Worksheet

Method	Herbicide Separatory Funnel 8151A	Extraction Set	140908A	Extraction Method	SEP002	Units	mL

Spiked ID 1	Herb Spike w/ Surrogate 8-30-14 exp 11-30-15		Surrogate ID 1	Herb Surrogate 8-26-14 exp 12-26-14	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	09/08/14 13:45	
Spiked ID 8			Ext. End Time:	09/11/14 11:45	
			GC Requires Extract By:	**09/19/14 0:00**	

pH1	14	09/08/14 2:00:00 PM	Water Bath Temp Criteria	78 °C
pH2	2	09/08/14 3:10:00 PM		
pH3				

Spiked By: DL **Date** 09/08/14 **Witnessed By:** RMM **Date** 09/08/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	140908A Blk				1	1 equip	1000 E-WB5	5	14/	09/08/14 13:45	
2	140908A LCS-1		0.5	1	NA	NA equip	1000 E-WB5	5	14/	09/08/14 13:45	
3	AZ02108	AZ02108W06			1	1 equip	1070 E-WB5	5	14/	09/08/14 13:45	74218 RUSH 2 WEEKS
4	AZ02109	AZ02109W06			1	1 equip	1070 E-WB5	5	14/	09/08/14 13:45	74218 RUSH 2 WEEKS
5	AZ02116	AZ02116W06			1	1 equip	1000 E-WB5	5	14/	09/08/14 13:45	74218 RUSH 2 WEEKS

Solvent and Lot#	
MC	54128
Acidified Na2SO4	8-28-14
1+1 H2SO4	9-5-14
NaCl	wj11d
10N NaOH	8-27-14
MTBE	53339
DIAZOMETHANE	8-26-14
ph strips	hc413032

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	MA
Date	9/11/14
Time	17:00
Refrigerator	Hobart

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	IC

Modified	09/11/14 12:03:31 PM

Reviewed By: KLS **Date** 9/11/14

09/11/14 12:07:12 PM Ext_ID 888 45028

_MSE005MIS

Organic Extraction Worksheet

Method	Herb Extraction Reduced Sam 8151A MIS	Extraction Set	140916A	Extraction Method	MSE005MIS	Units	mL

Spiked ID 1	Herb Spike W/ Surrogate 8-30-14 exp 11-30-14		Surrogate ID 1	Herb Surrogate 8-26-14 exp 12-26-14	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	09/16/14 11:30	
Spiked ID 8			Ext. End Time:	09/16/14 16:10	
			GC Requires Extract By:	**09/19/14 0:00**	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 09/16/14 **Witnessed By:** IC **Date** 09/16/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	140916A Blk				1	1 equip	5.04g	5/5*10	NA	09/16/14 11:30	
2	140916A LCS-1		0.5	1	NA	NA equip	5.01g	5/5*10	NA	09/16/14 11:30	
3	AZ02099	AZ02099S11			1	1 equip	5.06g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
4	AZ02100 MS-1	AZ02100S11	0.5	1	NA	NA equip	5.13g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
5	AZ02100 MSD-1	AZ02100S11	0.5	1	NA	NA equip	5.33g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
6	AZ02100	AZ02100S11			1	1 equip	5.30g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
7	AZ02101	AZ02101S11			1	1 equip	5.06g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
8	AZ02102	AZ02102S11			1	1 equip	5.09g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
9	AZ02103	AZ02103S11			1	1 equip	5.10g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
10	AZ02104	AZ02104S11			1	1 equip	5.04g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
11	AZ02105	AZ02105S11			1	1 equip	5.04g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
12	AZ02106	AZ02106S11			1	1 equip	5.13g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
13	AZ02107	AZ02107S11			1	1 equip	5.13g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
14	AZ02110	AZ02110S11			1	1 equip	5.17g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
15	AZ02111	AZ02111S11			1	1 equip	5.10g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
16	AZ02112	AZ02112S11			1	1 equip	5.04g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS

Solvent and Lot#	
MTBE	53339
Ether	54059
Methanol	050714C
1+1 H2SO4	9-5-14
Acidified Na2SO4	8-28-14
DIAZOMETHANE	8-26-14
SILICIC ACID POWDER	J49630

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	LH
Date	9-17-14
Time	8:10
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	IC
Concentration	IC

Modified	09/16/14 12:09:23 PM

Reviewed By: KY **Date** 9/16/14

_MSE005MIS

Organic Extraction Worksheet

Method	Herb Extraction Reduced Sam 8151A MIS	Extraction Set	140916A	Extraction Method	MSE005MIS	Units	mL

Spiked ID 1	Herb Spike W/ Surrogate 8-30-14 exp 11-30-14		Surrogate ID 1	Herb Surrogate 8-26-14 exp 12-26-14	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	09/16/14 11:30	
Spiked ID 8			Ext. End Time:	09/16/14 16:10	
			GC Requires Extract By:	**09/19/14 0:00**	

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: KY **Date** 09/16/14 **Witnessed By:** IC **Date** 09/16/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ02113	AZ02113S11			1	1 equip	5.03g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
18	AZ02114	AZ02114S11			1	1 equip	5.11g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS
19	AZ02115	AZ02115S11			1	1 equip	5.02g	5/5*10	NA	09/16/14 11:30	74218 RUSH 2 WEEKS

KY 9/16/14

Solvent and Lot#	
MTBE	53339
Ether	54059
Methanol	050714C
1+1 H2SO4	9-5-14
Acidified Na2SO4	8-28-14
DIAZOMETHANE	8-26-14
SILICIC ACID POWDER	J49630

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	LH
Date	9-17-14
Time	8:10
Refrigerator	Hobart

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	IC
Concentration	IC

Modified	09/16/14 12:09:23 PM

Reviewed By: KY **Date** 9/16/14

09/16/14 4:37:09 PM Ext_ID 8905091

Injection Log

Directory: G:\HERBIE\DATA\140703\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0703002.D	1	HERB 15/1000 7/3/14	WATER	07-03-14 14:10:27
3	0703003.D	1	HERB 50/1000	WATER	07-03-14 14:32:46
4	0703004.D	1	HERB 100/1000	WATER	07-03-14 14:55:08
5	0703005.D	1	HERB 200/1000	WATER	07-03-14 15:17:37
6	0703006.D	1	HERB 300/1000	WATER	07-03-14 15:40:01
7	0703007.D	1	HERB 400/1000	WATER	07-03-14 16:02:20
9	0703009.D	1	HERB SS 200/1000 7/3/14	WATER	07-03-14 16:57:25
31	0911031.D	1	Herb 300/1000 7/3/14		09-15-14 9:42:49
32	0911032.D	5	140908A BLK 5/1000	water	09-15-14 10:05:06
33	0911033.D	5	140908A LCS-1 5/1000	water	09-15-14 10:27:34
34	0911034.D	4.6729	AZ02108W06 5/1070	water	09-15-14 10:49:53
35	0911035.D	4.6729	AZ02109W06 5/1070	water	09-15-14 11:12:14
36	0911036.D	5	AZ02116W06 5/1000	water	09-15-14 11:34:41
37	0911037.D	1	Herb 300/1000 7/3/14		09-15-14 11:57:05
68	0911068.D	1	HERB 300/1000 7/3/14		09-18-14 10:32:35
69	0911069.D	1984.13	140916A BLK 10/5.04	soil	09-18-14 10:54:57
70	0911070.D	1996.01	140916A LCS-1 10/5.01	soil	09-18-14 11:17:27
79	0911079.D	1984.13	AZ02105 10/5.04	soil	09-18-14 14:39:05
82	0911082.D	1	HERB 300/1000 7/3/14	water	09-18-14 16:13:23
83	0911083.D	1949.32	AZ02107 10/5.13	soil	09-18-14 16:38:49
84	0911084.D	1934.24	AZ02110 10/5.17	soil	09-18-14 17:01:11
85	0911085.D	1960.78	AZ02111 10/5.10	soil	09-18-14 17:23:38
86	0911086.D	1984.13	AZ02112 10/5.04	soil	09-18-14 17:46:00
87	0911087.D	1988.07	AZ02113 10/5.03	soil	09-18-14 18:08:25
88	0911088.D	1956.95	AZ02114 10/5.11	soil	09-18-14 18:30:58
89	0911089.D	1992.03	AZ02115 10/5.02	soil	09-18-14 18:53:28
90	0911090.D	1984.13	AZ02106 10/5.04	soil	09-18-14 19:15:57
92	0911092.D	1	HERB 300/1000 7/3/14	soil	09-18-14 20:01:04
94	0911094.D	1	Herb 300/1000		09-19-14 9:42:33
95	0911095.D	1976.28	AZ02099 10/5.06	soil	09-19-14 10:04:54
96	0911096.D	1949.32	AZ02100 MS-1 10/5.13	soil	09-19-14 10:27:23
97	0911097.D	1876.17	AZ02100 MSD-1 10/5.33	soil	09-19-14 10:49:46
98	0911098.D	1886.79	AZ02100 10/5.30	soil	09-19-14 11:12:04
99	0911099.D	1976.28	AZ02101 10/5.06	soil	09-19-14 11:34:32
100	0911100.D	1964.64	AZ02102 10/5.09	soil	09-19-14 11:56:51
1	0911101.D	1960.78	AZ02103 10/5.10	soil	09-19-14 12:19:12
2	0911102.D	1984.13	AZ02104 10/5.04	soil	09-19-14 12:41:38
4	0911104.D	1	HERB 300/1000 7/3/14	water	09-19-14 13:26:18

EPA METHOD 8270
Semivolatile Organic Compounds

APPL, INC.

EPA METHOD 8270
QC Summary

APPL, INC.

Method Blank
EPA 8270C WATER

Blank Name/QCG: **140908W-02108 - 189933**
Batch ID: #87CE2-140908A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2,4-TRICHLOROBENZENE	5.00 U	10.0	5.00	1.30	ug/L	9/8/14	9/11/14
BLANK	1,2-DICHLOROBENZENE	5.00 U	10.0	5.00	1.10	ug/L	9/8/14	9/11/14
BLANK	1,3-DICHLOROBENZENE	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
BLANK	1,4-DICHLOROBENZENE	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
BLANK	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	9/8/14	9/11/14
BLANK	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
BLANK	2,4-DICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
BLANK	2,4-DIMETHYLPHENOL	5.00 U	10.0	5.00	2.40	ug/L	9/8/14	9/11/14
BLANK	2,4-DINITROPHENOL	5.00 U	20.0	5.00	1.80	ug/L	9/8/14	9/11/14
BLANK	2,4-DINITROTOLUENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
BLANK	2,6-DINITROTOLUENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
BLANK	2-CHLOROPHENOL	5.00 U	10.0	5.00	2.00	ug/L	9/8/14	9/11/14
BLANK	3,3'-DICHLOROBENZIDINE	5.00 U	10.0	5.00	3.00	ug/L	9/8/14	9/11/14
BLANK	4-CHLOROANILINE	5.00 U	10.0	5.00	2.70	ug/L	9/8/14	9/11/14
BLANK	BIS (2-CHLOROETHYL) ETHER	5.00 U	10.0	5.00	2.20	ug/L	9/8/14	9/11/14
BLANK	BIS (2-CHLOROISOPROPYL) ET	5.00 U	10.0	5.00	2.00	ug/L	9/8/14	9/11/14
BLANK	BIS (2-ETHYLHEXYL) PHTHALAT	5.00 U	20.0	5.00	2.90	ug/L	9/8/14	9/11/14
BLANK	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	9/8/14	9/11/14
BLANK	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	9/8/14	9/11/14
BLANK	HEXACHLOROBENZENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
BLANK	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	9/8/14	9/11/14
BLANK	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	9/8/14	9/11/14
BLANK	ISOPHORONE	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
BLANK	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	9/8/14	9/11/14
BLANK	PENTACHLOROPHENOL	5.00 U	20.0	5.00	2.80	ug/L	9/8/14	9/11/14
BLANK	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
BLANK	SURROGATE: 2,4,6-TRIBROMOP	72.9	40-125			%	9/8/14	9/11/14
BLANK	SURROGATE: 2-FLUORBIPHENY	60.4	50-110			%	9/8/14	9/11/14
BLANK	SURROGATE: 2-FLUOROPHENO	41.5	20-110			%	9/8/14	9/11/14
BLANK	SURROGATE: NITROBENZENE-	61.4	40-110			%	9/8/14	9/11/14
BLANK	SURROGATE: PHENOL (S)	27.4	10-115			%	9/8/14	9/11/14
BLANK	SURROGATE: TERPHENYL-D14 (	102	50-135			%	9/8/14	9/11/14

Quant Method: Y87HP.M
Run #: 0910Y011
Instrument: YODA
Sequence: Y140910
Initials: LF

GC SC-Blank-REG MDLs
Printed: 9/22/14 8:22:27 PM

Method Blank
EPA 8270C IS SOILS

Blank Name/QCG: **140915S-02100 - 189979**
Batch ID: #87CE2-140915A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
BLANK	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
BLANK	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
BLANK	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
BLANK	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
BLANK	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
BLANK	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
BLANK	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
BLANK	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
BLANK	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
BLANK	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
BLANK	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
BLANK	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
BLANK	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
BLANK	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
BLANK	BIS (2-CHLOROISOPROPYL) ET	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
BLANK	BIS (2-ETHYLHEXYL) PHTHALAT	0.167 U	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
BLANK	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
BLANK	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
BLANK	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
BLANK	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
BLANK	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
BLANK	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
BLANK	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
BLANK	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
BLANK	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
BLANK	SURROGATE: 2,4,6-TRIBROMOP	64.5	35-125			%	9/15/14	9/21/14
BLANK	SURROGATE: 2-FLUORBIPHENY	90.6	45-105			%	9/15/14	9/21/14
BLANK	SURROGATE: 2-FLUOROPHENO	80.4	35-105			%	9/15/14	9/21/14
BLANK	SURROGATE: NITROBENZENE-	87.1	35-100			%	9/15/14	9/21/14
BLANK	SURROGATE: PHENOL (S)	93.7	40-100			%	9/15/14	9/21/14
BLANK	SURROGATE: TERPHENYL-D14 (	82.9	30-125			%	9/15/14	9/21/14

Quant Method: Y87HP.M
Run #: 0921Y003
Instrument: YODA
Sequence: Y140920B
Initials: LF

GC SC-Blank-REG MDLs
Printed: 9/22/14 8:22:27 PM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/11/14

Matrix: WATER Instrument: YODA

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140908A-BLK	Blank	40-125	72.9		50-110	60.4	
140908A-LCS	Lab Control Spike	40-125	68.5		50-110	54.1	
AZ02108	EN010	40-125	65.8		50-110	57.5	
AZ02109	EN011	40-125	62.1		50-110	50.6	
AZ02116	EN018	40-125	66.9		50-110	56.1	

Comments: Batch: #87CE2-140908A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/11/14

Matrix: WATER Instrument: YODA

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140908A-BLK	Blank	20-110	41.5		40-110	61.4	
140908A-LCS	Lab Control Spike	20-110	42.4		40-110	60.9	
AZ02108	EN010	20-110	38.2		40-110	60.1	
AZ02109	EN011	20-110	42.7		40-110	58.9	
AZ02116	EN018	20-110	42.2		40-110	60.3	

Comments: Batch: #87CE2-140908A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/11/14

Matrix: WATER Instrument: YODA

APPL ID.	Client Sample No.	SURROGATE: PHENOL (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140908A-BLK	Blank	10-115	27.4		50-135	102	
140908A-LCS	Lab Control Spike	10-115	27.8		50-135	106	
AZ02108	EN010	10-115	23.3		50-135	94.6	
AZ02109	EN011	10-115	28.0		50-135	105	
AZ02116	EN018	10-115	27.3		50-135	88.4	

Comments: Batch: #87CE2-140908A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/21/14

Matrix: SOIL Instrument: YODA

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140915A-BLK	Blank	35-125	64.5		45-105	90.6	
140915A-LCS	Lab Control Spike	35-125	67.6		45-105	76.8	
AZ02100-MS	Matrix Spike	35-125	64.0		45-105	77.5	
AZ02100-MSD	Matrix SpikeD	35-125	67.7		45-105	77.2	
AZ02099	EN001	35-125	57.5		45-105	76.1	
AZ02100	EN002	35-125	62.3		45-105	83.9	
AZ02101	EN003	35-125	62.4		45-105	82.3	
AZ02102	EN004	35-125	59.4		45-105	76.9	
AZ02103	EN005	35-125	59.9		45-105	81.5	
AZ02104	EN006	35-125	60.9		45-105	81.0	
AZ02105	EN007	35-125	60.1		45-105	76.7	
AZ02106	EN008	35-125	64.7		45-105	72.9	
AZ02107	EN009	35-125	58.2		45-105	73.3	
AZ02110	EN012	35-125	62.1		45-105	78.0	
AZ02111	EN013	35-125	57.0		45-105	71.4	
AZ02112	EN014	35-125	62.7		45-105	74.8	
AZ02113	EN015	35-125	59.5		45-105	75.6	
AZ02114	EN016	35-125	61.7		45-105	75.9	
AZ02115	EN017	35-125	64.3		45-105	80.6	

Comments: Batch: #87CE2-140915A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/21/14

Matrix: SOIL Instrument: YODA

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140915A-BLK	Blank	35-105	80.4		35-100	87.1	
140915A-LCS	Lab Control Spike	35-105	80.8		35-100	86.7	
AZ02100-MS	Matrix Spike	35-105	73.7		35-100	92.7	
AZ02100-MSD	Matrix SpikeD	35-105	70.1		35-100	86.9	
AZ02099	EN001	35-105	65.9		35-100	82.7	
AZ02100	EN002	35-105	75.8		35-100	95.2	
AZ02101	EN003	35-105	76.7		35-100	93.5	
AZ02102	EN004	35-105	74.0		35-100	90.0	
AZ02103	EN005	35-105	62.1		35-100	78.9	
AZ02104	EN006	35-105	65.6		35-100	85.4	
AZ02105	EN007	35-105	77.6		35-100	84.3	
AZ02106	EN008	35-105	79.8		35-100	82.2	
AZ02107	EN009	35-105	70.8		35-100	74.5	
AZ02110	EN012	35-105	71.9		35-100	82.3	
AZ02111	EN013	35-105	64.7		35-100	73.9	
AZ02112	EN014	35-105	68.9		35-100	72.6	
AZ02113	EN015	35-105	69.9		35-100	81.2	
AZ02114	EN016	35-105	75.2		35-100	84.3	
AZ02115	EN017	35-105	82.2		35-100	87.9	

Comments: Batch: #87CE2-140915A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/21/14

Matrix: SOIL Instrument: YODA

APPL ID.	Client Sample No.	SURROGATE: PHENOL (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140915A-BLK	Blank	40-100	93.7		30-125	82.9	
140915A-LCS	Lab Control Spike	40-100	94.0		30-125	73.2	
AZ02100-MS	Matrix Spike	40-100	89.7		30-125	86.9	
AZ02100-MSD	Matrix SpikeD	40-100	86.3		30-125	79.9	
AZ02099	EN001	40-100	85.5		30-125	73.3	
AZ02100	EN002	40-100	98.9		30-125	81.3	
AZ02101	EN003	40-100	97.1		30-125	85.1	
AZ02102	EN004	40-100	97.4		30-125	85.2	
AZ02103	EN005	40-100	83.8		30-125	80.4	
AZ02104	EN006	40-100	88.1		30-125	94.8	
AZ02105	EN007	40-100	99.0		30-125	82.0	
AZ02106	EN008	40-100	98.6		30-125	93.9	
AZ02107	EN009	40-100	90.1		30-125	75.0	
AZ02110	EN012	40-100	94.0		30-125	93.8	
AZ02111	EN013	40-100	85.6		30-125	88.2	
AZ02112	EN014	40-100	90.7		30-125	81.0	
AZ02113	EN015	40-100	89.1		30-125	90.6	
AZ02114	EN016	40-100	101	#	30-125	88.3	
AZ02115	EN017	40-100	105	#	30-125	85.6	

Comments: Batch: #87CE2-140915A

= Recovery outside of Control Limits on Sample.

Laboratory Control Spike Recovery
EPA 8270C IS SOILS

APPL ID: **140915S-02100 LCS - 189979**
Batch ID: #87CE2-140915A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
1,2,4-TRICHLOROBENZENE	1.66	1.28	77.1	45-110
1,2-DICHLOROBENZENE	1.66	1.32	79.5	45-95
1,3-DICHLOROBENZENE	1.66	1.21	72.9	40-100
1,4-DICHLOROBENZENE	1.66	1.39	83.7	35-105
2,4,5-TRICHLOROPHENOL	1.66	1.30	78.3	50-110
2,4,6-TRICHLOROPHENOL	1.66	1.38	83.1	45-110
2,4-DICHLOROPHENOL	1.66	1.33	80.1	45-110
2,4-DIMETHYLPHENOL	1.66	1.37	82.5	30-105
2,4-DINITROPHENOL	1.66	1.35	81.3	15-130
2,4-DINITROTOLUENE	1.66	1.45	87.3	50-115
2,6-DINITROTOLUENE	1.66	1.54	92.8	50-110
2-CHLOROPHENOL	1.66	1.38	83.1	45-105
3,3'-DICHLOROBENZIDINE	1.66	1.66	100	10-130
4-CHLOROANILINE	1.66	1.97	119 #	10-95
BIS (2-CHLOROETHYL) ETHER	1.66	1.67	101	40-105
BIS (2-CHLOROISOPROPYL) ETHER	1.66	1.53	92.2	20-115
BIS (2-ETHYLHEXYL) PHTHALATE	1.66	1.46	88.0	45-125
DIETHYL PHTHALATE	1.66	1.49	89.8	50-115
DIMETHYL PHTHALATE	1.66	1.39	83.7	50-110
HEXACHLOROBENZENE	1.66	1.38	83.1	45-120
HEXACHLOROBUTADIENE	1.66	1.24	74.7	40-115
HEXACHLOROETHANE	1.66	1.39	83.7	35-110
ISOPHORONE	1.66	1.44	86.7	45-110
NITROBENZENE	1.66	1.41	84.9	40-115
PENTACHLOROPHENOL	1.66	0.870	52.4	25-120
PHENOL	1.66	1.58	95.2	40-100
SURROGATE: 2,4,6-TRIBROMOPHENOL	6.63	4.48	67.6	35-125
SURROGATE: 2-FLUORBIPHENYL (S)	3.32	2.55	76.8	45-105
SURROGATE: 2-FLUOROPHENOL (S)	6.63	5.36	80.8	35-105
SURROGATE: NITROBENZENE-D5 (S)	3.32	2.88	86.7	35-100
SURROGATE: PHENOL (S)	6.63	6.23	94.0	40-100

= Recovery is outside QC limits.

Comments: _____

Primary	SPK
Quant Method :	Y87HP.M
Extraction Date :	9/15/14
Analysis Date :	9/21/14
Instrument :	YODA
Run :	0921Y004
Initials :	LF

Printed: 9/22/14 8:22:32 PM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8270C IS SOILS

APPL ID: **140915S-02100 LCS - 189979**
Batch ID: #87CE2-140915A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
SURROGATE: TERPHENYL-D14 (S)	3.32	2.43	73.2	30-125

= Recovery is outside QC limits.

Comments: _____

Primary	SPK
Quant Method :	Y87HP.M
Extraction Date :	9/15/14
Analysis Date :	9/21/14
Instrument :	YODA
Run :	0921Y004
Initials :	LF

Printed: 9/22/14 8:22:32 PM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8270C WATER

APPL ID: **140908W-02108 LCS - 189933**
Batch ID: #87CE2-140908A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2,4-TRICHLOROBENZENE	50.0	27.4	54.8	35-105
1,2-DICHLOROBENZENE	50.0	29.0	58.0	35-100
1,3-DICHLOROBENZENE	50.0	26.3	52.6	30-100
1,4-DICHLOROBENZENE	50.0	27.0	54.0	30-100
2,4,5-TRICHLOROPHENOL	50.0	34.1	68.2	50-110
2,4,6-TRICHLOROPHENOL	50.0	33.3	66.6	50-115
2,4-DICHLOROPHENOL	50.0	32.3	64.6	50-105
2,4-DIMETHYLPHENOL	50.0	36.1	72.2	30-110
2,4-DINITROPHENOL	50.0	37.1	74.2	15-140
2,4-DINITROTOLUENE	50.0	31.9	63.8	50-120
2,6-DINITROTOLUENE	50.0	35.1	70.2	50-115
2-CHLOROPHENOL	50.0	33.7	67.4	35-105
3,3'-DICHLOROBENZIDINE	50.0	49.2	98.4	20-110
4-CHLOROANILINE	50.0	53.3	107	15-110
BIS (2-CHLOROETHYL) ETHER	50.0	33.6	67.2	35-110
BIS (2-CHLOROISOPROPYL) ETHER	50.0	33.3	66.6	25-130
BIS (2-ETHYLHEXYL) PHTHALATE	50.0	37.1	74.2	40-125
DIETHYL PHTHALATE	50.0	30.2	60.4	40-120
DIMETHYL PHTHALATE	50.0	31.5	63.0	25-125
HEXACHLOROBENZENE	50.0	35.5	71.0	50-110
HEXACHLOROBUTADIENE	50.0	25.8	51.6	25-105
HEXACHLOROETHANE	50.0	26.3	52.6	30-95
ISOPHORONE	50.0	34.8	69.6	50-110
NITROBENZENE	50.0	32.4	64.8	45-110
PENTACHLOROPHENOL	50.0	38.8	77.6	40-115
PHENOL	50.0	16.2	32.4	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	137	68.5	40-125
SURROGATE: 2-FLUORBIPHENYL (S)	100	54.1	54.1	50-110
SURROGATE: 2-FLUOROPHENOL (S)	200	84.7	42.4	20-110
SURROGATE: NITROBENZENE-D5 (S)	100	60.9	60.9	40-110
SURROGATE: PHENOL (S)	200	55.6	27.8	10-115

Primary	SPK
Quant Method :	Y87HP.M
Extraction Date :	9/8/14
Analysis Date :	9/11/14
Instrument :	YODA
Run :	0910Y012
Initials :	LF

Comments: _____

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APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8270C WATER

APPL ID: **140908W-02108 LCS - 189933**
Batch ID: #87CE2-140908A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
SURROGATE: TERPHENYL-D14 (S)	100	106	106	50-135

Comments: _____

Primary	SPK
Quant Method :	Y87HP.M
Extraction Date :	9/8/14
Analysis Date :	9/11/14
Instrument :	YODA
Run :	0910Y012
Initials :	LF

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APPL Standard LCS

Matrix Spike Recoveries

EPA 8270C IS SOILS

APPL ID: **140915S-02100 MS - 189979**
Batch ID: #87CE2-140915A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2,4-TRICHLOROBENZENE	1.65	ND	1.38	1.24	83.6	75.2	45-110	10.7	30
1,2-DICHLOROBENZENE	1.65	ND	1.40	1.28	84.8	77.6	45-95	9.0	30
1,3-DICHLOROBENZENE	1.65	ND	1.40	1.28	84.8	77.6	40-100	9.0	30
1,4-DICHLOROBENZENE	1.65	ND	1.33	1.23	80.6	74.5	35-105	7.8	30
2,4,5-TRICHLOROPHENOL	1.65	ND	1.26	1.25	76.4	75.8	50-110	0.80	30
2,4,6-TRICHLOROPHENOL	1.65	ND	1.35	1.25	81.8	75.8	45-110	7.7	30
2,4-DICHLOROPHENOL	1.65	ND	1.28	1.16	77.6	70.3	45-110	9.8	30
2,4-DIMETHYLPHENOL	1.65	ND	0.427	0.402	25.9 #	24.4 #	30-105	6.0	30
2,4-DINITROPHENOL	1.65	ND	0.259	0.207	15.7	12.5 #	15-130	22.3	30
2,4-DINITROTOLUENE	1.65	ND	1.51	1.34	91.5	81.2	50-115	11.9	30
2,6-DINITROTOLUENE	1.65	ND	1.54	1.36	93.3	82.4	50-110	12.4	30
2-CHLOROPHENOL	1.65	ND	1.36	1.26	82.4	76.4	45-105	7.6	30
3,3'-DICHLOROBENZIDINE	1.65	ND	0.159	0.118	9.6 #	7.2 #	10-130	29.6	30
4-CHLOROANILINE	1.65	ND	0.627	0.580	38.0	35.2	10-95	7.8	30
BIS (2-CHLOROETHYL) ETHER	1.65	ND	1.71	1.56	104	94.5	40-105	9.2	30
BIS (2-CHLOROISOPROPYL) ETHER	1.65	ND	1.64	1.54	99.4	93.3	20-115	6.3	30
BIS (2-ETHYLHEXYL) PHTHALATE	1.65	0.29	1.96	1.94	101	100	45-125	1.0	30
DIETHYL PHTHALATE	1.65	ND	1.47	1.38	89.1	83.6	50-115	6.3	30
DIMETHYL PHTHALATE	1.65	ND	1.46	1.40	88.5	84.8	50-110	4.2	30
HEXACHLOROBENZENE	1.65	ND	1.45	1.21	87.9	73.3	45-120	18.0	30
HEXACHLOROBUTADIENE	1.65	ND	1.31	1.17	79.4	70.9	40-115	11.3	30
HEXACHLOROETHANE	1.65	ND	1.44	1.33	87.3	80.6	35-110	7.9	30
ISOPHORONE	1.65	ND	1.48	1.35	89.7	81.8	45-110	9.2	30
NITROBENZENE	1.65	ND	1.49	1.35	90.3	81.8	40-115	9.9	30
PENTACHLOROPHENOL	1.65	ND	0.541	0.465	32.8	28.2	25-120	15.1	30
PHENOL	1.65	ND	1.46	1.37	88.5	83.0	40-100	6.4	30
SURROGATE: 2,4,6-TRIBROMOPHENOL	6.59	NA	4.22	4.46	64.0	67.7	35-125		
SURROGATE: 2-FLUORBIPHENYL (S)	3.29	NA	2.55	2.54	77.5	77.2	45-105		
SURROGATE: 2-FLUOROPHENOL (S)	6.59	NA	4.86	4.62	73.7	70.1	35-105		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	Y87HP.M	Y87HP.M
Extraction Date :	9/15/14	9/15/14
Analysis Date :	9/21/14	9/21/14
Instrument :	YODA	YODA
Run :	0921Y005	0921Y006
Initials :	LF	

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APPL MSD SCII

Matrix Spike Recoveries
EPA 8270C IS SOILS

APPL ID: **140915S-02100 MS - 189979**
Batch ID: #87CE2-140915A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
SURROGATE: NITROBENZENE-D5 (S)	3.29	NA	3.05	2.86	92.7	86.9	35-100		
SURROGATE: PHENOL (S)	6.59	NA	5.91	5.69	89.7	86.3	40-100		
SURROGATE: TERPHENYL-D14 (S)	3.29	NA	2.86	2.63	86.9	79.9	30-125		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	Y87HP.M	Y87HP.M
Extraction Date :	9/15/14	9/15/14
Analysis Date :	9/21/14	9/21/14
Instrument :	YODA	YODA
Run :	0921Y005	0921Y006
Initials :	LF	

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APPL MSD SCII

EPA 8270C

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/11/14

Matrix: WATER Instrument: YODA

Blank ID: 140908A-BLK Time Analyzed: 0218

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140908A-BLK	Blank	0910Y011	9/11/14 0218
140908A-LCS	Lab Control Spike	0910Y012	9/11/14 0238
AZ02108	EN010	0910Y022	9/11/14 0602
AZ02109	EN011	0910Y023	9/11/14 0622
AZ02116	EN018	0910Y024	9/11/14 0642

Comments: Batch: #87CE2-140908A

EPA 8270C

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/21/14

Matrix: SOIL Instrument: YODA

Blank ID: 140915A-BLK Time Analyzed: 1311

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140915A-BLK	Blank	0921Y003	9/21/14 1311
140915A-LCS	Lab Control Spike	0921Y004	9/21/14 1327
140915A-MS	Matrix Spike	0921Y005	9/21/14 1344
140915A-MSD	Matrix SpikeD	0921Y006	9/21/14 1401
AZ02099	EN001	0921Y007	9/21/14 1419
AZ02100	EN002	0921Y008	9/21/14 1436
AZ02101	EN003	0921Y009	9/21/14 1453
AZ02102	EN004	0921Y010	9/21/14 1510
AZ02103	EN005	0921Y011	9/21/14 1527
AZ02104	EN006	0921Y012	9/21/14 1544
AZ02105	EN007	0921Y013	9/21/14 1601
AZ02106	EN008	0921Y014	9/21/14 1618
AZ02107	EN009	0921Y015	9/21/14 1635
AZ02110	EN012	0921Y016	9/21/14 1652
AZ02111	EN013	0921Y017	9/21/14 1709
AZ02112	EN014	0921Y018	9/21/14 1726
AZ02113	EN015	0921Y019	9/21/14 1743
AZ02114	EN016	0921Y020	9/21/14 1800
AZ02115	EN017	0921Y021	9/21/14 1817

Comments: Batch: #87CE2-140915A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 74218
Matrix: Water
ID: SV TUNE 02-04-14

SDG No: 74218
Date Analyzed: 9/10/2014
Instrument: YODA
Time Analyzed: 22:55

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	140908A BLK 1/1000	0910Y011.D	9/11/2014 2:18
2	Lab Control Spike	140908A LCS-1 1/1000	0910Y012.D	9/11/2014 2:38
3	EN010	AZ02108W04 1/1040	0910Y022.D	9/11/2014 6:02
4	EN011	AZ02109W05 1/980	0910Y023.D	9/11/2014 6:22
5	EN018	AZ02116W08 1/960	0910Y024.D	9/11/2014 6:42
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	38.6
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	50.8
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	28.6
365	1 - 100% of mass 198	4.9
441	0.01 - 100% of mass 443	99.0
442	40 - 150% of mass 198	142.5
443	17 - 23% of mass 442	18.8

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 74218
Matrix: Soil
ID: SV TUNE 09-16-14

SDG No: 74218
Date Analyzed: 9/21/2014
Instrument: YODA
Time Analyzed: 12:40

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	140915A BLK 1/30.41G	0921Y003.D	9/21/2014 13:11
2	Lab Control Spike	140915A LCS-1 1/30.1	0921Y004.D	9/21/2014 13:27
3	Matrix Spike	AZ02100S11 MS-1 1/30	0921Y005.D	9/21/2014 13:44
4	Matrix Spike Dup	AZ02100S11 MSD-1 1/3	0921Y006.D	9/21/2014 14:01
5	EN001	AZ02099S11 1/30.20G	0921Y007.D	9/21/2014 14:19
6	EN002	AZ02100S11 1/30.36G	0921Y008.D	9/21/2014 14:36
7	EN003	AZ02101S11 1/30.16G	0921Y009.D	9/21/2014 14:53
8	EN004	AZ02102S11 1/30.11G	0921Y010.D	9/21/2014 15:10
9	EN005	AZ02103S11 1/30.42G	0921Y011.D	9/21/2014 15:27
10	EN006	AZ02104S11 1/30.21G	0921Y012.D	9/21/2014 15:44
11	EN007	AZ02105S11 1/30.12G	0921Y013.D	9/21/2014 16:01
12	EN008	AZ02106S11 1/30.12G	0921Y014.D	9/21/2014 16:18
13	EN009	AZ02107S11 1/30.14G	0921Y015.D	9/21/2014 16:35
14	EN012	AZ02110S11 1/30.45G	0921Y016.D	9/21/2014 16:52
15	EN013	AZ02111S11 1/30.13G	0921Y017.D	9/21/2014 17:09
16	EN014	AZ02112S11 1/30.09G	0921Y018.D	9/21/2014 17:26
17	EN015	AZ02113S11 1/30.13G	0921Y019.D	9/21/2014 17:43
18	EN016	AZ02114S11 1/30.11G	0921Y020.D	9/21/2014 18:00
19	EN017	AZ02115S11 1/30.13G	0921Y021.D	9/21/2014 18:17
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	45.4
68	0 - 2% of mass 69	0.7
70	0 - 2% of mass 69	0.9
127	40 - 60% of mass 198	42.8
197	0 - 1% of mass 198	0.1
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	19.6
365	1 - 100% of mass 198	1.7
441	0.01 - 100% of mass 443	79.4
442	40 - 150% of mass 198	94.5
443	17 - 23% of mass 442	19.0

8A

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 74218

Lab File ID (Standard): 0910Y006.D Date Analyzed: 09/11/14

Instrument ID: YODA Time Analyzed: 0:35

GC Column: _____ ID: Heated Purge: (Y/N) _____

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	92754	3.29	323044	4.11	204175	5.20
	UPPER LIMIT	185508	3.79	646088	4.61	408350	5.70
	LOWER LIMIT	46377	2.79	161522	3.61	102088	4.70
	SAMPLE NO.						
01	140908A BLK 1/1000	85725	3.29	316901	4.11	212522	5.20
02	140908A LCS-1 1/1000	90464	3.29	343663	4.11	241886	5.20
03	AZ02108W04 1/1040	100258	3.29	372868	4.11	256453	5.20
04	AZ02109W05 1/980	99725	3.29	395794	4.12	276402	5.20
05	AZ02116W08 1/960	111320	3.29	410905	4.11	274116	5.20
06							
07							
08							
09							
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12							
13							
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15							
16							
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22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 74218

Lab File ID (Standard): 0910Y006.D Date Analyzed: 09/11/14

Instrument ID: YODA Time Analyzed: 0:35

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	441997	6.15	456137	8.10	275860	9.60
	UPPER LIMIT	883994	6.65	912274	8.60	551720	10.10
	LOWER LIMIT	220999	5.65	228069	7.60	137930	9.10
	SAMPLE NO.						
01	140908A BLK 1/1000	432211	6.15	408468	8.11	279325	9.61
02	140908A LCS-1 1/1000	434816	6.16	426331	8.13	328218	9.62
03	AZ02108W04 1/1040	513848	6.15	503501	8.12	329856	9.62
04	AZ02109W05 1/980	506503	6.15	495176	8.10	352223	9.60
05	AZ02116W08 1/960	476509	6.15	538273	8.12	334442	9.62
06							
07							
08							
09							
10							
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8A

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 74218

Lab File ID (Standard): 0920Y006.D Date Analyzed: 09/20/14

Instrument ID: YODA Time Analyzed: 23:48

GC Column: _____ ID: Heated Purge: (Y/N) _____

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	365188	2.33	1535210	3.28	819768	4.43
	UPPER LIMIT	730376	2.83	3070420	3.78	1639536	4.93
	LOWER LIMIT	182594	1.83	767605	2.78	409884	3.93
	SAMPLE NO.						
01	140915A BLK 1/30.41G	286160	2.34	1304610	3.28	605520	4.43
02	140915A LCS-1 1/30.16	251831	2.34	1158580	3.28	626362	4.42
03	AZ02100S11 MS-1 1/30	253644	2.34	1151520	3.28	619089	4.42
04	AZ02100S11 MSD-1 1/3	247665	2.34	1147590	3.28	604352	4.42
05	AZ02099S11 1/30.20G	251765	2.34	1208710	3.28	619387	4.43
06	AZ02100S11 1/30.36G	229584	2.35	1109300	3.28	578108	4.43
07	AZ02101S11 1/30.16G	235066	2.35	1136600	3.28	602680	4.43
08	AZ02102S11 1/30.11G	228585	2.34	1140870	3.29	621249	4.43
09	AZ02103S11 1/30.42G	226478	2.35	1118880	3.28	571300	4.43
10	AZ02104S11 1/30.21G	224319	2.35	1065920	3.28	575689	4.43
11	AZ02105S11 1/30.12G	226767	2.35	1114800	3.29	605305	4.43
12	AZ02106S11 1/30.12G	238227	2.34	1151150	3.29	631130	4.42
13	AZ02107S11 1/30.14G	227534	2.35	1125180	3.28	602097	4.43
14	AZ02110S11 1/30.45G	221315	2.35	1085200	3.29	578874	4.43
15	AZ02111S11 1/30.13G	232135	2.35	1134320	3.29	609635	4.43
16	AZ02112S11 1/30.09G	232306	2.34	1129700	3.29	588330	4.42
17	AZ02113S11 1/30.13G	235146	2.34	1126640	3.29	602477	4.43
18	AZ02114S11 1/30.11G	243185	2.34	1196200	3.29	619710	4.42
19	AZ02115S11 1/30.13G	240449	2.35	1123500	3.28	573984	4.43
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
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8A

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 74218

Lab File ID (Standard): 0920Y006.D Date Analyzed: 09/20/14

Instrument ID: YODA Time Analyzed: 23:48

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1138650	5.37	937409	7.24	757630	8.74
	UPPER LIMIT	2277300	5.87	1874818	7.74	1515260	9.24
	LOWER LIMIT	569325	4.87	468705	6.74	378815	8.24
	SAMPLE NO.						
01	140915A BLK 1/30.41G	992654	5.37	797148	7.28	620633	8.78
02	140915A LCS-1 1/30.16	929307	5.37	748730	7.26	537512	8.75
03	AZ02100S11 MS-1 1/30	897046	5.37	645167	7.26	490801	8.76
04	AZ02100S11 MSD-1 1/3	873034	5.37	630680	7.27	484921	8.77
05	AZ02099S11 1/30.20G	893338	5.37	675519	7.26	474498	8.76
06	AZ02100S11 1/30.36G	833393	5.37	625465	7.26	386569	8.76
07	AZ02101S11 1/30.16G	906317	5.37	641130	7.25	418676	8.75
08	AZ02102S11 1/30.11G	867274	5.37	651502	7.25	409201	8.75
09	AZ02103S11 1/30.42G	843729	5.37	614271	7.26	371585 *	8.76
10	AZ02104S11 1/30.21G	852613	5.37	581535	7.26	356224 *	8.76
11	AZ02105S11 1/30.12G	879999	5.37	595924	7.26	311545 *	8.76
12	AZ02106S11 1/30.12G	893076	5.37	608496	7.26	338449 *	8.76
13	AZ02107S11 1/30.14G	855849	5.37	633837	7.26	348913 *	8.75
14	AZ02110S11 1/30.45G	842554	5.37	582609	7.25	343664 *	8.75
15	AZ02111S11 1/30.13G	859093	5.37	608616	7.25	341643 *	8.75
16	AZ02112S11 1/30.09G	827553	5.37	638733	7.25	313652 *	8.75
17	AZ02113S11 1/30.13G	870351	5.37	613390	7.25	313139 *	8.75
18	AZ02114S11 1/30.11G	884036	5.37	596461	7.25	316457 *	8.75
19	AZ02115S11 1/30.13G	728989	5.36	573208	7.25	283968 *	8.75
20							
21							
22							

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INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 74218

Lab File ID (Standard): 0920Y006.D Date Analyzed: 09/20/14

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GC Column: _____ ID: Heated Purge: (Y/N) _____

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	365188	2.33	1535210	3.28	819768	4.43
	UPPER LIMIT	730376	2.83	3070420	3.78	1639536	4.93
	LOWER LIMIT	182594	1.83	767605	2.78	409884	3.93
	SAMPLE NO.						
01	140915A BLK 1/30.41G	286160	2.34	1304610	3.28	605520	4.43
02	140915A LCS-1 1/30.16	251831	2.34	1158580	3.28	626362	4.42
03	AZ02100S11 MS-1 1/30	253644	2.34	1151520	3.28	619089	4.42
04	AZ02100S11 MSD-1 1/3	247665	2.34	1147590	3.28	604352	4.42
05	AZ02099S11 1/30.20G	251765	2.34	1208710	3.28	619387	4.43
06	AZ02100S11 1/30.36G	229584	2.35	1109300	3.28	578108	4.43
07	AZ02101S11 1/30.16G	235066	2.35	1136600	3.28	602680	4.43
08	AZ02102S11 1/30.11G	228585	2.34	1140870	3.29	621249	4.43
09	AZ02103S11 1/30.42G	226478	2.35	1118880	3.28	571300	4.43
10	AZ02104S11 1/30.21G	224319	2.35	1065920	3.28	575689	4.43
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12	AZ02106S11 1/30.12G	238227	2.34	1151150	3.29	631130	4.42
13	AZ02107S11 1/30.14G	227534	2.35	1125180	3.28	602097	4.43
14	AZ02110S11 1/30.45G	221315	2.35	1085200	3.29	578874	4.43
15	AZ02111S11 1/30.13G	232135	2.35	1134320	3.29	609635	4.43
16	AZ02112S11 1/30.09G	232306	2.34	1129700	3.29	588330	4.42
17	AZ02113S11 1/30.13G	235146	2.34	1126640	3.29	602477	4.43
18	AZ02114S11 1/30.11G	243185	2.34	1196200	3.29	619710	4.42
19	AZ02115S11 1/30.13G	240449	2.35	1123500	3.28	573984	4.43
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GC Column: _____ ID: Heated Purge: (Y/N) _____

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1138650	5.37	937409	7.24	757630	8.74
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	LOWER LIMIT	569325	4.87	468705	6.74	378815	8.24
	SAMPLE NO.						
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02	140915A LCS-1 1/30.16	929307	5.37	748730	7.26	537512	8.75
03	AZ02100S11 MS-1 1/30	897046	5.37	645167	7.26	490801	8.76
04	AZ02100S11 MSD-1 1/3	873034	5.37	630680	7.27	484921	8.77
05	AZ02099S11 1/30.20G	893338	5.37	675519	7.26	474498	8.76
06	AZ02100S11 1/30.36G	833393	5.37	625465	7.26	386569	8.76
07	AZ02101S11 1/30.16G	906317	5.37	641130	7.25	418676	8.75
08	AZ02102S11 1/30.11G	867274	5.37	651502	7.25	409201	8.75
09	AZ02103S11 1/30.42G	843729	5.37	614271	7.26	371585 NT	8.76
10	AZ02104S11 1/30.21G	852613	5.37	581535	7.26	356224 NT	8.76
11	AZ02105S11 1/30.12G	879999	5.37	595924	7.26	311545 NT	8.76
12	AZ02106S11 1/30.12G	893076	5.37	608496	7.26	338449 NT	8.76
13	AZ02107S11 1/30.14G	855849	5.37	633837	7.26	348913 NT	8.75
14	AZ02110S11 1/30.45G	842554	5.37	582609	7.25	343664 NT	8.75
15	AZ02111S11 1/30.13G	859093	5.37	608616	7.25	341643 NT	8.75
16	AZ02112S11 1/30.09G	827553	5.37	638733	7.25	313652 NT	8.75
17	AZ02113S11 1/30.13G	870351	5.37	613390	7.25	313139 NT	8.75
18	AZ02114S11 1/30.11G	884036	5.37	596461	7.25	316457 NT	8.75
19	AZ02115S11 1/30.13G	728989	5.36	573208	7.25	283968 NT	8.75
20							
21							
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EPA METHOD 8270
Sample Data

APPL, INC.

EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN001

APPL ID: AZ02099

Sample Collection Date: 9/2/14

QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	0.57 J	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	57.5	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	76.1	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	65.9	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	82.7	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	85.5	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	73.3	30-125			%	9/15/14	9/21/14

J = Estimated value.

Quant Method: Y87HP.M
Run #: 0921Y007
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y007.D Vial: 7
Acq On : 21 Sep 14 14:19 Operator: CSC
Sample : AZ02099S11 1/30.20G Inst : YODA
Misc : Multiplr: 33.11

Quant Time: Sep 21 21:37 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.34	152	251765	40.00000 ppb	0.02
20) Napthalene-D8(IS)	3.28	136	1208714	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	4.43	164	619387	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	893338	40.00000 ppb	0.00
76) Chrysene-D12(IS)	7.26	240	675519	40.00000 ppb	0.02
87) Perylene-D12(IS)	8.76	264	474498	40.00000 ppb	0.02
System Monitoring Compounds					
4) 2-Fluorophenol (S)	1.66	112	752301	4366.57952 ppb	0.02
Spiked Amount 6622.517			Recovery =	65.935%	
5) Phenol-D6 (S)	2.09	99	1174960	5663.26217 ppb	0.02
Spiked Amount 6622.517			Recovery =	85.515%	
21) Nitrobenzene-D5(S)	2.76	82	639780	2737.82085 ppb	0.00
Spiked Amount 3311.258			Recovery =	82.682%	
44) 2-Fluorobiphenyl(S)	3.99	172	1282488	2520.84490 ppb	0.00
Spiked Amount 3311.258			Recovery =	76.130%	
61) 2,4,6-Tribromophenol(S)	4.92	330	237442	3810.25346 ppb	0.00
Spiked Amount 6622.517			Recovery =	57.535%	
79) Terphenyl-D14(S)	6.42	244	940364	2428.56543 ppb	0.00
Spiked Amount 3311.258			Recovery =	73.343%	
Target Compounds					Qvalue
83) Bis (2-ethylhexyl) phthala	7.21	149	263471	572.13236 ppb	98

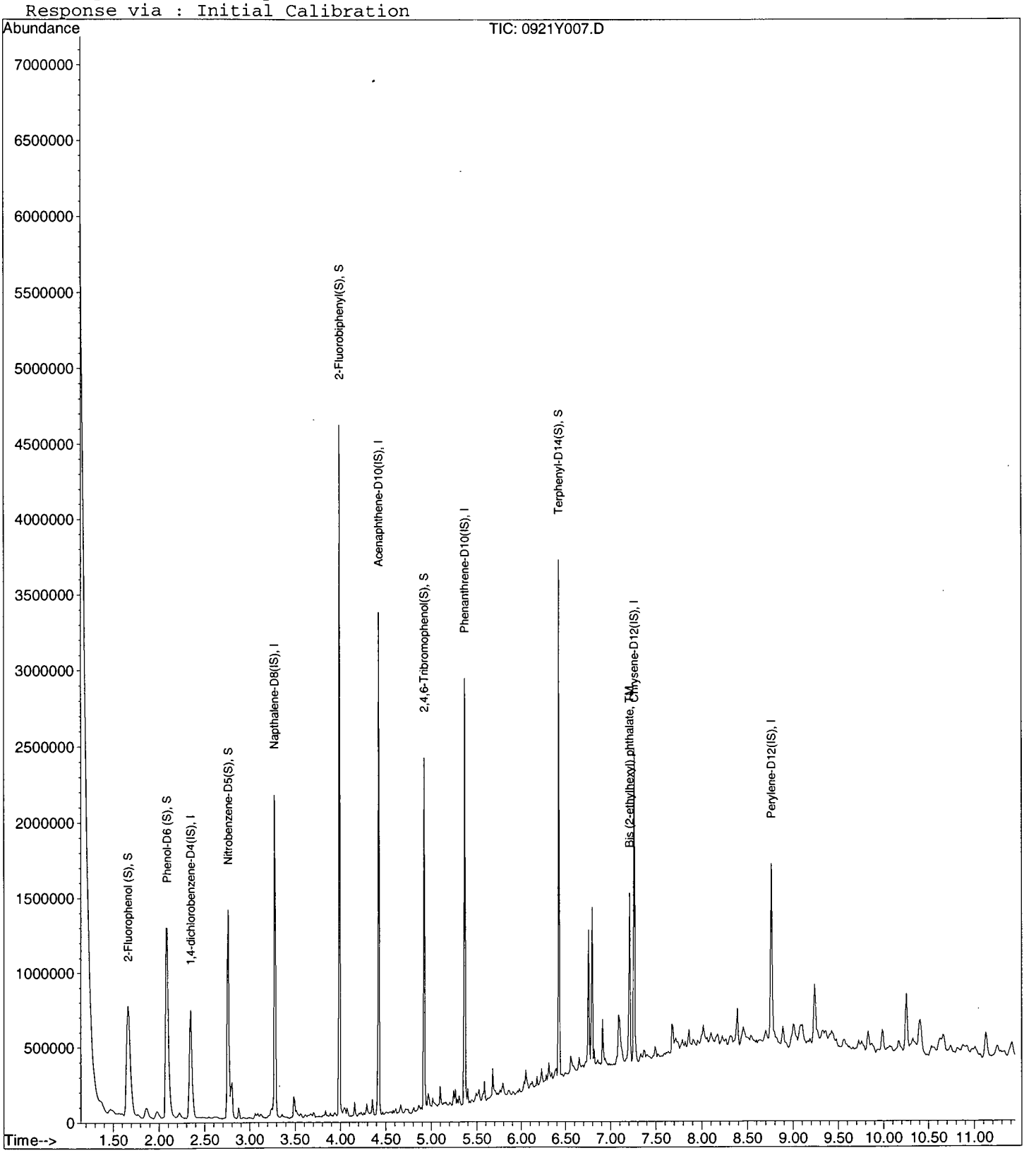
(#) = qualifier out of range (m) = manual integration

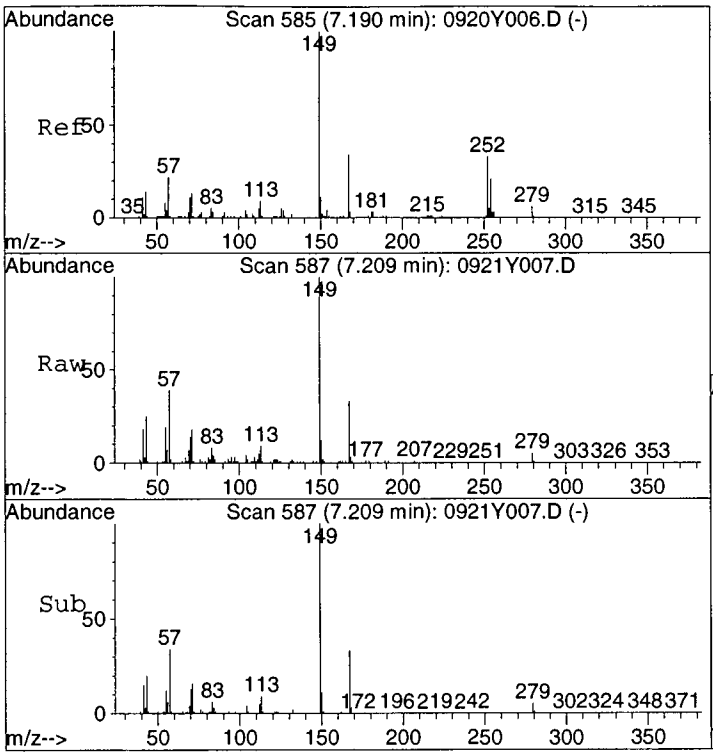
Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y007.D Vial: 7
Acq On : 21 Sep 14 14:19 Operator: CSC
Sample : AZ02099S11 1/30.20G Inst : YODA
Misc : Multiplr: 33.11

Quant Time: Sep 21 21:37 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

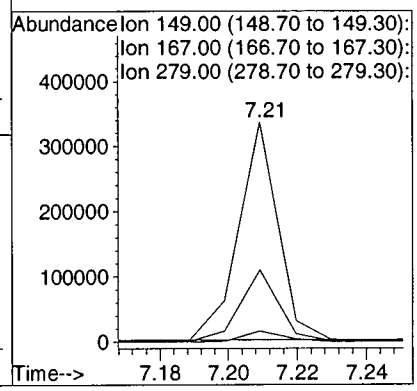




#83
Bis (2-ethylhexyl) phthalate
Concen: 572.13236 ppb
RT: 7.21 min Scan# 587
Delta R.T. 0.02 min
Lab File: 0921Y007.D
Acq: 21 Sep 14 14:19

Tgt Ion:149 Resp: 263471

Ion	Ratio	Lower	Upper
149	100		
167	32.8	23.6	43.8
279	5.0	4.5	8.3



EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN002
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02100
QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	0.29 J	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	62.3	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	83.9	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	75.8	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	95.2	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	98.9	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	81.3	30-125			%	9/15/14	9/21/14

J = Estimated value.

Quant Method: Y87HP.M
Run #: 0921Y008
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y008.D Vial: 8
Acq On : 21 Sep 14 14:36 Operator: CSC
Sample : AZ02100S11 1/30.36G Inst : YODA
Misc : Multiplr: 32.94

Quant Time: Sep 21 21:37 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.35	152	229584	40.00000	ppb	0.02
20) Napthalene-D8(IS)	3.28	136	1109298	40.00000	ppb	0.00
38) Acenaphthene-D10(IS)	4.43	164	578108	40.00000	ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	833393	40.00000	ppb	0.00
76) Chrysene-D12(IS)	7.26	240	625465	40.00000	ppb	0.02
87) Perylene-D12(IS)	8.76	264	386569	40.00000	ppb	0.02
System Monitoring Compounds						
4) 2-Fluorophenol (S)	1.66	112	788189	4990.44300	ppb	0.02
Spiked Amount 6587.615			Recovery =	75.755%		
5) Phenol-D6 (S)	2.09	99	1239176	6515.31736	ppb	0.02
Spiked Amount 6587.615			Recovery =	98.903%		
21) Nitrobenzene-D5(S)	2.76	82	675787	3134.47480	ppb	0.00
Spiked Amount 3293.808			Recovery =	95.163%		
44) 2-Fluorobiphenyl(S)	3.99	172	1319415	2763.96538	ppb	0.00
Spiked Amount 3293.808			Recovery =	83.914%		
61) 2,4,6-Tribromophenol(S)	4.92	330	239927	4103.30514	ppb	0.00
Spiked Amount 6587.615			Recovery =	62.288%		
79) Terphenyl-D14(S)	6.42	244	964980	2677.39188	ppb	0.00
Spiked Amount 3293.808			Recovery =	81.286%		
Target Compounds						Qvalue
83) Bis (2-ethylhexyl) phthala	7.21	149	122289	285.29286	ppb	# 96

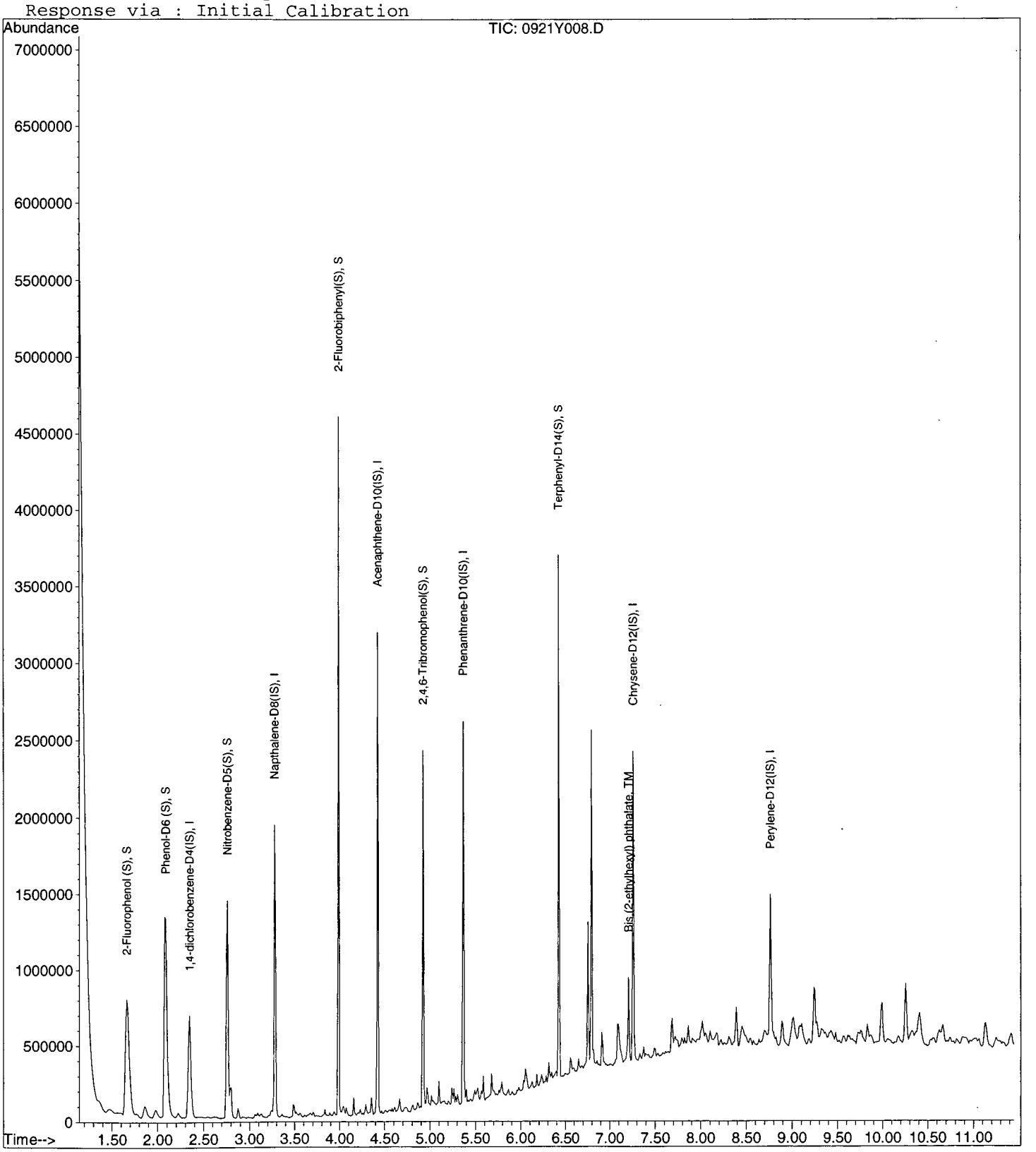
(#) = qualifier out of range (m) = manual integration

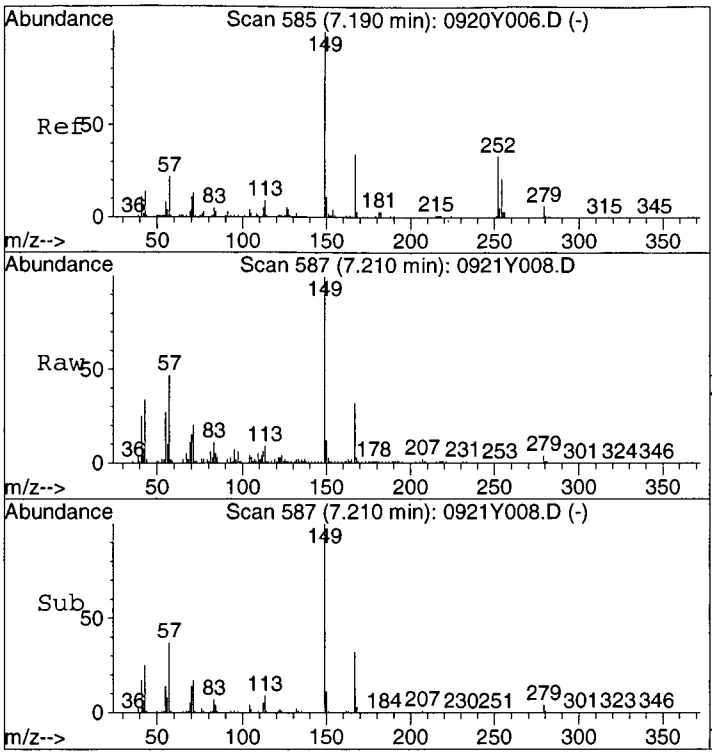
Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y008.D Vial: 8
Acq On : 21 Sep 14 14:36 Operator: CSC
Sample : AZ02100S11 1/30.36G Inst : YODA
Misc : Multiplr: 32.94

Quant Time: Sep 21 21:37 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

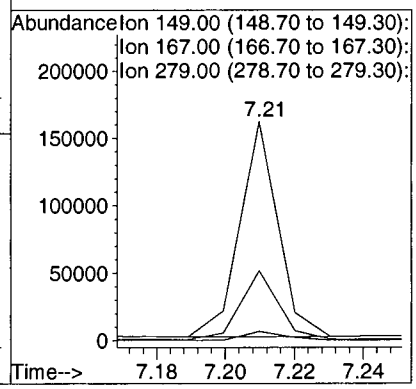




#83
Bis (2-ethylhexyl) phthalate
Concen: 285.29286 ppb
RT: 7.21 min Scan# 587
Delta R.T. 0.02 min
Lab File: 0921Y008.D
Acq: 21 Sep 14 14:36

Tgt Ion:149 Resp: 122289

Ion	Ratio	Lower	Upper
149	100		
167	31.8	23.6	43.8
279	4.2	4.5	8.3#



EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN003
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02101
QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3´-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	0.56 J	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	62.4	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	82.3	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	76.7	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	93.5	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	97.1	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	85.1	30-125			%	9/15/14	9/21/14

J = Estimated value.

Quant Method: Y87HP.M
Run #: 0921Y009
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y009.D Vial: 9
Acq On : 21 Sep 14 14:53 Operator: CSC
Sample : AZ02101S11 1/30.16G Inst : YODA
Misc : Multiplr: 33.16

Quant Time: Sep 21 21:38 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.35	152	235066	40.00000 ppb		0.02
20) Napthalene-D8(IS)	3.28	136	1136595	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	4.43	164	602680	40.00000 ppb		0.00
62) Phenanthrene-D10(IS)	5.37	188	906317	40.00000 ppb		0.00
76) Chrysene-D12(IS)	7.25	240	641130	40.00000 ppb		0.00
87) Perylene-D12(IS)	8.75	264	418676	40.00000 ppb		0.01
System Monitoring Compounds						
4) 2-Fluorophenol (S)	1.66	112	816666	5083.64724 ppb		0.02
Spiked Amount 6631.300			Recovery =	76.661%		
5) Phenol-D6 (S)	2.09	99	1245556	6438.54953 ppb		0.02
Spiked Amount 6631.300			Recovery =	97.093%		
21) Nitrobenzene-D5(S)	2.76	82	680280	3099.95608 ppb		0.00
Spiked Amount 3315.650			Recovery =	93.495%		
44) 2-Fluorobiphenyl(S)	3.99	172	1348285	2727.25336 ppb		0.00
Spiked Amount 3315.650			Recovery =	82.254%		
61) 2,4,6-Tribromophenol(S)	4.92	330	250554	4137.60122 ppb		0.00
Spiked Amount 6631.300			Recovery =	62.395%		
79) Terphenyl-D14(S)	6.42	244	1035828	2822.33518 ppb		0.00
Spiked Amount 3315.650			Recovery =	85.122%		
Target Compounds						Qvalue
71) Phenanthrene	5.38	178	143212	175.02037 ppb		99
72) Anthracene	5.38	178	143212	192.03546 ppb		100
75) Fluoranthene	6.17	202	109246	148.67698 ppb		95
78) Pyrene	6.34	202	68929	101.23458 ppb		94
82) Benz (a) anthracene	7.25	228	31008	52.01108 ppb		99
83) Bis (2-ethylhexyl) phthala	7.20	149	243416	557.67341 ppb	#	92
84) Chrysene	7.28	228	28311	56.45715 ppb	#	96
88) Benzo (b) fluoranthene	8.32	252	37593	68.78495 ppb	#	89
89) Benzo (k) fluoranthene	8.32	252	37593	86.75307 ppb	#	86
90) Benzo (a) pyrene	8.69	252	16364	34.30640 ppb	#	86

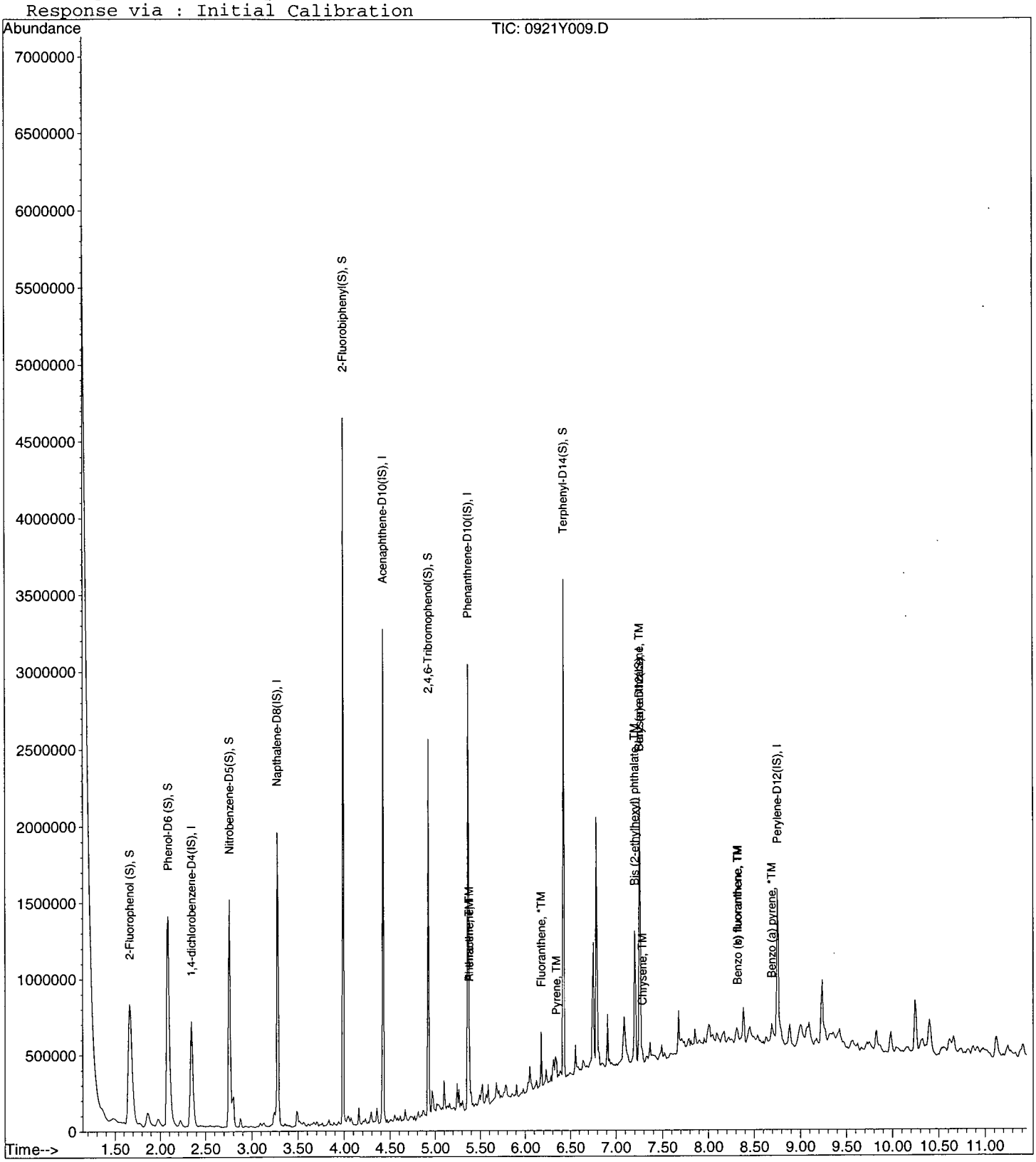
(#) = qualifier out of range (m) = manual integration

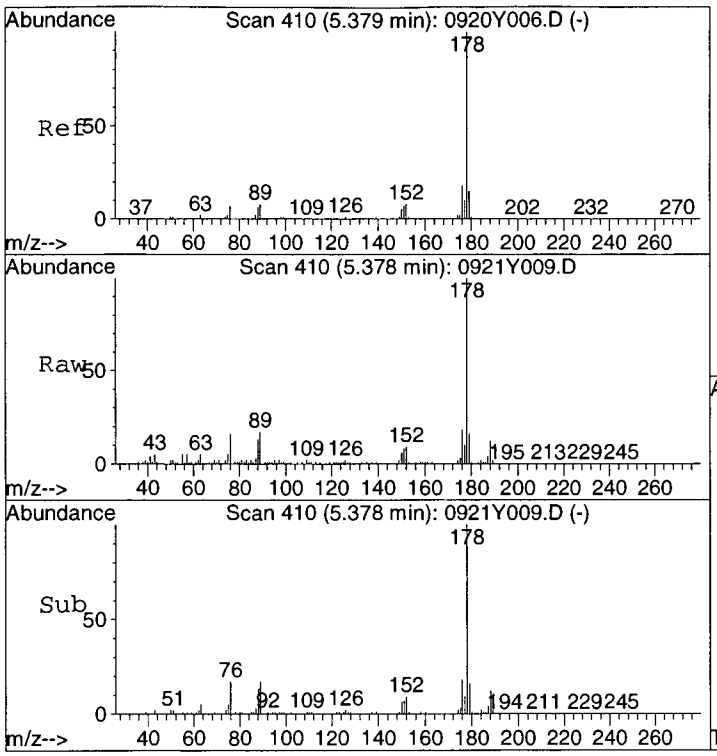
Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y009.D Vial: 9
Acq On : 21 Sep 14 14:53 Operator: CSC
Sample : AZ02101S11 1/30.16G Inst : YODA
Misc : Multiplr: 33.16

Quant Time: Sep 21 21:38 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

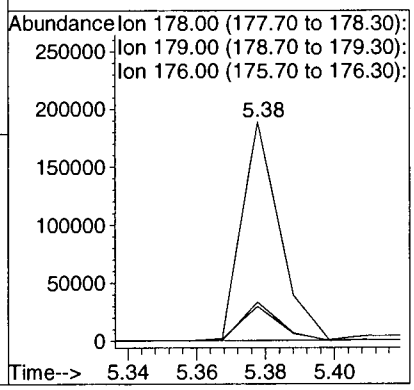


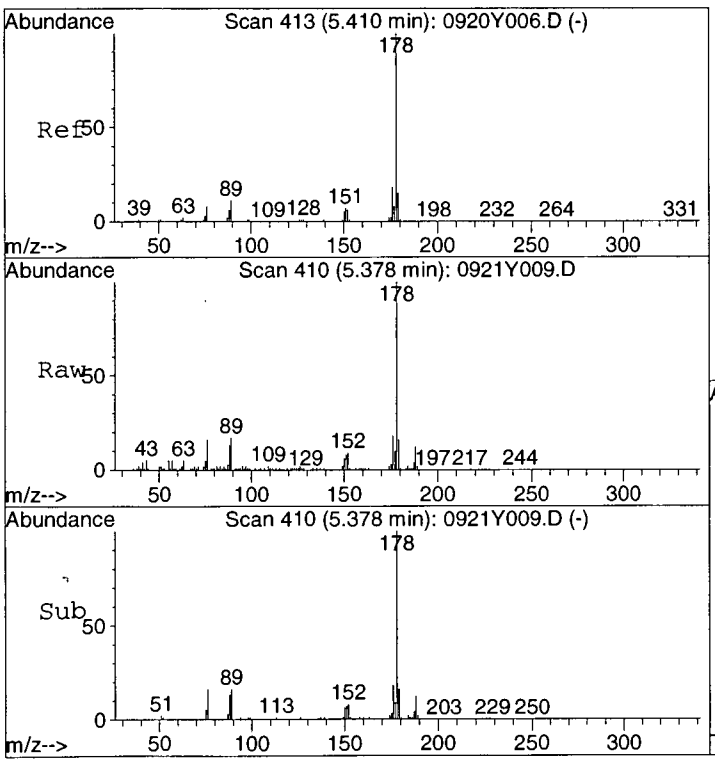


#71
Phenanthrene
Concen: 175.02037 ppb
RT: 5.38 min Scan# 410
Delta R.T. -0.00 min
Lab File: 0921Y009.D
Acq: 21 Sep 14 14:53

Tgt Ion:178 Resp: 143212

Ion	Ratio	Lower	Upper
178	100		
179	15.5	10.7	19.9
176	17.7	12.7	23.5

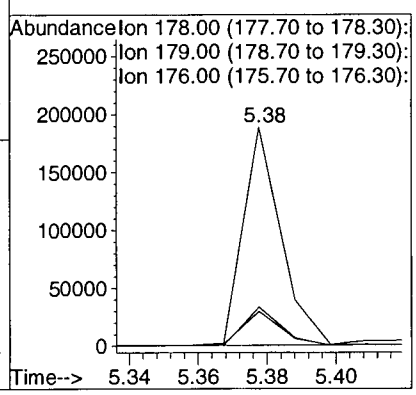


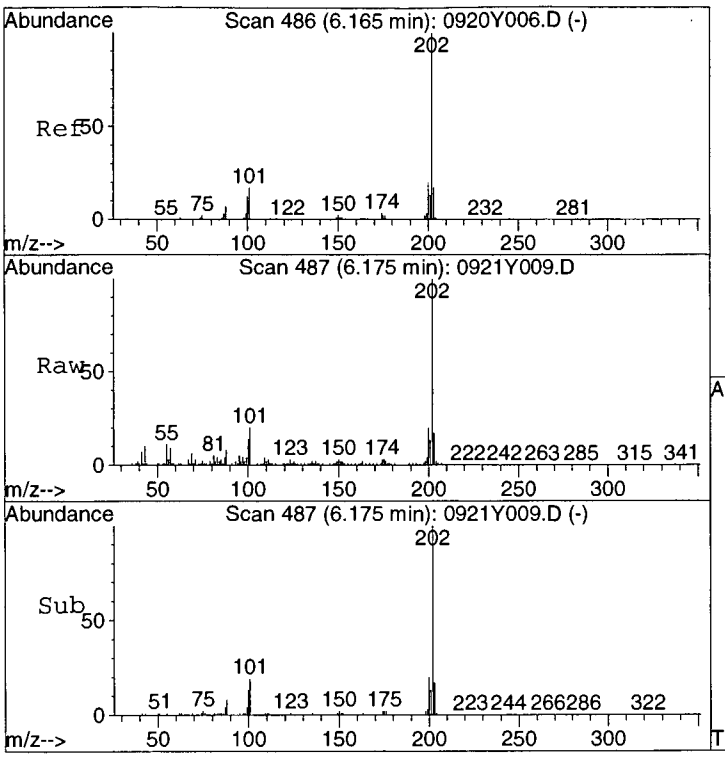


#72
Anthracene
Concen: 192.03546 ppb
RT: 5.38 min Scan# 410
Delta R.T. -0.03 min
Lab File: 0921Y009.D
Acq: 21 Sep 14 14:53

Tgt Ion:178 Resp: 143212

Ion	Ratio	Lower	Upper
178	100		
179	15.5	10.8	20.0
176	17.7	12.3	22.9

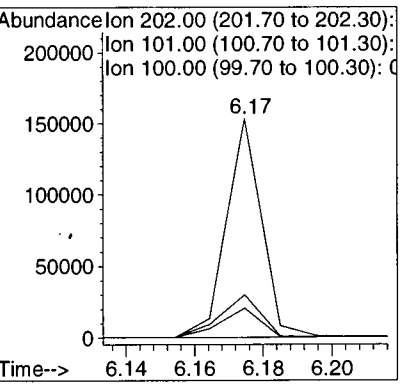


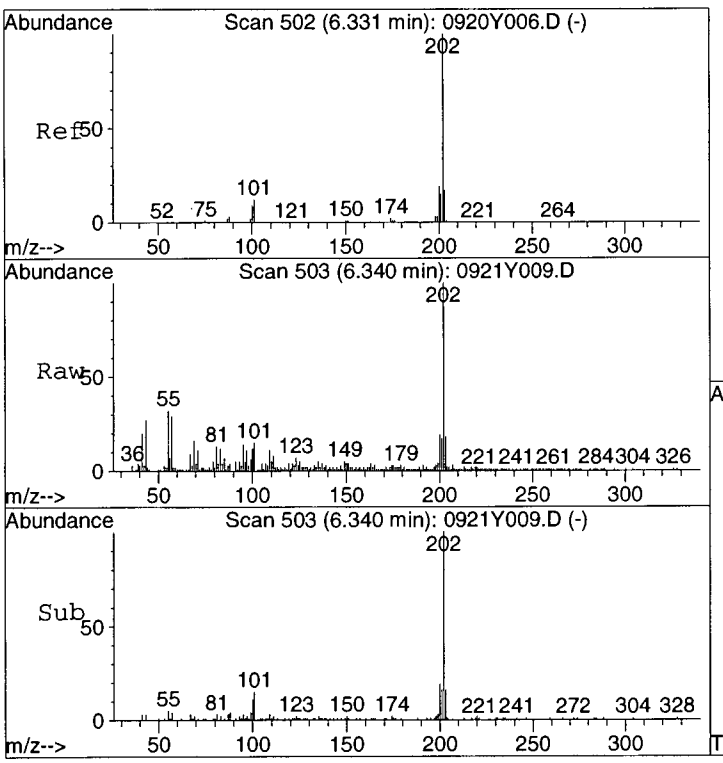


#75
Fluoranthene
Concen: 148.67698 ppb
RT: 6.17 min Scan# 487
Delta R.T. 0.01 min
Lab File: 0921Y009.D
Acq: 21 Sep 14 14:53

Tgt Ion:202 Resp: 109246

Ion	Ratio	Lower	Upper
202	100		
101	19.4	12.0	22.2
100	13.4	8.1	15.1

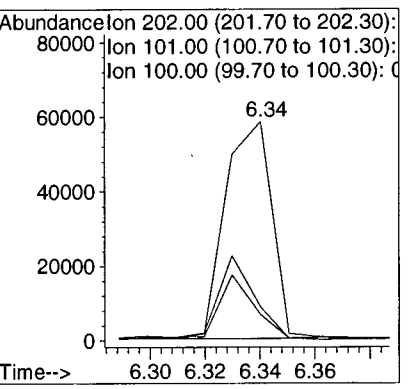


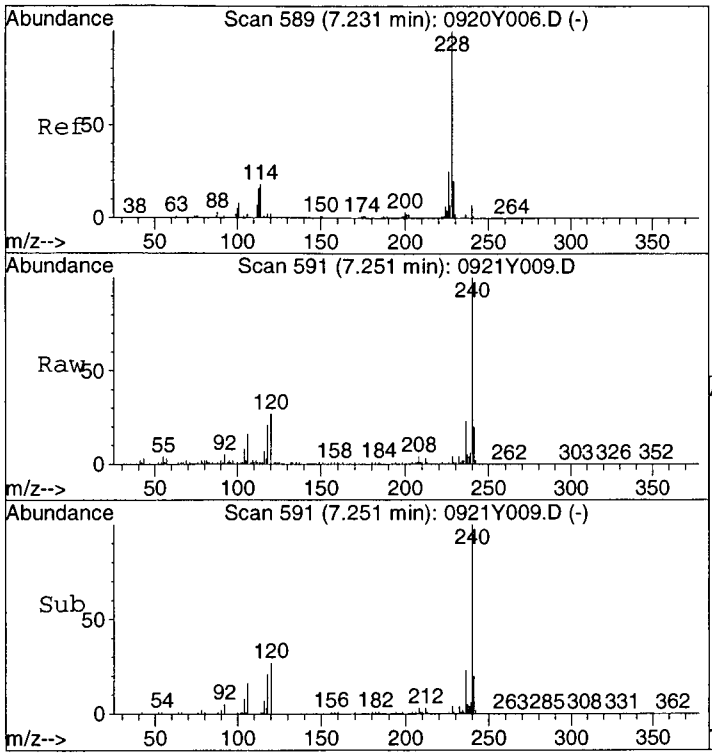


#78
Pyrene
Concen: 101.23458 ppb
RT: 6.34 min Scan# 503
Delta R.T. 0.01 min
Lab File: 0921Y009.D
Acq: 21 Sep 14 14:53

Tgt Ion:202 Resp: 68929

Ion	Ratio	Lower	Upper
202	100		
101	14.1	8.6	16.0
100	11.5	6.3	11.7

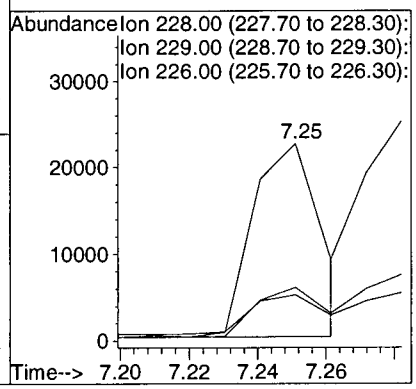


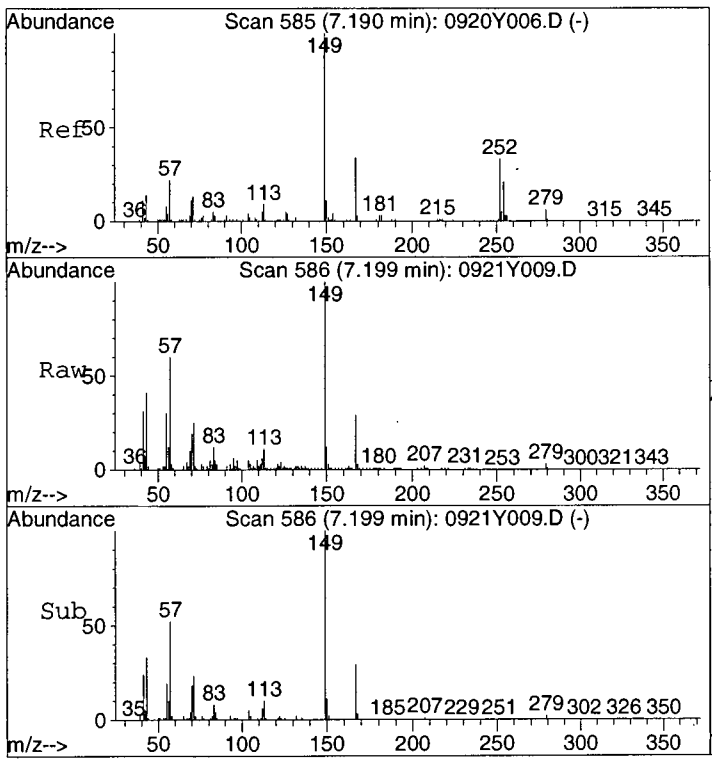


#82
Benz (a) anthracene
Concen: 52.01108 ppb
RT: 7.25 min Scan# 591
Delta R.T. 0.02 min
Lab File: 0921Y009.D
Acq: 21 Sep 14 14:53

Tgt Ion:228 Resp: 31008

Ion	Ratio	Lower	Upper
228	100		
229	20.3	13.9	25.7
226	25.7	17.9	33.2

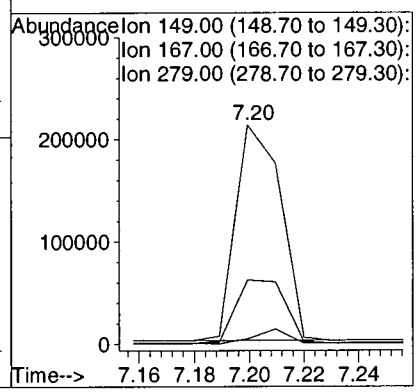


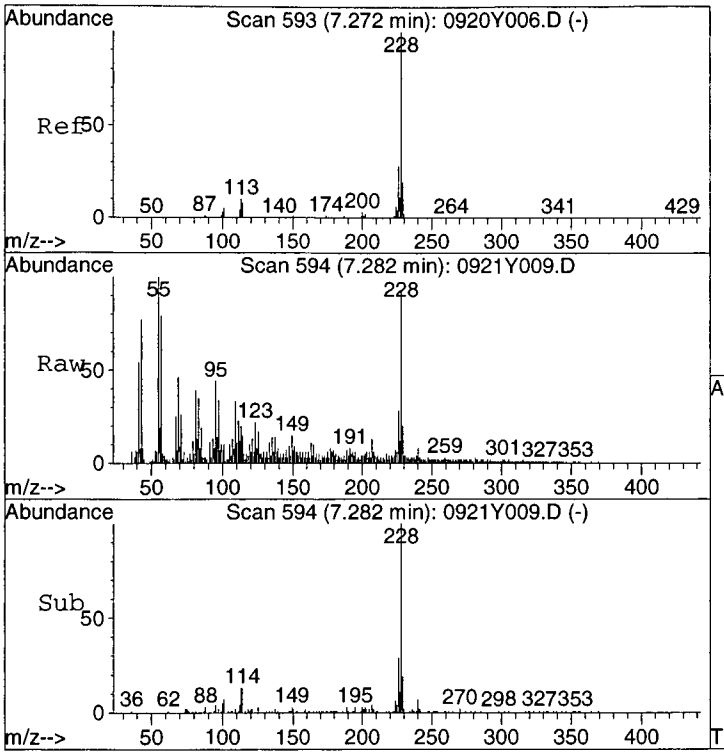


#83
Bis (2-ethylhexyl) phthalate
Concen: 557.67341 ppb
RT: 7.20 min Scan# 586
Delta R.T. 0.01 min
Lab File: 0921Y009.D
Acq: 21 Sep 14 14:53

Tgt Ion:149 Resp: 243416

Ion	Ratio	Lower	Upper
149	100		
167	29.2	23.6	43.8
279	2.5	4.5	8.3#

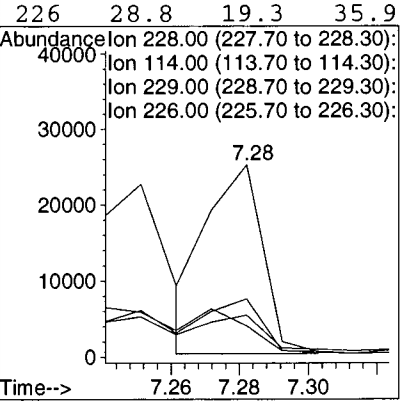


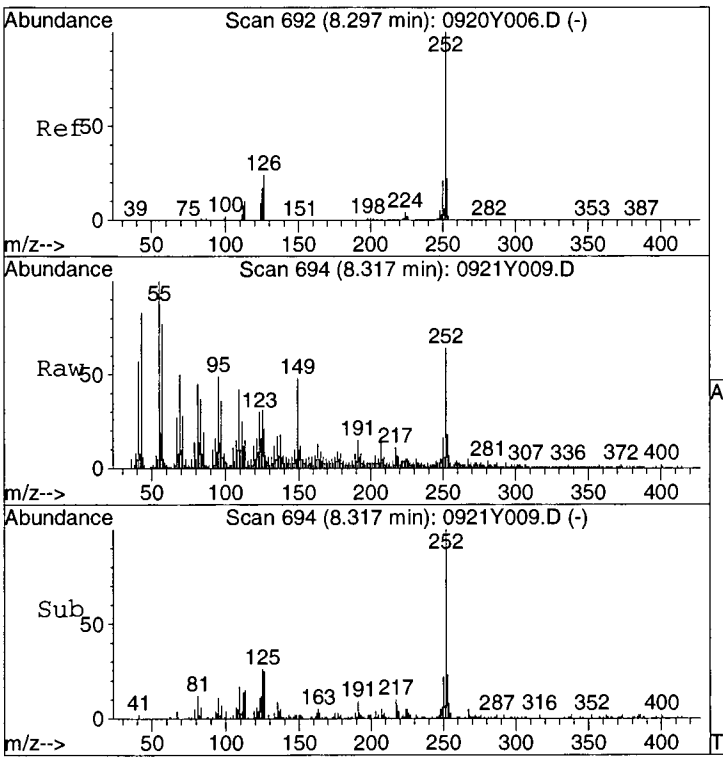


#84
Chrysene
Concen: 56.45715 ppb
RT: 7.28 min Scan# 594
Delta R.T. 0.01 min
Lab File: 0921Y009.D
Acq: 21 Sep 14 14:53

Tgt Ion:228 Resp: 28311

Ion	Ratio	Lower	Upper
228	100		
114	13.6	6.5	12.1#
229	18.3	13.4	24.8
226	28.8	19.3	35.9

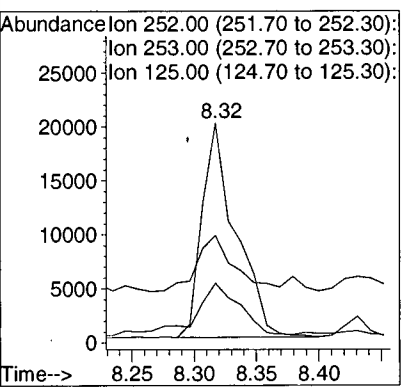


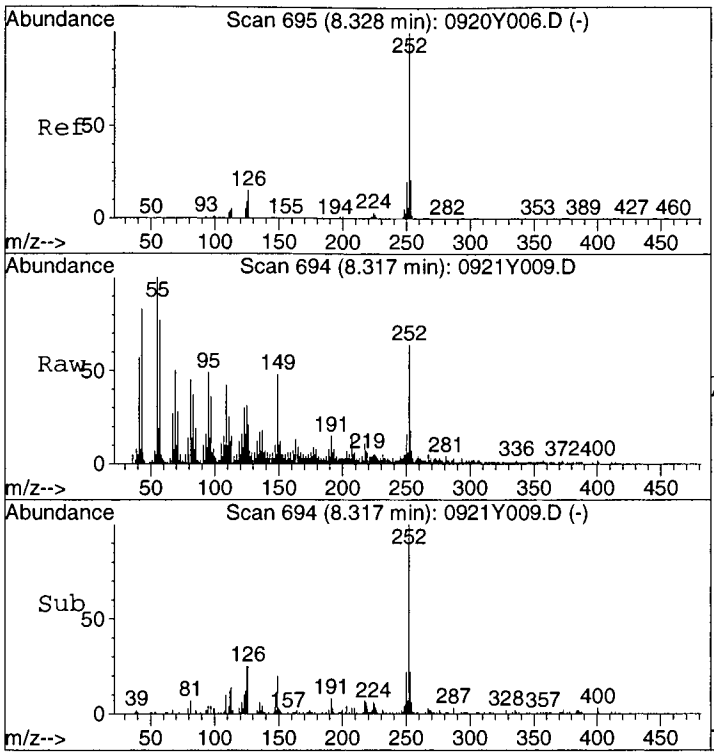


#88
Benzo (b) fluoranthene
Concen: 68.78495 ppb
RT: 8.32 min Scan# 694
Delta R.T. 0.02 min
Lab File: 0921Y009.D
Acq: 21 Sep 14 14:53

Tgt Ion:252 Resp: 37593

Ion	Ratio	Lower	Upper
252	100		
253	23.6	15.1	28.1
125	25.8	12.0	22.2#

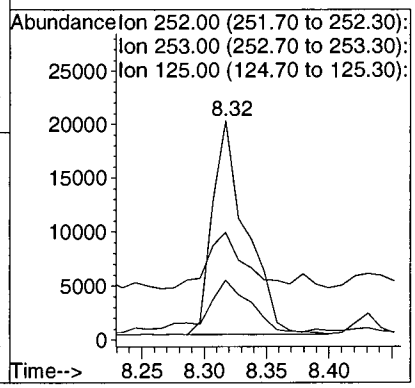


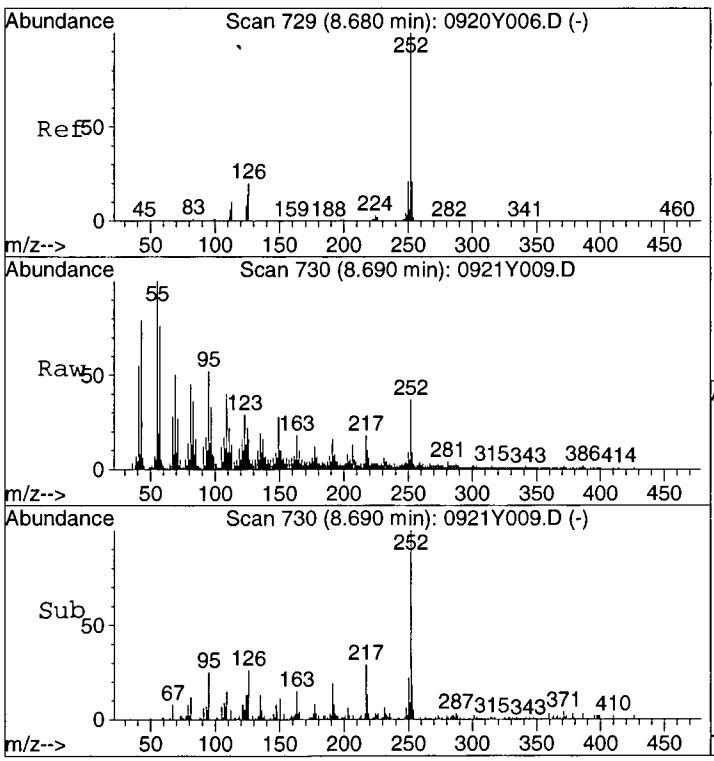


#89
Benzo (k) fluoranthene
Concen: 86.75307 ppb
RT: 8.32 min Scan# 694
Delta R.T. -0.01 min
Lab File: 0921Y009.D
Acq: 21 Sep 14 14:53

Tgt Ion:252 Resp: 37593

Ion	Ratio	Lower	Upper
252	100		
253	23.6	14.9	27.7
125	25.8	10.2	19.0#

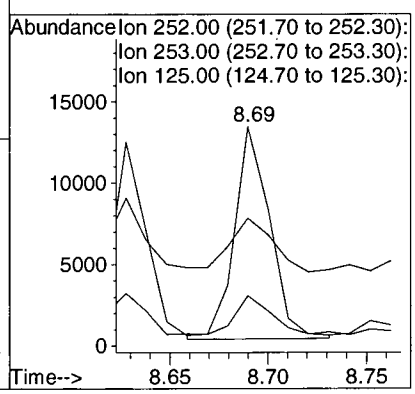




#90
Benzo (a) pyrene
Concen: 34.30640 ppb
RT: 8.69 min Scan# 730
Delta R.T. 0.01 min
Lab File: 0921Y009.D
Acq: 21 Sep 14 14:53

Tgt Ion:252 Resp: 16364

Ion	Ratio	Lower	Upper
252	100		
253	18.2	14.9	27.7
125	24.7	9.9	18.3#



EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN004

APPL ID: AZ02102

Sample Collection Date: 9/2/14

QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	1.0	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	59.4	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	76.9	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	74.0	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	90.0	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	97.4	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	85.2	30-125			%	9/15/14	9/21/14

Quant Method: Y87HP.M
Run #: 0921Y010
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y010.D Vial: 10
Acq On : 21 Sep 14 15:10 Operator: CSC
Sample : AZ02102S11 1/30.11G Inst : YODA
Misc : Multiplr: 33.21

Quant Time: Sep 21 21:39 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.34	152	228585	40.00000 ppb	0.02
20) Napthalene-D8(IS)	3.29	136	1140867	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	4.43	164	621249	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	867274	40.00000 ppb	0.00
76) Chrysene-D12(IS)	7.25	240	651502	40.00000 ppb	0.00
87) Perylene-D12(IS)	8.75	264	409201	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	1.66	112	766775	4916.56246 ppb	0.02
Spiked Amount 6642.312			Recovery =	74.019%	
5) Phenol-D6 (S)	2.09	99	1214806	6468.36317 ppb	0.02
Spiked Amount 6642.312			Recovery =	97.381%	
21) Nitrobenzene-D5(S)	2.76	82	657004	2987.63247 ppb	0.00
Spiked Amount 3321.156			Recovery =	89.958%	
44) 2-Fluorobiphenyl(S)	3.99	172	1299234	2553.71738 ppb	0.00
Spiked Amount 3321.156			Recovery =	76.892%	
61) 2,4,6-Tribromophenol(S)	4.92	330	245925	3946.31405 ppb	0.00
Spiked Amount 6642.312			Recovery =	59.412%	
79) Terphenyl-D14(S)	6.42	244	1053405	2829.22352 ppb	0.00
Spiked Amount 3321.156			Recovery =	85.188%	
Target Compounds					Qvalue
83) Bis (2-ethylhexyl) phthala	7.20	149	442356	998.97285 ppb #	93

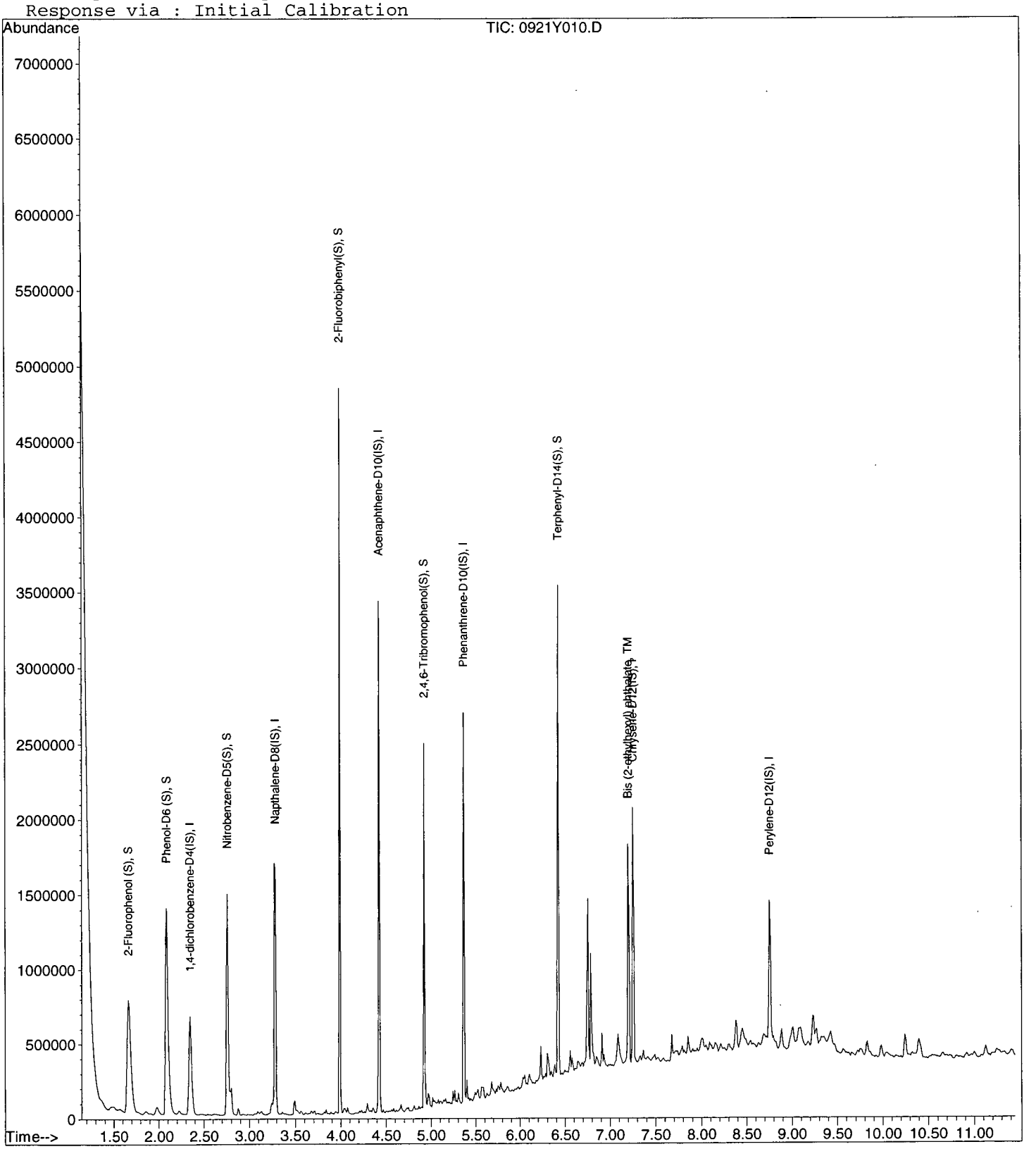
(#) = qualifier out of range (m) = manual integration

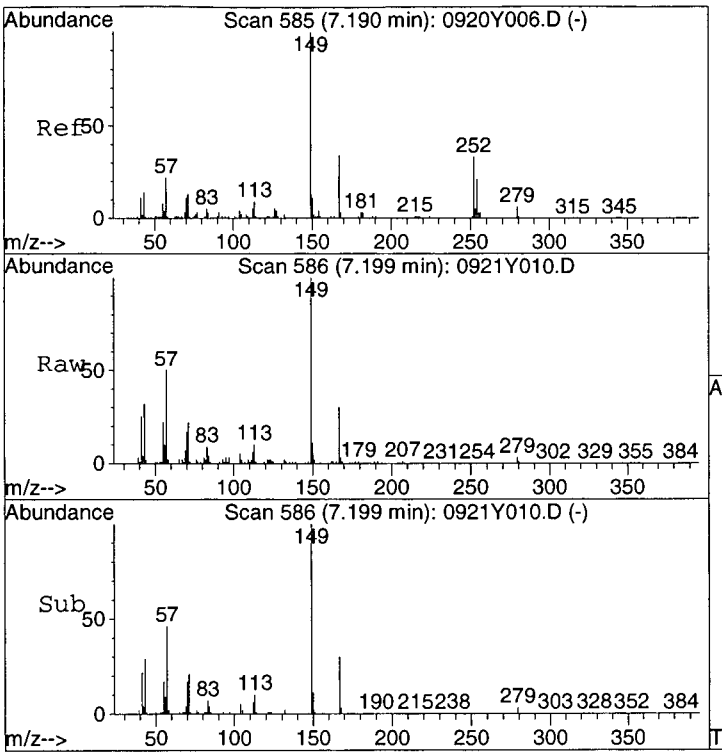
Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y010.D Vial: 10
Acq On : 21 Sep 14 15:10 Operator: CSC
Sample : AZ02102S11 1/30.11G Inst : YODA
Misc : Multiplr: 33.21

Quant Time: Sep 21 21:39 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

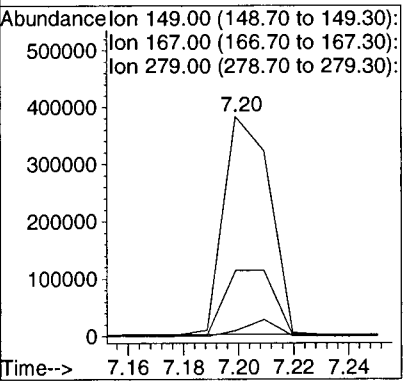




#83
Bis (2-ethylhexyl) phthalate
Concen: 998.97285 ppb
RT: 7.20 min Scan# 586
Delta R.T. 0.01 min
Lab File: 0921Y010.D
Acq: 21 Sep 14 15:10

Tgt Ion:149 Resp: 442356

Ion	Ratio	Lower	Upper
149	100		
167	29.9	23.6	43.8
279	2.6	4.5	8.3#



EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN005
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02103
QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	0.45 J	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	59.9	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	81.5	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	62.1	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	78.9	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	83.8	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	80.4	30-125			%	9/15/14	9/21/14

J = Estimated value.

Quant Method: Y87HP.M
Run #: 0921Y011
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y011.D Vial: 11
Acq On : 21 Sep 14 15:27 Operator: CSC
Sample : AZ02103S11 1/30.42G Inst : YODA
Misc : Multiplr: 32.87

Quant Time: Sep 21 21:40 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.35	152	226478	40.00000	ppb	0.02
20) Napthalene-D8(IS)	3.28	136	1118883	40.00000	ppb	0.00
38) Acenaphthene-D10(IS)	4.43	164	571300	40.00000	ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	843729	40.00000	ppb	0.00
76) Chrysene-D12(IS)	7.26	240	614271	40.00000	ppb	0.02
87) Perylene-D12(IS)	8.76	264	371585	40.00000	ppb	0.02
System Monitoring Compounds						
4) 2-Fluorophenol (S)	1.66	112	637628	4084.45598	ppb	0.02
Spiked Amount 6574.622			Recovery =	62.125%		
5) Phenol-D6 (S)	2.09	99	1036096	5511.38422	ppb	0.02
Spiked Amount 6574.622			Recovery =	83.828%		
21) Nitrobenzene-D5(S)	2.76	82	565474	2595.21689	ppb	0.01
Spiked Amount 3287.311			Recovery =	78.947%		
44) 2-Fluorobiphenyl(S)	3.99	172	1266783	2680.03630	ppb	0.00
Spiked Amount 3287.311			Recovery =	81.527%		
61) 2,4,6-Tribromophenol(S)	4.92	330	227957	3937.26723	ppb	0.00
Spiked Amount 6574.622			Recovery =	59.886%		
79) Terphenyl-D14(S)	6.43	244	936967	2641.82130	ppb	0.01
Spiked Amount 3287.311			Recovery =	80.364%		
Target Compounds						Qvalue
83) Bis (2-ethylhexyl) phthala	7.21	149	188934	447.91864	ppb #	95

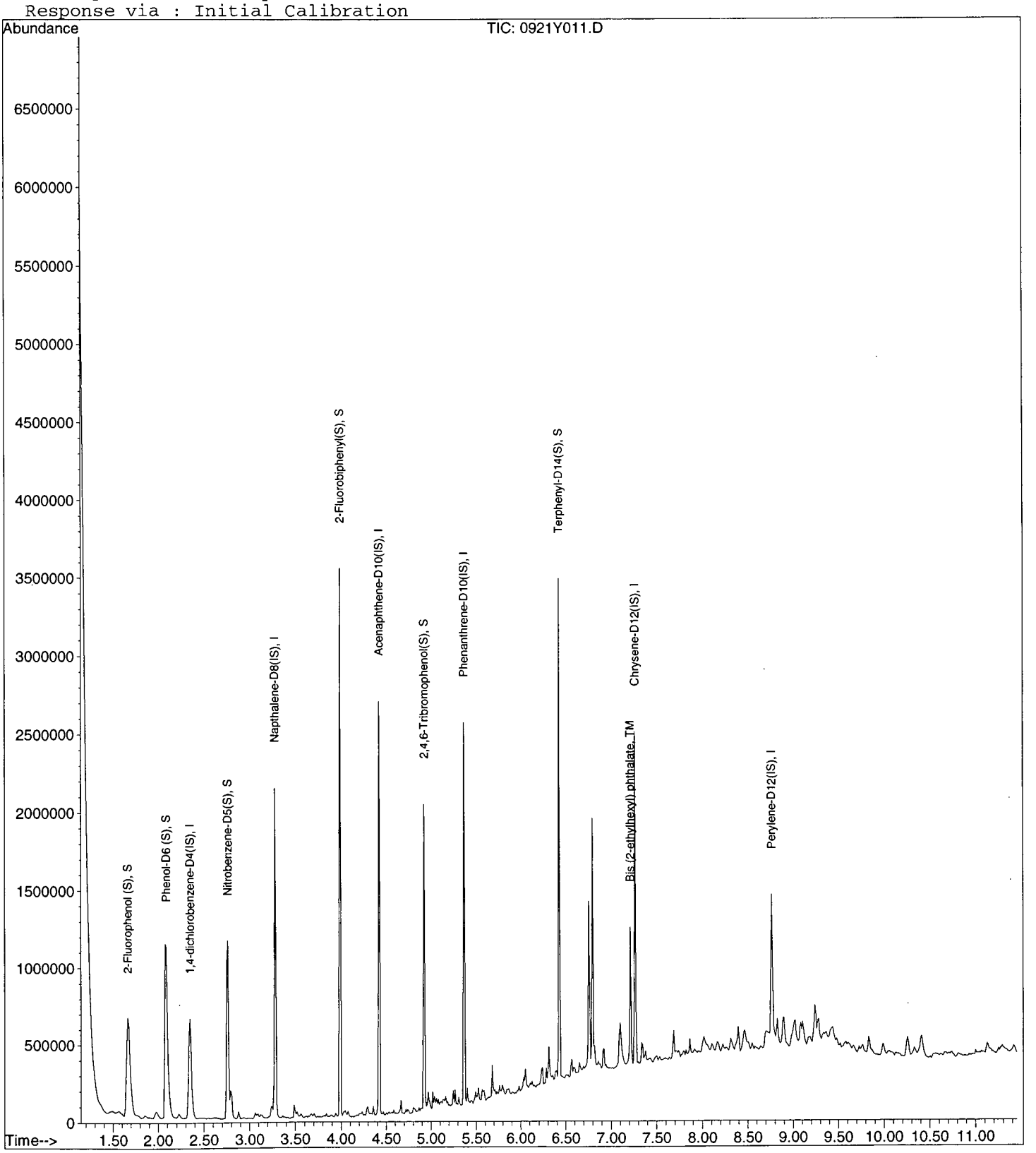
(#) = qualifier out of range (m) = manual integration

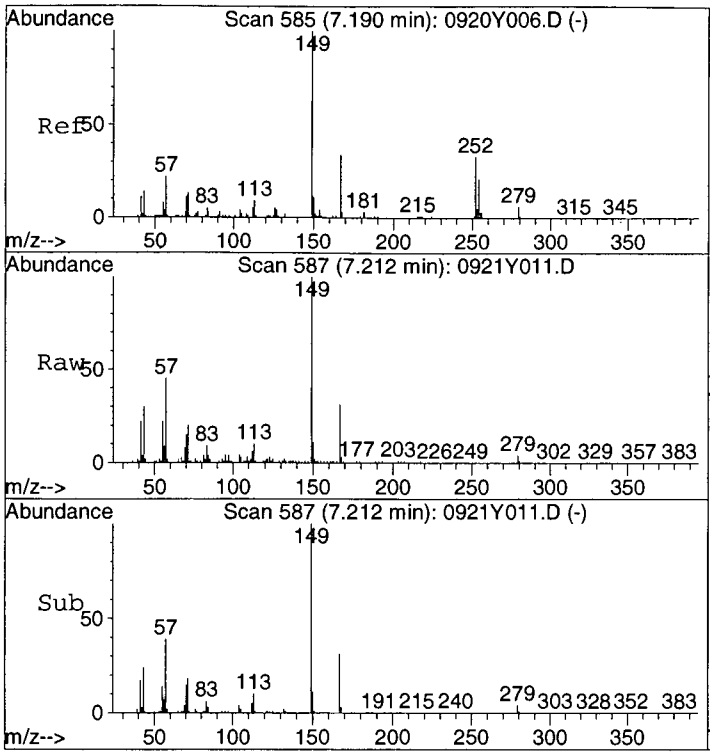
Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y011.D Vial: 11
Acq On : 21 Sep 14 15:27 Operator: CSC
Sample : AZ02103S11 1/30.42G Inst : YODA
Misc : Multiplr: 32.87

Quant Time: Sep 21 21:40 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

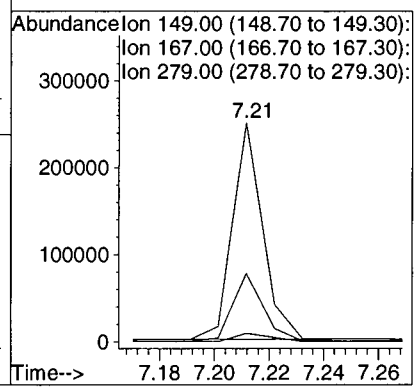




#83
Bis (2-ethylhexyl) phthalate
Concen: 447.91864 ppb
RT: 7.21 min Scan# 587
Delta R.T. 0.02 min
Lab File: 0921Y011.D
Acq: 21 Sep 14 15:27

Tgt Ion:149 Resp: 188934

Ion	Ratio	Lower	Upper
149	100		
167	31.3	23.6	43.8
279	3.8	4.5	8.3#



EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN006
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02104
QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	0.40 J	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	60.9	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	81.0	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	65.6	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	85.4	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	88.1	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	94.8	30-125			%	9/15/14	9/21/14

J = Estimated value.

Quant Method: Y87HP.M
Run #: 0921Y012
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y012.D Vial: 12
Acq On : 21 Sep 14 15:44 Operator: CSC
Sample : AZ02104S11 1/30.21G Inst : YODA
Misc : Multiplr: 33.10

Quant Time: Sep 21 21:40 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.35	152	224319	40.00000	ppb	0.02
20) Napthalene-D8(IS)	3.28	136	1065920	40.00000	ppb	0.00
38) Acenaphthene-D10(IS)	4.43	164	575689	40.00000	ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	852613	40.00000	ppb	0.00
76) Chrysene-D12(IS)	7.26	240	581535	40.00000	ppb	0.02
87) Perylene-D12(IS)	8.76	264	356224	40.00000	ppb	0.02
System Monitoring Compounds						
4) 2-Fluorophenol (S)	1.66	112	667158	4344.74163	ppb	0.02
Spiked Amount 6620.324			Recovery =	65.627%		
5) Phenol-D6 (S)	2.09	99	1078885	5834.50832	ppb	0.02
Spiked Amount 6620.324			Recovery =	88.130%		
21) Nitrobenzene-D5(S)	2.76	82	582858	2827.43285	ppb	0.01
Spiked Amount 3310.162			Recovery =	85.417%		
44) 2-Fluorobiphenyl(S)	3.99	172	1268286	2681.26907	ppb	0.00
Spiked Amount 3310.162			Recovery =	81.001%		
61) 2,4,6-Tribromophenol(S)	4.92	330	233714	4033.77283	ppb	0.00
Spiked Amount 6620.324			Recovery =	60.930%		
79) Terphenyl-D14(S)	6.42	244	1046460	3138.29948	ppb	0.01
Spiked Amount 3310.162			Recovery =	94.808%		
Target Compounds						Qvalue
83) Bis (2-ethylhexyl) phthala	7.21	149	160155	403.85190	ppb	# 92

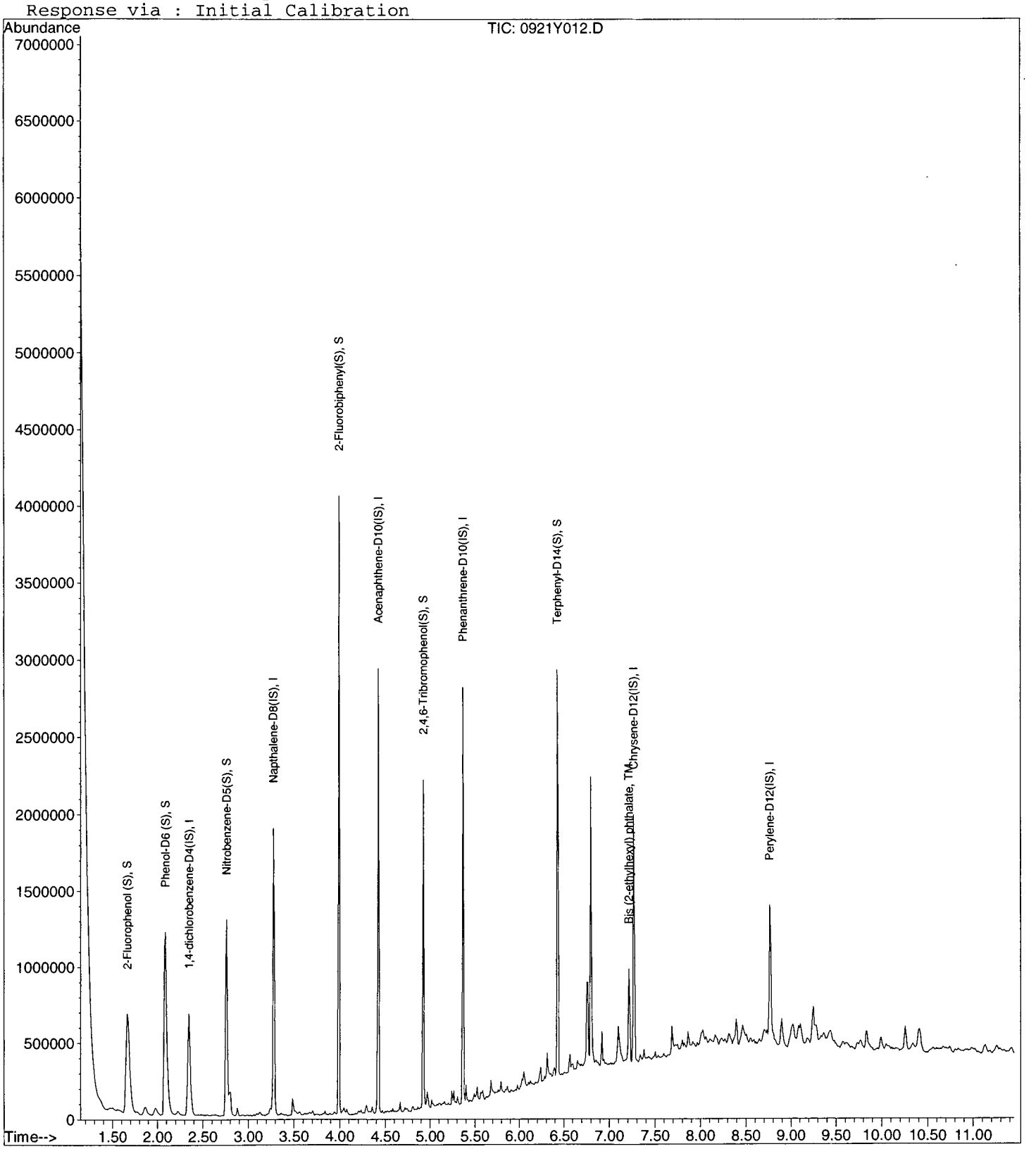
(#) = qualifier out of range (m) = manual integration

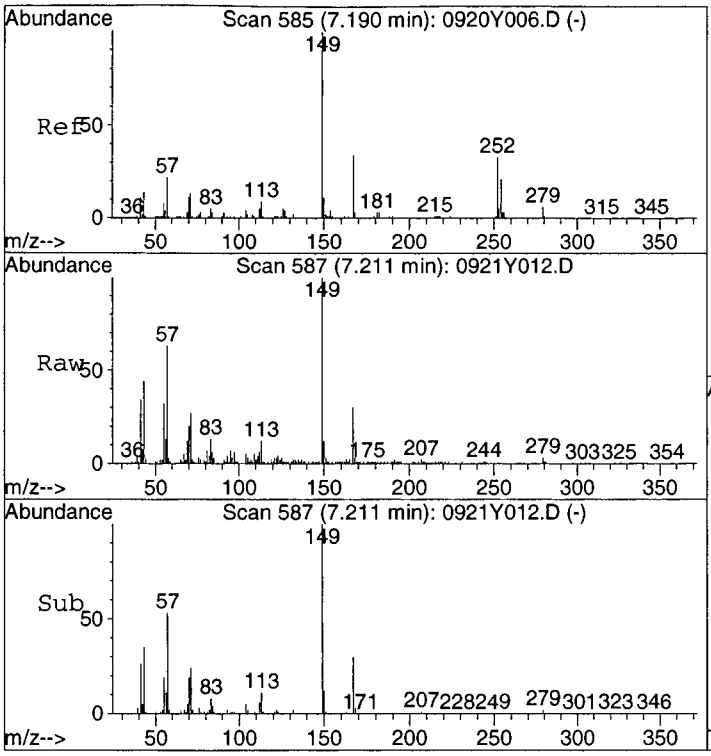
Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y012.D Vial: 12
Acq On : 21 Sep 14 15:44 Operator: CSC
Sample : AZ02104S11 1/30.21G Inst : YODA
Misc : Multiplr: 33.10

Quant Time: Sep 21 21:40 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

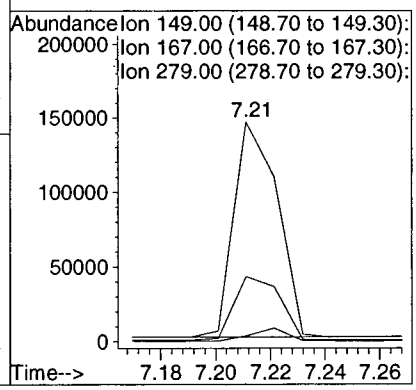




#83
Bis (2-ethylhexyl) phthalate
Concen: 403.85190 ppb
RT: 7.21 min Scan# 587
Delta R.T. 0.02 min
Lab File: 0921Y012.D
Acq: 21 Sep 14 15:44

Tgt Ion:149 Resp: 160155

Ion	Ratio	Lower	Upper
149	100		
167	29.4	23.6	43.8
279	2.5	4.5	8.3#



EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN007
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02105
QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	1.1	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	60.1	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	76.7	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	77.6	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	84.3	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	99.0	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	82.0	30-125			%	9/15/14	9/21/14

Quant Method: Y87HP.M
Run #: 0921Y013
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y013.D Vial: 13
Acq On : 21 Sep 14 16:01 Operator: CSC
Sample : AZ02105S11 1/30.12G Inst : YODA
Misc : Multiplr: 33.20

Quant Time: Sep 21 21:41 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.35	152	226767	40.00000 ppb	0.02
20) Napthalene-D8(IS)	3.29	136	1114795	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	4.43	164	605305	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	879999	40.00000 ppb	0.00
76) Chrysene-D12(IS)	7.26	240	595924	40.00000 ppb	0.02
87) Perylene-D12(IS)	8.76	264	311545	40.00000 ppb	0.02
System Monitoring Compounds					
4) 2-Fluorophenol (S)	1.67	112	796994	5149.58561 ppb	0.03
Spiked Amount 6640.106			Recovery =	77.553%	
5) Phenol-D6 (S)	2.09	99	1224682	6571.04463 ppb	0.02
Spiked Amount 6640.106			Recovery =	98.960%	
21) Nitrobenzene-D5(S)	2.76	82	601922	2800.23913 ppb	0.00
Spiked Amount 3320.053			Recovery =	84.343%	
44) 2-Fluorobiphenyl(S)	3.99	172	1262917	2546.87392 ppb	0.00
Spiked Amount 3320.053			Recovery =	76.712%	
61) 2,4,6-Tribromophenol(S)	4.92	330	242278	3988.87223 ppb	0.00
Spiked Amount 6640.106			Recovery =	60.072%	
79) Terphenyl-D14(S)	6.42	244	926967	2720.92628 ppb	0.00
Spiked Amount 3320.053			Recovery =	81.954%	
Target Compounds					Qvalue
83) Bis (2-ethylhexyl) phthala	7.21	149	440143	1086.31601 ppb	100

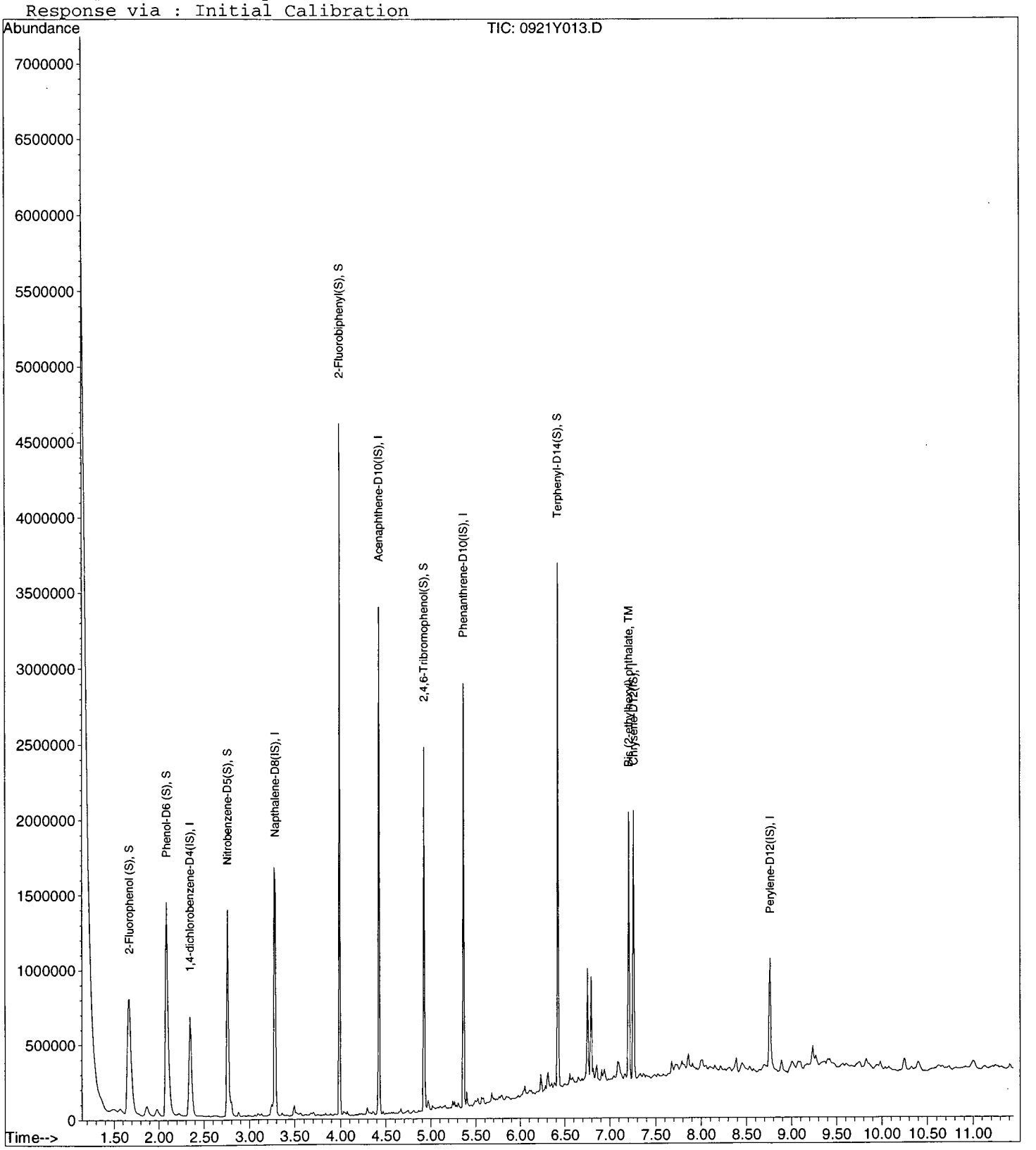
(#) = qualifier out of range (m) = manual integration

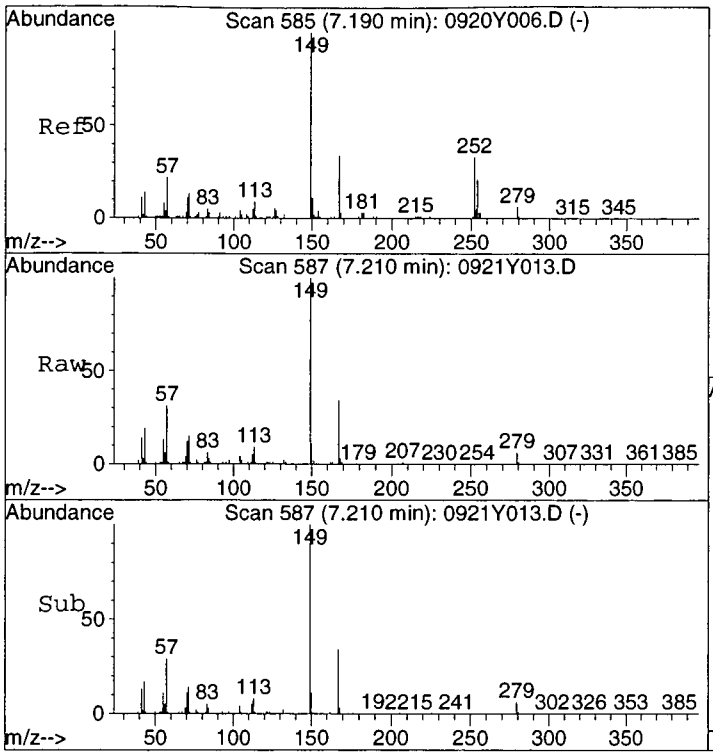
Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y013.D Vial: 13
Acq On : 21 Sep 14 16:01 Operator: CSC
Sample : AZ02105S11 1/30.12G Inst : YODA
Misc : Multiplr: 33.20

Quant Time: Sep 21 21:41 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

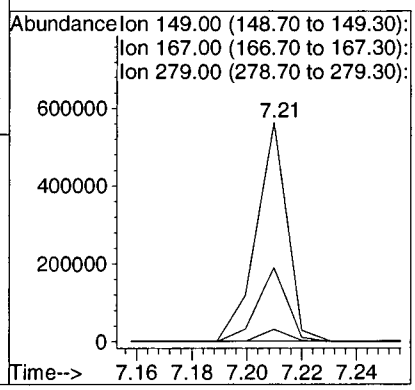




#83
Bis (2-ethylhexyl) phthalate
Concen: 1086.31601 ppb
RT: 7.21 min Scan# 587
Delta R.T. 0.02 min
Lab File: 0921Y013.D
Acq: 21 Sep 14 16:01

Tgt Ion:149 Resp: 440143

Ion	Ratio	Lower	Upper
149	100		
167	33.8	23.6	43.8
279	5.8	4.5	8.3



EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN008
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02106
QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	0.38 J	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	64.7	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	72.9	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	79.8	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	82.2	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	98.6	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	93.9	30-125			%	9/15/14	9/21/14

J = Estimated value.

Quant Method: Y87HP.M
Run #: 0921Y014
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y014.D Vial: 14
Acq On : 21 Sep 14 16:18 Operator: CSC
Sample : AZ02106S11 1/30.12G Inst : YODA
Misc : Multiplr: 33.20

Quant Time: Sep 21 21:41 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.34	152	238227	40.00000	ppb	0.02
20) Napthalene-D8(IS)	3.29	136	1151153	40.00000	ppb	0.00
38) Acenaphthene-D10(IS)	4.42	164	631130	40.00000	ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	893076	40.00000	ppb	0.00
76) Chrysene-D12(IS)	7.26	240	608496	40.00000	ppb	0.02
87) Perylene-D12(IS)	8.76	264	338449	40.00000	ppb	0.02
System Monitoring Compounds						
4) 2-Fluorophenol (S)	1.67	112	861606	5299.25500	ppb	0.03
Spiked Amount 6640.106			Recovery =	79.807%		
5) Phenol-D6 (S)	2.09	99	1281647	6545.88513	ppb	0.02
Spiked Amount 6640.106			Recovery =	98.581%		
21) Nitrobenzene-D5(S)	2.76	82	605797	2729.25418	ppb	0.00
Spiked Amount 3320.053			Recovery =	82.205%		
44) 2-Fluorobiphenyl(S)	3.99	172	1250968	2419.54818	ppb	0.00
Spiked Amount 3320.053			Recovery =	72.877%		
61) 2,4,6-Tribromophenol(S)	4.92	330	271963	4294.38924	ppb	0.00
Spiked Amount 6640.106			Recovery =	64.673%		
79) Terphenyl-D14(S)	6.42	244	1084234	3116.79811	ppb	0.00
Spiked Amount 3320.053			Recovery =	93.878%		
Target Compounds						Qvalue
83) Bis (2-ethylhexyl) phthala	7.21	149	157475	380.63362	ppb	# 94

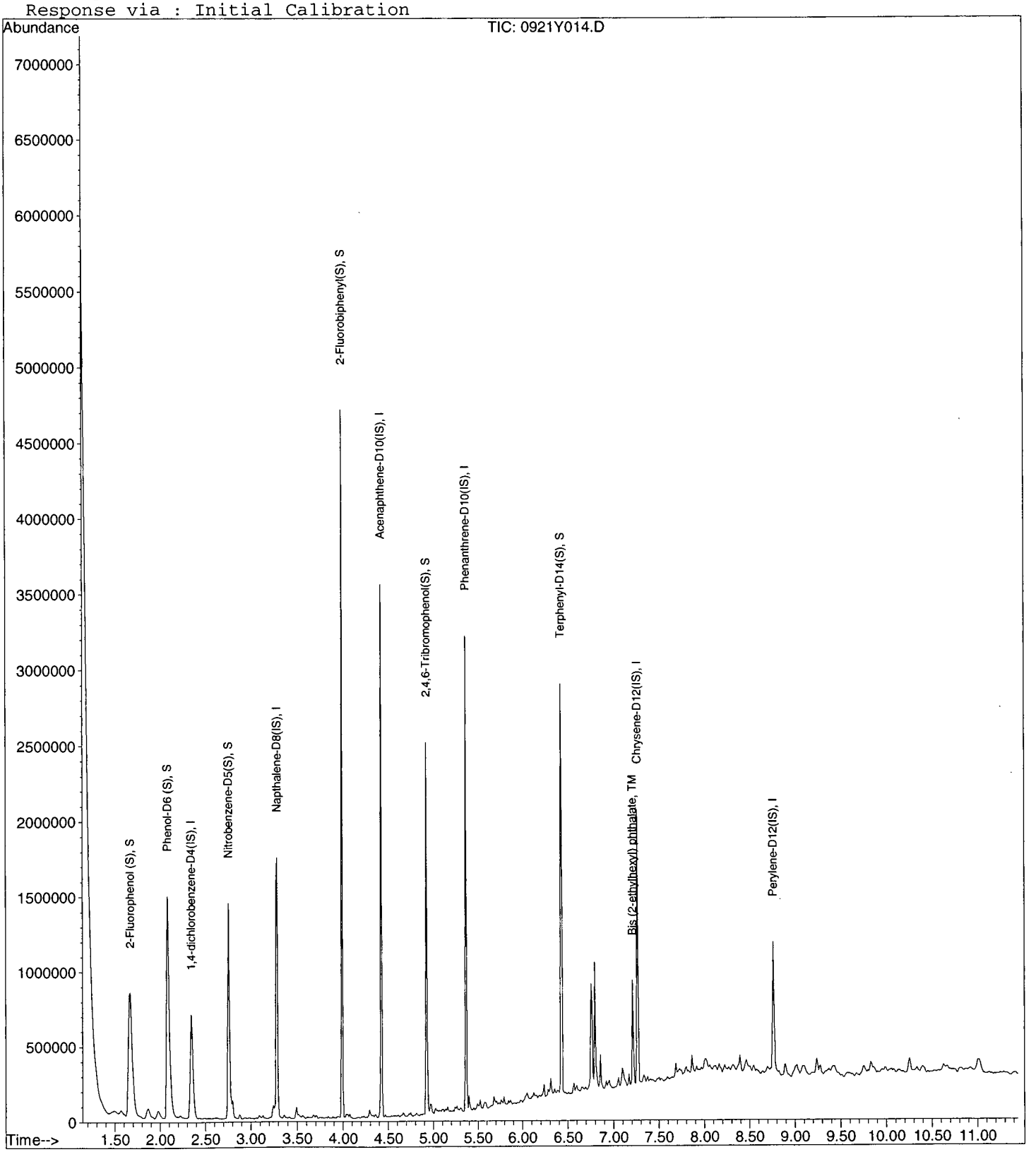
(#) = qualifier out of range (m) = manual integration

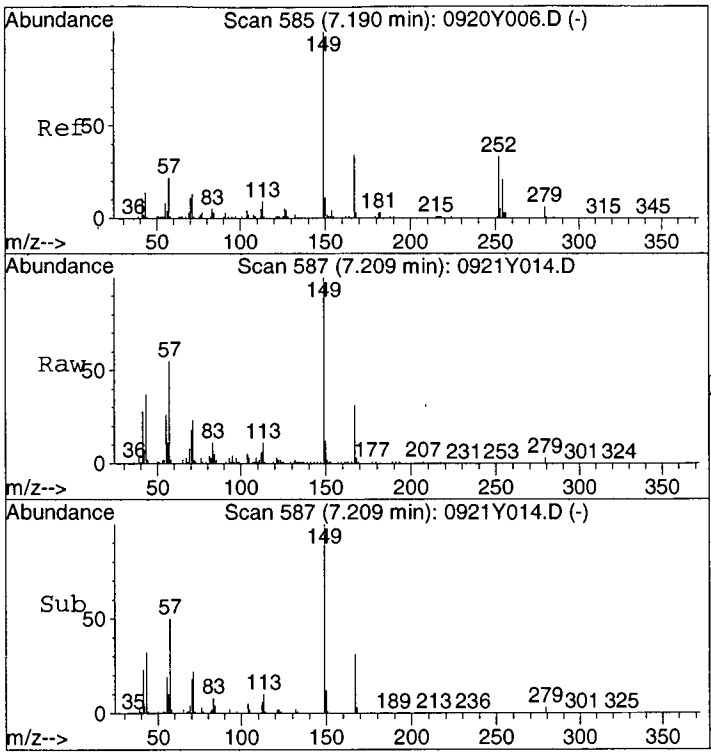
Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y014.D Vial: 14
Acq On : 21 Sep 14 16:18 Operator: CSC
Sample : AZ02106S11 1/30.12G Inst : YODA
Misc : Multiplr: 33.20

Quant Time: Sep 21 21:41 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

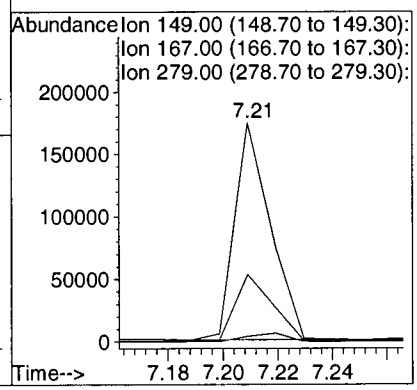




#83
Bis (2-ethylhexyl) phthalate
Concen: 380.63362 ppb
RT: 7.21 min Scan# 587
Delta R.T. 0.02 min
Lab File: 0921Y014.D
Acq: 21 Sep 14 16:18

Tgt Ion:149 Resp: 157475

Ion	Ratio	Lower	Upper
149	100		
167	30.7	23.6	43.8
279	2.6	4.5	8.3#



EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN009
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02107
QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	0.52 J	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	58.2	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	73.3	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	70.8	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	74.5	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	90.1	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	75.0	30-125			%	9/15/14	9/21/14

J = Estimated value.

Quant Method: Y87HP.M
Run #: 0921Y015
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y015.D Vial: 15
Acq On : 21 Sep 14 16:35 Operator: CSC
Sample : AZ02107S11 1/30.14G Inst : YODA
Misc : Multiplr: 33.18

Quant Time: Sep 21 21:42 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

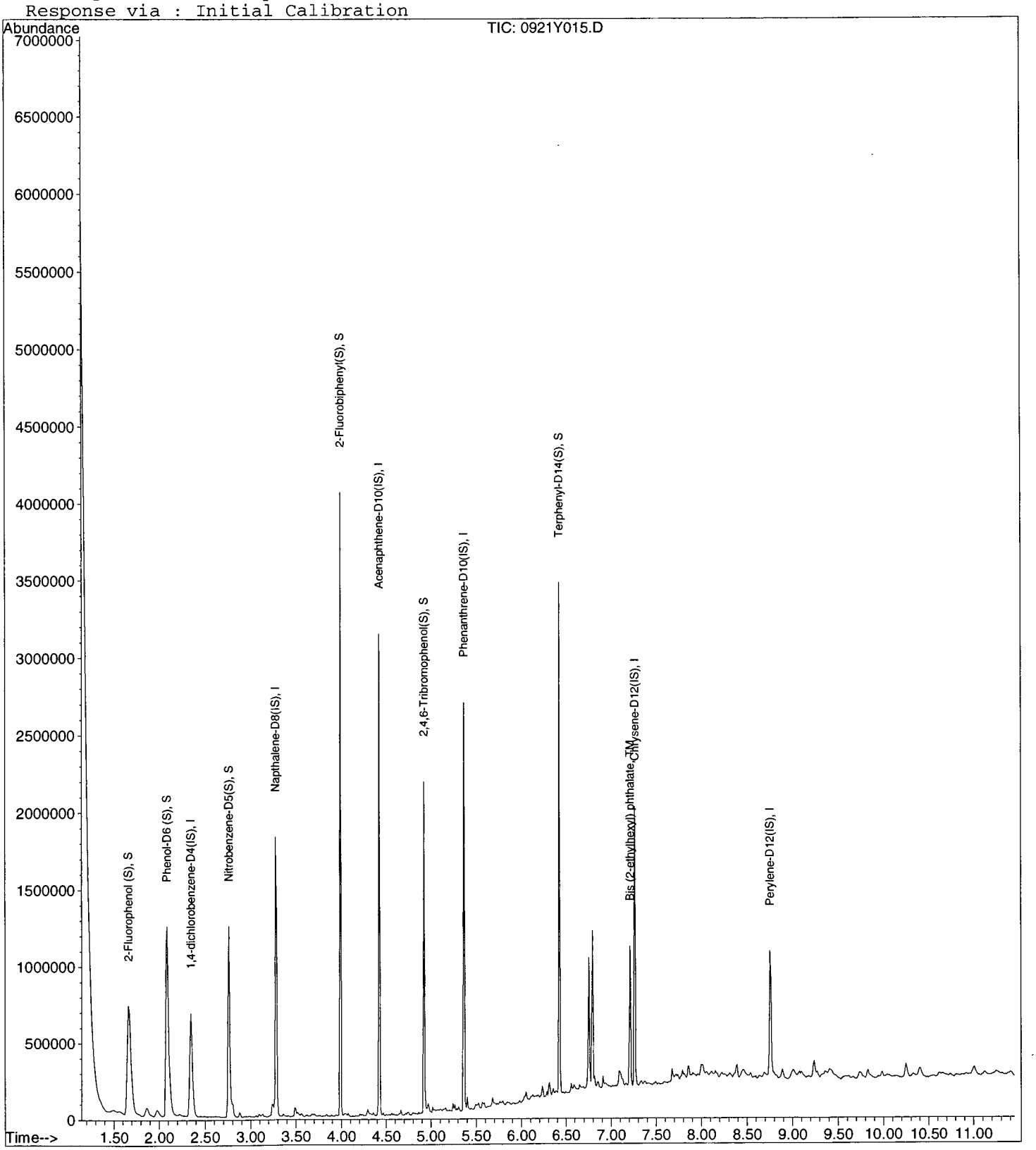
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.35	152	227534	40.00000 ppb	0.02
20) Napthalene-D8(IS)	3.28	136	1125182	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	4.43	164	602097	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	855849	40.00000 ppb	0.00
76) Chrysene-D12(IS)	7.26	240	633837	40.00000 ppb	0.02
87) Perylene-D12(IS)	8.75	264	348913	40.00000 ppb	0.01
System Monitoring Compounds					
4) 2-Fluorophenol (S)	1.66	112	729972	4697.52085 ppb	0.02
Spiked Amount 6635.700			Recovery =	70.792%	
5) Phenol-D6 (S)	2.09	99	1119093	5980.29414 ppb	0.02
Spiked Amount 6635.700			Recovery =	90.123%	
21) Nitrobenzene-D5(S)	2.76	82	536397	2470.72956 ppb	0.01
Spiked Amount 3317.850			Recovery =	74.468%	
44) 2-Fluorobiphenyl(S)	3.99	172	1199756	2430.77688 ppb	0.00
Spiked Amount 3317.850			Recovery =	73.264%	
61) 2,4,6-Tribromophenol(S)	4.92	330	233466	3861.70698 ppb	0.00
Spiked Amount 6635.700			Recovery =	58.196%	
79) Terphenyl-D14(S)	6.42	244	902077	2487.83247 ppb	0.01
Spiked Amount 3317.850			Recovery =	74.983%	
Target Compounds					Qvalue
83) Bis (2-ethylhexyl) phthala	7.21	149	225701	523.38453 ppb	96

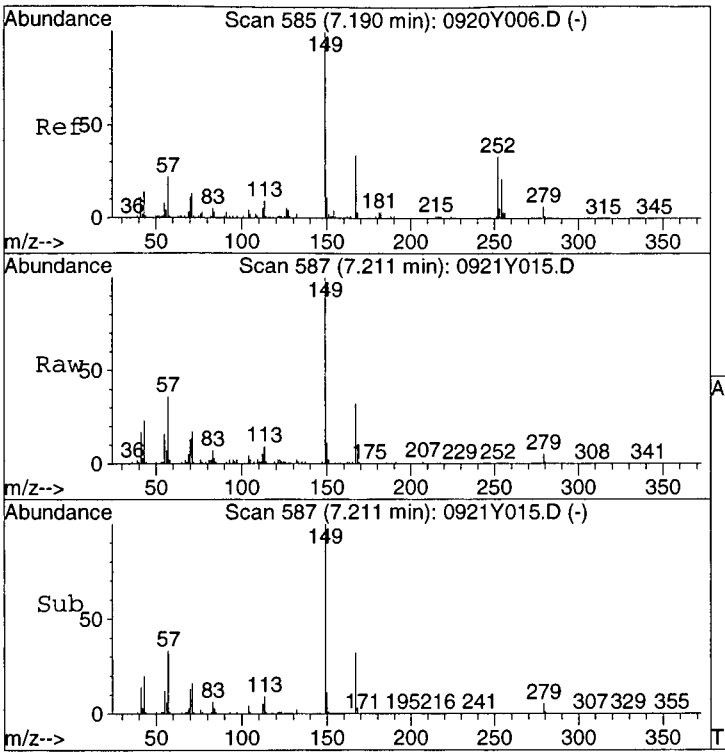
(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y140920B\0921Y015.D Vial: 15
Acq On : 21 Sep 14 16:35 Operator: CSC
Sample : AZ02107S11 1/30.14G Inst : YODA
Misc : Multiplr: 33.18

Quant Time: Sep 21 21:42 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

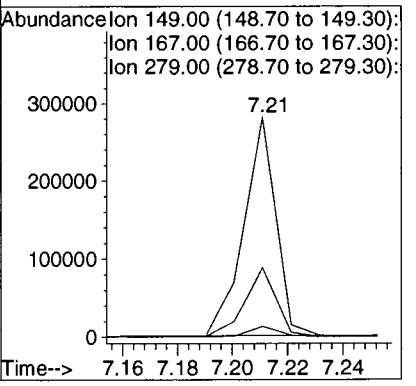




#83
Bis (2-ethylhexyl) phthalate
Concen: 523.38453 ppb
RT: 7.21 min Scan# 587
Delta R.T. 0.02 min
Lab File: 0921Y015.D
Acq: 21 Sep 14 16:35

Tgt Ion:149 Resp: 225701

Ion	Ratio	Lower	Upper
149	100		
167	31.5	23.6	43.8
279	4.9	4.5	8.3



EPA 8270C WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN010
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02108
QCG: #87CE2-140908A-189933

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	5.00 U	10.0	5.00	1.30	ug/L	9/8/14	9/11/14
EPA 8270C	1,2-DICHLOROBENZENE	5.00 U	10.0	5.00	1.10	ug/L	9/8/14	9/11/14
EPA 8270C	1,3-DICHLOROBENZENE	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
EPA 8270C	1,4-DICHLOROBENZENE	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	9/8/14	9/11/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
EPA 8270C	2,4-DICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
EPA 8270C	2,4-DIMETHYLPHENOL	5.00 U	10.0	5.00	2.40	ug/L	9/8/14	9/11/14
EPA 8270C	2,4-DINITROPHENOL	5.00 U	20.0	5.00	1.80	ug/L	9/8/14	9/11/14
EPA 8270C	2,4-DINITROTOLUENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
EPA 8270C	2,6-DINITROTOLUENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
EPA 8270C	2-CHLOROPHENOL	5.00 U	10.0	5.00	2.00	ug/L	9/8/14	9/11/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	5.00 U	10.0	5.00	3.00	ug/L	9/8/14	9/11/14
EPA 8270C	4-CHLOROANILINE	5.00 U	10.0	5.00	2.70	ug/L	9/8/14	9/11/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	5.00 U	10.0	5.00	2.20	ug/L	9/8/14	9/11/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	5.00 U	10.0	5.00	2.00	ug/L	9/8/14	9/11/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	5.00 U	20.0	5.00	2.90	ug/L	9/8/14	9/11/14
EPA 8270C	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	9/8/14	9/11/14
EPA 8270C	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	9/8/14	9/11/14
EPA 8270C	HEXACHLOROBENZENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
EPA 8270C	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	9/8/14	9/11/14
EPA 8270C	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	9/8/14	9/11/14
EPA 8270C	ISOPHORONE	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
EPA 8270C	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	9/8/14	9/11/14
EPA 8270C	PENTACHLOROPHENOL	5.00 U	20.0	5.00	2.80	ug/L	9/8/14	9/11/14
EPA 8270C	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	65.8	40-125			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	57.5	50-110			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	38.2	20-110			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	60.1	40-110			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: PHENOL (S)	23.3	10-115			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	94.6	50-135			%	9/8/14	9/11/14

Quant Method: Y87HP.M
Run #: 0910Y022
Instrument: YODA
Sequence: Y140910
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y022.D Vial: 22
Acq On : 11 Sep 14 6:02 Operator: LF
Sample : AZ02108W04 1/1040 Inst : YODA
Misc : Multiplr: 0.96

Quant Time: Sep 18 23:07 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	3.29	152	100258	40.00000 ppb	0.00
20) Napthalene-D8(IS)	4.11	136	372868	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	5.20	164	256453	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	6.15	188	513848	40.00000 ppb	0.00
76) Chrysene-D12(IS)	8.12	240	503501	40.00000 ppb	0.02
87) Perylene-D12(IS)	9.62	264	329856	40.00000 ppb	0.02
System Monitoring Compounds					
4) 2-Fluorophenol (S)	2.35	112	346170	73.39893 ppb	0.00
Spiked Amount 192.308			Recovery =	38.167%	
5) Phenol-D6 (S)	3.04	99	271230	44.75977 ppb	0.00
Spiked Amount 192.308			Recovery =	23.275%	
21) Nitrobenzene-D5(S)	3.65	82	330342	57.74949 ppb	-0.01
Spiked Amount 96.154			Recovery =	60.059%	
44) 2-Fluorobiphenyl(S)	4.76	172	718394	55.29588 ppb	0.00
Spiked Amount 96.154			Recovery =	57.508%	
61) 2,4,6-Tribromophenol(S)	5.69	330	220356	126.53984 ppb	0.00
Spiked Amount 192.308			Recovery =	65.801%	
79) Terphenyl-D14(S)	7.26	244	1554519	90.98685 ppb	0.00
Spiked Amount 96.154			Recovery =	94.626%	

Target Compounds Qvalue

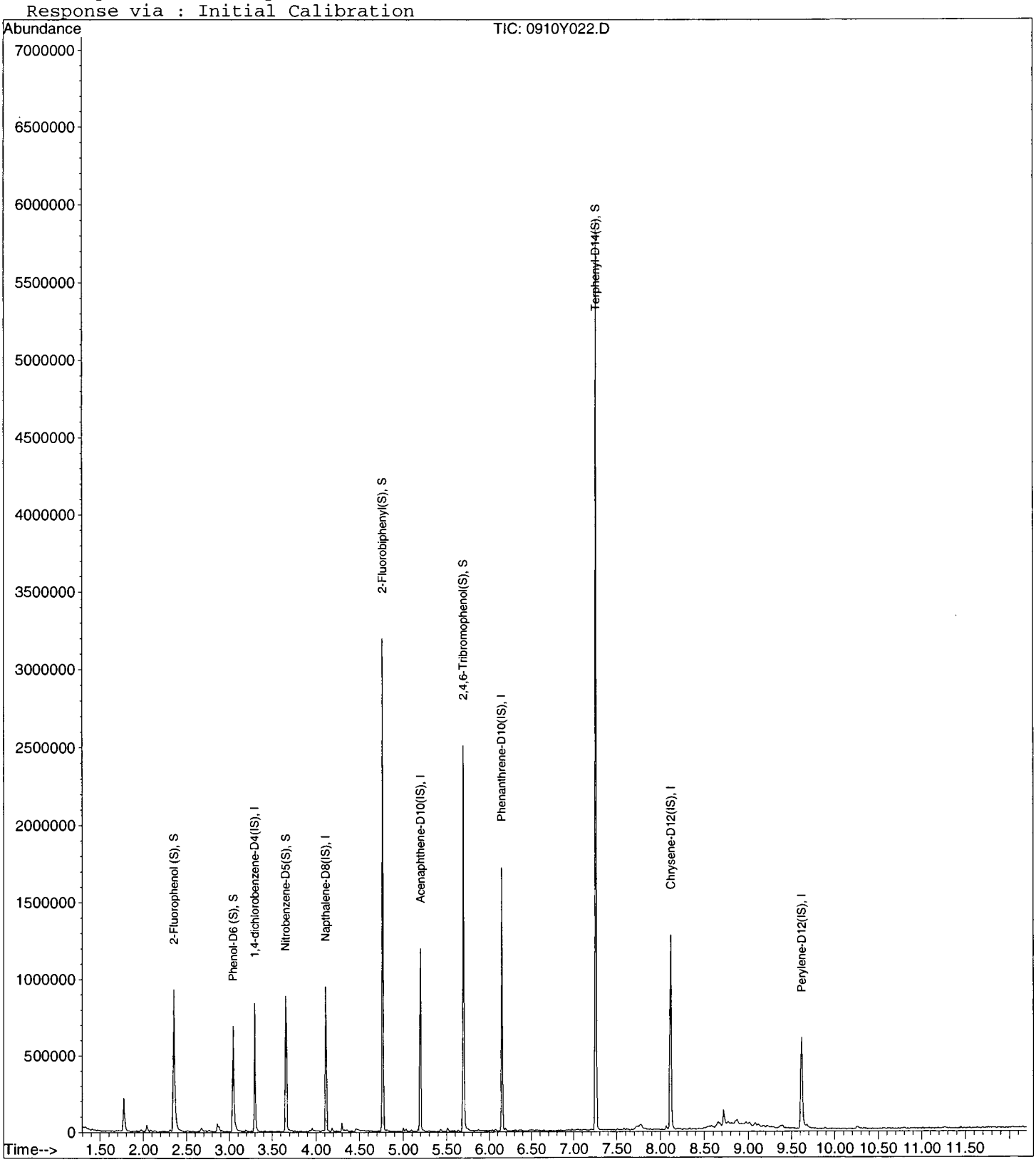
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140910\0910Y022.D Vial: 22
Acq On : 11 Sep 14 6:02 Operator: LF
Sample : AZ02108W04 1/1040 Inst : YODA
Misc : Multiplr: 0.96

Quant Time: Sep 18 23:07 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration



EPA 8270C WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN011

APPL ID: AZ02109

Sample Collection Date: 9/2/14

QCG: #87CE2-140908A-189933

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	5.00 U	10.0	5.00	1.30	ug/L	9/8/14	9/11/14
EPA 8270C	1,2-DICHLOROBENZENE	5.00 U	10.0	5.00	1.10	ug/L	9/8/14	9/11/14
EPA 8270C	1,3-DICHLOROBENZENE	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
EPA 8270C	1,4-DICHLOROBENZENE	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	9/8/14	9/11/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
EPA 8270C	2,4-DICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
EPA 8270C	2,4-DIMETHYLPHENOL	5.00 U	10.0	5.00	2.40	ug/L	9/8/14	9/11/14
EPA 8270C	2,4-DINITROPHENOL	5.00 U	20.0	5.00	1.80	ug/L	9/8/14	9/11/14
EPA 8270C	2,4-DINITROTOLUENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
EPA 8270C	2,6-DINITROTOLUENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
EPA 8270C	2-CHLOROPHENOL	5.00 U	10.0	5.00	2.00	ug/L	9/8/14	9/11/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	5.00 U	10.0	5.00	3.00	ug/L	9/8/14	9/11/14
EPA 8270C	4-CHLOROANILINE	5.00 U	10.0	5.00	2.70	ug/L	9/8/14	9/11/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	5.00 U	10.0	5.00	2.20	ug/L	9/8/14	9/11/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	5.00 U	10.0	5.00	2.00	ug/L	9/8/14	9/11/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	5.00 U	20.0	5.00	2.90	ug/L	9/8/14	9/11/14
EPA 8270C	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	9/8/14	9/11/14
EPA 8270C	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	9/8/14	9/11/14
EPA 8270C	HEXACHLOROBENZENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
EPA 8270C	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	9/8/14	9/11/14
EPA 8270C	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	9/8/14	9/11/14
EPA 8270C	ISOPHORONE	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
EPA 8270C	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	9/8/14	9/11/14
EPA 8270C	PENTACHLOROPHENOL	5.00 U	20.0	5.00	2.80	ug/L	9/8/14	9/11/14
EPA 8270C	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	62.1	40-125			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	50.6	50-110			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	42.7	20-110			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	58.9	40-110			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: PHENOL (S)	28.0	10-115			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	105	50-135			%	9/8/14	9/11/14

Quant Method: Y87HP.M
Run #: 0910Y023
Instrument: YODA
Sequence: Y140910
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y023.D Vial: 23
Acq On : 11 Sep 14 6:22 Operator: LF
Sample : AZ02109W05 1/980 Inst : YODA
Misc : Multiplr: 1.02

Quant Time: Sep 18 23:07 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	3.29	152	99725	40.00000 ppb	0.00
20) Napthalene-D8(IS)	4.12	136	395794	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	5.20	164	276402	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	6.15	188	506503	40.00000 ppb	0.00
76) Chrysene-D12(IS)	8.10	240	495176	40.00000 ppb	0.00
87) Perylene-D12(IS)	9.60	264	352223	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	2.35	112	385370	87.17672 ppb	0.00
Spiked Amount 204.082			Recovery = 42.717%		
5) Phenol-D6 (S)	3.04	99	324005	57.04587 ppb	0.00
Spiked Amount 204.082			Recovery = 27.953%		
21) Nitrobenzene-D5(S)	3.66	82	343917	60.10786 ppb	0.00
Spiked Amount 102.041			Recovery = 58.906%		
44) 2-Fluorobiphenyl(S)	4.76	172	681059	51.61653 ppb	0.00
Spiked Amount 102.041			Recovery = 50.585%		
61) 2,4,6-Tribromophenol(S)	5.69	330	224063	126.69122 ppb	0.00
Spiked Amount 204.082			Recovery = 62.079%		
79) Terphenyl-D14(S)	7.25	244	1695548	107.08799 ppb	0.00
Spiked Amount 102.041			Recovery = 104.946%		

Target Compounds Qvalue

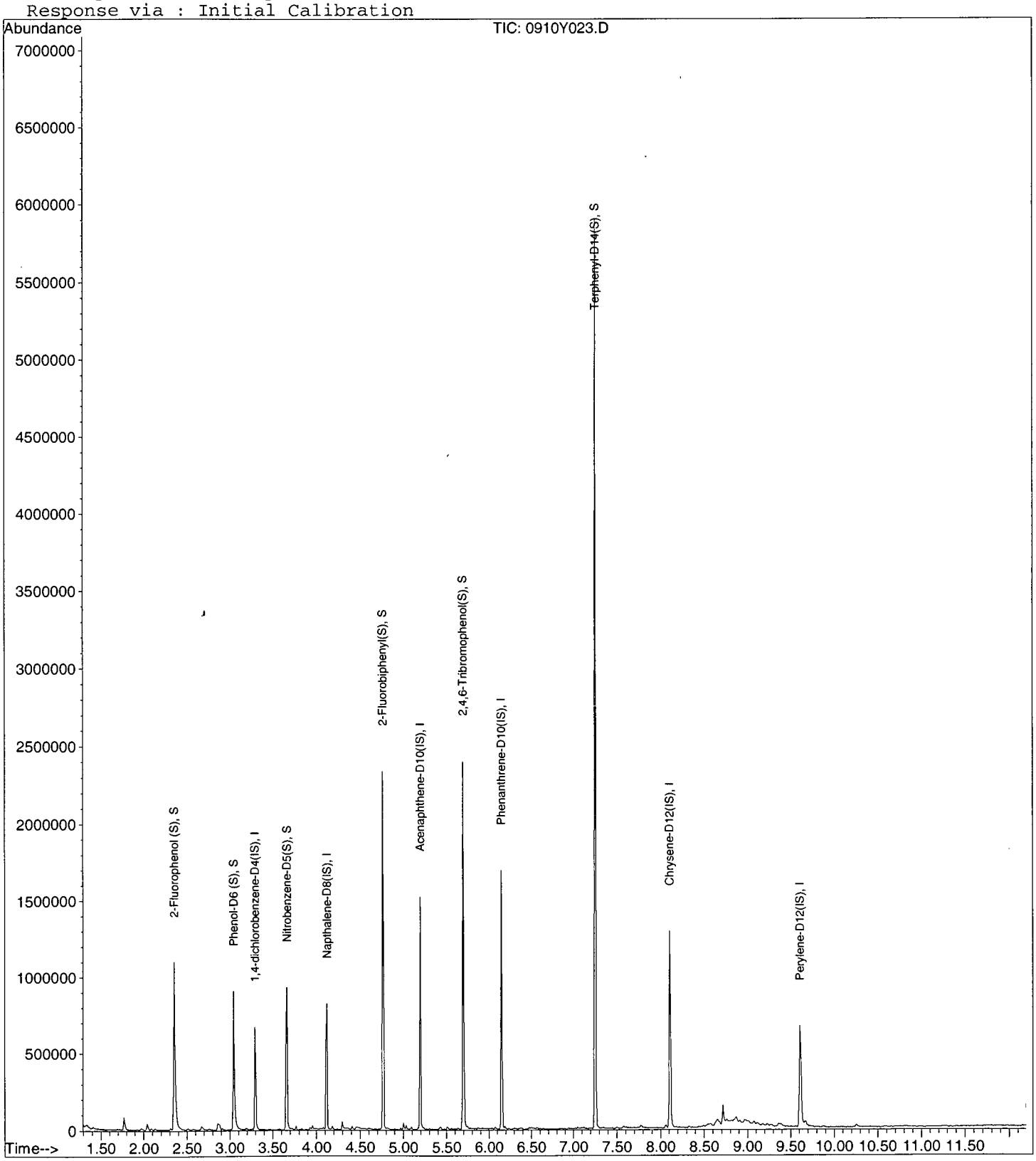
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140910\0910Y023.D Vial: 23
Acq On : 11 Sep 14 6:22 Operator: LF
Sample : AZ02109W05 1/980 Inst : YODA
Misc : Multiplr: 1.02

Quant Time: Sep 18 23:07 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration



EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN012

APPL ID: AZ02110

Sample Collection Date: 9/3/14

QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	0.22 J	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	62.1	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	78.0	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	71.9	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	82.3	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	94.0	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	93.8	30-125			%	9/15/14	9/21/14

J = Estimated value.

Quant Method: Y87HP.M
Run #: 0921Y016
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y016.D Vial: 16
Acq On : 21 Sep 14 16:52 Operator: CSC
Sample : AZ02110S11 1/30.45G Inst : YODA
Misc : Multiplr: 32.84

Quant Time: Sep 21 21:43 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.35	152	221315	40.00000	ppb	0.02
20) Napthalene-D8(IS)	3.29	136	1085199	40.00000	ppb	0.00
38) Acenaphthene-D10(IS)	4.43	164	578874	40.00000	ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	842554	40.00000	ppb	0.00
76) Chrysene-D12(IS)	7.25	240	582609	40.00000	ppb	0.00
87) Perylene-D12(IS)	8.75	264	343664	40.00000	ppb	0.01
System Monitoring Compounds						
4) 2-Fluorophenol (S)	1.67	112	720779	4720.15232	ppb	0.03
Spiked Amount 6568.144			Recovery =	71.864%		
5) Phenol-D6 (S)	2.09	99	1135906	6177.17825	ppb	0.02
Spiked Amount 6568.144			Recovery =	94.048%		
21) Nitrobenzene-D5(S)	2.76	82	571662	2702.38679	ppb	0.00
Spiked Amount 3284.072			Recovery =	82.288%		
44) 2-Fluorobiphenyl(S)	3.99	172	1228391	2562.28323	ppb	0.00
Spiked Amount 3284.072			Recovery =	78.022%		
61) 2,4,6-Tribromophenol(S)	4.92	330	239554	4079.41082	ppb	0.00
Spiked Amount 6568.144			Recovery =	62.109%		
79) Terphenyl-D14(S)	6.42	244	1037051	3079.88114	ppb	0.00
Spiked Amount 3284.072			Recovery =	93.782%		
Target Compounds						Qvalue
83) Bis (2-ethylhexyl) phthala	7.20	149	87209	217.77350	ppb #	92

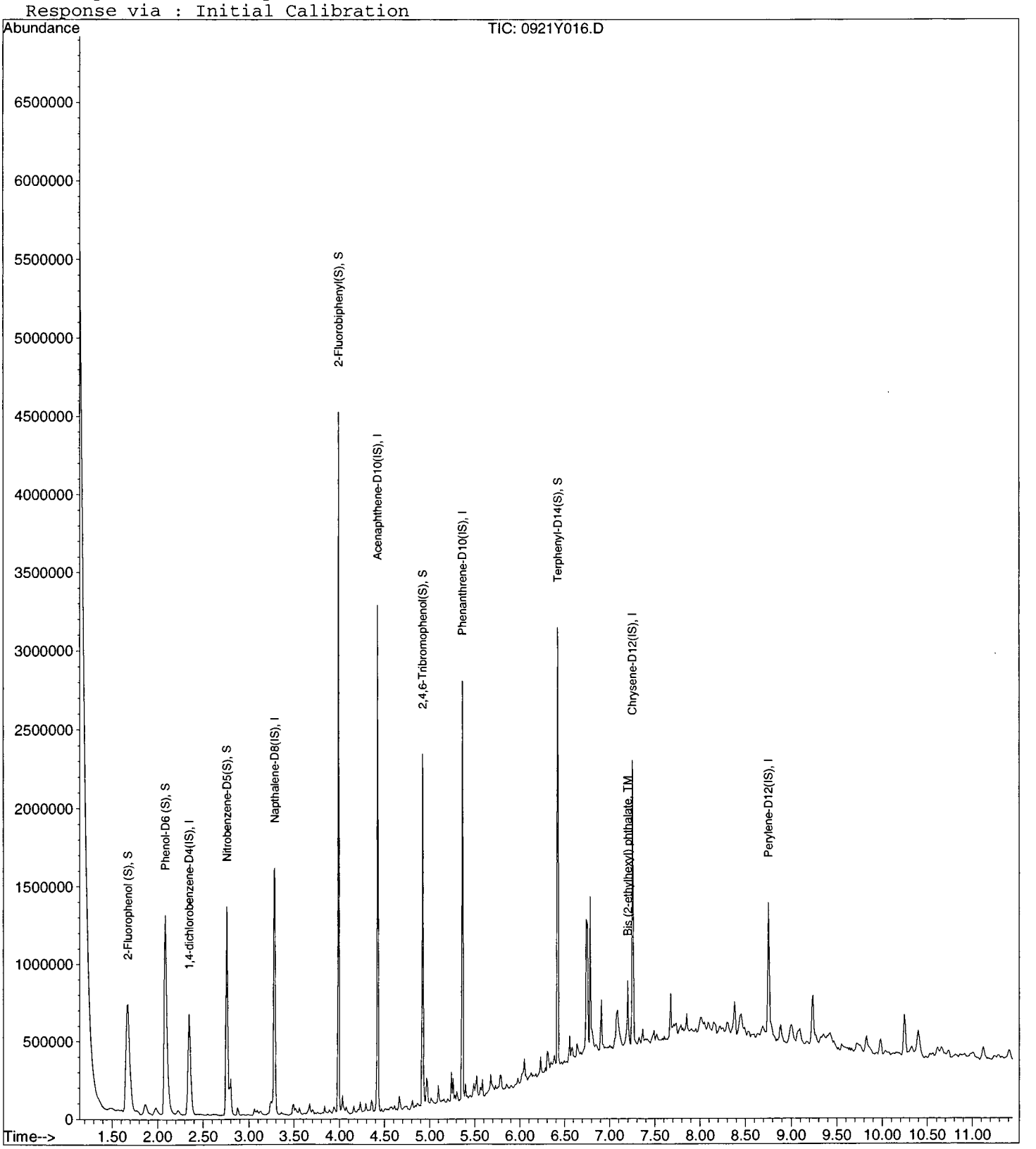
(#) = qualifier out of range (m) = manual integration

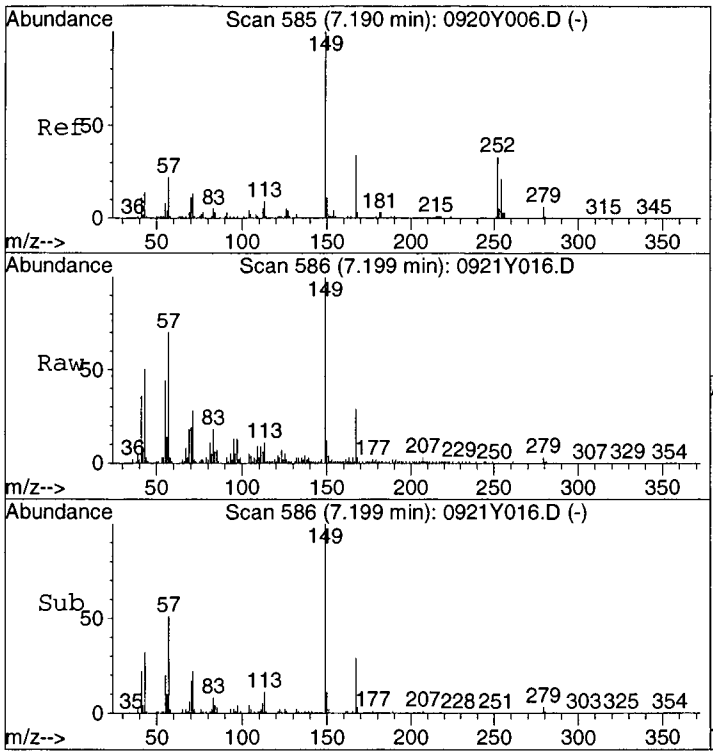
Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y016.D Vial: 16
Acq On : 21 Sep 14 16:52 Operator: CSC
Sample : AZ02110S11 1/30.45G Inst : YODA
Misc : Multiplr: 32.84

Quant Time: Sep 21 21:43 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

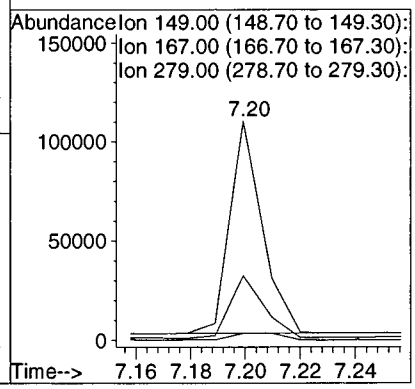




#83
Bis (2-ethylhexyl) phthalate
Concen: 217.77350 ppb
RT: 7.20 min Scan# 586
Delta R.T. 0.01 min
Lab File: 0921Y016.D
Acq: 21 Sep 14 16:52

Tgt Ion:149 Resp: 87209

Ion	Ratio	Lower	Upper
149	100		
167	29.3	23.6	43.8
279	3.1	4.5	8.3#



EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN013

APPL ID: AZ02111

Sample Collection Date: 9/3/14

QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	0.16 J	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	57.0	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	71.4	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	64.7	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	73.9	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	85.6	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	88.2	30-125			%	9/15/14	9/21/14

J = Estimated value.

Quant Method: Y87HP.M
Run #: 0921Y017
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y017.D Vial: 17
Acq On : 21 Sep 14 17:09 Operator: CSC
Sample : AZ02111S11 1/30.13G Inst : YODA
Misc : Multiplr: 33.19

Quant Time: Sep 21 21:43 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.35	152	232135	40.00000 ppb	0.02
20) Napthalene-D8(IS)	3.29	136	1134322	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	4.43	164	609635	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	859093	40.00000 ppb	0.00
76) Chrysene-D12(IS)	7.25	240	608616	40.00000 ppb	0.00
87) Perylene-D12(IS)	8.75	264	341643	40.00000 ppb	0.01
System Monitoring Compounds					
4) 2-Fluorophenol (S)	1.67	112	680524	4293.93760 ppb	0.03
Spiked Amount 6637.902			Recovery =	64.688%	
5) Phenol-D6 (S)	2.09	99	1084540	5682.66048 ppb	0.02
Spiked Amount 6637.902			Recovery =	85.609%	
21) Nitrobenzene-D5(S)	2.76	82	536387	2451.58880 ppb	0.00
Spiked Amount 3318.951			Recovery =	73.866%	
44) 2-Fluorobiphenyl(S)	3.99	172	1184351	2370.68177 ppb	0.00
Spiked Amount 3318.951			Recovery =	71.429%	
61) 2,4,6-Tribromophenol(S)	4.92	330	231706	3786.46214 ppb	0.00
Spiked Amount 6637.902			Recovery =	57.043%	
79) Terphenyl-D14(S)	6.42	244	1019398	2928.86675 ppb	0.00
Spiked Amount 3318.951			Recovery =	88.247%	
Target Compounds					Qvalue
83) Bis (2-ethylhexyl) phthala	7.20	149	67043	161.96425 ppb #	94

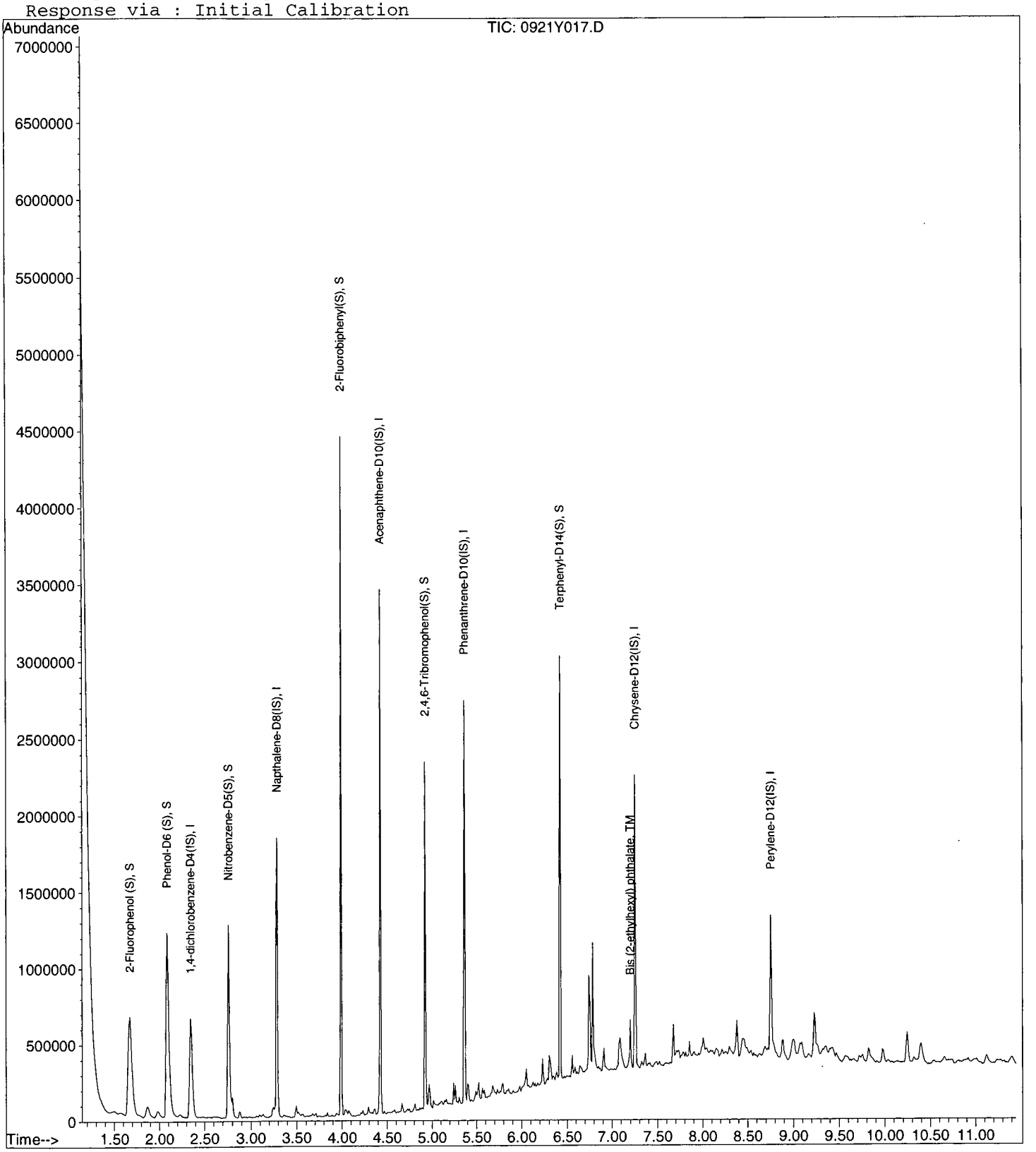
(#) = qualifier out of range (m) = manual integration

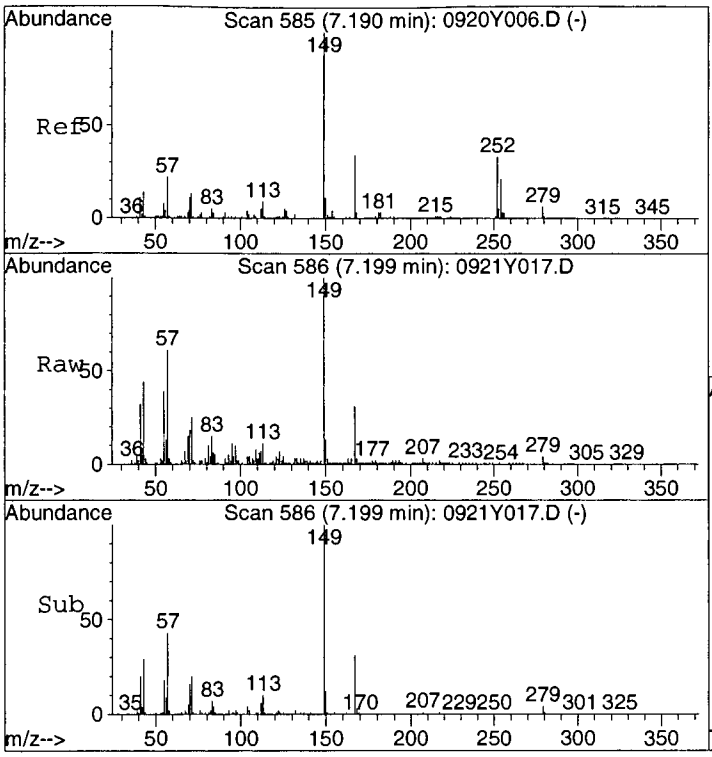
Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y017.D Vial: 17
Acq On : 21 Sep 14 17:09 Operator: CSC
Sample : AZ02111S11 1/30.13G Inst : YODA
Misc : Multiplr: 33.19

Quant Time: Sep 21 21:43 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

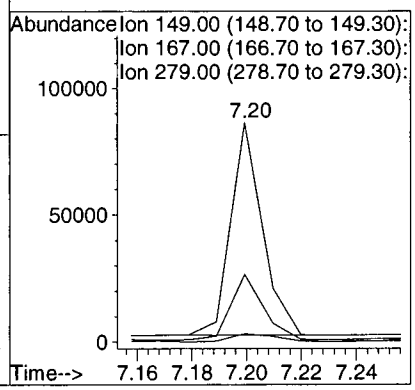




#83
Bis (2-ethylhexyl) phthalate
Concen: 161.96425 ppb
RT: 7.20 min Scan# 586
Delta R.T. 0.01 min
Lab File: 0921Y017.D
Acq: 21 Sep 14 17:09

Tgt Ion:149 Resp: 67043

Ion	Ratio	Lower	Upper
149	100		
167	30.8	23.6	43.8
279	3.6	4.5	8.3#



EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN014

APPL ID: AZ02112

Sample Collection Date: 9/3/14

QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	0.36 J	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	62.7	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	74.8	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	68.9	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	72.6	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	90.7	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	81.0	30-125			%	9/15/14	9/21/14

J = Estimated value.

Quant Method: Y87HP.M
Run #: 0921Y018
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y018.D Vial: 18
Acq On : 21 Sep 14 17:26 Operator: CSC
Sample : AZ02112S11 1/30.09G Inst : YODA
Misc : Multiplr: 33.23

Quant Time: Sep 21 21:44 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.34	152	232306	40.00000 ppb	0.02
20) Napthalene-D8(IS)	3.29	136	1129698	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	4.42	164	588330	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	827553	40.00000 ppb	0.00
76) Chrysene-D12(IS)	7.25	240	638733	40.00000 ppb	0.00
87) Perylene-D12(IS)	8.75	264	313652	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	1.67	112	725584	4580.96654 ppb	0.03
Spiked Amount 6646.726			Recovery = 68.921%		
5) Phenol-D6 (S)	2.09	99	1149819	6028.27081 ppb	0.02
Spiked Amount 6646.726			Recovery = 90.695%		
21) Nitrobenzene-D5(S)	2.76	82	525237	2413.65744 ppb	0.00
Spiked Amount 3323.363			Recovery = 72.627%		
44) 2-Fluorobiphenyl(S)	3.99	172	1196956	2485.97555 ppb	0.00
Spiked Amount 3323.363			Recovery = 74.803%		
61) 2,4,6-Tribromophenol(S)	4.92	330	245776	4167.36604 ppb	0.00
Spiked Amount 6646.726			Recovery = 62.698%		
79) Terphenyl-D14(S)	6.41	244	981840	2691.51936 ppb	0.00
Spiked Amount 3323.363			Recovery = 80.988%		
Target Compounds					Qvalue
83) Bis (2-ethylhexyl) phthala	7.20	149	154959	357.17699 ppb	99

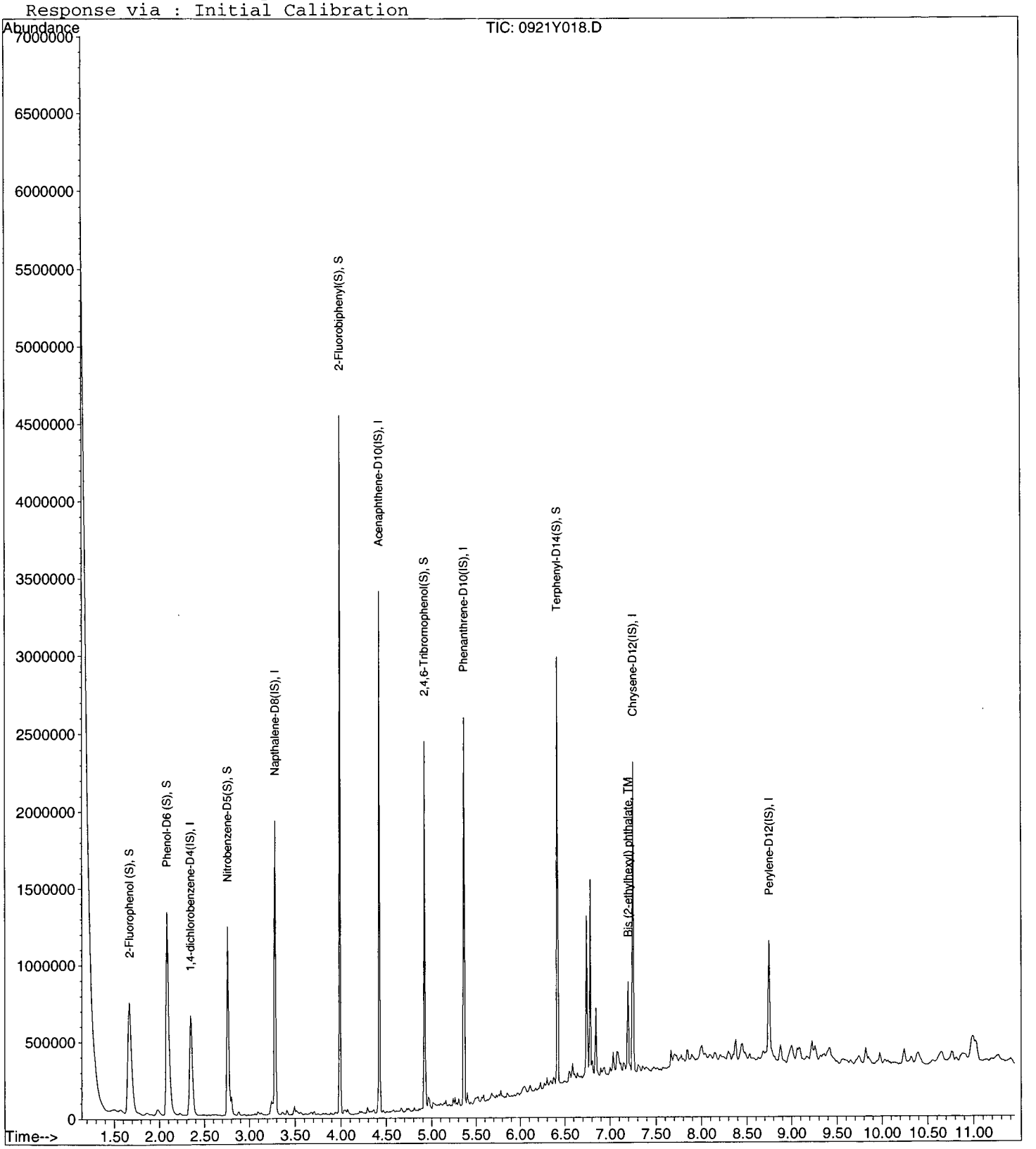
(#) = qualifier out of range (m) = manual integration

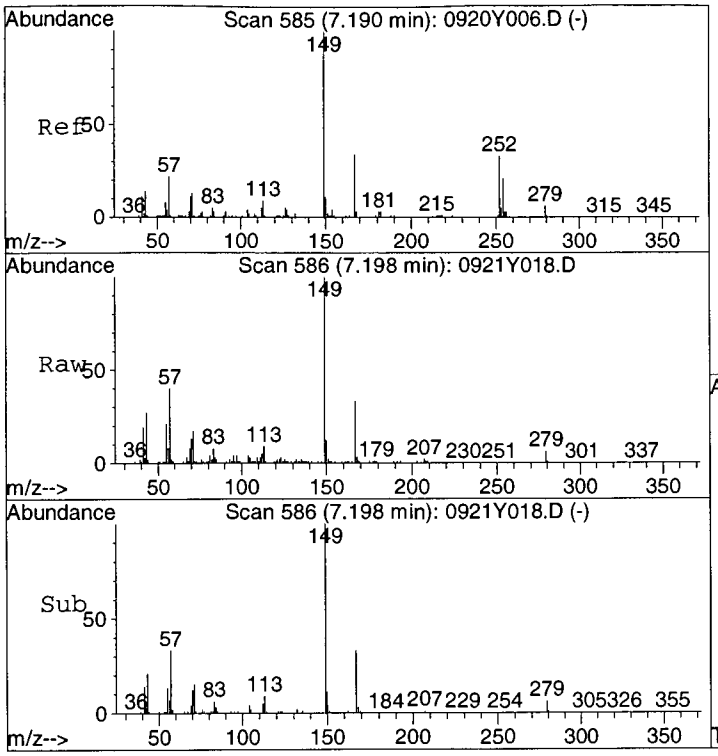
Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y018.D Vial: 18
Acq On : 21 Sep 14 17:26 Operator: CSC
Sample : AZ02112S11 1/30.09G Inst : YODA
Misc : Multiplr: 33.23

Quant Time: Sep 21 21:44 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

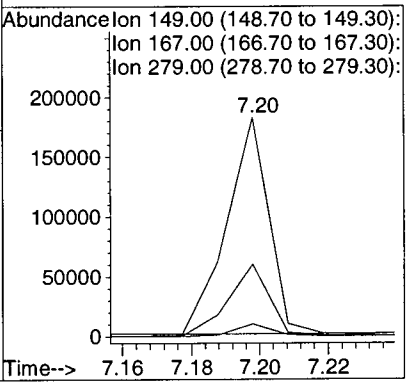




#83
Bis (2-ethylhexyl) phthalate
Concen: 357.17699 ppb
RT: 7.20 min Scan# 586
Delta R.T. 0.01 min
Lab File: 0921Y018.D
Acq: 21 Sep 14 17:26

Tgt Ion:149 Resp: 154959

Ion	Ratio	Lower	Upper
149	100		
167	33.1	23.6	43.8
279	5.6	4.5	8.3



EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN015
Sample Collection Date: 9/3/14

ARF: 74218
APPL ID: AZ02113
QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	0.13 J	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	59.5	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	75.6	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	69.9	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	81.2	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	89.1	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	90.6	30-125			%	9/15/14	9/21/14

J = Estimated value.

Quant Method: Y87HP.M
Run #: 0921Y019
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y019.D Vial: 19
Acq On : 21 Sep 14 17:43 Operator: CSC
Sample : AZ02113S11 1/30.13G Inst : YODA
Misc : Multiplr: 33.19

Quant Time: Sep 21 21:44 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.34	152	235146	40.00000 ppb	0.02
20) Napthalene-D8(IS)	3.29	136	1126639	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	4.43	164	602477	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	870351	40.00000 ppb	0.00
76) Chrysene-D12(IS)	7.25	240	613390	40.00000 ppb	0.00
87) Perylene-D12(IS)	8.75	264	313139	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	1.67	112	745338	4642.67815 ppb	0.03
Spiked Amount 6637.902			Recovery =	69.942%	
5) Phenol-D6 (S)	2.09	99	1143140	5913.00963 ppb	0.02
Spiked Amount 6637.902			Recovery =	89.079%	
21) Nitrobenzene-D5(S)	2.76	82	585586	2694.70758 ppb	0.00
Spiked Amount 3318.951			Recovery =	81.192%	
44) 2-Fluorobiphenyl(S)	3.99	172	1238971	2509.47799 ppb	0.00
Spiked Amount 3318.951			Recovery =	75.611%	
61) 2,4,6-Tribromophenol(S)	4.92	330	238886	3950.17610 ppb	0.00
Spiked Amount 6637.902			Recovery =	59.509%	
79) Terphenyl-D14(S)	6.42	244	1055337	3008.52535 ppb	0.00
Spiked Amount 3318.951			Recovery =	90.647%	
Target Compounds					Qvalue
83) Bis (2-ethylhexyl) phthala	7.20	149	53803	128.96708 ppb #	94

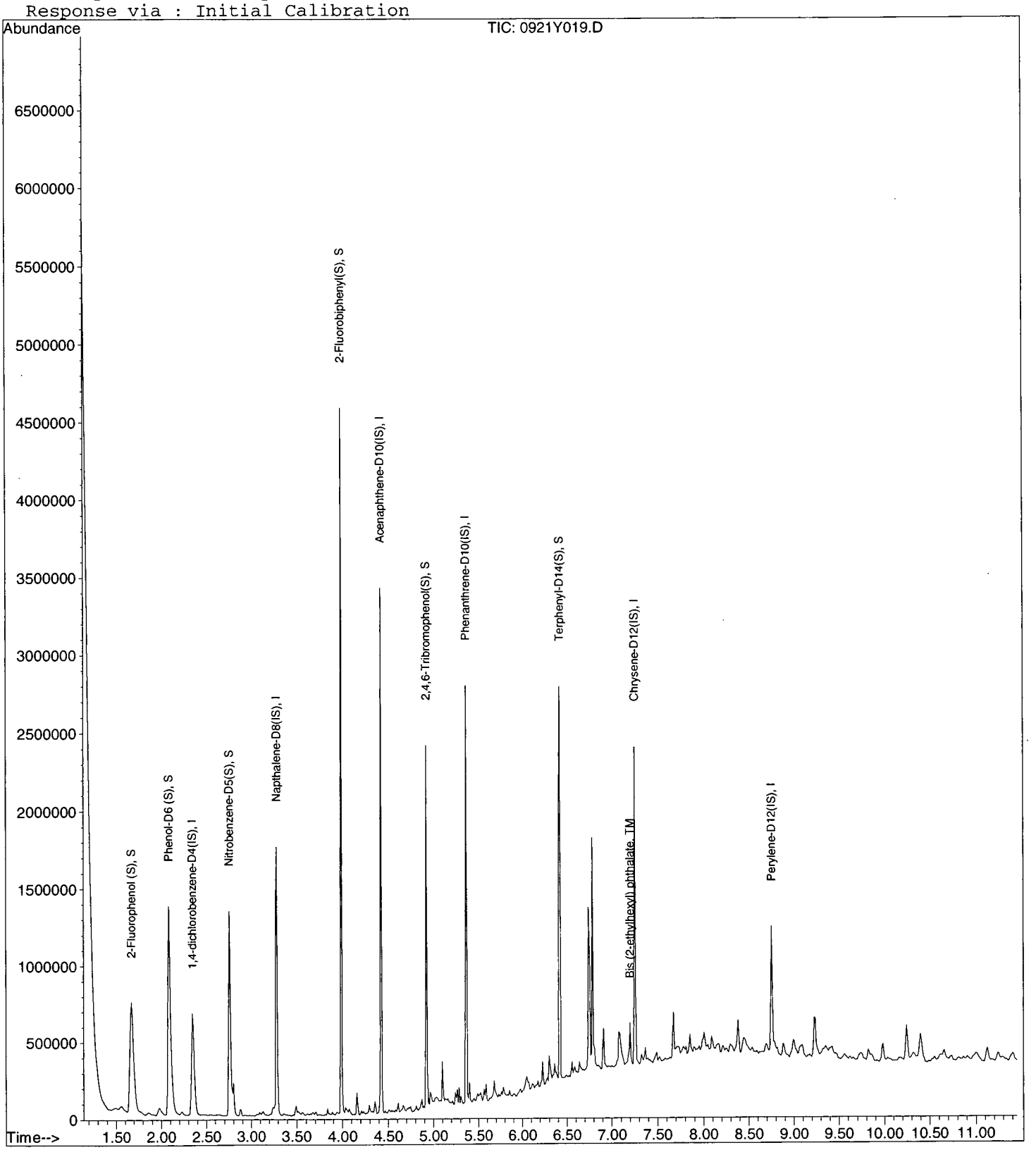
(#) = qualifier out of range (m) = manual integration

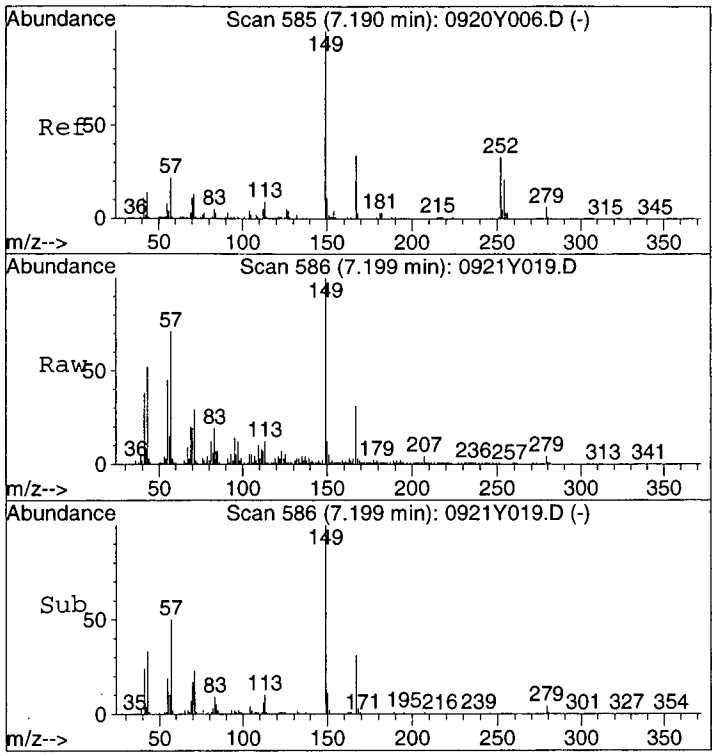
Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y019.D Vial: 19
Acq On : 21 Sep 14 17:43 Operator: CSC
Sample : AZ02113S11 1/30.13G Inst : YODA
Misc : Multiplr: 33.19

Quant Time: Sep 21 21:44 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

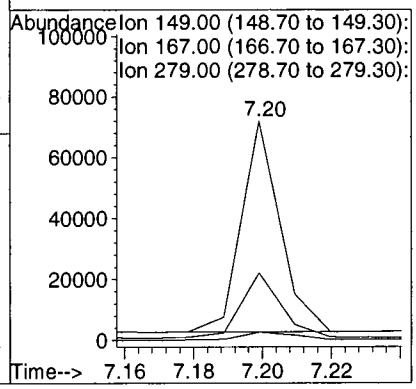




#83
Bis (2-ethylhexyl) phthalate
Concen: 128.96708 ppb
RT: 7.20 min Scan# 586
Delta R.T. 0.01 min
Lab File: 0921Y019.D
Acq: 21 Sep 14 17:43

Tgt Ion:149 Resp: 53803

Ion	Ratio	Lower	Upper
149	100		
167	30.5	23.6	43.8
279	3.5	4.5	8.3#



EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN016

APPL ID: AZ02114

Sample Collection Date: 9/3/14

QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	0.082 J	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	61.7	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	75.9	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	75.2	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	84.3	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	101 #	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	88.3	30-125			%	9/15/14	9/21/14

J = Estimated value.
= Recovery (or RPD) is outside QC limits.

Quant Method: Y87HP.M
Run #: 0921Y020
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y020.D Vial: 20
Acq On : 21 Sep 14 18:00 Operator: CSC
Sample : AZ02114S11 1/30.11G Inst : YODA
Misc : Multiplr: 33.21

Quant Time: Sep 21 21:45 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.34	152	243185	40.00000	ppb	0.02
20) Napthalene-D8(IS)	3.29	136	1196200	40.00000	ppb	0.00
38) Acenaphthene-D10(IS)	4.42	164	619710	40.00000	ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	884036	40.00000	ppb	0.00
76) Chrysene-D12(IS)	7.25	240	596461	40.00000	ppb	0.00
87) Perylene-D12(IS)	8.75	264	316457	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	1.67	112	828611	4994.07724	ppb	0.03
Spiked Amount 6642.312			Recovery = 75.186%			
5) Phenol-D6 (S)	2.09	99	1336073	6686.95806	ppb	0.02
Spiked Amount 6642.312			Recovery = 100.672%			
21) Nitrobenzene-D5(S)	2.76	82	645781	2800.75835	ppb	0.00
Spiked Amount 3321.156			Recovery = 84.331%			
44) 2-Fluorobiphenyl(S)	3.99	172	1279846	2521.85649	ppb	0.00
Spiked Amount 3321.156			Recovery = 75.933%			
61) 2,4,6-Tribromophenol(S)	4.92	330	254748	4098.04709	ppb	0.00
Spiked Amount 6642.312			Recovery = 61.696%			
79) Terphenyl-D14(S)	6.42	244	999511	2932.19712	ppb	0.00
Spiked Amount 3321.156			Recovery = 88.288%			
Target Compounds						Qvalue
83) Bis (2-ethylhexyl) phthala	7.20	149	33409	82.40981	ppb #	90

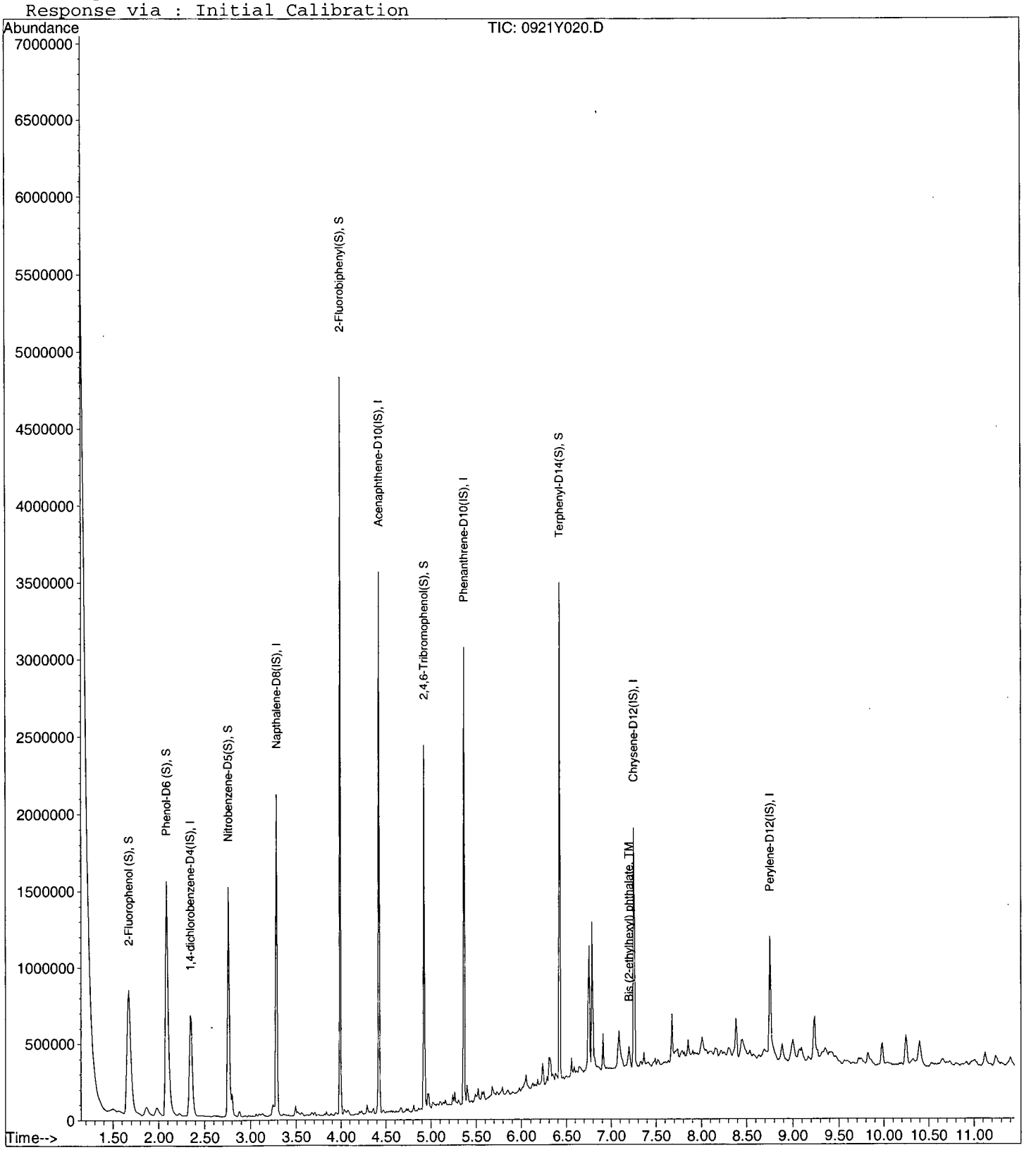
(#) = qualifier out of range (m) = manual integration

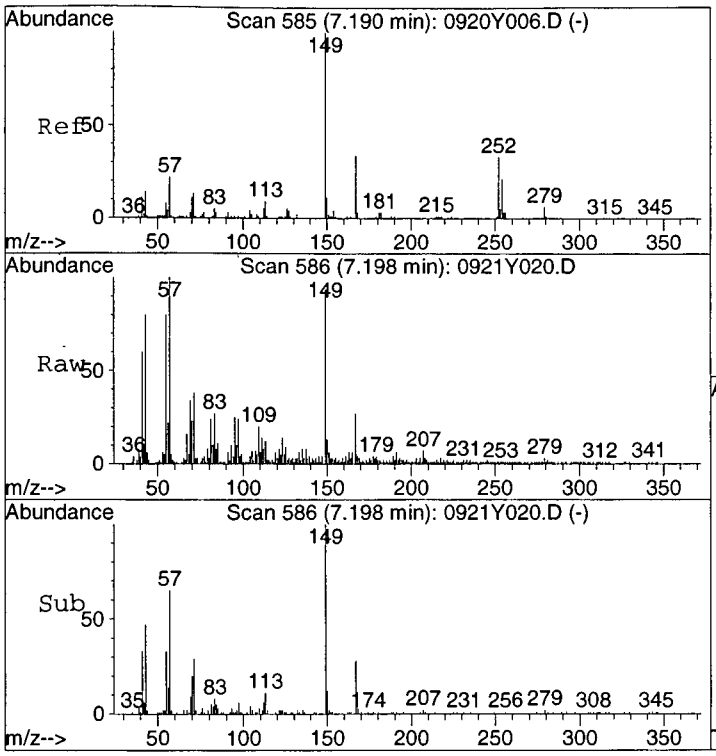
Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y020.D Vial: 20
Acq On : 21 Sep 14 18:00 Operator: CSC
Sample : AZ02114S11 1/30.11G Inst : YODA
Misc : Multiplr: 33.21

Quant Time: Sep 21 21:45 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

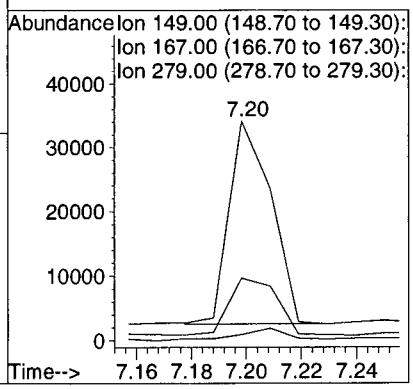




#83
Bis (2-ethylhexyl) phthalate
Concen: 82.40981 ppb
RT: 7.20 min Scan# 586
Delta R.T. 0.01 min
Lab File: 0921Y020.D
Acq: 21 Sep 14 18:00

Tgt Ion:149 Resp: 33409

Ion	Ratio	Lower	Upper
149	100		
167	27.9	23.6	43.8
279	2.3	4.5	8.3#



EPA 8270C IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN017
Sample Collection Date: 9/3/14

ARF: 74218
APPL ID: AZ02115
QCG: #87CE2-140915A-189979

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
EPA 8270C	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
EPA 8270C	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
EPA 8270C	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
EPA 8270C	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	0.17 J	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
EPA 8270C	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
EPA 8270C	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
EPA 8270C	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
EPA 8270C	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
EPA 8270C	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	64.3	35-125			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	80.6	45-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	82.2	35-105			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	87.9	35-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: PHENOL (S)	105 #	40-100			%	9/15/14	9/21/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	85.6	30-125			%	9/15/14	9/21/14

J = Estimated value.
= Recovery (or RPD) is outside QC limits.

Quant Method: Y87HP.M
Run #: 0921Y021
Instrument: YODA
Sequence: Y140920B
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y021.D Vial: 21
Acq On : 21 Sep 14 18:17 Operator: CSC
Sample : AZ02115S11 1/30.13G Inst : YODA
Misc : Multiplr: 33.19

Quant Time: Sep 21 21:45 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.35	152	240449	40.00000 ppb	0.02
20) Napthalene-D8(IS)	3.28	136	1123503	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	4.43	164	573984	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	5.36	188	728989	40.00000 ppb	0.00
76) Chrysene-D12(IS)	7.25	240	573208	40.00000 ppb	0.01
87) Perylene-D12(IS)	8.75	264	283968	40.00000 ppb	0.01
System Monitoring Compounds					
4) 2-Fluorophenol (S)	1.67	112	896258	5459.62708 ppb	0.03
Spiked Amount 6637.902			Recovery = 82.249%		
5) Phenol-D6 (S)	2.09	99	1382648	6994.15761 ppb	0.02
Spiked Amount 6637.902			Recovery = 105.367%		
21) Nitrobenzene-D5(S)	2.76	82	632449	2918.48196 ppb	0.01
Spiked Amount 3318.951			Recovery = 87.934%		
44) 2-Fluorobiphenyl(S)	3.99	172	1258816	2676.24082 ppb	0.00
Spiked Amount 3318.951			Recovery = 80.635%		
61) 2,4,6-Tribromophenol(S)	4.92	330	245966	4269.15107 ppb	0.00
Spiked Amount 6637.902			Recovery = 64.315%		
79) Terphenyl-D14(S)	6.41	244	931209	2840.75725 ppb	0.00
Spiked Amount 3318.951			Recovery = 85.592%		
Target Compounds					Qvalue
83) Bis (2-ethylhexyl) phthala	7.20	149	66700	171.08923 ppb	# 95

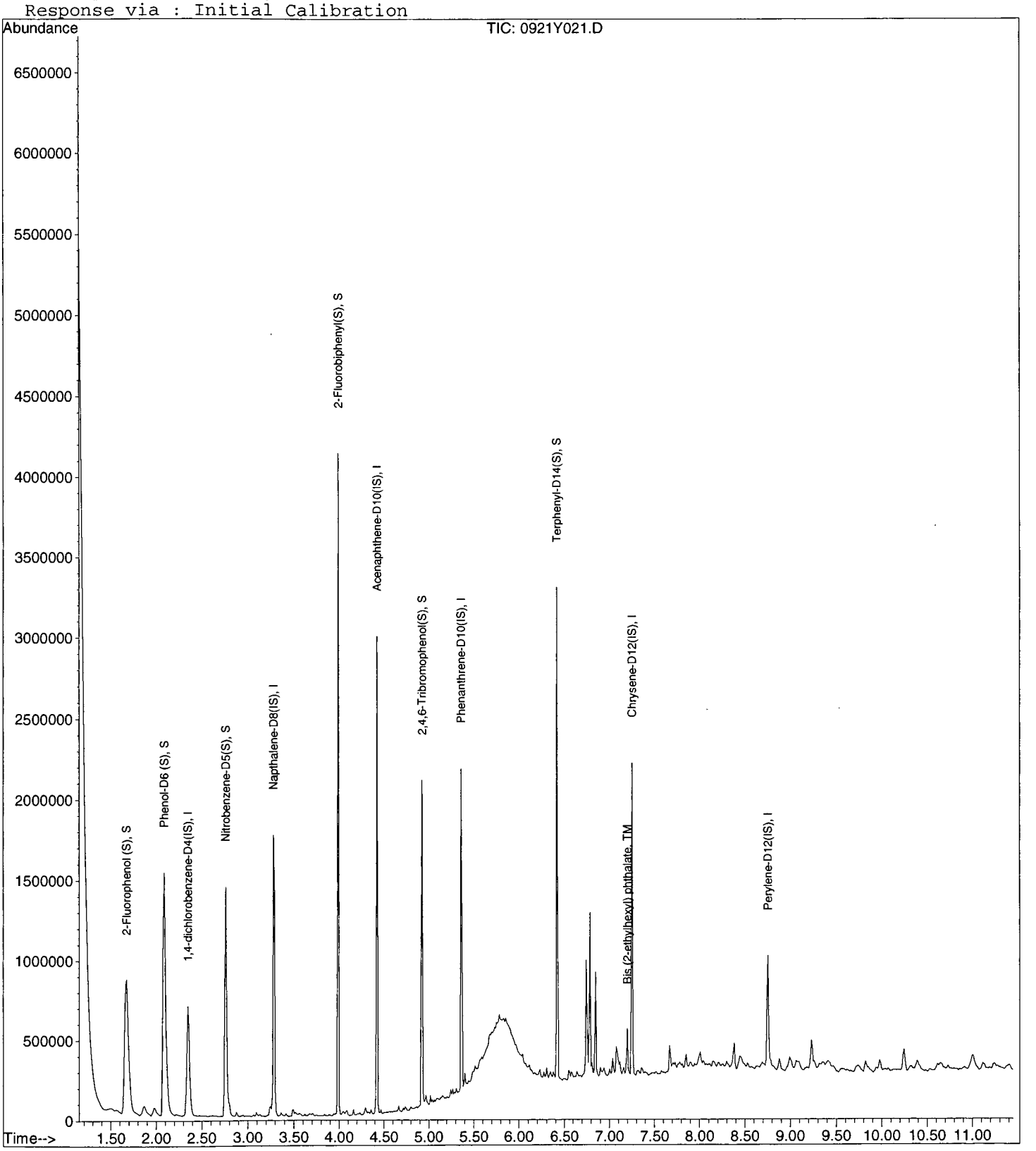
(#) = qualifier out of range (m) = manual integration

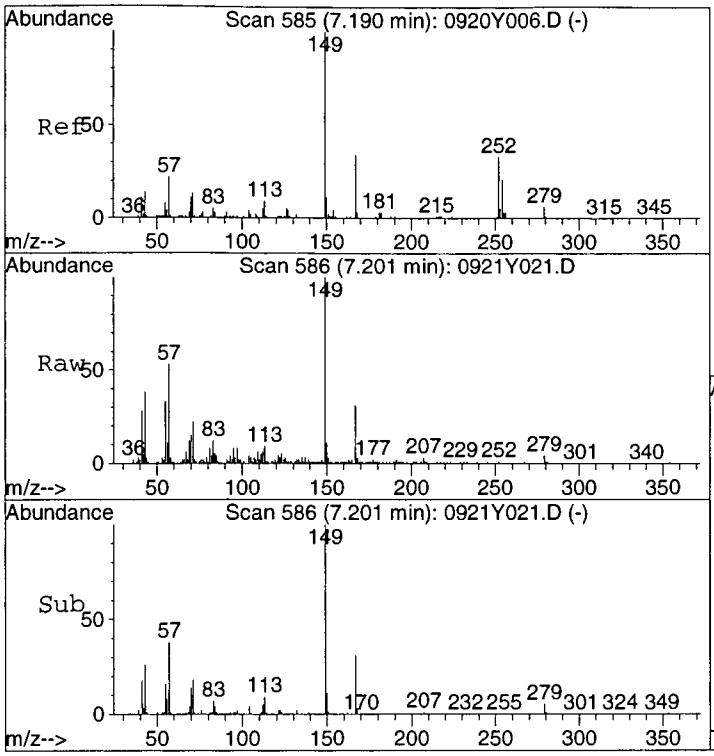
Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y021.D Vial: 21
Acq On : 21 Sep 14 18:17 Operator: CSC
Sample : AZ02115S11 1/30.13G Inst : YODA
Misc : Multiplr: 33.19

Quant Time: Sep 21 21:45 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration

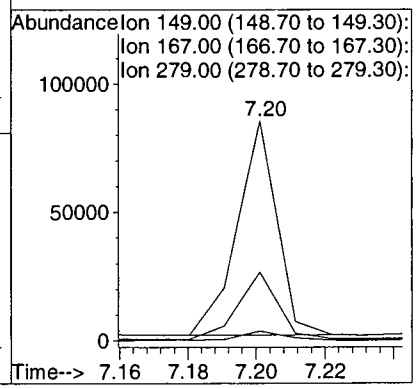




#83
Bis (2-ethylhexyl) phthalate
Concen: 171.08923 ppb
RT: 7.20 min Scan# 586
Delta R.T. 0.01 min
Lab File: 0921Y021.D
Acq: 21 Sep 14 18:17

Tgt Ion:149 Resp: 66700

Ion	Ratio	Lower	Upper
149	100		
167	31.1	23.6	43.8
279	4.3	4.5	8.3#



EPA 8270C WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN018

APPL ID: AZ02116

Sample Collection Date: 9/3/14

QCG: #87CE2-140908A-189933

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270C	1,2,4-TRICHLOROBENZENE	5.00 U	10.0	5.00	1.30	ug/L	9/8/14	9/11/14
EPA 8270C	1,2-DICHLOROBENZENE	5.00 U	10.0	5.00	1.10	ug/L	9/8/14	9/11/14
EPA 8270C	1,3-DICHLOROBENZENE	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
EPA 8270C	1,4-DICHLOROBENZENE	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
EPA 8270C	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	9/8/14	9/11/14
EPA 8270C	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
EPA 8270C	2,4-DICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
EPA 8270C	2,4-DIMETHYLPHENOL	5.00 U	10.0	5.00	2.40	ug/L	9/8/14	9/11/14
EPA 8270C	2,4-DINITROPHENOL	5.00 U	20.0	5.00	1.80	ug/L	9/8/14	9/11/14
EPA 8270C	2,4-DINITROTOLUENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
EPA 8270C	2,6-DINITROTOLUENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
EPA 8270C	2-CHLOROPHENOL	5.00 U	10.0	5.00	2.00	ug/L	9/8/14	9/11/14
EPA 8270C	3,3'-DICHLOROBENZIDINE	5.00 U	10.0	5.00	3.00	ug/L	9/8/14	9/11/14
EPA 8270C	4-CHLOROANILINE	5.00 U	10.0	5.00	2.70	ug/L	9/8/14	9/11/14
EPA 8270C	BIS (2-CHLOROETHYL) ETHER	5.00 U	10.0	5.00	2.20	ug/L	9/8/14	9/11/14
EPA 8270C	BIS (2-CHLOROISOPROPYL) ETHER	5.00 U	10.0	5.00	2.00	ug/L	9/8/14	9/11/14
EPA 8270C	BIS (2-ETHYLHEXYL) PHTHALATE	5.00 U	20.0	5.00	2.90	ug/L	9/8/14	9/11/14
EPA 8270C	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	9/8/14	9/11/14
EPA 8270C	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	9/8/14	9/11/14
EPA 8270C	HEXACHLOROBENZENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
EPA 8270C	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	9/8/14	9/11/14
EPA 8270C	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	9/8/14	9/11/14
EPA 8270C	ISOPHORONE	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
EPA 8270C	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	9/8/14	9/11/14
EPA 8270C	PENTACHLOROPHENOL	5.00 U	20.0	5.00	2.80	ug/L	9/8/14	9/11/14
EPA 8270C	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
EPA 8270C	SURROGATE: 2,4,6-TRIBROMOPHEN	66.9	40-125			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: 2-FLUORBIPHENYL (S)	56.1	50-110			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: 2-FLUOROPHENOL (S)	42.2	20-110			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: NITROBENZENE-D5 (S)	60.3	40-110			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: PHENOL (S)	27.3	10-115			%	9/8/14	9/11/14
EPA 8270C	SURROGATE: TERPHENYL-D14 (S)	88.4	50-135			%	9/8/14	9/11/14

Quant Method: Y87HP.M
Run #: 0910Y024
Instrument: YODA
Sequence: Y140910
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:22:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y024.D Vial: 24
Acq On : 11 Sep 14 6:42 Operator: LF
Sample : AZ02116W08 1/960 Inst : YODA
Misc : Multiplr: 1.04

Quant Time: Sep 18 23:08 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	3.29	152	111320	40.00000 ppb	0.00
20) Napthalene-D8(IS)	4.11	136	410905	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	5.20	164	274116	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	6.15	188	476509	40.00000 ppb	0.00
76) Chrysene-D12(IS)	8.12	240	538273	40.00000 ppb	0.02
87) Perylene-D12(IS)	9.62	264	334442	40.00000 ppb	0.02
System Monitoring Compounds					
4) 2-Fluorophenol (S)	2.35	112	424744	87.86910 ppb	0.00
Spiked Amount 208.333			Recovery = 42.177%		
5) Phenol-D6 (S)	3.04	99	353587	56.93182 ppb	0.00
Spiked Amount 208.333			Recovery = 27.327%		
21) Nitrobenzene-D5(S)	3.65	82	365241	62.76830 ppb	-0.01
Spiked Amount 104.167			Recovery = 60.257%		
44) 2-Fluorobiphenyl(S)	4.76	172	749146	58.44303 ppb	0.00
Spiked Amount 104.167			Recovery = 56.105%		
61) 2,4,6-Tribromophenol(S)	5.69	330	239642	139.47666 ppb	0.00
Spiked Amount 208.333			Recovery = 66.949%		
79) Terphenyl-D14(S)	7.26	244	1551906	92.04676 ppb	0.00
Spiked Amount 104.167			Recovery = 88.365%		

Target Compounds Qvalue

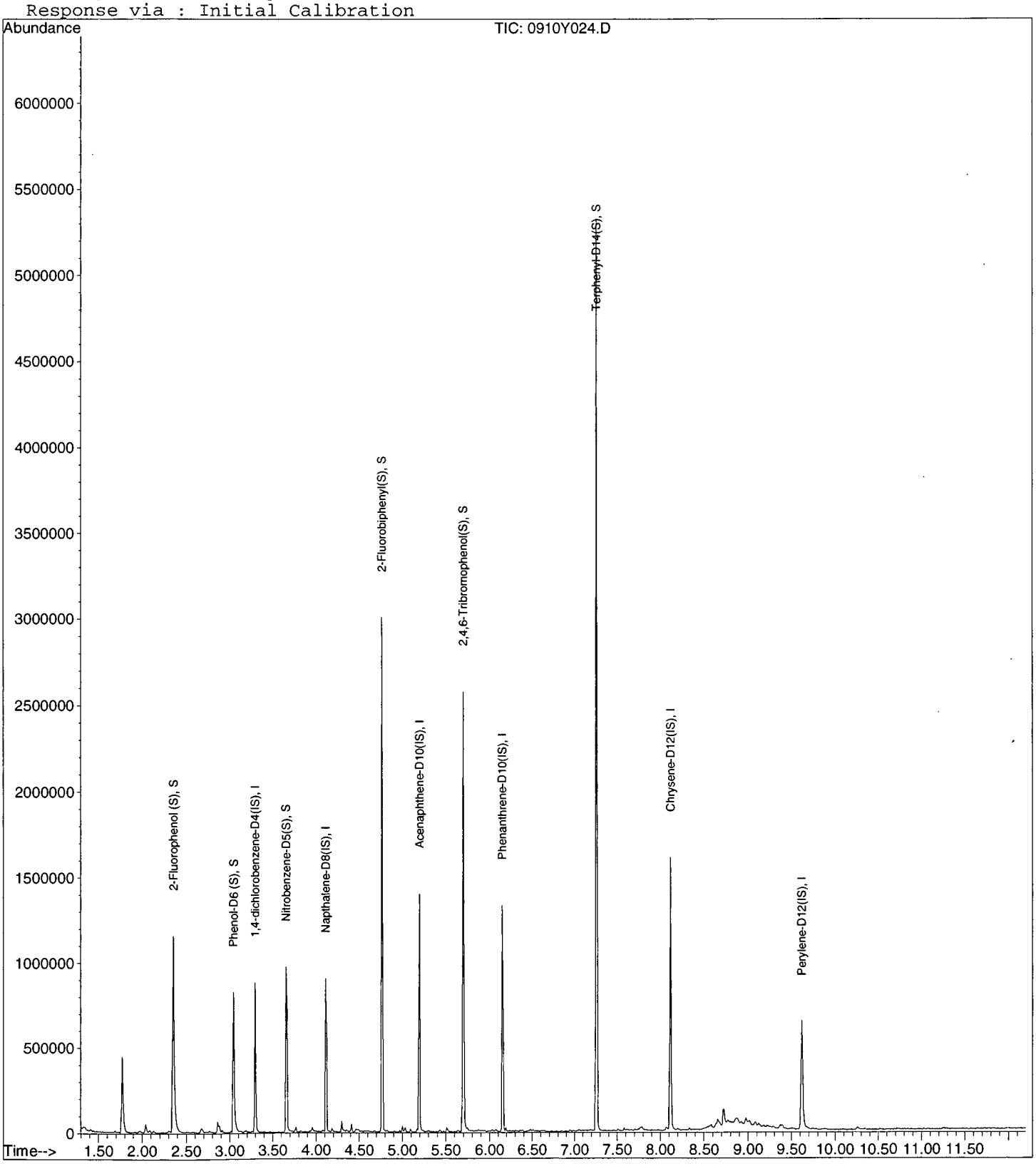
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140910\0910Y024.D Vial: 24
Acq On : 11 Sep 14 6:42 Operator: LF
Sample : AZ02116W08 1/960 Inst : YODA
Misc : Multiplr: 1.04

Quant Time: Sep 18 23:08 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration



EPA METHOD 8270
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 9/10/2014
Matrix: Instrument: YODA Initials:

			0910Y002.D	0910Y003.D	0910Y004.D	0910Y005.D	0910Y006.D	0910Y007.D	0910Y008.D	0910Y009.D						
		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		r
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	n-Nitrosodimethylamine	0.6194	0.4962	0.6034	0.7085	0.6779	0.5912	0.6313	0.5895			0.61	10	TM	
3	TM	Pyridine	0.9028	0.6257	0.9383	0.9506	0.6749	0.8094	0.8125	0.7979			0.81	14	TM	
4	S	2-Fluorophenol (S)	1.839	1.810	1.972	1.911	1.740	1.708	1.777	1.718			1.8	5.2	S	
5	S	Phenol-D6 (S)	2.755	2.329	2.491	2.446	2.168	2.071	2.215	2.122			2.3	9.9	S	
6	*TM	Phenol	2.801	2.452	2.883	2.758	2.319	2.401	2.279	2.222			2.5	10	*TM	
7	TM	Aniline	1.773	1.710	1.997	1.982	1.627	1.701	1.477	1.469			1.7	12	TM	
8	TM	Bis (2-chloroethyl) ether	1.008	1.047	1.189	1.074	0.9919	1.011	1.029	0.9616			1.0	6.7	TM	
9	TM	2-Chlorophenol	1.983	2.141	2.297	2.093	1.950	1.878	1.923	1.939			2.0	7.0	TM	
10	TM	1,3-DCB	2.656	2.305	2.596	2.558	2.126	2.189	2.418	2.309			2.4	8.1	TM	
11	*TM	1,4-DCB	2.642	2.273	2.555	2.425	2.182	2.076	2.273	2.221			2.3	8.3	*TM	
12	TM	Benzyl alcohol	2.218	2.111	2.491	2.282	1.989	1.867	2.022	1.962			2.1	9.6	TM	
13	TM	1,2-DCB	2.252	2.206	2.446	2.262	1.996	1.917	2.093	2.082			2.2	7.8	TM	
14	TM	2-Methylphenol	1.802	1.858	1.950	1.833	1.652	1.615	1.742	1.607			1.8	7.1	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.906	1.892	2.103	1.903	1.718	1.653	1.660	1.532			1.8	10	TM	
16	TM	Acetophenone	3.217	3.006	3.307	3.130	2.608	2.431	2.427	2.300			2.8	14	TM	
17	TM	3&4-Methylphenol	2.426	2.213	2.555	2.207	1.862	1.792	1.768				2.1	15	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.667	1.557	1.826	1.550	1.282	1.254	1.265				1.5	15	**TM	
19	TM	Hexachloroethane	0.9945	0.8589	1.217	1.147	0.9372	0.9297	0.9875	0.8833			0.99	13	TM	
20	I	Napthalene-D8(IS)														
21	S	Nitrobenzene-D5(S)	0.6279	0.5361	0.7484	0.6280	0.5918	0.5135	0.5562	0.5184			0.59	13	S	
22	TM	Nitrobenzene	0.6179	0.5375	0.7156	0.6504	0.5819	0.4917	0.5102	0.4777			0.57	15	TM	
23	TM	Isophorone	1.152	0.8822	1.272	1.053	1.046	0.8626	0.9987	0.9259			1.0	14	TM	
24	*TM	2-Nitrophenol	0.2248	0.2155	0.2889	0.2521	0.2937	0.2227	0.2740	0.2890			0.26	13	*TM	
25	TM	2,4-Dimethylphenol	0.8840	0.7877	1.004	0.7780	0.7968	0.6163	0.7335	0.7129			0.79	15	TM	
26	TMQ	Benzoic acid	0.1221	0.1239	0.2452	0.2100	0.2888	0.2770	0.3624				0.23	38	TMQ	0.995
27	TM	Bis (2-chloroethoxy) methane	0.6994	0.4982	0.7304	0.5855	0.6072						0.62	15	TM	
28	*TM	2,4-Dichlorophenol	0.4442	0.4065	0.5073	0.4544	0.4323	0.3718	0.4603	0.4621			0.44	9.1	*TM	
29	TM	1,2,4-Trichlorobenzene	0.6183	0.5049	0.6868	0.6168	0.5653	0.4942	0.5608	0.5017			0.57	12	TM	
30	TM	Naphthalene	1.731	1.381	1.994	1.742	1.547	1.405	1.514	1.374			1.6	14	TM	
31	TM	4-Chloroaniline	0.3301	0.3651	0.3979	0.3464	0.3692	0.3494	0.4318	0.3950			0.37	8.9	TM	
32	TM	2,6-Dichlorophenol	0.4706	0.4547	0.5218	0.4182	0.4428	0.3402	0.4383	0.4268			0.44	12	TM	
33	TM	Hexachloropropene	0.4544	0.3738	0.5676	0.5207	0.4437	0.4360	0.4584	0.4052			0.46	13	TM	
34	*TM	Hexachlorobutadiene	0.4250	0.3885	0.4321	0.4026	0.3878	0.2924	0.3297	0.3372			0.37	13	*TM	
35	TM	Caprolactum		0.1497	0.2256	0.1901	0.1914	0.1528	0.1806	0.1845			0.18	14	TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 9/10/2014
Matrix: Instrument: YODA Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		r
36	*TM	4-Chloro-3-methylphenol	0.5573	0.5743	0.6933	0.5546	0.5883	0.4595	0.5561	0.5350			0.56	11	*TM	
37	TM	2-Methylnaphthalene	1.202	1.117	1.237	1.235	1.073	1.018	1.277	1.194			1.2	7.7	TM	
38	I	Acenaphthene-D10(IS)														
39	**TMQ	Hexachlorocyclopentadiene	0.0161	0.0520	0.1241	0.2362	0.2522	0.3028	0.4218				0.20	72	**TMQ	0.999
40	TM	1,2,4,5-Tetrachlorobenzene	0.9260	1.030	0.8963	0.9614	0.8981	0.8153	0.9750	0.9540			0.93	6.9	TM	
41	*TM	2,4,6-Trichlorophenol	0.4718	0.5979	0.4792	0.4738	0.5543	0.4406	0.5554	0.5682			0.52	11	*TM	
42	TM	2,4,5-Trichlorophenol	0.4462	0.5186	0.5695	0.5202	0.5000	0.4048	0.5118	0.5511			0.50	11	TM	
43	TM	2-Chloronaphthalene	1.548	1.759	1.599	1.781	1.546	1.538	1.618	1.526			1.6	6.3	TM	
44	S	2-Fluorobiphenyl(S)	2.044	2.743	1.983	1.736	1.995	1.436	1.847	1.804			1.9	19	S	
45	TM	1,1'-Biphenyl	2.099	2.308	2.082	2.185	1.988	1.991	2.338	2.142			2.1	6.1	TM	
46	TM	2-Nitroaniline	0.4069	0.5365	0.5661	0.4956	0.5990	0.4379	0.5475	0.5557			0.52	13	TM	
47	TM	Dimethyl phthalate	1.782	2.502	2.033	1.804	2.090	1.610	2.104	2.016			2.0	14	TM	
48	TM	2,6-DNT	0.4002	0.3547	0.4059	0.4671	0.4610	0.4125	0.3797	0.3794			0.41	9.7	TM	
49	TM	Acenaphthylene	2.615	2.974	2.499	2.583	2.597	2.343	2.885	2.935			2.7	8.5	TM	
50	TM	3-Nitroaniline	0.4776	0.6226	0.5768	0.5268	0.5661	0.4908	0.5411	0.5234			0.54	8.7	TM	
51	*TM	Acenaphthene	1.661	1.549	1.620	1.720	1.578	1.445	1.600	1.595			1.6	5.0	*TM	
52	**TMQ	2,4-Dinitrophenol			0.0733	0.0993	0.1237	0.1108	0.1709	0.1914			0.13	35	**TMQ	0.995
53	**TM	4-Nitrophenol		0.2424	0.2730	0.3299	0.3345	0.2958	0.3197	0.3492			0.31	12	**TM	
54	TM	Dibenzofuran	2.257	2.662	2.787	2.563	2.786	2.012	2.336	2.094			2.4	13	TM	
55	TM	2,4-DNT	0.4381	0.6185	0.6621	0.5771	0.6540	0.5646	0.6071	0.6212			0.59	12	TM	
56	TM	2,3,4,6-Tetrachlorophenol		0.3335	0.3682	0.4221	0.4143	0.3994	0.4312	0.4736			0.41	11	TM	
57	TM	Diethyl phthalate	1.897	2.281	2.482	2.032	2.050	1.593	1.892	1.976			2.0	13	TM	
58	TM	4-Chlorophenyl phenyl ether	1.082	1.101	0.9597	0.9637	0.8942	0.8771	0.8978	1.052			0.98	9.1	TM	
59	TM	Fluorene	1.723	1.988	1.936	1.904	1.978	1.568	1.812	1.499			1.8	10	TM	
60	TM	4-Nitroaniline	0.4373	0.4722	0.4517	0.4428	0.4263	0.3436	0.3976	0.3762			0.42	10	TM	
61	S	2,4,6-Tribromophenol(S)	0.2114	0.2522	0.2783	0.2570	0.2946	0.2187	0.2729	0.3042			0.26	13	S	
62	I	Phenanthrene-D10(IS)														
63	TM	Diphenyl amine	1.150	0.9243	1.190	1.263	1.010	0.8753	0.9217	0.9625			1.0	14	TM	
64	TMQ	4,6-Dinitro-2-methylphenol		0.0877	0.1166	0.1505	0.1443	0.1512	0.1851	0.1809			0.15	24	TMQ	0.997
65	*TM	n-Nitrosodiphenylamine	0.5747	0.5540	0.6275	0.6798	0.5199	0.4688	0.5080	0.5015			0.55	13	*TM	
66	TM	1,2-Diphenylhydrazine	0.3931	0.3439	0.2920	0.3041	0.2511	0.2884	0.2839				0.31	15	TM	
67	TM	4-Bromophenyl phenyl ether	0.3914	0.3370	0.3910	0.3875	0.3076	0.2891	0.3098	0.3038			0.34	13	TM	
68	TM	Hexachlorobenzene	0.3552	0.3700	0.3135	0.3438	0.2883	0.3057	0.3743	0.3425			0.34	9.3	TM	
69	TM	Atrazine	0.3978	0.2908	0.3111	0.3577	0.3057	0.3252	0.3150	0.3141			0.33	11	TM	
70	*TM	Pentachlorophenol		0.0600	0.0821	0.1053	0.1105	0.1139	0.1291	0.1262			0.10	24	*TM	

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y002.D Vial: 2
Acq On : 10 Sep 14 23:12 Operator: LF
Sample : 5.0ppm SVOC 09-10-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:31 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:30:53 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	3.29	152	87847	40.00000	ppb		0.00
20) Napthalene-D8(IS)	4.12	136	322591	40.00000	ppb		0.00
38) Acenaphthene-D10(IS)	5.20	164	230462	40.00000	ppb		0.00
62) Phenanthrene-D10(IS)	6.16	188	383273	40.00000	ppb		0.00
76) Chrysene-D12(IS)	8.14	240	436507	40.00000	ppb		0.05
87) Perylene-D12(IS)	9.65	264	289714	40.00000	ppb		0.05
System Monitoring Compounds							
4) 2-Fluorophenol (S)	2.36	112	40380	10.18992	ppb		0.00
Spiked Amount 200.000			Recovery =	5.095%			
5) Phenol-D6 (S)	3.04	99	60497	11.84974	ppb		0.00
Spiked Amount 200.000			Recovery =	5.925%			
21) Nitrobenzene-D5(S)	3.66	82	25321	5.45774	ppb		0.00
Spiked Amount 100.000			Recovery =	5.458%			
44) 2-Fluorobiphenyl(S)	4.76	172	58871	14.04628	ppb		0.00
Spiked Amount 100.000			Recovery =	14.046%			
61) 2,4,6-Tribromophenol(S)	5.70	330	12182	8.10101	ppb		0.00
Spiked Amount 200.000			Recovery =	4.051%			
79) Terphenyl-D14(S)	7.29	244	76132	5.33902	ppb		0.04
Spiked Amount 100.000			Recovery =	5.339%			
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.65	74	6802	5.04439	ppb		98
3) Pyridine	1.67	52	9914	5.54902	ppb		79
6) Phenol	3.05	94	30758	5.60962	ppb		91
7) Aniline	3.10	93	19471	5.16641	ppb	#	98
8) Bis (2-chloroethyl) ether	3.10	63	11069	4.85909	ppb		72
9) 2-Chlorophenol	3.17	128	21772	4.89746	ppb		97
10) 1,3-DCB	3.26	146	29167	5.54637	ppb		98
11) 1,4-DCB	3.30	146	29013	5.68114	ppb		98
12) Benzyl alcohol	3.38	79	24353	5.23342	ppb		90
13) 1,2-DCB	3.41	146	24729	5.22774	ppb		96
14) 2-Methylphenol	3.47	108	19793	5.15732	ppb		97
15) Bis (2-chloroisopropyl) et	3.47	45	20935	5.30763	ppb		91
16) Acetophenone	3.56	105	35324	5.74436	ppb		82
17) 3&4-Methylphenol	3.56	107	53280	11.89484	ppb	#	68
18) n-Nitrosodi-n-propylamine	3.55	43	18303	5.75379	ppb	#	78
19) Hexachloroethane	3.63	117	10920	5.00284	ppb		91
22) Nitrobenzene	3.67	77	24915	5.41015	ppb		90
23) Isophorone	3.82	82	46435	5.62783	ppb		92
24) 2-Nitrophenol	3.88	139	9065	4.36685	ppb		89
25) 2,4-Dimethylphenol	4.09	107	35645	5.62523	ppb		93
26) Benzoic acid	3.97	105	4923	8.35188	ppb		98
27) Bis (2-chloroethoxy) metha	3.94	93	28204	6.15847	ppb		96
28) 2,4-Dichlorophenol	4.04	162	17913	5.02740	ppb		82
29) 1,2,4-Trichlorobenzene	4.08	180	24933	5.44053	ppb		97
30) Naphthalene	4.13	128	69794	5.47825	ppb		98
31) 4-Chloroaniline	4.16	127	13312	4.47957	ppb		97
32) 2,6-Dichlorophenol	4.17	162	18975	5.36874	ppb	#	82
33) Hexachloropropene	4.18	213	18322	4.96605	ppb		98
34) Hexachlorobutadiene	4.19	225	17136	5.67507	ppb		90
35) Caprolactum	4.41	113	386	0.30006	ppb	#	53
36) 4-Chloro-3-methylphenol	4.46	107	22473	4.94715	ppb		85
37) 2-Methylnaphthalene	4.55	142	48465	5.14368	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y002.D Vial: 2
Acq On : 10 Sep 14 23:12 Operator: LF
Sample : 5.0ppm SVOC 09-10-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:31 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:30:53 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Hexachlorocyclopentadiene	4.65	237	465	0.82129	ppb	#	22
40)	1,2,4,5-Tetrachlorobenzene	4.66	216	26677	4.96771	ppb	#	81
41)	2,4,6-Trichlorophenol	4.73	196	13592	4.55703	ppb		93
42)	2,4,5-Trichlorophenol	4.76	196	12853	4.49608	ppb		87
43)	2-Chloronaphthalene	4.85	162	44585	4.79283	ppb		91
45)	1,1'-Biphenyl	4.83	154	60475	4.90046	ppb	#	93
46)	2-Nitroaniline	4.92	138	11723	3.93123	ppb	#	61
47)	Dimethyl phthalate	5.00	163	51321	4.47121	ppb	#	78
48)	2,6-DNT	5.05	165	11530	4.90996	ppb	#	82
49)	Acenaphthylene	5.11	152	75346	4.88097	ppb		97
50)	3-Nitroaniline	5.16	65	13760	4.44804	ppb	#	87
51)	Acenaphthene	5.22	154	47842	5.22161	ppb		96
53)	4-Nitrophenol	5.24	109	515	0.34957	ppb	#	37
54)	Dibenzofuran	5.32	168	65026	4.63186	ppb	#	72
55)	2,4-DNT	5.31	165	12622	3.69496	ppb	#	68
56)	2,3,4,6-Tetrachlorophenol	5.41	232	6815	3.08860	ppb	#	72
57)	Diethyl phthalate	5.43	149	54643	4.68269	ppb		94
58)	4-Chlorophenyl phenyl ethe	5.53	204	31175	5.52968	ppb		86
59)	Fluorene	5.55	165	49622	4.78341	ppb		99
60)	4-Nitroaniline	5.56	138	12598	5.27921	ppb		95
63)	Diphenyl amine	5.60	168	55102	5.57599	ppb		92
64)	4,6-Dinitro-2-methylphenol	5.58	198	3935	2.99455	ppb		84
65)	n-Nitrosodiphenylamine	5.60	167	27535	5.19395	ppb		96
66)	1,2-Diphenylhydrazine	5.63	182	18831	6.53294	ppb	#	1
67)	4-Bromophenyl phenyl ether	5.85	248	18752	5.75488	ppb		86
68)	Hexachlorobenzene	5.91	284	17019	5.27022	ppb	#	54
69)	Atrazine	5.94	200	9529	3.04105	ppb	#	83
70)	Pentachlorophenol	6.04	266	2721	2.89593	ppb	#	61
71)	Phenanthrene	6.18	178	85075	5.88246	ppb		99
72)	Anthracene	6.21	178	76764	5.18001	ppb		92
73)	Carbazol	6.32	167	69712	5.51430	ppb		98
74)	Di-n-butylphthalate	6.52	149	94109	5.47385	ppb	#	97
75)	Fluoranthene	7.02	202	96064	5.45608	ppb	#	90
77)	Benzidine	7.11	184	11018	4.18069	ppb	#	89
78)	Pyrene	7.19	202	98934	5.04528	ppb		99
80)	Butyl benzylphthalate	7.64	149	42075	4.99723	ppb		81
81)	3,3'-Dichlorobenzidine	8.10	252	23383	4.86890	ppb		97
82)	Benz (a) anthracene	8.13	228	98345	5.16553	ppb		97
83)	Bis (2-ethylhexyl) phthala	8.10	149	55617	5.06825	ppb	#	95
84)	Chrysene	8.18	228	92055	5.56408	ppb	#	94
85)	Di-n-octylphthalate	8.71	149	84831	4.60202	ppb		98
86)	Indeno (1,2,3-cd) pyrene	11.03	276	86365	4.39777	ppb		98
88)	Benzo (b) fluoranthene	9.21	252	88397	4.37662	ppb		98
89)	Benzo (k) fluoranthene	9.24	252	94175	5.27910	ppb		96
90)	Benzo (a) pyrene	9.58	252	83918	4.62355	ppb		95
91)	Dibenz (a,h) anthracene	11.04	278	68121	4.13951	ppb	#	89
92)	Benzo (g,h,i) perylene	11.41	276	70807	4.28245	ppb		93

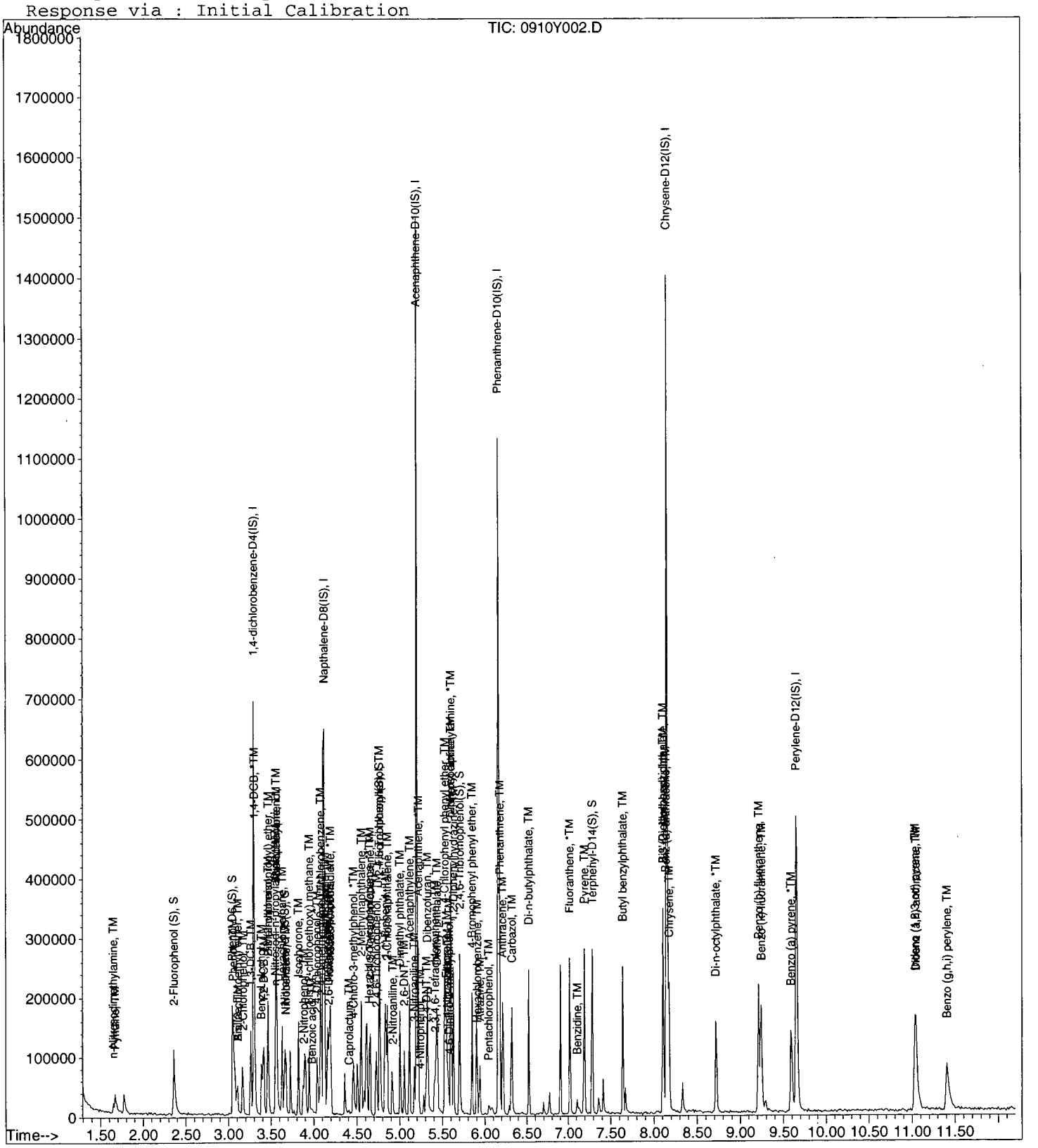
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140910\0910Y002.D Vial: 2
Acq On : 10 Sep 14 23:12 Operator: LF
Sample : 5.0ppm SVOC 09-10-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:31 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y003.D Vial: 3
Acq On : 10 Sep 14 23:33 Operator: LF
Sample : 10ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:31 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:31:40 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	3.29	152	89436	40.00000 ppb		0.00
20) Napthalene-D8(IS)	4.11	136	349476	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	5.19	164	195201	40.00000 ppb		-0.01
62) Phenanthrene-D10(IS)	6.15	188	394124	40.00000 ppb		0.00
76) Chrysene-D12(IS)	8.10	240	442639	40.00000 ppb		0.00
87) Perylene-D12(IS)	9.60	264	282618	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	2.35	112	80939	20.06212 ppb		0.00
Spiked Amount 200.000			Recovery = 10.031%			
5) Phenol-D6 (S)	3.05	99	104157	20.03909 ppb		0.00
Spiked Amount 200.000			Recovery = 10.020%			
21) Nitrobenzene-D5(S)	3.66	82	46842	9.31971 ppb		-0.01
Spiked Amount 100.000			Recovery = 9.320%			
44) 2-Fluorobiphenyl(S)	4.76	172	133855	37.70613 ppb		0.00
Spiked Amount 100.000			Recovery = 37.706%			
61) 2,4,6-Tribromophenol(S)	5.70	330	24611	19.32268 ppb		0.00
Spiked Amount 200.000			Recovery = 9.662%			
79) Terphenyl-D14(S)	7.25	244	141568	9.79042 ppb		0.00
Spiked Amount 100.000			Recovery = 9.790%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.65	74	11095	8.08191 ppb		91
3) Pyridine	1.67	52	13989	7.69075 ppb		79
6) Phenol	3.06	94	54825	9.82128 ppb		89
7) Aniline	3.10	93	38234	9.96472 ppb	#	82
8) Bis (2-chloroethyl) ether	3.10	63	23407	10.09269 ppb		97
9) 2-Chlorophenol	3.16	128	47865	10.57561 ppb		98
10) 1,3-DCB	3.26	146	51536	9.62592 ppb		97
11) 1,4-DCB	3.30	146	50826	9.77559 ppb		90
12) Benzyl alcohol	3.39	79	47192	9.96130 ppb		98
13) 1,2-DCB	3.41	146	49330	10.24314 ppb		95
14) 2-Methylphenol	3.46	108	41534	10.62993 ppb		84
15) Bis (2-chloroisopropyl) et	3.46	45	42306	10.53523 ppb		99
16) Acetophenone	3.56	105	67211	10.73561 ppb		97
17) 3&4-Methylphenol	3.56	107	98978	21.70439 ppb		96
18) n-Nitrosodi-n-propylamine	3.55	43	34803	10.74641 ppb	#	78
19) Hexachloroethane	3.64	117	19205	8.64217 ppb		90
22) Nitrobenzene	3.67	77	46963	9.41324 ppb	#	73
23) Isophorone	3.82	82	77076	8.62282 ppb	#	83
24) 2-Nitrophenol	3.87	139	18828	8.37220 ppb		87
25) 2,4-Dimethylphenol	4.08	107	68817	10.02472 ppb		97
26) Benzoic acid	3.97	105	10823	10.94420 ppb		92
27) Bis (2-chloroethoxy) metha	3.95	93	43529	8.77356 ppb		94
28) 2,4-Dichlorophenol	4.04	162	35518	9.20150 ppb	#	83
29) 1,2,4-Trichlorobenzene	4.08	180	44115	8.88563 ppb		92
30) Naphthalene	4.13	128	120686	8.74410 ppb		99
31) 4-Chloroaniline	4.15	127	31900	9.90875 ppb		98
32) 2,6-Dichlorophenol	4.16	162	39730	10.37634 ppb		94
33) Hexachloropropene	4.18	213	32661	8.17151 ppb		96
34) Hexachlorobutadiene	4.19	225	33943	10.37640 ppb		98
35) Caprolactum	4.36	113	13076	9.38268 ppb	#	43
36) 4-Chloro-3-methylphenol	4.45	107	50175	10.19568 ppb		96
37) 2-Methylnaphthalene	4.55	142	97556	9.55728 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y003.D Vial: 3
Acq On : 10 Sep 14 23:33 Operator: LF
Sample : 10ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:31 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:31:40 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39) Hexachlorocyclopentadiene	4.64	237	2539	4.65268	ppb	#	66
40) 1,2,4,5-Tetrachlorobenzene	4.65	216	50253	11.04837	ppb		96
41) 2,4,6-Trichlorophenol	4.72	196	29177	11.54933	ppb		91
42) 2,4,5-Trichlorophenol	4.76	196	25308	10.45214	ppb	#	86
43) 2-Chloronaphthalene	4.85	162	85837	10.89419	ppb	#	78
45) 1,1'-Biphenyl	4.83	154	112637	10.77605	ppb		98
46) 2-Nitroaniline	4.91	138	26182	10.36596	ppb		94
47) Dimethyl phthalate	5.00	163	122079	12.55707	ppb		87
48) 2,6-DNT	5.04	165	17309	8.70237	ppb	#	1
49) Acenaphthylene	5.11	152	145140	11.10070	ppb		96
50) 3-Nitroaniline	5.16	65	30382	11.59535	ppb		89
51) Acenaphthene	5.21	154	75615	9.74362	ppb		93
53) 4-Nitrophenol	5.31	109	11828	9.47886	ppb	#	1
54) Dibenzofuran	5.32	168	129914	10.92550	ppb		98
55) 2,4-DNT	5.30	165	30182	10.43150	ppb		89
56) 2,3,4,6-Tetrachlorophenol	5.41	232	16276	8.70884	ppb		92
57) Diethyl phthalate	5.44	149	111322	11.26312	ppb		96
58) 4-Chlorophenyl phenyl ethe	5.52	204	53726	11.25111	ppb		92
59) Fluorene	5.54	165	96993	11.03879	ppb		92
60) 4-Nitroaniline	5.55	138	23043	11.40050	ppb		99
63) Diphenyl amine	5.59	168	91070	8.96201	ppb		89
64) 4,6-Dinitro-2-methylphenol	5.56	198	8637	6.39183	ppb	#	42
65) n-Nitrosodiphenylamine	5.59	167	54588	10.01349	ppb		79
66) 1,2-Diphenylhydrazine	5.62	182	33882	11.43087	ppb	#	1
67) 4-Bromophenyl phenyl ether	5.84	248	33201	9.90867	ppb		99
68) Hexachlorobenzene	5.89	284	36458	10.97900	ppb	#	78
69) Atrazine	5.92	200	14328	4.44669	ppb	#	91
70) Pentachlorophenol	6.04	266	5907	6.11367	ppb	#	76
71) Phenanthrene	6.16	178	159531	10.72698	ppb		98
72) Anthracene	6.20	178	143001	9.38398	ppb		96
73) Carbazol	6.30	167	127169	9.78227	ppb	#	86
74) Di-n-butylphthalate	6.50	149	165751	9.37548	ppb		97
75) Fluoranthene	6.99	202	178534	9.86090	ppb		100
77) Benzidine	7.07	184	15511	5.80399	ppb	#	88
78) Pyrene	7.15	202	190548	9.58265	ppb		99
80) Butyl benzylphthalate	7.59	149	86216	10.09798	ppb		94
81) 3,3'-Dichlorobenzidine	8.05	252	39476	8.10598	ppb		97
82) Benz (a) anthracene	8.09	228	190157	9.84955	ppb		98
83) Bis (2-ethylhexyl) phthala	8.04	149	105377	9.46974	ppb		98
84) Chrysene	8.12	228	149221	8.89441	ppb	#	95
85) Di-n-octylphthalate	8.67	149	163237	8.73280	ppb		96
86) Indeno (1,2,3-cd) pyrene	10.98	276	188792	9.48024	ppb		99
88) Benzo (b) fluoranthene	9.15	252	187329	9.50771	ppb	#	95
89) Benzo (k) fluoranthene	9.18	252	154620	8.88505	ppb		97
90) Benzo (a) pyrene	9.53	252	167543	9.46273	ppb		98
91) Dibenz (a,h) anthracene	10.99	278	147533	9.19024	ppb		99
92) Benzo (g,h,i) perylene	11.36	276	150673	9.34160	ppb		95

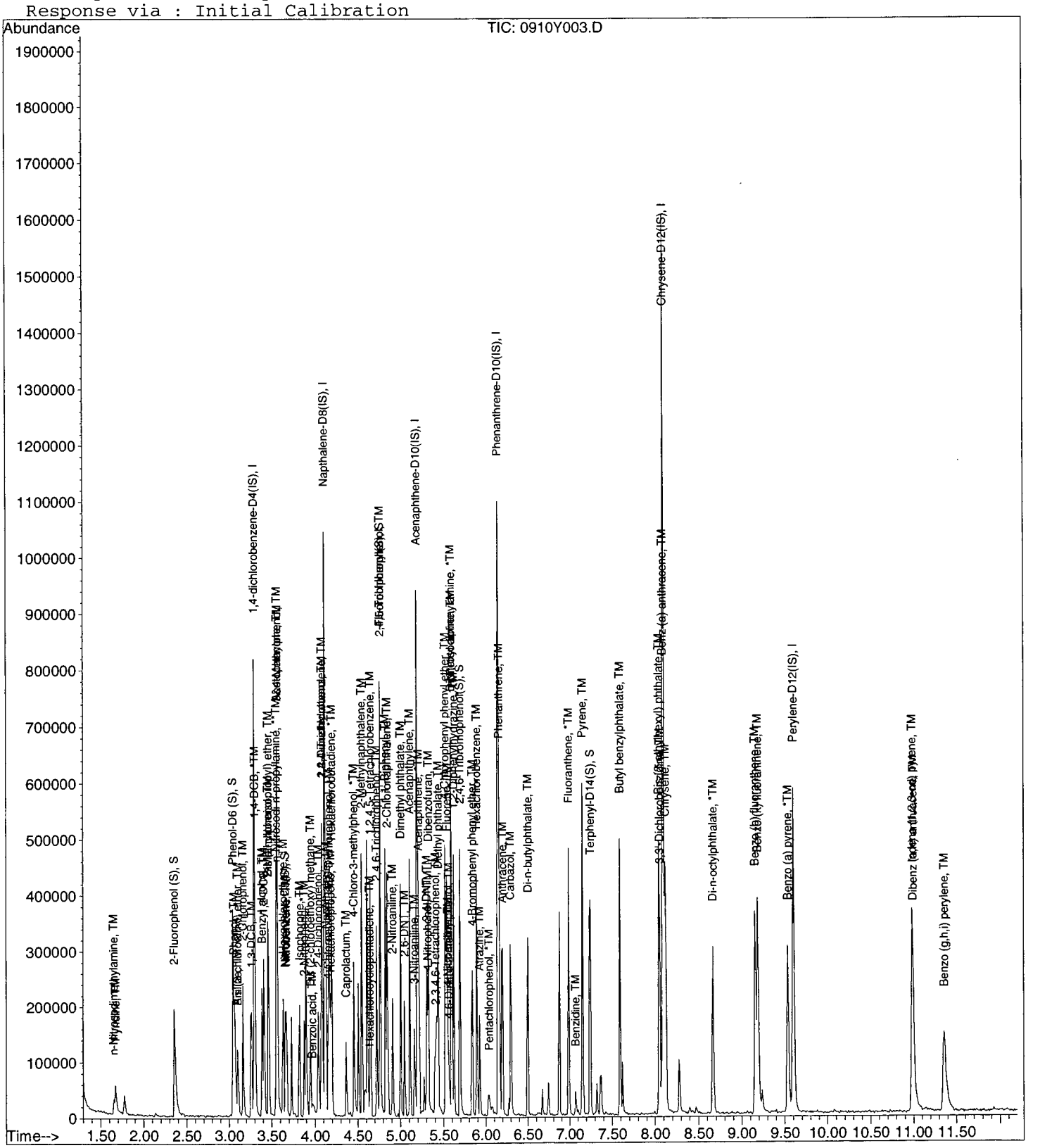
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140910\0910Y003.D Vial: 3
Acq On : 10 Sep 14 23:33 Operator: LF
Sample : 10ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:31 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y004.D Vial: 4
Acq On : 10 Sep 14 23:53 Operator: LF
Sample : 20ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:40 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:40:00 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	3.29	152	77852	40.00000 ppb		0.00
20) Napthalene-D8(IS)	4.12	136	273171	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	5.20	164	202615	40.00000 ppb		0.00
62) Phenanthrene-D10(IS)	6.15	188	374111	40.00000 ppb		0.00
76) Chrysene-D12(IS)	8.09	240	380811	40.00000 ppb		0.00
87) Perylene-D12(IS)	9.59	264	241204	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	2.35	112	153488	43.58696 ppb		0.00
Spiked Amount 200.000			Recovery = 21.794%			
5) Phenol-D6 (S)	3.04	99	193905	42.85693 ppb		0.00
Spiked Amount 200.000			Recovery = 21.429%			
21) Nitrobenzene-D5(S)	3.66	82	102225	25.36849 ppb		0.00
Spiked Amount 100.000			Recovery = 25.368%			
44) 2-Fluorobiphenyl(S)	4.76	172	200925	20.35790 ppb		0.00
Spiked Amount 100.000			Recovery = 20.358%			
61) 2,4,6-Tribromophenol(S)	5.69	330	56392	42.62739 ppb		0.00
Spiked Amount 200.000			Recovery = 21.314%			
79) Terphenyl-D14(S)	7.24	244	247997	19.95963 ppb		-0.01
Spiked Amount 100.000			Recovery = 19.960%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.65	74	23488	19.63302 ppb		95
3) Pyridine	1.66	52	36526	23.05496 ppb		91
6) Phenol	3.05	94	112230	22.93358 ppb		100
7) Aniline	3.11	93	77726	23.25739 ppb	#	97
8) Bis (2-chloroethyl) ether	3.11	63	46281	22.88837 ppb		76
9) 2-Chlorophenol	3.16	128	89410	22.68058 ppb		96
10) 1,3-DCB	3.26	146	101042	21.68084 ppb		97
11) 1,4-DCB	3.30	146	99453	21.92163 ppb		95
12) Benzyl alcohol	3.38	79	96972	23.52834 ppb		95
13) 1,2-DCB	3.41	146	95231	22.68684 ppb		96
14) 2-Methylphenol	3.47	108	75925	22.19724 ppb		99
15) Bis (2-chloroisopropyl) et	3.47	45	81875	23.42265 ppb		92
16) Acetophenone	3.56	105	128727	23.59258 ppb		100
17) 3&4-Methylphenol	3.56	107	198893	48.25962 ppb		90
18) n-Nitrosodi-n-propylamine	3.55	43	71083	24.58288 ppb		86
19) Hexachloroethane	3.63	117	47354	24.46850 ppb		78
22) Nitrobenzene	3.67	77	97747	24.98414 ppb		98
23) Isophorone	3.82	82	173745	24.84542 ppb		94
24) 2-Nitrophenol	3.87	139	39458	22.43063 ppb		86
25) 2,4-Dimethylphenol	4.08	107	137165	25.45070 ppb		94
26) Benzoic acid	3.96	105	33491	24.80514 ppb	#	80
27) Bis (2-chloroethoxy) metha	3.94	93	99758	24.53914 ppb		97
28) 2,4-Dichlorophenol	4.04	162	69294	22.93637 ppb	#	83
29) 1,2,4-Trichlorobenzene	4.08	180	93808	24.15749 ppb		98
30) Naphthalene	4.13	128	272336	25.14617 ppb		98
31) 4-Chloroaniline	4.15	127	54352	21.32942 ppb		91
32) 2,6-Dichlorophenol	4.16	162	71268	23.76231 ppb		97
33) Hexachloropropene	4.18	213	77524	24.81372 ppb		99
34) Hexachlorobutadiene	4.19	225	59022	23.08306 ppb		93
35) Caprolactum	4.37	113	30817	24.78094 ppb	#	75
36) 4-Chloro-3-methylphenol	4.45	107	94694	24.54928 ppb		94
37) 2-Methylnaphthalene	4.55	142	168939	21.15850 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y004.D Vial: 4
Acq On : 10 Sep 14 23:53 Operator: LF
Sample : 20ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:40 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:40:00 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Hexachlorocyclopentadiene	4.65	237	12575	21.23795	ppb	#	92
40)	1,2,4,5-Tetrachlorobenzene	4.66	216	90805	19.23486	ppb	#	79
41)	2,4,6-Trichlorophenol	4.72	196	48545	18.51409	ppb		93
42)	2,4,5-Trichlorophenol	4.76	196	57695	22.65455	ppb	#	93
43)	2-Chloronaphthalene	4.85	162	162010	19.81034	ppb		96
45)	1,1'-Biphenyl	4.83	154	210969	19.44645	ppb	#	93
46)	2-Nitroaniline	4.91	138	57350	21.85008	ppb		92
47)	Dimethyl phthalate	5.00	163	205947	20.40732	ppb		90
48)	2,6-DNT	5.05	165	41123	19.91945	ppb		99
49)	Acenaphthylene	5.11	152	253191	18.65730	ppb		98
50)	3-Nitroaniline	5.15	65	58432	21.33701	ppb		97
51)	Acenaphthene	5.22	154	164120	20.30062	ppb		96
52)	2,4-Dinitrophenol	5.24	184	7427	20.03650	ppb	#	9
53)	4-Nitrophenol	5.29	109	27652	17.82038	ppb		82
54)	Dibenzofuran	5.32	168	282344	22.87080	ppb		95
55)	2,4-DNT	5.30	165	67073	22.33614	ppb		98
56)	2,3,4,6-Tetrachlorophenol	5.40	232	37298	18.13393	ppb	#	95
57)	Diethyl phthalate	5.43	149	251403	24.50605	ppb		100
58)	4-Chlorophenyl phenyl ethe	5.53	204	97225	19.61698	ppb	#	58
59)	Fluorene	5.54	165	196122	21.49872	ppb		99
60)	4-Nitroaniline	5.55	138	45764	21.59041	ppb		93
63)	Diphenyl amine	5.60	168	222547	22.94410	ppb		98
64)	4,6-Dinitro-2-methylphenol	5.57	198	21807	19.88664	ppb		91
65)	n-Nitrosodiphenylamine	5.60	167	117370	22.64077	ppb		90
66)	1,2-Diphenylhydrazine	5.63	182	54623	18.95869	ppb		92
67)	4-Bromophenyl phenyl ether	5.84	248	73132	23.02327	ppb		93
68)	Hexachlorobenzene	5.89	284	58638	18.62246	ppb		87
69)	Atrazine	5.93	200	29098	9.50944	ppb		89
70)	Pentachlorophenol	6.02	266	15353	15.80698	ppb	#	85
71)	Phenanthrene	6.16	178	282982	20.06847	ppb		98
72)	Anthracene	6.20	178	300806	20.76962	ppb		98
73)	Carbazol	6.30	167	246747	19.98009	ppb		100
74)	Di-n-butylphthalate	6.50	149	382065	22.77689	ppb		98
75)	Fluoranthene	6.99	202	344780	20.06810	ppb		99
77)	Benzidine	7.07	184	42366	16.61316	ppb		96
78)	Pyrene	7.15	202	370982	21.70725	ppb		98
80)	Butyl benzylphthalate	7.59	149	157713	21.48703	ppb		93
81)	3,3'-Dichlorobenzidine	8.04	252	78231	18.60956	ppb		99
82)	Benz (a) anthracene	8.08	228	400118	23.65466	ppb		98
83)	Bis (2-ethylhexyl) phthala	8.04	149	227079	23.71851	ppb	#	98
84)	Chrysene	8.11	228	281319	19.87670	ppb	#	98
85)	Di-n-octylphthalate	8.65	149	346776	21.53903	ppb		99
86)	Indeno (1,2,3-cd) pyrene	10.97	276	361162	21.06095	ppb		98
88)	Benzo (b) fluoranthene	9.15	252	327382	19.46907	ppb	#	99
89)	Benzo (k) fluoranthene	9.18	252	352190	23.60533	ppb	#	97
90)	Benzo (a) pyrene	9.52	252	320945	21.17177	ppb		96
91)	Dibenz (a,h) anthracene	10.98	278	277625	20.24903	ppb		98
92)	Benzo (g,h,i) perylene	11.34	276	285941	20.76937	ppb		94

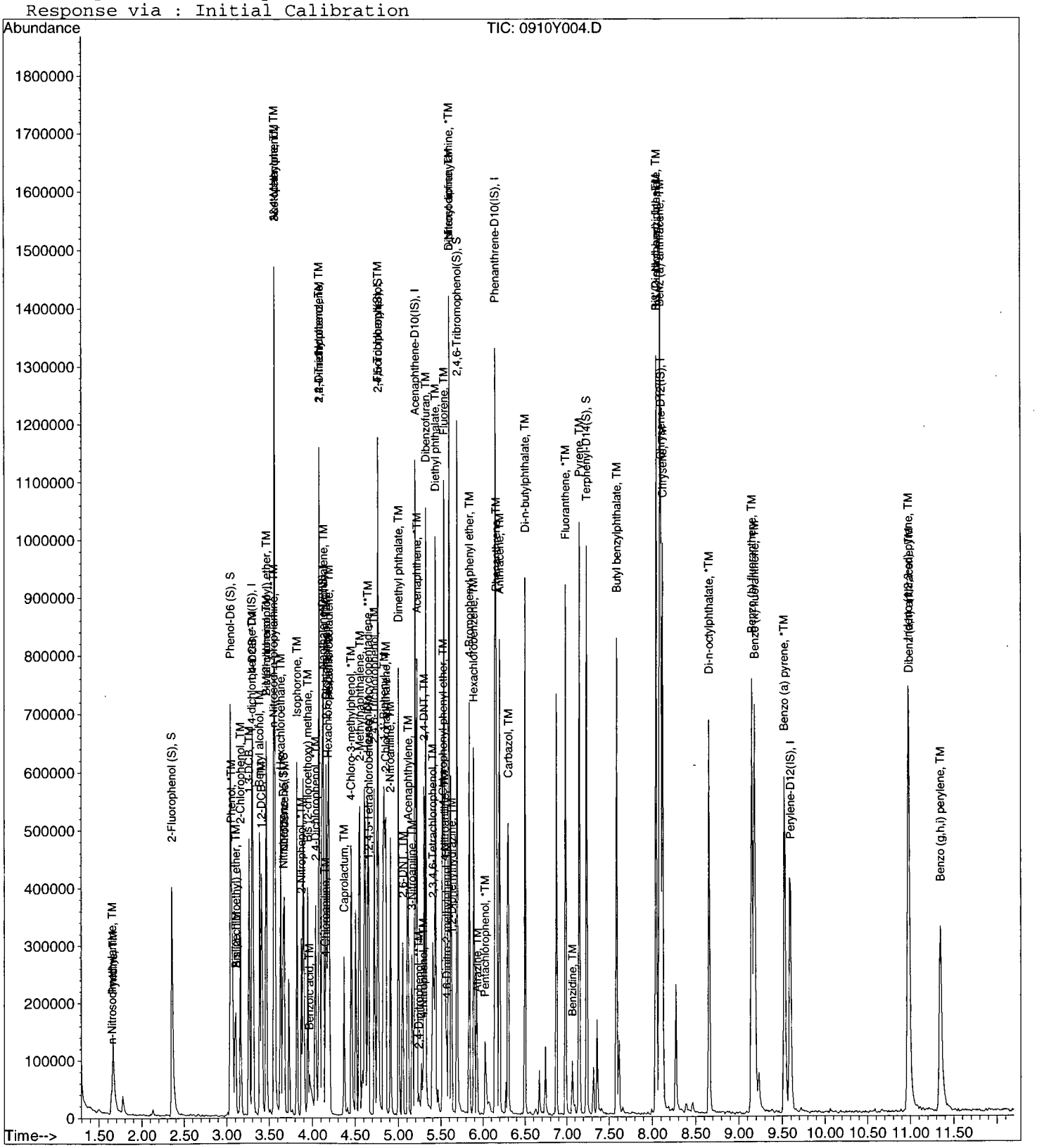
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140910\0910Y004.D Vial: 4
Acq On : 10 Sep 14 23:53 Operator: LF
Sample : 20ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:40 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y005.D Vial: 5
Acq On : 11 Sep 14 00:14 Operator: LF
Sample : 40ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:37 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:36:58 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	3.30	152	76949	40.00000	ppb		0.00
20) Napthalene-D8(IS)	4.12	136	294362	40.00000	ppb		0.00
38) Acenaphthene-D10(IS)	5.20	164	198665	40.00000	ppb		0.00
62) Phenanthrene-D10(IS)	6.15	188	346088	40.00000	ppb		0.00
76) Chrysene-D12(IS)	8.08	240	368101	40.00000	ppb		-0.01
87) Perylene-D12(IS)	9.58	264	233592	40.00000	ppb		-0.01
System Monitoring Compounds							
4) 2-Fluorophenol (S)	2.35	112	294074	84.71982	ppb		0.00
Spiked Amount 200.000			Recovery = 42.360%				
5) Phenol-D6 (S)	3.04	99	376504	84.19153	ppb		0.00
Spiked Amount 200.000			Recovery = 42.096%				
21) Nitrobenzene-D5(S)	3.66	82	184862	43.66670	ppb		0.00
Spiked Amount 100.000			Recovery = 43.667%				
44) 2-Fluorobiphenyl(S)	4.77	172	344975	35.64531	ppb		0.00
Spiked Amount 100.000			Recovery = 35.645%				
61) 2,4,6-Tribromophenol(S)	5.69	330	102126	78.78345	ppb		0.00
Spiked Amount 200.000			Recovery = 39.392%				
79) Terphenyl-D14(S)	7.23	244	547267	45.51119	ppb		-0.01
Spiked Amount 100.000			Recovery = 45.511%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.64	74	54516	46.15512	ppb		77
3) Pyridine	1.66	52	73145	46.73862	ppb		98
6) Phenol	3.05	94	212196	44.18107	ppb		92
7) Aniline	3.10	93	152542	46.20768	ppb		99
8) Bis (2-chloroethyl) ether	3.10	63	82667	41.42885	ppb		75
9) 2-Chlorophenol	3.16	128	161084	41.36652	ppb		99
10) 1,3-DCB	3.26	146	196805	42.72452	ppb		99
11) 1,4-DCB	3.31	146	186594	41.71230	ppb		92
12) Benzyl alcohol	3.38	79	175582	43.07616	ppb		95
13) 1,2-DCB	3.42	146	174052	42.00590	ppb		89
14) 2-Methylphenol	3.47	108	141069	41.96311	ppb		94
15) Bis (2-chloroisopropyl) et	3.47	45	146472	42.39417	ppb		94
16) Acetophenone	3.56	105	240861	44.71593	ppb		91
17) 3&4-Methylphenol	3.56	107	339608	83.81679	ppb	#	84
18) n-Nitrosodi-n-propylamine	3.56	43	119290	41.79704	ppb	#	85
19) Hexachloroethane	3.63	117	88270	46.16695	ppb		75
22) Nitrobenzene	3.67	77	191466	45.56281	ppb		93
23) Isophorone	3.82	82	309984	41.17230	ppb		96
24) 2-Nitrophenol	3.88	139	74195	39.16928	ppb	#	76
25) 2,4-Dimethylphenol	4.09	107	229012	39.60685	ppb		95
26) Benzoic acid	3.97	105	61806	38.47651	ppb		90
27) Bis (2-chloroethoxy) metha	3.94	93	172358	37.58849	ppb		95
28) 2,4-Dichlorophenol	4.04	162	133768	41.14318	ppb	#	84
29) 1,2,4-Trichlorobenzene	4.08	180	181561	43.41703	ppb		98
30) Naphthalene	4.13	128	512670	44.09933	ppb		100
31) 4-Chloroaniline	4.16	127	101979	37.60750	ppb	#	82
32) 2,6-Dichlorophenol	4.17	162	123095	38.16819	ppb	#	84
33) Hexachloropropene	4.18	213	153267	45.52576	ppb		99
34) Hexachlorobutadiene	4.20	225	118504	43.00959	ppb		97
35) Caprolactum	4.38	113	55956	42.02543	ppb	#	77
36) 4-Chloro-3-methylphenol	4.46	107	163267	39.38789	ppb	#	79
37) 2-Methylnaphthalene	4.55	142	363478	42.27602	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y005.D Vial: 5
Acq On : 11 Sep 14 00:14 Operator: LF
Sample : 40ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:37 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:36:58 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Hexachlorocyclopentadiene	4.65	237	46917	42.18855	ppb	#	92
40)	1,2,4,5-Tetrachlorobenzene	4.66	216	190994	41.25881	ppb	#	83
41)	2,4,6-Trichlorophenol	4.73	196	94122	36.60732	ppb	#	84
42)	2,4,5-Trichlorophenol	4.76	196	103339	41.93456	ppb	#	90
43)	2-Chloronaphthalene	4.85	162	353854	44.12709	ppb		92
45)	1,1'-Biphenyl	4.83	154	434035	40.80035	ppb	#	94
46)	2-Nitroaniline	4.91	138	98463	38.30366	ppb	#	75
47)	Dimethyl phthalate	5.00	163	358305	36.21270	ppb	#	83
48)	2,6-DNT	5.05	165	92789	45.83770	ppb	#	76
49)	Acenaphthylene	5.11	152	513208	38.56714	ppb		97
50)	3-Nitroaniline	5.16	65	104652	39.24423	ppb	#	54
51)	Acenaphthene	5.22	154	341686	43.26138	ppb		98
52)	2,4-Dinitrophenol	5.24	184	19726	41.79976	ppb	#	9
53)	4-Nitrophenol	5.29	109	65537	43.95236	ppb		86
54)	Dibenzofuran	5.32	168	509245	42.07973	ppb		91
55)	2,4-DNT	5.30	165	114643	38.93202	ppb		81
56)	2,3,4,6-Tetrachlorophenol	5.40	232	83865	41.80820	ppb		93
57)	Diethyl phthalate	5.43	149	403611	40.12374	ppb		97
58)	4-Chlorophenyl phenyl ethe	5.53	204	191460	39.39575	ppb	#	61
59)	Fluorene	5.54	165	378308	42.30456	ppb		100
60)	4-Nitroaniline	5.55	138	87975	42.76659	ppb		94
63)	Diphenyl amine	5.60	168	437003	48.97347	ppb		98
64)	4,6-Dinitro-2-methylphenol	5.57	198	52073	41.44709	ppb		100
65)	n-Nitrosodiphenylamine	5.60	167	235271	49.14768	ppb		93
66)	1,2-Diphenylhydrazine	5.63	182	105237	39.43533	ppb		73
67)	4-Bromophenyl phenyl ether	5.84	248	134098	45.57564	ppb		95
68)	Hexachlorobenzene	5.89	284	118989	40.80592	ppb		94
69)	Atrazine	5.93	200	61893	21.87453	ppb		95
70)	Pentachlorophenol	6.02	266	36445	40.51966	ppb		92
71)	Phenanthrene	6.16	178	521318	39.91915	ppb		98
72)	Anthracene	6.20	178	589771	44.07352	ppb		97
73)	Carbazol	6.29	167	472115	41.35732	ppb		92
74)	Di-n-butylphthalate	6.50	149	601476	38.74377	ppb		99
75)	Fluoranthene	6.98	202	625613	39.35025	ppb	#	85
77)	Benzidine	7.06	184	101209	41.50359	ppb		99
78)	Pyrene	7.14	202	698138	42.21872	ppb	#	88
80)	Butyl benzylphthalate	7.58	149	328944	46.32883	ppb		95
81)	3,3'-Dichlorobenzidine	8.03	252	174046	42.97530	ppb		89
82)	Benz (a) anthracene	8.07	228	684491	42.63386	ppb		99
83)	Bis (2-ethylhexyl) phthala	8.03	149	412086	44.53103	ppb		98
84)	Chrysene	8.10	228	595253	42.66499	ppb	#	97
85)	Di-n-octylphthalate	8.65	149	695773	44.75951	ppb		98
86)	Indeno (1,2,3-cd) pyrene	10.97	276	708146	42.76037	ppb		99
88)	Benzo (b) fluoranthene	9.14	252	729688	44.80742	ppb	#	98
89)	Benzo (k) fluoranthene	9.17	252	534969	37.19328	ppb		98
90)	Benzo (a) pyrene	9.52	252	597000	40.79492	ppb		97
91)	Dibenz (a,h) anthracene	10.98	278	553894	41.74518	ppb		96
92)	Benzo (g,h,i) perylene	11.33	276	544321	40.83032	ppb		99

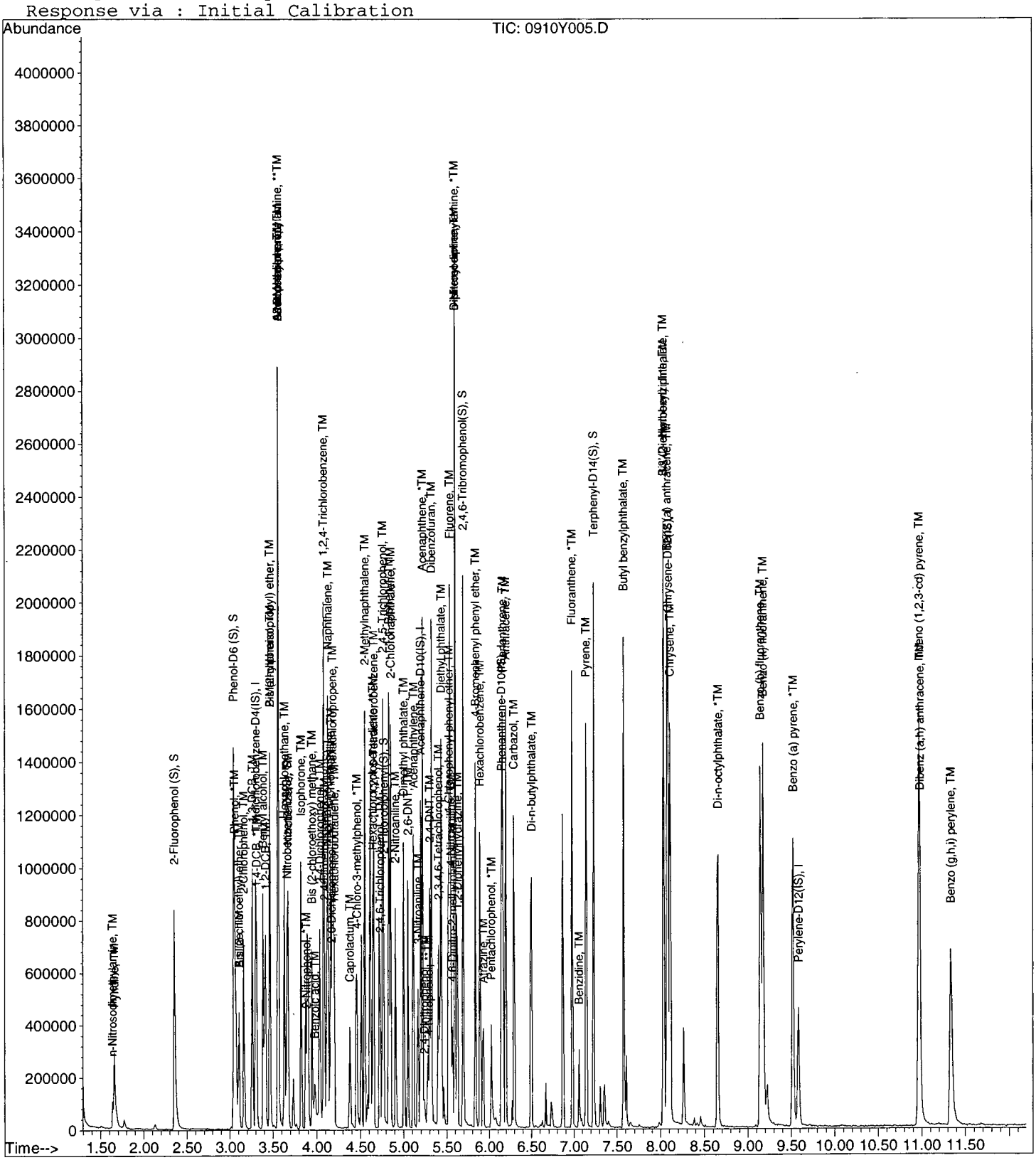
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140910\0910Y005.D Vial: 5
Acq On : 11 Sep 14 00:14 Operator: LF
Sample : 40ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:37 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y006.D Vial: 6
Acq On : 11 Sep 14 00:35 Operator: LF
Sample : 50ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:31 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:31:40 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	3.29	152	92754	40.00000	ppb	0.00
20) Napthalene-D8(IS)	4.11	136	323044	40.00000	ppb	0.00
38) Acenaphthene-D10(IS)	5.20	164	204175	40.00000	ppb	0.00
62) Phenanthrene-D10(IS)	6.15	188	441997	40.00000	ppb	0.00
76) Chrysene-D12(IS)	8.10	240	456137	40.00000	ppb	0.00
87) Perylene-D12(IS)	9.60	264	275860	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	2.35	112	403459	96.42688	ppb	0.00
Spiked Amount 200.000			Recovery = 48.214%			
5) Phenol-D6 (S)	3.05	99	502825	93.27946	ppb	0.00
Spiked Amount 200.000			Recovery = 46.640%			
21) Nitrobenzene-D5(S)	3.67	82	238970	51.43588	ppb	0.00
Spiked Amount 100.000			Recovery = 51.436%			
44) 2-Fluorobiphenyl(S)	4.76	172	509066	137.09792	ppb	0.00
Spiked Amount 100.000			Recovery = 137.098%			
61) 2,4,6-Tribromophenol(S)	5.70	330	150353	112.85728	ppb	0.00
Spiked Amount 200.000			Recovery = 56.429%			
79) Terphenyl-D14(S)	7.25	244	662639	44.47005	ppb	0.00
Spiked Amount 100.000			Recovery = 44.470%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.64	74	78597	55.20421	ppb	100
3) Pyridine	1.66	52	78252	41.48174	ppb	100
6) Phenol	3.06	94	268881	46.44398	ppb	100
7) Aniline	3.11	93	188652	47.40853	ppb	100
8) Bis (2-chloroethyl) ether	3.10	63	114999	47.81181	ppb	100
9) 2-Chlorophenol	3.16	128	226112	48.17154	ppb	100
10) 1,3-DCB	3.26	146	246491	44.39279	ppb	100
11) 1,4-DCB	3.31	146	252976	46.91548	ppb	100
12) Benzyl alcohol	3.39	79	230647	46.94346	ppb	100
13) 1,2-DCB	3.41	146	231387	46.32768	ppb	100
14) 2-Methylphenol	3.46	108	191531	47.26563	ppb	100
15) Bis (2-chloroisopropyl) et	3.47	45	199166	47.82302	ppb	100
16) Acetophenone	3.56	105	302423	46.57801	ppb	100
17) 3&4-Methylphenol	3.56	107	431704	91.27980	ppb	100
18) n-Nitrosodi-n-propylamine	3.55	43	148621	44.24931	ppb	100
19) Hexachloroethane	3.64	117	108661	47.14788	ppb	100
22) Nitrobenzene	3.68	77	234977	50.95236	ppb	100
23) Isophorone	3.82	82	422274	51.10698	ppb	100
24) 2-Nitrophenol	3.87	139	118601	57.05312	ppb	100
25) 2,4-Dimethylphenol	4.08	107	321753	50.70547	ppb	100
26) Benzoic acid	3.99	105	116619	52.45102	ppb	100
27) Bis (2-chloroethoxy) metha	3.95	93	245196	53.46456	ppb	100
28) 2,4-Dichlorophenol	4.03	162	174568	48.92494	ppb	100
29) 1,2,4-Trichlorobenzene	4.08	180	228260	49.73789	ppb	100
30) Naphthalene	4.13	128	624547	48.95299	ppb	100
31) 4-Chloroaniline	4.15	127	149093	50.10038	ppb	100
32) 2,6-Dichlorophenol	4.16	162	178790	50.51547	ppb	100
33) Hexachloropropene	4.18	213	179178	48.49683	ppb	100
34) Hexachlorobutadiene	4.20	225	156582	51.78383	ppb	100
35) Caprolactum	4.39	113	77288	59.99562	ppb	100
36) 4-Chloro-3-methylphenol	4.45	107	237562	52.22294	ppb	100
37) 2-Methylnaphthalene	4.55	142	433359	45.92866	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y006.D Vial: 6
Acq On : 11 Sep 14 00:35 Operator: LF
Sample : 50ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:31 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:31:40 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Hexachlorocyclopentadiene	4.64	237	64360	47.72226 ppb	100
40)	1,2,4,5-Tetrachlorobenzene	4.65	216	229207	48.17743 ppb	100
41)	2,4,6-Trichlorophenol	4.72	196	141468	53.53697 ppb	100
42)	2,4,5-Trichlorophenol	4.75	196	127597	50.38104 ppb	100
43)	2-Chloronaphthalene	4.86	162	394644	47.88567 ppb	100
45)	1,1'-Biphenyl	4.83	154	507487	46.41762 ppb	100
46)	2-Nitroaniline	4.91	138	152865	57.86208 ppb	100
47)	Dimethyl phthalate	5.00	163	533327	52.44697 ppb	100
48)	2,6-DNT	5.05	165	117667	56.55875 ppb	100
49)	Acenaphthylene	5.11	152	662904	48.47228 ppb	100
50)	3-Nitroaniline	5.16	65	144469	52.71348 ppb	100
51)	Acenaphthene	5.22	154	402676	49.60755 ppb	100
52)	2,4-Dinitrophenol	5.23	184	31563	50.11305 ppb	100
53)	4-Nitrophenol	5.28	109	85365	65.40396 ppb	100
54)	Dibenzofuran	5.32	168	711059	57.17032 ppb	100
55)	2,4-DNT	5.30	165	166911	55.15224 ppb	100
56)	2,3,4,6-Tetrachlorophenol	5.41	232	105739	54.09127 ppb	100
57)	Diethyl phthalate	5.44	149	523211	50.60974 ppb	100
58)	4-Chlorophenyl phenyl ethe	5.52	204	228218	45.69199 ppb	100
59)	Fluorene	5.54	165	504755	54.92133 ppb	100
60)	4-Nitroaniline	5.55	138	108791	51.45850 ppb	100
63)	Diphenyl amine	5.60	168	558135	48.97595 ppb	100
64)	4,6-Dinitro-2-methylphenol	5.57	198	79719	52.60630 ppb	100
65)	n-Nitrosodiphenylamine	5.60	167	287238	46.98333 ppb	100
66)	1,2-Diphenylhydrazine	5.63	182	138745	41.73892 ppb	100
67)	4-Bromophenyl phenyl ether	5.84	248	169921	45.21940 ppb	100
68)	Hexachlorobenzene	5.89	284	159278	42.77001 ppb	100
69)	Atrazine	5.93	200	84441	23.36780 ppb	100
70)	Pentachlorophenol	6.03	266	61028	56.32195 ppb	100
71)	Phenanthrene	6.16	178	715079	42.87457 ppb	100
72)	Anthracene	6.20	178	816642	47.78518 ppb	100
73)	Carbazol	6.31	167	654060	44.86311 ppb	100
74)	Di-n-butylphthalate	6.50	149	987253	49.79426 ppb	100
75)	Fluoranthene	6.99	202	954065	46.98800 ppb	100
77)	Benzidine	7.07	184	118720	43.10873 ppb	100
78)	Pyrene	7.16	202	983144	47.97915 ppb	100
80)	Butyl benzylphthalate	7.59	149	419713	47.70386 ppb	100
81)	3,3'-Dichlorobenzidine	8.05	252	242478	48.31689 ppb	100
82)	Benz (a) anthracene	8.09	228	913906	45.93674 ppb	100
83)	Bis (2-ethylhexyl) phthala	8.05	149	527458	45.99752 ppb	100
84)	Chrysene	8.13	228	789706	45.67801 ppb	100
85)	Di-n-octylphthalate	8.67	149	940467	48.82396 ppb	100
86)	Indeno (1,2,3-cd) pyrene	10.98	276	1003172	48.88388 ppb	100
88)	Benzo (b) fluoranthene	9.16	252	959887	49.91166 ppb	100
89)	Benzo (k) fluoranthene	9.18	252	778119	45.80903 ppb	100
90)	Benzo (a) pyrene	9.54	252	810951	46.92407 ppb	100
91)	Dibenz (a,h) anthracene	11.00	278	776211	49.53689 ppb	100
92)	Benzo (g,h,i) perylene	11.35	276	759908	48.26784 ppb	100

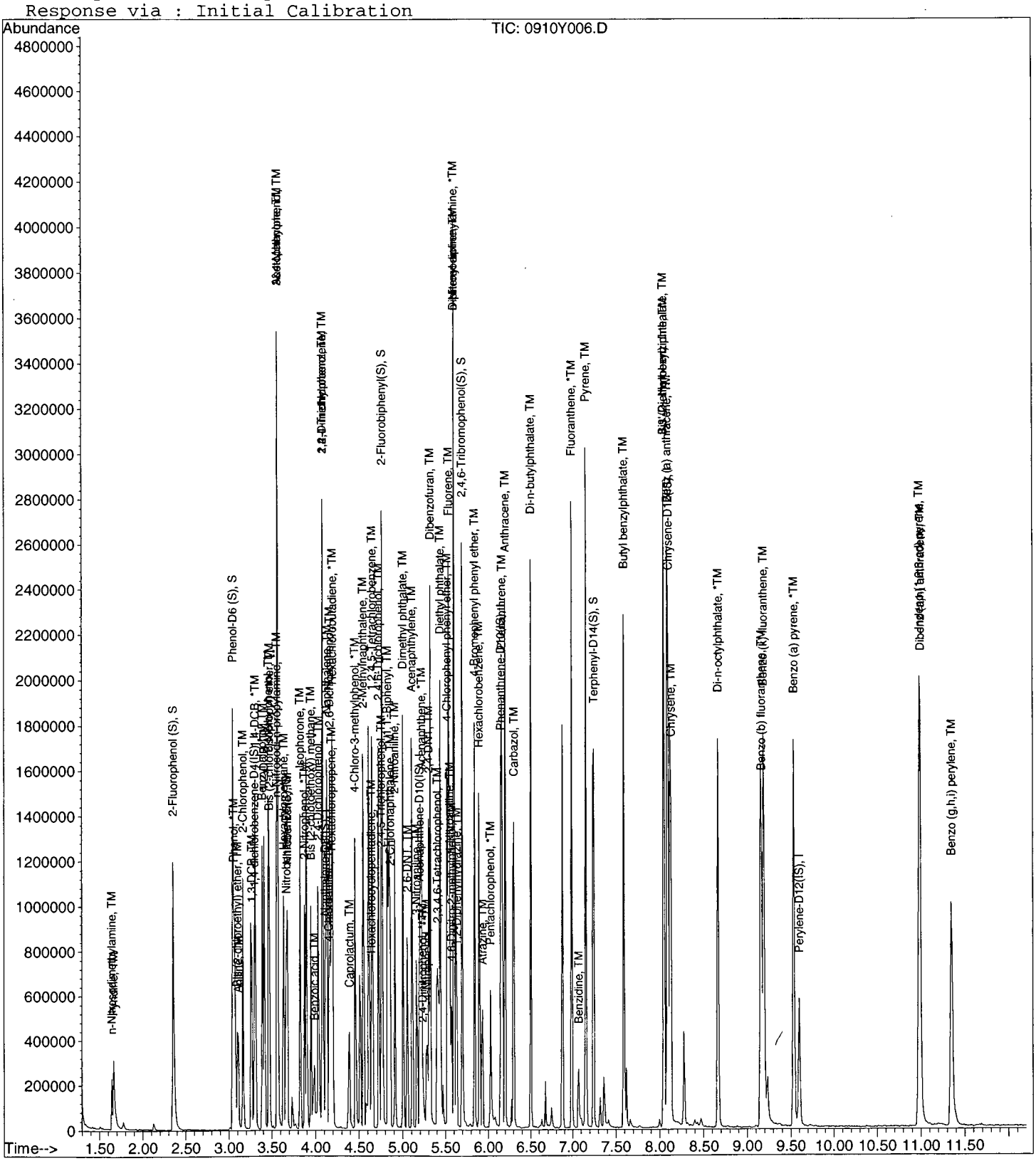
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140910\0910Y006.D Vial: 6
Acq On : 11 Sep 14 00:35 Operator: LF
Sample : 50ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:31 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y007.D Vial: 7
Acq On : 11 Sep 14 00:56 Operator: LF
Sample : 60ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:37 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:36:58 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	3.29	152	93255	40.00000 ppb		0.00
20) Napthalene-D8(IS)	4.12	136	380075	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	5.20	164	244865	40.00000 ppb		0.00
62) Phenanthrene-D10(IS)	6.15	188	443231	40.00000 ppb		0.00
76) Chrysene-D12(IS)	8.10	240	453310	40.00000 ppb		0.00
87) Perylene-D12(IS)	9.59	264	265174	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	2.35	112	477730	113.56428 ppb		0.00
Spiked Amount 200.000			Recovery =	56.782%		
5) Phenol-D6 (S)	3.04	99	579338	106.89606 ppb		0.00
Spiked Amount 200.000			Recovery =	53.448%		
21) Nitrobenzene-D5(S)	3.66	82	292777	53.56143 ppb		0.00
Spiked Amount 100.000			Recovery =	53.561%		
44) 2-Fluorobiphenyl(S)	4.77	172	527266	44.20172 ppb		0.00
Spiked Amount 100.000			Recovery =	44.202%		
61) 2,4,6-Tribromophenol(S)	5.70	330	160665	100.55753 ppb		0.00
Spiked Amount 200.000			Recovery =	50.279%		
79) Terphenyl-D14(S)	7.25	244	871669	58.86298 ppb		0.00
Spiked Amount 100.000			Recovery =	58.863%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.64	74	82704	57.77677 ppb		84
3) Pyridine	1.66	52	113215	59.69336 ppb		98
6) Phenol	3.05	94	335802	57.69167 ppb		100
7) Aniline	3.11	93	237969	59.48068 ppb		99
8) Bis (2-chloroethyl) ether	3.11	63	141428	58.48399 ppb		97
9) 2-Chlorophenol	3.16	128	262735	55.67310 ppb		97
10) 1,3-DCB	3.26	146	306242	54.85758 ppb		98
11) 1,4-DCB	3.31	146	290431	53.57230 ppb		95
12) Benzyl alcohol	3.38	79	261116	52.85928 ppb		94
13) 1,2-DCB	3.42	146	268163	53.40243 ppb		91
14) 2-Methylphenol	3.47	108	225903	55.44838 ppb		95
15) Bis (2-chloroisopropyl) et	3.47	45	231245	55.22741 ppb		99
16) Acetophenone	3.56	105	340101	52.09961 ppb		87
17) 3&4-Methylphenol	3.57	107	501448	102.11978 ppb	#	81
18) n-Nitrosodi-n-propylamine	3.56	43	175357	50.69854 ppb	#	91
19) Hexachloroethane	3.63	117	130051	56.12581 ppb		78
22) Nitrobenzene	3.67	77	280342	51.66774 ppb		89
23) Isophorone	3.82	82	491775	50.58767 ppb		93
24) 2-Nitrophenol	3.88	139	126945	51.90379 ppb	#	79
25) 2,4-Dimethylphenol	4.09	107	351351	47.06150 ppb		96
26) Benzoic acid	4.00	105	157899	58.10143 ppb		96
27) Bis (2-chloroethoxy) metha	3.94	93	257033	43.41350 ppb		93
28) 2,4-Dichlorophenol	4.04	162	211985	50.49672 ppb	#	84
29) 1,2,4-Trichlorobenzene	4.08	180	281776	52.18599 ppb		97
30) Naphthalene	4.13	128	800856	53.35326 ppb		99
31) 4-Chloroaniline	4.16	127	199198	56.89330 ppb	#	82
32) 2,6-Dichlorophenol	4.17	162	193965	46.57973 ppb	#	86
33) Hexachloropropene	4.18	213	248578	57.18521 ppb		98
34) Hexachlorobutadiene	4.20	225	166726	46.86494 ppb		99
35) Caprolactum	4.39	113	87098	50.66245 ppb	#	80
36) 4-Chloro-3-methylphenol	4.46	107	261990	48.95098 ppb	#	80
37) 2-Methylnaphthalene	4.55	142	580414	52.28369 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y007.D Vial: 7
Acq On : 11 Sep 14 00:56 Operator: LF
Sample : 60ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:37 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:36:58 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Hexachlorocyclopentadiene	4.65	237	111226	58.82420	ppb	#	98
40)	1,2,4,5-Tetrachlorobenzene	4.66	216	299459	52.48425	ppb	#	82
41)	2,4,6-Trichlorophenol	4.73	196	161836	51.06773	ppb	#	84
42)	2,4,5-Trichlorophenol	4.76	196	148698	48.95619	ppb	#	86
43)	2-Chloronaphthalene	4.85	162	564957	57.15987	ppb		94
45)	1,1'-Biphenyl	4.83	154	731196	55.76576	ppb	#	94
46)	2-Nitroaniline	4.91	138	160848	50.76654	ppb		81
47)	Dimethyl phthalate	5.01	163	591258	48.48191	ppb	#	72
48)	2,6-DNT	5.05	165	151496	60.71865	ppb	#	68
49)	Acenaphthylene	5.11	152	860699	52.47711	ppb		99
50)	3-Nitroaniline	5.16	65	180273	54.84709	ppb	#	59
51)	Acenaphthene	5.22	154	530873	54.53289	ppb		97
52)	2,4-Dinitrophenol	5.24	184	40698	55.36481	ppb	#	9
53)	4-Nitrophenol	5.28	109	108645	56.63670	ppb		95
54)	Dibenzofuran	5.32	168	739005	49.54367	ppb		92
55)	2,4-DNT	5.31	165	207367	57.13388	ppb	#	57
56)	2,3,4,6-Tetrachlorophenol	5.40	232	146716	59.34072	ppb		97
57)	Diethyl phthalate	5.43	149	585042	47.18676	ppb		96
58)	4-Chlorophenyl phenyl ethe	5.53	204	322143	53.77925	ppb	#	60
59)	Fluorene	5.54	165	576070	52.26507	ppb		97
60)	4-Nitroaniline	5.55	138	126201	49.77403	ppb		95
63)	Diphenyl amine	5.60	168	581927	50.92152	ppb		99
64)	4,6-Dinitro-2-methylphenol	5.57	198	100527	57.45715	ppb	#	71
65)	n-Nitrosodiphenylamine	5.60	167	311696	50.84196	ppb		94
66)	1,2-Diphenylhydrazine	5.63	182	191724	56.09832	ppb	#	24
67)	4-Bromophenyl phenyl ether	5.84	248	192223	51.01199	ppb		98
68)	Hexachlorobenzene	5.90	284	203222	54.41812	ppb	#	54
69)	Atrazine	5.93	200	108092	29.82959	ppb		95
70)	Pentachlorophenol	6.02	266	75718	65.73298	ppb		99
71)	Phenanthrene	6.17	178	947334	56.64194	ppb		98
72)	Anthracene	6.20	178	996929	58.17213	ppb		98
73)	Carbazol	6.30	167	896272	61.30570	ppb		100
74)	Di-n-butylphthalate	6.50	149	1076700	54.15452	ppb		99
75)	Fluoranthene	6.99	202	1057605	51.94236	ppb	#	91
77)	Benzidine	7.07	184	182255	60.69007	ppb		100
78)	Pyrene	7.15	202	1107334	54.37685	ppb	#	91
80)	Butyl benzylphthalate	7.60	149	464302	53.10087	ppb	#	76
81)	3,3'-Dichlorobenzidine	8.05	252	300220	60.19581	ppb		96
82)	Benz (a) anthracene	8.09	228	1085160	54.88484	ppb		98
83)	Bis (2-ethylhexyl) phthala	8.05	149	646422	56.72345	ppb	#	93
84)	Chrysene	8.13	228	957268	55.71541	ppb	#	98
85)	Di-n-octylphthalate	8.66	149	1082419	56.54379	ppb		99
86)	Indeno (1,2,3-cd) pyrene	10.99	276	1153810	56.57500	ppb		96
88)	Benzo (b) fluoranthene	9.16	252	1004276	54.32413	ppb	#	96
89)	Benzo (k) fluoranthene	9.19	252	1043588	63.91341	ppb		98
90)	Benzo (a) pyrene	9.53	252	983929	59.22739	ppb		97
91)	Dibenz (a,h) anthracene	10.99	278	922597	61.25179	ppb	#	97
92)	Benzo (g,h,i) perylene	11.35	276	908911	60.05872	ppb		97

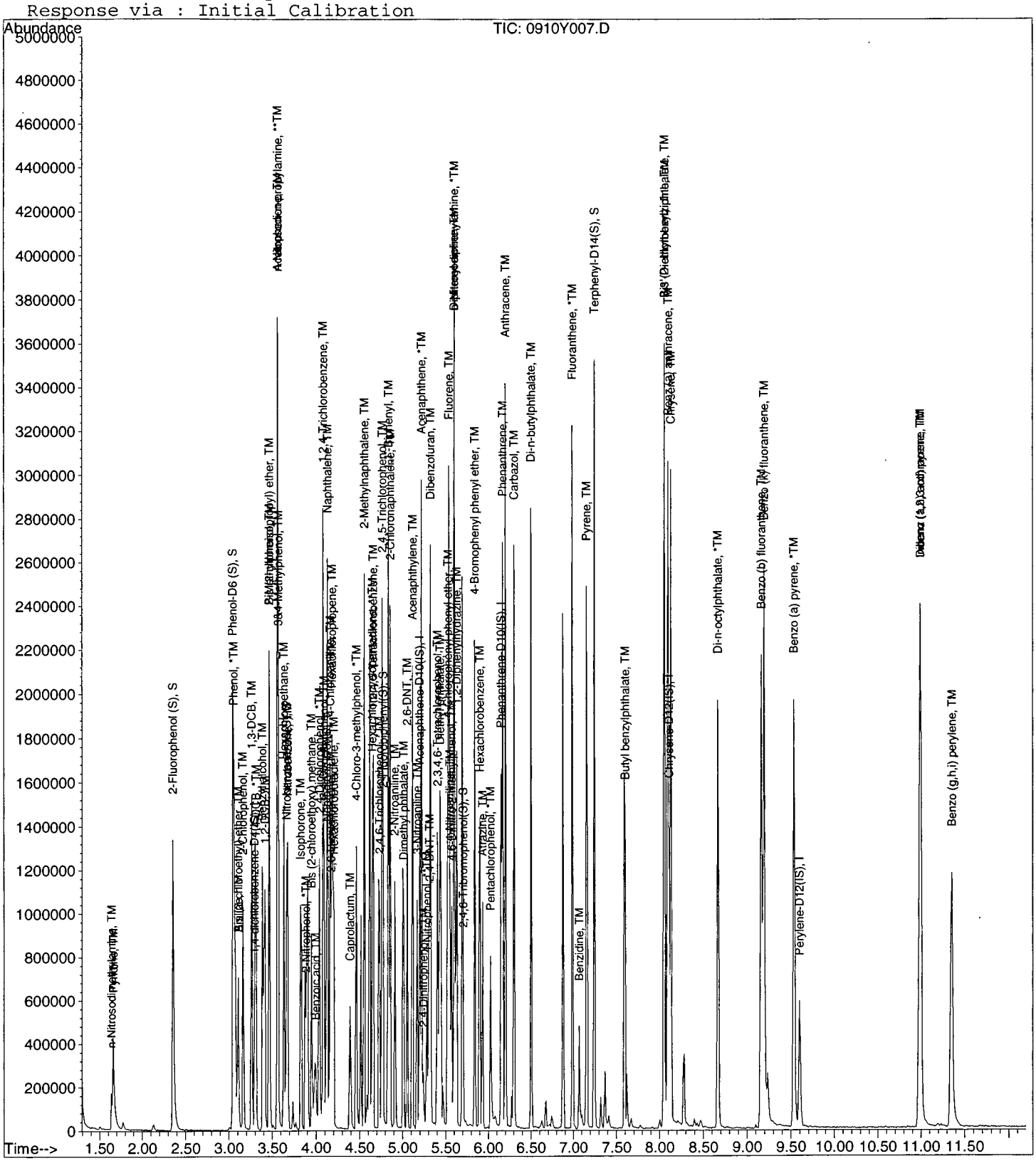
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140910\0910Y007.D Vial: 7
Acq On : 11 Sep 14 00:56 Operator: LF
Sample : 60ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:37 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration



1012

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y008.D Vial: 8
Acq On : 11 Sep 14 1:16 Operator: LF
Sample : 80ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:32 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:31:40 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	3.30	152	89706	40.00000 ppb		0.00
20) Napthalene-D8(IS)	4.12	136	336734	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	5.20	164	216550	40.00000 ppb		0.00
62) Phenanthrene-D10(IS)	6.17	188	395875	40.00000 ppb		0.02
76) Chrysene-D12(IS)	8.15	240	430665	40.00000 ppb		0.05
87) Perylene-D12(IS)	9.64	264	259790	40.00000 ppb		0.04
System Monitoring Compounds						
4) 2-Fluorophenol (S)	2.35	112	637796	157.61286 ppb		0.00
Spiked Amount 200.000			Recovery = 78.807%			
5) Phenol-D6 (S)	3.04	99	794809	152.45550 ppb		0.00
Spiked Amount 200.000			Recovery = 76.228%			
21) Nitrobenzene-D5(S)	3.66	82	374568	77.34428 ppb		0.00
Spiked Amount 100.000			Recovery = 77.344%			
44) 2-Fluorobiphenyl(S)	4.77	172	799922	203.11818 ppb		0.00
Spiked Amount 100.000			Recovery = 203.118%			
61) 2,4,6-Tribromophenol(S)	5.71	330	236402	167.30657 ppb		0.02
Spiked Amount 200.000			Recovery = 83.653%			
79) Terphenyl-D14(S)	7.28	244	1085557	77.16120 ppb		0.03
Spiked Amount 100.000			Recovery = 77.161%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.64	74	113264	82.25632 ppb		90
3) Pyridine	1.66	52	145764	79.89562 ppb		94
6) Phenol	3.05	94	408879	73.02563 ppb		90
7) Aniline	3.10	93	265001	68.85789 ppb		99
8) Bis (2-chloroethyl) ether	3.10	63	184544	79.33269 ppb		98
9) 2-Chlorophenol	3.17	128	344953	75.98677 ppb		93
10) 1,3-DCB	3.26	146	433776	80.77706 ppb		98
11) 1,4-DCB	3.31	146	407845	78.20655 ppb		93
12) Benzyl alcohol	3.39	79	362734	76.33553 ppb		93
13) 1,2-DCB	3.42	146	375427	77.72098 ppb		90
14) 2-Methylphenol	3.47	108	312548	79.75065 ppb		92
15) Bis (2-chloroisopropyl) et	3.47	45	297804	73.93728 ppb		98
16) Acetophenone	3.56	105	435471	69.34840 ppb		80
17) 3&4-Methylphenol	3.57	107	634254	138.66377 ppb		87
18) n-Nitrosodi-n-propylamine	3.56	43	226874	69.84290 ppb	#	96
19) Hexachloroethane	3.63	117	177173	79.48719 ppb		74
22) Nitrobenzene	3.67	77	343617	71.48061 ppb		82
23) Isophorone	3.83	82	672611	78.09524 ppb		91
24) 2-Nitrophenol	3.88	139	184541	85.16451 ppb	#	78
25) 2,4-Dimethylphenol	4.09	107	493986	74.68296 ppb		91
26) Benzoic acid	4.01	105	244046	85.12307 ppb		94
27) Bis (2-chloroethoxy) metha	3.94	93	336796	70.45215 ppb		89
28) 2,4-Dichlorophenol	4.04	162	310009	83.35175 ppb	#	83
29) 1,2,4-Trichlorobenzene	4.08	180	377714	78.95786 ppb		97
30) Naphthalene	4.13	128	1019556	76.66549 ppb		98
31) 4-Chloroaniline	4.16	127	290802	93.74667 ppb	#	86
32) 2,6-Dichlorophenol	4.17	162	295192	80.01299 ppb	#	90
33) Hexachloropropene	4.18	213	308724	80.16296 ppb		97
34) Hexachlorobutadiene	4.20	225	222039	70.44600 ppb		99
35) Caprolactum	4.40	113	121615	90.56686 ppb	#	80
36) 4-Chloro-3-methylphenol	4.46	107	374538	78.98687 ppb		85
37) 2-Methylnaphthalene	4.55	142	860249	87.46511 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y008.D Vial: 8
Acq On : 11 Sep 14 1:16 Operator: LF
Sample : 80ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:32 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:31:40 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

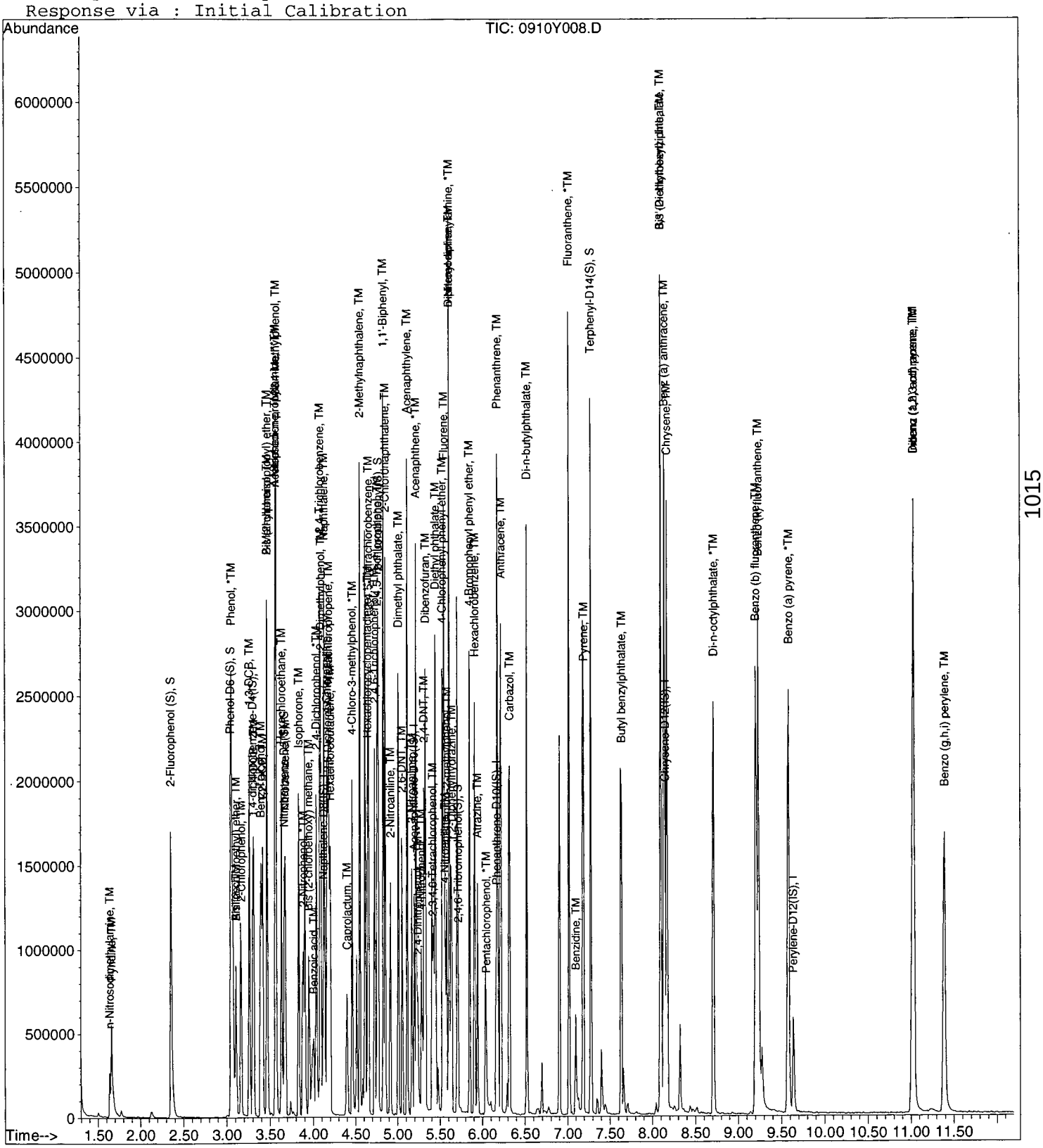
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Hexachlorocyclopentadiene	4.65	237	182696	85.11127	ppb		96
40)	1,2,4,5-Tetrachlorobenzene	4.66	216	422261	83.68375	ppb	#	84
41)	2,4,6-Trichlorophenol	4.73	196	240524	85.82195	ppb		87
42)	2,4,5-Trichlorophenol	4.76	196	221680	82.52729	ppb	#	88
43)	2-Chloronaphthalene	4.85	162	700971	80.19447	ppb		91
45)	1,1'-Biphenyl	4.83	154	1012635	87.32835	ppb	#	96
46)	2-Nitroaniline	4.92	138	237139	84.63176	ppb	#	76
47)	Dimethyl phthalate	5.01	163	911110	84.47770	ppb	#	83
48)	2,6-DNT	5.05	165	164438	74.52323	ppb	#	14
49)	Acenaphthylene	5.11	152	1249590	86.14988	ppb		99
50)	3-Nitroaniline	5.16	65	234337	80.61805	ppb	#	88
51)	Acenaphthene	5.22	154	692983	80.49316	ppb		99
52)	2,4-Dinitrophenol	5.24	184	74011	110.79322	ppb		86
53)	4-Nitrophenol	5.28	109	138443	100.00911	ppb		84
54)	Dibenzofuran	5.33	168	1011682	76.69258	ppb		95
55)	2,4-DNT	5.31	165	262946	81.91985	ppb		90
56)	2,3,4,6-Tetrachlorophenol	5.41	232	186750	90.07349	ppb		94
57)	Diethyl phthalate	5.44	149	819510	74.74047	ppb		99
58)	4-Chlorophenyl phenyl ethe	5.53	204	388824	73.39857	ppb		93
59)	Fluorene	5.55	165	784803	80.51289	ppb		97
60)	4-Nitroaniline	5.56	138	172182	76.78852	ppb		98
63)	Diphenyl amine	5.61	168	729789	71.49937	ppb		97
64)	4,6-Dinitro-2-methylphenol	5.58	198	146516	107.94990	ppb	#	78
65)	n-Nitrosodiphenylamine	5.61	167	402189	73.45026	ppb		93
66)	1,2-Diphenylhydrazine	5.64	182	224747	75.48820	ppb	#	74
67)	4-Bromophenyl phenyl ether	5.85	248	245247	72.86898	ppb		91
68)	Hexachlorobenzene	5.91	284	296355	88.84993	ppb	#	58
69)	Atrazine	5.94	200	124706	38.53125	ppb		91
70)	Pentachlorophenol	6.04	266	102205	105.31298	ppb		96
71)	Phenanthrene	6.18	178	1200761	80.38289	ppb		98
72)	Anthracene	6.22	178	1261052	82.38644	ppb		98
73)	Carbazol	6.32	167	1087045	83.24930	ppb		98
74)	Di-n-butylphthalate	6.52	149	1390156	78.28447	ppb		99
75)	Fluoranthene	7.02	202	1569553	86.30704	ppb	#	95
77)	Benzidine	7.10	184	257645	99.08747	ppb		97
78)	Pyrene	7.19	202	1518578	78.49252	ppb	#	90
80)	Butyl benzylphthalate	7.64	149	615103	74.04652	ppb	#	75
81)	3,3'-Dichlorobenzidine	8.09	252	436739	92.17312	ppb		100
82)	Benz (a) anthracene	8.14	228	1535704	81.75642	ppb		98
83)	Bis (2-ethylhexyl) phthala	8.09	149	805746	74.42184	ppb	#	95
84)	Chrysene	8.17	228	1159277	71.02066	ppb	#	97
85)	Di-n-octylphthalate	8.71	149	1493468	82.11852	ppb		99
86)	Indeno (1,2,3-cd) pyrene	11.03	276	1612248	83.21045	ppb		95
88)	Benzo (b) fluoranthene	9.20	252	1653909	91.31872	ppb	#	97
89)	Benzo (k) fluoranthene	9.23	252	1158576	72.42624	ppb		98
90)	Benzo (a) pyrene	9.58	252	1390467	85.43346	ppb		99
91)	Dibenz (a,h) anthracene	11.03	278	1275349	86.42597	ppb	#	95
92)	Benzo (g,h,i) perylene	11.40	276	1309421	88.31663	ppb		94

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y140910\0910Y008.D Vial: 8
Acq On : 11 Sep 14 1:16 Operator: LF
Sample : 80ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:32 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y009.D Vial: 9
Acq On : 11 Sep 14 1:37 Operator: LF
Sample : 100ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:32 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:31:40 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	3.30	152	86168	40.00000 ppb		0.00
20) Napthalene-D8(IS)	4.12	136	327227	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	5.20	164	204883	40.00000 ppb		0.00
62) Phenanthrene-D10(IS)	6.16	188	389326	40.00000 ppb		0.00
76) Chrysene-D12(IS)	8.10	240	387371	40.00000 ppb		0.00
87) Perylene-D12(IS)	9.60	264	241482	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	2.35	112	740321	190.46072 ppb		0.00
Spiked Amount 200.000			Recovery = 95.231%			
5) Phenol-D6 (S)	3.05	99	914231	182.56256 ppb		0.00
Spiked Amount 200.000			Recovery = 91.281%			
21) Nitrobenzene-D5(S)	3.66	82	424047	90.10509 ppb		0.00
Spiked Amount 100.000			Recovery = 90.105%			
44) 2-Fluorobiphenyl(S)	4.77	172	924126	248.01880 ppb		0.00
Spiked Amount 100.000			Recovery = 248.019%			
61) 2,4,6-Tribromophenol(S)	5.70	330	311621	233.09922 ppb		0.00
Spiked Amount 200.000			Recovery = 116.550%			
79) Terphenyl-D14(S)	7.24	244	1232401	97.38921 ppb		0.00
Spiked Amount 100.000			Recovery = 97.389%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.63	74	126983	96.00602 ppb		82
3) Pyridine	1.66	52	171887	98.08243 ppb		100
6) Phenol	3.06	94	478732	89.01197 ppb		86
7) Aniline	3.10	93	316474	85.60906 ppb	#	99
8) Bis (2-chloroethyl) ether	3.10	63	207151	92.70748 ppb		93
9) 2-Chlorophenol	3.17	128	417634	95.77439 ppb		100
10) 1,3-DCB	3.26	146	497315	96.41166 ppb		99
11) 1,4-DCB	3.31	146	478482	95.51885 ppb		94
12) Benzyl alcohol	3.39	79	422580	92.58121 ppb		95
13) 1,2-DCB	3.42	146	448468	96.65397 ppb		92
14) 2-Methylphenol	3.47	108	346081	91.93286 ppb		97
15) Bis (2-chloroisopropyl) et	3.47	45	329955	85.28314 ppb		99
16) Acetophenone	3.57	105	495524	82.15186 ppb		99
17) 3&4-Methylphenol	3.57	107	677719	154.24991 ppb		94
18) n-Nitrosodi-n-propylamine	3.56	43	259013	83.01079 ppb		97
19) Hexachloroethane	3.63	117	190289	88.87687 ppb		74
22) Nitrobenzene	3.68	77	390793	83.65622 ppb		93
23) Isophorone	3.83	82	757457	90.50163 ppb		97
24) 2-Nitrophenol	3.88	139	236450	112.29048 ppb		83
25) 2,4-Dimethylphenol	4.09	107	583193	90.73128 ppb		94
26) Benzoic acid	4.01	105	290834	97.67111 ppb		96
27) Bis (2-chloroethoxy) metha	3.95	93	389817	83.91236 ppb		94
28) 2,4-Dichlorophenol	4.04	162	378005	104.58654 ppb	#	85
29) 1,2,4-Trichlorobenzene	4.08	180	410385	88.27985 ppb		97
30) Naphthalene	4.13	128	1123804	86.95954 ppb		100
31) 4-Chloroaniline	4.16	127	323147	107.20041 ppb	#	88
32) 2,6-Dichlorophenol	4.17	162	349139	97.38501 ppb	#	91
33) Hexachloropropene	4.18	213	331489	88.57483 ppb		99
34) Hexachlorobutadiene	4.20	225	275852	90.06189 ppb		98
35) Caprolactum	4.41	113	150959	115.68552 ppb		93
36) 4-Chloro-3-methylphenol	4.46	107	437686	94.98598 ppb		86
37) 2-Methylnaphthalene	4.55	142	977133	102.23561 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y009.D Vial: 9
Acq On : 11 Sep 14 1:37 Operator: LF
Sample : 100ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:32 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:31:40 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

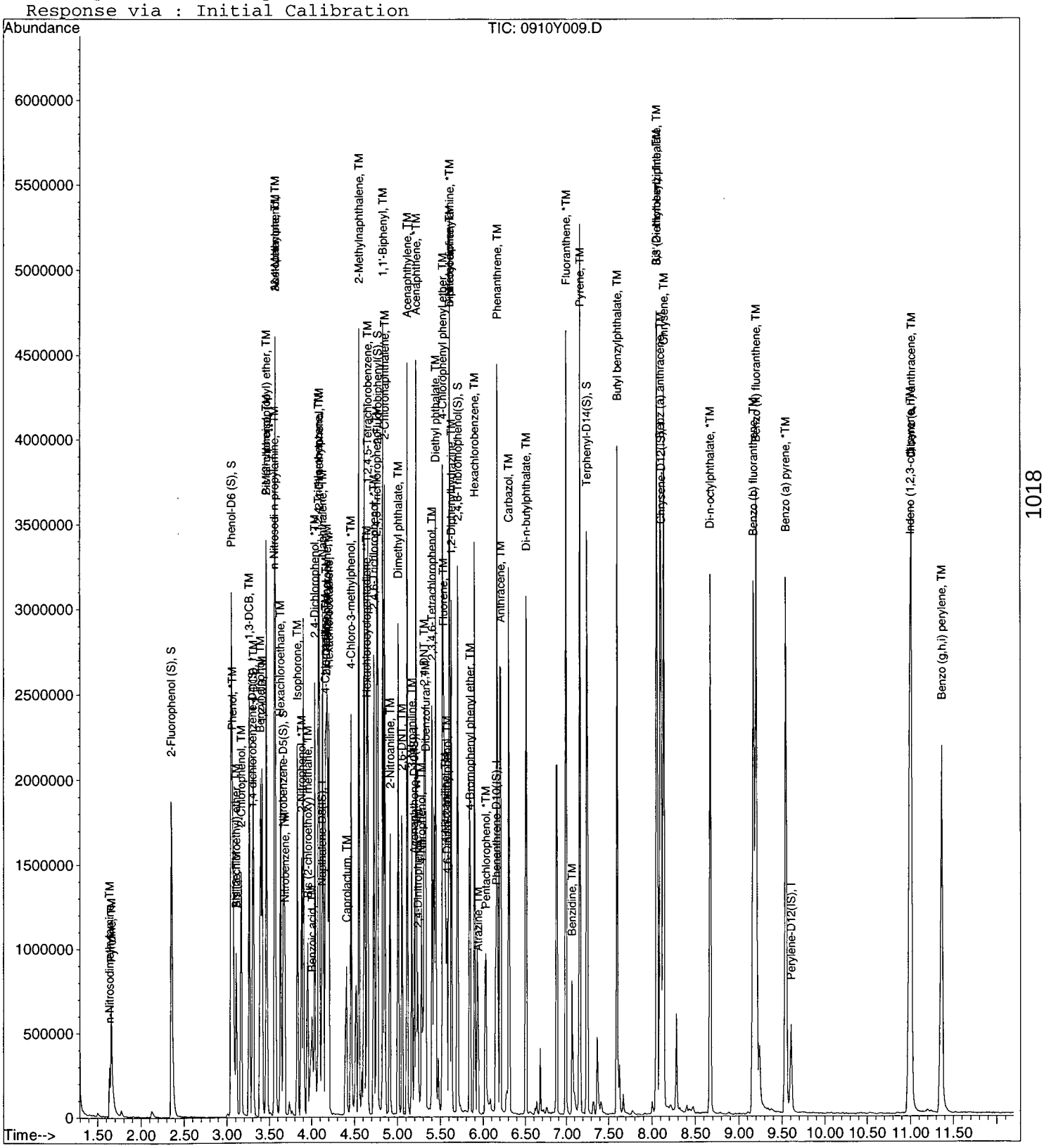
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Hexachlorocyclopentadiene	4.65	237	220750	97.71018	ppb	#	99
40)	1,2,4,5-Tetrachlorobenzene	4.66	216	488648	102.35488	ppb	#	87
41)	2,4,6-Trichlorophenol	4.73	196	291045	109.76209	ppb	#	88
42)	2,4,5-Trichlorophenol	4.76	196	282276	111.07013	ppb	#	88
43)	2-Chloronaphthalene	4.85	162	781678	94.52018	ppb	#	89
45)	1,1'-Biphenyl	4.83	154	1097157	100.00538	ppb	#	96
46)	2-Nitroaniline	4.92	138	284651	107.37307	ppb		80
47)	Dimethyl phthalate	5.01	163	1032522	101.18656	ppb	#	83
48)	2,6-DNT	5.05	165	194339	93.08971	ppb	#	24
49)	Acenaphthylene	5.11	152	1503148	109.53203	ppb		97
50)	3-Nitroaniline	5.16	65	268076	97.47688	ppb	#	85
51)	Acenaphthene	5.22	154	816926	100.29317	ppb		98
52)	2,4-Dinitrophenol	5.24	184	98014	155.08053	ppb	#	32
53)	4-Nitrophenol	5.28	109	178867	136.56866	ppb		95
54)	Dibenzofuran	5.33	168	1072371	85.92245	ppb		94
55)	2,4-DNT	5.31	165	318161	104.76634	ppb		79
56)	2,3,4,6-Tetrachlorophenol	5.40	232	242574	123.66104	ppb	#	89
57)	Diethyl phthalate	5.44	149	1012118	97.56297	ppb		97
58)	4-Chlorophenyl phenyl ethe	5.53	204	538809	107.50326	ppb	#	71
59)	Fluorene	5.54	165	767895	83.26431	ppb		98
60)	4-Nitroaniline	5.56	138	192681	90.82381	ppb		97
63)	Diphenyl amine	5.61	168	936845	93.32915	ppb		98
64)	4,6-Dinitro-2-methylphenol	5.58	198	176033	131.87909	ppb		96
65)	n-Nitrosodiphenylamine	5.61	167	488114	90.64191	ppb		98
66)	1,2-Diphenylhydrazine	5.63	182	240999	82.30857	ppb	#	1
67)	4-Bromophenyl phenyl ether	5.85	248	295668	89.32807	ppb		100
68)	Hexachlorobenzene	5.90	284	333402	101.63837	ppb	#	71
69)	Atrazine	5.94	200	152841	48.01868	ppb		94
70)	Pentachlorophenol	6.03	266	122811	128.67426	ppb		95
71)	Phenanthrene	6.17	178	1373889	93.51975	ppb		97
72)	Anthracene	6.21	178	1413277	93.88468	ppb		99
73)	Carbazol	6.30	167	1196720	93.19021	ppb		94
74)	Di-n-butylphthalate	6.51	149	1711930	98.02633	ppb		99
75)	Fluoranthene	7.00	202	1876181	104.90342	ppb		99
77)	Benzidine	7.07	184	323801	138.44832	ppb		98
78)	Pyrene	7.16	202	1806273	103.79753	ppb		98
80)	Butyl benzylphthalate	7.60	149	738504	98.83759	ppb		96
81)	3,3'-Dichlorobenzidine	8.05	252	474234	111.27241	ppb		95
82)	Benz (a) anthracene	8.09	228	1695166	100.33190	ppb		98
83)	Bis (2-ethylhexyl) phthala	8.05	149	920179	94.49026	ppb		96
84)	Chrysene	8.13	228	1572904	107.13027	ppb	#	97
85)	Di-n-octylphthalate	8.67	149	1755207	107.29661	ppb		99
86)	Indeno (1,2,3-cd) pyrene	11.00	276	1910159	109.60441	ppb		93
88)	Benzo (b) fluoranthene	9.17	252	1742560	103.50793	ppb	#	97
89)	Benzo (k) fluoranthene	9.20	252	1620677	108.99474	ppb		99
90)	Benzo (a) pyrene	9.54	252	1632522	107.91058	ppb		99
91)	Dibenz (a,h) anthracene	11.01	278	1522568	111.00169	ppb		99
92)	Benzo (g,h,i) perylene	11.36	276	1489375	108.06994	ppb		97

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y140910\0910Y009.D Vial: 9
Acq On : 11 Sep 14 1:37 Operator: LF
Sample : 100ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 11 19:32 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration



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Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 9/11/2014

Matrix: Instrument: YODA

Initial Cal. Date: 9/10/2014

Data File: 0910Y010.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.6147	0.6977	14	TM	
3	TM	Pyridine	0.8140	0.6587	19	TM	
4	*TM	Phenol	2.514	2.446	2.7	*TM	
5	TM	Aniline	1.717	1.720	0.15	TM	
6	TM	Bis (2-chloroethyl) ether	1.039	1.016	2.2	TM	
7	TM	2-Chlorophenol	2.025	1.980	2.2	TM	
8	TM	1,3-DCB	2.395	2.216	7.4	TM	
9	*TM	1,4-DCB	2.331	2.189	6.1	*TM	
10	TM	Benzyl alcohol	2.118	2.005	5.3	TM	
11	TM	1,2-DCB	2.157	2.073	3.9	TM	
12	TM	2-Methylphenol	1.757	1.706	2.9	TM	
13	TM	Bis (2-chloroisopropyl) ether	1.796	1.737	3.3	TM	
14	TM	Acetophenone	2.803	2.623	6.4	TM	
15	TM	3&4-Methylphenol	2.118	1.938	8.5	TM	
16	**TM	n-Nitrosodi-n-propylamine	1.486	1.331	10	**TM	
17	TM	Hexachloroethane	0.9944	0.9470	4.8	TM	
18	I	Napthalene-D8(IS)	ISTD			I	
19	TM	Nitrobenzene	0.5729	0.6014	5.0	TM	
20	TM	Isophorone	1.024	1.078	5.2	TM	
21	*TM	2-Nitrophenol	0.2576	0.3037	18	*TM	
22	TM	2,4-Dimethylphenol	0.7892	0.8217	4.1	TM	
23	TMQ	Benzoic acid	0.2328	0.3293	41	TMQ	15
24	TM	Bis (2-chloroethoxy) methane	0.6242	0.5926	5.0	TM	
25	*TM	2,4-Dichlorophenol	0.4424	0.4325	2.2	*TM	
26	TM	1,2,4-Trichlorobenzene	0.5686	0.5668	0.32	TM	
27	TM	Naphthalene	1.586	1.675	5.6	TM	
28	TM	4-Chloroaniline	0.3731	0.4166	12	TM	
29	TM	2,6-Dichlorophenol	0.4392	0.4433	0.94	TM	
30	TM	Hexachloropropene	0.4575	0.4566	0.19	TM	
31	*TM	Hexachlorobutadiene	0.3744	0.3686	1.6	*TM	
32	TM	Caprolactum	0.1821	0.1944	6.7	TM	
33	*TM	4-Chloro-3-methylphenol	0.5648	0.5937	5.1	*TM	
34	TM	2-Methylnaphthalene	1.169	1.093	6.5	TM	
35	I	Acenaphthene-D10(IS)	ISTD			I	
36	**TMQ	Hexachlorocyclopentadiene	0.2008	0.2323	16	**TMQ	6.3
37	TM	1,2,4,5-Tetrachlorobenzene	0.9320	0.8046	14	TM	
38	*TM	2,4,6-Trichlorophenol	0.5176	0.5385	4.0	*TM	
39	TM	2,4,5-Trichlorophenol	0.5028	0.4748	5.6	TM	
40	TM	2-Chloronaphthalene	1.615	1.419	12	TM	
		Average			7.3		

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 9/11/2014
Instrument: YODA
Cal. Date: 9/10/2014
Data File: 0910Y010.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM	1,1'-Biphenyl	2.142	1.827	15	TM		
42	TM	2-Nitroaniline	0.5182	0.5425	4.7	TM		
43	TM	Dimethyl phthalate	1.992	1.876	5.8	TM		
44	TM	2,6-DNT	0.4076	0.4591	13	TM		
45	TM	Acenaphthylene	2.679	2.507	6.4	TM		
46	TM	3-Nitroaniline	0.5406	0.5356	0.94	TM		
47	*TM	Acenaphthene	1.596	1.622	1.6	*TM		
48	**TMQ	2,4-Dinitrophenol	0.1282	0.1347	5.1	**TMQ	11	
49	**TM	4-Nitrophenol	0.3063	0.2502	18	**TM		
50	TM	Dibenzofuran	2.437	2.587	6.1	TM		
51	TM	2,4-DNT	0.5928	0.5918	0.17	TM		
52	TM	2,3,4,6-Tetrachlorophenol	0.4061	0.4045	0.39	TM		
53	TM	Diethyl phthalate	2.025	1.985	2.0	TM		
54	TM	4-Chlorophenyl phenyl ether	0.9784	0.9259	5.4	TM		
55	TM	Fluorene	1.801	1.920	6.6	TM		
56	TM	4-Nitroaniline	0.4185	0.4677	12	TM		
57	I	Phenanthrene-D10(IS)	ISTD			I		
58	TM	Diphenyl amine	1.037	1.090	5.1	TM		
59	TMQ	4,6-Dinitro-2-methylphenol	0.1452	0.1573	8.4	TMQ	2.6	
60	*TM	n-Nitrosodiphenylamine	0.5543	0.5784	4.4	*TM		
61	TM	1,2-Diphenylhydrazine	0.3081	0.2398	22	TM		NT
62	TM	4-Bromophenyl phenyl ether	0.3396	0.3150	7.3	TM		
63	TM	Hexachlorobenzene	0.3367	0.2958	12	TM		
64	TM	Atrazine	0.3272	0.3440	5.1	TM		
65	*TM	Pentachlorophenol	0.1038	0.1182	14	*TM		
66	TM	Phenanthrene	1.508	1.374	8.9	TM		
67	TM	Anthracene	1.549	1.560	0.74	TM		
68	TM	Carbazol	1.320	1.336	1.2	TM		
69	TM	Di-n-butylphthalate	1.794	1.780	0.73	TM		
70	*TM	Fluoranthene	1.837	1.613	12	*TM		
71	I	Chrysene-D12(IS)	ISTD			I		
72	TM	Benzidine	0.2679	0.3488	30	TM		NT
73	TM	Pyrene	1.795	1.720	4.2	TM		
74	TM	Butyl benzylphthalate	0.7710	0.7828	1.5	TM		
75	TM	3,3'-Dichlorobenzidine	0.4416	0.4929	12	TM		
76	TM	Benz (a) anthracene	1.777	1.876	5.6	TM		
77	TM	Bis (2-ethylhexyl) phthalate	1.006	1.057	5.1	TM		
78	TM	Chrysene	1.487	1.425	4.2	TM		
79	*TM	Di-n-octylphthalate	1.691	1.788	5.7	*TM		
80	TM	Indeno (1,2,3-cd) pyrene	1.801	1.892	5.0	TM		
		Average			7.3			

0
0

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 9/11/2014
Instrument: YODA
Cal. Date: 9/10/2014
Data File: 0910Y010.D

		Compound	MEAN	CCRF	%D	%Drift	
81	I	Perylene-D12(IS)	ISTD			I	
82	TM	Benzo (b) fluoranthene	2.789	2.513	9.9	TM	
83	TM	Benzo (k) fluoranthene	2.474	2.040	18	TM	
84	*TM	Benzo (a) pyrene	2.514	2.522	0.33	*TM	
85	TM	Dibenz (a,h) anthracene	2.274	2.415	6.2	TM	
86	TM	Benzo (g,h,i) perylene	2.283	2.416	5.8	TM	
87							
88							
89							
90							
91							
92							
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111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.0		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y010.D Vial: 10
Acq On : 11 Sep 14 1:57 Operator: LF
Sample : 50ppm SVOC SS 9-10-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 22 21:18 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:22 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	3.29	152	88618	40.00000	ppb		0.00
20) Napthalene-D8(IS)	4.11	136	309845	40.00000	ppb		0.00
38) Acenaphthene-D10(IS)	5.20	164	212152	40.00000	ppb		0.00
62) Phenanthrene-D10(IS)	6.15	188	415650	40.00000	ppb		0.00
76) Chrysene-D12(IS)	8.11	240	394814	40.00000	ppb		0.00
87) Perylene-D12(IS)	9.60	264	242079	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	0.00	112	0	0.00000	ppb		
Spiked Amount 200.000			Recovery =	0.000%			
5) Phenol-D6 (S)	0.00	99	0	0.00000	ppb		
Spiked Amount 200.000			Recovery =	0.000%			
21) Nitrobenzene-D5(S)	0.00	82	0d	0.00000	ppb		
Spiked Amount 100.000			Recovery =	0.000%			
44) 2-Fluorobiphenyl(S)	0.00	172	0d	0.00000	ppb		
Spiked Amount 100.000			Recovery =	0.000%			
61) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000	ppb		
Spiked Amount 200.000			Recovery =	0.000%			
79) Terphenyl-D14(S)	0.00	244	0	0.00000	ppb		
Spiked Amount 100.000			Recovery =	0.000%			
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.64	74	77285	56.75238	ppb		98
3) Pyridine	1.66	52	72968	40.46155	ppb		99
6) Phenol	3.06	94	270914	48.63425	ppb		95
7) Aniline	3.10	93	190500	50.07691	ppb	#	97
8) Bis (2-chloroethyl) ether	3.10	63	112563	48.90526	ppb		99
9) 2-Chlorophenol	3.16	128	219365	48.88586	ppb		99
10) 1,3-DCB	3.26	146	245487	46.27544	ppb		96
11) 1,4-DCB	3.30	146	242519	46.96222	ppb		97
12) Benzyl alcohol	3.39	79	222121	47.34590	ppb		98
13) 1,2-DCB	3.41	146	229605	48.05349	ppb		96
14) 2-Methylphenol	3.46	108	188949	48.52959	ppb		91
15) Bis (2-chloroisopropyl) et	3.47	45	192394	48.35307	ppb		99
16) Acetophenone	3.56	105	290532	46.77864	ppb		96
17) 3&4-Methylphenol	3.56	107	429295	91.50990	ppb		97
18) n-Nitrosodi-n-propylamine	3.55	43	147388	44.77927	ppb		89
19) Hexachloroethane	3.64	117	104907	47.62149	ppb		98
22) Nitrobenzene	3.68	77	232945	52.49336	ppb		97
23) Isophorone	3.82	82	417363	52.61844	ppb		99
24) 2-Nitrophenol	3.87	139	117635	58.95668	ppb		98
25) 2,4-Dimethylphenol	4.08	107	318237	52.05916	ppb		97
26) Benzoic acid	3.99	105	127525	57.28539	ppb		95
27) Bis (2-chloroethoxy) metha	3.95	93	229535	47.47581	ppb		98
28) 2,4-Dichlorophenol	4.03	162	167495	48.87886	ppb		98
29) 1,2,4-Trichlorobenzene	4.08	180	219523	49.84047	ppb		98
30) Naphthalene	4.13	128	648721	52.80984	ppb		99
31) 4-Chloroaniline	4.15	127	161365	55.82940	ppb		96
32) 2,6-Dichlorophenol	4.16	162	171700	50.47247	ppb		96
33) Hexachloropropene	4.18	213	176839	49.90268	ppb		96
34) Hexachlorobutadiene	4.19	225	142743	49.21805	ppb		99
35) Caprolactum	4.39	113	75287	53.37495	ppb		90
36) 4-Chloro-3-methylphenol	4.45	107	229937	52.55515	ppb		99
37) 2-Methylnaphthalene	4.55	142	423479	46.76026	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y010.D Vial: 10
Acq On : 11 Sep 14 1:57 Operator: LF
Sample : 50ppm SVOC SS 9-10-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 22 21:18 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:22 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Hexachlorocyclopentadiene	4.65	237	61593	46.86587	ppb	#	98
40)	1,2,4,5-Tetrachlorobenzene	4.65	216	213379	43.16735	ppb		98
41)	2,4,6-Trichlorophenol	4.72	196	142798	52.01210	ppb		94
42)	2,4,5-Trichlorophenol	4.76	196	125906	47.21589	ppb	#	90
43)	2-Chloronaphthalene	4.86	162	376192	43.93233	ppb		95
45)	1,1'-Biphenyl	4.83	154	484414	42.64449	ppb		96
46)	2-Nitroaniline	4.91	138	143860	52.34608	ppb		95
47)	Dimethyl phthalate	5.00	163	497618	47.09241	ppb		96
48)	2,6-DNT	5.05	165	121755	56.32535	ppb		98
49)	Acenaphthylene	5.11	152	664884	46.79191	ppb		99
50)	3-Nitroaniline	5.16	65	142028	49.53147	ppb		96
51)	Acenaphthene	5.22	154	430057	50.80405	ppb		99
52)	2,4-Dinitrophenol	5.24	184	35724	55.33917	ppb	#	9
53)	4-Nitrophenol	5.28	109	66353	40.83904	ppb		93
54)	Dibenzofuran	5.32	168	685957	53.06695	ppb		99
55)	2,4-DNT	5.30	165	156938	49.91293	ppb		91
56)	2,3,4,6-Tetrachlorophenol	5.41	232	107258	49.80359	ppb		100
57)	Diethyl phthalate	5.44	149	526318	48.99768	ppb		99
58)	4-Chlorophenyl phenyl ethe	5.53	204	245536	47.31446	ppb	#	56
59)	Fluorene	5.54	165	509240	53.31301	ppb		97
60)	4-Nitroaniline	5.55	138	124022	55.88047	ppb		92
63)	Diphenyl amine	5.60	168	566420	52.56062	ppb		99
64)	4,6-Dinitro-2-methylphenol	5.57	198	81724	51.28054	ppb		96
65)	n-Nitrosodiphenylamine	5.60	167	300534	52.17956	ppb		95
66)	1,2-Diphenylhydrazine	5.63	182	124609	38.92736	ppb		80
67)	4-Bromophenyl phenyl ether	5.84	248	163650	46.37118	ppb		99
68)	Hexachlorobenzene	5.90	284	153685	43.93008	ppb	#	49
69)	Atrazine	5.93	200	89367	26.28703	ppb		98
70)	Pentachlorophenol	6.03	266	61406	56.90352	ppb		97
71)	Phenanthrene	6.17	178	713709	45.55638	ppb		97
72)	Anthracene	6.20	178	810527	50.37119	ppb		97
73)	Carbazol	6.31	167	693967	50.57746	ppb		98
74)	Di-n-butylphthalate	6.50	149	925026	49.63453	ppb		98
75)	Fluoranthene	6.99	202	838198	43.91202	ppb	#	89
77)	Benzidine	7.07	184	172139	65.10749	ppb		97
78)	Pyrene	7.15	202	848705	47.89891	ppb	#	84
80)	Butyl benzylphthalate	7.60	149	386339	50.76852	ppb	#	82
81)	3,3'-Dichlorobenzidine	8.06	252	243251	55.81216	ppb		97
82)	Benz (a) anthracene	8.10	228	925871	52.79539	ppb		100
83)	Bis (2-ethylhexyl) phthala	8.06	149	521701	52.55925	ppb	#	97
84)	Chrysene	8.13	228	703078	47.91437	ppb	#	98
85)	Di-n-octylphthalate	8.67	149	882237	52.85418	ppb		100
86)	Indeno (1,2,3-cd) pyrene	10.99	276	933807	52.52306	ppb		100
88)	Benzo (b) fluoranthene	9.16	252	760576	45.06718	ppb	#	96
89)	Benzo (k) fluoranthene	9.19	252	617424	41.23291	ppb		98
90)	Benzo (a) pyrene	9.54	252	763182	50.16283	ppb		97
91)	Dibenz (a,h) anthracene	10.99	278	730859	53.11370	ppb	#	96
92)	Benzo (g,h,i) perylene	11.36	276	731127	52.91358	ppb		96

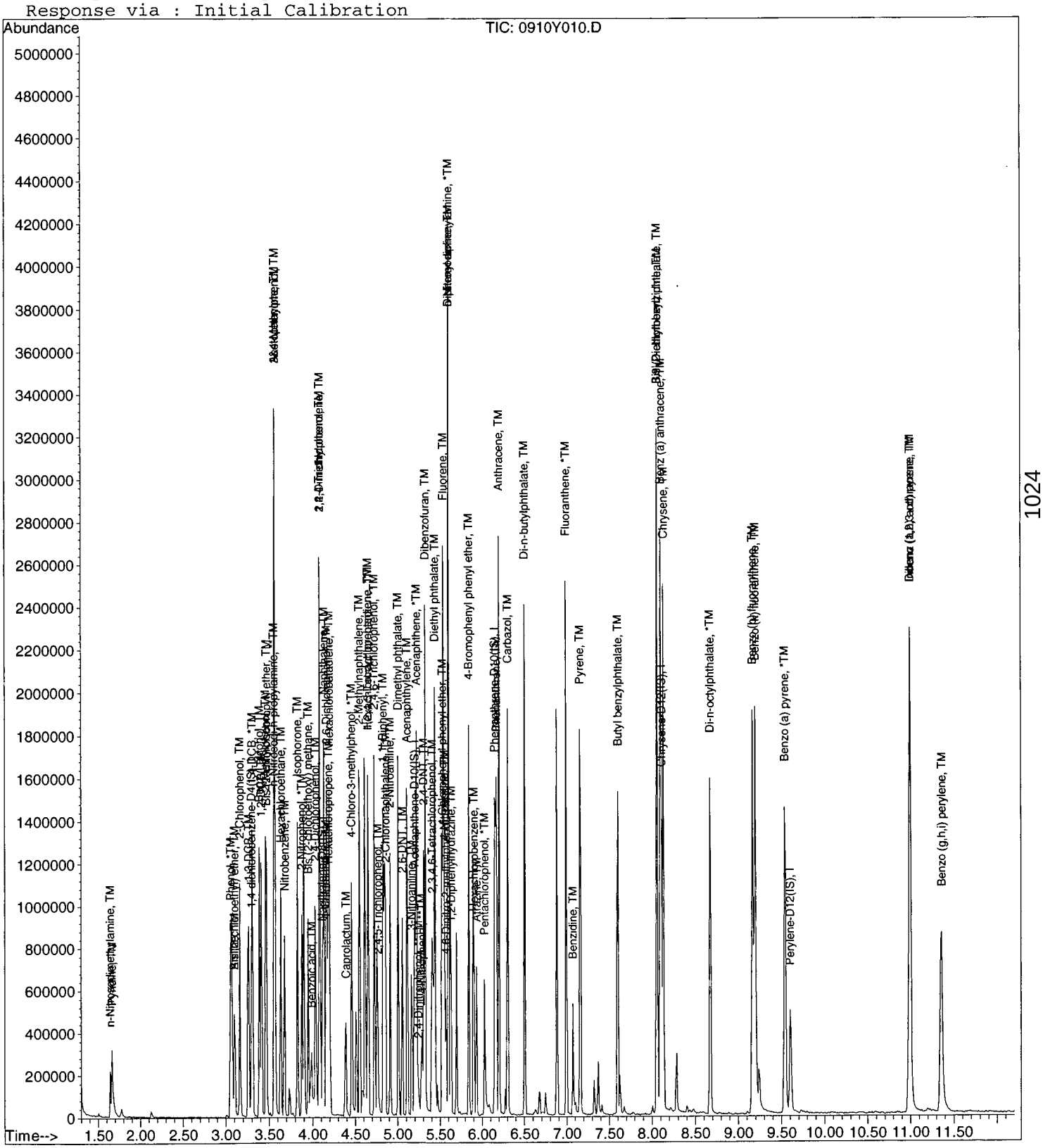
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140910\0910Y010.D Vial: 10
Acq On : 11 Sep 14 1:57 Operator: LF
Sample : 50ppm SVOC SS 9-10-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 22 21:18 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration



1024

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 9/20/2014
Matrix: Instrument: YODA
Initials:

		Compound	0920Y002.D 5	0920Y003.D 10	0920Y004.D 20	0920Y005.D 40	0920Y006.D 50	0920Y007.D 60	0920Y008.D 80	0920Y009.D 100			Avg	%RSD		r
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	n-Nitrosodimethylamine	0.4383	0.4616	0.4457	0.4186	0.4065	0.4064	0.3966	0.4009			0.42	5.7	TM	
3	TM	Pyridine	0.7109	0.7371	0.6615	0.6006	0.5833	0.5787	0.5784	0.5772			0.63	10	TM	
4	S	2-Fluorophenol (S)	1.106	0.9938	0.9850	0.8595	0.8363	0.8470	0.8200	0.8035			0.91	12	S	
5	S	Phenol-D6 (S)		1.339	1.288	1.078	1.038	1.024	0.9529	0.9206			1.1	15	S	
6	*TM	Phenol		1.766	1.520	1.361	1.299	1.275	1.205	1.156			1.4	15	*TM	
7	TM	Aniline	2.189	2.330	2.057	2.081	2.065	2.249	2.125	2.201			2.2	4.5	TM	
8	TM	Bis (2-chloroethyl) ether	0.3163	0.3095	0.2859	0.2554	0.2538	0.2487	0.2417	0.2479			0.27	11	TM	
9	TM	2-Chlorophenol	1.643	1.750	1.535	1.488	1.433	1.447	1.406	1.406			1.5	8.2	TM	
10	TM	1,3-DCB	1.736	1.978	1.655	1.738	1.620	1.743	1.728	1.636			1.7	6.5	TM	
11	*TM	1,4-DCB	1.860	1.891	1.829	1.697	1.748	1.667	1.613	1.753			1.8	5.5	*TM	
12	TM	Benzyl alcohol	1.035	1.084	0.9641	0.9389	0.8969	0.9116	0.8939	0.8907			0.95	7.6	TM	
13	TM	1,2-DCB	1.668	1.791	1.569	1.571	1.555	1.571	1.574	1.614			1.6	5.0	TM	
14	TM	2-Methylphenol	1.117	1.153	1.052	1.011	1.003	1.011	1.012	1.033			1.0	5.4	TM	
15	TM	Bis (2-chloroisopropyl) ether	3.195	3.312	2.875	2.643	2.524	2.466	2.302	2.209			2.7	15	TM	
16	TM	Acetophenone	2.050	2.219	1.946	1.773	1.683	1.644	1.467				1.8	14	TM	
17	TM	3&4-Methylphenol	0.6587	0.6961	0.6249	0.5988	0.5788	0.5906	0.5695	0.5700			0.61	7.5	TM	
18	**TMQ	n-Nitrosodi-n-propylamine	1.413	1.518	1.282	1.099	1.015	0.9889	0.9123	0.8586			1.1	21	**TMQ	0.999
19	TM	Hexachloroethane	0.5656	0.5979	0.5362	0.5357	0.5280	0.5296	0.5228	0.5147			0.54	5.0	TM	
20	I	Napthalene-D8(IS)														
21	S	Nitrobenzene-D5(S)	0.2910	0.2586	0.2632	0.2499	0.2426	0.2539	0.2475	0.2418			0.26	6.2	S	
22	TM	Nitrobenzene	0.3041	0.3134	0.2850	0.2831	0.2732	0.2761	0.2705	0.2724			0.28	5.6	TM	
23	TM	Isophorone	0.5956	0.6167	0.5508	0.5468	0.5325	0.5359	0.5357	0.5356			0.56	5.7	TM	
24	*TM	2-Nitrophenol	0.1753	0.1969	0.1820	0.1912	0.1918	0.1901	0.1974	0.2080			0.19	5.2	*TM	
25	TM	2,4-Dimethylphenol	0.3850	0.4067	0.3662	0.3738	0.3489	0.3457	0.3308	0.3313			0.36	7.4	TM	
26	TM	Benzoic acid	0.1458	0.1487	0.1646	0.1438	0.1363	0.1548	0.1678	0.1724			0.15	8.3	TM	
27	TM	Bis (2-chloroethoxy) methane	0.3665	0.3930	0.3510	0.3545	0.3339	0.3365	0.3368	0.3303			0.35	6.0	TM	
28	*TM	2,4-Dichlorophenol	0.2540	0.2819	0.2635	0.2800	0.2631	0.2812	0.2760	0.2822			0.27	4.0	*TM	
29	TM	1,2,4-Trichlorobenzene	0.2607	0.2937	0.2697	0.2865	0.2805	0.2862	0.2788	0.2819			0.28	3.7	TM	
30	TM	Naphthalene	1.064	1.127	1.016	1.043	1.001	1.008	0.9830	0.9529			1.0	5.2	TM	
31	TM	4-Chloroaniline	0.2138	0.2314	0.2188	0.2639	0.2636	0.2830	0.3026	0.2991			0.26	13	TM	
32	TM	2,6-Dichlorophenol	0.2730	0.2782	0.2598	0.2824	0.2672	0.2831	0.2721	0.2534			0.27	3.9	TM	
33	TM	Hexachloropropene	0.1032	0.1210	0.1199	0.1312	0.1327	0.1346	0.1402	0.1434			0.13	10	TM	
34	*TM	Hexachlorobutadiene	0.1086	0.1184	0.1114	0.1185	0.1233	0.1178	0.1224	0.1183			0.12	4.3	*TM	
35	TM	Caprolactum	0.1227	0.1222	0.1131	0.1184	0.1090	0.1160	0.1215	0.1141			0.12	4.2	TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 9/20/2014
Matrix: Instrument: YODA Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		r
36	*TM	4-Chloro-3-methylphenol	0.2742	0.2973	0.2623	0.2473	0.2428	0.2472	0.2533	0.2451			0.26	7.3	*TM	
37	TM	2-Methylnaphthalene	0.7688	0.7759	0.7001	0.7801	0.7027	0.7327	0.7012	0.6734			0.73	5.6	TM	
38	I	Acenaphthene-D10(IS)														
39	**TMQ	Hexachlorocyclopentadiene		0.0118	0.0311	0.0678	0.1013	0.0960	0.1223	0.1653			0.09	62	**TMQ	0.997
40	TM	1,2,4,5-Tetrachlorobenzene	0.4672	0.4714	0.4410	0.4174	0.4795	0.4220	0.4307	0.3839			0.44	7.4	TM	
41	*TM	2,4,6-Trichlorophenol	0.2760	0.2696	0.2475	0.3285	0.2944	0.3184	0.3013	0.3084			0.29	9.2	*TM	
42	TM	2,4,5-Trichlorophenol	0.3282	0.3226	0.3052	0.3437	0.3007	0.3392	0.3128	0.2660			0.31	7.9	TM	
43	TM	2-Chloronaphthalene	1.295	1.338	1.208	1.119	1.156	1.063	1.042	0.8809			1.1	13	TM	
44	S	2-Fluorobiphenyl(S)	1.173	1.008	1.106	1.227	1.124	1.136	0.9723	0.9573			1.1	9.0	S	
45	TM	1,1'-Biphenyl	1.709	1.745	1.537	1.427	1.532	1.315	1.319	1.101			1.5	15	TM	
46	TM	2-Nitroaniline	0.4443	0.4838	0.4479	0.4436	0.4851	0.4360	0.4210	0.4325			0.45	5.2	TM	
47	TM	Dimethyl phthalate	1.160	1.042	0.9441	1.332	1.124	1.184	1.148	1.171			1.1	9.9	TM	
48	TM	2,6-DNT	0.2570	0.2817	0.2766	0.2639	0.3123	0.2501	0.2532	0.2640			0.27	7.5	TM	
49	TM	Acenaphthylene	1.876	1.826	1.695	2.006	1.858	1.924	1.784	1.786			1.8	5.2	TM	
50	TM	3-Nitroaniline	0.2720	0.2694	0.2279	0.2802	0.2723	0.2753	0.2634	0.2778			0.27	6.3	TM	
51	*TM	Acenaphthene	1.189	1.250	1.145	1.199	1.127	1.037	0.9110	0.8428			1.1	13	*TM	
52	**TMQ	2,4-Dinitrophenol	0.0123	0.0226	0.0390	0.0697	0.0670	0.0843	0.1030				0.06	58	**TMQ	0.998
53	**TM	4-Nitrophenol	0.0598	0.0610	0.0557	0.0582	0.0603	0.0605	0.0623	0.0663			0.06	5.1	**TM	
54	TM	Dibenzofuran	1.756	1.735	1.695	1.533	1.591	1.477	1.505	1.244			1.6	11	TM	
55	TM	2,4-DNT	0.2928	0.3054	0.2865	0.4053	0.3526	0.4002	0.4089	0.4040			0.36	15	TM	
56	TM	2,3,4,6-Tetrachlorophenol	0.1835	0.1875	0.1759	0.2140	0.2317	0.2161	0.2190	0.2307			0.21	11	TM	
57	TM	Diethyl phthalate	1.092	1.058	1.000	1.160	1.084	1.105	1.031	1.025			1.1	4.8	TM	
58	TM	4-Chlorophenyl phenyl ether	0.5106	0.5154	0.4575	0.6187	0.4977	0.5223	0.4847	0.4804			0.51	9.5	TM	
59	TM	Fluorene	1.314	1.315	1.206	1.198	1.154	1.033	0.9189				1.2	12	TM	
60	TM	4-Nitroaniline	0.3670	0.3588	0.3215	0.3471	0.3417	0.3218	0.3760	0.3645			0.35	5.9	TM	
61	S	2,4,6-Tribromophenol(S)	0.1407	0.1369	0.1689	0.1452	0.1282	0.1244	0.1242	0.0976			0.13	15	S	
62	I	Phenanthrene-D10(IS)														
63	TMQ	Diphenyl amine	0.9226	0.8985	0.8404	0.7146	0.6313	0.5920	0.5955				0.74	19	TMQ	0.996
64	TMQ	4,6-Dinitro-2-methylphenol		0.0573	0.0697	0.1157	0.1194	0.1266	0.1159	0.1194			0.10	27	TMQ	0.997
65	*TMQ	n-Nitrosodiphenylamine	0.5073	0.4864	0.4560	0.3924	0.3470	0.3217	0.3223				0.40	19	*TMQ	0.996
66	TM	1,2-Diphenylhydrazine	0.2232	0.1986	0.1871	0.2582	0.2341	0.2590	0.2429	0.2293			0.23	11	TM	
67	TM	4-Bromophenyl phenyl ether	0.1935	0.1687	0.1497	0.1966	0.1703	0.1846	0.1841	0.1756			0.18	8.6	TM	
68	TM	Hexachlorobenzene	0.1892	0.2292	0.2242	0.2451	0.2344	0.2301	0.1878	0.1825			0.22	11	TM	
69	TM	Atrazine	0.1587	0.2080	0.1877	0.2114	0.2336	0.2210	0.1791	0.1963			0.20	12	TM	
70	*TM	Pentachlorophenol	0.0463	0.0409	0.0429	0.0664	0.0732	0.0785	0.0832	0.0843			0.06	29	*TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 9/20/2014
Matrix: Instrument: YODA
Initials:

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		r
71	TM	Phenanthrene	1.404	1.142	1.130	1.320	1.270	1.176	0.9386				1.2	13	TM	
72	TM	Anthracene	1.188	1.122	1.037	1.212	1.201	1.154	0.9857	0.8302			1.1	12	TM	
73	TM	Carbazol	1.314	1.218	1.171	1.267	1.237	1.160	1.090	1.109			1.2	6.5	TM	
74	TM	Di-n-butylphthalate	1.687	1.421	1.248	1.485	1.485	1.405	1.143	1.096			1.4	14	TM	
75	*TM	Fluoranthene	1.171	1.081	1.115	1.216	1.147	1.118	0.8910	0.8641			1.1	12	*TM	
76	I	Chrysene-D12(IS)														
77	TMQ	Benzidine		0.1882	0.1784	0.2416	0.2899	0.2747	0.3501				0.25	26	TMQ	0.997
78	TM	Pyrene	1.432	1.527	1.469	1.393	1.586	1.390	1.336	1.136			1.4	9.7	TM	
79	S	Terphenyl-D14(S)	0.7619	0.7728	0.9220	0.7496	0.8328	0.7722	0.6870	0.5754			0.76	13	S	
80	TM	Butyl benzylphthalate	0.7399	0.7811	0.7077	0.6643	0.7354	0.6479	0.6127	0.5918			0.69	9.7	TM	
81	TM	3,3'-Dichlorobenzidine	0.3221	0.3323	0.3210	0.3247	0.3357	0.3338	0.2710	0.2600			0.31	9.5	TM	
82	TM	Benz (a) anthracene	1.349	1.384	1.252	1.263	1.281	1.135	1.153	1.050			1.2	9.2	TM	
83	TM	Bis (2-ethylhexyl) phthalate	0.9954	1.091	1.027	0.9176	0.8867	0.8628	0.7749	0.6680			0.90	15	TM	
84	TM	Chrysene	0.8995	1.002	1.034	1.049	1.241	1.042	1.059	0.9725			1.0	9.4	TM	
85	*TM	Di-n-octylphthalate	1.649	1.759	1.677	1.744	1.808	1.691	1.708	1.650			1.7	3.3	*TM	
86	TM	Indeno (1,2,3-cd) pyrene	1.036	1.201	1.214	1.295	1.403	1.282	1.289	1.253			1.2	8.5	TM	
87	I	Perylene-D12(IS)														
88	TM	Benzo (b) fluoranthene	1.383	1.600	1.514	1.712	1.842	1.719	1.994	2.086			1.7	14	TM	
89	TM	Benzo (k) fluoranthene	1.280	1.477	1.440	1.615	1.371	1.610	1.164	1.024			1.4	15	TM	
90	*TM	Benzo (a) pyrene	1.319	1.445	1.427	1.624	1.576	1.625	1.532	1.541			1.5	7.1	*TM	
91	TM	Dibenz (a,h) anthracene	1.189	1.328	1.341	1.516	1.490	1.504	1.386	1.388			1.4	7.9	TM	
92	TM	Benzo (g,h,i) perylene	1.140	1.292	1.199	1.386	1.383	1.464	1.460	1.551			1.4	10	TM	
93																
94																
95																
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y002.D Vial: 2
Acq On : 20 Sep 14 22:40 Operator: CSC
Sample : 5ppm SVOC 09-20-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:00 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.33	152	321010	40.00000 ppb		0.00
20) Napthalene-D8(IS)	3.28	136	1394379	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	4.43	164	722352	40.00000 ppb		0.00
62) Phenanthrene-D10(IS)	5.38	188	1027685	40.00000 ppb		0.01
76) Chrysene-D12(IS)	7.29	240	893865	40.00000 ppb		0.05
87) Perylene-D12(IS)	8.79	264	660151	40.00000 ppb		0.05
System Monitoring Compounds						
4) 2-Fluorophenol (S)	1.64	112	88757	12.37658 ppb		0.00
Spiked Amount 200.000			Recovery =	6.189%		
5) Phenol-D6 (S)	2.07	99	122815	13.48957 ppb		0.00
Spiked Amount 200.000			Recovery =	6.745%		
21) Nitrobenzene-D5(S)	2.75	82	50713	5.77521 ppb		0.00
Spiked Amount 100.000			Recovery =	5.775%		
44) 2-Fluorobiphenyl(S)	3.99	172	105908	5.08893 ppb		0.00
Spiked Amount 100.000			Recovery =	5.089%		
61) 2,4,6-Tribromophenol(S)	4.92	330	25407	9.54341 ppb		0.00
Spiked Amount 200.000			Recovery =	4.772%		
79) Terphenyl-D14(S)	6.44	244	85131	4.56343 ppb		0.03
Spiked Amount 100.000			Recovery =	4.563%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.23	74	17587	5.17355 ppb	#	30
3) Pyridine	1.24	52	28527	5.77900 ppb		97
6) Phenol	2.08	94	66166	5.91781 ppb		94
7) Aniline	2.12	93	87846	5.29465 ppb	#	84
8) Bis (2-chloroethyl) ether	2.19	63	12691	5.96707 ppb		99
9) 2-Chlorophenol	2.19	128	65937	5.53208 ppb		100
10) 1,3-DCB	2.29	146	69645	5.19239 ppb		94
11) 1,4-DCB	2.35	146	74635	5.28925 ppb		98
12) Benzyl alcohol	2.42	79	41529	5.54465 ppb		96
13) 1,2-DCB	2.46	146	66927	5.32856 ppb		99
14) 2-Methylphenol	2.42	108	44833	5.46596 ppb		93
15) Bis (2-chloroisopropyl) et	2.51	45	128222	5.95995 ppb		100
16) Acetophenone	2.63	105	82244	5.69239 ppb		96
17) 3&4-Methylphenol	2.50	107	52865	10.96379 ppb		97
18) n-Nitrosodi-n-propylamine	2.62	43	56714	6.24331 ppb		97
19) Hexachloroethane	2.72	117	22694	5.30217 ppb		96
22) Nitrobenzene	2.76	77	53007	5.42219 ppb		96
23) Isophorone	2.94	82	103814	5.48068 ppb		98
24) 2-Nitrophenol	3.00	139	30562	4.65504 ppb		91
25) 2,4-Dimethylphenol	3.25	107	67103	5.30344 ppb		95
26) Benzoic acid	3.11	105	25421	2.17790 ppb		92
27) Bis (2-chloroethoxy) metha	3.08	93	63872	5.28883 ppb		99
28) 2,4-Dichlorophenol	3.18	162	44270	4.72313 ppb	#	94
29) 1,2,4-Trichlorobenzene	3.24	180	45444	4.67431 ppb		96
30) Naphthalene	3.29	128	185393	5.21273 ppb		100
31) 4-Chloroaniline	3.32	127	37270	4.29753 ppb	#	86
32) 2,6-Dichlorophenol	3.33	162	47585	5.05953 ppb		97
33) Hexachloropropene	3.35	213	17989	4.03294 ppb		100
34) Hexachlorobutadiene	3.37	225	18926	4.61187 ppb		98
35) Caprolactum	3.55	113	21391	5.40739 ppb		79
36) 4-Chloro-3-methylphenol	3.66	107	47796	5.46721 ppb		76
37) 2-Methylnaphthalene	3.75	142	134003	5.28288 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y002.D Vial: 2
Acq On : 20 Sep 14 22:40 Operator: CSC
Sample : 5ppm SVOC 09-20-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:00 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
40)	1,2,4,5-Tetrachlorobenzene	3.87	216	42181	5.23759	ppb		97
41)	2,4,6-Trichlorophenol	3.95	196	24924	4.75677	ppb		95
42)	2,4,5-Trichlorophenol	3.98	196	29635	5.18480	ppb	#	91
43)	2-Chloronaphthalene	4.07	162	116921	5.57619	ppb		98
45)	1,1'-Biphenyl	4.05	154	154271	5.69977	ppb		98
46)	2-Nitroaniline	4.14	138	40121	4.84160	ppb		96
47)	Dimethyl phthalate	4.23	163	104779	5.11986	ppb	#	66
48)	2,6-DNT	4.28	165	23202	4.51936	ppb		95
49)	Acenaphthylene	4.33	152	169398	5.06227	ppb		99
50)	3-Nitroaniline	4.40	65	24556	5.22695	ppb		88
51)	Acenaphthene	4.45	154	107342	5.13681	ppb		99
52)	2,4-Dinitrophenol	4.49	184	1108	14.75815	ppb		100
53)	4-Nitrophenol	4.53	109	5404	5.15413	ppb		89
54)	Dibenzofuran	4.55	168	158577	5.46738	ppb		92
55)	2,4-DNT	4.54	165	26439	4.20546	ppb	#	89
56)	2,3,4,6-Tetrachlorophenol	4.63	232	16568	4.42804	ppb	#	82
57)	Diethyl phthalate	4.66	149	98642	6.85801	ppb	#	87
58)	4-Chlorophenyl phenyl ethe	4.76	204	46101	4.86594	ppb	#	88
59)	Fluorene	4.77	165	118628	5.53800	ppb		99
60)	4-Nitroaniline	4.78	138	33142	6.93704	ppb		96
63)	Diphenyl amine	4.83	168	118522	6.33022	ppb		100
64)	4,6-Dinitro-2-methylphenol	4.80	198	6753	13.91624	ppb		94
65)	n-Nitrosodiphenylamine	4.83	167	65164	6.36525	ppb		100
66)	1,2-Diphenylhydrazine	4.86	182	28677	4.92903	ppb	#	57
67)	4-Bromophenyl phenyl ether	5.07	248	24854	5.61875	ppb		95
68)	Hexachlorobenzene	5.12	284	24305	4.03269	ppb	#	35
69)	Atrazine	5.16	200	10192	1.88107	ppb		89
70)	Pentachlorophenol	5.25	266	5952	3.80811	ppb		95
71)	Phenanthrene	5.39	178	180422	5.66214	ppb		99
72)	Anthracene	5.42	178	152605	5.16406	ppb		99
73)	Carbazol	5.52	167	168770	5.36282	ppb		93
74)	Di-n-butylphthalate	5.72	149	216694	5.99864	ppb		99
75)	Fluoranthene	6.20	202	150437	5.05170	ppb	#	90
77)	Benzidine	6.28	184	22872	4.32570	ppb		94
78)	Pyrene	6.36	202	160000	4.82962	ppb	#	78
80)	Butyl benzylphthalate	6.79	149	82673	5.26636	ppb	#	72
81)	3,3'-Dichlorobenzidine	7.24	252	35989	4.92280	ppb		95
82)	Benz (a) anthracene	7.28	228	150696	5.32978	ppb		99
83)	Bis (2-ethylhexyl) phthala	7.24	149	111217	5.27283	ppb	#	94
84)	Chrysene	7.31	228	100506	4.05890	ppb	#	94
85)	Di-n-octylphthalate	7.85	149	184268	4.73061	ppb		99
86)	Indeno (1,2,3-cd) pyrene	10.17	276	115701	3.97015	ppb		81
88)	Benzo (b) fluoranthene	8.35	252	114144	4.09369	ppb		98
89)	Benzo (k) fluoranthene	8.38	252	105636	4.33818	ppb		98
90)	Benzo (a) pyrene	8.72	252	108836	4.27614	ppb	#	87
91)	Dibenz (a,h) anthracene	10.18	278	98114	4.10274	ppb	#	87
92)	Benzo (g,h,i) perylene	10.54	276	94094	4.31115	ppb	#	83

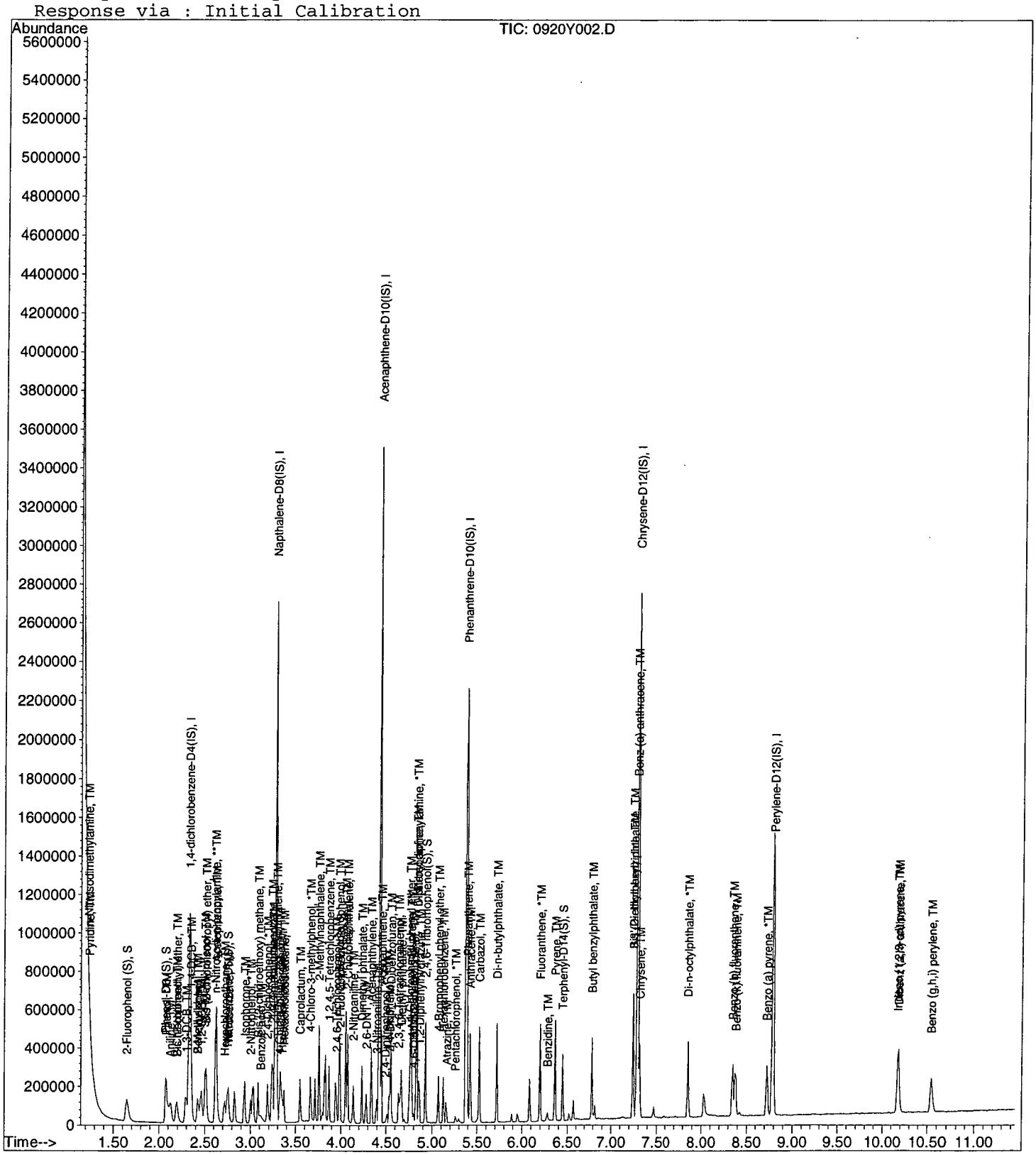
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0920Y002.D Vial: 2
Acq On : 20 Sep 14 22:40 Operator: CSC
Sample : 5ppm SVOC 09-20-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:00 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y003.D Vial: 3
Acq On : 20 Sep 14 22:57 Operator: CSC
Sample : 10ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:00 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.32	152	301829	40.00000 ppb		0.00
20) Napthalene-D8(IS)	3.28	136	1345284	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	4.42	164	748513	40.00000 ppb		0.00
62) Phenanthrene-D10(IS)	5.37	188	1127981	40.00000 ppb		0.00
76) Chrysene-D12(IS)	7.26	240	889152	40.00000 ppb		0.02
87) Perylene-D12(IS)	8.76	264	651430	40.00000 ppb		0.02
System Monitoring Compounds						
4) 2-Fluorophenol (S)	1.64	112	149972	22.24159 ppb		0.00
Spiked Amount 200.000			Recovery =	11.121%		
5) Phenol-D6 (S)	2.07	99	202123	23.61131 ppb		0.00
Spiked Amount 200.000			Recovery =	11.806%		
21) Nitrobenzene-D5(S)	2.75	82	86980	10.26679 ppb		0.00
Spiked Amount 100.000			Recovery =	10.267%		
44) 2-Fluorobiphenyl(S)	3.99	172	188572	8.74429 ppb		0.00
Spiked Amount 100.000			Recovery =	8.744%		
61) 2,4,6-Tribromophenol(S)	4.92	330	51219	18.56654 ppb		0.00
Spiked Amount 200.000			Recovery =	9.284%		
79) Terphenyl-D14(S)	6.42	244	171783	9.25721 ppb		0.00
Spiked Amount 100.000			Recovery =	9.257%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.23	74	34834	10.89829 ppb	#	65
3) Pyridine	1.24	52	55623	11.98418 ppb		89
6) Phenol	2.08	94	133274	12.67736 ppb		100
7) Aniline	2.13	93	175798	11.26903 ppb	#	83
8) Bis (2-chloroethyl) ether	2.19	63	23357	11.67991 ppb		95
9) 2-Chlorophenol	2.19	128	132040	11.78209 ppb		98
10) 1,3-DCB	2.29	146	149230	11.83290 ppb		98
11) 1,4-DCB	2.34	146	142692	10.75495 ppb		99
12) Benzyl alcohol	2.42	79	81813	11.61722 ppb		90
13) 1,2-DCB	2.46	146	135114	11.44107 ppb		96
14) 2-Methylphenol	2.42	108	86974	11.27757 ppb		100
15) Bis (2-chloroisopropyl) et	2.51	45	249900	12.35390 ppb		99
16) Acetophenone	2.62	105	167421	12.32418 ppb		98
17) 3&4-Methylphenol	2.50	107	105047	23.17041 ppb		98
18) n-Nitrosodi-n-propylamine	2.61	43	114569	13.41373 ppb		97
19) Hexachloroethane	2.72	117	45117	11.21091 ppb		94
22) Nitrobenzene	2.76	77	105390	11.17399 ppb		92
23) Isophorone	2.93	82	207422	11.35012 ppb		98
24) 2-Nitrophenol	3.00	139	66238	10.45720 ppb		92
25) 2,4-Dimethylphenol	3.24	107	136783	11.20507 ppb		94
26) Benzoic acid	3.11	105	49994	7.19800 ppb		98
27) Bis (2-chloroethoxy) metha	3.08	93	132167	11.34330 ppb		96
28) 2,4-Dichlorophenol	3.18	162	94809	10.48424 ppb		95
29) 1,2,4-Trichlorobenzene	3.23	180	98771	10.53021 ppb		99
30) Naphthalene	3.29	128	379150	11.04969 ppb		99
31) 4-Chloroaniline	3.33	127	77809	9.29943 ppb	#	96
32) 2,6-Dichlorophenol	3.34	162	93579	10.31300 ppb		95
33) Hexachloropropene	3.35	213	40688	9.45470 ppb		99
34) Hexachlorobutadiene	3.37	225	39805	10.05362 ppb		99
35) Caprolactum	3.56	113	41099	10.76849 ppb		83
36) 4-Chloro-3-methylphenol	3.66	107	99977	11.85335 ppb		74
37) 2-Methylnaphthalene	3.75	142	260949	10.66299 ppb		98

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y140920B\0920Y003.D Vial: 3
Acq On : 20 Sep 14 22:57 Operator: CSC
Sample : 10ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:00 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39) Hexachlorocyclopentadiene	3.86	237	2216	-40.00000 ppb		89
40) 1,2,4,5-Tetrachlorobenzene	3.87	216	88221	10.57149 ppb		94
41) 2,4,6-Trichlorophenol	3.95	196	50442	9.29044 ppb		95
42) 2,4,5-Trichlorophenol	3.98	196	60376	10.19392 ppb	#	96
43) 2-Chloronaphthalene	4.07	162	250461	11.52749 ppb		99
45) 1,1'-Biphenyl	4.05	154	326576	11.64412 ppb	#	96
46) 2-Nitroaniline	4.13	138	90534	10.54335 ppb		95
47) Dimethyl phthalate	4.23	163	195019	9.19625 ppb	#	48
48) 2,6-DNT	4.28	165	52720	9.91005 ppb		98
49) Acenaphthylene	4.34	152	341708	9.85467 ppb		99
50) 3-Nitroaniline	4.39	65	50404	10.35393 ppb		90
51) Acenaphthene	4.45	154	233874	10.80079 ppb		99
52) 2,4-Dinitrophenol	4.48	184	4221	15.90494 ppb	#	100
53) 4-Nitrophenol	4.53	109	11418	10.50943 ppb		86
54) Dibenzofuran	4.55	168	324698	10.80359 ppb		93
55) 2,4-DNT	4.54	165	57149	8.77257 ppb		91
56) 2,3,4,6-Tetrachlorophenol	4.63	232	35086	9.04951 ppb	#	84
57) Diethyl phthalate	4.66	149	198060	11.25357 ppb	#	87
58) 4-Chlorophenyl phenyl ethe	4.76	204	96444	9.82383 ppb		92
59) Fluorene	4.77	165	246132	11.08876 ppb		98
60) 4-Nitroaniline	4.78	138	67137	11.83783 ppb		97
63) Diphenyl amine	4.83	168	253375	12.32940 ppb		99
64) 4,6-Dinitro-2-methylphenol	4.80	198	16153	15.54648 ppb		95
65) n-Nitrosodiphenylamine	4.83	167	137155	12.20612 ppb		99
66) 1,2-Diphenylhydrazine	4.86	182	56013	8.77153 ppb		86
67) 4-Bromophenyl phenyl ether	5.07	248	47561	9.79609 ppb		100
68) Hexachlorobenzene	5.12	284	64624	9.76904 ppb	#	89
69) Atrazine	5.15	200	29332	4.93226 ppb		97
70) Pentachlorophenol	5.25	266	11533	6.72276 ppb		97
71) Phenanthrene	5.38	178	321954	9.20542 ppb		100
72) Anthracene	5.42	178	316370	9.75385 ppb		99
73) Carbazol	5.51	167	343545	9.94580 ppb		93
74) Di-n-butylphthalate	5.71	149	400792	10.10841 ppb		99
75) Fluoranthene	6.17	202	304851	9.32671 ppb	#	80
77) Benzidine	6.26	184	41828	7.95271 ppb		94
78) Pyrene	6.34	202	339401	10.29917 ppb	#	87
80) Butyl benzylphthalate	6.75	149	173624	11.11866 ppb	#	66
81) 3,3'-Dichlorobenzidine	7.21	252	73870	10.15796 ppb		95
82) Benz (a) anthracene	7.25	228	307592	10.93651 ppb		99
83) Bis (2-ethylhexyl) phthala	7.21	149	242463	11.55618 ppb		99
84) Chrysene	7.28	228	222624	9.03824 ppb	#	94
85) Di-n-octylphthalate	7.82	149	390956	10.09000 ppb		99
86) Indeno (1,2,3-cd) pyrene	10.14	276	266977	9.20959 ppb	#	79
88) Benzo (b) fluoranthene	8.32	252	260499	9.46767 ppb		98
89) Benzo (k) fluoranthene	8.35	252	240466	10.00747 ppb		98
90) Benzo (a) pyrene	8.69	252	235271	9.36748 ppb	#	90
91) Dibenz (a,h) anthracene	10.15	278	216265	9.16441 ppb	#	83
92) Benzo (g,h,i) perylene	10.51	276	210404	9.76924 ppb	#	80

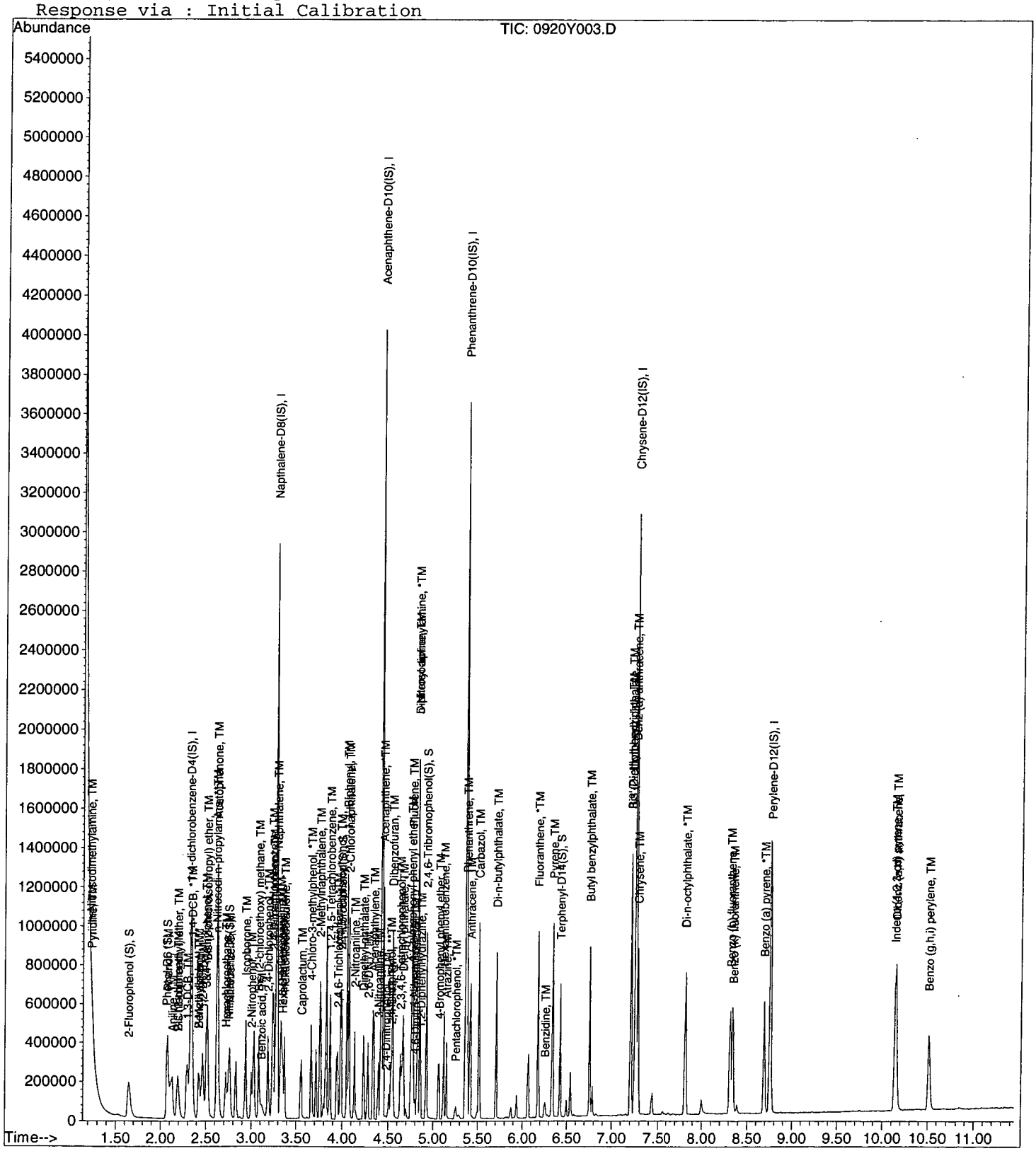
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0920Y003.D Vial: 3
Acq On : 20 Sep 14 22:57 Operator: CSC
Sample : 10ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:00 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y004.D Vial: 4
Acq On : 20 Sep 14 23:14 Operator: CSC
Sample : 20ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:00 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.32	152	326365	40.00000 ppb		0.00
20) Napthalene-D8(IS)	3.28	136	1420169	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	4.42	164	802867	40.00000 ppb		0.00
62) Phenanthrene-D10(IS)	5.37	188	1186630	40.00000 ppb		0.00
76) Chrysene-D12(IS)	7.26	240	926371	40.00000 ppb		0.02
87) Perylene-D12(IS)	8.76	264	694222	40.00000 ppb		0.02
System Monitoring Compounds						
4) 2-Fluorophenol (S)	1.64	112	321459	44.08985 ppb		0.00
Spiked Amount 200.000			Recovery = 22.045%			
5) Phenol-D6 (S)	2.07	99	420331	45.41017 ppb		0.00
Spiked Amount 200.000			Recovery = 22.705%			
21) Nitrobenzene-D5(S)	2.75	82	186864	20.89367 ppb		0.00
Spiked Amount 100.000			Recovery = 20.894%			
44) 2-Fluorobiphenyl(S)	3.99	172	443888	19.19007 ppb		0.00
Spiked Amount 100.000			Recovery = 19.190%			
61) 2,4,6-Tribromophenol(S)	4.92	330	135635	45.83818 ppb		0.00
Spiked Amount 200.000			Recovery = 22.919%			
79) Terphenyl-D14(S)	6.42	244	427077	22.09007 ppb		0.00
Spiked Amount 100.000			Recovery = 22.090%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.22	74	72724	21.04214 ppb		91
3) Pyridine	1.24	52	107937	21.50709 ppb		92
6) Phenol	2.08	94	248009	21.81767 ppb		95
7) Aniline	2.13	93	335621	19.89661 ppb	#	83
8) Bis (2-chloroethyl) ether	2.19	63	46647	21.57266 ppb		98
9) 2-Chlorophenol	2.19	128	250460	20.66868 ppb		99
10) 1,3-DCB	2.29	146	270101	19.80699 ppb		99
11) 1,4-DCB	2.35	146	298527	20.80893 ppb		98
12) Benzyl alcohol	2.42	79	157320	20.65957 ppb		97
13) 1,2-DCB	2.46	146	256058	20.05220 ppb		99
14) 2-Methylphenol	2.42	108	171675	20.58687 ppb		97
15) Bis (2-chloroisopropyl) et	2.51	45	469189	21.45078 ppb		99
16) Acetophenone	2.62	105	317494	21.61430 ppb		99
17) 3&4-Methylphenol	2.50	107	203954	41.60444 ppb		99
18) n-Nitrosodi-n-propylamine	2.61	43	209194	22.65108 ppb		96
19) Hexachloroethane	2.72	117	87504	20.10878 ppb		94
22) Nitrobenzene	2.76	77	202393	20.32723 ppb		96
23) Isophorone	2.93	82	391105	20.27277 ppb		100
24) 2-Nitrophenol	3.00	139	129263	19.33109 ppb		93
25) 2,4-Dimethylphenol	3.25	107	260031	20.17817 ppb		97
26) Benzoic acid	3.10	105	116875	20.00000 ppb		95
27) Bis (2-chloroethoxy) metha	3.08	93	249228	20.26222 ppb		97
28) 2,4-Dichlorophenol	3.18	162	187119	19.60104 ppb		97
29) 1,2,4-Trichlorobenzene	3.23	180	191508	19.34054 ppb		100
30) Naphthalene	3.29	128	721389	19.91510 ppb		100
31) 4-Chloroaniline	3.33	127	155393	17.59268 ppb	#	96
32) 2,6-Dichlorophenol	3.33	162	184498	19.26071 ppb		97
33) Hexachloropropene	3.35	213	85164	18.74611 ppb		99
34) Hexachlorobutadiene	3.37	225	79076	18.91922 ppb		100
35) Caprolactum	3.56	113	80289	19.92753 ppb		90
36) 4-Chloro-3-methylphenol	3.66	107	186268	20.91959 ppb		77
37) 2-Methylnaphthalene	3.75	142	497119	19.24233 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y004.D Vial: 4
Acq On : 20 Sep 14 23:14 Operator: CSC
Sample : 20ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:00 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Hexachlorocyclopentadiene	3.86	237	12504	16.01329	ppb		99
40)	1,2,4,5-Tetrachlorobenzene	3.87	216	177017	19.77584	ppb		96
41)	2,4,6-Trichlorophenol	3.95	196	99371	17.06316	ppb		98
42)	2,4,5-Trichlorophenol	3.98	196	122520	19.28588	ppb	#	96
43)	2-Chloronaphthalene	4.07	162	484776	20.80136	ppb		99
45)	1,1'-Biphenyl	4.05	154	617102	20.51327	ppb	#	97
46)	2-Nitroaniline	4.14	138	179813	19.52287	ppb		98
47)	Dimethyl phthalate	4.23	163	378998	16.66197	ppb	#	47
48)	2,6-DNT	4.28	165	111034	19.45863	ppb		97
49)	Acenaphthylene	4.33	152	680275	18.29057	ppb		99
50)	3-Nitroaniline	4.39	65	91492	17.52182	ppb		98
51)	Acenaphthene	4.45	154	459747	19.79466	ppb		97
52)	2,4-Dinitrophenol	4.47	184	15667	20.00000	ppb	#	100
53)	4-Nitrophenol	4.52	109	22352	19.18056	ppb		76
54)	Dibenzofuran	4.55	168	680410	21.10644	ppb		100
55)	2,4-DNT	4.54	165	115007	16.45879	ppb		94
56)	2,3,4,6-Tetrachlorophenol	4.63	232	70606	16.97809	ppb	#	94
57)	Diethyl phthalate	4.66	149	401576	19.34020	ppb		89
58)	4-Chlorophenyl phenyl ethe	4.76	204	183661	17.44128	ppb		95
59)	Fluorene	4.77	165	483971	20.32778	ppb		97
60)	4-Nitroaniline	4.78	138	129077	19.78818	ppb		95
63)	Diphenyl amine	4.83	168	498603	23.06320	ppb		99
64)	4,6-Dinitro-2-methylphenol	4.80	198	41366	20.00000	ppb		95
65)	n-Nitrosodiphenylamine	4.83	167	270524	22.88538	ppb		98
66)	1,2-Diphenylhydrazine	4.86	182	110994	16.52237	ppb		92
67)	4-Bromophenyl phenyl ether	5.07	248	88792	17.38450	ppb		92
68)	Hexachlorobenzene	5.12	284	133046	19.11816	ppb		93
69)	Atrazine	5.15	200	55696	8.90255	ppb		98
70)	Pentachlorophenol	5.25	266	25441	14.09697	ppb		96
71)	Phenanthrene	5.38	178	670583	18.22589	ppb		100
72)	Anthracene	5.42	178	615544	18.03958	ppb		100
73)	Carbazol	5.51	167	694690	19.11761	ppb		95
74)	Di-n-butylphthalate	5.71	149	740649	17.75673	ppb		99
75)	Fluoranthene	6.17	202	661554	19.23945	ppb		92
77)	Benzidine	6.25	184	82613	15.07604	ppb	#	93
78)	Pyrene	6.34	202	680363	19.81623	ppb	#	92
80)	Butyl benzylphthalate	6.75	149	327811	20.14917	ppb	#	67
81)	3,3'-Dichlorobenzidine	7.21	252	148672	19.62270	ppb		98
82)	Benz (a) anthracene	7.25	228	579910	19.79044	ppb		99
83)	Bis (2-ethylhexyl) phthala	7.21	149	475847	21.76844	ppb		99
84)	Chrysene	7.28	228	478951	18.66354	ppb	#	95
85)	Di-n-octylphthalate	7.82	149	776872	19.24438	ppb		100
86)	Indeno (1,2,3-cd) pyrene	10.15	276	562390	18.62065	ppb		90
88)	Benzo (b) fluoranthene	8.32	252	525597	17.92500	ppb		99
89)	Benzo (k) fluoranthene	8.35	252	499959	19.52426	ppb		100
90)	Benzo (a) pyrene	8.69	252	495157	18.49979	ppb	#	90
91)	Dibenz (a,h) anthracene	10.16	278	465471	18.50888	ppb		94
92)	Benzo (g,h,i) perylene	10.52	276	416082	18.12821	ppb		91

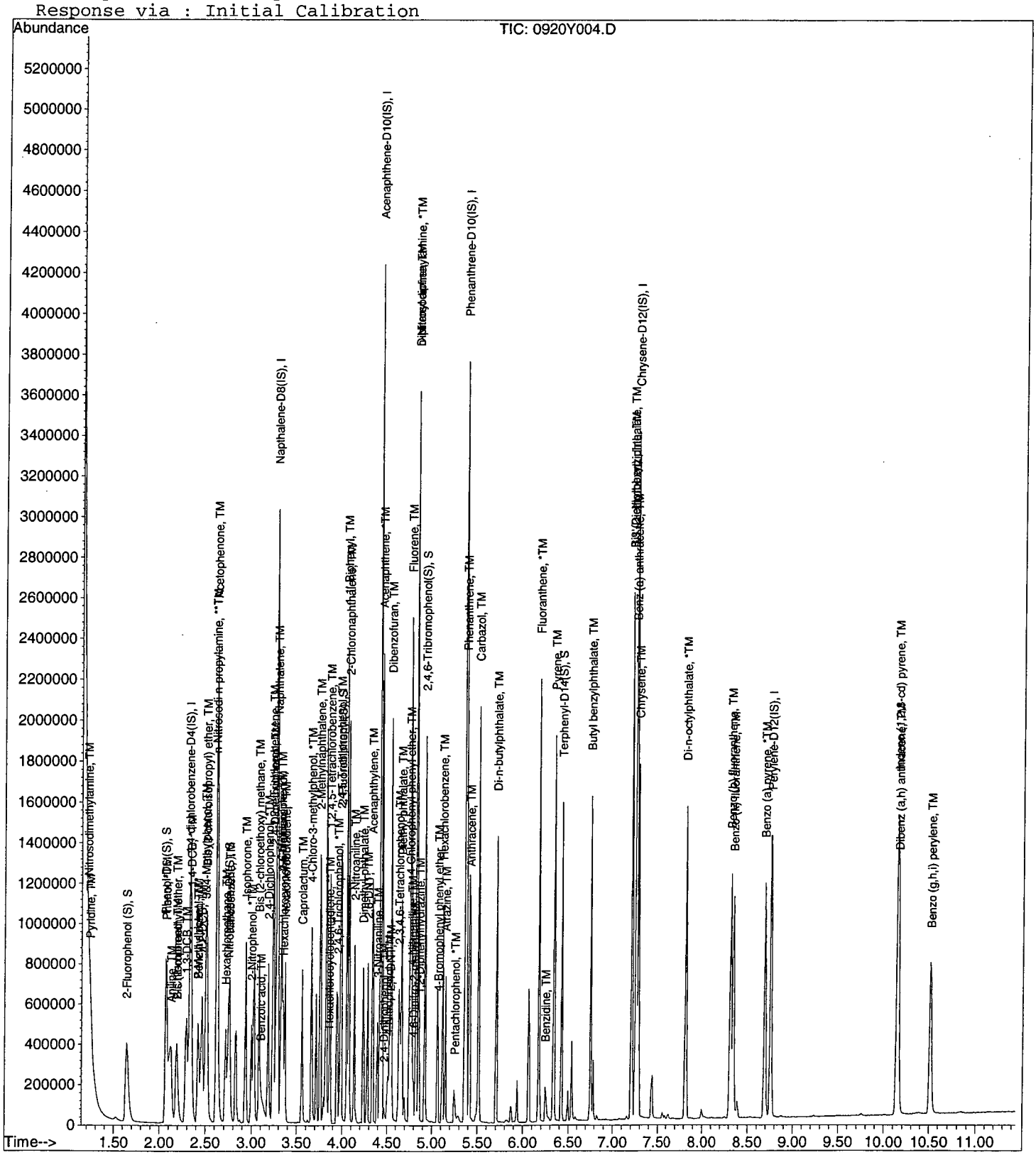
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0920Y004.D Vial: 4
Acq On : 20 Sep 14 23:14 Operator: CSC
Sample : 20ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:00 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y005.D Vial: 5
Acq On : 20 Sep 14 23:31 Operator: CSC
Sample : 40ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.33	152	360156	40.00000 ppb		0.00
20) Napthalene-D8(IS)	3.27	136	1504936	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	4.42	164	820086	40.00000 ppb		0.00
62) Phenanthrene-D10(IS)	5.37	188	1164643	40.00000 ppb		0.00
76) Chrysene-D12(IS)	7.24	240	1014790	40.00000 ppb		0.00
87) Perylene-D12(IS)	8.73	264	733554	40.00000 ppb		-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (S)	1.64	112	619099	76.94601 ppb		0.00
Spiked Amount 200.000			Recovery = 38.473%			
5) Phenol-D6 (S)	2.06	99	776416	76.00972 ppb		0.00
Spiked Amount 200.000			Recovery = 38.005%			
21) Nitrobenzene-D5(S)	2.75	82	376112	39.68517 ppb		0.00
Spiked Amount 100.000			Recovery = 39.685%			
44) 2-Fluorobiphenyl(S)	3.99	172	1006372	42.59374 ppb		0.00
Spiked Amount 100.000			Recovery = 42.594%			
61) 2,4,6-Tribromophenol(S)	4.92	330	238102	78.77762 ppb		0.00
Spiked Amount 200.000			Recovery = 39.389%			
79) Terphenyl-D14(S)	6.40	244	760665	35.91642 ppb		-0.01
Spiked Amount 100.000			Recovery = 35.916%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.23	74	150779	39.53357 ppb		99
3) Pyridine	1.24	52	216304	39.05609 ppb		96
6) Phenol	2.07	94	490027	39.06374 ppb		97
7) Aniline	2.13	93	749309	40.25351 ppb	#	85
8) Bis (2-chloroethyl) ether	2.19	63	91991	38.55122 ppb		100
9) 2-Chlorophenol	2.19	128	535769	40.06497 ppb		98
10) 1,3-DCB	2.29	146	626091	41.60473 ppb		99
11) 1,4-DCB	2.34	146	611267	38.61091 ppb		99
12) Benzyl alcohol	2.42	79	338152	40.24039 ppb		94
13) 1,2-DCB	2.46	146	565935	40.16088 ppb		99
14) 2-Methylphenol	2.42	108	364275	39.58454 ppb		99
15) Bis (2-chloroisopropyl) et	2.52	45	951883	39.43590 ppb		98
16) Acetophenone	2.63	105	638489	39.38873 ppb		82
17) 3&4-Methylphenol	2.50	107	431296	79.72524 ppb		99
18) n-Nitrosodi-n-propylamine	2.62	43	395655	38.82123 ppb		91
19) Hexachloroethane	2.72	117	192952	40.18094 ppb		91
22) Nitrobenzene	2.77	77	425996	40.37478 ppb		94
23) Isophorone	2.93	82	822942	40.25417 ppb		97
24) 2-Nitrophenol	3.01	139	287693	40.60069 ppb		92
25) 2,4-Dimethylphenol	3.24	107	562563	41.19550 ppb		96
26) Benzoic acid	3.12	105	216362	40.00000 ppb		95
27) Bis (2-chloroethoxy) metha	3.08	93	533461	40.92747 ppb		95
28) 2,4-Dichlorophenol	3.18	162	421430	41.65898 ppb		98
29) 1,2,4-Trichlorobenzene	3.23	180	431206	41.09494 ppb		99
30) Naphthalene	3.30	128	1570204	40.90637 ppb		99
31) 4-Chloroaniline	3.33	127	397194	42.43510 ppb	#	94
32) 2,6-Dichlorophenol	3.34	162	424924	41.86142 ppb		95
33) Hexachloropropene	3.35	213	197496	41.02376 ppb		100
34) Hexachlorobutadiene	3.37	225	178314	40.25929 ppb		99
35) Caprolactum	3.57	113	178138	41.72304 ppb		92
36) 4-Chloro-3-methylphenol	3.67	107	372139	39.44047 ppb		94
37) 2-Methylnaphthalene	3.76	142	1174036	42.88452 ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y005.D Vial: 5
Acq On : 20 Sep 14 23:31 Operator: CSC
Sample : 40ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Hexachlorocyclopentadiene	3.85	237	55625	40.00000	ppb		99
40)	1,2,4,5-Tetrachlorobenzene	3.86	216	342317	37.43972	ppb	#	90
41)	2,4,6-Trichlorophenol	3.95	196	269405	45.28867	ppb		95
42)	2,4,5-Trichlorophenol	3.98	196	281823	43.43033	ppb	#	97
43)	2-Chloronaphthalene	4.07	162	918035	38.56506	ppb		96
45)	1,1'-Biphenyl	4.05	154	1170440	38.09003	ppb	#	96
46)	2-Nitroaniline	4.13	138	363817	38.67139	ppb		84
47)	Dimethyl phthalate	4.24	163	1092264	47.01119	ppb		93
48)	2,6-DNT	4.28	165	216443	37.13506	ppb	#	80
49)	Acenaphthylene	4.34	152	1645121	43.30367	ppb		99
50)	3-Nitroaniline	4.39	65	229776	43.08091	ppb		86
51)	Acenaphthene	4.44	154	983104	41.43935	ppb		99
52)	2,4-Dinitrophenol	4.46	184	57124	40.00000	ppb		100
53)	4-Nitrophenol	4.52	109	47714	40.08436	ppb		72
54)	Dibenzofuran	4.55	168	1256945	38.17199	ppb		94
55)	2,4-DNT	4.54	165	332356	46.56520	ppb		89
56)	2,3,4,6-Tetrachlorophenol	4.63	232	175524	41.32071	ppb	#	89
57)	Diethyl phthalate	4.67	149	951041	41.97941	ppb		98
58)	4-Chlorophenyl phenyl ethe	4.75	204	507361	47.16966	ppb		92
59)	Fluorene	4.77	165	982865	40.41558	ppb		99
60)	4-Nitroaniline	4.78	138	284689	40.63547	ppb		98
63)	Diphenyl amine	4.83	168	832236	39.22236	ppb		100
64)	4,6-Dinitro-2-methylphenol	4.80	198	134791	40.00000	ppb		93
65)	n-Nitrosodiphenylamine	4.83	167	457023	39.39244	ppb		100
66)	1,2-Diphenylhydrazine	4.86	182	300670	45.60215	ppb	#	71
67)	4-Bromophenyl phenyl ether	5.07	248	228943	45.67075	ppb		96
68)	Hexachlorobenzene	5.12	284	285426	41.78884	ppb	#	87
69)	Atrazine	5.15	200	123080	20.04474	ppb		98
70)	Pentachlorophenol	5.24	266	77320	43.65218	ppb		99
71)	Phenanthrene	5.38	178	1537446	42.57538	ppb		99
72)	Anthracene	5.41	178	1411870	42.15844	ppb		100
73)	Carbazol	5.51	167	1475416	41.36942	ppb		99
74)	Di-n-butylphthalate	5.70	149	1729550	42.24799	ppb		99
75)	Fluoranthene	6.16	202	1415785	41.95147	ppb		98
77)	Benzidine	6.23	184	245157	40.84059	ppb		98
78)	Pyrene	6.32	202	1413678	37.58716	ppb	#	61
80)	Butyl benzylphthalate	6.73	149	674159	37.82725	ppb	#	71
81)	3,3'-Dichlorobenzidine	7.19	252	329547	39.70596	ppb		99
82)	Benz (a) anthracene	7.23	228	1281466	39.92186	ppb		99
83)	Bis (2-ethylhexyl) phthala	7.19	149	931152	38.88565	ppb	#	96
84)	Chrysene	7.26	228	1064700	37.87381	ppb	#	97
85)	Di-n-octylphthalate	7.80	149	1769515	40.01451	ppb		100
86)	Indeno (1,2,3-cd) pyrene	10.13	276	1313930	39.71351	ppb		97
88)	Benzo (b) fluoranthene	8.29	252	1255843	40.53292	ppb		97
89)	Benzo (k) fluoranthene	8.32	252	1184950	43.79317	ppb		96
90)	Benzo (a) pyrene	8.67	252	1191243	42.12021	ppb	#	93
91)	Dibenz (a,h) anthracene	10.14	278	1112434	41.86279	ppb		96
92)	Benzo (g,h,i) perylene	10.50	276	1016421	41.90983	ppb		89

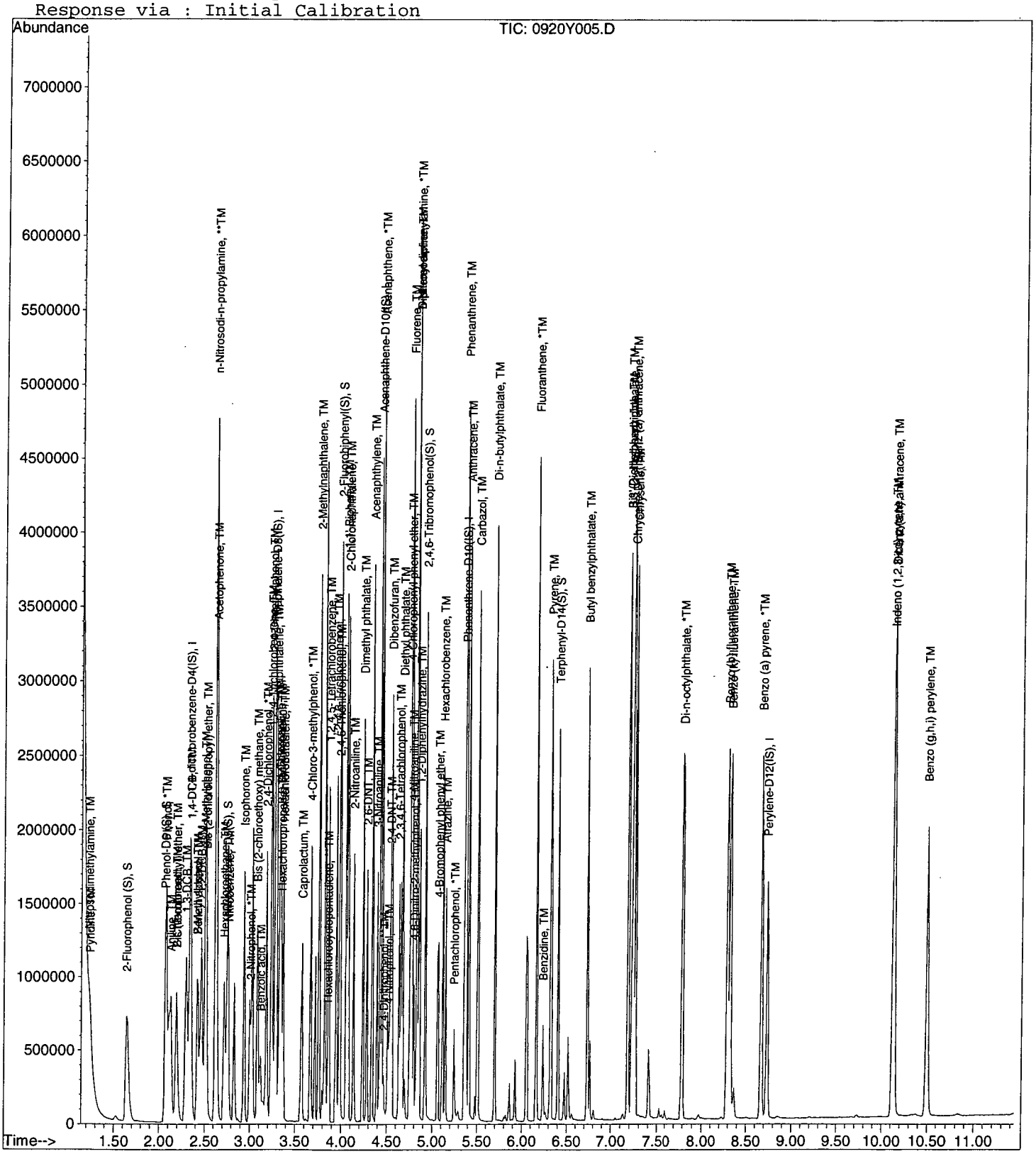
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0920Y005.D Vial: 5
Acq On : 20 Sep 14 23:31 Operator: CSC
Sample : 40ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y006.D Vial: 6
Acq On : 20 Sep 14 23:48 Operator: CSC
Sample : 50ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.33	152	365188	40.00000 ppb	0.00
20) Napthalene-D8(IS)	3.28	136	1535213	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	4.43	164	819768	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	1138654	40.00000 ppb	0.00
76) Chrysene-D12(IS)	7.24	240	937409	40.00000 ppb	0.00
87) Perylene-D12(IS)	8.74	264	757630	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	1.64	112	763559	93.59286 ppb	0.00
Spiked Amount 200.000			Recovery =	46.797%	
5) Phenol-D6 (S)	2.07	99	947314	91.46243 ppb	0.00
Spiked Amount 200.000			Recovery =	45.731%	
21) Nitrobenzene-D5(S)	2.75	82	465608	48.15938 ppb	0.00
Spiked Amount 100.000			Recovery =	48.159%	
44) 2-Fluorobiphenyl(S)	3.99	172	1152152	48.78266 ppb	0.00
Spiked Amount 100.000			Recovery =	48.783%	
61) 2,4,6-Tribromophenol(S)	4.92	330	262648	86.93253 ppb	0.00
Spiked Amount 200.000			Recovery =	43.467%	
79) Terphenyl-D14(S)	6.41	244	975829	49.87931 ppb	0.00
Spiked Amount 100.000			Recovery =	49.879%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.22	74	185541	47.97768 ppb	100
3) Pyridine	1.24	52	266251	47.41215 ppb	100
6) Phenol	2.08	94	593064	46.62615 ppb	100
7) Aniline	2.12	93	942639	49.94159 ppb	100
8) Bis (2-chloroethyl) ether	2.19	63	115846	47.87933 ppb	100
9) 2-Chlorophenol	2.19	128	654199	48.24710 ppb	100
10) 1,3-DCB	2.29	146	739695	48.47660 ppb	100
11) 1,4-DCB	2.35	146	798042	49.71403 ppb	100
12) Benzyl alcohol	2.42	79	409425	48.05059 ppb	100
13) 1,2-DCB	2.46	146	709691	49.66839 ppb	100
14) 2-Methylphenol	2.42	108	457707	49.05214 ppb	100
15) Bis (2-chloroisopropyl) et	2.51	45	1152225	47.07818 ppb	100
16) Acetophenone	2.63	105	768047	46.72835 ppb	100
17) 3&4-Methylphenol	2.50	107	528418	96.33235 ppb	100
18) n-Nitrosodi-n-propylamine	2.62	43	463441	44.84575 ppb	100
19) Hexachloroethane	2.72	117	241033	49.50186 ppb	100
22) Nitrobenzene	2.76	77	524318	48.71345 ppb	100
23) Isophorone	2.94	82	1021900	49.00038 ppb	100
24) 2-Nitrophenol	3.00	139	368084	50.92141 ppb	100
25) 2,4-Dimethylphenol	3.25	107	669511	48.06021 ppb	100
26) Benzoic acid	3.12	105	261555	50.00000 ppb	100
27) Bis (2-chloroethoxy) metha	3.08	93	640695	48.18512 ppb	100
28) 2,4-Dichlorophenol	3.18	162	504878	48.92367 ppb	100
29) 1,2,4-Trichlorobenzene	3.24	180	538198	50.27998 ppb	100
30) Naphthalene	3.29	128	1921826	49.07930 ppb	100
31) 4-Chloroaniline	3.33	127	505818	52.97442 ppb	100
32) 2,6-Dichlorophenol	3.33	162	512792	49.52145 ppb	100
33) Hexachloropropene	3.35	213	254662	51.85501 ppb	100
34) Hexachlorobutadiene	3.37	225	236656	52.37783 ppb	100
35) Caprolactum	3.58	113	209180	48.02738 ppb	100
36) 4-Chloro-3-methylphenol	3.67	107	465868	48.40043 ppb	100
37) 2-Methylnaphthalene	3.75	142	1348576	48.28853 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y006.D Vial: 6
Acq On : 20 Sep 14 23:48 Operator: CSC
Sample : 50ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Hexachlorocyclopentadiene	3.86	237	103809	50.00000	ppb	100
40)	1,2,4,5-Tetrachlorobenzene	3.87	216	491352	53.76075	ppb	100
41)	2,4,6-Trichlorophenol	3.95	196	301664	50.73128	ppb	100
42)	2,4,5-Trichlorophenol	3.98	196	308095	47.49739	ppb	100
43)	2-Chloronaphthalene	4.07	162	1184790	49.79028	ppb	100
45)	1,1'-Biphenyl	4.05	154	1569736	51.10428	ppb	100
46)	2-Nitroaniline	4.14	138	497049	52.85358	ppb	100
47)	Dimethyl phthalate	4.24	163	1151527	49.58110	ppb	100
48)	2,6-DNT	4.28	165	320064	54.93459	ppb	100
49)	Acenaphthylene	4.33	152	1904249	50.14400	ppb	100
50)	3-Nitroaniline	4.40	65	279075	52.34432	ppb	100
51)	Acenaphthene	4.45	154	1155243	48.71416	ppb	100
52)	2,4-Dinitrophenol	4.47	184	68662	50.00000	ppb	100
53)	4-Nitrophenol	4.51	109	61806	51.94314	ppb	100
54)	Dibenzofuran	4.55	168	1629950	49.51892	ppb	100
55)	2,4-DNT	4.54	165	361346	50.64652	ppb	100
56)	2,3,4,6-Tetrachlorophenol	4.63	232	237379	55.90389	ppb	100
57)	Diethyl phthalate	4.67	149	1110697	48.68039	ppb	100
58)	4-Chlorophenyl phenyl ethe	4.76	204	510014	47.43471	ppb	100
59)	Fluorene	4.77	165	1182928	48.66107	ppb	100
60)	4-Nitroaniline	4.78	138	350104	49.57635	ppb	100
63)	Diphenyl amine	4.83	168	898546	43.31403	ppb	100
64)	4,6-Dinitro-2-methylphenol	4.80	198	169890	50.00000	ppb	100
65)	n-Nitrosodiphenylamine	4.83	167	493938	43.54600	ppb	100
66)	1,2-Diphenylhydrazine	4.86	182	333213	51.69139	ppb	100
67)	4-Bromophenyl phenyl ether	5.06	248	242358	49.45033	ppb	100
68)	Hexachlorobenzene	5.12	284	333679	49.96855	ppb	100
69)	Atrazine	5.15	200	166216	27.68770	ppb	100
70)	Pentachlorophenol	5.24	266	104238	60.19234	ppb	100
71)	Phenanthrene	5.38	178	1808200	51.21606	ppb	100
72)	Anthracene	5.41	178	1709246	52.20300	ppb	100
73)	Carbazol	5.51	167	1760660	50.49420	ppb	100
74)	Di-n-butylphthalate	5.70	149	2113222	52.79820	ppb	100
75)	Fluoranthene	6.17	202	1632003	49.46203	ppb	100
77)	Benzidine	6.24	184	339685	61.25917	ppb	100
78)	Pyrene	6.33	202	1857884	53.47548	ppb	100
80)	Butyl benzylphthalate	6.74	149	861726	52.34301	ppb	100
81)	3,3'-Dichlorobenzidine	7.19	252	393390	51.31079	ppb	100
82)	Benz (a) anthracene	7.23	228	1501014	50.62156	ppb	100
83)	Bis (2-ethylhexyl) phthala	7.19	149	1039015	46.97184	ppb	100
84)	Chrysene	7.27	228	1454188	55.99888	ppb	100
85)	Di-n-octylphthalate	7.80	149	2118915	51.87091	ppb	100
86)	Indeno (1,2,3-cd) pyrene	10.14	276	1644453	53.80648	ppb	100
88)	Benzo (b) fluoranthene	8.30	252	1744693	54.52134	ppb	100
89)	Benzo (k) fluoranthene	8.33	252	1298030	46.44790	ppb	100
90)	Benzo (a) pyrene	8.68	252	1492650	51.10026	ppb	100
91)	Dibenz (a,h) anthracene	10.15	278	1410680	51.39931	ppb	100
92)	Benzo (g,h,i) perylene	10.51	276	1309844	52.29218	ppb	100

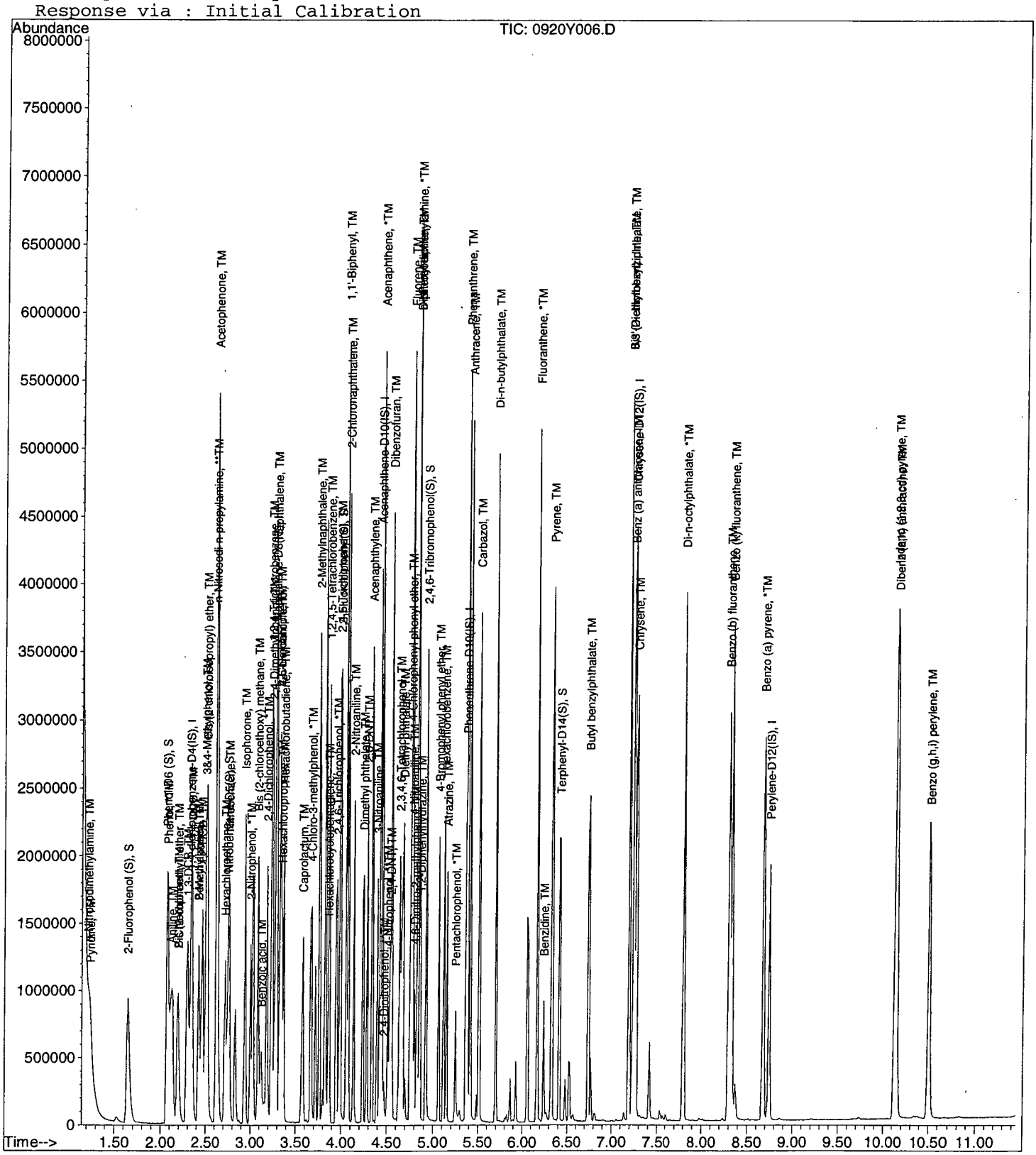
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0920Y006.D Vial: 6
Acq On : 20 Sep 14 23:48 Operator: CSC
Sample : 50ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y007.D Vial: 7
Acq On : 21 Sep 14 00:05 Operator: CSC
Sample : 60ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.33	152	353599	40.00000 ppb		0.00
20) Napthalene-D8(IS)	3.28	136	1480381	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	4.42	164	815497	40.00000 ppb		0.00
62) Phenanthrene-D10(IS)	5.36	188	1129286	40.00000 ppb		-0.01
76) Chrysene-D12(IS)	7.23	240	988062	40.00000 ppb		-0.01
87) Perylene-D12(IS)	8.72	264	720897	40.00000 ppb		-0.02
System Monitoring Compounds						
4) 2-Fluorophenol (S)	1.64	112	898458	113.73742 ppb		0.00
Spiked Amount 200.000			Recovery = 56.869%			
5) Phenol-D6 (S)	2.07	99	1086351	108.32393 ppb		0.00
Spiked Amount 200.000			Recovery = 54.162%			
21) Nitrobenzene-D5(S)	2.75	82	563911	60.48757 ppb		0.00
Spiked Amount 100.000			Recovery = 60.488%			
44) 2-Fluorobiphenyl(S)	3.99	172	1389374	59.13484 ppb		0.00
Spiked Amount 100.000			Recovery = 59.135%			
61) 2,4,6-Tribromophenol(S)	4.92	330	304382	101.27349 ppb		0.00
Spiked Amount 200.000			Recovery = 50.637%			
79) Terphenyl-D14(S)	6.39	244	1144425	55.49821 ppb		-0.02
Spiked Amount 100.000			Recovery = 55.498%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.22	74	215555	57.56558 ppb		97
3) Pyridine	1.24	52	306958	56.45246 ppb		97
6) Phenol	2.08	94	676284	54.91141 ppb		94
7) Aniline	2.13	93	1193104	65.28310 ppb	#	80
8) Bis (2-chloroethyl) ether	2.19	63	131899	56.30072 ppb		98
9) 2-Chlorophenol	2.19	128	767649	58.46952 ppb		99
10) 1,3-DCB	2.29	146	924225	62.55509 ppb		99
11) 1,4-DCB	2.34	146	884302	56.89306 ppb		99
12) Benzyl alcohol	2.42	79	483499	58.60375 ppb		97
13) 1,2-DCB	2.46	146	833441	60.24086 ppb		100
14) 2-Methylphenol	2.42	108	536109	59.33746 ppb		99
15) Bis (2-chloroisopropyl) et	2.52	45	1307990	55.19405 ppb		99
16) Acetophenone	2.63	105	871992	54.79118 ppb		81
17) 3&4-Methylphenol	2.50	107	626540	117.96382 ppb		98
18) n-Nitrosodi-n-propylamine	2.62	43	524494	52.41708 ppb		91
19) Hexachloroethane	2.72	117	280912	59.58278 ppb		99
22) Nitrobenzene	2.77	77	613159	59.07753 ppb		92
23) Isophorone	2.93	82	1189902	59.16942 ppb		96
24) 2-Nitrophenol	3.00	139	422160	60.56556 ppb		93
25) 2,4-Dimethylphenol	3.24	107	767547	57.13840 ppb		97
26) Benzoic acid	3.13	105	343768	79.16415 ppb		96
27) Bis (2-chloroethoxy) metha	3.08	93	747192	58.27589 ppb		96
28) 2,4-Dichlorophenol	3.18	162	624394	62.74606 ppb		99
29) 1,2,4-Trichlorobenzene	3.23	180	635436	61.56302 ppb		100
30) Naphthalene	3.30	128	2237840	59.26638 ppb		99
31) 4-Chloroaniline	3.33	127	628334	68.24293 ppb		98
32) 2,6-Dichlorophenol	3.34	162	628551	62.94884 ppb	#	95
33) Hexachloropropene	3.35	213	298832	63.10283 ppb		99
34) Hexachlorobutadiene	3.37	225	261480	60.01553 ppb		100
35) Caprolactum	3.59	113	257683	61.35496 ppb		93
36) 4-Chloro-3-methylphenol	3.67	107	548920	59.14125 ppb		92
37) 2-Methylnaphthalene	3.76	142	1627121	60.42040 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y007.D Vial: 7
Acq On : 21 Sep 14 00:05 Operator: CSC
Sample : 60ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39) Hexachlorocyclopentadiene	3.86	237	117417	52.39940 ppb		99
40) 1,2,4,5-Tetrachlorobenzene	3.87	216	516180	56.77307 ppb		95
41) 2,4,6-Trichlorophenol	3.95	196	389460	65.83908 ppb		94
42) 2,4,5-Trichlorophenol	3.98	196	414920	64.30105 ppb		98
43) 2-Chloronaphthalene	4.07	162	1300368	54.93360 ppb		98
45) 1,1'-Biphenyl	4.05	154	1608437	52.63847 ppb		97
46) 2-Nitroaniline	4.13	138	533326	57.00810 ppb		88
47) Dimethyl phthalate	4.24	163	1448884	62.71107 ppb		94
48) 2,6-DNT	4.28	165	305908	52.77989 ppb	#	76
49) Acenaphthylene	4.34	152	2352977	62.28472 ppb		99
50) 3-Nitroaniline	4.39	65	336764	63.49549 ppb		87
51) Acenaphthene	4.45	154	1268782	53.78206 ppb		99
52) 2,4-Dinitrophenol	4.47	184	103172	-40.00000 ppb		100
53) 4-Nitrophenol	4.52	109	74002	62.51866 ppb		66
54) Dibenzofuran	4.55	168	1806383	55.16649 ppb		97
55) 2,4-DNT	4.54	165	489572	68.97815 ppb		91
56) 2,3,4,6-Tetrachlorophenol	4.63	232	264370	62.58648 ppb	#	93
57) Diethyl phthalate	4.67	149	1351298	59.05182 ppb		97
58) 4-Chlorophenyl phenyl ethe	4.76	204	638875	59.73084 ppb		94
59) Fluorene	4.77	165	1263548	52.24969 ppb		98
60) 4-Nitroaniline	4.78	138	393643	55.79852 ppb		96
63) Diphenyl amine	4.83	168	1002808	48.74094 ppb		99
64) 4,6-Dinitro-2-methylphenol	4.80	198	214413	64.66095 ppb		87
65) n-Nitrosodiphenylamine	4.83	167	544900	48.43736 ppb		97
66) 1,2-Diphenylhydrazine	4.86	182	438656	68.61328 ppb		79
67) 4-Bromophenyl phenyl ether	5.07	248	312762	64.34482 ppb		94
68) Hexachlorobenzene	5.12	284	389693	58.84076 ppb		94
69) Atrazine	5.15	200	187154	31.43409 ppb		98
70) Pentachlorophenol	5.24	266	133042	77.46255 ppb		98
71) Phenanthrene	5.38	178	1992552	56.90589 ppb		100
72) Anthracene	5.41	178	1954980	60.20340 ppb		99
73) Carbazol	5.50	167	1964230	56.79972 ppb	#	92
74) Di-n-butylphthalate	5.70	149	2380137	59.96030 ppb		99
75) Fluoranthene	6.15	202	1893045	57.84952 ppb		95
77) Benzidine	6.22	184	407063	69.64682 ppb		99
78) Pyrene	6.32	202	2059804	56.24798 ppb		98
80) Butyl benzylphthalate	6.72	149	960320	55.34143 ppb	#	78
81) 3,3'-Dichlorobenzidine	7.18	252	494739	61.22186 ppb		99
82) Benz (a) anthracene	7.22	228	1682321	53.82754 ppb		99
83) Bis (2-ethylhexyl) phthala	7.17	149	1278714	54.84463 ppb		98
84) Chrysene	7.25	228	1544506	56.42783 ppb	#	97
85) Di-n-octylphthalate	7.78	149	2505499	58.19015 ppb		100
86) Indeno (1,2,3-cd) pyrene	10.12	276	1899445	58.96371 ppb		98
88) Benzo (b) fluoranthene	8.28	252	1858471	61.03617 ppb		96
89) Benzo (k) fluoranthene	8.32	252	1741374	65.48733 ppb		96
90) Benzo (a) pyrene	8.66	252	1757474	63.23215 ppb		96
91) Dibenz (a,h) anthracene	10.14	278	1626314	62.27549 ppb		96
92) Benzo (g,h,i) perylene	10.49	276	1583266	66.42859 ppb		92

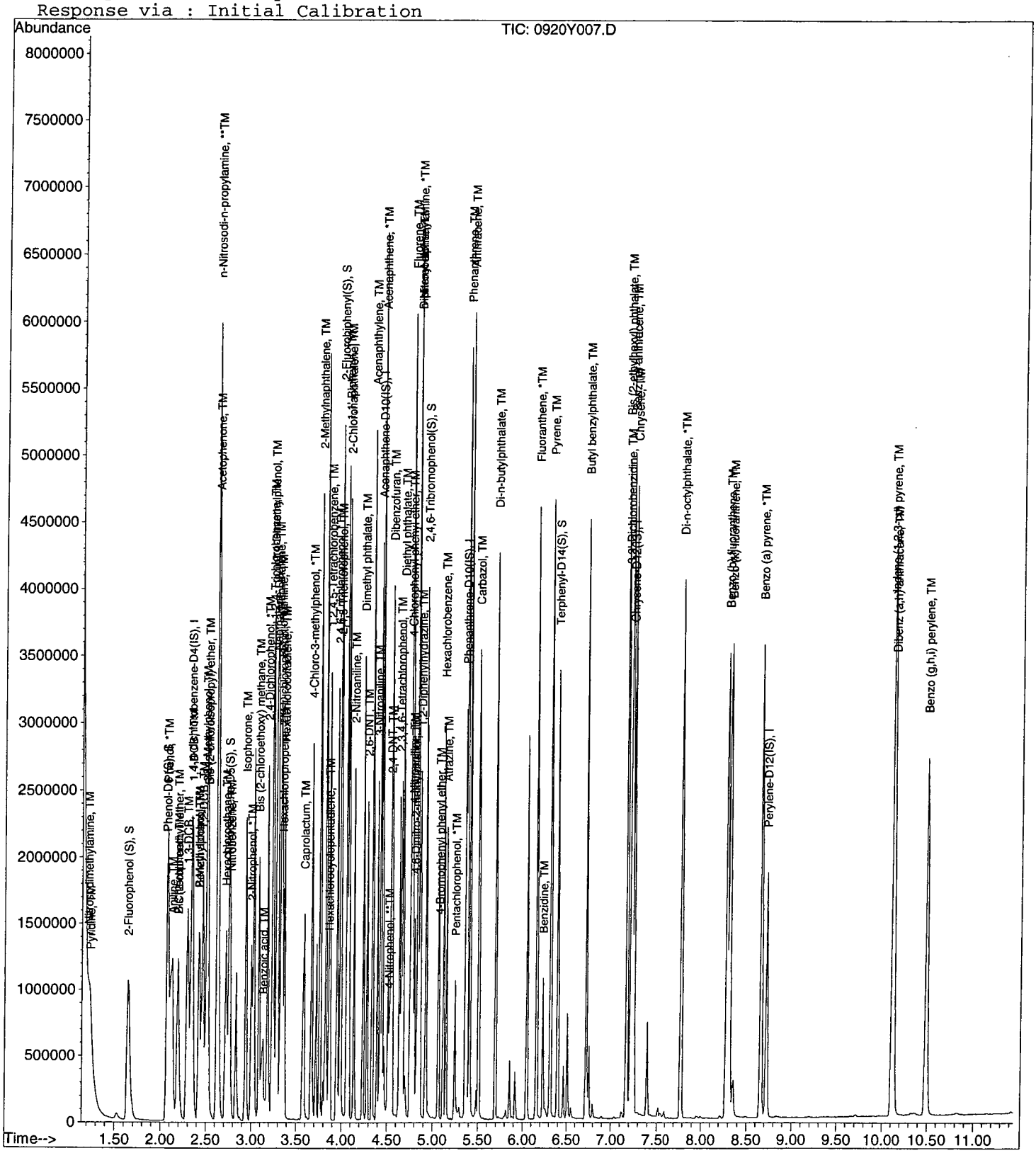
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0920Y007.D Vial: 7
Acq On : 21 Sep 14 00:05 Operator: CSC
Sample : 60ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration



1045

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y008.D Vial: 8
Acq On : 21 Sep 14 00:22 Operator: CSC
Sample : 80ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.33	152	362609	40.00000 ppb		0.00
20) Napthalene-D8(IS)	3.28	136	1485739	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	4.43	164	808271	40.00000 ppb		0.00
62) Phenanthrene-D10(IS)	5.37	188	1190763	40.00000 ppb		0.00
76) Chrysene-D12(IS)	7.24	240	968808	40.00000 ppb		0.00
87) Perylene-D12(IS)	8.73	264	751852	40.00000 ppb		-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (S)	1.64	112	1189369	146.82319 ppb		0.00
Spiked Amount 200.000			Recovery =	73.412%		
5) Phenol-D6 (S)	2.07	99	1382159	134.39549 ppb		0.00
Spiked Amount 200.000			Recovery =	67.198%		
21) Nitrobenzene-D5(S)	2.75	82	735441	78.60214 ppb		0.00
Spiked Amount 100.000			Recovery =	78.602%		
44) 2-Fluorobiphenyl(S)	3.99	172	1571780	67.49653 ppb		0.00
Spiked Amount 100.000			Recovery =	67.497%		
61) 2,4,6-Tribromophenol(S)	4.92	330	401696	134.84651 ppb		0.00
Spiked Amount 200.000			Recovery =	67.424%		
79) Terphenyl-D14(S)	6.40	244	1331067	65.83214 ppb		-0.01
Spiked Amount 100.000			Recovery =	65.832%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.22	74	287657	74.91214 ppb		98
3) Pyridine	1.24	52	419457	75.22528 ppb		98
6) Phenol	2.08	94	873850	69.18992 ppb		92
7) Aniline	2.13	93	1541358	82.24290 ppb	#	89
8) Bis (2-chloroethyl) ether	2.19	63	175253	72.94749 ppb		100
9) 2-Chlorophenol	2.19	128	1019768	75.74268 ppb		99
10) 1,3-DCB	2.29	146	1252843	82.69020 ppb		98
11) 1,4-DCB	2.35	146	1170136	73.41208 ppb		98
12) Benzyl alcohol	2.42	79	648265	76.62225 ppb		99
13) 1,2-DCB	2.46	146	1141349	80.44651 ppb		99
14) 2-Methylphenol	2.42	108	734017	79.22358 ppb		98
15) Bis (2-chloroisopropyl) et	2.52	45	1669250	68.68812 ppb		99
16) Acetophenone	2.63	105	1063926	65.19015 ppb		90
17) 3&4-Methylphenol	2.50	107	825968	151.64765 ppb		99
18) n-Nitrosodi-n-propylamine	2.62	43	661632	64.47944 ppb		91
19) Hexachloroethane	2.72	117	379177	78.42687 ppb		97
22) Nitrobenzene	2.77	77	803673	77.15420 ppb		90
23) Isophorone	2.93	82	1591903	78.87398 ppb		95
24) 2-Nitrophenol	3.00	139	586433	83.82972 ppb		98
25) 2,4-Dimethylphenol	3.25	107	982860	72.90306 ppb		96
26) Benzoic acid	3.14	105	498557	-40.00000 ppb		98
27) Bis (2-chloroethoxy) metha	3.08	93	1000758	77.77084 ppb		98
28) 2,4-Dichlorophenol	3.18	162	820163	82.12188 ppb		100
29) 1,2,4-Trichlorobenzene	3.24	180	828470	79.97530 ppb		99
30) Naphthalene	3.30	128	2920938	77.07841 ppb		99
31) 4-Chloroaniline	3.33	127	899200	97.30930 ppb		98
32) 2,6-Dichlorophenol	3.34	162	808657	80.69424 ppb	#	95
33) Hexachloropropene	3.35	213	416722	87.67972 ppb		98
34) Hexachlorobutadiene	3.37	225	363832	83.20646 ppb		97
35) Caprolactum	3.60	113	361146	85.67965 ppb		85
36) 4-Chloro-3-methylphenol	3.67	107	752812	80.81630 ppb		91
37) 2-Methylnaphthalene	3.76	142	2083594	77.09173 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y008.D Vial: 8
Acq On : 21 Sep 14 00:22 Operator: CSC
Sample : 80ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39) Hexachlorocyclopentadiene	3.86	237	197635	63.89608	ppb		98
40) 1,2,4,5-Tetrachlorobenzene	3.87	216	696216	77.25926	ppb		94
41) 2,4,6-Trichlorophenol	3.95	196	487019	83.06770	ppb		95
42) 2,4,5-Trichlorophenol	3.98	196	505716	79.07255	ppb		98
43) 2-Chloronaphthalene	4.07	162	1684788	71.80959	ppb		97
45) 1,1'-Biphenyl	4.05	154	2131905	70.39348	ppb		98
46) 2-Nitroaniline	4.14	138	680543	73.39471	ppb		88
47) Dimethyl phthalate	4.24	163	1855738	81.03873	ppb	#	90
48) 2,6-DNT	4.28	165	409327	71.25468	ppb	#	70
49) Acenaphthylene	4.34	152	2884472	77.03632	ppb		99
50) 3-Nitroaniline	4.39	65	425764	80.99376	ppb	#	82
51) Acenaphthene	4.45	154	1472630	62.98099	ppb		99
52) 2,4-Dinitrophenol	4.47	184	166434	-40.00000	ppb		100
53) 4-Nitrophenol	4.52	109	100697	85.83177	ppb	#	63
54) Dibenzofuran	4.55	168	2433390	74.97951	ppb		96
55) 2,4-DNT	4.54	165	661066	93.97344	ppb	#	83
56) 2,3,4,6-Tetrachlorophenol	4.63	232	354083	84.57437	ppb	#	93
57) Diethyl phthalate	4.67	149	1667097	72.97242	ppb		96
58) 4-Chlorophenyl phenyl ethe	4.76	204	783497	73.90698	ppb	#	89
59) Fluorene	4.77	165	1485378	61.97183	ppb		97
60) 4-Nitroaniline	4.79	138	607788	85.91674	ppb		92
63) Diphenyl amine	4.83	168	1418138	65.36921	ppb		99
64) 4,6-Dinitro-2-methylphenol	4.80	198	275964	86.38646	ppb	#	71
65) n-Nitrosodiphenylamine	4.83	167	767617	64.71231	ppb		98
66) 1,2-Diphenylhydrazine	4.86	182	578568	85.82566	ppb	#	65
67) 4-Bromophenyl phenyl ether	5.07	248	438478	85.55119	ppb		96
68) Hexachlorobenzene	5.12	284	447332	64.05665	ppb	#	85
69) Atrazine	5.15	200	213253	33.96844	ppb		98
70) Pentachlorophenol	5.24	266	198197	109.44066	ppb		98
71) Phenanthrene	5.38	178	2235241	60.54113	ppb		100
72) Anthracene	5.41	178	2347423	68.55651	ppb		100
73) Carbazol	5.51	167	2595782	71.18700	ppb		98
74) Di-n-butylphthalate	5.70	149	2722236	65.03785	ppb		100
75) Fluoranthene	6.16	202	2121970	61.49738	ppb		94
77) Benzidine	6.24	184	678408	118.37966	ppb	#	93
78) Pyrene	6.32	202	2588361	72.08624	ppb	#	83
80) Butyl benzylphthalate	6.73	149	1187265	69.77961	ppb	#	78
81) 3,3'-Dichlorobenzidine	7.19	252	525144	66.27584	ppb		99
82) Benz (a) anthracene	7.23	228	2234285	72.90893	ppb		99
83) Bis (2-ethylhexyl) phthala	7.18	149	1501400	65.67553	ppb	#	97
84) Chrysene	7.26	228	2051536	76.44153	ppb	#	97
85) Di-n-octylphthalate	7.80	149	3308922	78.37693	ppb		99
86) Indeno (1,2,3-cd) pyrene	10.14	276	2498279	79.09435	ppb		95
88) Benzo (b) fluoranthene	8.30	252	2998995	94.43828	ppb		97
89) Benzo (k) fluoranthene	8.33	252	1750929	63.13565	ppb		99
90) Benzo (a) pyrene	8.68	252	2303510	79.46576	ppb		99
91) Dibenz (a,h) anthracene	10.15	278	2083673	76.50383	ppb		97
92) Benzo (g,h,i) perylene	10.51	276	2194751	88.29320	ppb		97

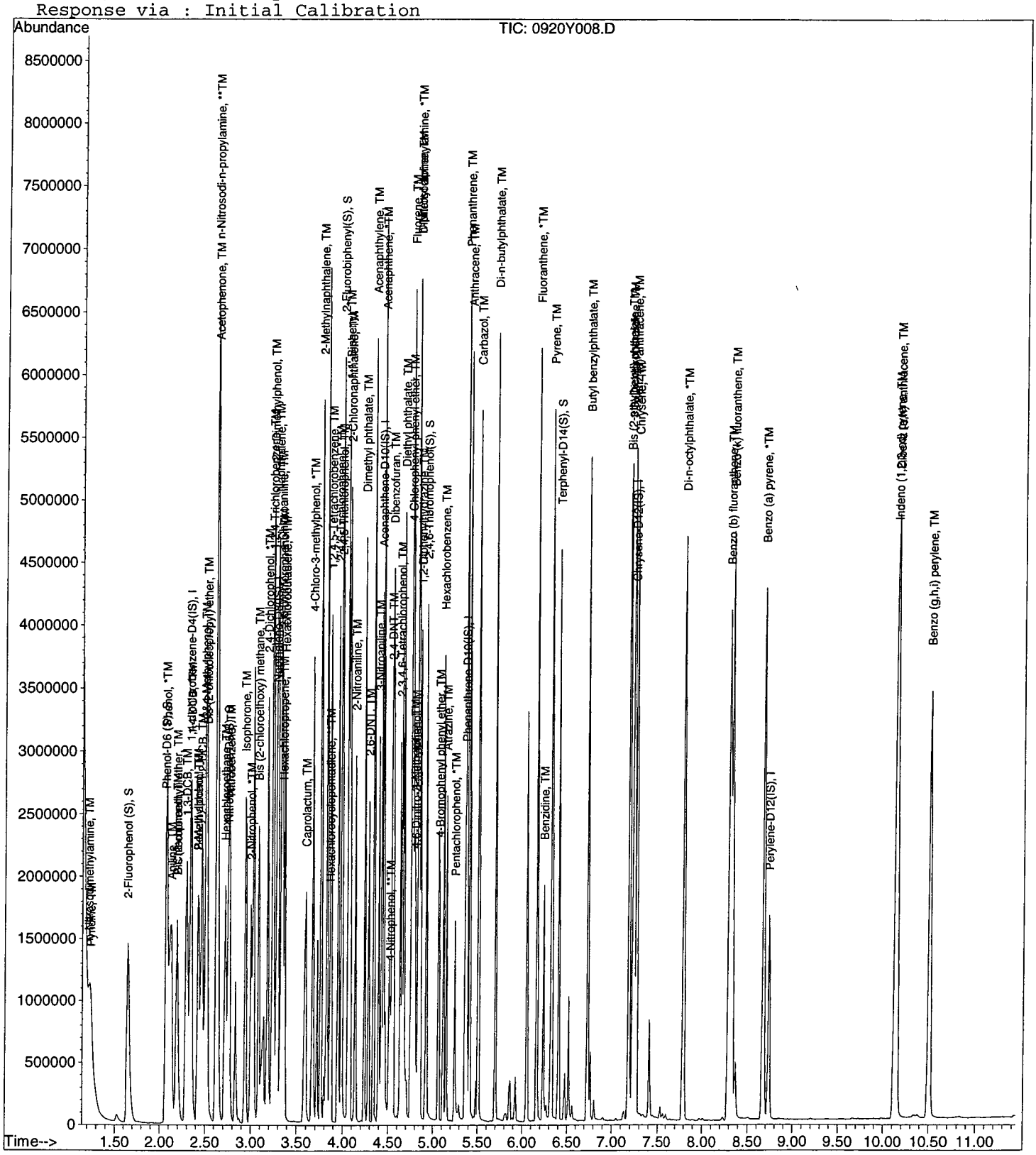
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0920Y008.D Vial: 8
Acq On : 21 Sep 14 00:22 Operator: CSC
Sample : 80ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y009.D Vial: 9
Acq On : 21 Sep 14 00:39 Operator: CSC
Sample : 100ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.33	152	349437	40.00000 ppb		0.00
20) Napthalene-D8(IS)	3.28	136	1416071	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	4.43	164	764451	40.00000 ppb		0.00
62) Phenanthrene-D10(IS)	5.36	188	1160152	40.00000 ppb		0.00
76) Chrysene-D12(IS)	7.24	240	937036	40.00000 ppb		0.00
87) Perylene-D12(IS)	8.73	264	705629	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	1.64	112	1403862	179.83415 ppb		0.00
Spiked Amount 200.000				Recovery = 89.917%		
5) Phenol-D6 (S)	2.07	99	1608405	162.29002 ppb		0.00
Spiked Amount 200.000				Recovery = 81.145%		
21) Nitrobenzene-D5(S)	2.75	82	856053	95.99413 ppb		0.00
Spiked Amount 100.000				Recovery = 95.994%		
44) 2-Fluorobiphenyl(S)	3.99	172	1829606	83.07198 ppb		0.00
Spiked Amount 100.000				Recovery = 83.072%		
61) 2,4,6-Tribromophenol(S)	4.92	330	373036	132.40375 ppb		0.00
Spiked Amount 200.000				Recovery = 66.202%		
79) Terphenyl-D14(S)	6.40	244	1347992	68.92977 ppb		0.00
Spiked Amount 100.000				Recovery = 68.930%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.22	74	350202	94.63800 ppb		99
3) Pyridine	1.24	52	504265	93.84364 ppb		100
6) Phenol	2.08	94	1009714	82.96100 ppb		94
7) Aniline	2.12	93	1923127	106.48111 ppb	#	87
8) Bis (2-chloroethyl) ether	2.19	63	216581	93.54810 ppb		99
9) 2-Chlorophenol	2.19	128	1228283	94.66892 ppb		100
10) 1,3-DCB	2.30	146	1428960	97.86945 ppb		100
11) 1,4-DCB	2.35	146	1531826	99.72643 ppb		97
12) Benzyl alcohol	2.42	79	778105	95.43555 ppb		96
13) 1,2-DCB	2.46	146	1410145	103.13883 ppb		99
14) 2-Methylphenol	2.42	108	902066	101.03139 ppb		99
15) Bis (2-chloroisopropyl) et	2.51	45	1929472	82.38885 ppb		95
16) Acetophenone	2.64	105	1206723	76.72694 ppb		92
17) 3&4-Methylphenol	2.50	107	995887	189.73708 ppb		98
18) n-Nitrosodi-n-propylamine	2.62	43	750041	75.85067 ppb		98
19) Hexachloroethane	2.72	117	449656	96.51015 ppb		86
22) Nitrobenzene	2.77	77	964219	97.12105 ppb		86
23) Isophorone	2.94	82	1896209	98.57365 ppb		99
24) 2-Nitrophenol	3.00	139	736310	110.43273 ppb		95
25) 2,4-Dimethylphenol	3.25	107	1172763	91.26869 ppb		96
26) Benzoic acid	3.14	105	610297	-40.00000 ppb		97
27) Bis (2-chloroethoxy) metha	3.08	93	1169408	95.34793 ppb		96
28) 2,4-Dichlorophenol	3.19	162	999129	104.96337 ppb		98
29) 1,2,4-Trichlorobenzene	3.24	180	997804	101.06059 ppb		100
30) Naphthalene	3.29	128	3373302	93.39489 ppb		100
31) 4-Chloroaniline	3.33	127	1059006	120.24139 ppb		99
32) 2,6-Dichlorophenol	3.34	162	897159	93.93017 ppb	#	93
33) Hexachloropropene	3.35	213	507523	112.03815 ppb		99
34) Hexachlorobutadiene	3.37	225	418748	100.47693 ppb		98
35) Caprolactum	3.60	113	403779	100.50695 ppb		93
36) 4-Chloro-3-methylphenol	3.67	107	867673	97.72958 ppb		94
37) 2-Methylnaphthalene	3.76	142	2383847	92.54023 ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y009.D Vial: 9
Acq On : 21 Sep 14 00:39 Operator: CSC
Sample : 100ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:00:06 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Hexachlorocyclopentadiene	3.86	237	315856	78.45758	ppb		99
40)	1,2,4,5-Tetrachlorobenzene	3.87	216	733744	86.09114	ppb		98
41)	2,4,6-Trichlorophenol	3.95	196	589389	106.29080	ppb		98
42)	2,4,5-Trichlorophenol	3.98	196	508316	84.03500	ppb		98
43)	2-Chloronaphthalene	4.08	162	1683528	75.86909	ppb		98
45)	1,1'-Biphenyl	4.06	154	2104654	73.47721	ppb		99
46)	2-Nitroaniline	4.14	138	826608	94.25755	ppb		98
47)	Dimethyl phthalate	4.24	163	2237405	103.30657	ppb		96
48)	2,6-DNT	4.28	165	504547	92.86498	ppb		91
49)	Acenaphthylene	4.33	152	3412546	96.36406	ppb		100
50)	3-Nitroaniline	4.40	65	530926	106.78837	ppb		89
51)	Acenaphthene	4.45	154	1610639	72.83186	ppb		99
52)	2,4-Dinitrophenol	4.47	184	195649	-40.00000	ppb		100
53)	4-Nitrophenol	4.51	109	126728	114.21193	ppb		84
54)	Dibenzofuran	4.55	168	2377164	77.44571	ppb		94
55)	2,4-DNT	4.54	165	772163	116.05842	ppb		94
56)	2,3,4,6-Tetrachlorophenol	4.63	232	440842	111.33303	ppb		98
57)	Diethyl phthalate	4.68	149	1958422	90.11282	ppb		97
58)	4-Chlorophenyl phenyl ethe	4.76	204	918071	91.56547	ppb		97
59)	Fluorene	4.77	165	1587189	70.01536	ppb		98
60)	4-Nitroaniline	4.79	138	696605	103.73416	ppb		93
63)	Diphenyl amine	4.83	168	1310149	61.98490	ppb		99
64)	4,6-Dinitro-2-methylphenol	4.80	198	346370	-40.00000	ppb	#	78
65)	n-Nitrosodiphenylamine	4.83	167	716774	62.02046	ppb		100
66)	1,2-Diphenylhydrazine	4.86	182	664929	101.23914	ppb		93
67)	4-Bromophenyl phenyl ether	5.06	248	509378	102.00674	ppb		96
68)	Hexachlorobenzene	5.12	284	529395	77.80805	ppb		92
69)	Atrazine	5.15	200	284636	46.53511	ppb		97
70)	Pentachlorophenol	5.25	266	244439	138.53597	ppb		97
71)	Phenanthrene	5.38	178	2460275	68.39435	ppb		100
72)	Anthracene	5.41	178	2407826	72.17601	ppb		100
73)	Carbazol	5.51	167	3217866	90.57553	ppb		100
74)	Di-n-butylphthalate	5.70	149	3178563	77.94382	ppb		99
75)	Fluoranthene	6.17	202	2506110	74.54662	ppb		93
77)	Benzidine	6.24	184	812403	146.56797	ppb	#	92
78)	Pyrene	6.32	202	2661160	76.62667	ppb	#	89
80)	Butyl benzylphthalate	6.74	149	1386278	84.23890	ppb	#	82
81)	3,3'-Dichlorobenzidine	7.19	252	608956	79.45920	ppb		99
82)	Benz (a) anthracene	7.23	228	2459141	82.96732	ppb		99
83)	Bis (2-ethylhexyl) phthala	7.18	149	1564816	70.77044	ppb		99
84)	Chrysene	7.26	228	2278153	87.76362	ppb	#	97
85)	Di-n-octylphthalate	7.79	149	3866408	94.68711	ppb		99
86)	Indeno (1,2,3-cd) pyrene	10.14	276	2935166	96.07682	ppb		93
88)	Benzo (b) fluoranthene	8.30	252	3679511	123.45775	ppb		97
89)	Benzo (k) fluoranthene	8.33	252	1805940	69.38496	ppb		97
90)	Benzo (a) pyrene	8.68	252	2717946	99.90487	ppb		99
91)	Dibenz (a,h) anthracene	10.16	278	2448717	95.79617	ppb		94
92)	Benzo (g,h,i) perylene	10.51	276	2736144	117.28350	ppb		99

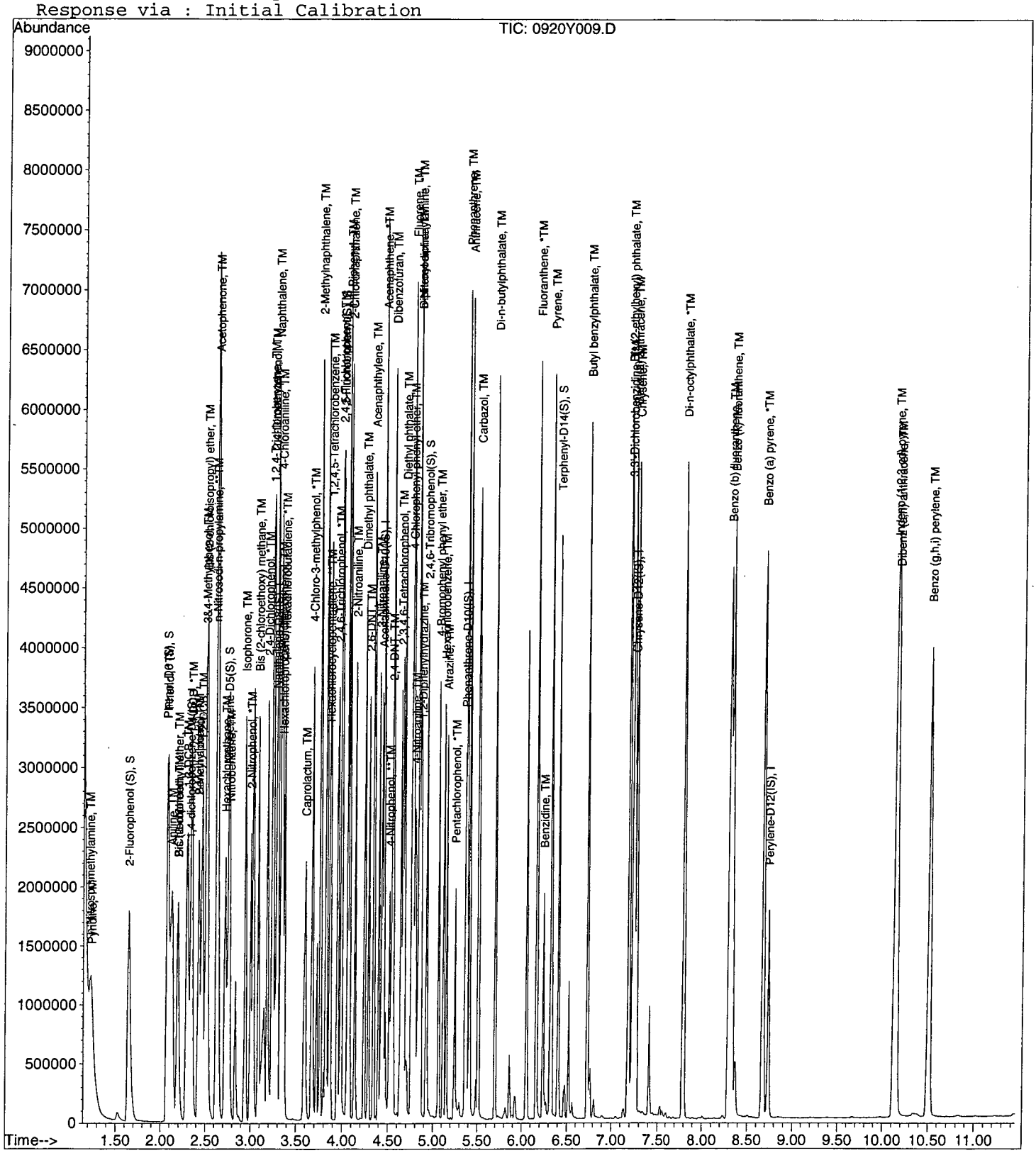
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0920Y009.D Vial: 9
Acq On : 21 Sep 14 00:39 Operator: CSC
Sample : 100ppm SVOC Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 21 12:01 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration



1051

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 9/21/2014
Instrument: YODA
Initial Cal. Date: 9/20/2014
Data File: 0920Y010.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.4218	0.4004	5.1	TM	
3	TM	Pyridine	0.6285	0.5771	8.2	TM	
4	*TM	Phenol	1.369	1.388	1.4	*TM	
5	TM	Aniline	2.162	2.183	0.94	TM	
6	TM	Bis (2-chloroethyl) ether	0.2699	0.2429	10.0	TM	
7	TM	2-Chlorophenol	1.514	1.433	5.3	TM	
8	TM	1,3-DCB	1.729	1.703	1.5	TM	
9	*TM	1,4-DCB	1.758	1.681	4.4	*TM	
10	TM	Benzyl alcohol	0.9519	0.8894	6.6	TM	
11	TM	1,2-DCB	1.614	1.541	4.6	TM	
12	TM	2-Methylphenol	1.049	0.9833	6.3	TM	
13	TM	Bis (2-chloroisopropyl) ether	2.691	2.547	5.3	TM	
14	TM	Acetophenone	1.826	1.692	7.3	TM	
15	TM	3&4-Methylphenol	0.6109	0.5943	2.7	TM	
16	**TMQ	n-Nitrosodi-n-propylamine	1.136	1.036	8.8	**TMQ	1.2
17	TM	Hexachloroethane	0.5413	0.5323	1.7	TM	
18	I	Napthalene-D8(IS)	ISTD			I	
19	TM	Nitrobenzene	0.2847	0.2745	3.6	TM	
20	TM	Isophorone	0.5562	0.5423	2.5	TM	
21	*TM	2-Nitrophenol	0.1916	0.1918	0.09	*TM	
22	TM	2,4-Dimethylphenol	0.3610	0.3618	0.21	TM	
23	TM	Benzoic acid	0.1543	0.1399	9.3	TM	
24	TM	Bis (2-chloroethoxy) methane	0.3503	0.3367	3.9	TM	
25	*TM	2,4-Dichlorophenol	0.2727	0.2788	2.2	*TM	
26	TM	1,2,4-Trichlorobenzene	0.2797	0.2844	1.7	TM	
27	TM	Naphthalene	1.024	1.021	0.36	TM	
28	TM	4-Chloroaniline	0.2595	0.3012	16	TM	
29	TM	2,6-Dichlorophenol	0.2712	0.2816	3.8	TM	
30	TM	Hexachloropropene	0.1283	0.1302	1.5	TM	
31	*TM	Hexachlorobutadiene	0.1173	0.1204	2.6	*TM	
32	TM	Caprolactum	0.1171	0.1116	4.7	TM	
33	*TM	4-Chloro-3-methylphenol	0.2587	0.2377	8.1	*TM	
34	TM	2-Methylnaphthalene	0.7294	0.7346	0.72	TM	
35	I	Acenaphthene-D10(IS)	ISTD			I	
36	**TMQ	Hexachlorocyclopentadiene	0.0851	0.0835	1.8	**TMQ	0.57
37	TM	1,2,4,5-Tetrachlorobenzene	0.4391	0.4359	0.74	TM	
38	*TM	2,4,6-Trichlorophenol	0.2930	0.3028	3.3	*TM	
39	TM	2,4,5-Trichlorophenol	0.3148	0.3282	4.3	TM	
40	TM	2-Chloronaphthalene	1.138	1.078	5.2	TM	
		Average			4.2		

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 9/21/2014
Instrument: YODA
Cal. Date: 9/20/2014
Data File: 0920Y010.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	1,1'-Biphenyl	1.461	1.372	6.0	TM	
42	TM	2-Nitroaniline	0.4493	0.4538	1.0	TM	
43	TM	Dimethyl phthalate	1.138	1.208	6.2	TM	
44	TM	2,6-DNT	0.2699	0.2535	6.0	TM	
45	TM	Acenaphthylene	1.844	1.860	0.84	TM	
46	TM	3-Nitroaniline	0.2673	0.2798	4.7	TM	
47	*TM	Acenaphthene	1.088	1.109	2.0	*TM	
48	**TMQ	2,4-Dinitrophenol	0.0568	0.0734	29	**TMQ	0.68
49	**TM	4-Nitrophenol	0.0605	0.0581	4.1	**TM	
50	TM	Dibenzofuran	1.567	1.493	4.7	TM	
51	TM	2,4-DNT	0.3570	0.3860	8.1	TM	
52	TM	2,3,4,6-Tetrachlorophenol	0.2073	0.2222	7.2	TM	
53	TM	Diethyl phthalate	1.069	1.098	2.6	TM	
54	TM	4-Chlorophenyl phenyl ether	0.5109	0.5323	4.2	TM	
55	TM	Fluorene	1.163	1.107	4.8	TM	
56	TM	4-Nitroaniline	0.3498	0.3454	1.3	TM	
57	I	Phenanthrene-D10(IS)	ISTD			I	
58	TMQ	Diphenyl amine	0.7421	0.6495	12	TMQ	0.05
59	TMQ	4,6-Dinitro-2-methylphenol	0.1034	0.1260	22	TMQ	5.5
60	*TMQ	n-Nitrosodiphenylamine	0.4047	0.3589	11	*TMQ	0.66
61	TM	1,2-Diphenylhydrazine	0.2290	0.2472	7.9	TM	
62	TM	4-Bromophenyl phenyl ether	0.1779	0.1823	2.5	TM	
63	TM	Hexachlorobenzene	0.2153	0.2444	13	TM	
64	TM	Atrazine	0.1995	0.2283	14	TM	
65	*TM	Pentachlorophenol	0.0645	0.0714	11	*TM	
66	TM	Phenanthrene	1.197	1.294	8.1	TM	
67	TM	Anthracene	1.091	1.245	14	TM	
68	TM	Carbazol	1.196	1.237	3.4	TM	
69	TM	Di-n-butylphthalate	1.371	1.475	7.5	TM	
70	*TM	Fluoranthene	1.075	1.198	11	*TM	
71	I	Chrysene-D12(IS)	ISTD			I	
72	TMQ	Benzidine	0.2538	0.3097	22	TMQ	10
73	TM	Pyrene	1.409	1.350	4.2	TM	
74	TM	Butyl benzylphthalate	0.6851	0.6695	2.3	TM	
75	TM	3,3'-Dichlorobenzidine	0.3126	0.3382	8.2	TM	
76	TM	Benz (a) anthracene	1.233	1.247	1.1	TM	
77	TM	Bis (2-ethylhexyl) phthalate	0.9029	0.9109	0.88	TM	
78	TM	Chrysene	1.037	1.005	3.1	TM	
79	*TM	Di-n-octylphthalate	1.711	1.728	1.0	*TM	
80	TM	Indeno (1,2,3-cd) pyrene	1.247	1.308	5.0	TM	
		Average			7.3		

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 9/21/2014
Instrument: YODA
Cal. Date: 9/20/2014
Data File: 0920Y010.D

		Compound	MEAN	CCRF	%D	%Drift	
81	I	Perylene-D12(IS)	ISTD			I	
82	TM	Benzo (b) fluoranthene	1.731	1.677	3.1	TM	
83	TM	Benzo (k) fluoranthene	1.373	1.603	17	TM	
84	*TM	Benzo (a) pyrene	1.511	1.574	4.2	*TM	
85	TM	Dibenz (a,h) anthracene	1.393	1.493	7.2	TM	
86	TM	Benzo (g,h,i) perylene	1.359	1.398	2.9	TM	
87							
88							
89							
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116							
117							
118							
119							
120							
		Average			6.9		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y010.D Vial: 10
Acq On : 21 Sep 14 00:56 Operator: CSC
Sample : 50ppm SVOC SS 09-20-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 22 20:31 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:04:36 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.33	152	332839	40.00000 ppb		0.00
20) Napthalene-D8(IS)	3.28	136	1386450	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	4.42	164	773275	40.00000 ppb		0.00
62) Phenanthrene-D10(IS)	5.37	188	1046231	40.00000 ppb		0.00
76) Chrysene-D12(IS)	7.24	240	924990	40.00000 ppb		0.00
87) Perylene-D12(IS)	8.73	264	688627	40.00000 ppb		-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb		
Spiked Amount 200.000			Recovery =	0.000%		
5) Phenol-D6 (S)	0.00	99	0	0.00000 ppb		
Spiked Amount 200.000			Recovery =	0.000%		
21) Nitrobenzene-D5(S)	0.00	82	0d	0.00000 ppb		
Spiked Amount 100.000			Recovery =	0.000%		
44) 2-Fluorobiphenyl(S)	0.00	172	0	0.00000 ppb		
Spiked Amount 100.000			Recovery =	0.000%		
61) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb		
Spiked Amount 200.000			Recovery =	0.000%		
79) Terphenyl-D14(S)	0.00	244	0	0.00000 ppb		
Spiked Amount 100.000			Recovery =	0.000%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.23	74	166584	47.45957 ppb		99
3) Pyridine	1.24	52	240119	45.91672 ppb		95
6) Phenol	2.08	94	577297	50.68538 ppb		92
7) Aniline	2.13	93	908071	50.47232 ppb	#	86
8) Bis (2-chloroethyl) ether	2.19	63	101065	45.00268 ppb		99
9) 2-Chlorophenol	2.19	128	596148	47.33606 ppb		98
10) 1,3-DCB	2.29	146	708626	49.25076 ppb		99
11) 1,4-DCB	2.34	146	699267	47.81563 ppb		99
12) Benzyl alcohol	2.42	79	370044	46.71816 ppb		97
13) 1,2-DCB	2.46	146	640976	47.72310 ppb		99
14) 2-Methylphenol	2.42	108	409098	46.87051 ppb		100
15) Bis (2-chloroisopropyl) et	2.52	45	1059805	47.33446 ppb		100
16) Acetophenone	2.63	105	704161	46.35005 ppb		81
17) 3&4-Methylphenol	2.50	107	494524	97.28097 ppb		98
18) n-Nitrosodi-n-propylamine	2.61	43	431002	49.39336 ppb		98
19) Hexachloroethane	2.72	117	221470	49.16722 ppb		94
22) Nitrobenzene	2.76	77	475680	48.20088 ppb		94
23) Isophorone	2.93	82	939811	48.74800 ppb		98
24) 2-Nitrophenol	3.00	139	332344	50.04484 ppb		95
25) 2,4-Dimethylphenol	3.24	107	627024	50.10616 ppb		98
26) Benzoic acid	3.12	105	242414	45.33561 ppb		98
27) Bis (2-chloroethoxy) metha	3.08	93	583591	48.06523 ppb		96
28) 2,4-Dichlorophenol	3.18	162	483146	51.10675 ppb		99
29) 1,2,4-Trichlorobenzene	3.23	180	492962	50.84139 ppb		100
30) Naphthalene	3.30	128	1769025	49.82074 ppb		99
31) 4-Chloroaniline	3.33	127	522005	58.02870 ppb		97
32) 2,6-Dichlorophenol	3.34	162	488006	51.92274 ppb	#	94
33) Hexachloropropene	3.35	213	225689	50.75852 ppb		98
34) Hexachlorobutadiene	3.37	225	208654	51.30951 ppb		98
35) Caprolactum	3.58	113	193443	47.64916 ppb		98
36) 4-Chloro-3-methylphenol	3.67	107	411942	45.94302 ppb		96
37) 2-Methylnaphthalene	3.76	142	1273137	50.35953 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0920Y010.D Vial: 10
Acq On : 21 Sep 14 00:56 Operator: CSC
Sample : 50ppm SVOC SS 09-20-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 22 20:31 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:04:36 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39) Hexachlorocyclopentadiene	3.85	237	80749	49.71564 ppb		99
40) 1,2,4,5-Tetrachlorobenzene	3.87	216	421322	49.62988 ppb		95
41) 2,4,6-Trichlorophenol	3.95	196	292657	51.66569 ppb		95
42) 2,4,5-Trichlorophenol	3.98	196	317230	52.12767 ppb		97
43) 2-Chloronaphthalene	4.07	162	1042278	47.38332 ppb		99
45) 1,1'-Biphenyl	4.05	154	1326491	46.97750 ppb		98
46) 2-Nitroaniline	4.13	138	438646	50.50326 ppb		91
47) Dimethyl phthalate	4.24	163	1168058	53.08559 ppb		95
48) 2,6-DNT	4.28	165	245075	46.97768 ppb	#	83
49) Acenaphthylene	4.34	152	1797678	50.41961 ppb		99
50) 3-Nitroaniline	4.39	65	270441	52.33965 ppb		89
51) Acenaphthene	4.44	154	1072042	50.98683 ppb		100
52) 2,4-Dinitrophenol	4.47	184	70949	50.33805 ppb		100
53) 4-Nitrophenol	4.52	109	56120	47.96900 ppb		68
54) Dibenzofuran	4.55	168	1443428	47.65049 ppb		96
55) 2,4-DNT	4.54	165	373098	54.06436 ppb		90
56) 2,3,4,6-Tetrachlorophenol	4.63	232	214766	53.59145 ppb	#	94
57) Diethyl phthalate	4.67	149	1061062	51.32275 ppb		99
58) 4-Chlorophenyl phenyl ethe	4.76	204	514488	52.09149 ppb		94
59) Fluorene	4.77	165	1069593	47.58272 ppb		98
60) 4-Nitroaniline	4.78	138	333879	49.37278 ppb		99
63) Diphenyl amine	4.83	168	849467	50.02489 ppb		98
64) 4,6-Dinitro-2-methylphenol	4.80	198	164756	52.75459 ppb		99
65) n-Nitrosodiphenylamine	4.83	167	469357	49.67144 ppb		99
66) 1,2-Diphenylhydrazine	4.86	182	323222	53.95233 ppb		96
67) 4-Bromophenyl phenyl ether	5.07	248	238447	51.25106 ppb		92
68) Hexachlorobenzene	5.12	284	319593	56.74806 ppb		95
69) Atrazine	5.15	200	149273	28.61204 ppb		99
70) Pentachlorophenol	5.24	266	93386	55.37859 ppb		98
71) Phenanthrene	5.38	178	1692088	54.02764 ppb		100
72) Anthracene	5.41	178	1628102	57.03842 ppb		100
73) Carbazol	5.51	167	1617215	51.70951 ppb		100
74) Di-n-butylphthalate	5.70	149	1928720	53.77416 ppb		100
75) Fluoranthene	6.16	202	1567098	55.72091 ppb		95
77) Benzidine	6.23	184	358126	55.10785 ppb		95
78) Pyrene	6.32	202	1560622	47.91428 ppb	#	73
80) Butyl benzylphthalate	6.73	149	774049	48.85701 ppb	#	75
81) 3,3'-Dichlorobenzidine	7.19	252	391075	54.10289 ppb		99
82) Benz (a) anthracene	7.23	228	1441955	50.56083 ppb		99
83) Bis (2-ethylhexyl) phthala	7.19	149	1053171	50.43942 ppb	#	95
84) Chrysene	7.26	228	1162016	48.44135 ppb	#	96
85) Di-n-octylphthalate	7.80	149	1997942	50.50337 ppb		100
86) Indeno (1,2,3-cd) pyrene	10.13	276	1512876	52.48051 ppb		97
88) Benzo (b) fluoranthene	8.29	252	1443425	48.42905 ppb		96
89) Benzo (k) fluoranthene	8.33	252	1380143	58.40194 ppb		97
90) Benzo (a) pyrene	8.67	252	1354715	52.07856 ppb		96
91) Dibenz (a,h) anthracene	10.14	278	1285022	53.59482 ppb		94
92) Benzo (g,h,i) perylene	10.50	276	1203789	51.44121 ppb		95

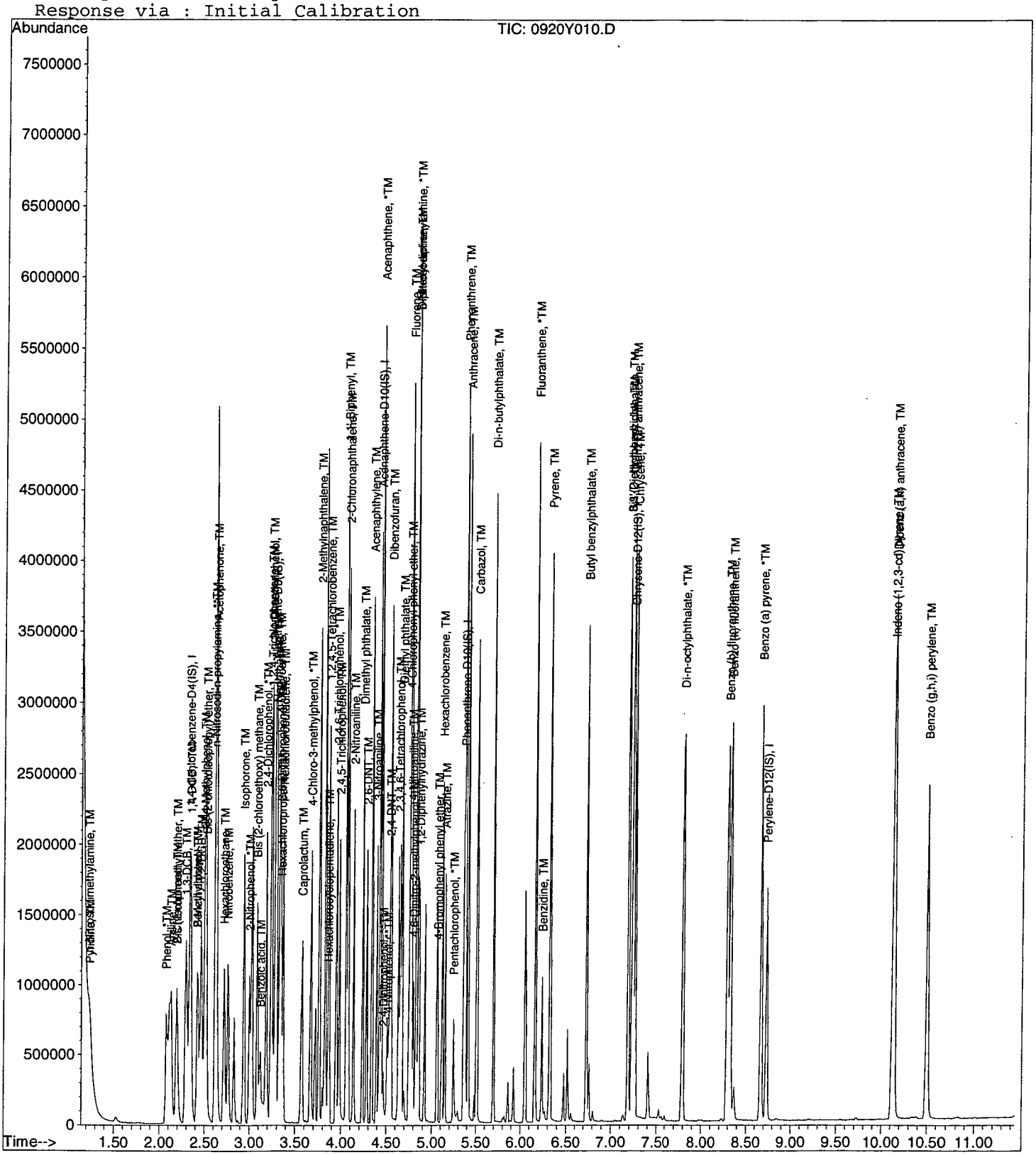
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0920Y010.D Vial: 10
Acq On : 21 Sep 14 00:56 Operator: CSC
Sample : 50ppm SVOC SS 09-20-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 22 20:31 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 9/21/2014

Matrix: Instrument: YODA

Initial Cal. Date: 9/20/2014

Data File: 0921Y002.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.4218	0.3923	7.0	TM	
3	TM	Pyridine	0.6285	0.6289	0.07	TM	
4	S	2-Fluorophenol (S)	0.9064	0.8439	6.9	S	
5	S	Phenol-D6 (S)	1.091	1.175	7.6	S	
6	*TM	Phenol	1.369	1.414	3.3	*TM	
7	TM	Aniline	2.162	2.589	20	TM	
8	TM	Bis (2-chloroethyl) ether	0.2699	0.3003	11	TM	
9	TM	2-Chlorophenol	1.514	1.466	3.1	TM	
10	TM	1,3-DCB	1.729	1.549	10	TM	
11	*TM	1,4-DCB	1.758	1.797	2.3	*TM	
12	TM	Benzyl alcohol	0.9519	0.9782	2.8	TM	
13	TM	1,2-DCB	1.614	1.584	1.8	TM	
14	TM	2-Methylphenol	1.049	1.016	3.1	TM	
15	TM	Bis (2-chloroisopropyl) ether	2.691	2.587	3.9	TM	
16	TM	Acetophenone	1.826	1.682	7.9	TM	
17	TM	3&4-Methylphenol	0.6109	0.5958	2.5	TM	
18	**TMQ	n-Nitrosodi-n-propylamine	1.136	1.164	2.4	**TMQ	14
19	TM	Hexachloroethane	0.5413	0.5461	0.89	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.2561	0.2740	7.0	S	
22	TM	Nitrobenzene	0.2847	0.2882	1.2	TM	
23	TM	Isophorone	0.5562	0.5659	1.7	TM	
24	*TM	2-Nitrophenol	0.1916	0.1967	2.7	*TM	
25	TM	2,4-Dimethylphenol	0.3610	0.3400	5.8	TM	
26	TM	Benzoic acid	0.1543	0.1693	9.7	TM	
27	TM	Bis (2-chloroethoxy) methane	0.3503	0.3762	7.4	TM	
28	*TM	2,4-Dichlorophenol	0.2727	0.2760	1.2	*TM	
29	TM	1,2,4-Trichlorobenzene	0.2797	0.2733	2.3	TM	
30	TM	Naphthalene	1.024	0.9984	2.5	TM	
31	TM	4-Chloroaniline	0.2595	0.3009	16	TM	
32	TM	2,6-Dichlorophenol	0.2712	0.2701	0.40	TM	
33	TM	Hexachloropropene	0.1283	0.1283	0.01	TM	
34	*TM	Hexachlorobutadiene	0.1173	0.1119	4.6	*TM	
35	TM	Caprolactum	0.1171	0.1212	3.5	TM	
36	*TM	4-Chloro-3-methylphenol	0.2587	0.2412	6.8	*TM	
37	TM	2-Methylnaphthalene	0.7294	0.7174	1.6	TM	
38	I	Acenaphthene-D10(IS)	ISTD			I	
39	**TMQ	Hexachlorocyclopentadiene	0.0851	0.0786	7.6	**TMQ	3.7
40	TM	1,2,4,5-Tetrachlorobenzene	0.4391	0.4419	0.62	TM	
		Average			4.8		

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 9/21/2014
Matrix: 0 Instrument: YODA
Cal. Date: 9/20/2014
Data File: 0921Y002.D

		Compound	MEAN	CCRF	%D		%Drift	
41	*TM	2,4,6-Trichlorophenol	0.2930	0.3294	12	*TM		
42	TM	2,4,5-Trichlorophenol	0.3148	0.3567	13	TM		
43	TM	2-Chloronaphthalene	1.138	1.138	0.04	TM		
44	S	2-Fluorobiphenyl(S)	1.088	1.226	13	S		
45	TM	1,1'-Biphenyl	1.461	1.422	2.6	TM		
46	TM	2-Nitroaniline	0.4493	0.4791	6.6	TM		
47	TM	Dimethyl phthalate	1.138	1.272	12	TM		
48	TM	2,6-DNT	0.2699	0.2838	5.2	TM		
49	TM	Acenaphthylene	1.844	1.976	7.1	TM		
50	TM	3-Nitroaniline	0.2673	0.3045	14	TM		
51	*TM	Acenaphthene	1.088	1.102	1.3	*TM		
52	**TMQ	2,4-Dinitrophenol	0.0568	0.0704	24	**TMQ	1.8	
53	**TM	4-Nitrophenol	0.0605	0.0631	4.3	**TM		
54	TM	Dibenzofuran	1.567	1.594	1.7	TM		
55	TM	2,4-DNT	0.3570	0.4031	13	TM		
56	TM	2,3,4,6-Tetrachlorophenol	0.2073	0.1965	5.2	TM		
57	TM	Diethyl phthalate	1.069	1.169	9.3	TM		
58	TM	4-Chlorophenyl phenyl ether	0.5109	0.5053	1.1	TM		
59	TM	Fluorene	1.163	1.139	2.0	TM		
60	TM	4-Nitroaniline	0.3498	0.3908	12	TM		
61	S	2,4,6-Tribromophenol(S)	0.1333	0.1178	12	S		
62	I	Phenanthrene-D10(IS)	ISTD			I		
63	TMQ	Diphenyl amine	0.7421	0.6497	12	TMQ	0.07	
64	TMQ	4,6-Dinitro-2-methylphenol	0.1034	0.1073	3.8	TMQ	8.7	
65	*TMQ	n-Nitrosodiphenylamine	0.4047	0.3532	13	*TMQ	2.7	
66	TM	1,2-Diphenylhydrazine	0.2290	0.2309	0.81	TM		
67	TM	4-Bromophenyl phenyl ether	0.1779	0.2014	13	TM		
68	TM	Hexachlorobenzene	0.2153	0.2050	4.8	TM		
69	TM	Atrazine	0.1995	0.1811	9.2	TM		
70	*TM	Pentachlorophenol	0.0645	0.0722	12	*TM		
71	TM	Phenanthrene	1.197	1.126	6.0	TM		
72	TM	Anthracene	1.091	1.199	9.9	TM		
73	TM	Carbazol	1.196	1.153	3.6	TM		
74	TM	Di-n-butylphthalate	1.371	1.310	4.5	TM		
75	*TM	Fluoranthene	1.075	1.149	6.9	*TM		
76	I	Chrysene-D12(IS)	ISTD			I		
77	TMQ	Benzidine	0.2538	0.3820	51	TMQ	26	NT
78	TM	Pyrene	1.409	1.493	6.0	TM		
79	S	Terphenyl-D14(S)	0.7592	0.8307	9.4	S		
80	TM	Butyl benzylphthalate	0.6851	0.7544	10	TM		
		Average			9.1			

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 9/21/2014
Matrix: 0 Instrument: YODA
Cal. Date: 9/20/2014
Data File: 0921Y002.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	3,3'-Dichlorobenzidine	0.3126	0.3296	5.4	TM	
82	TM	Benz (a) anthracene	1.233	1.298	5.3	TM	
83	TM	Bis (2-ethylhexyl) phthalate	0.9029	0.8576	5.0	TM	
84	TM	Chrysene	1.037	1.044	0.66	TM	
85	*TM	Di-n-octylphthalate	1.711	1.862	8.8	*TM	
86	TM	Indeno (1,2,3-cd) pyrene	1.247	1.310	5.1	TM	
87	I	Perylene-D12(IS)	ISTD			I	
88	TM	Benzo (b) fluoranthene	1.731	1.476	15	TM	
89	TM	Benzo (k) fluoranthene	1.373	1.468	6.9	TM	
90	*TM	Benzo (a) pyrene	1.511	1.459	3.4	*TM	
91	TM	Dibenz (a,h) anthracene	1.393	1.437	3.2	TM	
92	TM	Benzo (g,h,i) perylene	1.359	1.401	3.1	TM	
93							
94							
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115							
116							
117							
118							
119							
120							
		Average			5.6		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y002.D Vial: 2
Acq On : 21 Sep 14 12:54 Operator: CSC
Sample : 50ppm SVOC 09-20-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 22 21:04 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.34	152	311755	40.00000 ppb	0.02
20) Napthalene-D8(IS)	3.28	136	1316335	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	4.42	164	655225	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	5.39	188	952771	40.00000 ppb	0.02
76) Chrysene-D12(IS)	7.33	240	772494	40.00000 ppb	0.09
87) Perylene-D12(IS)	8.82	264	595176	40.00000 ppb	0.08
System Monitoring Compounds					
4) 2-Fluorophenol (S)	1.66	112	657720	93.10643 ppb	0.02
Spiked Amount 200.000			Recovery = 46.553%		
5) Phenol-D6 (S)	2.07	99	915549	107.62523 ppb	0.00
Spiked Amount 200.000			Recovery = 53.813%		
21) Nitrobenzene-D5(S)	2.76	82	450832	53.49993 ppb	0.00
Spiked Amount 100.000			Recovery = 53.500%		
44) 2-Fluorobiphenyl(S)	3.99	172	1003950	56.33568 ppb	0.00
Spiked Amount 100.000			Recovery = 56.336%		
61) 2,4,6-Tribromophenol(S)	4.93	330	192971	88.40299 ppb	0.00
Spiked Amount 200.000			Recovery = 44.202%		
79) Terphenyl-D14(S)	6.47	244	802173	54.71058 ppb	0.06
Spiked Amount 100.000			Recovery = 54.711%		
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.25	74	152886	46.50279 ppb	84
3) Pyridine	1.27	52	245089	50.03673 ppb	85
6) Phenol	2.09	94	550896	51.63852 ppb	91
7) Aniline	2.13	93	1008812	59.86383 ppb	79
8) Bis (2-chloroethyl) ether	2.20	63	117039	55.64024 ppb	99
9) 2-Chlorophenol	2.20	128	571347	48.43494 ppb	98
10) 1,3-DCB	2.30	146	603819	44.80468 ppb	98
11) 1,4-DCB	2.35	146	700304	51.12510 ppb	98
12) Benzyl alcohol	2.43	79	381196	51.38087 ppb	93
13) 1,2-DCB	2.47	146	617449	49.08047 ppb	100
14) 2-Methylphenol	2.43	108	395999	48.43811 ppb	100
15) Bis (2-chloroisopropyl) et	2.52	45	1008182	48.07410 ppb	88
16) Acetophenone	2.63	105	655418	46.05931 ppb	96
17) 3&4-Methylphenol	2.51	107	464374	97.52797 ppb	99
18) n-Nitrosodi-n-propylamine	2.62	43	453444	57.18036 ppb	88
19) Hexachloroethane	2.73	117	212827	50.44385 ppb	98
22) Nitrobenzene	2.77	77	474172	50.60737 ppb	95
23) Isophorone	2.94	82	931161	50.87201 ppb	97
24) 2-Nitrophenol	3.01	139	323701	51.33969 ppb	99
25) 2,4-Dimethylphenol	3.24	107	559499	47.09167 ppb	96
26) Benzoic acid	3.11	105	278531	54.86471 ppb	98
27) Bis (2-chloroethoxy) metha	3.09	93	619060	53.70231 ppb	99
28) 2,4-Dichlorophenol	3.18	162	454160	50.59953 ppb	96
29) 1,2,4-Trichlorobenzene	3.23	180	449629	48.84230 ppb	100
30) Naphthalene	3.30	128	1642824	48.73097 ppb	99
31) 4-Chloroaniline	3.33	127	495106	57.97011 ppb	93
32) 2,6-Dichlorophenol	3.34	162	444393	49.80093 ppb	98
33) Hexachloropropene	3.35	213	211043	49.99278 ppb	99
34) Hexachlorobutadiene	3.37	225	184205	47.71011 ppb	98
35) Caprolactum	3.59	113	199450	51.74568 ppb	96
36) 4-Chloro-3-methylphenol	3.67	107	396871	46.61982 ppb	95
37) 2-Methylnaphthalene	3.76	142	1180455	49.18059 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y002.D Vial: 2
Acq On : 21 Sep 14 12:54 Operator: CSC
Sample : 50ppm SVOC 09-20-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 22 21:04 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Hexachlorocyclopentadiene	3.86	237	64364	48.15412	ppb		99
40)	1,2,4,5-Tetrachlorobenzene	3.87	216	361908	50.31191	ppb	#	92
41)	2,4,6-Trichlorophenol	3.95	196	269759	56.20342	ppb		95
42)	2,4,5-Trichlorophenol	3.98	196	292167	56.65897	ppb		98
43)	2-Chloronaphthalene	4.07	162	932284	50.01885	ppb		98
45)	1,1'-Biphenyl	4.05	154	1165029	48.69292	ppb	#	97
46)	2-Nitroaniline	4.13	138	392416	53.32065	ppb	#	76
47)	Dimethyl phthalate	4.24	163	1041592	55.86674	ppb	#	93
48)	2,6-DNT	4.28	165	232432	52.58138	ppb	#	72
49)	Acenaphthylene	4.34	152	1618124	53.56029	ppb		99
50)	3-Nitroaniline	4.39	65	249389	56.96120	ppb		67
51)	Acenaphthene	4.44	154	902804	50.67377	ppb		99
52)	2,4-Dinitrophenol	4.47	184	57644	49.10945	ppb		100
53)	4-Nitrophenol	4.52	109	51699	52.15172	ppb		74
54)	Dibenzofuran	4.56	168	1305639	50.86732	ppb		90
55)	2,4-DNT	4.54	165	330163	56.46249	ppb		72
56)	2,3,4,6-Tetrachlorophenol	4.64	232	160900	47.38376	ppb		95
57)	Diethyl phthalate	4.67	149	957796	54.67461	ppb		94
58)	4-Chlorophenyl phenyl ethe	4.76	204	413890	49.45611	ppb	#	76
59)	Fluorene	4.78	165	932956	48.98188	ppb		99
60)	4-Nitroaniline	4.79	138	320037	55.85245	ppb		95
63)	Diphenyl amine	4.84	168	773719	50.03576	ppb		99
64)	4,6-Dinitro-2-methylphenol	4.81	198	127840	45.63424	ppb		90
65)	n-Nitrosodiphenylamine	4.84	167	420691	48.66977	ppb		100
66)	1,2-Diphenylhydrazine	4.86	182	274996	50.40513	ppb	#	1
67)	4-Bromophenyl phenyl ether	5.08	248	239869	56.61405	ppb		97
68)	Hexachlorobenzene	5.13	284	244109	47.59668	ppb	#	73
69)	Atrazine	5.17	200	107842	22.69837	ppb		89
70)	Pentachlorophenol	5.26	266	85992	55.99603	ppb		97
71)	Phenanthrene	5.40	178	1340955	47.01607	ppb		100
72)	Anthracene	5.44	178	1428157	54.94155	ppb		99
73)	Carbazol	5.53	167	1372676	48.19586	ppb		94
74)	Di-n-butylphthalate	5.74	149	1560280	47.76899	ppb		98
75)	Fluoranthene	6.21	202	1368924	53.44911	ppb	#	88
77)	Benzidine	6.30	184	368900	63.17486	ppb		96
78)	Pyrene	6.39	202	1441797	53.00457	ppb		94
80)	Butyl benzylphthalate	6.83	149	728500	55.05920	ppb	#	84
81)	3,3'-Dichlorobenzidine	7.28	252	318241	52.71794	ppb		100
82)	Benz (a) anthracene	7.32	228	1253732	52.63918	ppb		99
83)	Bis (2-ethylhexyl) phthala	7.28	149	828122	47.49058	ppb		97
84)	Chrysene	7.35	228	1008297	50.33088	ppb	#	97
85)	Di-n-octylphthalate	7.89	149	1797630	54.41012	ppb		99
86)	Indeno (1,2,3-cd) pyrene	10.21	276	1265182	52.55205	ppb		99
88)	Benzo (b) fluoranthene	8.39	252	1098383	42.63872	ppb		100
89)	Benzo (k) fluoranthene	8.42	252	1092101	53.46932	ppb		99
90)	Benzo (a) pyrene	8.76	252	1085601	48.28585	ppb	#	92
91)	Dibenz (a,h) anthracene	10.22	278	1069024	51.58678	ppb		95
92)	Benzo (g,h,i) perylene	10.58	276	1042191	51.52841	ppb		98

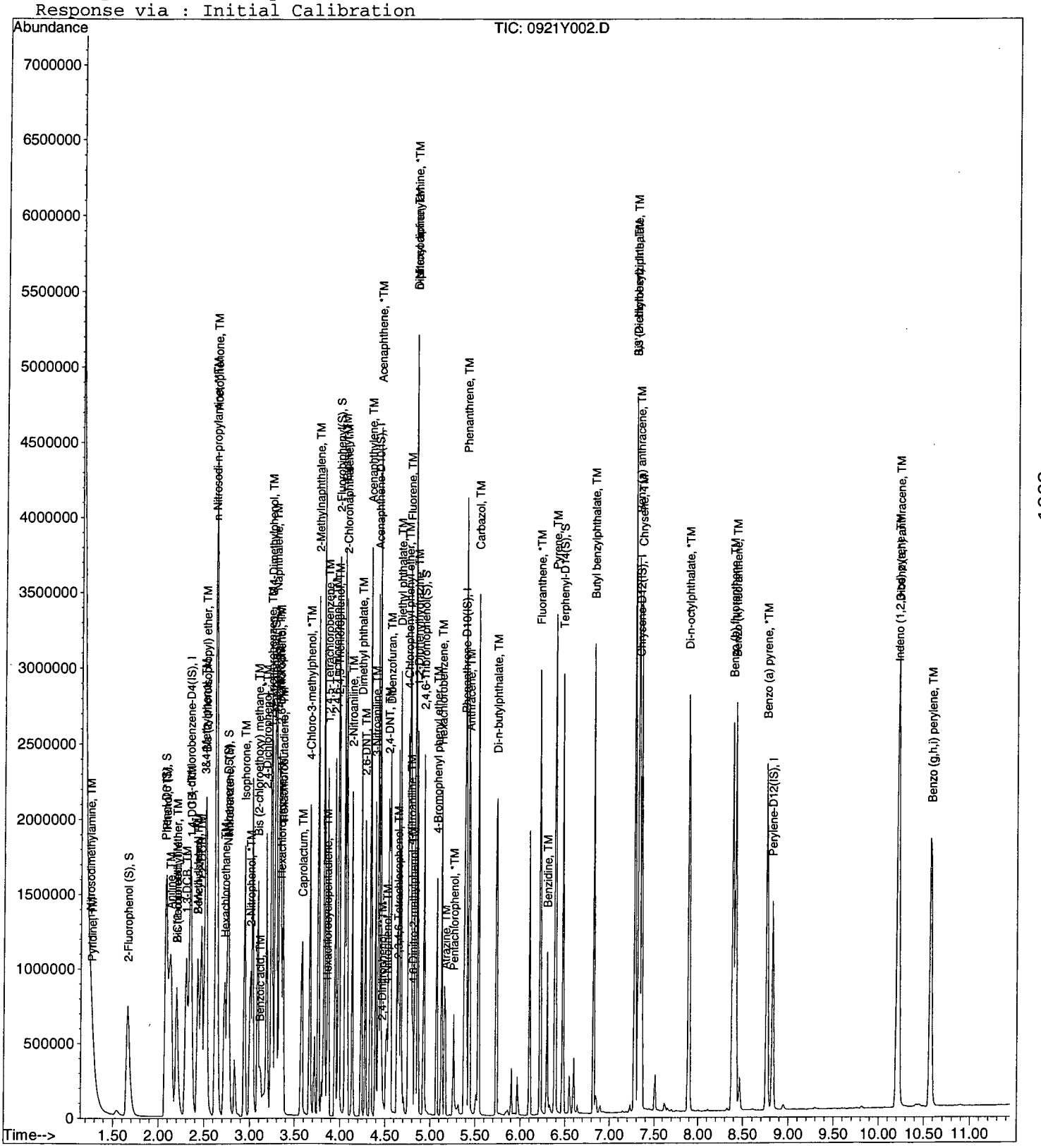
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y002.D Vial: 2
Acq On : 21 Sep 14 12:54 Operator: CSC
Sample : 50ppm SVOC 09-20-14 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 22 21:04 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration



1063

EPA METHOD 8270
Raw Data

APPL, INC.

Method Blank
EPA 8270C WATER

Blank Name/QCG: **140908W-02108 - 189933**
Batch ID: #87CE2-140908A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2,4-TRICHLOROBENZENE	5.00 U	10.0	5.00	1.30	ug/L	9/8/14	9/11/14
BLANK	1,2-DICHLOROBENZENE	5.00 U	10.0	5.00	1.10	ug/L	9/8/14	9/11/14
BLANK	1,3-DICHLOROBENZENE	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
BLANK	1,4-DICHLOROBENZENE	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
BLANK	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	9/8/14	9/11/14
BLANK	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
BLANK	2,4-DICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
BLANK	2,4-DIMETHYLPHENOL	5.00 U	10.0	5.00	2.40	ug/L	9/8/14	9/11/14
BLANK	2,4-DINITROPHENOL	5.00 U	20.0	5.00	1.80	ug/L	9/8/14	9/11/14
BLANK	2,4-DINITROTOLUENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
BLANK	2,6-DINITROTOLUENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
BLANK	2-CHLOROPHENOL	5.00 U	10.0	5.00	2.00	ug/L	9/8/14	9/11/14
BLANK	3,3'-DICHLOROBENZIDINE	5.00 U	10.0	5.00	3.00	ug/L	9/8/14	9/11/14
BLANK	4-CHLOROANILINE	5.00 U	10.0	5.00	2.70	ug/L	9/8/14	9/11/14
BLANK	BIS (2-CHLOROETHYL) ETHER	5.00 U	10.0	5.00	2.20	ug/L	9/8/14	9/11/14
BLANK	BIS (2-CHLOROISOPROPYL) ET	5.00 U	10.0	5.00	2.00	ug/L	9/8/14	9/11/14
BLANK	BIS (2-ETHYLHEXYL) PHTHALAT	5.00 U	20.0	5.00	2.90	ug/L	9/8/14	9/11/14
BLANK	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	9/8/14	9/11/14
BLANK	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	9/8/14	9/11/14
BLANK	HEXACHLOROBENZENE	5.00 U	20.0	5.00	2.70	ug/L	9/8/14	9/11/14
BLANK	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	9/8/14	9/11/14
BLANK	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	9/8/14	9/11/14
BLANK	ISOPHORONE	5.00 U	10.0	5.00	2.50	ug/L	9/8/14	9/11/14
BLANK	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	9/8/14	9/11/14
BLANK	PENTACHLOROPHENOL	5.00 U	20.0	5.00	2.80	ug/L	9/8/14	9/11/14
BLANK	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	9/8/14	9/11/14
BLANK	SURROGATE: 2,4,6-TRIBROMOP	72.9	40-125			%	9/8/14	9/11/14
BLANK	SURROGATE: 2-FLUORBIPHENY	60.4	50-110			%	9/8/14	9/11/14
BLANK	SURROGATE: 2-FLUOROPHENO	41.5	20-110			%	9/8/14	9/11/14
BLANK	SURROGATE: NITROBENZENE-	61.4	40-110			%	9/8/14	9/11/14
BLANK	SURROGATE: PHENOL (S)	27.4	10-115			%	9/8/14	9/11/14
BLANK	SURROGATE: TERPHENYL-D14 (	102	50-135			%	9/8/14	9/11/14

Quant Method: Y87HP.M
Run #: 0910Y011
Instrument: YODA
Sequence: Y140910
Initials: LF

GC SC-Blank-REG MDLs
Printed: 9/22/14 8:22:41 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y011.D Vial: 11
Acq On : 11 Sep 14 2:18 Operator: LF
Sample : 140908A BLK 1/1000 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 18 23:05 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	3.29	152	85725	40.00000 ppb	0.00
20) Napthalene-D8(IS)	4.11	136	316901	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	5.20	164	212522	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	6.15	188	432211	40.00000 ppb	0.00
76) Chrysene-D12(IS)	8.11	240	408468	40.00000 ppb	0.00
87) Perylene-D12(IS)	9.61	264	279325	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	2.35	112	321513	82.91689 ppb	0.00
Spiked Amount 200.000			Recovery = 41.459%		
5) Phenol-D6 (S)	3.04	99	273455	54.88835 ppb	0.00
Spiked Amount 200.000			Recovery = 27.444%		
21) Nitrobenzene-D5(S)	3.65	82	287234	61.44469 ppb	-0.01
Spiked Amount 100.000			Recovery = 61.445%		
44) 2-Fluorobiphenyl(S)	4.76	172	625716	60.44270 ppb	0.00
Spiked Amount 100.000			Recovery = 60.443%		
61) 2,4,6-Tribromophenol(S)	5.69	330	202312	145.80103 ppb	0.00
Spiked Amount 200.000			Recovery = 72.900%		
79) Terphenyl-D14(S)	7.25	244	1356986	101.81995 ppb	0.00
Spiked Amount 100.000			Recovery = 101.820%		

Target Compounds Qvalue

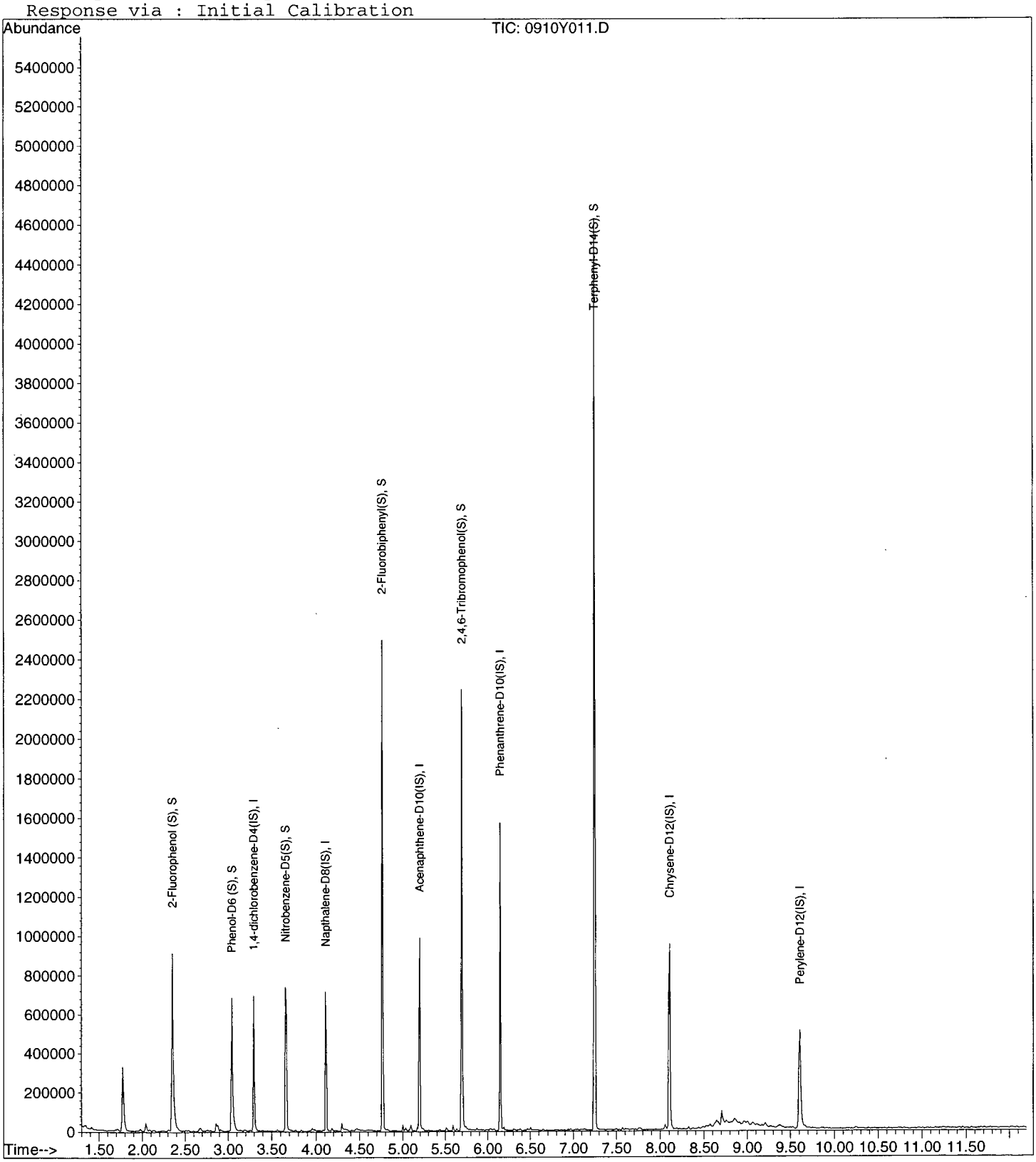
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140910\0910Y011.D Vial: 11
Acq On : 11 Sep 14 2:18 Operator: LF
Sample : 140908A BLK 1/1000 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 18 23:05 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration



Method Blank
EPA 8270C IS SOILS

Blank Name/QCG: **140915S-02100 - 189979**
Batch ID: #87CE2-140915A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2,4-TRICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
BLANK	1,2-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
BLANK	1,3-DICHLOROBENZENE	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
BLANK	1,4-DICHLOROBENZENE	0.167 U	0.33	0.167	0.049	mg/kg	9/15/14	9/21/14
BLANK	2,4,5-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.060	mg/kg	9/15/14	9/21/14
BLANK	2,4,6-TRICHLOROPHENOL	0.167 U	0.33	0.167	0.048	mg/kg	9/15/14	9/21/14
BLANK	2,4-DICHLOROPHENOL	0.167 U	0.33	0.167	0.051	mg/kg	9/15/14	9/21/14
BLANK	2,4-DIMETHYLPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
BLANK	2,4-DINITROPHENOL	0.167 U	0.66	0.167	0.054	mg/kg	9/15/14	9/21/14
BLANK	2,4-DINITROTOLUENE	0.167 U	0.66	0.167	0.064	mg/kg	9/15/14	9/21/14
BLANK	2,6-DINITROTOLUENE	0.167 U	0.66	0.167	0.061	mg/kg	9/15/14	9/21/14
BLANK	2-CHLOROPHENOL	0.167 U	0.33	0.167	0.044	mg/kg	9/15/14	9/21/14
BLANK	3,3'-DICHLOROBENZIDINE	0.167 U	0.66	0.167	0.056	mg/kg	9/15/14	9/21/14
BLANK	4-CHLOROANILINE	0.167 U	0.33	0.167	0.017	mg/kg	9/15/14	9/21/14
BLANK	BIS (2-CHLOROETHYL) ETHER	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
BLANK	BIS (2-CHLOROISOPROPYL) ET	0.167 U	0.33	0.167	0.047	mg/kg	9/15/14	9/21/14
BLANK	BIS (2-ETHYLHEXYL) PHTHALAT	0.167 U	0.66	0.167	0.062	mg/kg	9/15/14	9/21/14
BLANK	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	9/15/14	9/21/14
BLANK	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	9/15/14	9/21/14
BLANK	HEXACHLOROBENZENE	0.167 U	0.66	0.167	0.060	mg/kg	9/15/14	9/21/14
BLANK	HEXACHLOROBUTADIENE	0.167 U	0.33	0.167	0.052	mg/kg	9/15/14	9/21/14
BLANK	HEXACHLOROETHANE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
BLANK	ISOPHORONE	0.167 U	0.33	0.167	0.057	mg/kg	9/15/14	9/21/14
BLANK	NITROBENZENE	0.167 U	0.33	0.167	0.050	mg/kg	9/15/14	9/21/14
BLANK	PENTACHLOROPHENOL	0.167 U	0.66	0.167	0.059	mg/kg	9/15/14	9/21/14
BLANK	PHENOL	0.167 U	0.33	0.167	0.043	mg/kg	9/15/14	9/21/14
BLANK	SURROGATE: 2,4,6-TRIBROMOP	64.5	35-125			%	9/15/14	9/21/14
BLANK	SURROGATE: 2-FLUORBIPHENY	90.6	45-105			%	9/15/14	9/21/14
BLANK	SURROGATE: 2-FLUOROPHENO	80.4	35-105			%	9/15/14	9/21/14
BLANK	SURROGATE: NITROBENZENE-	87.1	35-100			%	9/15/14	9/21/14
BLANK	SURROGATE: PHENOL (S)	93.7	40-100			%	9/15/14	9/21/14
BLANK	SURROGATE: TERPHENYL-D14 (	82.9	30-125			%	9/15/14	9/21/14

Quant Method: Y87HP.M
Run #: 0921Y003
Instrument: YODA
Sequence: Y140920B
Initials: LF

GC SC-Blank-REG MDLs
Printed: 9/22/14 8:22:41 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y003.D Vial: 3
Acq On : 21 Sep 14 13:11 Operator: CSC
Sample : 140915A BLK 1/30.41G Inst : YODA
Misc : Multiplr: 32.88

Quant Time: Sep 21 21:36 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.34	152	286160	40.00000 ppb	0.01
20) Napthalene-D8(IS)	3.28	136	1304607	40.00000 ppb	0.00
38) Acenaphthene-D10(IS)	4.43	164	605520	40.00000 ppb	0.00
62) Phenanthrene-D10(IS)	5.37	188	992654	40.00000 ppb	0.00
76) Chrysene-D12(IS)	7.28	240	797148	40.00000 ppb	0.04
87) Perylene-D12(IS)	8.78	264	620633	40.00000 ppb	0.03
System Monitoring Compounds					
4) 2-Fluorophenol (S)	1.66	112	1042057	5284.67397 ppb	0.02
Spiked Amount 6576.784			Recovery =	80.353%	
5) Phenol-D6 (S)	2.08	99	1462910	6160.81523 ppb	0.01
Spiked Amount 6576.784			Recovery =	93.675%	
21) Nitrobenzene-D5(S)	2.75	82	727319	2863.74083 ppb	0.00
Spiked Amount 3288.392			Recovery =	87.086%	
44) 2-Fluorobiphenyl(S)	3.98	172	1491343	2977.79305 ppb	0.00
Spiked Amount 3288.392			Recovery =	90.555%	
61) 2,4,6-Tribromophenol(S)	4.93	330	260128	4240.40739 ppb	0.00
Spiked Amount 6576.784			Recovery =	64.475%	
79) Terphenyl-D14(S)	6.45	244	1253651	2724.70592 ppb	0.03
Spiked Amount 3288.392			Recovery =	82.858%	

Target Compounds Qvalue

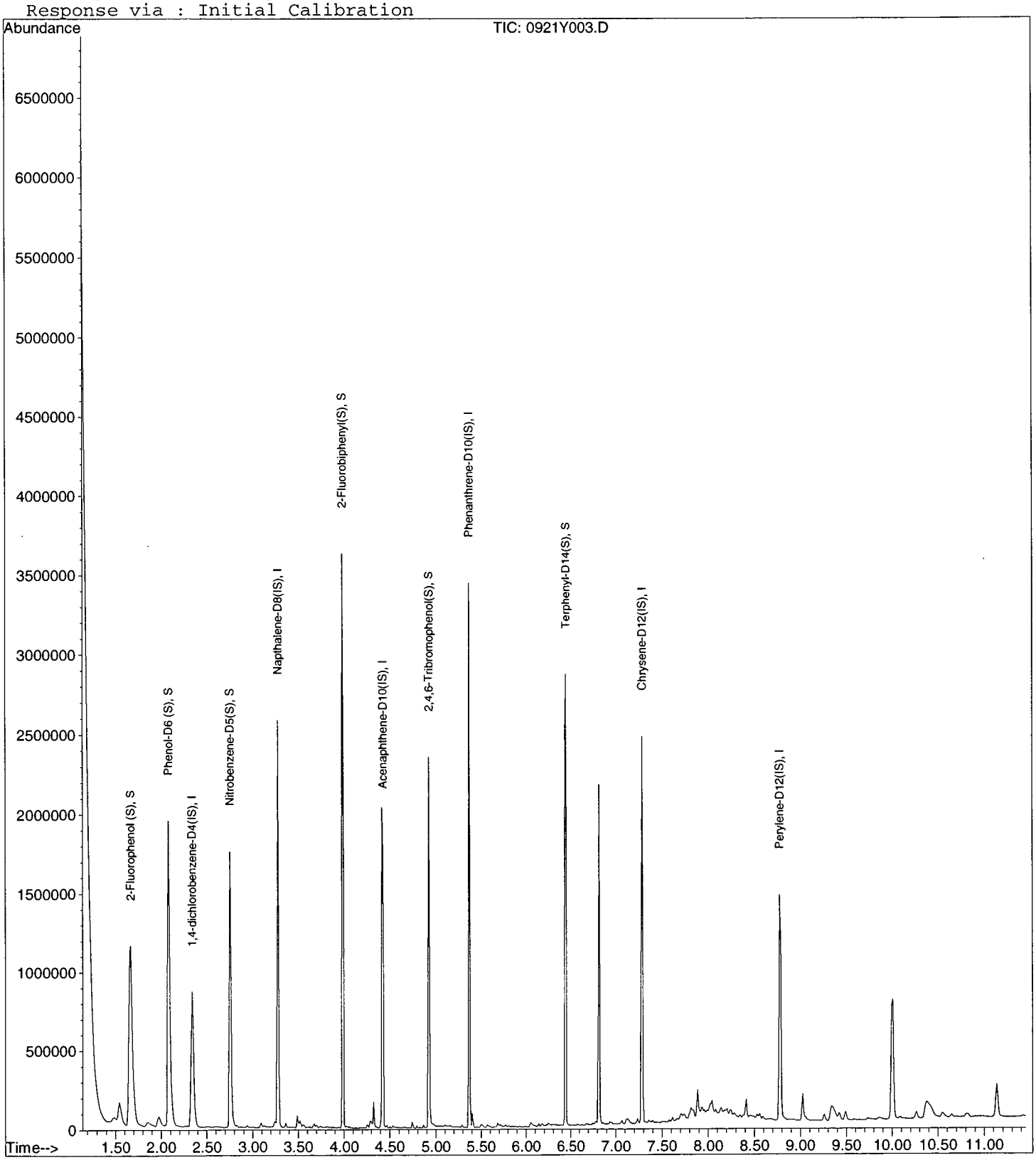
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y003.D Vial: 3
Acq On : 21 Sep 14 13:11 Operator: CSC
Sample : 140915A BLK 1/30.41G Inst : YODA
Misc : Multiplr: 32.88

Quant Time: Sep 21 21:36 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270C IS SOILS

APPL ID: **140915S-02100 LCS - 189979**
Batch ID: #87CE2-140915A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
1,2,4-TRICHLOROBENZENE	1.66	1.28	77.1	45-110
1,2-DICHLOROBENZENE	1.66	1.32	79.5	45-95
1,3-DICHLOROBENZENE	1.66	1.21	72.9	40-100
1,4-DICHLOROBENZENE	1.66	1.39	83.7	35-105
2,4,5-TRICHLOROPHENOL	1.66	1.30	78.3	50-110
2,4,6-TRICHLOROPHENOL	1.66	1.38	83.1	45-110
2,4-DICHLOROPHENOL	1.66	1.33	80.1	45-110
2,4-DIMETHYLPHENOL	1.66	1.37	82.5	30-105
2,4-DINITROPHENOL	1.66	1.35	81.3	15-130
2,4-DINITROTOLUENE	1.66	1.45	87.3	50-115
2,6-DINITROTOLUENE	1.66	1.54	92.8	50-110
2-CHLOROPHENOL	1.66	1.38	83.1	45-105
3,3´-DICHLOROBENZIDINE	1.66	1.66	100	10-130
4-CHLOROANILINE	1.66	1.97	119 #	10-95
BIS (2-CHLOROETHYL) ETHER	1.66	1.67	101	40-105
BIS (2-CHLOROISOPROPYL) ETHER	1.66	1.53	92.2	20-115
BIS (2-ETHYLHEXYL) PHTHALATE	1.66	1.46	88.0	45-125
DIETHYL PHTHALATE	1.66	1.49	89.8	50-115
DIMETHYL PHTHALATE	1.66	1.39	83.7	50-110
HEXACHLOROBENZENE	1.66	1.38	83.1	45-120
HEXACHLOROBUTADIENE	1.66	1.24	74.7	40-115
HEXACHLOROETHANE	1.66	1.39	83.7	35-110
ISOPHORONE	1.66	1.44	86.7	45-110
NITROBENZENE	1.66	1.41	84.9	40-115
PENTACHLOROPHENOL	1.66	0.870	52.4	25-120
PHENOL	1.66	1.58	95.2	40-100
SURROGATE: 2,4,6-TRIBROMOPHENOL	6.63	4.48	67.6	35-125
SURROGATE: 2-FLUORBIPHENYL (S)	3.32	2.55	76.8	45-105
SURROGATE: 2-FLUOROPHENOL (S)	6.63	5.36	80.8	35-105
SURROGATE: NITROBENZENE-D5 (S)	3.32	2.88	86.7	35-100
SURROGATE: PHENOL (S)	6.63	6.23	94.0	40-100

= Recovery is outside QC limits.

Comments:

Primary	SPK
Quant Method :	Y87HP.M
Extraction Date :	9/15/14
Analysis Date :	9/21/14
Instrument :	YODA
Run :	0921Y004
Initials :	LF

Printed: 9/22/14 8:22:43 PM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8270C IS SOILS

APPL ID: **140915S-02100 LCS - 189979**
Batch ID: #87CE2-140915A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
SURROGATE: TERPHENYL-D14 (S)	3.32	2.43	73.2	30-125

= Recovery is outside QC limits.

Comments: _____

Primary	SPK
Quant Method :	Y87HP.M
Extraction Date :	9/15/14
Analysis Date :	9/21/14
Instrument :	YODA
Run :	0921Y004
Initials :	LF

Printed: 9/22/14 8:22:43 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y004.D Vial: 4
Acq On : 21 Sep 14 13:27 Operator: CSC
Sample : 140915A LCS-1 1/30.16G Inst : YODA
Misc : Multiplr: 33.16

Quant Time: Sep 21 20:50 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.34	152	251831	40.00000	ppb		0.02
20) Napthalene-D8(IS)	3.28	136	1158577	40.00000	ppb		0.00
38) Acenaphthene-D10(IS)	4.42	164	626362	40.00000	ppb		0.00
62) Phenanthrene-D10(IS)	5.37	188	929307	40.00000	ppb		0.00
76) Chrysene-D12(IS)	7.26	240	748730	40.00000	ppb		0.02
87) Perylene-D12(IS)	8.75	264	537512	40.00000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol (S)	1.66	112	921616	5355.02576	ppb		0.02
Spiked Amount 6631.300			Recovery = 80.754%				
5) Phenol-D6 (S)	2.08	99	1290168	6225.17659	ppb		0.00
Spiked Amount 6631.300			Recovery = 93.876%				
21) Nitrobenzene-D5(S)	2.76	82	643422	2876.36889	ppb		0.00
Spiked Amount 3315.650			Recovery = 86.751%				
44) 2-Fluorobiphenyl(S)	3.99	172	1307763	2545.27203	ppb		0.00
Spiked Amount 3315.650			Recovery = 76.765%				
61) 2,4,6-Tribromophenol(S)	4.92	330	281640	4475.10267	ppb		0.00
Spiked Amount 6631.300			Recovery = 67.485%				
79) Terphenyl-D14(S)	6.42	244	1040808	2428.35641	ppb		0.00
Spiked Amount 3315.650			Recovery = 73.239%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.25	74	114032	1423.67541	ppb		75
3) Pyridine	1.27	52	137335	1150.85147	ppb		90
6) Phenol	2.09	94	411480	1583.16363	ppb		85
7) Aniline	2.14	93	755682	1840.62889	ppb	#	82
8) Bis (2-chloroethyl) ether	2.20	63	85452	1667.45271	ppb		97
9) 2-Chlorophenol	2.20	128	396808	1380.74080	ppb		98
10) 1,3-DCB	2.30	146	396084	1206.35977	ppb		98
11) 1,4-DCB	2.35	146	465358	1394.46528	ppb		98
12) Benzyl alcohol	2.43	79	234709	1298.54142	ppb		89
13) 1,2-DCB	2.47	146	405159	1321.92260	ppb		99
14) 2-Methylphenol	2.43	108	230737	1158.46594	ppb		98
15) Bis (2-chloroisopropyl) et	2.52	45	779264	1525.21034	ppb		90
16) Acetophenone	2.63	105	498917	1439.13080	ppb		97
17) 3&4-Methylphenol	2.51	107	326656	2815.94947	ppb		98
18) n-Nitrosodi-n-propylamine	2.62	43	381186	1996.99772	ppb		85
19) Hexachloroethane	2.73	117	142615	1387.45739	ppb		93
22) Nitrobenzene	2.77	77	350728	1410.12799	ppb		95
23) Isophorone	2.94	82	701300	1443.33828	ppb		99
24) 2-Nitrophenol	3.01	139	223990	1338.28333	ppb		94
25) 2,4-Dimethylphenol	3.24	107	433404	1374.19344	ppb		97
26) Benzoic acid	3.12	105	148330	1100.67404	ppb		97
27) Bis (2-chloroethoxy) metha	3.09	93	443868	1450.52186	ppb		94
28) 2,4-Dichlorophenol	3.18	162	318033	1334.81176	ppb	#	93
29) 1,2,4-Trichlorobenzene	3.23	180	311797	1275.92144	ppb		99
30) Naphthalene	3.30	128	1189963	1329.71220	ppb		99
31) 4-Chloroaniline	3.33	127	447100	1972.06323	ppb	#	92
32) 2,6-Dichlorophenol	3.34	162	326985	1380.41059	ppb		97
33) Hexachloropropene	3.35	213	137335	1225.54087	ppb		97
34) Hexachlorobutadiene	3.37	225	127309	1242.16211	ppb		99
35) Caprolactum	3.58	113	140899	1377.07673	ppb	#	77
36) 4-Chloro-3-methylphenol	3.67	107	299151	1323.79847	ppb		95
37) 2-Methylnaphthalene	3.76	142	873844	1371.47670	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y004.D Vial: 4
Acq On : 21 Sep 14 13:27 Operator: CSC
Sample : 140915A LCS-1 1/30.16G Inst : YODA
Misc : Multiplr: 33.16

Quant Time: Sep 21 20:50 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	Hexachlorocyclopentadiene	3.86	237	33565	1160.75510 ppb		98
40)	1,2,4,5-Tetrachlorobenzene	3.87	216	282713	1363.17666 ppb		95
41)	2,4,6-Trichlorophenol	3.95	196	190571	1377.13767 ppb	#	90
42)	2,4,5-Trichlorophenol	3.98	196	193897	1304.19450 ppb		97
43)	2-Chloronaphthalene	4.07	162	736084	1369.76659 ppb		98
45)	1,1'-Biphenyl	4.05	154	957791	1388.46056 ppb	#	97
46)	2-Nitroaniline	4.13	138	308527	1454.03755 ppb	#	77
47)	Dimethyl phthalate	4.24	163	745367	1386.62693 ppb		96
48)	2,6-DNT	4.28	165	196645	1542.95315 ppb	#	81
49)	Acenaphthylene	4.34	152	1166159	1338.82136 ppb		99
50)	3-Nitroaniline	4.39	65	255671	2025.42902 ppb	#	76
51)	Acenaphthene	4.45	154	749705	1459.53295 ppb		100
52)	2,4-Dinitrophenol	4.47	184	40443	1354.16597 ppb		100
53)	4-Nitrophenol	4.52	109	40489	1416.63270 ppb		81
54)	Dibenzofuran	4.55	168	999046	1350.00374 ppb		98
55)	2,4-DNT	4.54	165	244796	1452.01021 ppb	#	88
56)	2,3,4,6-Tetrachlorophenol	4.63	232	131450	1342.66550 ppb	#	94
57)	Diethyl phthalate	4.67	149	751000	1486.91580 ppb		97
58)	4-Chlorophenyl phenyl ethe	4.76	204	338695	1403.71048 ppb		97
59)	Fluorene	4.77	165	790545	1439.57597 ppb		99
60)	4-Nitroaniline	4.78	138	241933	1464.43755 ppb		96
63)	Diphenyl amine	4.83	168	648739	1376.52729 ppb		99
64)	4,6-Dinitro-2-methylphenol	4.80	198	108478	1340.34437 ppb		92
65)	n-Nitrosodiphenylamine	4.83	167	355616	1350.70939 ppb		99
66)	1,2-Diphenylhydrazine	4.86	182	213060	1327.54203 ppb	#	67
67)	4-Bromophenyl phenyl ether	5.07	248	167400	1343.08508 ppb		96
68)	Hexachlorobenzene	5.12	284	208629	1382.81961 ppb	#	86
69)	Atrazine	5.15	200	77267	552.83909 ppb		96
70)	Pentachlorophenol	5.24	266	39316	870.29503 ppb		98
71)	Phenanthrene	5.38	178	1081114	1288.55097 ppb		100
72)	Anthracene	5.42	178	1109813	1451.35199 ppb		98
73)	Carbazol	5.51	167	1179471	1407.75463 ppb		96
74)	Di-n-butylphthalate	5.71	149	1261675	1313.07350 ppb		99
75)	Fluoranthene	6.17	202	1086913	1442.62645 ppb		99
77)	Benzidine	6.25	184	68512	634.40836 ppb		96
78)	Pyrene	6.34	202	1117326	1405.16609 ppb		96
80)	Butyl benzylphthalate	6.75	149	557103	1440.37121 ppb	#	77
81)	3,3'-Dichlorobenzidine	7.21	252	292775	1659.10880 ppb		99
82)	Benz (a) anthracene	7.25	228	980599	1408.42722 ppb		99
83)	Bis (2-ethylhexyl) phthala	7.21	149	744732	1461.00499 ppb		97
84)	Chrysene	7.28	228	773082	1320.11021 ppb	#	97
85)	Di-n-octylphthalate	7.82	149	1273621	1318.73688 ppb		100
86)	Indeno (1,2,3-cd) pyrene	10.15	276	900233	1279.17544 ppb		94
88)	Benzo (b) fluoranthene	8.32	252	854814	1218.28231 ppb		99
89)	Benzo (k) fluoranthene	8.35	252	792469	1424.45933 ppb		99
90)	Benzo (a) pyrene	8.69	252	757554	1237.05546 ppb	#	91
91)	Dibenz (a,h) anthracene	10.16	278	761648	1349.37034 ppb		97
92)	Benzo (g,h,i) perylene	10.51	276	696540	1264.36188 ppb	#	84

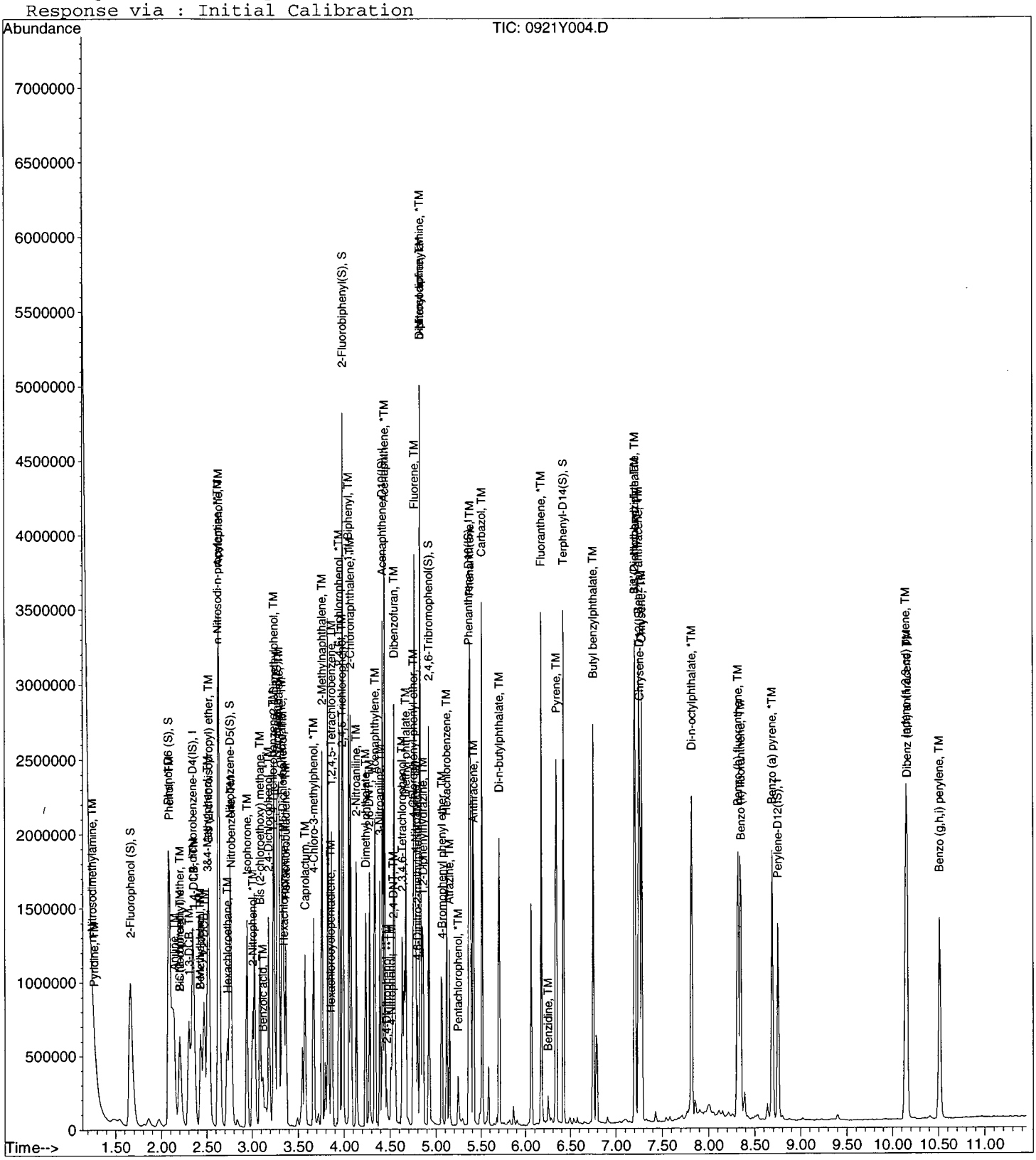
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y004.D Vial: 4
Acq On : 21 Sep 14 13:27 Operator: CSC
Sample : 140915A LCS-1 1/30.16G Inst : YODA
Misc : Multiplr: 33.16

Quant Time: Sep 21 20:50 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270C WATER

APPL ID: **140908W-02108 LCS - 189933**
Batch ID: #87CE2-140908A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,2,4-TRICHLOROBENZENE	50.0	27.4	54.8	35-105
1,2-DICHLOROBENZENE	50.0	29.0	58.0	35-100
1,3-DICHLOROBENZENE	50.0	26.3	52.6	30-100
1,4-DICHLOROBENZENE	50.0	27.0	54.0	30-100
2,4,5-TRICHLOROPHENOL	50.0	34.1	68.2	50-110
2,4,6-TRICHLOROPHENOL	50.0	33.3	66.6	50-115
2,4-DICHLOROPHENOL	50.0	32.3	64.6	50-105
2,4-DIMETHYLPHENOL	50.0	36.1	72.2	30-110
2,4-DINITROPHENOL	50.0	37.1	74.2	15-140
2,4-DINITROTOLUENE	50.0	31.9	63.8	50-120
2,6-DINITROTOLUENE	50.0	35.1	70.2	50-115
2-CHLOROPHENOL	50.0	33.7	67.4	35-105
3,3'-DICHLOROBENZIDINE	50.0	49.2	98.4	20-110
4-CHLOROANILINE	50.0	53.3	107	15-110
BIS (2-CHLOROETHYL) ETHER	50.0	33.6	67.2	35-110
BIS (2-CHLOROISOPROPYL) ETHER	50.0	33.3	66.6	25-130
BIS (2-ETHYLHEXYL) PHTHALATE	50.0	37.1	74.2	40-125
DIETHYL PHTHALATE	50.0	30.2	60.4	40-120
DIMETHYL PHTHALATE	50.0	31.5	63.0	25-125
HEXACHLOROBENZENE	50.0	35.5	71.0	50-110
HEXACHLOROBUTADIENE	50.0	25.8	51.6	25-105
HEXACHLOROETHANE	50.0	26.3	52.6	30-95
ISOPHORONE	50.0	34.8	69.6	50-110
NITROBENZENE	50.0	32.4	64.8	45-110
PENTACHLOROPHENOL	50.0	38.8	77.6	40-115
PHENOL	50.0	16.2	32.4	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	137	68.5	40-125
SURROGATE: 2-FLUORBIPHENYL (S)	100	54.1	54.1	50-110
SURROGATE: 2-FLUOROPHENOL (S)	200	84.7	42.4	20-110
SURROGATE: NITROBENZENE-D5 (S)	100	60.9	60.9	40-110
SURROGATE: PHENOL (S)	200	55.6	27.8	10-115

Primary	SPK
Quant Method :	Y87HP.M
Extraction Date :	9/8/14
Analysis Date :	9/11/14
Instrument :	YODA
Run :	0910Y012
Initials :	LF

Comments: _____

Printed: 9/22/14 8:22:43 PM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8270C WATER

APPL ID: **140908W-02108 LCS - 189933**
Batch ID: #87CE2-140908A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
SURROGATE: TERPHENYL-D14 (S)	100	106	106	50-135

Comments: _____

Primary	SPK
Quant Method :	Y87HP.M
Extraction Date :	9/8/14
Analysis Date :	9/11/14
Instrument :	YODA
Run :	0910Y012
Initials :	LF

Printed: 9/22/14 8:22:43 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y012.D Vial: 12
Acq On : 11 Sep 14 2:38 Operator: LF
Sample : 140908A LCS-1 1/1000 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 18 23:06 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	3.29	152	90464	40.00000 ppb		0.00
20) Napthalene-D8(IS)	4.11	136	343663	40.00000 ppb		0.00
38) Acenaphthene-D10(IS)	5.20	164	241886	40.00000 ppb		0.00
62) Phenanthrene-D10(IS)	6.16	188	434816	40.00000 ppb		0.00
76) Chrysene-D12(IS)	8.13	240	426331	40.00000 ppb		0.03
87) Perylene-D12(IS)	9.62	264	328218	40.00000 ppb		0.02
System Monitoring Compounds						
4) 2-Fluorophenol (S)	2.35	112	346729	84.73569 ppb		0.00
Spiked Amount 200.000			Recovery = 42.368%			
5) Phenol-D6 (S)	3.04	99	292426	55.62141 ppb		0.00
Spiked Amount 200.000			Recovery = 27.811%			
21) Nitrobenzene-D5(S)	3.67	82	308602	60.87487 ppb		0.00
Spiked Amount 100.000			Recovery = 60.875%			
44) 2-Fluorobiphenyl(S)	4.76	172	637967	54.14495 ppb		0.00
Spiked Amount 100.000			Recovery = 54.145%			
61) 2,4,6-Tribromophenol(S)	5.70	330	216212	136.90267 ppb		0.00
Spiked Amount 200.000			Recovery = 68.452%			
79) Terphenyl-D14(S)	7.27	244	1474999	106.03772 ppb		0.02
Spiked Amount 100.000			Recovery = 106.038%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.64	74	30117	21.66440 ppb		83
3) Pyridine	1.66	52	33221	18.04550 ppb		97
6) Phenol	3.06	94	92123	16.20037 ppb		89
7) Aniline	3.10	93	130075	33.49520 ppb		91
8) Bis (2-chloroethyl) ether	3.10	63	78935	33.59508 ppb		91
9) 2-Chlorophenol	3.16	128	154239	33.67102 ppb		98
10) 1,3-DCB	3.26	146	142453	26.30509 ppb		95
11) 1,4-DCB	3.30	146	142294	26.99203 ppb		99
12) Benzyl alcohol	3.39	79	143735	30.01245 ppb		95
13) 1,2-DCB	3.41	146	141412	28.99185 ppb		98
14) 2-Methylphenol	3.46	108	119778	30.13597 ppb		97
15) Bis (2-chloroisopropyl) et	3.47	45	135138	33.27026 ppb		97
16) Acetophenone	3.56	105	219848	34.67547 ppb		95
17) 3&4-Methylphenol	3.56	107	283513	59.20132 ppb		96
18) n-Nitrosodi-n-propylamine	3.55	43	115198	34.28514 ppb		91
19) Hexachloroethane	3.63	117	59079	26.27107 ppb		93
22) Nitrobenzene	3.68	77	159626	32.43145 ppb		98
23) Isophorone	3.82	82	306341	34.82097 ppb		94
24) 2-Nitrophenol	3.87	139	84167	38.03207 ppb		97
25) 2,4-Dimethylphenol	4.08	107	244757	36.09885 ppb		95
26) Benzoic acid	3.97	105	35345	22.22347 ppb		88
27) Bis (2-chloroethoxy) metha	3.95	93	172496	32.16727 ppb		96
28) 2,4-Dichlorophenol	4.03	162	122751	32.29654 ppb		97
29) 1,2,4-Trichlorobenzene	4.08	180	133652	27.35831 ppb		99
30) Naphthalene	4.13	128	410465	30.12623 ppb		100
31) 4-Chloroaniline	4.15	127	170781	53.27272 ppb		98
32) 2,6-Dichlorophenol	4.16	162	118986	31.53493 ppb		95
33) Hexachloropropene	4.18	213	112689	28.67075 ppb		98
34) Hexachlorobutadiene	4.19	225	83051	25.81821 ppb		99
35) Caprolactum	4.37	113	16824	10.75371 ppb	#	65
36) 4-Chloro-3-methylphenol	4.45	107	175597	36.18555 ppb		86
37) 2-Methylnaphthalene	4.55	142	278926	27.76808 ppb		100

(#) = qualifier out of range (m) = manual integration

30117×40
90464 Y0,6487
=36

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140910\0910Y012.D Vial: 12
Acq On : 11 Sep 14 2:38 Operator: LF
Sample : 140908A LCS-1 1/1000 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 18 23:06 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

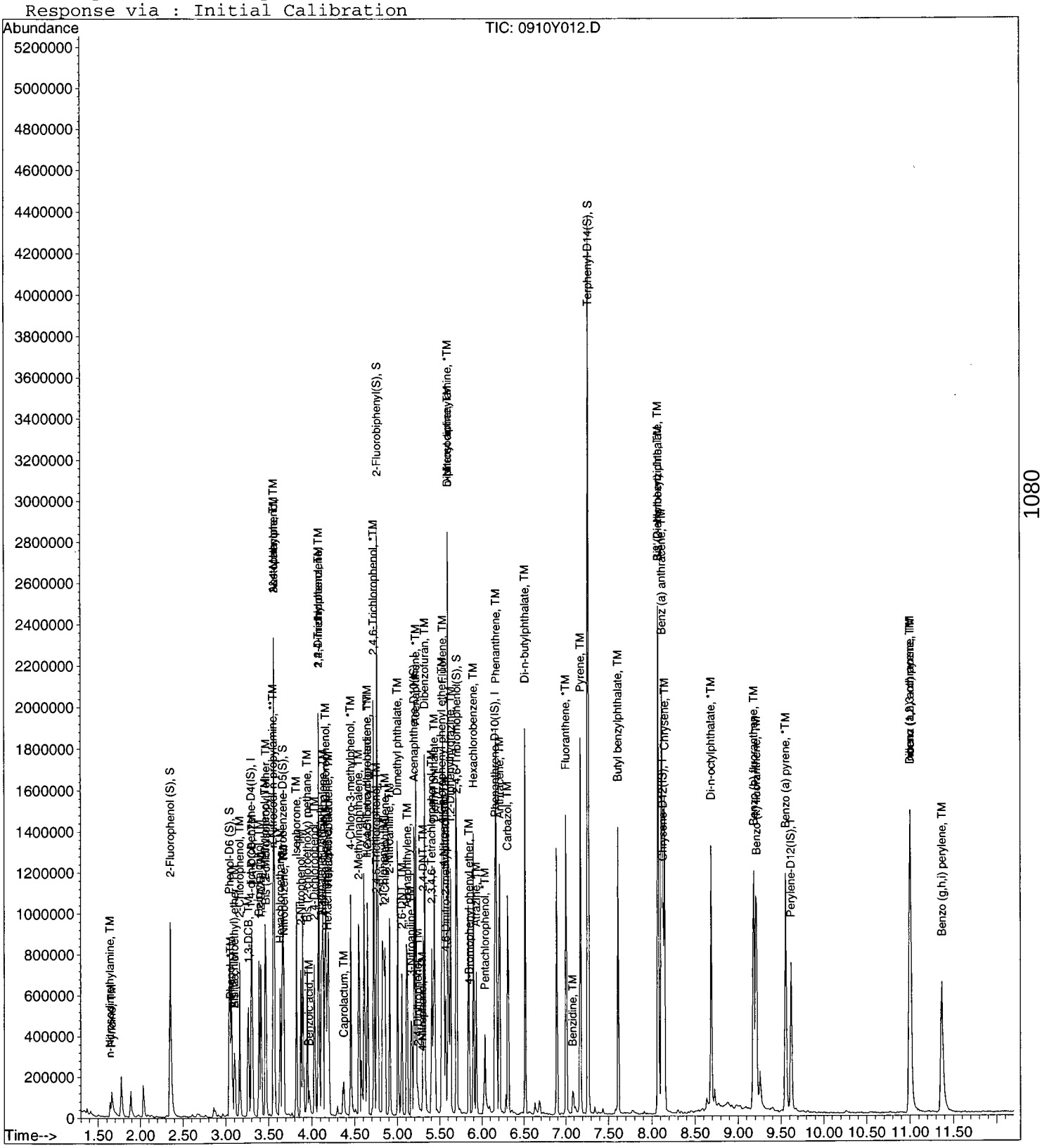
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Hexachlorocyclopentadiene	4.65	237	21842	25.78146	ppb		97
40)	1,2,4,5-Tetrachlorobenzene	4.65	216	139700	24.78771	ppb		93
41)	2,4,6-Trichlorophenol	4.72	196	104194	33.28598	ppb		94
42)	2,4,5-Trichlorophenol	4.75	196	103750	34.12450	ppb	#	93
43)	2-Chloronaphthalene	4.86	162	267314	27.37996	ppb		96
45)	1,1'-Biphenyl	4.84	154	334847	25.85408	ppb	#	93
46)	2-Nitroaniline	4.91	138	109313	34.88609	ppb		97
47)	Dimethyl phthalate	5.00	163	379834	31.52718	ppb		94
48)	2,6-DNT	5.05	165	86593	35.13470	ppb		93
49)	Acenaphthylene	5.11	152	455135	28.09322	ppb		98
50)	3-Nitroaniline	5.16	65	113049	34.57884	ppb		98
51)	Acenaphthene	5.22	154	317756	32.92324	ppb		98
52)	2,4-Dinitrophenol	5.24	184	21102	37.07993	ppb	#	9
53)	4-Nitrophenol	5.29	109	26005	14.03810	ppb		93
54)	Dibenzofuran	5.32	168	461989	31.34695	ppb		92
55)	2,4-DNT	5.30	165	114442	31.92323	ppb		80
56)	2,3,4,6-Tetrachlorophenol	5.40	232	86823	35.35918	ppb		93
57)	Diethyl phthalate	5.44	149	369931	30.20539	ppb		98
58)	4-Chlorophenyl phenyl ethe	5.53	204	204096	34.49448	ppb	#	64
59)	Fluorene	5.54	165	350743	32.20595	ppb		99
60)	4-Nitroaniline	5.55	138	84733	33.48500	ppb		96
63)	Diphenyl amine	5.60	168	363272	32.22375	ppb		99
64)	4,6-Dinitro-2-methylphenol	5.57	198	62534	39.96479	ppb	#	86
65)	n-Nitrosodiphenylamine	5.60	167	198515	32.94750	ppb		93
66)	1,2-Diphenylhydrazine	5.63	182	110461	32.98654	ppb	#	1
67)	4-Bromophenyl phenyl ether	5.85	248	104904	28.41492	ppb		100
68)	Hexachlorobenzene	5.90	284	129923	35.50086	ppb	#	71
69)	Atrazine	5.93	200	62428	17.55359	ppb		95
70)	Pentachlorophenol	6.04	266	43756	38.76039	ppb		94
71)	Phenanthrene	6.17	178	551733	33.66505	ppb		98
72)	Anthracene	6.21	178	546779	32.48245	ppb		99
73)	Carbazol	6.31	167	466855	32.52539	ppb		93
74)	Di-n-butylphthalate	6.51	149	707788	36.30408	ppb		100
75)	Fluoranthene	7.00	202	608369	30.46675	ppb	#	85
77)	Benzidine	7.08	184	44845	15.70766	ppb	#	95
78)	Pyrene	7.17	202	679249	35.50124	ppb		96
80)	Butyl benzylphthalate	7.61	149	283348	34.48194	ppb		80
81)	3,3'-Dichlorobenzidine	8.08	252	231562	49.20249	ppb		98
82)	Benz (a) anthracene	8.12	228	620840	32.78467	ppb		100
83)	Bis (2-ethylhexyl) phthala	8.08	149	397280	37.06549	ppb	#	98
84)	Chrysene	8.15	228	555424	35.05359	ppb		98
85)	Di-n-octylphthalate	8.69	149	634330	35.19289	ppb		99
86)	Indeno (1,2,3-cd) pyrene	11.00	276	654476	34.09041	ppb		95
88)	Benzo (b) fluoranthene	9.18	252	596562	26.07162	ppb		99
89)	Benzo (k) fluoranthene	9.21	252	563566	27.75876	ppb	#	97
90)	Benzo (a) pyrene	9.56	252	541383	26.24540	ppb		98
91)	Dibenz (a,h) anthracene	11.00	278	513673	27.53306	ppb	#	97
92)	Benzo (g,h,i) perylene	11.37	276	524366	27.99004	ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y140910\0910Y012.D Vial: 12
Acq On : 11 Sep 14 2:38 Operator: LF
Sample : 140908A LCS-1 1/1000 Inst : YODA
Misc : Multiplr: 1.00

Quant Time: Sep 18 23:06 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Sep 11 19:44:39 2014
Response via : Initial Calibration



1080

Matrix Spike Recoveries

EPA 8270C IS SOILS

APPL ID: **140915S-02100 MS - 189979**
Batch ID: #87CE2-140915A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2,4-TRICHLOROBENZENE	1.65	ND	1.38	1.24	83.6	75.2	45-110	10.7	30
1,2-DICHLOROBENZENE	1.65	ND	1.40	1.28	84.8	77.6	45-95	9.0	30
1,3-DICHLOROBENZENE	1.65	ND	1.40	1.28	84.8	77.6	40-100	9.0	30
1,4-DICHLOROBENZENE	1.65	ND	1.33	1.23	80.6	74.5	35-105	7.8	30
2,4,5-TRICHLOROPHENOL	1.65	ND	1.26	1.25	76.4	75.8	50-110	0.80	30
2,4,6-TRICHLOROPHENOL	1.65	ND	1.35	1.25	81.8	75.8	45-110	7.7	30
2,4-DICHLOROPHENOL	1.65	ND	1.28	1.16	77.6	70.3	45-110	9.8	30
2,4-DIMETHYLPHENOL	1.65	ND	0.427	0.402	25.9 #	24.4 #	30-105	6.0	30
2,4-DINITROPHENOL	1.65	ND	0.259	0.207	15.7	12.5 #	15-130	22.3	30
2,4-DINITROTOLUENE	1.65	ND	1.51	1.34	91.5	81.2	50-115	11.9	30
2,6-DINITROTOLUENE	1.65	ND	1.54	1.36	93.3	82.4	50-110	12.4	30
2-CHLOROPHENOL	1.65	ND	1.36	1.26	82.4	76.4	45-105	7.6	30
3,3'-DICHLOROBENZIDINE	1.65	ND	0.159	0.118	9.6 #	7.2 #	10-130	29.6	30
4-CHLOROANILINE	1.65	ND	0.627	0.580	38.0	35.2	10-95	7.8	30
BIS (2-CHLOROETHYL) ETHER	1.65	ND	1.71	1.56	104	94.5	40-105	9.2	30
BIS (2-CHLOROISOPROPYL) ETHER	1.65	ND	1.64	1.54	99.4	93.3	20-115	6.3	30
BIS (2-ETHYLHEXYL) PHTHALATE	1.65	0.29	1.96	1.94	101	100	45-125	1.0	30
DIETHYL PHTHALATE	1.65	ND	1.47	1.38	89.1	83.6	50-115	6.3	30
DIMETHYL PHTHALATE	1.65	ND	1.46	1.40	88.5	84.8	50-110	4.2	30
HEXACHLOROBENZENE	1.65	ND	1.45	1.21	87.9	73.3	45-120	18.0	30
HEXACHLOROBUTADIENE	1.65	ND	1.31	1.17	79.4	70.9	40-115	11.3	30
HEXACHLOROETHANE	1.65	ND	1.44	1.33	87.3	80.6	35-110	7.9	30
ISOPHORONE	1.65	ND	1.48	1.35	89.7	81.8	45-110	9.2	30
NITROBENZENE	1.65	ND	1.49	1.35	90.3	81.8	40-115	9.9	30
PENTACHLOROPHENOL	1.65	ND	0.541	0.465	32.8	28.2	25-120	15.1	30
PHENOL	1.65	ND	1.46	1.37	88.5	83.0	40-100	6.4	30
SURROGATE: 2,4,6-TRIBROMOPHENOL	6.59	NA	4.22	4.46	64.0	67.7	35-125		
SURROGATE: 2-FLUORBIPHENYL (S)	3.29	NA	2.55	2.54	77.5	77.2	45-105		
SURROGATE: 2-FLUOROPHENOL (S)	6.59	NA	4.86	4.62	73.7	70.1	35-105		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	Y87HP.M	Y87HP.M
Extraction Date :	9/15/14	9/15/14
Analysis Date :	9/21/14	9/21/14
Instrument :	YODA	YODA
Run :	0921Y005	0921Y006
Initials :	LF	

Printed: 9/22/14 8:22:45 PM
APPL MSD SCII

Matrix Spike Recoveries
EPA 8270C IS SOILS

APPL ID: **140915S-02100 MS - 189979**
Batch ID: #87CE2-140915A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
SURROGATE: NITROBENZENE-D5 (S)	3.29	NA	3.05	2.86	92.7	86.9	35-100		
SURROGATE: PHENOL (S)	6.59	NA	5.91	5.69	89.7	86.3	40-100		
SURROGATE: TERPHENYL-D14 (S)	3.29	NA	2.86	2.63	86.9	79.9	30-125		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	Y87HP.M	Y87HP.M
Extraction Date :	9/15/14	9/15/14
Analysis Date :	9/21/14	9/21/14
Instrument :	YODA	YODA
Run :	0921Y005	0921Y006
Initials :	LF	

Printed: 9/22/14 8:22:45 PM
APPL MSD SCII

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y005.D Vial: 5
Acq On : 21 Sep 14 13:44 Operator: CSC
Sample : AZ02100S11 MS-1 1/30.36G Inst : YODA
Misc : Multiplr: 32.94

Quant Time: Sep 21 20:50 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.34	152	253644	40.00000	ppb		0.02
20) Napthalene-D8(IS)	3.28	136	1151518	40.00000	ppb		0.00
38) Acenaphthene-D10(IS)	4.42	164	619089	40.00000	ppb		0.00
62) Phenanthrene-D10(IS)	5.37	188	897046	40.00000	ppb		0.00
76) Chrysene-D12(IS)	7.26	240	645167	40.00000	ppb		0.02
87) Perylene-D12(IS)	8.76	264	490801	40.00000	ppb		0.02
System Monitoring Compounds							
4) 2-Fluorophenol (S)	1.66	112	847933	4859.45195	ppb		0.02
Spiked Amount 6587.615			Recovery =	73.766%			
5) Phenol-D6 (S)	2.09	99	1241475	5908.23260	ppb		0.02
Spiked Amount 6587.615			Recovery =	89.687%			
21) Nitrobenzene-D5(S)	2.76	82	682943	3051.52482	ppb		0.00
Spiked Amount 3293.808			Recovery =	92.644%			
44) 2-Fluorobiphenyl(S)	3.99	172	1305365	2553.51867	ppb		0.00
Spiked Amount 3293.808			Recovery =	77.525%			
61) 2,4,6-Tribromophenol(S)	4.92	330	264512	4224.31176	ppb		0.00
Spiked Amount 6587.615			Recovery =	64.125%			
79) Terphenyl-D14(S)	6.42	244	1064047	2862.10332	ppb		0.00
Spiked Amount 3293.808			Recovery =	86.893%			
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.25	74	112501	1385.33505	ppb		75
3) Pyridine	1.28	52	1940	16.03445	ppb	#	44
6) Phenol	2.09	94	385220	1461.84086	ppb	#	83
7) Aniline	2.14	93	432603	1039.27596	ppb	#	70
8) Bis (2-chloroethyl) ether	2.20	63	88671	1706.58175	ppb		97
9) 2-Chlorophenol	2.20	128	395933	1358.83785	ppb		99
10) 1,3-DCB	2.30	146	467586	1404.64068	ppb		96
11) 1,4-DCB	2.35	146	450461	1331.34900	ppb		97
12) Benzyl alcohol	2.44	79	283699	1548.09663	ppb		93
13) 1,2-DCB	2.47	146	436045	1403.22090	ppb		98
14) 2-Methylphenol	2.44	108	283673	1404.74736	ppb		99
15) Bis (2-chloroisopropyl) et	2.52	45	847585	1636.22335	ppb		90
16) Acetophenone	2.63	105	540927	1538.95111	ppb		94
17) 3&4-Methylphenol	2.52	107	175875	1495.38329	ppb	#	83
18) n-Nitrosodi-n-propylamine	2.62	43	412734	2186.18989	ppb		85
19) Hexachloroethane	2.73	117	150364	1442.82120	ppb		89
22) Nitrobenzene	2.77	77	370757	1489.91408	ppb		93
23) Isophorone	2.94	82	719007	1479.04430	ppb		98
24) 2-Nitrophenol	3.01	139	229618	1371.22632	ppb		94
25) 2,4-Dimethylphenol	3.24	107	134596	426.55092	ppb		94
27) Bis (2-chloroethoxy) metha	3.09	93	482602	1576.31617	ppb		95
28) 2,4-Dichlorophenol	3.18	162	304450	1277.16670	ppb	#	89
29) 1,2,4-Trichlorobenzene	3.23	180	337031	1378.49636	ppb		100
30) Naphthalene	3.30	128	1267438	1415.58089	ppb		100
31) 4-Chloroaniline	3.33	127	142190	626.85774	ppb	#	89
32) 2,6-Dichlorophenol	3.34	162	310320	1309.40499	ppb		97
33) Hexachloropropene	3.36	213	151264	1349.16765	ppb		99
34) Hexachlorobutadiene	3.37	225	134002	1306.81534	ppb		100
35) Caprolactum	3.57	113	31387	306.60823	ppb	#	79
36) 4-Chloro-3-methylphenol	3.66	107	278569	1232.10571	ppb	#	73
37) 2-Methylnaphthalene	3.76	142	934001	1465.16198	ppb		99
39) Hexachlorocyclopentadiene	3.86	237	25121	994.41138	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y005.D Vial: 5
Acq On : 21 Sep 14 13:44 Operator: CSC
Sample : AZ02100S11 MS-1 1/30.36G Inst : YODA
Misc : Multiplr: 32.94

Quant Time: Sep 21 20:50 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

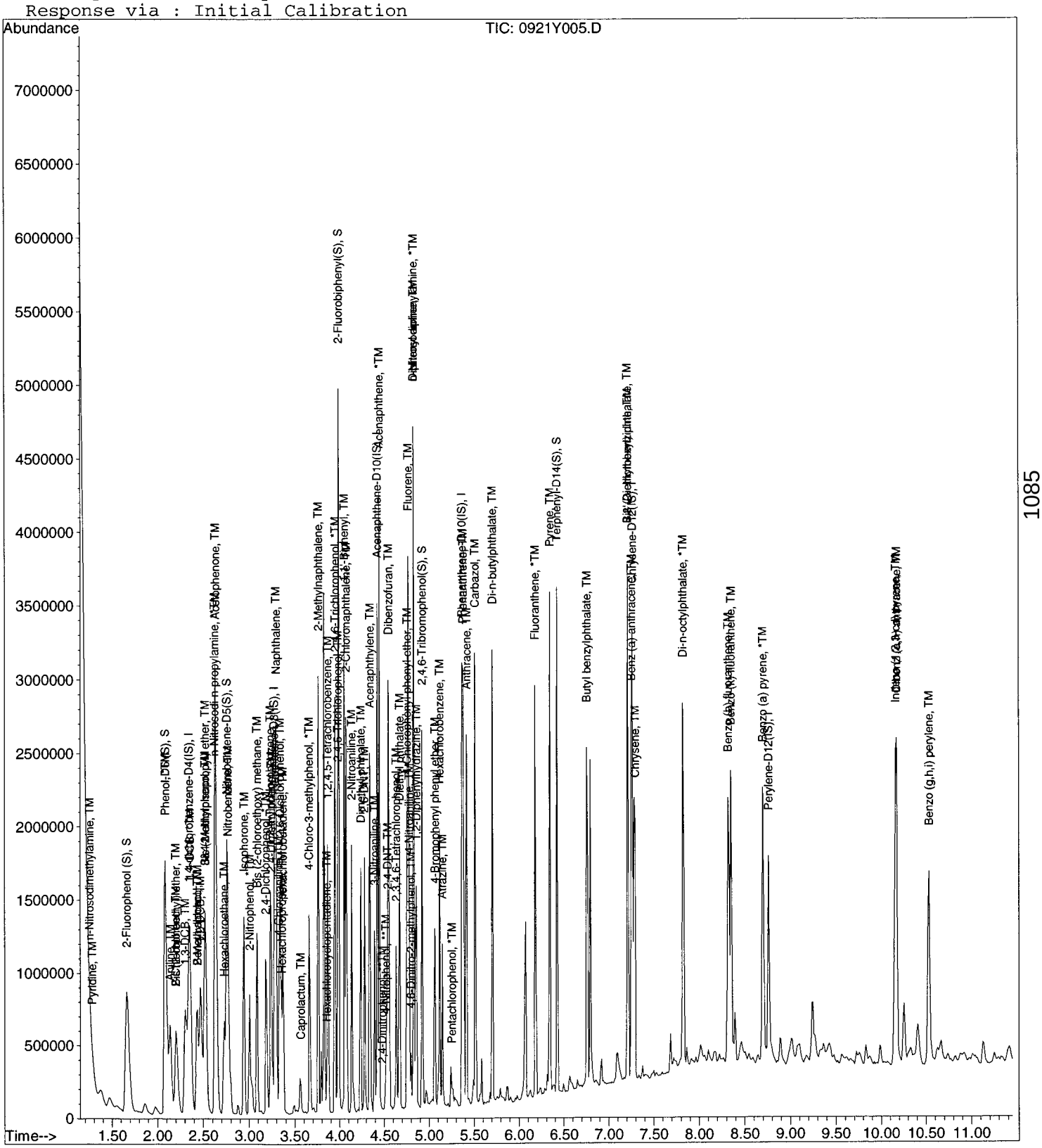
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
40)	1,2,4,5-Tetrachlorobenzene	3.87	216	277762	1346.11173	ppb	#	91
41)	2,4,6-Trichlorophenol	3.95	196	186125	1351.84584	ppb	#	90
42)	2,4,5-Trichlorophenol	3.98	196	187000	1264.19712	ppb		98
43)	2-Chloronaphthalene	4.07	162	733092	1371.13300	ppb		97
45)	1,1'-Biphenyl	4.05	154	961978	1401.61860	ppb	#	97
46)	2-Nitroaniline	4.14	138	321834	1524.46088	ppb	#	76
47)	Dimethyl phthalate	4.24	163	779872	1458.19200	ppb		95
48)	2,6-DNT	4.28	165	195114	1538.72205	ppb	#	79
49)	Acenaphthylene	4.34	152	1224591	1413.05102	ppb		99
50)	3-Nitroaniline	4.39	65	198573	1581.09392	ppb	#	75
51)	Acenaphthene	4.45	154	790235	1546.25698	ppb		100
52)	2,4-Dinitrophenol	4.48	184	3617	259.45544	ppb	#	100
53)	4-Nitrophenol	4.52	109	32136	1130.09238	ppb		88
54)	Dibenzofuran	4.55	168	1052884	1429.98647	ppb		96
55)	2,4-DNT	4.54	165	252989	1508.23463	ppb	#	84
56)	2,3,4,6-Tetrachlorophenol	4.63	232	117242	1203.62825	ppb		96
57)	Diethyl phthalate	4.67	149	739325	1471.24075	ppb		98
58)	4-Chlorophenyl phenyl ethe	4.76	204	361996	1507.90660	ppb		94
59)	Fluorene	4.77	165	776688	1421.53155	ppb		99
60)	4-Nitroaniline	4.78	138	208831	1270.49403	ppb		97
63)	Diphenyl amine	4.83	168	608886	1321.29543	ppb		99
64)	4,6-Dinitro-2-methylphenol	4.80	198	48283	738.51116	ppb		96
65)	n-Nitrosodiphenylamine	4.83	167	329196	1275.76503	ppb		98
66)	1,2-Diphenylhydrazine	4.86	182	232571	1491.33775	ppb	#	59
67)	4-Bromophenyl phenyl ether	5.07	248	183358	1513.98660	ppb		96
68)	Hexachlorobenzene	5.12	284	213095	1453.57755	ppb	#	82
69)	Atrazine	5.15	200	73297	539.71562	ppb		97
70)	Pentachlorophenol	5.25	266	23751	541.06965	ppb		99
71)	Phenanthrene	5.38	178	1112548	1364.65529	ppb		99
72)	Anthracene	5.42	178	1152718	1551.38688	ppb		99
73)	Carbazol	5.51	167	1093151	1342.74625	ppb		94
74)	Di-n-butylphthalate	5.71	149	1426168	1527.51794	ppb		99
75)	Fluoranthene	6.17	202	1008251	1377.21537	ppb	#	86
77)	Benzidine	6.23	184	750	-48.41348	ppb	#	10
78)	Pyrene	6.34	202	1124469	1630.33905	ppb	#	84
80)	Butyl benzylphthalate	6.75	149	557787	1662.60856	ppb	#	58
81)	3,3'-Dichlorobenzidine	7.21	252	24279	158.61869	ppb		100
82)	Benz (a) anthracene	7.25	228	939548	1555.76725	ppb		99
83)	Bis (2-ethylhexyl) phthala	7.21	149	864977	1956.31567	ppb	#	96
84)	Chrysene	7.29	228	861377	1695.74517	ppb		99
85)	Di-n-octylphthalate	7.82	149	1367586	1632.50785	ppb		99
86)	Indeno (1,2,3-cd) pyrene	10.16	276	877516	1437.51676	ppb		95
88)	Benzo (b) fluoranthene	8.32	252	934274	1448.64810	ppb		96
89)	Benzo (k) fluoranthene	8.35	252	726243	1420.24103	ppb		95
90)	Benzo (a) pyrene	8.70	252	763598	1356.60272	ppb	#	95
91)	Dibenz (a,h) anthracene	10.17	278	745595	1437.11713	ppb		95
92)	Benzo (g,h,i) perylene	10.53	276	672304	1327.71038	ppb		93

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y140920B\0921Y005.D Vial: 5
Acq On : 21 Sep 14 13:44 Operator: CSC
Sample : AZ02100S11 MS-1 1/30.36G Inst : YODA
Misc : Multiplr: 32.94

Quant Time: Sep 21 20:50 2014 Quant Results File: Y87HP.RES

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration



1085

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y006.D Vial: 6
Acq On : 21 Sep 14 14:01 Operator: CSC
Sample : AZ02100S11 MSD-1 1/30.11G Inst : YODA
Misc : Multiplr: 33.21

Quant Time: Sep 21 20:51 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	2.34	152	247665	40.00000	ppb		0.02
20) Napthalene-D8(IS)	3.28	136	1147592	40.00000	ppb		0.00
38) Acenaphthene-D10(IS)	4.42	164	604352	40.00000	ppb		0.00
62) Phenanthrene-D10(IS)	5.37	188	873034	40.00000	ppb		0.00
76) Chrysene-D12(IS)	7.27	240	630680	40.00000	ppb		0.03
87) Perylene-D12(IS)	8.77	264	484921	40.00000	ppb		0.03
System Monitoring Compounds							
4) 2-Fluorophenol (S)	1.66	112	780616	4619.70407	ppb		0.02
Spiked Amount 6642.312			Recovery = 69.550%				
5) Phenol-D6 (S)	2.09	99	1158723	5694.42905	ppb		0.02
Spiked Amount 6642.312			Recovery = 85.730%				
21) Nitrobenzene-D5(S)	2.76	82	631943	2856.83114	ppb		0.00
Spiked Amount 3321.156			Recovery = 86.019%				
44) 2-Fluorobiphenyl(S)	3.99	172	1256342	2538.45268	ppb		0.00
Spiked Amount 3321.156			Recovery = 76.433%				
61) 2,4,6-Tribromophenol(S)	4.92	330	270648	4464.46605	ppb		0.00
Spiked Amount 6642.312			Recovery = 67.213%				
79) Terphenyl-D14(S)	6.43	244	947830	2629.71709	ppb		0.02
Spiked Amount 3321.156			Recovery = 79.181%				
Target Compounds							Qvalue
2) n-Nitrosodimethylamine	1.25	74	100210	1274.26705	ppb	#	72
3) Pyridine	1.26	52	3395	28.97630	ppb	#	43
6) Phenol	2.09	94	350397	1373.10138	ppb	#	84
7) Aniline	2.14	93	386867	959.74087	ppb	#	70
8) Bis (2-chloroethyl) ether	2.20	63	78656	1563.24951	ppb		95
9) 2-Chlorophenol	2.20	128	354325	1255.73698	ppb		97
10) 1,3-DCB	2.30	146	413553	1282.87952	ppb		97
11) 1,4-DCB	2.35	146	401419	1225.13401	ppb		97
12) Benzyl alcohol	2.43	79	257010	1448.24232	ppb		89
13) 1,2-DCB	2.47	146	384090	1276.37617	ppb		98
14) 2-Methylphenol	2.44	108	258753	1323.17282	ppb		100
15) Bis (2-chloroisopropyl) et	2.52	45	770349	1535.66965	ppb		90
16) Acetophenone	2.63	105	484631	1423.79776	ppb		94
17) 3&4-Methylphenol	2.51	107	156766	1376.42085	ppb	#	93
18) n-Nitrosodi-n-propylamine	2.62	43	373590	1991.26941	ppb		87
19) Hexachloroethane	2.73	117	134409	1331.82741	ppb		90
22) Nitrobenzene	2.77	77	331249	1346.79240	ppb		93
23) Isophorone	2.94	82	648215	1349.09134	ppb		98
24) 2-Nitrophenol	3.01	139	206099	1245.24071	ppb		94
25) 2,4-Dimethylphenol	3.24	107	125241	401.56834	ppb		93
27) Bis (2-chloroethoxy) metha	3.09	93	420725	1390.35834	ppb		95
28) 2,4-Dichlorophenol	3.19	162	273016	1158.76114	ppb		97
29) 1,2,4-Trichlorobenzene	3.23	180	298505	1235.26916	ppb		99
30) Naphthalene	3.30	128	1149326	1298.74956	ppb		99
31) 4-Chloroaniline	3.33	127	130034	580.00411	ppb	#	90
32) 2,6-Dichlorophenol	3.34	162	278096	1187.22540	ppb		98
33) Hexachloropropene	3.35	213	114845	1036.37433	ppb		99
34) Hexachlorobutadiene	3.37	225	118414	1168.36950	ppb		99
35) Caprolactum	3.56	113	30954	305.93206	ppb	#	47
36) 4-Chloro-3-methylphenol	3.66	107	253735	1135.45461	ppb	#	72
37) 2-Methylnaphthalene	3.76	142	848714	1347.01949	ppb		99
39) Hexachlorocyclopentadiene	3.86	237	13991	740.51866	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y140920B\0921Y006.D Vial: 6
Acq On : 21 Sep 14 14:01 Operator: CSC
Sample : AZ02100S11 MSD-1 1/30.11G Inst : YODA
Misc : Multiplr: 33.21

Quant Time: Sep 21 20:51 2014 Quant Results File: Y87HP.RES

Quant Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration
DataAcq Meth : Y87ZBAQ

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
40)	1,2,4,5-Tetrachlorobenzene	3.87	216	244840	1225.58876 ppb	#	90
41)	2,4,6-Trichlorophenol	3.95	196	167037	1253.11019 ppb	#	92
42)	2,4,5-Trichlorophenol	3.98	196	178457	1246.12296 ppb	#	96
43)	2-Chloronaphthalene	4.07	162	656845	1268.93134 ppb		96
45)	1,1'-Biphenyl	4.05	154	860826	1295.49042 ppb	#	96
46)	2-Nitroaniline	4.13	138	280026	1370.05132 ppb	#	72
47)	Dimethyl phthalate	4.24	163	722570	1395.48582 ppb	#	93
48)	2,6-DNT	4.28	165	167561	1364.89363 ppb	#	73
49)	Acenaphthylene	4.34	152	1116061	1330.17515 ppb		99
50)	3-Nitroaniline	4.39	65	184864	1520.35126 ppb	#	72
51)	Acenaphthene	4.45	154	725116	1465.50404 ppb		100
52)	2,4-Dinitrophenol	4.48	184	2642	207.37375 ppb	#	100
53)	4-Nitrophenol	4.52	109	31102	1129.70373 ppb		90
54)	Dibenzofuran	4.55	168	904449	1268.78958 ppb		94
55)	2,4-DNT	4.54	165	217112	1336.91937 ppb	#	83
56)	2,3,4,6-Tetrachlorophenol	4.63	232	99917	1059.50414 ppb	#	90
57)	Diethyl phthalate	4.67	149	670415	1377.99041 ppb		98
58)	4-Chlorophenyl phenyl ethe	4.76	204	344147	1480.70580 ppb	#	89
59)	Fluorene	4.77	165	697907	1319.35474 ppb		99
60)	4-Nitroaniline	4.78	138	189225	1189.07786 ppb		95
63)	Diphenyl amine	4.83	168	556257	1233.30221 ppb		99
64)	4,6-Dinitro-2-methylphenol	4.80	198	33090	599.12179 ppb		87
65)	n-Nitrosodiphenylamine	4.83	167	303774	1207.39612 ppb		99
66)	1,2-Diphenylhydrazine	4.86	182	231738	1539.54454 ppb	#	26
67)	4-Bromophenyl phenyl ether	5.07	248	184355	1577.07243 ppb		98
68)	Hexachlorobenzene	5.12	284	171423	1211.45864 ppb	#	67
69)	Atrazine	5.15	200	53157	405.52142 ppb	#	90
70)	Pentachlorophenol	5.25	266	19716	465.33384 ppb		96
71)	Phenanthrene	5.39	178	1026326	1304.25974 ppb		100
72)	Anthracene	5.42	178	1089840	1519.61767 ppb		99
73)	Carbazol	5.52	167	949565	1208.40647 ppb		100
74)	Di-n-butylphthalate	5.71	149	1194669	1325.67718 ppb		100
75)	Fluoranthene	6.18	202	994533	1407.43048 ppb		99
77)	Benzidine	6.24	184	1083	-42.67677 ppb	#	69
78)	Pyrene	6.35	202	1026594	1535.26464 ppb		93
80)	Butyl benzylphthalate	6.76	149	479046	1472.83103 ppb	#	63
81)	3,3'-Dichlorobenzidine	7.22	252	17513	118.01527 ppb		99
82)	Benz (a) anthracene	7.26	228	845715	1444.45417 ppb		100
83)	Bis (2-ethylhexyl) phthala	7.22	149	830661	1937.81483 ppb	#	97
84)	Chrysene	7.29	228	756476	1536.08961 ppb	#	93
85)	Di-n-octylphthalate	7.83	149	1195115	1471.51404 ppb		99
86)	Indeno (1,2,3-cd) pyrene	10.17	276	695085	1174.49149 ppb		95
88)	Benzo (b) fluoranthene	8.33	252	791874	1253.05509 ppb	#	94
89)	Benzo (k) fluoranthene	8.36	252	627817	1252.96405 ppb		95
90)	Benzo (a) pyrene	8.71	252	666510	1208.42587 ppb	#	95
91)	Dibenz (a,h) anthracene	10.18	278	592645	1165.76026 ppb		97
92)	Benzo (g,h,i) perylene	10.54	276	508066	1023.96057 ppb		92

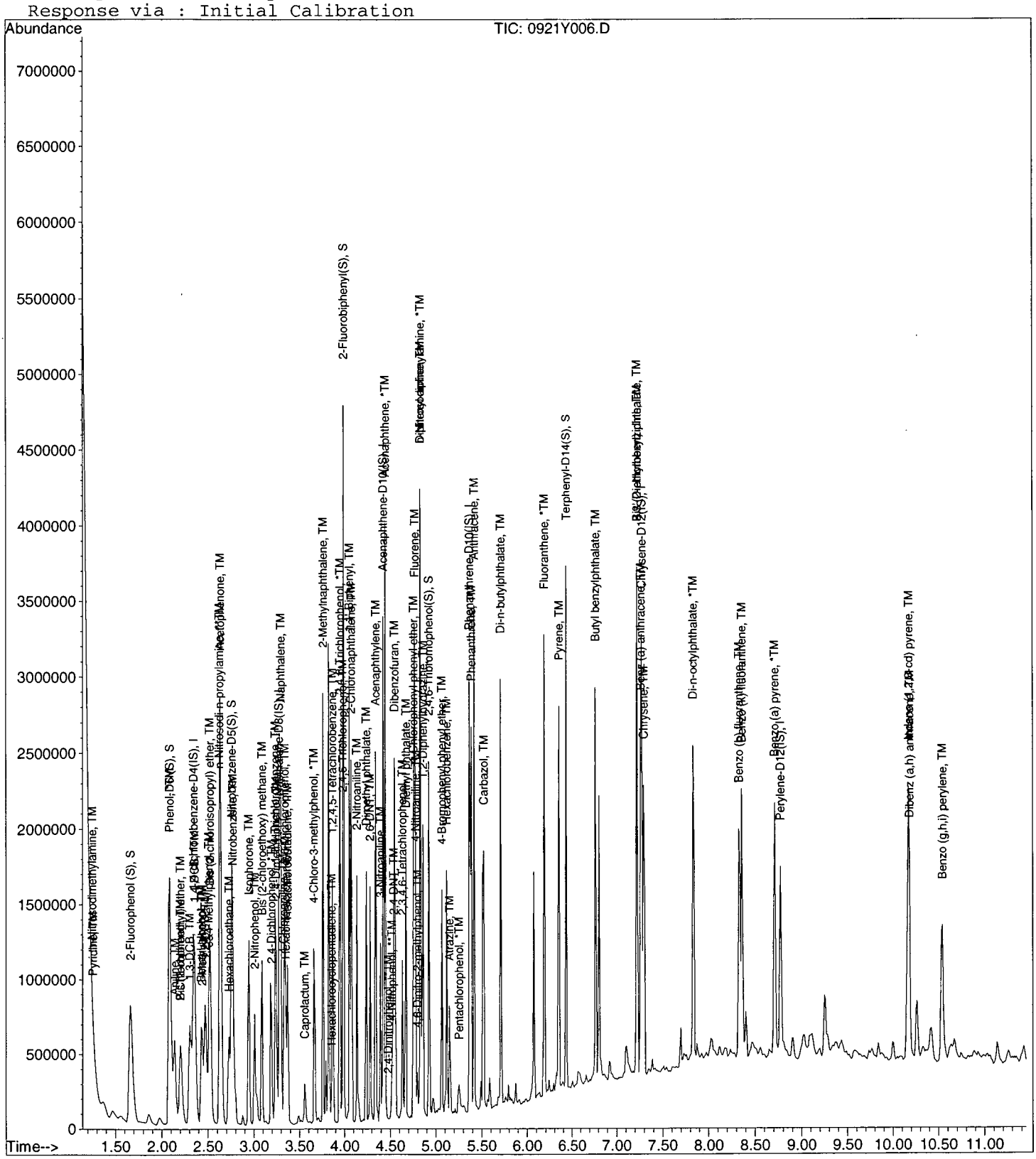
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y140920B\0921Y006.D Vial: 6
Acq On : 21 Sep 14 14:01 Operator: CSC
Sample : AZ02100S11 MSD-1 1/30.11G Inst : YODA
Misc : Multiplr: 33.21

Quant Time: Sep 21 20:51 2014 Quant Results File: Y87HP.RES

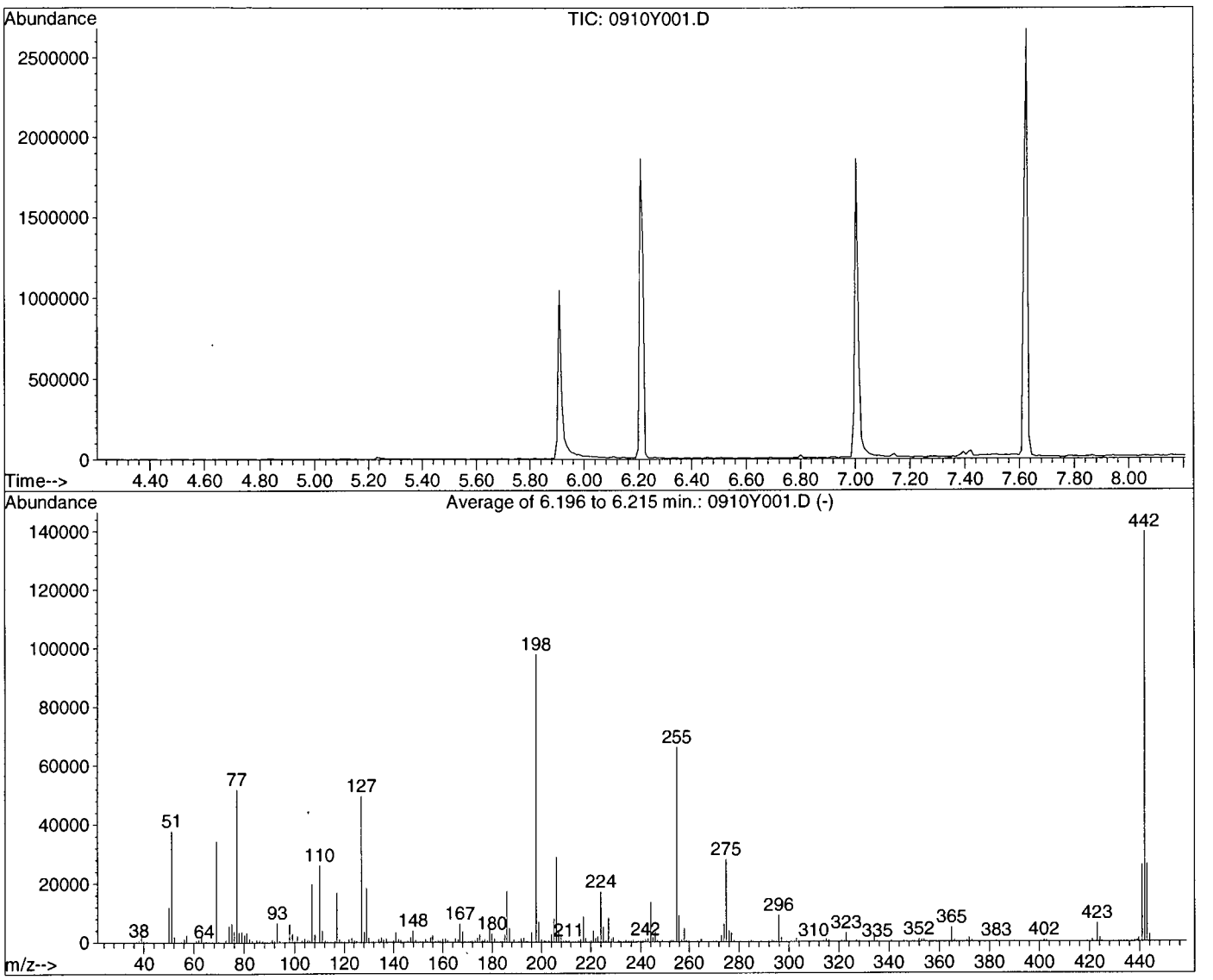
Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C
Last Update : Sun Sep 21 12:07:05 2014
Response via : Initial Calibration



1088

Data File : M:\YODA\DATA\Y140910\0910Y001.D Vial: 1
Acq On : 10 Sep 14 22:55 Operator: LF
Sample : SV TUNE 02-04-14 Inst : YODA
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y140910\Y87HP.M (RTE Integrator)
Title : EPA 8270C



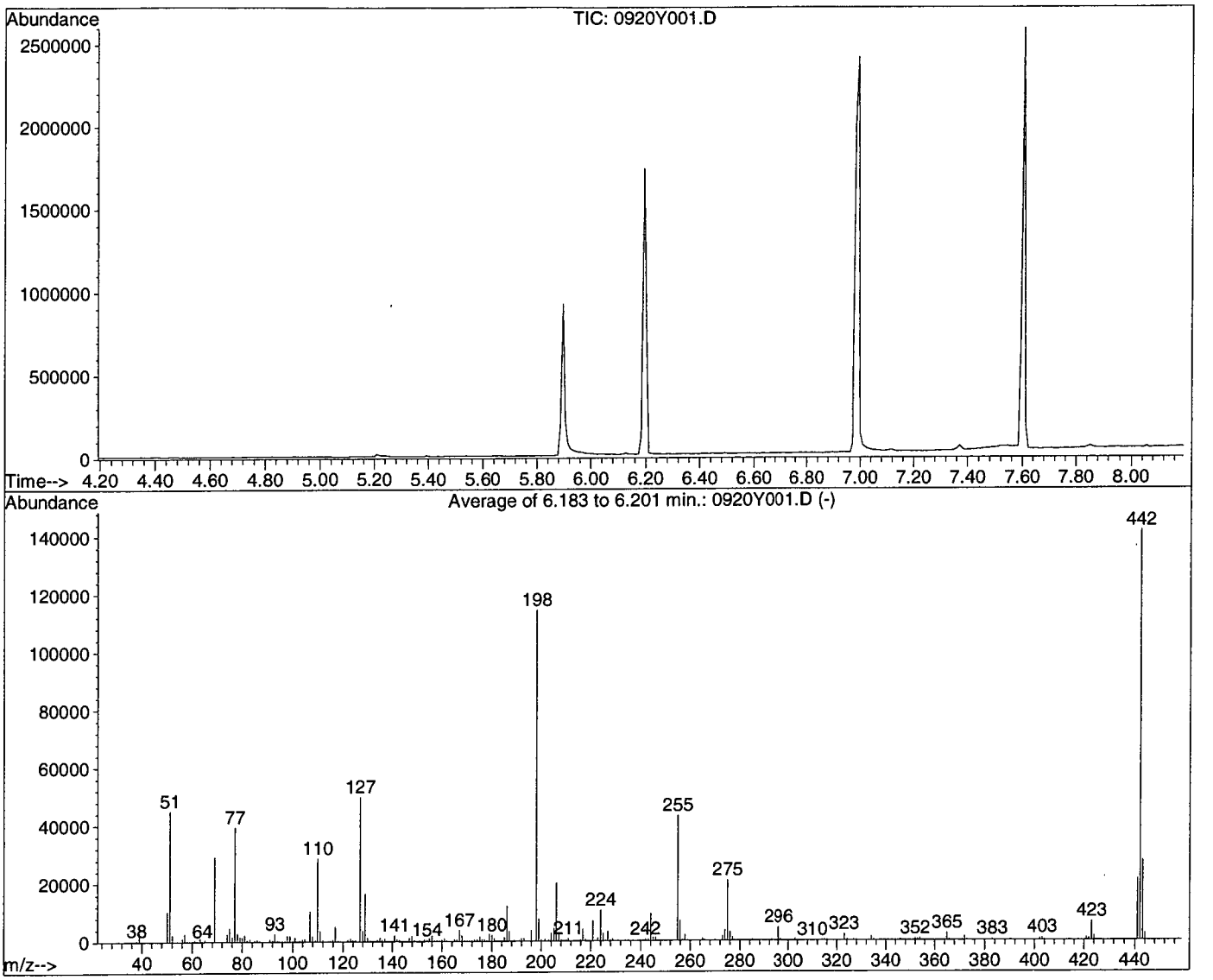
Spectrum Information: Average of 6.196 to 6.215 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	38.6	37779	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	200	PASS
127	198	40	60	50.8	49732	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	97960	PASS
199	198	5	9	6.9	6797	PASS
275	198	10	30	28.6	28025	PASS
365	198	1	100	4.9	4796	PASS
441	443	0.01	100	99.0	25941	PASS
442	198	40	150	142.5	139621	PASS
443	442	17	23	18.8	26198	PASS

DFTPP

Data File : M:\YODA\DATA\Y140920B\0920Y001.D Vial: 1
Acq On : 20 Sep 14 22:26 Operator: CSC
Sample : SV TUNE 09-16-14 Inst : YODA
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C



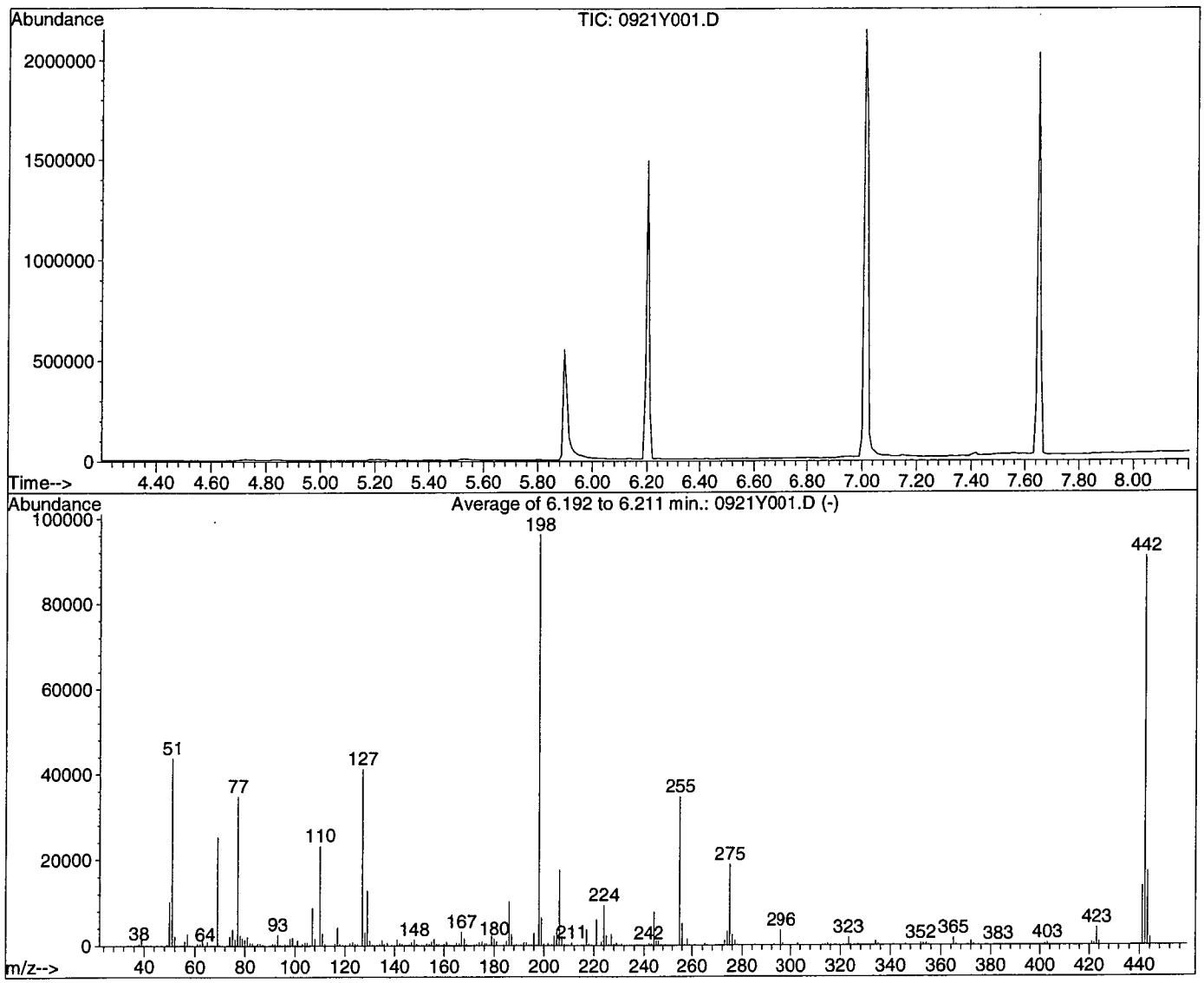
Spectrum Information: Average of 6.183 to 6.201 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	39.4	45167	PASS
68	69	0.00	2	0.2	60	PASS
70	69	0.00	2	0.4	110	PASS
127	198	40	60	43.5	49848	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	114570	PASS
199	198	5	9	6.6	7609	PASS
275	198	10	30	18.2	20889	PASS
365	198	1	100	2.1	2417	PASS
441	443	0.01	100	76.6	21112	PASS
442	198	40	150	123.8	141827	PASS
443	442	17	23	19.4	27571	PASS

DFTPP

Data File : M:\YODA\DATA\Y140920B\0921Y001.D Vial: 1
Acq On : 21 Sep 14 12:40 Operator: CSC
Sample : SV TUNE 09-16-14 Inst : YODA
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y140920B\Y87HP.M (RTE Integrator)
Title : EPA 8270C



Spectrum Information: Average of 6.192 to 6.211 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	45.4	43757	PASS
68	69	0.00	2	0.7	171	PASS
70	69	0.00	2	0.9	233	PASS
127	198	40	60	42.8	41235	PASS
197	198	0.00	1	0.1	91	PASS
198	198	100	100	100.0	96294	PASS
199	198	5	9	6.8	6517	PASS
275	198	10	30	19.6	18857	PASS
365	198	1	100	1.7	1679	PASS
441	443	0.01	100	79.4	13693	PASS
442	198	40	150	94.5	90979	PASS
443	442	17	23	19.0	17255	PASS

090

GC/MS STANDARD PREPARATION BOOK # K

VF 7/18/14

PREP DATE:	07-08-14					
8270 Second Source (SS) 50ug/mL						
						50
		Conc.		Date	CODE:	
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	8270 SS	200		2/18/2014	08-18-14	25
EM Science	Methylene Chloride		52104			75
					Final Vol.	100

VF 7/24/14

PREP DATE:	07-24-14												
8270 STANDARD CURVE													
Exp:	07-31-14					5	10	20	40	50	60	80	100
		Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
	8270 Stock	200		3/20/2014	09-20-14	5	5	10	20	25	30	40	50
	Surrogate Stock	VAR	196130-31983	12/5/2013	09-24-14	5	5	10	20	25	30	40	50
EM Science	Methylene Chloride		52104			190	90	80	60	50	40	20	0
					Final Vol.	200	100	100	100	100	100	100	100

VF 7/24/14

PREP DATE:	07-24-14					
8270 Second Source (SS) 50ug/mL						
						50
		Conc.		Date	CODE:	
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	8270 SS	200		2/18/2014	08-18-14	25
EM Science	Methylene Chloride		52104			75
					Final Vol.	100

VF 7/24/14

PREP DATE:	07-24-14												
8270 SIM STANDARD CURVE													
						0.10	0.20	0.50	1.00	5.00	10.00	50.00	100.00
		Conc.		Date	CODE:	A	A	C	D	E	F	G	H
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
	8270D PAH SIM	200	195512-31986	4/22/2014	09-10-14	0	0	0	0	5	5	25	50
	5.0ug/mL	5		7/24/2014		0	0	10	20	0	0	0	0
	1.0ug/mL	1		7/24/2014		10	20	0	0	0	0	0	0
	Surrogate Stock	VAR	196130-31983	12/5/2013	09-24-14	0	0	0	0	5	5	25	50
EM Science	Methylene Chloride		52104			90	80	90	80	190	90	50	0
					Final Vol.	100	100	100	100	200	100	100	100

VF 7/24/14

PREP DATE:	07-24-14					
SIM 8270 Second Source (5µg/mL)						
Exp:	08-07-14					
				Conc.	Date	CODE:
Supplier	ID #		Lot #	µg/mL	Code	Exp.Date	µL
	8270D PAH SIM (SS)		203014-31989	200	4/22/2014	01-30-15	5
EM Science	MeCl2			Lot#52104			195
					Final Volume		200

VF 7/24/14

NOTEBOOK INSERT LABEL

Semivolatile Internal Standard Mix **4-8902**

Lot: LB94031 EXP: JUL/2015 STORAGE: REFRIGERATE 2 x 1ml

DATE RECEIVED:_____

SUPELCO
Solutions within
595 North Harrison Road • Bellefonte, PA
16823-0048 USA • Phone 814-359-3441

exp 7/24/15 VF

STANDARD TRANSFER LABEL

Date of Preparation:

Reference Number:

Description: Semivolatile Internal Standard Mix
Lot #: LB94031 - 32287
Rec: 4/23/13 MFR exp. 7/31/15

Exp. Date: EXP: JUL/2015

Storage: REFRIGERATE

VF 7/27/14

PREP DATE: 07-27-14 EXP: 8-27-2014
Sulfolane Standard Curve

Supplier	ID #	Conc ug/mL	Lot #	Date Code	CODE: Exp Date								
		200		7-27-2014	08-27-14	5	5	5	10	20	25	30	40	50
EM Science	Sulfolane		92106			995	995	995	990	980	975	970	960	950
					Final Vol	1000	200	100	100	100	100	100	100	100

VF 7/31/14

PREP DATE: 07-31-14 EXP: 8-31-2014
Sulfolane Standard Curve

Supplier	ID #	Conc ug/mL	Lot #	Date Code	CODE: Exp Date								
		200		7-27-2014	08-27-14	5	5	5	10	20	25	30	40	50
EM Science	Sulfolane		92106			995	995	995	990	980	975	970	960	950
					Final Vol	1000	200	100	100	100	100	100	100	100

VF 8/4/14

PREP DATE: 08-04-14
8270 SIM STANDARD CURVE

Supplier	ID #	Conc ug/mL	Lot #	Date Code	CODE: Exp Date	0.10 A µL	0.20 A µL	0.50 C µL	1.00 D µL	5.00 E µL	10.00 F µL	50.00 G µL	100.00 H µL
	8270D PAH SIM	200		7-22-2014	09-10-14	0	0	0	0	5	5	25	50
		5		8-4-2014		0	0	10	20	0	0	0	0
		1		8-4-2014		10	20	0	0	0	0	0	0
		VAR		12-5-2013	09-24-14	0	0	0	0	5	5	25	50
EM Science	Mix 19		92101			90	80	90	80	190	90	50	0
					Final Vol	100	100	100	100	200	100	100	100

VF 8/4/14

PREP DATE: 08-01-14
SIM 8270 Second Source (5ug/mL)
Exp: 08-18-14

Supplier	ID #	Lot #	Conc ug/mL	Date Code	CODE: Exp Date	µL
	8270D PAH SIM (SS)		200			5
EM Science	Mix 19					195
				Final Volume		200

VF 8/13/14

10001
061812 061815 Storage 0 °C

CLP Semi-Volatiles Base/Neutrals Mix #1
14 components
2000 ug/mL in me

ABSOLUTE STANDARD

CLP Semi-Volatiles Base/Neutrals Mix #1
Lot #: 061812 - 33386
Rec: 3/13/14 MFR exp. 6/18/15

Exp 6/18/15

VF 8/13/14

10001
061812 061815 Storage 0 °C

CLP Semi-Volatiles Base/Neutrals Mix #1
14 components
2000 ug/mL in meth

ABSOLUTE STANDARD

CLP Semi-Volatiles Base/Neutrals Mix #1
Lot #: 061812 - 33385
Rec 3/13/14 MFR exp 6/18/15

Exp 6/18/15

10	100
uL	uL
0	50
0	50
00	100

LF 8/13/14

Part #: 10002
Lot #: 112811
Laboratory Use Only - See MSDS
Exp: 112814 Storage 4 °C
CLP Semi-Volatiles Base/Neutrals Mix #2
14 components
2000 ug/mL in m
ABSOLUTE STANDA
CLP Semi-Volatiles Base Neutrals Mix #2
Lot #: 112811 - 33392
Rec: 3/13/14 MFR exp. 11/28/14

LF

exp 11/28/14

0	100
L	uL
0	50
0	50
0	100

LF 8/13/14

Part #: 10002
Lot #: 112811
Laboratory Use Only - See MSDS
Exp: 112814 Storage 4 °C
CLP Semi-Volatiles Base/Neutrals Mix #2
14 components
2000 ug/mL in me
ABSOLUTE STANDAR
CLP Semi-Volatiles Base Neutrals Mix #2
Lot #: 112811 - 33391
Rec: 3/13/14 MFR exp. 11/28/14

LF

exp 11/28/14

100.00	
H	
uL	
50	
0	
0	
50	
0	
100	

LF 8/13/14

Part #: 10004
Lot #: 091911
Laboratory Use Only - See MSDS
Exp: 091916 Storage 4 °C
CLP Semi-Volatiles Toxic Substances #1
4 components
2000 ug/mL in me
ABSOLUTE STANDAI
CLP Semi-Volatiles Toxic Substances #1
Lot #: 091911 - 33401
Rec: 3/13/14 MFR exp. 9/19/16

LF

exp 9/19/16

LF 8/13/14

Part #: 10004
Lot #: 091911
Laboratory Use Only - See MSDS
Exp: 091916 Storage 4 °C
CLP Semi-Volatiles Toxic Substances #1
4 components
2000 ug/mL in metl
ABSOLUTE STANDARI
CLP Semi-Volatiles Toxic Substances #1
Lot #: 091911 - 33400
Rec: 3/13/14 MFR exp. 9/19/16

LF

exp 9/19/16

LF 8/13/14

Part #: 10005
Lot #: 081011
Laboratory Use Only - See MSDS
Exp: 081016 Storage 4 °C
CLP Semi-Volatile- Toxic Substances #2
8 components
2000 ug/mL in m
ABSOLUTE STANDA
CLP Semi-Volatiles Toxic Substances #2
Lot #: 081011 - 33407
Rec: 3/13/14 MFR exp. 8/10/16

LF

exp 8/10/16

LF 8/13/14

Part #: 10005
Lot #: 081011
Laboratory Use Only - See MSDS
Exp: 081016 Storage 4 °C
CLP Semi-Volatiles Toxic Substances #2
8 components
2000 ug/mL in n
ABSOLUTE STANDA
CLP Semi-Volatiles Toxic Substances #2
Lot #: 081011 - 33406
Rec: 3/13/14 MFR exp. 8/10/16

LF

exp 8/10/16

LF 8/13/14

Part #: 10006
Lot #: 120313
Laboratory Use Only - See MSDS
Exp: 120316 Storage 4 °C
CLP Semi-Volatiles - Benzidines
2 components
2000 ug/mL in mel
ABSOLUTE STANDAR
CLP Semi-Volatiles - Benzidines
Lot #: 120313 - 33440
Rec: 3/13/14 MFR exp. 12/3/16

LF

exp 12/3/16

Part # 10006
Lot # 120313 Exp 120316 Storage 4 °C
VF 5/13/14



CLP Semi-Volatiles - Benzidines
2 components
2000 ug/mL in me
ABSOLUTE STANDA

CLP Semi-Volatiles - Benzidines
Lot #: 120313 - 33439
Rec: 3/13/14 MFR exp. 12/3/16

VF exp 12/3/16 VF

Part # 10007
Lot # 071013 Exp 071018 Storage 4 °C
VF 8/13/14



CLP Semi-Volatiles - PAH Standard
17 components
2000 ug/mL in meth
ABSOLUTE STAND

CLP Semi-Volatiles - PAH Mix
Lot #: 071013 - 33413
Rec: 3/13/14 MFR exp. 7/10/18

VF exp 7/10/18 VF

Part # 10007
Lot # 071013 Exp 071018 Storage 4 °C
VF 8/13/14



CLP Semi-Volatiles - PAH Standard
17 components
2000 ug/mL in me
ABSOLUTE STANDA

CLP Semi-Volatiles - PAH Mix
Lot #: 071013 - 33412
Rec: 3/13/14 MFR exp. 7/10/18

VF exp 7/10/18 U

Part # 10018
Lot # 050213 Exp 050218 Storage 4 °C
VF 8/13/14



EPA Method 8270A - Analytes Mix #8
13 components - Ph
2000 ug/mL in meth
ABSOLUTE STANDAR

CLP Semi-Volatiles Mix #8 - Phenols
Lot #: 050213 - 33419
Rec: 3/13/14 MFR exp. 5/2/18

VF exp 5/2/18

Part # 10018
Lot # 050213 Exp 050218 Storage 4 °C
VF 8/13/14



EPA Method 8270A - Analytes Mix #8
13 components - Pl
2000 ug/mL in met
ABSOLUTE STANDAR

CLP Semi-Volatiles Mix #8 - Phenols
Lot #: 050213 - 33418
Rec: 3/13/14 MFR exp. 5/2/18

VF exp 5/2/18 VF

Part # 70023
Lot # 062513 Exp 062518 Storage 4 °C
VF 8/13/14



Atrazine
1000 ug/mL in ac
ABSOLUTE STAND

Atrazine
Lot #: 062513 - 33423
Rec: 3/13/14 MFR exp. 6/25/18

VF exp 6/25/18

Part # 70023
Lot # 062513 Exp 062518 Storage 4 °C
VF 8/13/14



Atrazine
1000 ug/mL in ac
ABSOLUTE STAND

Atrazine
Lot #: 062513 - 33422
Rec: 3/13/14 MFR exp 6/25/18

VF exp 6/25/18

VF 8/13/14

Part #: 82705 Laboratory Use Only - See MSDS
Lot #: 121713 Exp: 121716 Storage 4 °C
EPA Method 8270A - Mix #11
4 components
2000 ug/mL in ac
ABSOLUTE STANDA
EPA Method 8270A-Mix#11
Lot #: 121713 - 33431
Rec: 3/13/14 MFR exp. 12/17/16

VF exp 12/17/16

VF 8/13/14

Part #: 82705 Laboratory Use Only - See MSDS
Lot #: 121713 Exp: 121716 Storage 4 °C
EPA Method 8270A - Mix #11
4 components
2000 ug/mL in ac
ABSOLUTE STANDA
EPA Method 8270A-Mix#11
Lot #: 121713 - 33430
Rec: 3/13/14 MFR exp. 12/17/16

VF exp 12/17/16

VF 8/13/14

Part #: 94552 Laboratory Use Only - See MSDS
Lot #: 030411 Exp: 030416 Storage 4 °C
Semi-Volatile Standard
11 components
Varied ug/mL in r
ABSOLUTE STAND
Semi-Volatile Standard
Lot #: 030411 - 33437
Rec: 3/13/14 MFR exp. 3/4/16

VF exp 3/4/16

VF 8/13/14

Part #: 94552 Laboratory Use Only - See MSDS
Lot #: 030411 Exp: 030416 Storage 4 °C
Semi-Volatile Standard
11 components
Varied ug/mL in r
ABSOLUTE STANDA
Semi-Volatile Standard
Lot #: 030411 - 33436
Rec: 3/13/14 MFR exp. 3/4/16

VF exp 3/4/16

VF 8/13/14

PREP DATE:	08-13-14					
8270 Stock/Spike Standard						
Exp:	11-28-14					
		Conc.		Date	CODE:	P
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Absolute	10001	2000	061812-33386	8/13/2014	06-08-15	1000
Absolute	10001	2000	061812-33385	8/13/2014	06-08-15	1000
Absolute	10002	2000	112811-33392	8/13/2014	11-28-14	1000
Absolute	10002	2000	112811-33391	8/13/2014	11-28-14	1000
Absolute	10004	2000	091911-33401	8/13/2014	09-19-16	1000
Absolute	10004	2000	091911-33400	8/13/2014	09-19-16	1000
Absolute	10005	2000	081011-33407	8/13/2014	08-10-16	1000
Absolute	10005	2000	081011-33406	8/13/2014	08-10-16	1000
Absolute	10006	2000	120313-33440	8/13/2014	12-03-16	1000
Absolute	10006	2000	120313-33439	8/13/2014	12-03-16	1000
Absolute	10007	2000	071013-33413	8/13/2014	07-10-18	1000
Absolute	10007	2000	071013-33412	8/13/2014	07-10-18	1000
Absolute	10018	2000	050213-33419	8/13/2014	05-02-18	1000
Absolute	10018	2000	050213-33418	8/13/2014	05-02-18	1000
Absolute	70023	1000	062513-33423	8/13/2014	06-25-18	1000
Absolute	70023	1000	062513-33422	8/13/2014	06-25-18	1000
Absolute	82705	2000	121713-33431	8/13/2014	12-17-16	1000
Absolute	82705	2000	121713-33430	8/13/2014	12-17-16	1000
Absolute	94552	2000	030411-33437	8/13/2014	03-04-16	1000
Absolute	94552	2000	030411-33436	8/13/2014	03-04-16	1000
					Final Vol	20000

VF

11/19/14 VF

8270 BN Solution 14-4,
2,000 mg/L, 1 ml

110391-01

Lot #	Storage	Expiry
193470	≤ -10 Degrees C	7/28/15

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

8270BN Solution 14-4
Lot #: 193470 - 33143
Rec: 11/19/13 MFR exp. 7/28/15

11/19/14 VF

8270 BN Solution 14-3, 2,000 mg/L, 1 ml

110392-01

Lot #	Storage	Expiry
218075	≤ -10 Degrees C	11/22/16

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

8270BN Solution 14-3
Lot #: 218075 - 33145
Rec: 11/19/13 MFR exp. 11/22/16

11/19/14 VF

8270 Acid Solution 4-6,
2,000 mg/L, 1 ml

110393-01

Lot #	Storage	Expiry
193473	≤ -10 Degrees C	7/28/15

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

8270B Acid Solution 4-6
Lot #: 193473 - 33147
Rec: 11/19/13 MFR exp. 7/28/15

11/19/14 VF

TCL Hazardous Substances
Solution 2, 2,000 mg/L, 1 ml

110394-01

Lot #	Storage	Expiry
193476	≤ -10 Degrees C	7/28/15

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

TCL Hzd. Soln. 2
Lot #: 193476 - 33149
Rec: 11/19/13 MFR exp. 7/28/15

100
µL
50
50
100

11/19/14 VF

PAH Solution 17-3, 2,000 mg/L, 1 ml

116970-02

Lot #	Storage	Expiry
193478	≤ -10 Degrees C	7/28/15

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

PAH Solution
Lot #: 193478 - 33151
Rec: 11/19/13 MFR exp. 7/28/15

11/19/14 VF

8270 BN Solution 4-21,
2,000 mg/L, 1 ml

110395-01

Lot #	Storage	Expiry
193480	≤ -10 Degrees C	7/28/15

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

8270BN Solution 4-21
Lot #: 193480 - 33153
Rec: 11/19/13 MFR exp. 7/28/15

GC/MS STANDARD PREPARATION BOOK # K

9/10/14 VF

8270 Acid Solution 13-4, 2,000 mg/L, 1 ml
110396-01
Lot # 193479 Storage ≤ -10 Degrees C Expiry 7/28/15
Solv. Methylene Chloride
R&D only, not for human consumption. Made in the USA

8270 Acid Solution 13-4
Lot #: 193479 - 33155
Rec: 11/19/13 MFR exp. 7/28/15

9/10/14 VF

8270 11 Compound Custom Mix, 200:2,000 mg/L, 1 mL
110397-01
Lot # 234699 Storage ≤ -10 °C Expiry 21/Nov/2014
Solv: Methylene Chloride
R&D only, not for human consumption. Made in the USA

8270 11 Compound Mix
Lot #: 234699 - 33987
Rec: 8/27/14 MFR exp. 11/21/14

9/11

9/10/14 VF

Atrazine Solution, 1,000 mg/L, 1 mL
010337-01
Lot # 217950 Storage ≤ -10 Degrees C Expiry 11/14/15
Solv: Methylene Chloride
R&D only, not for human consumption. Made in the USA

Atrazine
Lot #: 217950 - 33159
Rec: 11/19/13 MFR exp. 11/14/15

9/10/14 VF

8270 BN:A (200:400) Surrogate Solution, 1 mL
110004-17
Lot # 224251 Storage ≤ -10 Degrees C Expiry 3/16/16
Solv: Methylene Chloride
R&D only, not for human consumption. Made in the USA

exp 9/10/15

8270 BN:A (200:400) Surrogate Solution
Lot # 224251 - 33495
Rec: 4/15/14 MFR exp. 3/16/16

9/

VF 9/10/14

PREP DATE:	09-10-14					
8270C Second Source Stock Standard						VF
Exp:	11-21-14					
		Conc.		Date	CODE:	P
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
O2SI	110391-01	2000	193470-33143	9/10/2014	7/28/2015	1000
O2SI	110392-01	2000	218075-33145	9/10/2014	11/22/2016	1000
O2SI	110393-01	2000	193473-33147	9/10/2014	7/28/2015	1000
O2SI	110394-01	2000	193476-33149	9/10/2014	7/28/2015	1000
O2SI	116070-02	2000	193478-33151	9/10/2014	7/28/2015	1000
O2SI	110395-01	2000	193480-33153	9/10/2014	7/28/2015	1000
O2SI	110396-01	2000	193479-33155	9/10/2014	7/28/2015	1000
O2SI	110397-01	2000	234699-33987	9/10/2014	11/21/2014	1000
O2SI	010337-01	1000	217950-33159	9/10/2014	11/14/2015	1000
EM Science	MeCl2		52104			1000
					Final Vol	10000

9/1

GC/MS STANDARD PREPARATION BOOK # _____ PAGE _____

csc 9/20/14

PREP DATE:	09-20-14					
8270 Second Source (SS) 50ug/mL						csc
						50
		Conc.		Date	CODE:	
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	8270 SS	200		09/10/14	11-21-14	25
EM Science	Methylene Chloride		54128			75
					Final Vol.	100
Internal Standard						2

csc 9/20/14

PREP DATE:	09-20-14													csc
8270 STANDARD CURVE														
Exp.	09-27-14						5	10	20	40	50	60	80	100
		Conc.		Date										
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL	
	8270 Stock	200		08/13/14	11-28-14	5	5	10	20	25	30	40	50	
	Surrogate Stock	VAR	224251-33495	09/10/14	09-10-15	5	5	10	20	25	30	40	50	
EM Science	Methylene Chloride		54128			190	90	80	60	50	40	20	0	
Internal Standard					Final Vol.	200	100	100	100	100	100	100	100	
						4	2	2	2	2	2	2	2	

Incremental Sampling Preparation Log Book # 1 Page # 1827

ARF # / Project	Sample #	1st Weight *	2nd Weight *	3rd Weight *	4th Weight * (If Needed)	Passing Sample (weight of foil negligible)	Tarred Container + Non-passing Sample	I.S. before grind (Initial Box when Complete)
	AZ 02222 NG sticker verified Date/Initials	Weight: 78.92 g Date: 9-9-14 Time: 15:25 Initials: CFM	Weight: 75.08 g Date: 9-10-14 Time: 07:75 Initials: CFM	Weight: 75.09 g Date: 9-10-14 Time: 10:20 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02223 NG sticker verified Date/Initials	Weight: 75.81 g Date: 9-9-14 Time: 15:75 Initials: CFM	Weight: 72.51 g Date: 9-10-14 Time: 07:25 Initials: CFM	Weight: 72.50 g Date: 9-10-14 Time: 10:20 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
74218 Element	AZ 02099 NG sticker verified Date/Initials	Weight: 2.004 Kg Date: 9.10.14 Time: 8:41 Initials: Rmm	Weight: 2.498 Kg Date: 9.11.14 Time: 8:35 Initials: E.R.	Weight: 2.494 Kg Date: 9-12-14 Time: 8:08 Initials: E.R Rmm	Weight: g Date: Time: Initials:	0.754 Kg Initials: Rmm	250.62 g Initials: Rmm	Metals: NM 8270: 8290: Other:
	AZ 02100 NG sticker verified Date/Initials	Weight: 2.144 Kg Date: 9.10.14 Time: 8:51 Initials: Rmm	Weight: 2.016 Kg Date: 9-11-14 Time: 8:36 Initials: E.R.	Weight: 2.0162 Kg Date: 9.12.14 Time: 8:10 Initials: Rmm	Weight: g Date: Time: Initials:	0.568 Kg Initials: E.R.	226.64 g Initials: E.R.	Metals: NM 8270: 8290: Other:
	AZ 02101 NG sticker verified Date/Initials	Weight: 2.724 Kg Date: 9.10.14 Time: 8:56 Initials: Rmm	Weight: 2.612 Kg Date: 9-11-14 Time: 8:38 Initials: E.R	Weight: 2.602 Kg Date: 9.12.14 Time: 8:12 Initials: Rmm	Weight: g Date: Time: Initials:	0.834 Kg Initials: Rmm	279.08 g Initials: Rmm	Metals: NM 8270: 8290: Other:
	AZ 02102 NG sticker verified Date/Initials	Weight: 2.788 Kg Date: 9.10.14 Time: 9:02 Initials: Rmm	Weight: 2.636 Kg Date: 9-11-14 Time: 8:39 Initials: E.R	Weight: 2.626 Kg Date: 9.12.14 Time: 8:15 Initials: Rmm	Weight: g Date: Time: Initials:	0.896 Kg Initials: E.R	282.97 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02103 NG sticker verified Date/Initials	Weight: 2.830 Kg Date: 9-10-14 Time: 9:08 Initials: Rmm	Weight: 2.672 Kg Date: 9-11-14 Time: 8:40 Initials: E.R	Weight: 2.6600 Kg Date: 9.12.14 Time: 8:16 Initials: Rmm	Weight: g Date: Time: Initials:	0.924 Kg Initials: E.R	264.59 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02104 NG sticker verified Date/Initials	Weight: 2.796 Kg Date: 9.10.14 Time: 9:12 Initials: Rmm	Weight: 2.636 Kg Date: 9-11-14 Time: 8:41 Initials: E.R	Weight: 2.624 Kg Date: 9.12.14 Time: 8:17 Initials: Rmm	Weight: g Date: Time: Initials:	0.894 Kg Initials: Rmm	318.83 g Initials: Rmm	Metals: NM 8270: 8290: Other:

* Each recorded weight includes the foil-lined tray + the sample.

NG = No Grind (applies to metals, PAH, Perchlorate, other methods etc.)

Incremental Sampling Preparation Log Book # 1 Page # 1828

ARF # / Project	Sample #	1st Weight *	2nd Weight *	3rd Weight *	4th Weight * (If Needed)	Passing Sample (weight of foil negligible)	Tarred Container + Non-passing Sample	I.S. before grind (Initial Box when Complete)
	AZ 02105 NG sticker verified Date/Initials	Weight: 2.814 Kg Date: 9-10-14 Time: 9:15 Initials: RMM	Weight: 2.572 Kg Date: 9-11-14 Time: 8:42 Initials: E.R.	Weight: 2.508 Kg Date: 9-12-14 Time: 8:18 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.978 Kg Initials: J.R	163.14 g Initials: J.R	Metals: NM 8270: 8290: Other:
	AZ 02106 NG sticker verified Date/Initials	Weight: 2.862 Kg Date: 9-10-14 Time: 9:19 Initials: RMM	Weight: 2.600 Kg Date: 9-11-14 Time: 8:43 Initials: E.R.	Weight: 2.546 Kg Date: 9-12-14 Time: 8:18 Initials: RMM	Weight: ____ g Date: Time: Initials:	E.R. 1.000 Kg Initials: E.R	136.28 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02107 NG sticker verified Date/Initials	Weight: 2.834 Kg Date: 9-10-14 Time: 9:19 Initials: RMM	Weight: 2.586 Kg Date: 9-11-14 Time: 8:44 Initials: E.R	Weight: 2.536 Kg Date: 9-12-14 Time: 8:19 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.924 Kg Initials: JR	219.20 g Initials: J.R	Metals: NM 8270: 8290: Other:
	AZ 02110 NG sticker verified Date/Initials	Weight: 2.720 Kg Date: 9-10-14 Time: 9:22 Initials: RMM	Weight: 2.584 Kg Date: 9-11-14 Time: 8:45 Initials: E.R	Weight: 2.574 Kg Date: 9-12-14 Time: 8:19 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.902 Kg Initials: E.R	282.40 g Initials: ER	Metals: NM 8270: 8290: Other:
	AZ 02111 NG sticker verified Date/Initials	Weight: 2.642 Kg Date: 9-10-14 Time: 9:30 Initials: RMM	Weight: 2.468 g Date: 9-11-14 Time: 8:45 Initials: E.R	Weight: 2.456 Kg Date: 9-12-14 Time: 8:21 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.892 Kg Initials: ER	302.54 g Initials: E.R	Metals: NM 8270: 8290: Other:
	AZ 02112 NG sticker verified Date/Initials	Weight: 2.780 Kg Date: 9-10-14 Time: 9:35 Initials: RMM	Weight: 2.520 Kg Date: 9-11-14 Time: 8:46 Initials: ER	Weight: 2.486 Kg Date: 9-12-14 Time: 8:22 Initials: RMM	Weight: 2.482 Kg Date: 9/12/14 Time: 11:20 Initials: KY	0.980 Kg Initials: E.R	129.53 g Initials: ER.	Metals: NM 8270: 8290: Other:
	AZ 02113 NG sticker verified Date/Initials	Weight: 2.596 Kg Date: 9-10-14 Time: 9:39 Initials: RMM	Weight: 2.464 Kg Date: 9-11-14 Time: 8:46 Initials: ER	Weight: 2.458 Kg Date: 9-12-14 Time: 8:23 Initials: RMM	Weight: ____ g Date: Time: Initials:	0884 Kg Initials: JR	167.65 g Initials: J.R	Metals: NM 8270: 8290: Other:
	AZ 02114 NG sticker verified Date/Initials	Weight: 2.856 Kg Date: 9-10-14 Time: 9:45 Initials: RMM	Weight: 2.666 Kg Date: 9-11-14 Time: 8:47 Initials: ER	Weight: 2.654 Kg Date: 9-12-14 Time: 8:23 Initials: RMM	Weight: ____ g Date: Time: Initials:	0.998 Kg Initials: E.R	241.29 g Initials: ER	Metals: NM 8270: 8290: Other:

* Each recorded weight includes the foil-lined tray + the sample.

NG = No Grind (applies to metals, PAH, Perchlorate, other methods etc.)

Incremental Sampling Preparation Log Book # 1 Page # 1829

ARF # / Project	Sample #	1st Weight *	2nd Weight *	3rd Weight *	4th Weight * (If Needed)	Passing Sample (weight of foil negligible)	Tarred Container + Non-passing Sample	I.S. before grind (Initial Box when Complete)
	AZ 02115 NG sticker verified Date/Initials	Weight: 2.8301 kg Date: 9-10-14 Time: 9:49 Initials: RMM	Weight: 2.594 g Date: 9-11-14 Time: 8:47 Initials: E.R	Weight: 2.5016 kg Date: 9-12-14 Time: 8:23 Initials: RMM	Weight: g Date: Time: Initials:	0.992K g Initials: E.R	139.57 g Initials: E.R	Metals: PM 8270: 8290: Other:
74237 UBS, Group	AZ 02231 NG sticker verified Date/Initials	Weight: 77.92 g Date: 9-10-14 Time: 14:54 Initials: CFM	Weight: 74.08 g Date: 9-11-14 Time: 08:14 Initials: CFM	Weight: 74.09 g Date: 9-12-14 Time: 11:36 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02232 NG sticker verified Date/Initials	Weight: 68.64 g Date: 9-10-14 Time: 14:54 Initials: CFM	Weight: 65.11 g Date: 9-11-14 Time: 08:14 Initials: CFM	Weight: 65.11 g Date: 9-12-14 Time: 11:36 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02233 NG sticker verified Date/Initials	Weight: 75.27 g Date: 9-10-14 Time: 14:54 Initials: CFM	Weight: 71.63 g Date: 9-11-14 Time: 08:14 Initials: CFM	Weight: 71.64 g Date: 9-12-14 Time: 11:36 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
74278 UBS, Group	AZ 02584 MS/MSD NG sticker verified Date/Initials	Weight: 75.59 g Date: 9-12-14 Time: 14:18 Initials: CFM	Weight: 72.47 g Date: 9-15-14 Time: 07:03 Initials: CFM	Weight: 72.48 g Date: 9-15-14 Time: 09:13 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02585 NG sticker verified Date/Initials	Weight: 74.17 g Date: 9-12-14 Time: 14:18 Initials: CFM	Weight: 70.92 g Date: 9-15-14 Time: 07:07 Initials: CFM	Weight: 70.91 g Date: 9-15-14 Time: 09:13 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
74297 UBS, Group	AZ 02668 NG sticker verified Date/Initials	Weight: 69.36 g Date: 9-16-14 Time: 13:31 Initials: CFM	Weight: 66.29 g Date: 9-17-14 Time: 07:54 Initials: CFM	Weight: 66.31 g Date: 9-17-14 Time: 15:33 Initials: CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:
	AZ 02669 NG sticker verified Date/Initials	Weight: 68.28 g Date: 9-16-14 Time: 13:31 Initials: CFM	Weight: 65.43 g Date: 9-17-14 Time: 07:54 Initials: CFM	Weight: 65.44 g Date: 9-17-14 Time: 15:33 Initials: 1102 CFM	Weight: g Date: Time: Initials:	g Initials:	g Initials:	Metals: 8270: 8290: Other:

* Each recorded weight includes the foil-lined tray + the sample.

NG = No Grind (applies to metals, PAH, Perchlorate, other methods etc.)

_SEP004

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	140908A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 8-13-14 EXP 11-28-14		Surrogate ID 1	8270 Surrogate 222525-33362	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	09/08/14 13:40	
Spiked ID 8			Ext. End Time:	09/09/14 12:45	
			GC Requires Extract By:	**09/19/14 0:00**	

pH1	2	09/08/14 1:45:00 PM	Water Bath Temp Criteria	78 °C
pH2	14	09/08/14 2:30:00 PM		
pH3				

Spiked By: DL **Date** 09/08/14 **Witnessed By:** RMM **Date** 09/08/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	140908A Blk				1	1	1000	1	2/1	09/08/14 13:40	
						equip	E-WB7				
2	140908A LCS-1		0.250	1	1	1	1000	1	2/1	09/08/14 13:40	
						equip	E-WB7				
3	AZ02108	AZ02108W04			1	1	1040	1	2/1	09/08/14 13:40	74218 RUSH 2 WEEKS
						equip	E-WB7				
4	AZ02109	AZ02109W05			1	1	980	1	2/1	09/08/14 13:40	74218 RUSH 2 WEEKS
						equip	E-WB7				
5	AZ02116	AZ02116W08			1	1	960	1	2/1	09/08/14 13:40	74218 RUSH 2 WEEKS
						equip	E-WB7				

KY 9/9/14

Solvent and Lot#	
MC	54128
1+1 Sulfuric Acid	9-5-14
Acidified Na2SO4	8-28-14
Na2SO4	WE05D
10N NaOH	6-31-14
ph strips	HC413032
Filter Paper	400038

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	LK
Date	9/10/14
Time	2300
Refrigerator	Upstairs

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	IC

Modified	09/09/14 3:09:06 PM

Reviewed By: Ky **Date** 9/9/14

_SON009MIS

Organic Extraction Worksheet

Method	8270 Sonicat Ext. Methylene c 3550 MIS	Extraction Set	140915A	Extraction Method	SON009MIS	Units	mL

Spiked ID 1	8270T Spike 8-13-14 EXP 11-28-14		Surrogate ID 1	8270 Surrogate 222525-33753	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	09/16/14 12:30	
Spiked ID 8			Ext. End Time:	09/18/14 16:35	
			GC Requires Extract By:	**09/19/14 0:00**	

pH1			Water Bath Temp Criteria	78,75 °C
pH2				
pH3				

Spiked By: KY **Date** 09/16/14 **Witnessed By:** CFM **Date** 09/16/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	140915A Blk				1	1 equip	30.41g e-s5 E-WB7	1	NA	09/16/14 12:30	
2	140915A LCS-1		0.250	1	1	1 equip	30.16g e-s4 E-WB7	1	NA	09/16/14 12:30	
3	AZ02099	AZ02099S11			1	1 equip	30.20g e-s3 E-WB7	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
4	AZ02100 MS-1	AZ02100S11	0.250	1	1	1 equip	30.36g E-S2 E-WB7	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
5	AZ02100 MSD-1	AZ02100S11	0.250	1	1	1 equip	30.11g E-S1.2 E-WB7	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
6	AZ02100	AZ02100S11			1	1 equip	30.36g E-S1.1 E-WB7	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
7	AZ02101	AZ02101S11			1	1 equip	30.16g E-S6 E-WB7	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
8	AZ02102	AZ02102S11			1	1 equip	30.11g E-S7 E-WB7	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
9	AZ02103	AZ02103S11			1	1 equip	30.42g E-S5 E-WB7	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
10	AZ02104	AZ02104S11			1	1 equip	30.21g E-S4 E-WB7	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
11	AZ02105	AZ02105S11			1	1 equip	30.12g E-S3.1 E-WB6	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
12	AZ02106	AZ02106S11			1	1 equip	30.12g E-S2 E-WB6	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
13	AZ02107	AZ02107S11			1	1 equip	30.14g E-S1.2 E-WB6	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
14	AZ02110	AZ02110S11			1	1 equip	30.45g E-S1.1 E-WB6	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
15	AZ02111	AZ02111S11			1	1 equip	30.13g E-S6 E-WB6	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
16	AZ02112	AZ02112S11			1	1 equip	30.09g E-S7 E-WB6	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS

Solvent and Lot#	
MC	54128
A. Na2SO4	8-28-14
Filter Paper	fc010442

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	9/16/14
Time	1700
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	IC
Concentration	IC

Modified	09/18/14 4:35:34 PM

Reviewed By: KY **Date** 9/18/14

_SON009MIS

Organic Extraction Worksheet

Method	8270 Sonicat Ext. Methylene c 3550 MIS	Extraction Set	140915A	Extraction Method	SON009MIS	Units	mL

Spiked ID 1	8270T Spike 8-13-14 EXP 11-28-14		Surrogate ID 1	8270 Surrogate 222525-33753	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	09/16/14 12:30	
Spiked ID 8			Ext. End Time:	09/18/14 16:35	
			GC Requires Extract By:	09/19/14 0:00	

pH1			Water Bath Temp Criteria	78,75 °C
pH2				
pH3				

Spiked By: KY **Date** 09/16/14 **Witnessed By:** CFM **Date** 09/16/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ02113	AZ02113S11			1	1 equip	30.13g E-S5 E-WB6	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
18	AZ02114	AZ02114S11			1	1 equip	30.11g E-S4 E-WB6	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS
19	AZ02115	AZ02115S11			1	1 equip	30.13g E-S3.1 E-WB6	1	NA	09/16/14 12:30	74218 RUSH 2 WEEKS

KS 9/18/14

Solvent and Lot#	
MC	54128
A. Na2SO4	8-28-14
Filter Paper	fc010442

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	KF
Date	9/20/14
Time	1700
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	IC
Concentration	IC

Modified	09/18/14 4:35:34 PM

Reviewed By: KS **Date** 9/18/14

Injection Log

Directory: M:\YODA\DATA\Y140910\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0910Y001.D	1	SV TUNE 02-04-14		10 Sep 14 22:55
2	2	0910Y002.D	1	5.0ppm SVOC 09-10-14		10 Sep 14 23:12
3	3	0910Y003.D	1	10ppm SVOC		10 Sep 14 23:33
4	4	0910Y004.D	1	20ppm SVOC		10 Sep 14 23:53
5	5	0910Y005.D	1	40ppm SVOC		11 Sep 14 00:14
6	6	0910Y006.D	1	50ppm SVOC		11 Sep 14 00:35
7	7	0910Y007.D	1	60ppm SVOC		11 Sep 14 00:56
8	8	0910Y008.D	1	80ppm SVOC		11 Sep 14 1:16
9	9	0910Y009.D	1	100ppm SVOC		11 Sep 14 1:37
10	10	0910Y010.D	1	50ppm SVOC SS 9-10-14		11 Sep 14 1:57
11	11	0910Y011.D	1	140908A BLK 1/1000		11 Sep 14 2:18
12	12	0910Y012.D	1	140908A LCS-1 1/1000		11 Sep 14 2:38
13	22	0910Y022.D	0.96154	AZ02108W04 1/1040		11 Sep 14 6:02
14	23	0910Y023.D	1.02041	AZ02109W05 1/980		11 Sep 14 6:22
15	24	0910Y024.D	1.04167	AZ02116W08 1/960		11 Sep 14 6:42

Injection Log

Directory: M:\YODA\DATA\Y140920B\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0920Y001.D	1	SV TUNE 09-16-14		20 Sep 14 22:26
2	2	0920Y002.D	1	5ppm SVOC 09-20-14		20 Sep 14 22:40
3	3	0920Y003.D	1	10ppm SVOC		20 Sep 14 22:57
4	4	0920Y004.D	1	20ppm SVOC		20 Sep 14 23:14
5	5	0920Y005.D	1	40ppm SVOC		20 Sep 14 23:31
6	6	0920Y006.D	1	50ppm SVOC		20 Sep 14 23:48
7	7	0920Y007.D	1	60ppm SVOC		21 Sep 14 00:05
8	8	0920Y008.D	1	80ppm SVOC		21 Sep 14 00:22
9	9	0920Y009.D	1	100ppm SVOC		21 Sep 14 00:39
10	10	0920Y010.D	1	50ppm SVOC SS 09-20-14		21 Sep 14 00:56
11	1	0921Y001.D	1	SV TUNE 09-16-14		21 Sep 14 12:40
12	2	0921Y002.D	1	50ppm SVOC 09-20-14		21 Sep 14 12:54
13	3	0921Y003.D	32.8839	140915A BLK 1/30.41G		21 Sep 14 13:11
14	4	0921Y004.D	33.1565	140915A LCS-1 1/30.16G		21 Sep 14 13:27
15	5	0921Y005.D	32.9381	AZ02100S11 MS-1 1/30.36G		21 Sep 14 13:44
16	6	0921Y006.D	33.2116	AZ02100S11 MSD-1 1/30.11G		21 Sep 14 14:01
17	7	0921Y007.D	33.1126	AZ02099S11 1/30.20G		21 Sep 14 14:19
18	8	0921Y008.D	32.9381	AZ02100S11 1/30.36G		21 Sep 14 14:36
19	9	0921Y009.D	33.1565	AZ02101S11 1/30.16G		21 Sep 14 14:53
20	10	0921Y010.D	33.2116	AZ02102S11 1/30.11G		21 Sep 14 15:10
21	11	0921Y011.D	32.8731	AZ02103S11 1/30.42G		21 Sep 14 15:27
22	12	0921Y012.D	33.1016	AZ02104S11 1/30.21G		21 Sep 14 15:44
23	13	0921Y013.D	33.2005	AZ02105S11 1/30.12G		21 Sep 14 16:01
24	14	0921Y014.D	33.2005	AZ02106S11 1/30.12G		21 Sep 14 16:18
25	15	0921Y015.D	33.1785	AZ02107S11 1/30.14G		21 Sep 14 16:35
26	16	0921Y016.D	32.8407	AZ02110S11 1/30.45G		21 Sep 14 16:52
27	17	0921Y017.D	33.1895	AZ02111S11 1/30.13G		21 Sep 14 17:09
28	18	0921Y018.D	33.2336	AZ02112S11 1/30.09G		21 Sep 14 17:26
29	19	0921Y019.D	33.1895	AZ02113S11 1/30.13G		21 Sep 14 17:43
30	20	0921Y020.D	33.2116	AZ02114S11 1/30.11G		21 Sep 14 18:00
31	21	0921Y021.D	33.1895	AZ02115S11 1/30.13G		21 Sep 14 18:17

EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons

APPL, INC.

EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
QC Summary

APPL, INC.

Method Blank
EPA 8270C SIM

Blank Name/QCG: **140908W-02108 - 189931**
Batch ID: #SIMHC-140908A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
BLANK	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
BLANK	ACENAPHTHYLENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
BLANK	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
BLANK	BENZO(A)ANTHRACENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
BLANK	BENZO(A)PYRENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
BLANK	BENZO(B)FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
BLANK	BENZO(GHI)PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
BLANK	BENZO(K)FLUORANTHENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
BLANK	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
BLANK	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
BLANK	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
BLANK	FLUORENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
BLANK	INDENO(1,2,3-CD)PYRENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
BLANK	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
BLANK	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
BLANK	SURROGATE: 2-FLUORBIPHENY	75.1	50-110			%	9/8/14	9/15/14
BLANK	SURROGATE: NITROBENZENE-	44.4	40-110			%	9/8/14	9/15/14
BLANK	SURROGATE: TERPHENYL-D14 (	82.0	50-135			%	9/8/14	9/15/14

Quant Method: SIM.M
Run #: 0915L003
Instrument: Linus
Sequence: L140821
Initials: LF

GC SC-Blank-REG MDLs
Printed: 9/22/14 8:23:13 PM

Method Blank

EPA 8270C SIM IS GROSS

Blank Name/QCG: **140910S-02100 - 189932**
Batch ID: #SIMHC-140910A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
BLANK	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
BLANK	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
BLANK	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
BLANK	ANTHRACENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
BLANK	BENZO(A)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
BLANK	BENZO(A)PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
BLANK	BENZO(B)FLUORANTHENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
BLANK	BENZO(GHI)PERYLENE	0.0017 U	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
BLANK	BENZO(K)FLUORANTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
BLANK	CHRYSENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
BLANK	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
BLANK	FLUORANTHENE	0.0017 U	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
BLANK	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
BLANK	INDENO(1,2,3-CD)PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
BLANK	PHENANTHRENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
BLANK	PYRENE	0.0017 U	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
BLANK	SURROGATE: 2-FLUORBIPHENY	71.6	45-105			%	9/10/14	9/16/14
BLANK	SURROGATE: NITROBENZENE-	45.5	35-100			%	9/10/14	9/16/14
BLANK	SURROGATE: TERPHENYL-D14 (	90.7	30-125			%	9/10/14	9/16/14

Quant Method: SIM.M
Run #: 0915L008
Instrument: Linus
Sequence: L140821
Initials: LF

GC SC-Blank-REG MDLs
Printed: 9/22/14 8:23:13 PM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/15/14

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140908A-BLK	Blank	50-110	75.1		40-110	44.4	
140908A-LCS	Lab Control Spike	50-110	62.0		40-110	61.5	
AZ02108	EN010	50-110	72.5		40-110	62.6	
AZ02109	EN011	50-110	58.0		40-110	55.6	
AZ02116	EN018	50-110	70.4		40-110	50.3	

Comments: Batch: #SIMHC-140908A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/15/14

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
140908A-BLK	Blank	50-135	82.0				
140908A-LCS	Lab Control Spike	50-135	74.5				
AZ02108	EN010	50-135	79.0				
AZ02109	EN011	50-135	97.9				
AZ02116	EN018	50-135	103				

Comments: Batch: #SIMHC-140908A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/16/14

Matrix: SOIL Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140910A-BLK	Blank	45-105	71.6		35-100	45.5	
140910A-LCS	Lab Control Spike	45-105	73.3		35-100	39.8	
AZ02099	EN001	45-105	105		35-100	52.8	
AZ02100-MS	Matrix Spike	45-105	98.6		35-100	62.3	
AZ02100-MSD	Matrix SpikeD	45-105	99.2		35-100	93.6	
AZ02100	EN002	45-105	89.1		35-100	67.5	
AZ02101	EN003	45-105	102		35-100	90.2	
AZ02102	EN004	45-105	87.0		35-100	83.0	
AZ02103	EN005	45-105	85.2		35-100	97.5	
AZ02104	EN006	45-105	109	#	35-100	91.9	
AZ02105	EN007	45-105	69.8		35-100	81.1	
AZ02106	EN008	45-105	65.8		35-100	77.7	
AZ02107	EN009	45-105	70.4		35-100	67.7	
AZ02110	EN012	45-105	79.5		35-100	79.8	
AZ02111	EN013	45-105	98.2		35-100	82.9	
AZ02112	EN014	45-105	64.7		35-100	75.5	
AZ02113	EN015	45-105	86.7		35-100	80.6	
AZ02114	EN016	45-105	66.9		35-100	82.0	
AZ02115	EN017	45-105	58.9		35-100	67.2	

Comments: Batch: #SIMHC-140910A

= Recovery outside of Control Limits on Sample.

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/16/14

Matrix: SOIL Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
140910A-BLK	Blank	30-125	90.7				
140910A-LCS	Lab Control Spike	30-125	96.7				
AZ02099	EN001	30-125	147	#			
AZ02100-MS	Matrix Spike	30-125	151	*			
AZ02100-MSD	Matrix SpikeD	30-125	156	*			
AZ02100	EN002	30-125	146	#			
AZ02101	EN003	30-125	163	#			
AZ02102	EN004	30-125	118				
AZ02103	EN005	30-125	144	#			
AZ02104	EN006	30-125	164	#			
AZ02105	EN007	30-125	85.4				
AZ02106	EN008	30-125	83.7				
AZ02107	EN009	30-125	95.0				
AZ02110	EN012	30-125	148	#			
AZ02111	EN013	30-125	127	#			
AZ02112	EN014	30-125	89.2				
AZ02113	EN015	30-125	159	#			
AZ02114	EN016	30-125	127	#			
AZ02115	EN017	30-125	70.0				

Comments: Batch: #SIMHC-140910A

* = Recovery outside of Control Limits on QC Sample.

= Recovery outside of Control Limits on Sample.

Laboratory Control Spike Recovery
EPA 8270C SIM IS GROSS

APPL ID: **140910S-02100 LCS - 189932**
Batch ID: #SIMHC-140910A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	0.133	0.104	78.2	45-105
2-METHYLNAPHTHALENE	0.133	0.115	86.5	45-105
ACENAPHTHENE	0.133	0.0983	73.9	45-110
ACENAPHTHYLENE	0.133	0.120	90.2	45-105
ANTHRACENE	0.133	0.132	99.2	55-105
BENZO(A)ANTHRACENE	0.133	0.122	91.7	50-110
BENZO(A)PYRENE	0.133	0.139	105	50-110
BENZO(B)FLUORANTHENE	0.133	0.119	89.5	45-115
BENZO(GHI)PERYLENE	0.133	0.128	96.2	40-125
BENZO(K)FLUORANTHENE	0.133	0.0803	60.4	45-125
CHRYSENE	0.133	0.144	108	55-110
DIBENZ(A,H)ANTHRACENE	0.133	0.115	86.5	40-125
FLUORANTHENE	0.133	0.102	76.7	55-115
FLUORENE	0.133	0.104	78.2	50-110
INDENO(1,2,3-CD)PYRENE	0.133	0.101	75.9	40-120
PHENANTHRENE	0.133	0.131	98.5	50-110
PYRENE	0.133	0.099	74.4	45-125
SURROGATE: 2-FLUORBIPHENYL (S)	0.0666	0.0488	73.3	45-105
SURROGATE: NITROBENZENE-D5 (S)	0.0666	0.0265	39.8	35-100
SURROGATE: TERPHENYL-D14 (S)	0.0666	0.0644	96.7	30-125

Comments: _____

Primary	SPK
Quant Method :	SIM.M
Extraction Date :	9/10/14
Analysis Date :	9/16/14
Instrument :	Linus
Run :	0915L009
Initials :	LF

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APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8270C SIM

APPL ID: **140908W-02108 LCS - 189931**
Batch ID: #SIMHC-140908A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	4.00	3.01	75.3	45-105
2-METHYLNAPHTHALENE	4.00	2.64	66.0	45-105
ACENAPHTHENE	4.00	2.81	70.3	45-110
ACENAPHTHYLENE	4.00	2.84	71.0	50-105
ANTHRACENE	4.00	3.37	84.3	55-110
BENZO(A)ANTHRACENE	4.00	2.89	72.3	55-110
BENZO(A)PYRENE	4.00	3.14	78.5	55-110
BENZO(B)FLUORANTHENE	4.00	2.82	70.5	45-120
BENZO(GHI)PERYLENE	4.00	2.95	73.8	40-125
BENZO(K)FLUORANTHENE	4.00	3.74	93.5	45-125
CHRYSENE	4.00	3.64	91.0	55-110
DIBENZ(A,H)ANTHRACENE	4.00	2.80	70.0	40-125
FLUORANTHENE	4.00	3.43	85.8	55-115
FLUORENE	4.00	2.96	74.0	50-110
INDENO(1,2,3-CD)PYRENE	4.00	2.91	72.8	45-125
PHENANTHRENE	4.00	3.30	82.5	50-115
PYRENE	4.00	3.37	84.3	50-130
SURROGATE: 2-FLUORBIPHENYL (S)	2.00	1.24	62.0	50-110
SURROGATE: NITROBENZENE-D5 (S)	2.00	1.23	61.5	40-110
SURROGATE: TERPHENYL-D14 (S)	2.00	1.49	74.5	50-135

Comments: _____

Primary	SPK
Quant Method :	SIM.M
Extraction Date :	9/8/14
Analysis Date :	9/15/14
Instrument :	Linus
Run :	0915L004
Initials :	LF

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APPL Standard LCS

Matrix Spike Recoveries
EPA 8270C SIM IS GROSS

APPL ID: **140910S-02100 MS - 189932**
Batch ID: #SIMHC-140910A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	0.118	0.00080	0.163	0.131	137 #	110 #	45-105	21.8	30
2-METHYLNAPHTHALENE	0.118	0.0011	0.118	0.137	99.1	115 #	45-105	14.9	30
ACENAPHTHENE	0.118	ND	0.134	0.135	114 #	114 #	45-110	0.74	30
ACENAPHTHYLENE	0.118	ND	0.133	0.129	113 #	109 #	45-105	3.1	30
ANTHRACENE	0.118	0.0012	0.154	0.135	129 #	113 #	55-105	13.1	30
BENZO(A)ANTHRACENE	0.118	0.0088	0.157	0.147	126 #	117 #	50-110	6.6	30
BENZO(A)PYRENE	0.118	0.0083	0.147	0.122	118 #	96.4	50-110	18.6	30
BENZO(B)FLUORANTHENE	0.118	0.016	0.147	0.109	111	78.8	45-115	29.7	30
BENZO(GHI)PERYLENE	0.118	0.023	0.144	0.149	103	107	40-125	3.4	30
BENZO(K)FLUORANTHENE	0.118	0.016	0.156	0.114	119	83.1	45-125	31.1 #	30
CHRYSENE	0.118	0.0089	0.133	0.132	105	104	55-110	0.75	30
DIBENZ(A,H)ANTHRACENE	0.118	0.0088	0.130	0.145	103	115	40-125	10.9	30
FLUORANTHENE	0.118	0.013	0.168	0.122	131 #	92.4	55-115	31.7 #	30
FLUORENE	0.118	ND	0.137	0.129	116 #	109	50-110	6.0	30
INDENO(1,2,3-CD)PYRENE	0.118	0.011	0.133	0.185	103	147 #	40-120	32.7 #	30
PHENANTHRENE	0.118	0.0038	0.151	0.138	125 #	114 #	50-110	9.0	30
PYRENE	0.118	0.012	0.151	0.147	118	114	45-125	2.7	30
SURROGATE: 2-FLUORBIPHENYL (S)	0.0591	NA	0.0583	0.0586	98.6	99.2	45-105		
SURROGATE: NITROBENZENE-D5 (S)	0.0591	NA	0.0368	0.0553	62.3	93.6	35-100		
SURROGATE: TERPHENYL-D14 (S)	0.0591	NA	0.0894	0.0923	151 #	156 #	30-125		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	SIM.M	SIM.M
Extraction Date :	9/10/14	9/10/14
Analysis Date :	9/16/14	9/16/14
Instrument :	Linus	Linus
Run :	0915L011	0915L012
Initials :	LF	

Printed: 9/22/14 8:23:20 PM
APPL MSD SCII

8270C-LL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/16/14

Matrix: SOIL Instrument: Linus

Blank ID: 140910A-BLK Time Analyzed: 0020

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140910A-BLK	Blank	0915L008	9/16/14 0020
140910A-LCS	Lab Control Spike	0915L009	9/16/14 0046
AZ02099	EN001	0915L010	9/16/14 0112
140910A-MS	Matrix Spike	0915L011	9/16/14 0139
140910A-MSD	Matrix SpikeD	0915L012	9/16/14 0205
AZ02100	EN002	0915L013	9/16/14 0231
AZ02101	EN003	0915L014	9/16/14 0257
AZ02102	EN004	0915L015	9/16/14 0323
AZ02103	EN005	0915L016	9/16/14 0349
AZ02104	EN006	0915L017	9/16/14 0414
AZ02105	EN007	0915L018	9/16/14 0440
AZ02106	EN008	0915L019	9/16/14 0506
AZ02107	EN009	0915L020	9/16/14 0532
AZ02110	EN012	0915L021	9/16/14 0558
AZ02111	EN013	0915L022	9/16/14 0623
AZ02112	EN014	0915L023	9/16/14 0649
AZ02113	EN015	0915L024	9/16/14 0715
AZ02114	EN016	0915L025	9/16/14 0741
AZ02115	EN017	0915L026	9/16/14 0807

Comments: Batch: #SIMHC-140910A

8270C-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/15/14

Matrix: WATER Instrument: Linus

Blank ID: 140908A-BLK Time Analyzed: 2209

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140908A-BLK	Blank	0915L003	9/15/14 2209
140908A-LCS	Lab Control Spike	0915L004	9/15/14 2235
AZ02108	EN010	0915L005	9/15/14 2302
AZ02109	EN011	0915L006	9/15/14 2328
AZ02116	EN018	0915L007	9/15/14 2354

Comments: Batch: #SIMHC-140908A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 74218
Matrix: Soil
ID: SVTUNE 02-04-14

SDG No: 74218
Date Analyzed: 9/15/2014
Instrument: Linus
Time Analyzed: 21:21

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	140908A BLK 1/1000	0915L003.D	9/15/2014 22:09
2	Lab Control Spike	140908A LCS-1 1/1000	0915L004.D	9/15/2014 22:35
3	EN010	AZ02108W10 1/1070	0915L005.D	9/15/2014 23:02
4	EN011	AZ02109W09 1/1070	0915L006.D	9/15/2014 23:28
5	EN018	AZ02116W11 1/1000	0915L007.D	9/15/2014 23:54
6	Blank	140910A BLK 1/30.19G	0915L008.D	9/16/2014 0:20
7	Lab Control Spike	140910A LCS-1 1/30.0	0915L009.D	9/16/2014 0:46
8	EN001	AZ02099S11 1/34.23G	0915L010.D	9/16/2014 1:12
9	Matrix Spike	AZ02100S11 MS-1 1/33	0915L011.D	9/16/2014 1:39
10	Matrix Spike Dup	AZ02100S11 MSD-1 1/3	0915L012.D	9/16/2014 2:05
11	EN002	AZ02100S11 1/33.89G	0915L013.D	9/16/2014 2:31
12	EN003	AZ02101S11 1/33.96G	0915L014.D	9/16/2014 2:57
13	EN004	AZ02102S11 1/33.73G	0915L015.D	9/16/2014 3:23
14	EN005	AZ02103S11 1/35.64G	0915L016.D	9/16/2014 3:49
15	EN006	AZ02104S11 1/34.98G	0915L017.D	9/16/2014 4:14
16	EN007	AZ02105S11 1/39.46G	0915L018.D	9/16/2014 4:40
17	EN008	AZ02106S11 1/42.78G	0915L019.D	9/16/2014 5:06
18	EN009	AZ02107S11 1/39.19G	0915L020.D	9/16/2014 5:32
19	EN012	AZ02110S11 1/34.96G	0915L021.D	9/16/2014 5:58
20	EN013	AZ02111S11 1/35.76G	0915L022.D	9/16/2014 6:23
21	EN014	AZ02112S11 1/39.08G	0915L023.D	9/16/2014 6:49
22	EN015	AZ02113S11 1/34.75G	0915L024.D	9/16/2014 7:15

m/e		
51	29.95 - 60% of mass 198	33.3
68	0 - 2.05% of mass 69	1.2
70	0 - 2% of mass 69	0.7
127	40 - 60% of mass 198	44.9
197	0 - 1% of mass 198	0.2
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	21.0
365	1 - 100% of mass 198	1.9
441	0.01 - 100% of mass 443	79.4
442	40 - 150% of mass 198	55.8
443	17 - 23% of mass 442	19.3

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 74218
Matrix: Soil
ID: SVTUNE 02-04-14

SDG No: 74218
Date Analyzed: 9/15/2014
Instrument: Linus
Time Analyzed: 21:21

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
23	EN016	AZ02114S11 1/35.89G	0915L025.D	9/16/2014 7:41
24	EN017	AZ02115S11 1/40.38G	0915L026.D	9/16/2014 8:07
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				

m/e		
51	29.95 - 60% of mass 198	33.3
68	0 - 2.05% of mass 69	1.2
70	0 - 2% of mass 69	0.7
127	40 - 60% of mass 198	44.9
197	0 - 1% of mass 198	0.2
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	21.0
365	1 - 100% of mass 198	1.9
441	.01 - 100% of mass 443	79.4
442	40 - 150% of mass 198	55.8
443	17 - 23% of mass 442	19.3

8A

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 74218

Lab File ID (Standard): 0821L006.D Date Analyzed: 08/21/14

Instrument ID: Linus Time Analyzed: 18:02

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2480	6.05	1057	8.06	1670	9.79
	UPPER LIMIT	4960	6.55	2114	8.56	3340	10.29
	LOWER LIMIT	1240	5.55	529	7.56	835	9.29
	SAMPLE NO.						
01	140908A BLK 1/1000	1740	6.05	610	8.06	1579	9.80
02	140908A LCS-1 1/1000	1487	6.05	960	8.05	1532	9.79
03	AZ02108W10 1/1070	1936	6.05	774	8.06	1210	9.80
04	AZ02109W09 1/1070	1611	6.05	787	8.06	1262	9.80
05	AZ02116W11 1/1000	1571	6.05	768	8.06	1167	9.80
06	140910A BLK 1/30.19G	1905	6.05	843	8.06	1518	9.79
07	140910A LCS-1 1/30.05	1564	6.05	663	8.05	1484	9.79
08	AZ02099S11 1/34.23G	2112	6.05	759	8.06	1592	9.77
09	AZ02100S11 MS-1 1/33	1852	6.05	924	8.05	1412	9.77
10	AZ02100S11 MSD-1 1/3	1894	6.05	838	8.05	1321	9.77
11	AZ02100S11 1/33.89G	1965	6.05	1049	8.05	1682	9.77
12	AZ02101S11 1/33.96G	2082	6.05	932	8.05	1526	9.77
13	AZ02102S11 1/33.73G	2138	6.05	921	8.05	1319	9.77
14	AZ02103S11 1/35.64G	1934	6.05	1115	8.05	1796	9.77
15	AZ02104S11 1/34.98G	1778	6.05	826	8.05	1559	9.77
16	AZ02105S11 1/39.46G	1655	6.05	836	8.05	1425	9.79
17	AZ02106S11 1/42.78G	1925	6.05	888	8.05	1513	9.79
18	AZ02107S11 1/39.19G	1973	6.05	865	8.06	1404	9.79
19	AZ02110S11 1/34.96G	1891	6.05	1002	8.05	1839	9.79
20	AZ02111S11 1/35.76G	1847	6.05	990	8.05	1457	9.79
21	AZ02112S11 1/39.08G	1950	6.05	909	8.05	1500	9.79
22	AZ02113S11 1/34.75G	1980	6.05	928	8.05	1639	9.79

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 74218

Lab File ID (Standard): 0821L006.D Date Analyzed: 08/21/14

Instrument ID: Linus Time Analyzed: 18:02

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2905	12.87	1597	14.45		
	UPPER LIMIT	5810	13.37	3194	14.95		
	LOWER LIMIT	1453	12.37	799	13.95		
	SAMPLE NO.						
01	140908A BLK 1/1000	1981	12.87	1252	14.49		
02	140908A LCS-1 1/1000	2669	12.87	1504	14.47		
03	AZ02108W10 1/1070	2154	12.87	1336	14.49		
04	AZ02109W09 1/1070	1910	12.87	1320	14.48		
05	AZ02116W11 1/1000	1886	12.87	1051	14.48		
06	140910A BLK 1/30.19G	2563	12.87	1343	14.49		
07	140910A LCS-1 1/30.05	2286	12.86	1129	14.47		
08	AZ02099S11 1/34.23G	2123	12.86	1602	14.45		
09	AZ02100S11 MS-1 1/33	2625	12.85	1360	14.45		
10	AZ02100S11 MSD-1 1/3	1793	12.85	1224	14.45		
11	AZ02100S11 1/33.89G	2964	12.85	1563	14.45		
12	AZ02101S11 1/33.96G	2693	12.85	1394	14.45		
13	AZ02102S11 1/33.73G	2641	12.86	1115	14.45		
14	AZ02103S11 1/35.64G	3214	12.85	1560	14.45		
15	AZ02104S11 1/34.98G	2568	12.86	1383	14.45		
16	AZ02105S11 1/39.46G	2328	12.86	1311	14.45		
17	AZ02106S11 1/42.78G	2617	12.85	1239	14.45		
18	AZ02107S11 1/39.19G	2244	12.86	1304	14.47		
19	AZ02110S11 1/34.96G	2632	12.86	1711	14.45		
20	AZ02111S11 1/35.76G	2772	12.86	1330	14.45		
21	AZ02112S11 1/39.08G	2353	12.86	1327	14.45		
22	AZ02113S11 1/34.75G	2626	12.85	1338	14.45		

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

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8A

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 74218

Lab File ID (Standard): 0821L006.D Date Analyzed: 8/21/2014

Instrument ID: Linus Time Analyzed: 18:02

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2480	6.0457	1057	8.0603	1670	9.7854
	UPPER LIMIT	4960	6.5457	2114	8.5603	3340	10.285
	LOWER LIMIT	1240	5.5457	528.5	7.5603	835	9.2854
	SAMPLE NO.						
23	AZ02114S11 1/35.89G	1788	6.05	1047	8.05	1613	9.79
24	AZ02115S11 1/40.38G	2367	6.05	1003	8.05	1936	9.79
25							
26							
27							
28							
29							
30							
31							
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38							
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42							
43							
44							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

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* Values outside of QC limits.

8A

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 74218

Lab File ID (Standard): 0821L006.D Date Analyzed: 8/21/2014

Instrument ID: Linus Time Analyzed: 18:02

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2905	12.867	1597	14.453		
	UPPER LIMIT	5810	13.367	3194	14.953		
	LOWER LIMIT	1452.5	12.367	798.5	13.953		
	SAMPLE NO.						
23	AZ02114S11 1/35.89G	2377	12.86	1345	14.47		
24	AZ02115S11 1/40.38G	3251	12.85	1671	14.47		
25							
26							
27							
28							
29							
30							
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33							
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44							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
Sample Data

APPL, INC.

EPA 8270C SIM IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN001

APPL ID: AZ02099

Sample Collection Date: 9/2/14

QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 12.2 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0017 J	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.013	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.011	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.021	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.013	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.021	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.013	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.0040 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.021	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.011	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.011	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.025	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	105	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	52.8	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	147 #	30-125			%	9/10/14	9/16/14

J = Estimated value.
= Recovery (or RPD) is outside QC limits.

Quant Method: SIM.M
Run #: 0915L010
Instrument: Linus
Sequence: L140821
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L010.D Vial: 10
Acq On : 16 Sep 14 1:12 Operator: LF
Sample : AZ02099S11 1/34.23G Inst : Linus
Misc : Multiplr: 29.21

Quant Time: Sep 18 22:41 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:41:06 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	2112	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	8.06	164	759	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.77	188	1592	2.50000 ppb		-0.01
15) Chrysene-D12(IS)	12.86	240	2123	2.50000 ppb		-0.01
21) Perylene-D12(IS)	14.45	264	1602	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	559	30.84253 ppb		0.00
Spiked Amount 58.428			Recovery = 52.788%			
7) Surrogate Recovery (FBP)	7.30	172	1601	61.14172 ppb		0.00
Spiked Amount 58.428			Recovery = 104.645%			
17) Surrogate Recovery (TPH)	11.65	244	2862	85.93601 ppb		-0.01
Spiked Amount 58.428			Recovery = 147.079%			
Target Compounds						Qvalue
12) Phenanthrene	9.81	178	420	9.53591 ppb		96
13) Anthracene	9.87	178	63	1.52672 ppb		95
14) Fluoranthene	11.19	202	1391	18.26198 ppb	#	81
16) Pyrene	11.44	202	1340	21.92979 ppb		98
18) Benz (a) anthracene	12.84	228	550	11.12381 ppb		94
19) Chrysene	12.88	228	534	11.14174 ppb	#	95
20) Indeno (1,2,3-cd) pyrene	15.89	276	404	9.74736 ppb	#	97
22) Benzo (b) fluoranthene	14.03	252	1086	18.68822 ppb		94
23) Benzo (k) fluoranthene	14.03	252	1086	18.87039 ppb	#	89
24) Benzo (a) pyrene	14.38	252	527	9.90950 ppb	#	80
25) Dibenz (a,h) anthracene	15.92	278	162	3.53778 ppb	#	81
26) Benzo (g,h,i) perylene	16.32	276	570	11.71194 ppb		91

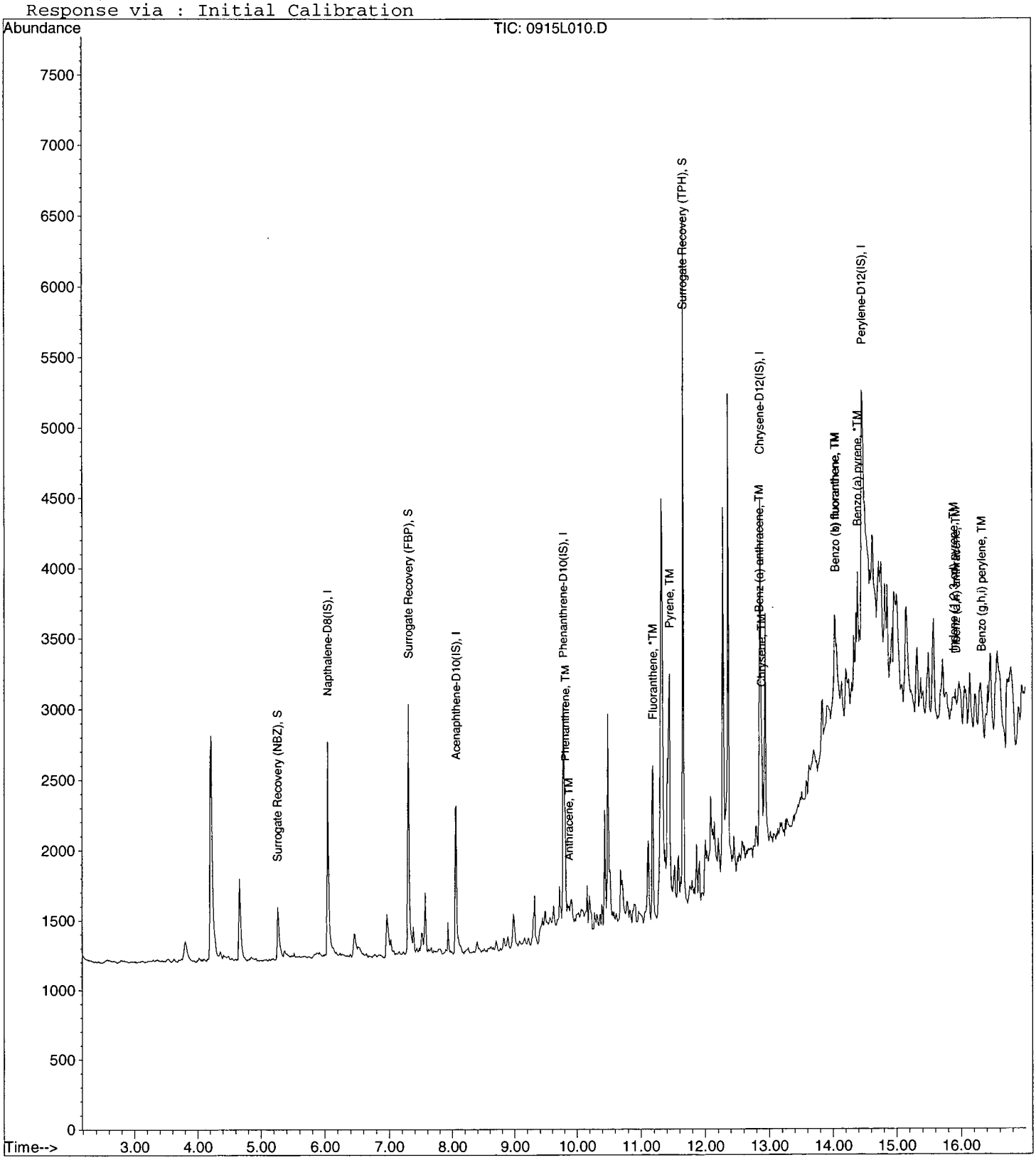
(#) = qualifier out of range (m) = manual integration

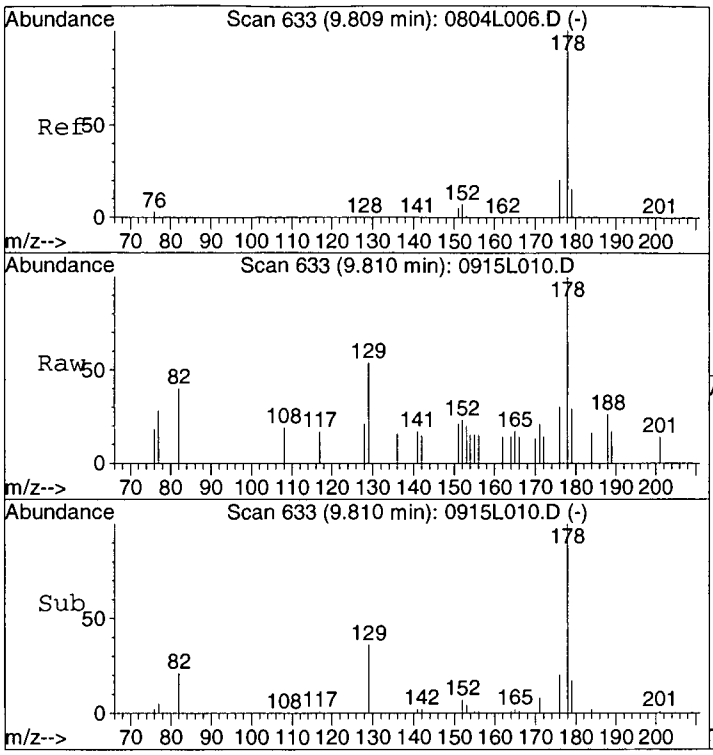
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L010.D Vial: 10
Acq On : 16 Sep 14 1:12 Operator: LF
Sample : AZ02099S11 1/34.23G Inst : Linus
Misc : Multiplr: 29.21

Quant Time: Sep 18 22:41 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

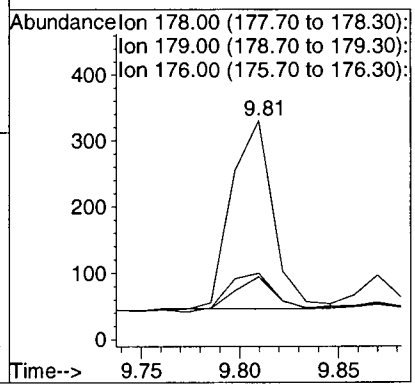


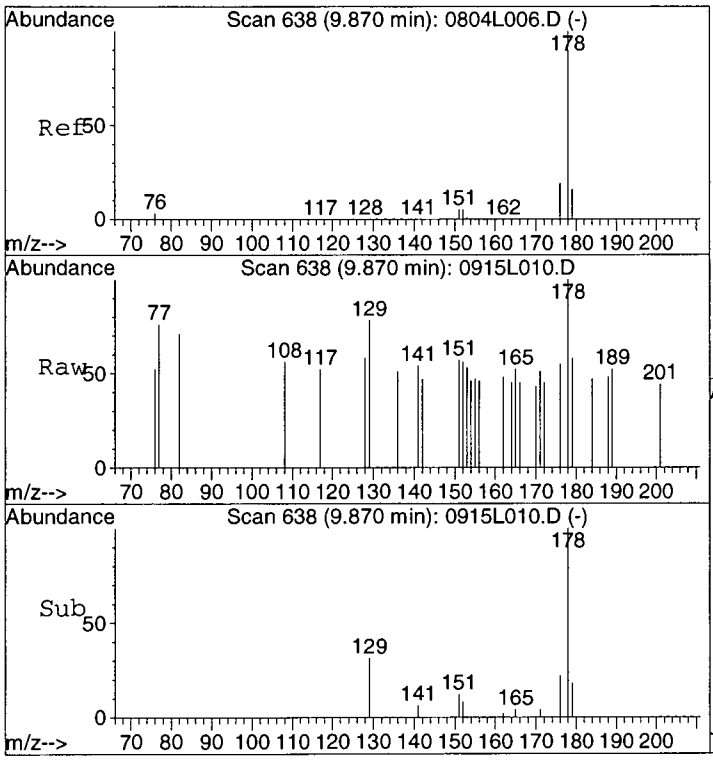


#12
Phenanthrene
Concen: 9.53591 ppb
RT: 9.81 min Scan# 633
Delta R.T. 0.00 min
Lab File: 0915L010.D
Acq: 16 Sep 14 1:12

Tgt Ion:178 Resp: 420

Ion	Ratio	Lower	Upper
178	100		
179	16.8	10.4	19.4
176	20.4	13.4	24.8

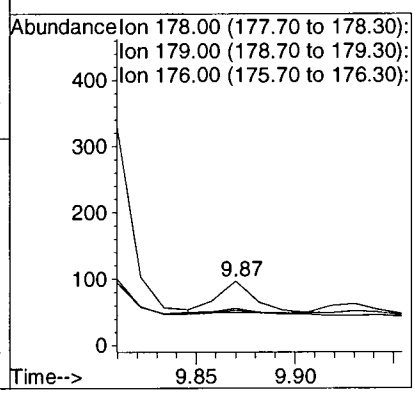


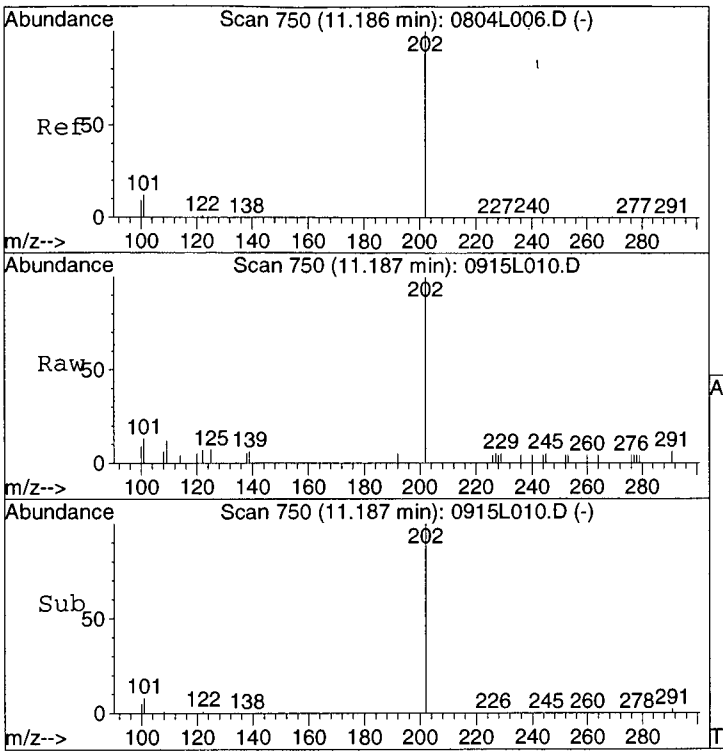


#13
Anthracene
Concen: 1.52672 ppb
RT: 9.87 min Scan# 638
Delta R.T. 0.00 min
Lab File: 0915L010.D
Acq: 16 Sep 14 1:12

Tgt Ion:178 Resp: 63

Ion	Ratio	Lower	Upper
178	100		
179	12.5	10.4	19.2
176	16.7	13.0	24.1

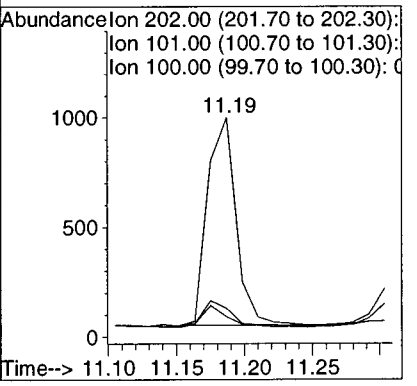


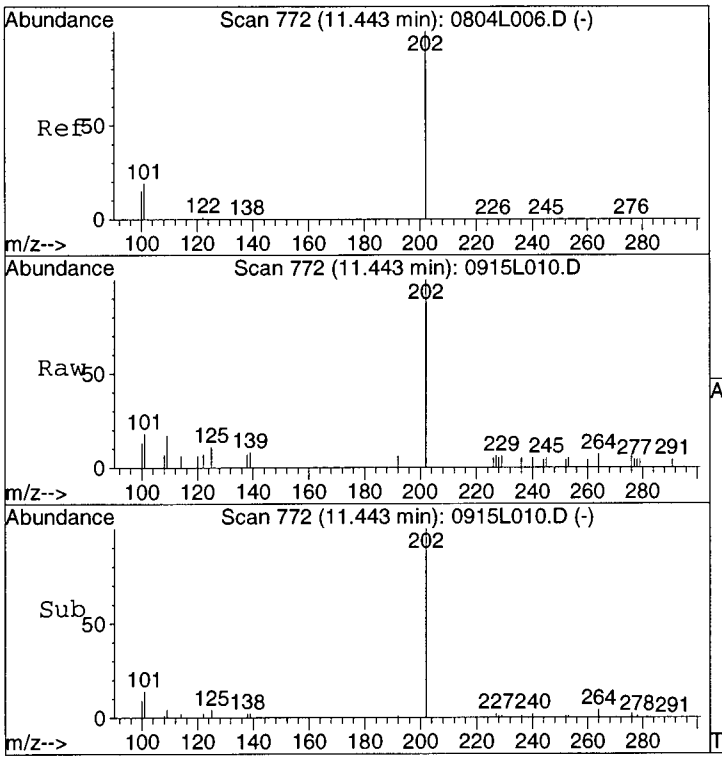


#14
Fluoranthene
Concen: 18.26198 ppb
RT: 11.19 min Scan# 750
Delta R.T. 0.00 min
Lab File: 0915L010.D
Acq: 16 Sep 14 1:12

Tgt Ion:202 Resp: 1391

Ion	Ratio	Lower	Upper
202	100		
101	8.3	12.0	22.2#
100	5.1	8.2	15.2#

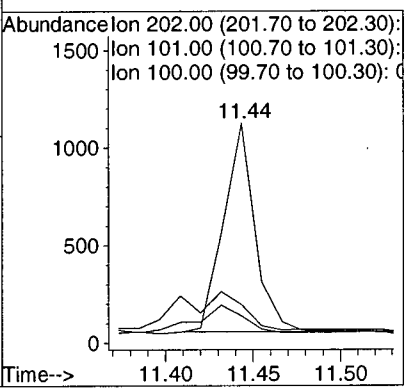


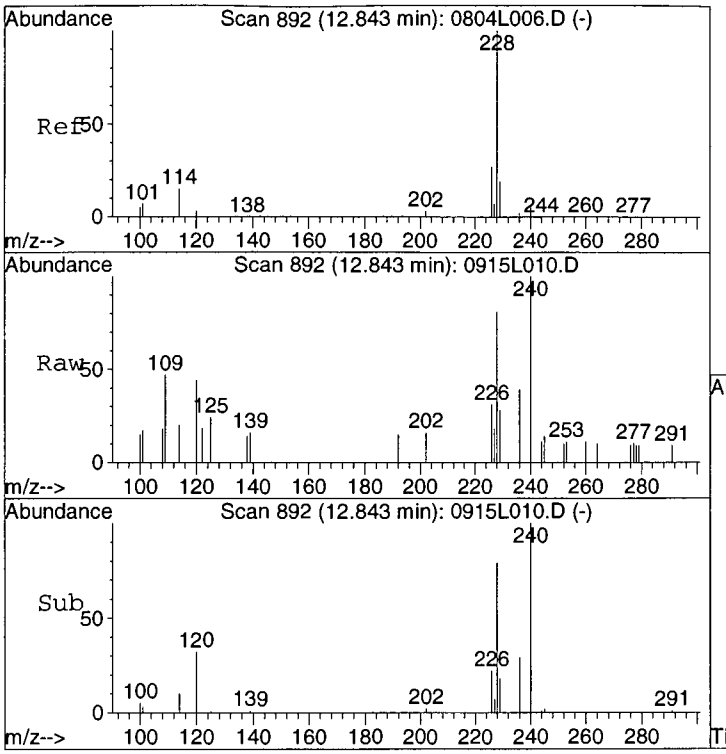


#16
Pyrene
Concen: 21.92979 ppb
RT: 11.44 min Scan# 772
Delta R.T. -0.01 min
Lab File: 0915L010.D
Acq: 16 Sep 14 1:12

Tgt Ion:202 Resp: 1340

Ion	Ratio	Lower	Upper
202	100		
101	12.1	7.4	13.8
100	8.2	5.8	10.8

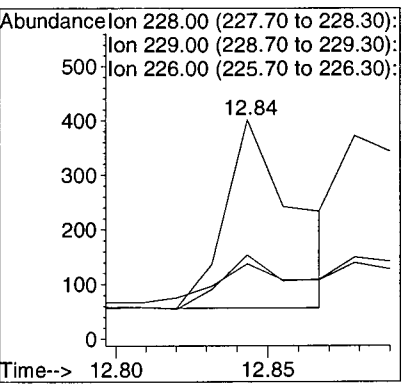


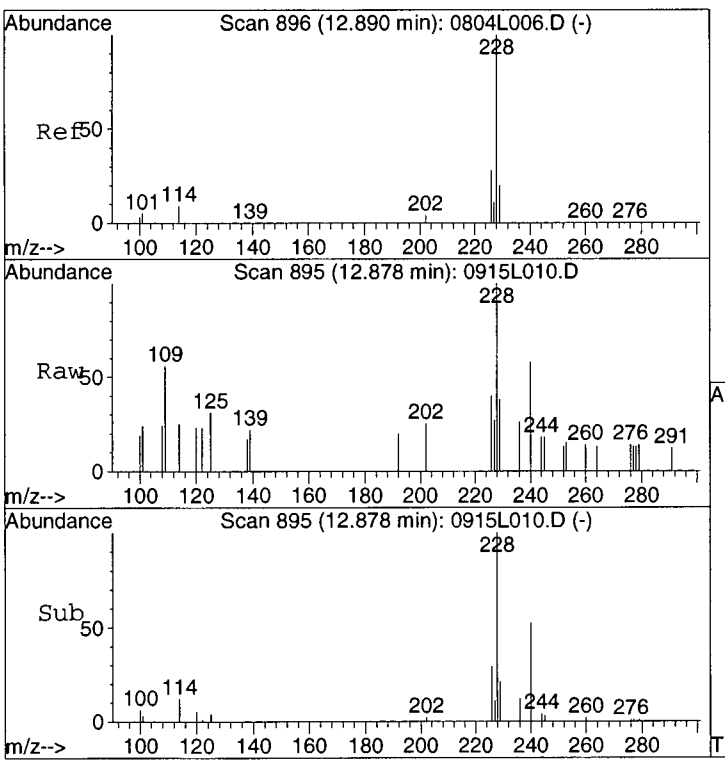


#18
Benz (a) anthracene
Concen: 11.12381 ppb
RT: 12.84 min Scan# 892
Delta R.T. -0.01 min
Lab File: 0915L010.D
Acq: 16 Sep 14 1:12

Tgt Ion:228 Resp: 550

Ion	Ratio	Lower	Upper
228	100		
229	18.0	14.1	26.1
226	28.7	17.5	32.5

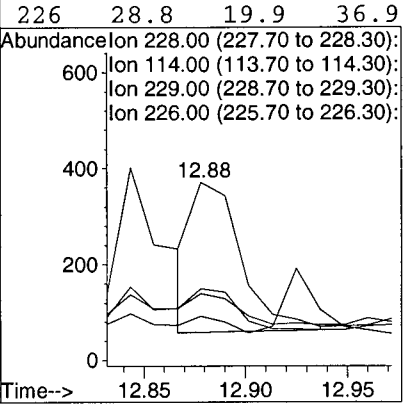


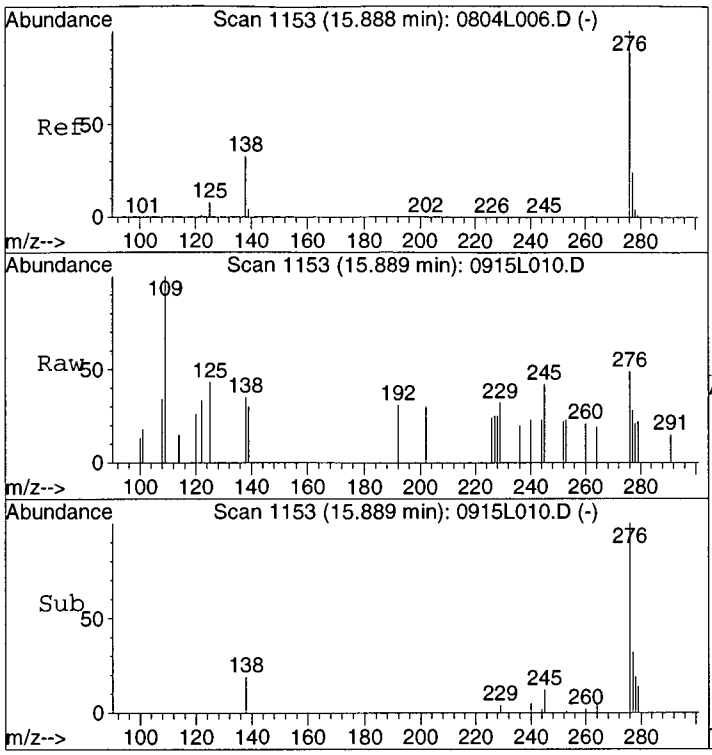


#19
Chrysene
Concen: 11.14174 ppb
RT: 12.88 min Scan# 895
Delta R.T. -0.01 min
Lab File: 0915L010.D
Acq: 16 Sep 14 1:12

Tgt Ion:228 Resp: 534

Ion	Ratio	Lower	Upper
228	100		
114	6.6	8.4	15.6#
229	21.9	13.8	25.6
226	28.8	19.9	36.9

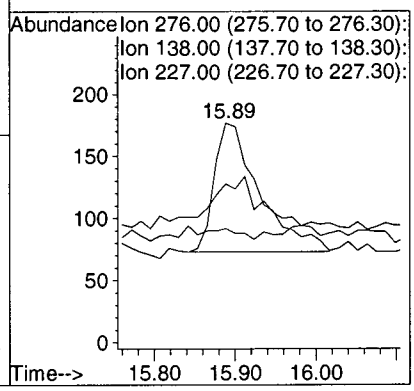


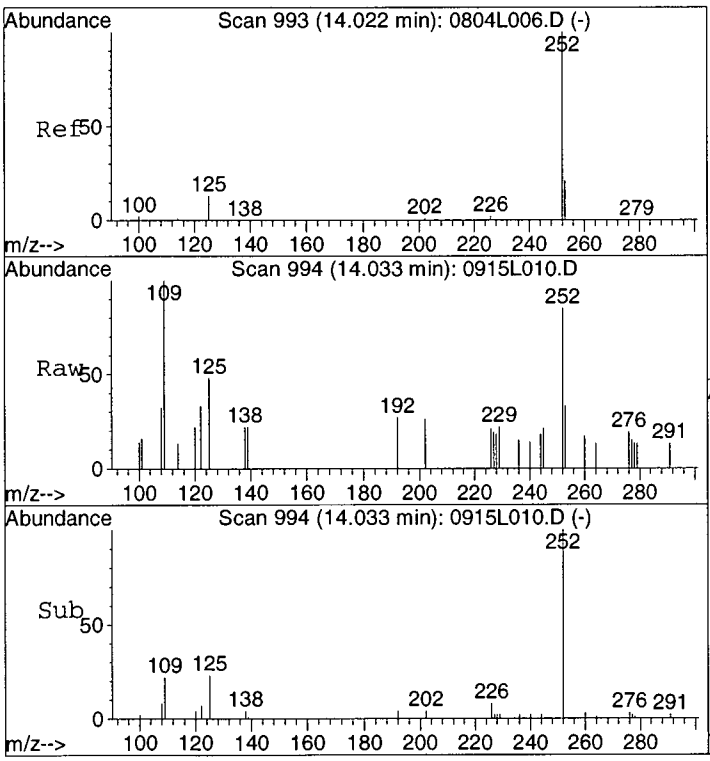


#20
Indeno (1,2,3-cd) pyrene
Concen: 9.74736 ppb
RT: 15.89 min Scan# 1153
Delta R.T. -0.01 min
Lab File: 0915L010.D
Acq: 16 Sep 14 1:12

Tgt Ion:276 Resp: 404

Ion	Ratio	Lower	Upper
276	100		
138	30.8	22.8	42.4
227	3.8	0.2	0.4#

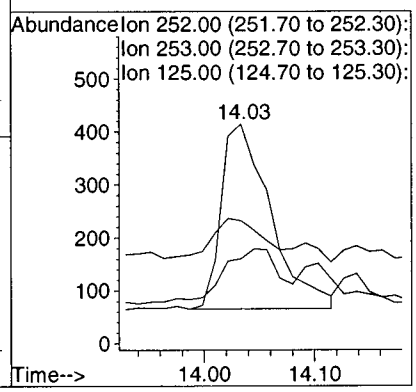


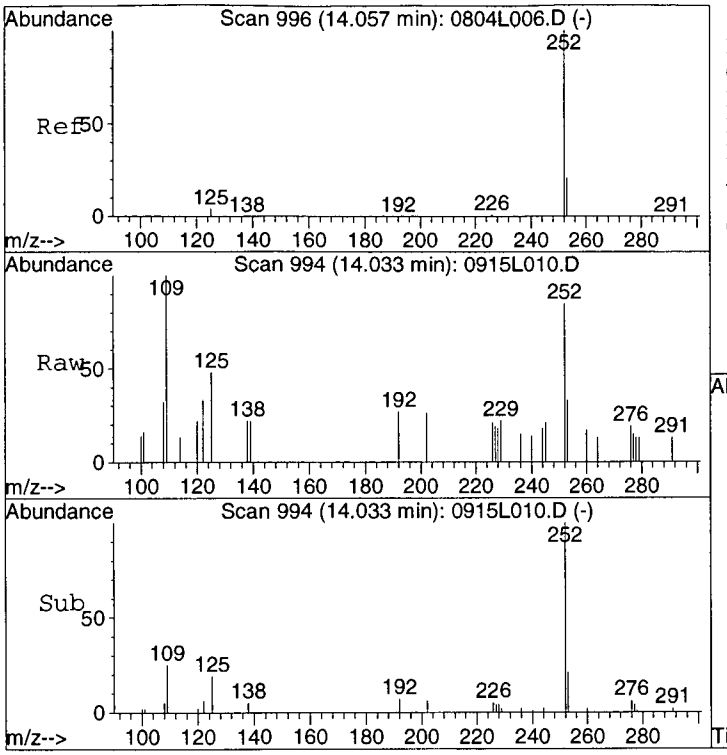


#22
Benzo (b) fluoranthene
Concen: 18.68822 ppb
RT: 14.03 min Scan# 994
Delta R.T. 0.01 min
Lab File: 0915L010.D
Acq: 16 Sep 14 1:12

Tgt Ion:252 Resp: 1086

Ion	Ratio	Lower	Upper
252	100		
253	22.1	14.9	27.7
125	22.6	12.3	22.8

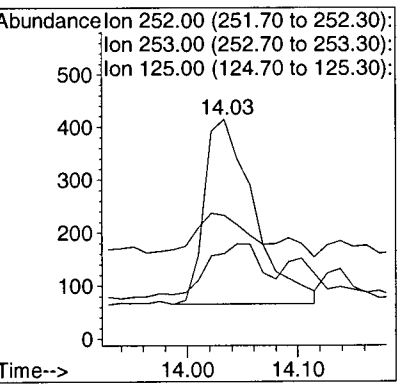


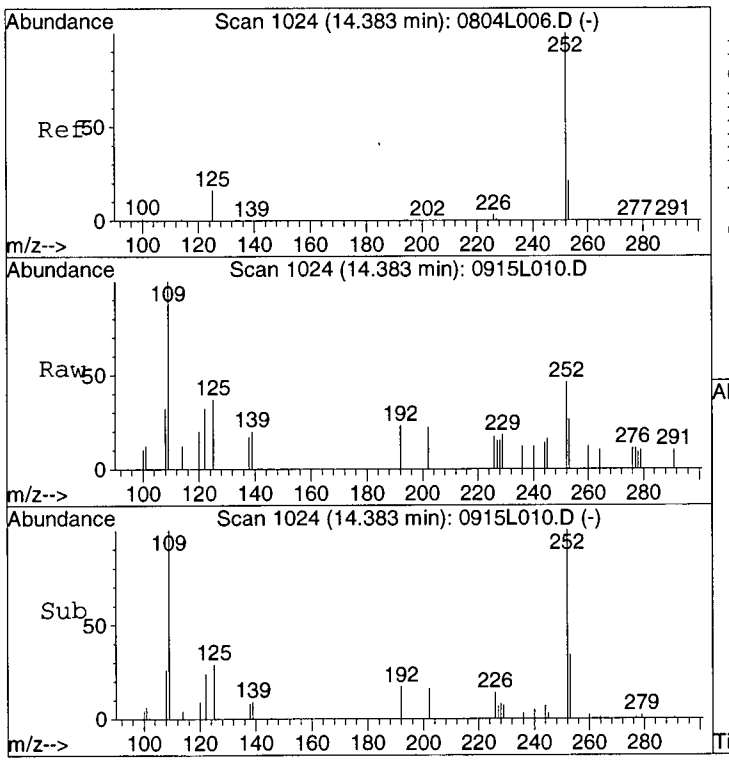


#23
Benzo (k) fluoranthene
Concen: 18.87039 ppb
RT: 14.03 min Scan# 994
Delta R.T. -0.02 min
Lab File: 0915L010.D
Acq: 16 Sep 14 1:12

Tgt Ion:252 Resp: 1086

Ion	Ratio	Lower	Upper
252	100		
253	22.1	14.7	27.3
125	22.6	9.2	17.0#

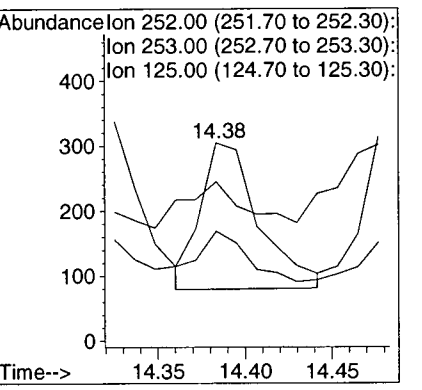


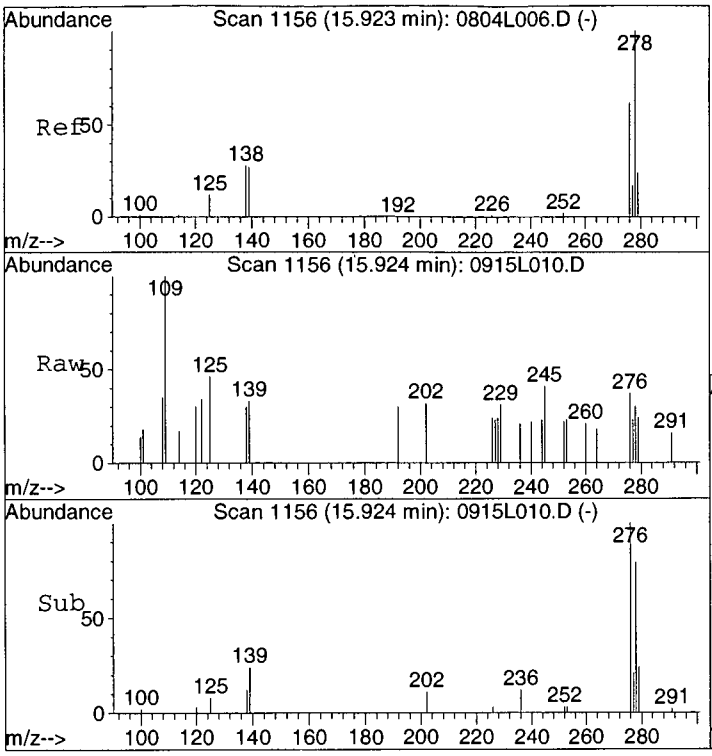


#24
Benzo (a) pyrene
Concen: 9.90950 ppb
RT: 14.38 min Scan# 1024
Delta R.T. -0.01 min
Lab File: 0915L010.D
Acq: 16 Sep 14 1:12

Tgt Ion:252 Resp: 527

Ion	Ratio	Lower	Upper
252	100		
253	37.3	15.4	28.6#
125	13.9	9.5	17.6

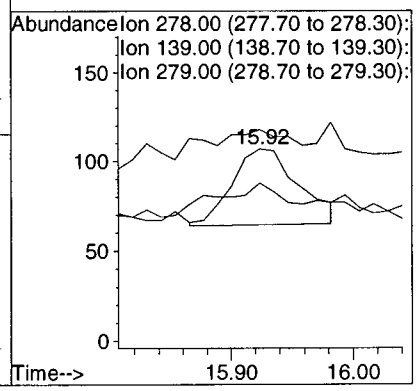


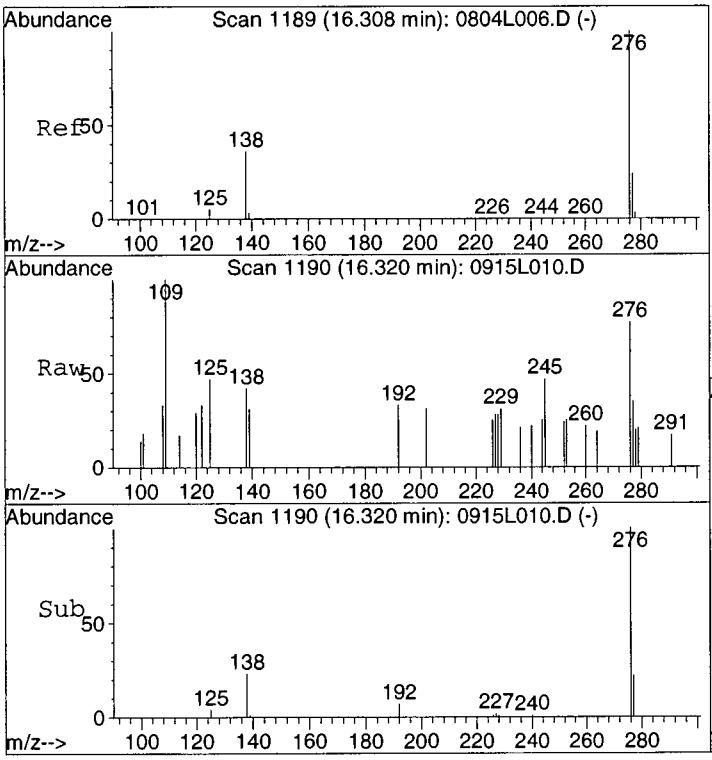


#25
Dibenz (a,h) anthracene
Concen: 3.53778 ppb
RT: 15.92 min Scan# 1156
Delta R.T. -0.01 min
Lab File: 0915L010.D
Acq: 16 Sep 14 1:12

Tgt Ion:278 Resp: 162

Ion	Ratio	Lower	Upper
278	100		
139	12.2	17.9	33.2#
279	29.3	16.5	30.6

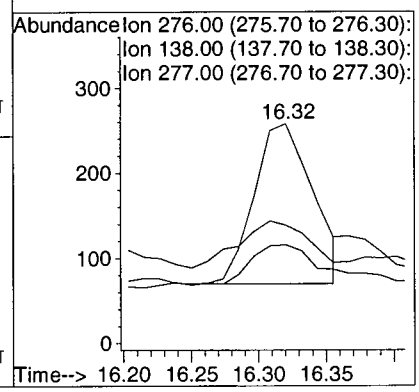




#26
Benzo (g,h,i) perylene
Concen: 11.71194 ppb
RT: 16.32 min Scan# 1190
Delta R.T. 0.00 min
Lab File: 0915L010.D
Acq: 16 Sep 14 1:12

Tgt Ion:276 Resp: 570

Ion	Ratio	Lower	Upper
276	100		
138	26.6	24.4	45.4
277	25.0	17.1	31.7



EPA 8270C SIM IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN002
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02100
QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 11.3 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0013 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0013 J	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.0099	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.0093	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.018	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.026	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.018	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.010	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.010	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.015	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.012	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.0043 J	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.014	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	89.1	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	67.5	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	146 #	30-125			%	9/10/14	9/16/14

J = Estimated value.
= Recovery (or RPD) is outside QC limits.

Quant Method:	SIM.M
Run #:	0915L013
Instrument:	Linus
Sequence:	L140821
Dilution Factor:	1
Initials:	LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L013.D Vial: 13
Acq On : 16 Sep 14 2:31 Operator: LF
Sample : AZ02100S11 1/33.89G Inst : Linus
Misc : Multiplr: 29.51

Quant Time: Sep 18 22:42 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1965	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	1049	2.50000 ppb		-0.01
11) Phenanthrene-D10(IS)	9.77	188	1682	2.50000 ppb		-0.01
15) Chrysene-D12(IS)	12.85	240	2964	2.50000 ppb		-0.01
21) Perylene-D12(IS)	14.45	264	1563	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	665	39.83148 ppb		0.00
Spiked Amount 59.014			Recovery = 67.494%			
7) Surrogate Recovery (FBP)	7.29	172	1883	52.55309 ppb		-0.01
Spiked Amount 59.014			Recovery = 89.051%			
17) Surrogate Recovery (TPH)	11.65	244	3959	85.99994 ppb		-0.01
Spiked Amount 59.014			Recovery = 145.727%			
Target Compounds						Qvalue
3) Naphthalene	6.07	128	40	0.88638 ppb	#	75
4) 2-Methylnaphthalene	6.87	142	28	1.12182 ppb		89
5) 1-Methylnaphthalene	6.96	142	20	0.80497 ppb		77
12) Phenanthrene	9.81	178	175	3.79842 ppb	#	92
13) Anthracene	9.87	178	51	1.18152 ppb	#	89
14) Fluoranthene	11.19	202	1042	13.07798 ppb	#	82
16) Pyrene	11.44	202	1017	12.04087 ppb	#	91
18) Benz (a) anthracene	12.84	228	599	8.76445 ppb	#	88
19) Chrysene	12.88	228	589	8.89066 ppb	#	95
20) Indeno (1,2,3-cd) pyrene	15.89	276	607	10.59502 ppb	#	56
22) Benzo (b) fluoranthene	14.02	252	898	15.99754 ppb	#	80
23) Benzo (k) fluoranthene	14.02	252	907	16.31538 ppb	#	76
24) Benzo (a) pyrene	14.38	252	426	8.29258 ppb	#	52
25) Dibenz (a,h) anthracene	15.92	278	391	8.83957 ppb	#	45
26) Benzo (g,h,i) perylene	16.32	276	1086	23.10056 ppb		97

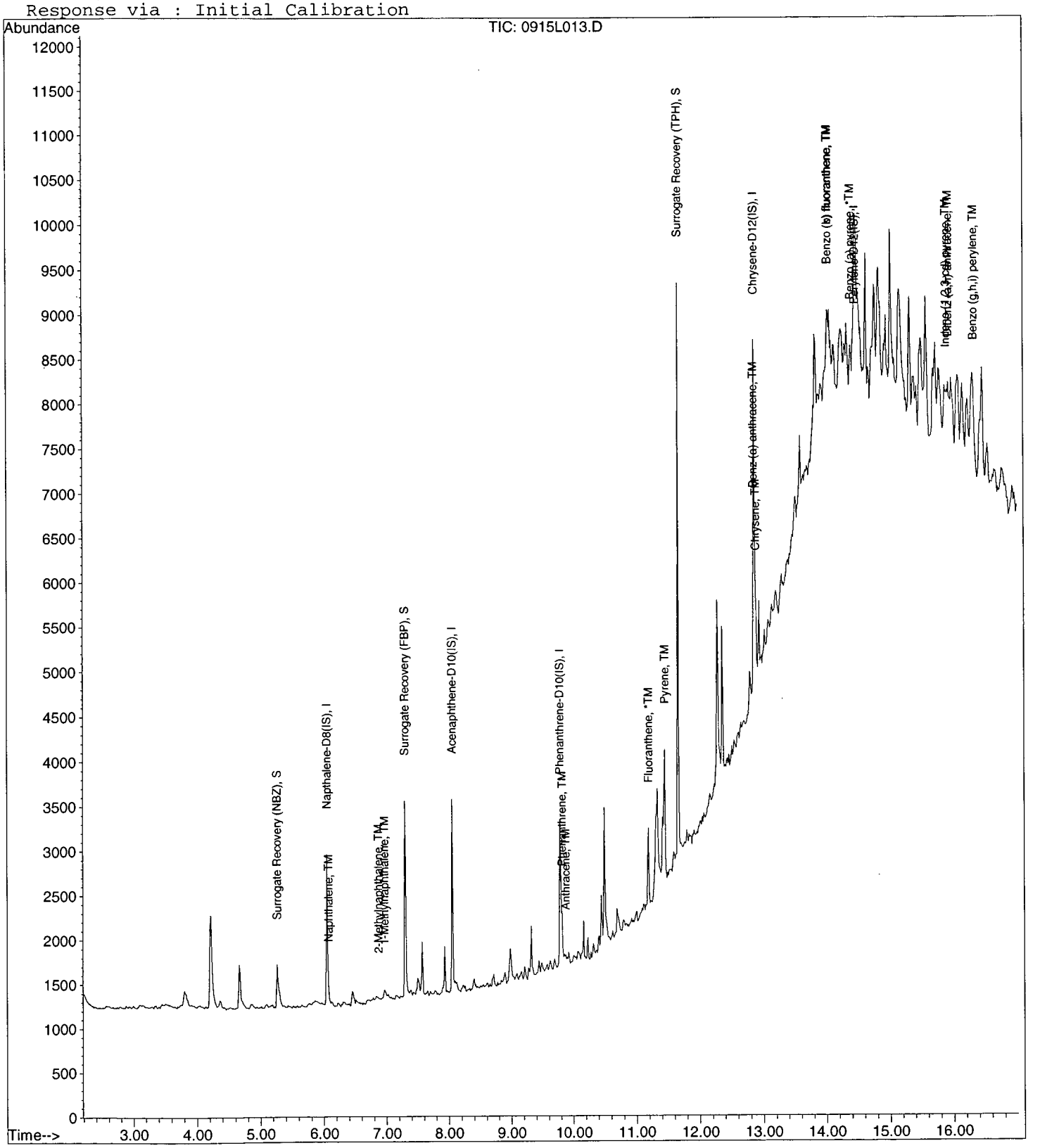
(#) = qualifier out of range (m) = manual integration

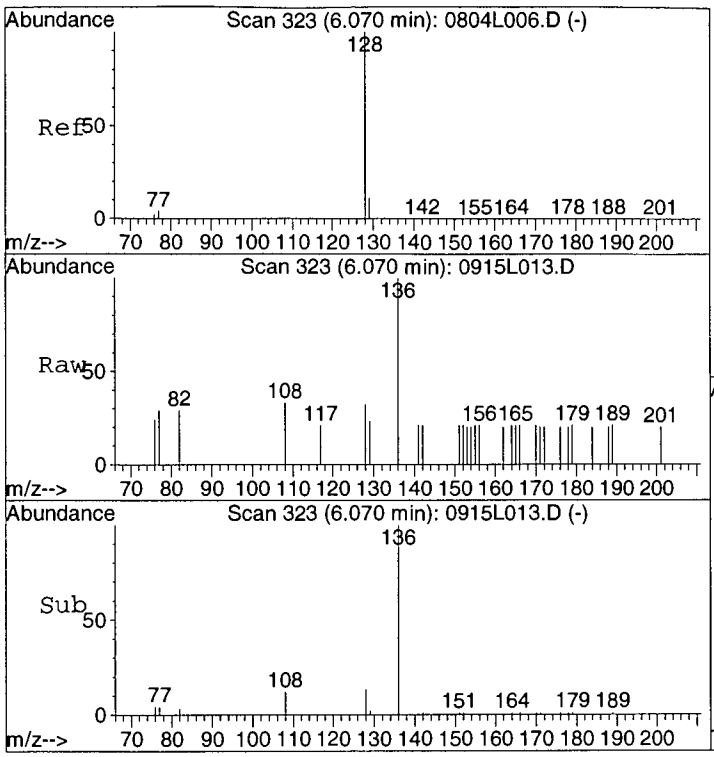
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L013.D Vial: 13
Acq On : 16 Sep 14 2:31 Operator: LF
Sample : AZ02100S11 1/33.89G Inst : Linus
Misc : Multiplr: 29.51

Quant Time: Sep 18 22:42 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

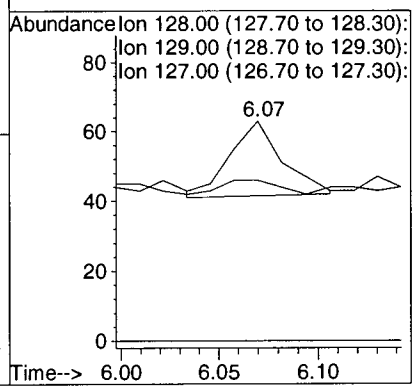


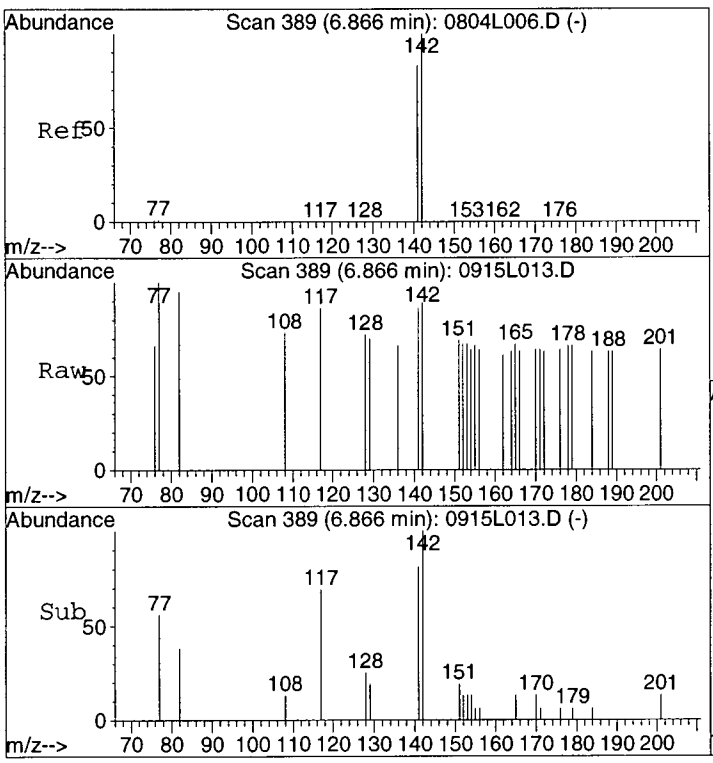


#3
Naphthalene
Concen: 0.88638 ppb
RT: 6.07 min Scan# 323
Delta R.T. 0.00 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:128 Resp: 40

Ion	Ratio	Lower	Upper
128	100		
129	20.0	7.5	13.9#
127	0.0	0.0	0.0

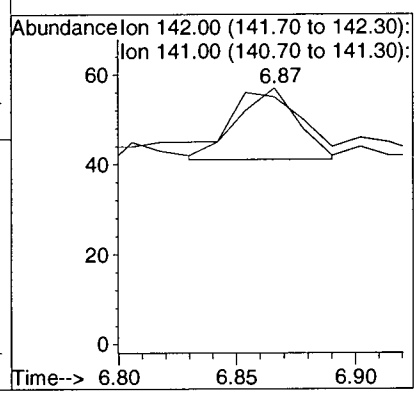


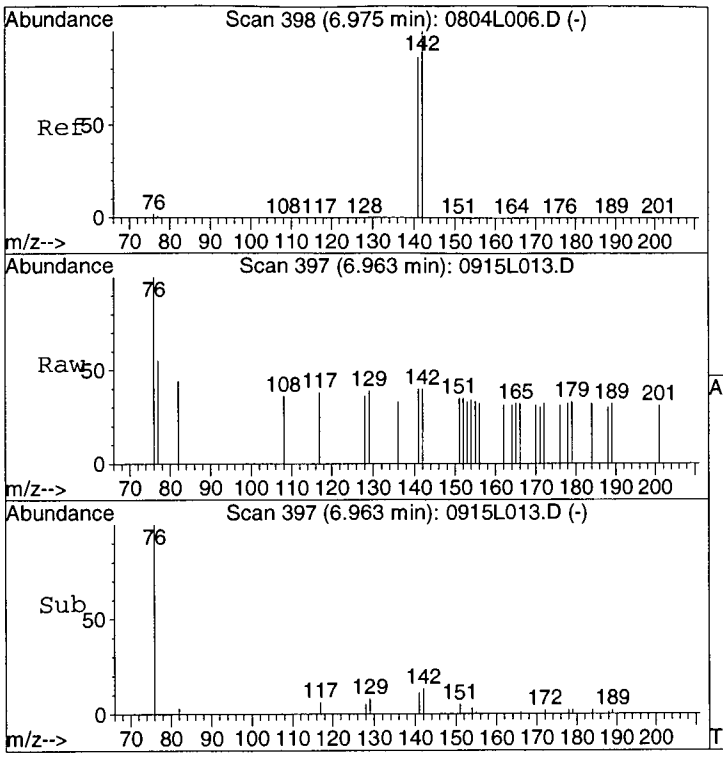


#4
2-Methylnaphthalene
Concen: 1.12182 ppb
RT: 6.87 min Scan# 389
Delta R.T. -0.00 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:142 Resp: 28

Ion	Ratio	Lower	Upper
142	100		
141	73.3	58.0	107.6

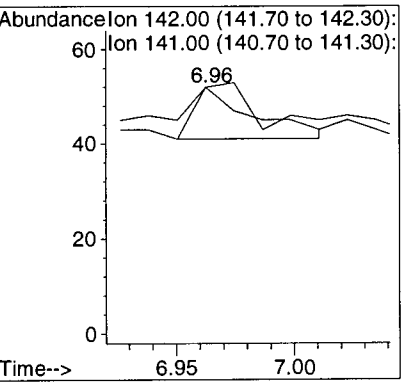


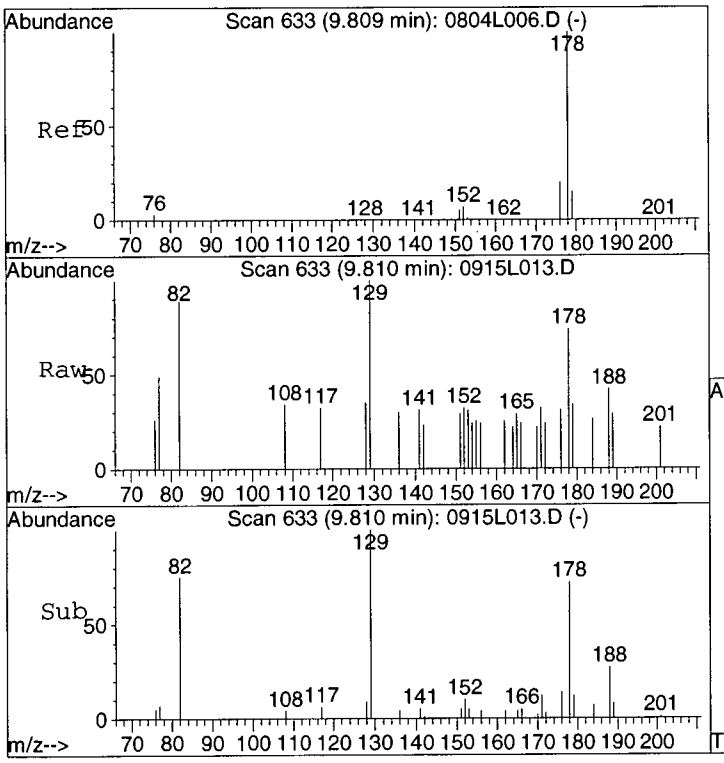


#5
1-Methylnaphthalene
Concen: 0.80497 ppb
RT: 6.96 min Scan# 397
Delta R.T. -0.01 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:142 Resp: 20

Ion	Ratio	Lower	Upper
142	100		
141	63.6	58.9	109.3

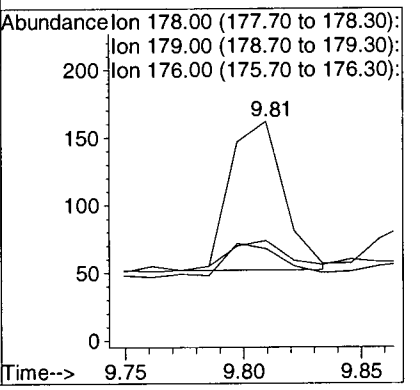


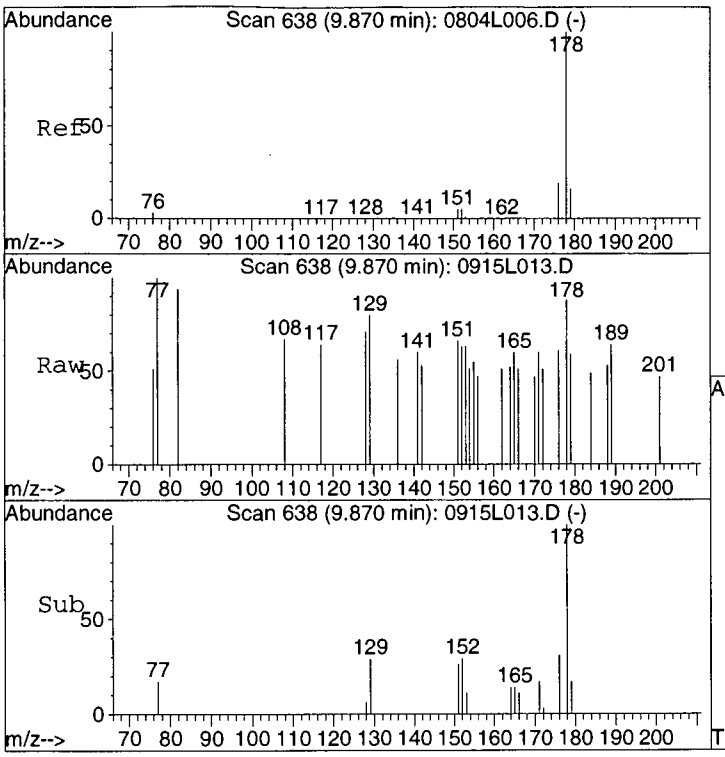


#12
Phenanthrene
Concen: 3.79842 ppb
RT: 9.81 min Scan# 633
Delta R.T. 0.00 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:178 Resp: 175

Ion	Ratio	Lower	Upper
178	100		
179	20.0	10.4	19.4#
176	17.3	13.4	24.8

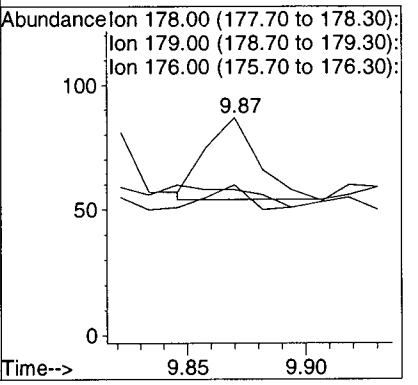


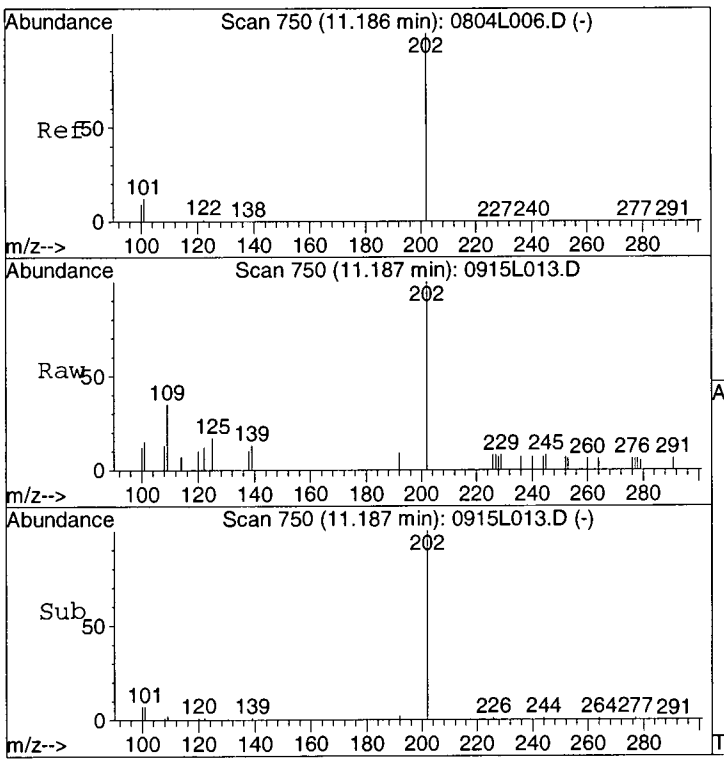


#13
Anthracene
Concen: 1.18152 ppb
RT: 9.87 min Scan# 638
Delta R.T. 0.00 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:178 Resp: 51

Ion	Ratio	Lower	Upper
178	100		
179	15.2	10.4	19.2
176	27.3	13.0	24.1#

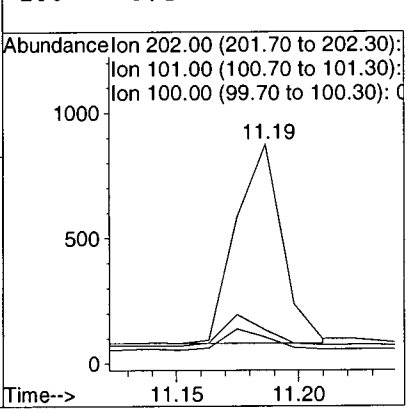


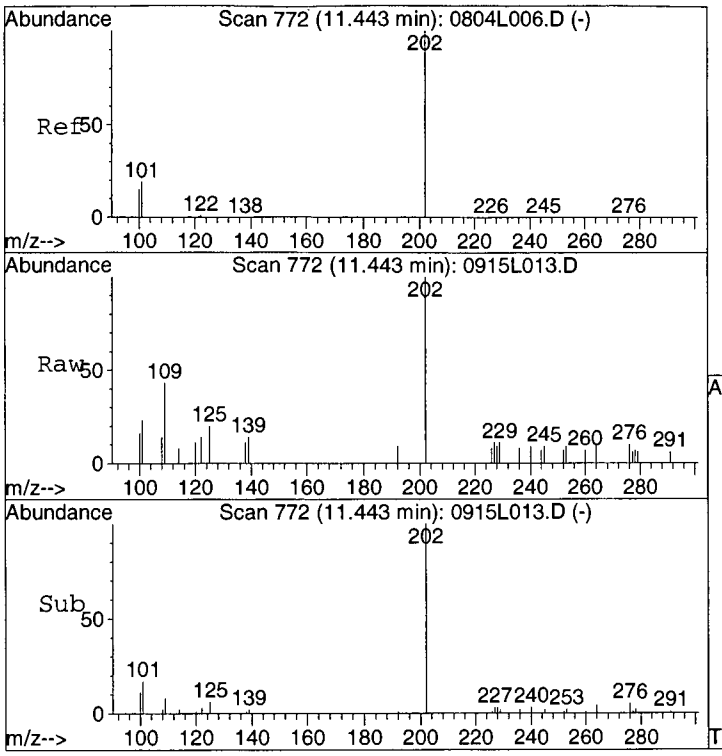


#14
Fluoranthene
Concen: 13.07798 ppb
RT: 11.19 min Scan# 750
Delta R.T. 0.00 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:202 Resp: 1042

Ion	Ratio	Lower	Upper
202	100		
101	8.1	12.0	22.2#
100	6.4	8.2	15.2#

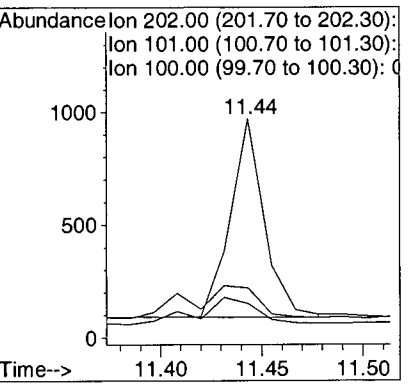


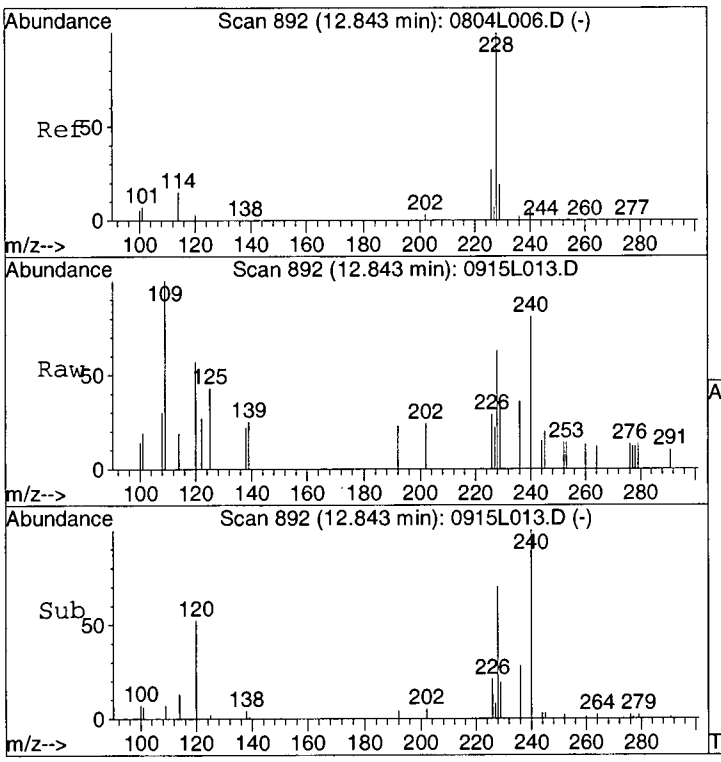


#16
Pyrene
Concen: 12.04087 ppb
RT: 11.44 min Scan# 772
Delta R.T. -0.01 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:202 Resp: 1017

Ion	Ratio	Lower	Upper
202	100		
101	14.9	7.4	13.8#
100	10.0	5.8	10.8

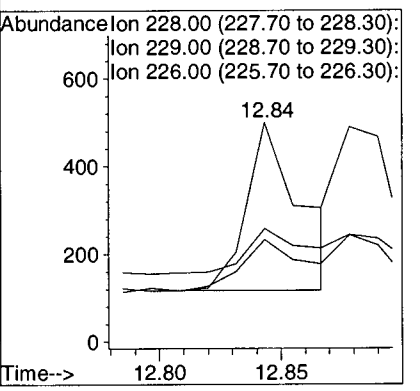


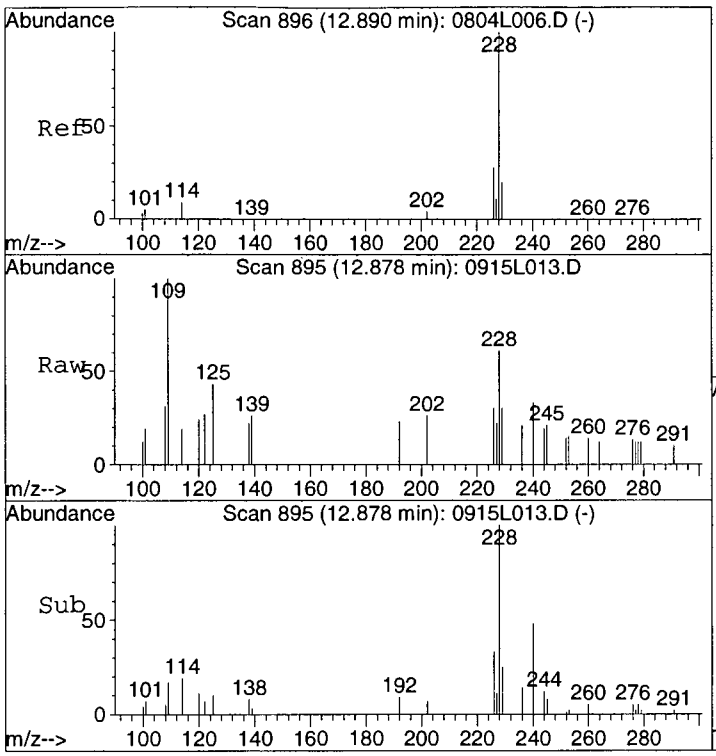


#18
Benz (a) anthracene
Concen: 8.76445 ppb
RT: 12.84 min Scan# 892
Delta R.T. -0.01 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:228 Resp: 599

Ion	Ratio	Lower	Upper
228	100		
229	26.4	14.1	26.1#
226	30.6	17.5	32.5

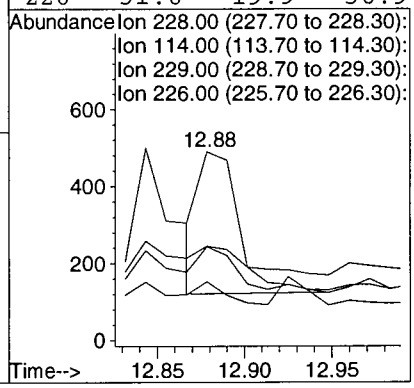


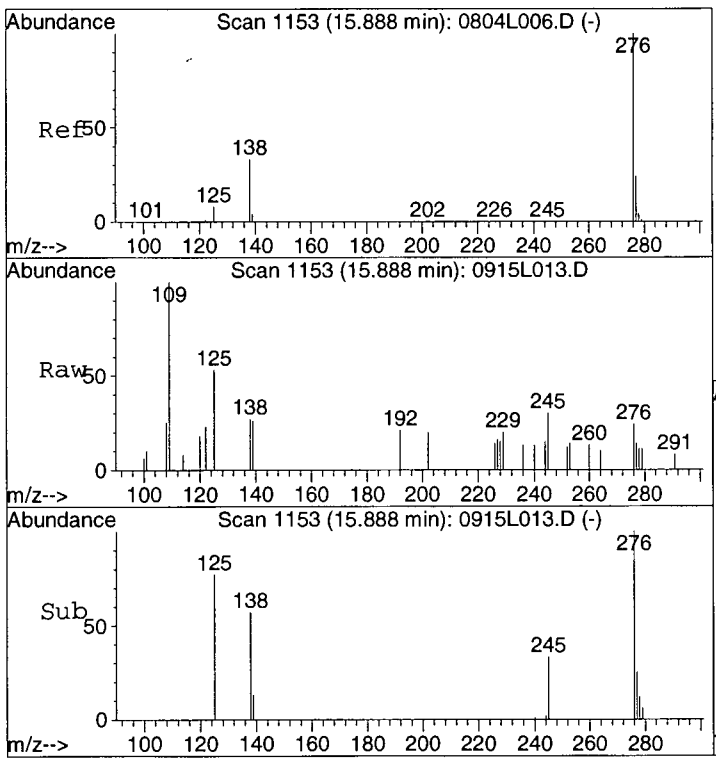


#19
Chrysene
Concen: 8.89066 ppb
RT: 12.88 min Scan# 895
Delta R.T. -0.01 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:228 Resp: 589

Ion	Ratio	Lower	Upper
228	100		
114	16.7	8.4	15.6#
229	20.5	13.8	25.6
226	31.0	19.9	36.9

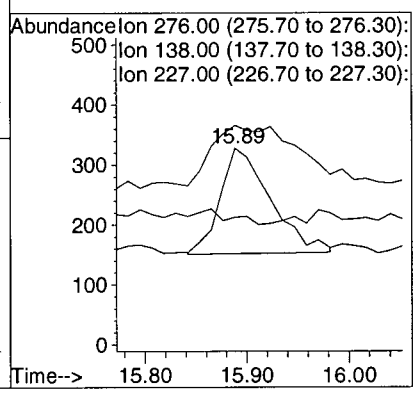


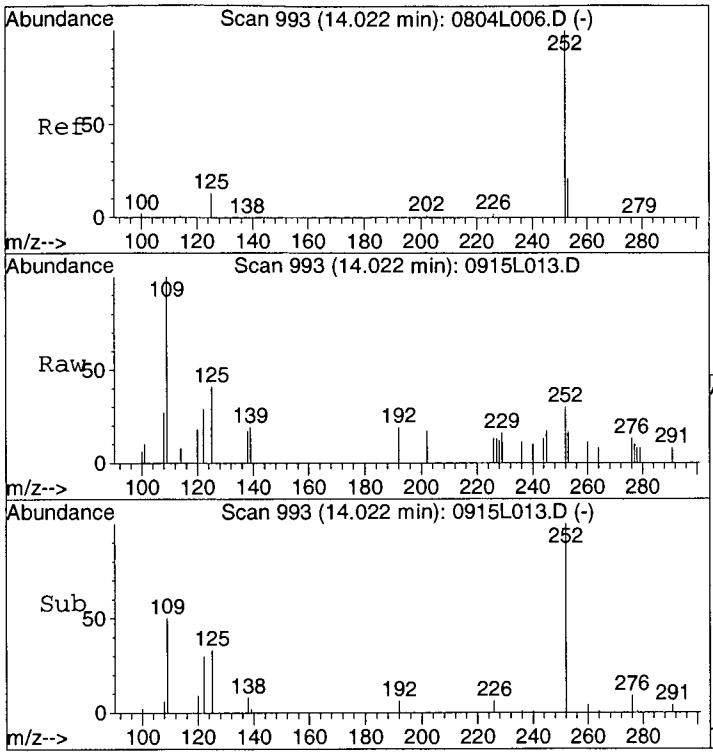


#20
Indeno (1,2,3-cd) pyrene
Concen: 10.59502 ppb
RT: 15.89 min Scan# 1153
Delta R.T. -0.01 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:276 Resp: 607

Ion	Ratio	Lower	Upper
276	100		
138	57.5	22.8	42.4#
227	0.0	0.2	0.4#

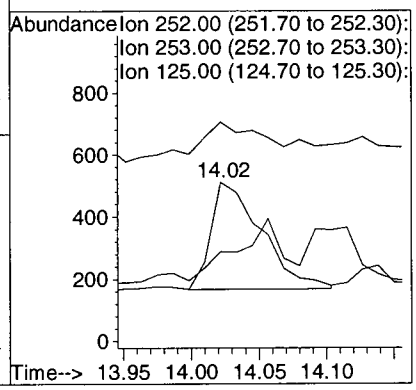


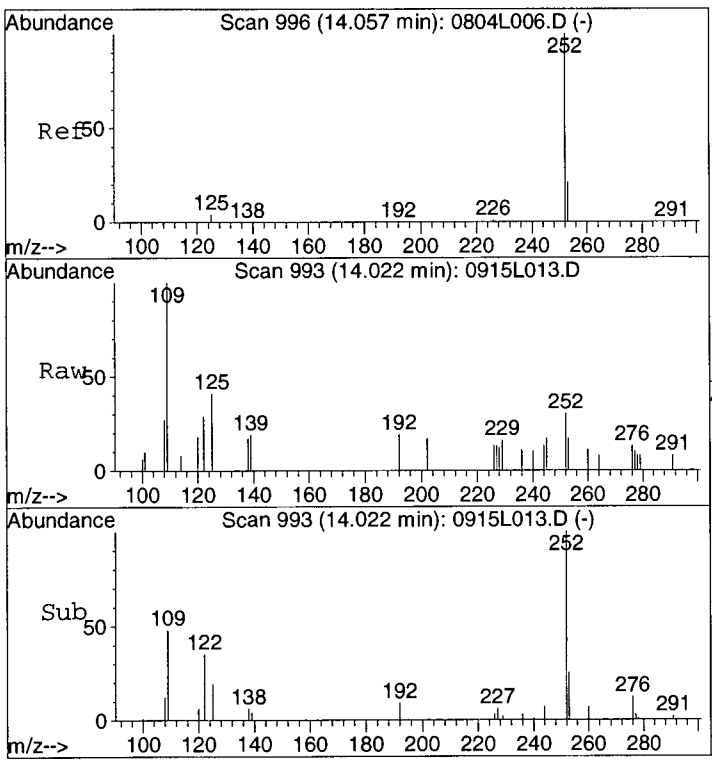


#22
Benzo (b) fluoranthene
Concen: 15.99754 ppb
RT: 14.02 min Scan# 993
Delta R.T. 0.00 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:252 Resp: 898

Ion	Ratio	Lower	Upper
252	100		
253	27.0	14.9	27.7
125	29.9	12.3	22.8#

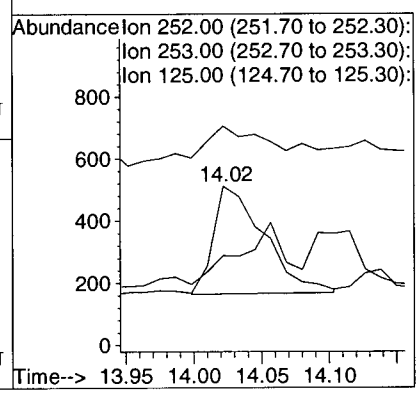


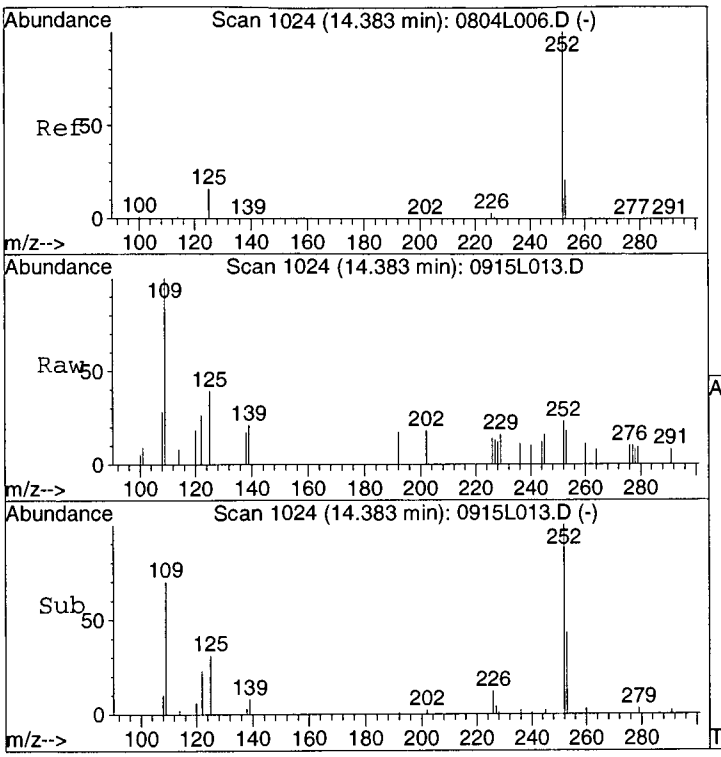


#23
Benzo (k) fluoranthene
Concen: 16.31538 ppb
RT: 14.02 min Scan# 993
Delta R.T. -0.04 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:252 Resp: 907

Ion	Ratio	Lower	Upper
252	100		
253	27.0	14.7	27.3
125	29.9	9.2	17.0#

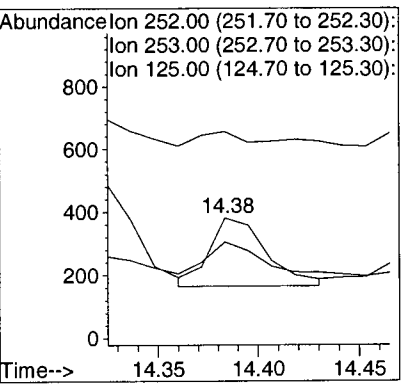


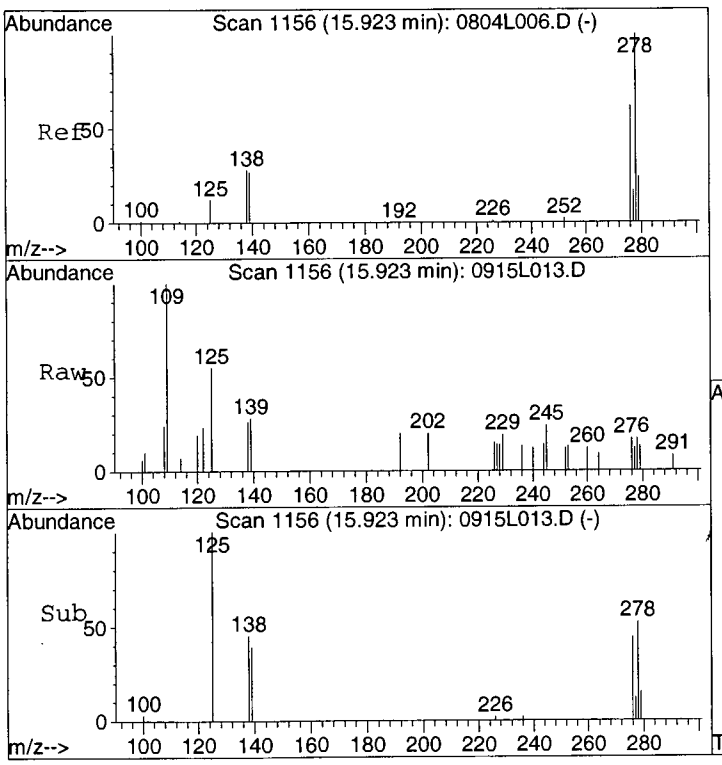


#24
Benzo (a) pyrene
Concen: 8.29258 ppb
RT: 14.38 min Scan# 1024
Delta R.T. -0.01 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:252 Resp: 426

Ion	Ratio	Lower	Upper
252	100		
253	51.5	15.4	28.6#
125	23.7	9.5	17.6#

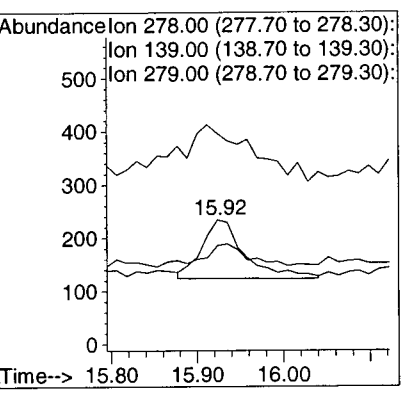


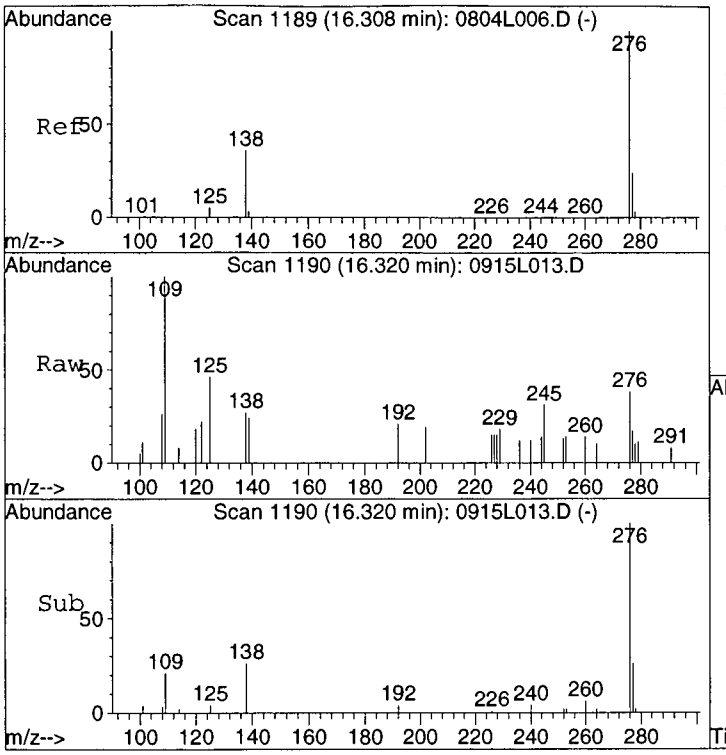


#25
Dibenz (a,h) anthracene
Concen: 8.83957 ppb
RT: 15.92 min Scan# 1156
Delta R.T. -0.01 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:278 Resp: 391

Ion	Ratio	Lower	Upper
278	100		
139	68.2	17.9	33.2#
279	34.6	16.5	30.6#

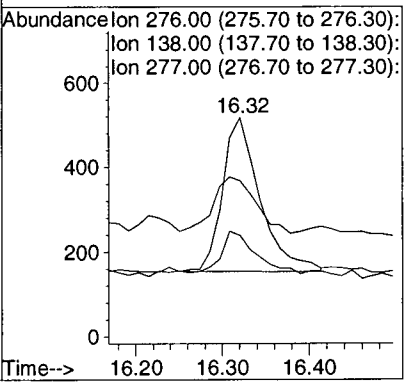




#26
Benzo (g,h,i) perylene
Concen: 23.10056 ppb
RT: 16.32 min Scan# 1190
Delta R.T. 0.00 min
Lab File: 0915L013.D
Acq: 16 Sep 14 2:31

Tgt Ion:276 Resp: 1086

Ion	Ratio	Lower	Upper
276	100		
138	32.8	24.4	45.4
277	23.4	17.1	31.7



EPA 8270C SIM IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN003

APPL ID: AZ02101

Sample Collection Date: 9/2/14

QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 11.5 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0016 J	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.0060	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.0094	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.015	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.020	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.016	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.0087	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.010	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.0060	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.0043 J	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.010	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	102	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	90.2	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	163 #	30-125			%	9/10/14	9/16/14

J = Estimated value.
= Recovery (or RPD) is outside QC limits.

Quant Method: SIM.M
Run #: 0915L014
Instrument: Linus
Sequence: L140821
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L014.D Vial: 14
Acq On : 16 Sep 14 2:57 Operator: LF
Sample : AZ02101S11 1/33.96G Inst : Linus
Misc : Multiplr: 29.45

Quant Time: Sep 18 22:43 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	2082	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	932	2.50000 ppb		-0.01
11) Phenanthrene-D10(IS)	9.77	188	1526	2.50000 ppb		-0.01
15) Chrysene-D12(IS)	12.85	240	2693	2.50000 ppb		-0.01
21) Perylene-D12(IS)	14.45	264	1394	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	942	53.14244 ppb		0.00
Spiked Amount 58.893			Recovery = 90.235%			
7) Surrogate Recovery (FBP)	7.29	172	1922	60.25108 ppb		-0.01
Spiked Amount 58.893			Recovery = 102.306%			
17) Surrogate Recovery (TPH)	11.65	244	4032	96.20086 ppb		-0.01
Spiked Amount 58.893			Recovery = 163.349%			
Target Compounds						Qvalue
3) Naphthalene	6.07	128	48	1.00181 ppb		96
12) Phenanthrene	9.81	178	158	3.77223 ppb	#	80
13) Anthracene	9.87	178	56	1.42703 ppb	#	84
14) Fluoranthene	11.19	202	662	9.13916 ppb	#	84
16) Pyrene	11.44	202	686	8.92086 ppb	#	87
18) Benz (a) anthracene	12.84	228	328	5.27130 ppb		91
19) Chrysene	12.88	228	464	7.69277 ppb	#	89
20) Indeno (1,2,3-cd) pyrene	15.89	276	276	5.29137 ppb	#	1
22) Benzo (b) fluoranthene	14.02	252	677	13.49478 ppb	#	81
23) Benzo (k) fluoranthene	14.02	252	682	13.72696 ppb	#	77
24) Benzo (a) pyrene	14.38	252	382	8.32038 ppb	#	33
26) Benzo (g,h,i) perylene	16.32	276	753	17.92206 ppb		96

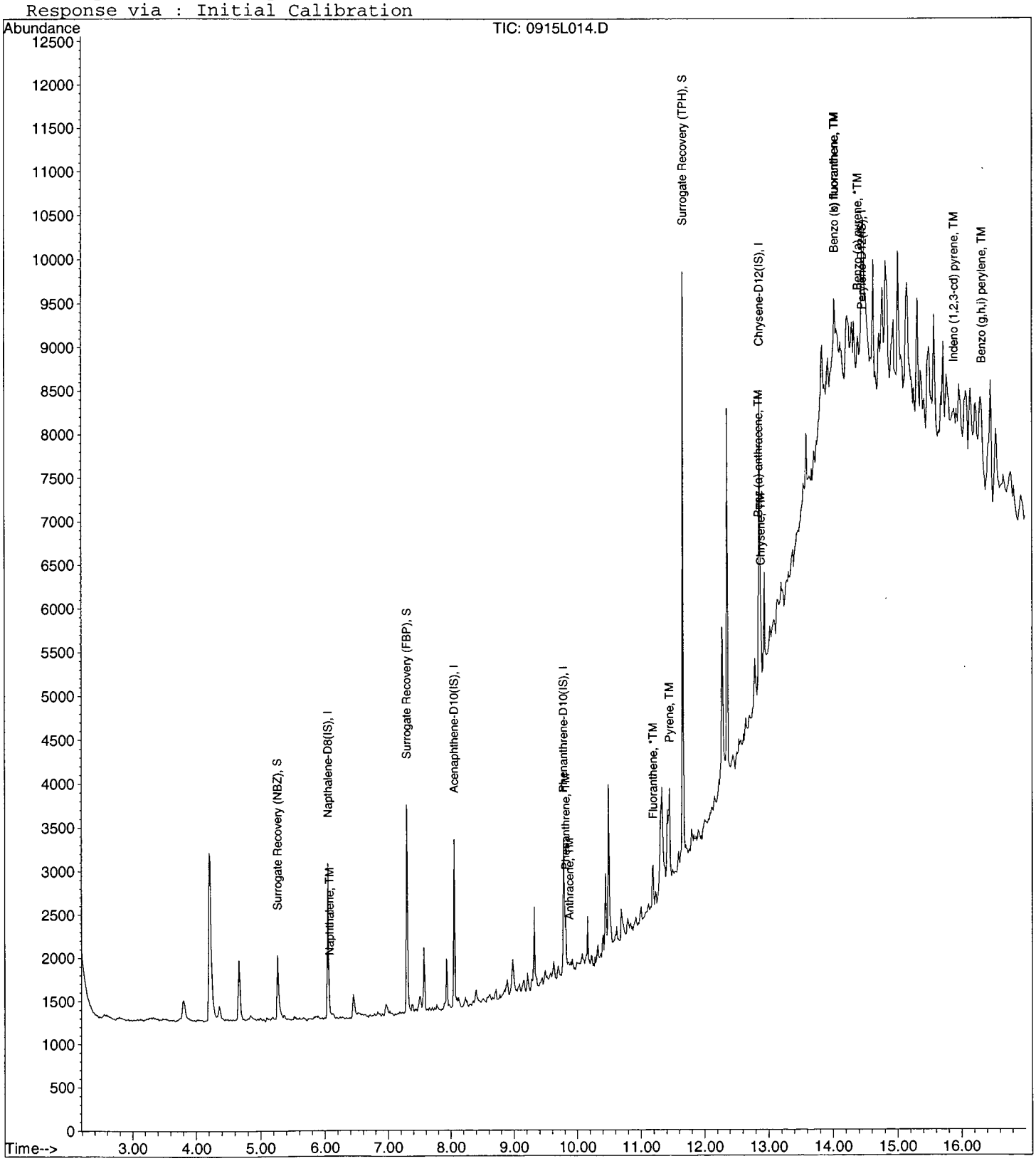
(#) = qualifier out of range (m) = manual integration

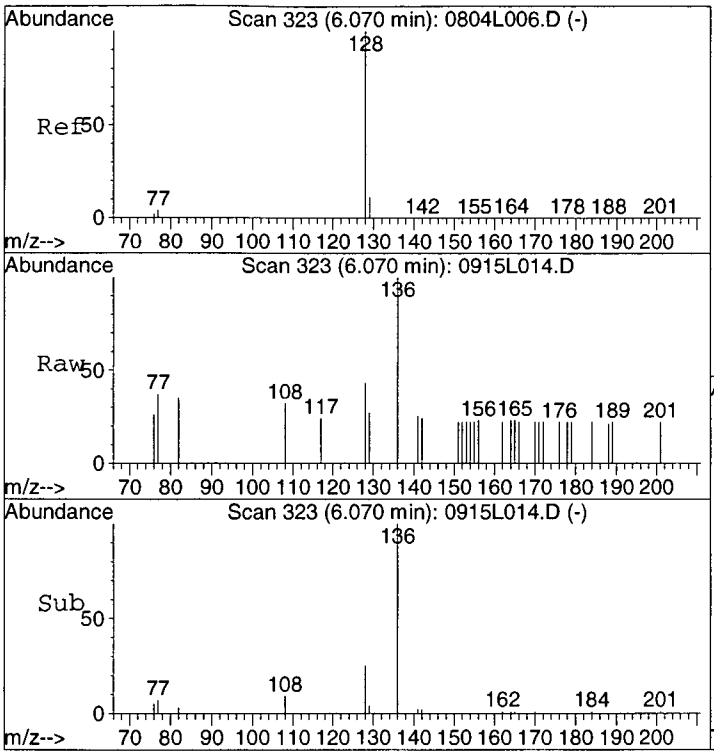
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L014.D Vial: 14
Acq On : 16 Sep 14 2:57 Operator: LF
Sample : AZ02101S11 1/33.96G Inst : Linus
Misc : Multiplr: 29.45

Quant Time: Sep 18 22:43 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

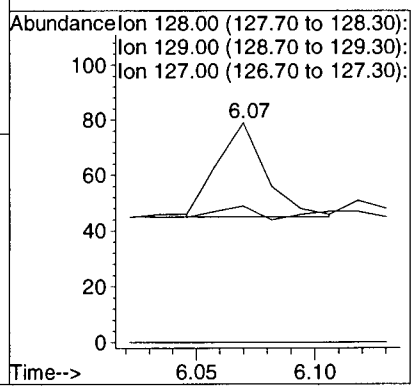


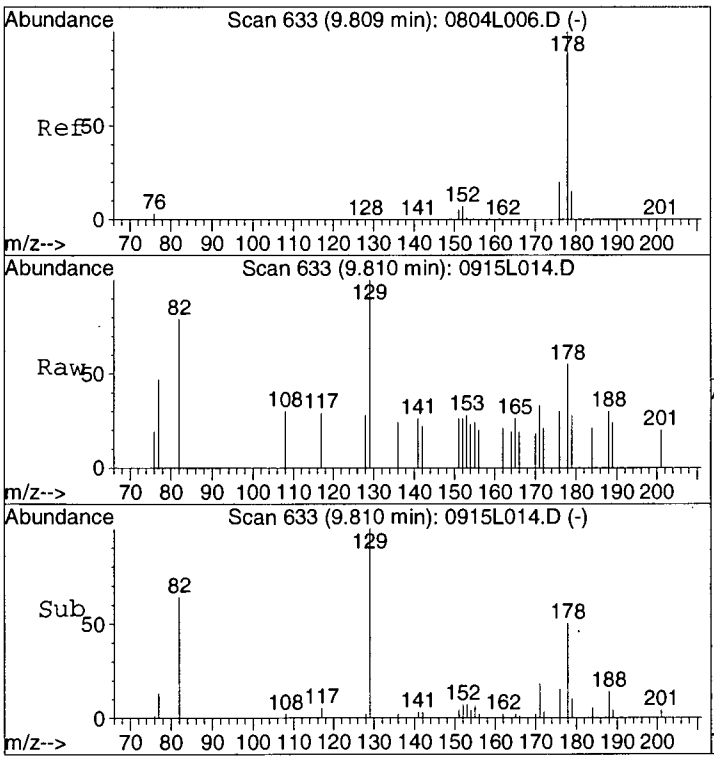


#3
Naphthalene
Concen: 1.00181 ppb
RT: 6.07 min Scan# 323
Delta R.T. 0.00 min
Lab File: 0915L014.D
Acq: 16 Sep 14 2:57

Tgt Ion:128 Resp: 48

Ion	Ratio	Lower	Upper
128	100		
129	12.1	7.5	13.9
127	0.0	0.0	0.0

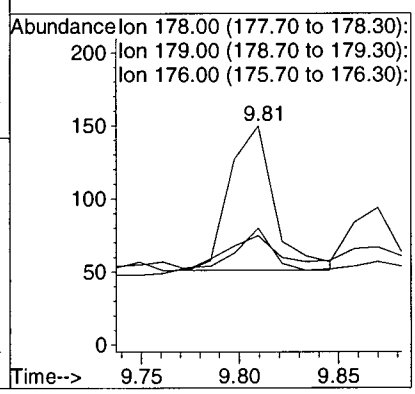


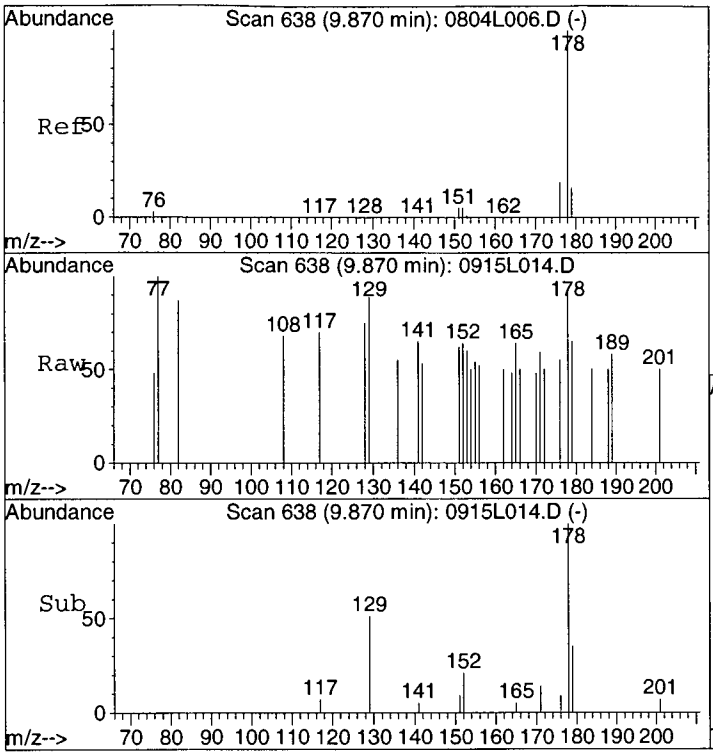


#12
Phenanthrene
Concen: 3.77223 ppb
RT: 9.81 min Scan# 633
Delta R.T. 0.00 min
Lab File: 0915L014.D
Acq: 16 Sep 14 2:57

Tgt Ion:178 Resp: 158

Ion	Ratio	Lower	Upper
178	100		
179	23.2	10.4	19.4#
176	28.3	13.4	24.8#

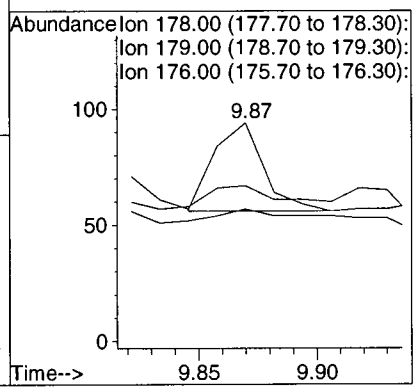


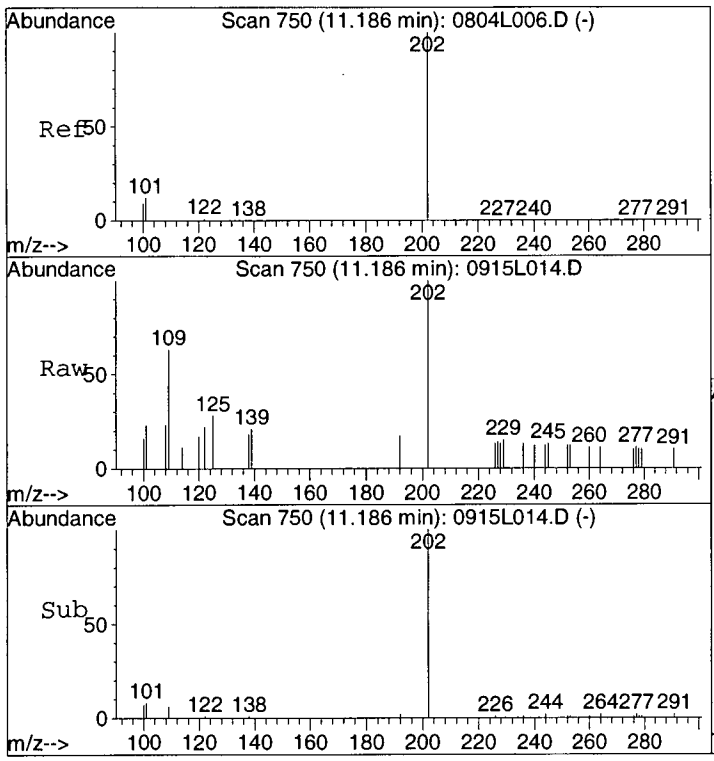


#13
Anthracene
Concen: 1.42703 ppb
RT: 9.87 min Scan# 638
Delta R.T. 0.00 min
Lab File: 0915L014.D
Acq: 16 Sep 14 2:57

Tgt Ion:178 Resp: 56

Ion	Ratio	Lower	Upper
178	100		
179	23.7	10.4	19.2#
176	13.2	13.0	24.1

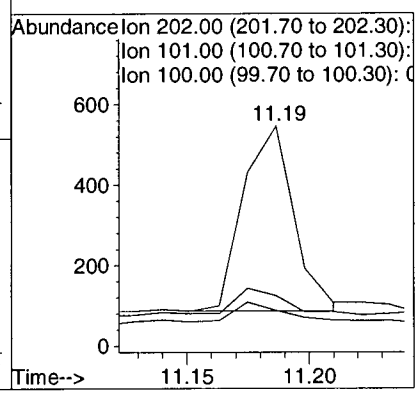


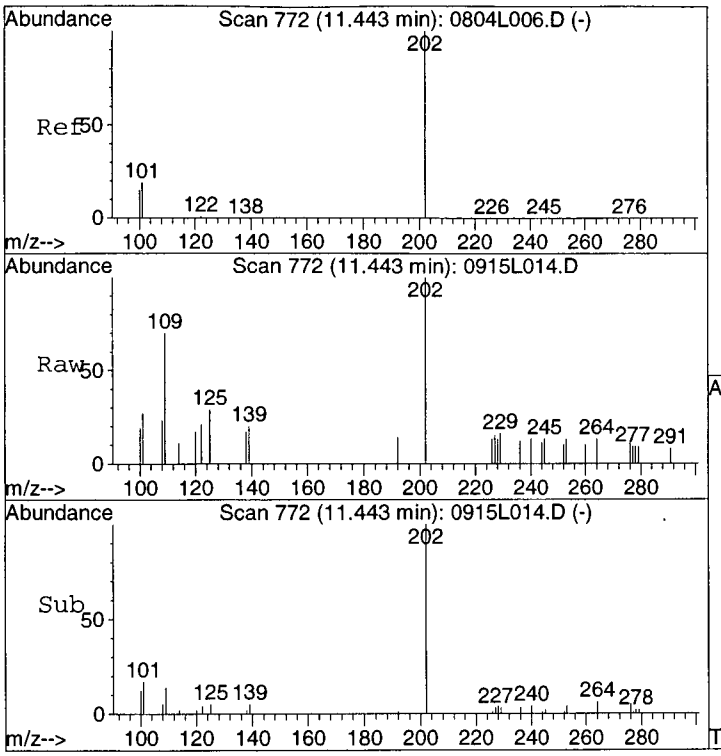


#14
Fluoranthene
Concen: 9.13916 ppb
RT: 11.19 min Scan# 750
Delta R.T. -0.00 min
Lab File: 0915L014.D
Acq: 16 Sep 14 2:57

Tgt Ion:202 Resp: 662

Ion	Ratio	Lower	Upper
202	100		
101	9.8	12.0	22.2#
100	6.1	8.2	15.2#

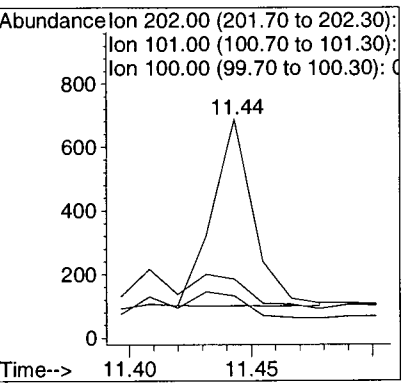


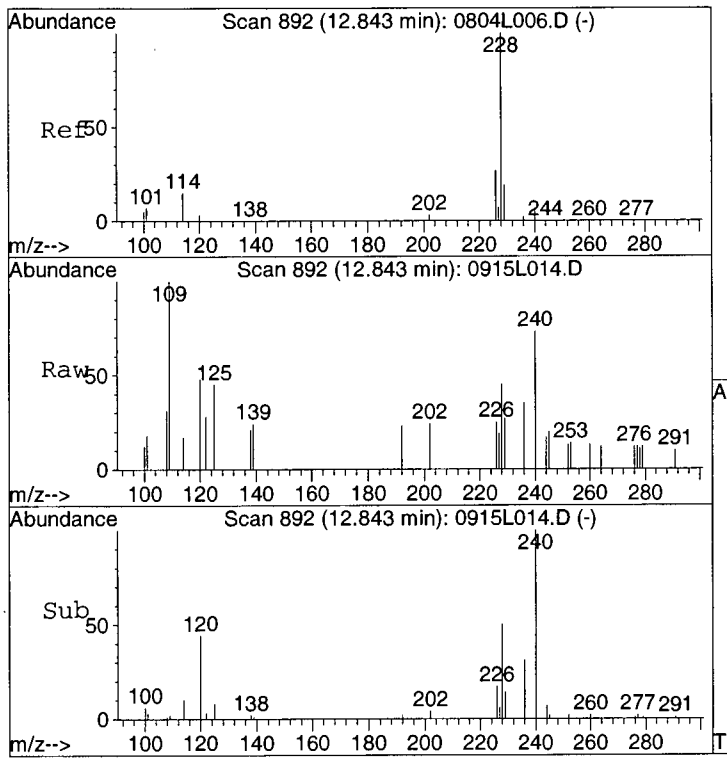


#16
Pyrene
Concen: 8.92086 ppb
RT: 11.44 min Scan# 772
Delta R.T. -0.01 min
Lab File: 0915L014.D
Acq: 16 Sep 14 2:57

Tgt Ion:202 Resp: 686

Ion	Ratio	Lower	Upper
202	100		
101	15.8	7.4	13.8#
100	12.1	5.8	10.8#

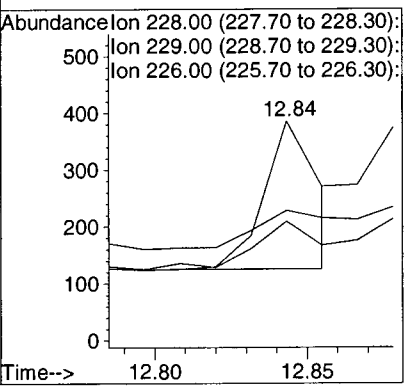


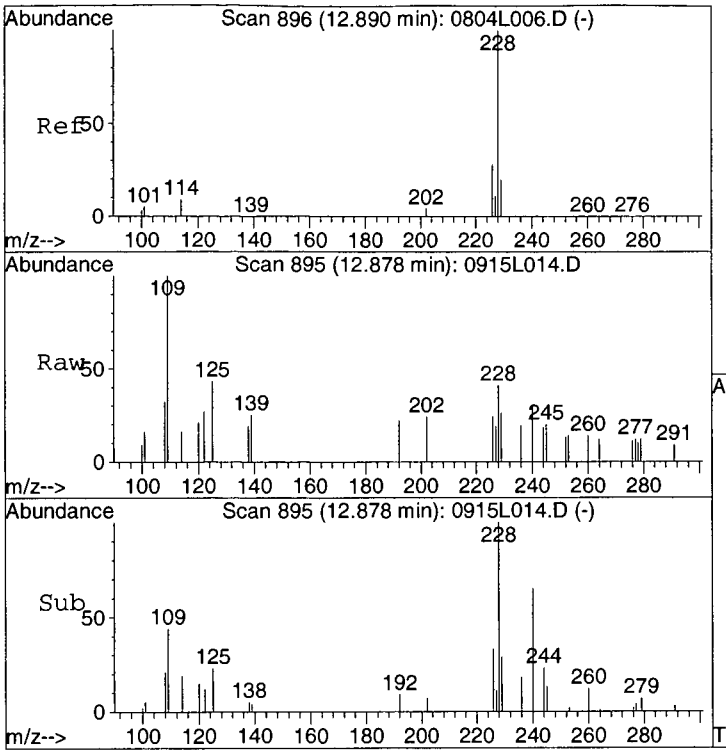


#18
Benz (a) anthracene
Concen: 5.27130 ppb
RT: 12.84 min Scan# 892
Delta R.T. -0.01 min
Lab File: 0915L014.D
Acq: 16 Sep 14 2:57

Tgt Ion:228 Resp: 328

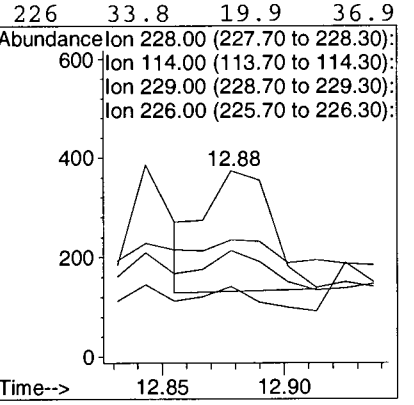
Ion	Ratio	Lower	Upper
228	100		
229	25.4	14.1	26.1
226	28.5	17.5	32.5

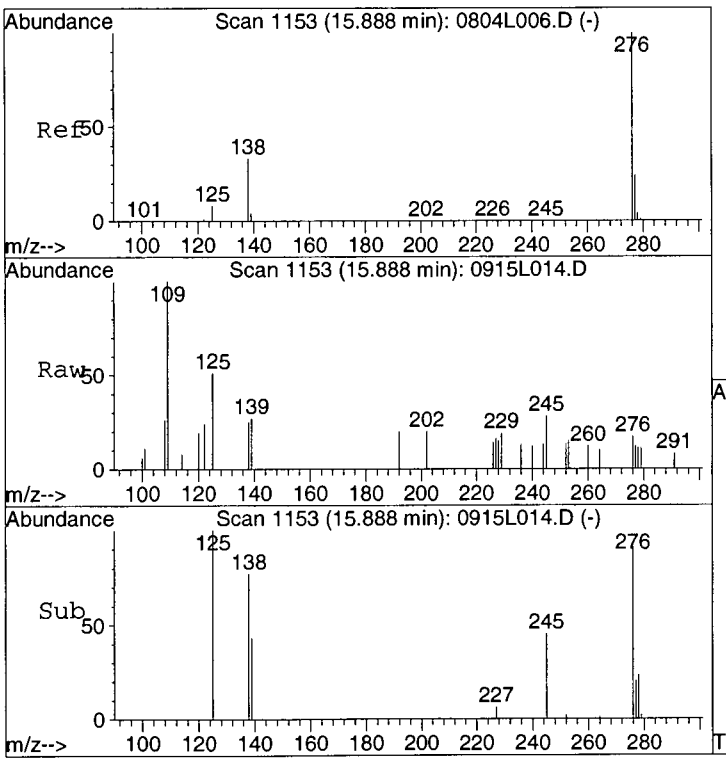




#19
Chrysene
Concen: 7.69277 ppb
RT: 12.88 min Scan# 895
Delta R.T. -0.01 min
Lab File: 0915L014.D
Acq: 16 Sep 14 2:57

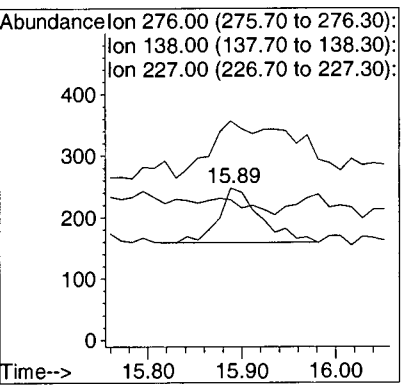
Tgt Ion:228	Resp:	464	
Ion	Ratio	Lower	Upper
228	100		
114	21.4	8.4	15.6#
229	17.1	13.8	25.6
226	33.8	19.9	36.9

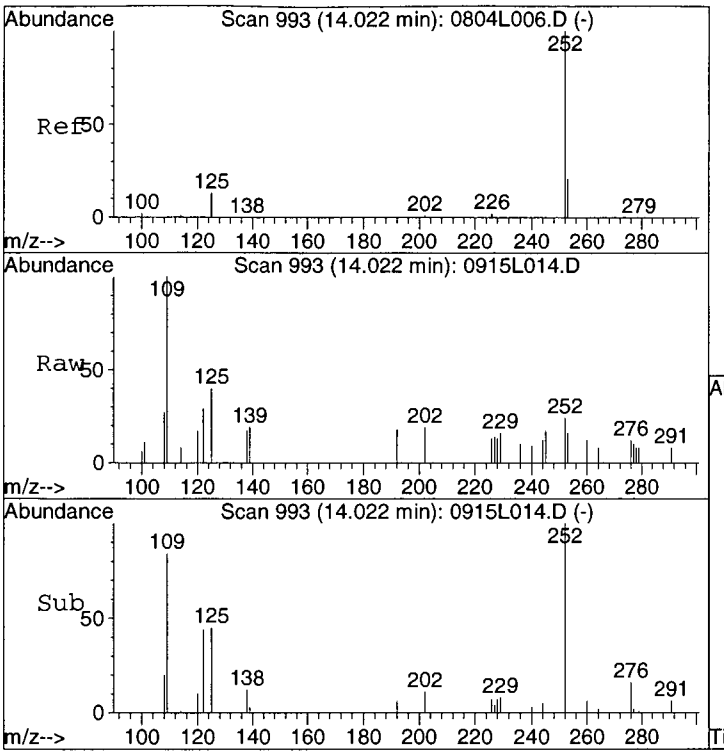




#20
Indeno (1,2,3-cd) pyrene
Concen: 5.29137 ppb
RT: 15.89 min Scan# 1153
Delta R.T. -0.01 min
Lab File: 0915L014.D
Acq: 16 Sep 14 2:57

Tgt Ion:276	Resp:	276	
Ion	Ratio	Lower	Upper
276	100		
138	104.5	22.8	42.4#
227	0.0	0.2	0.4#

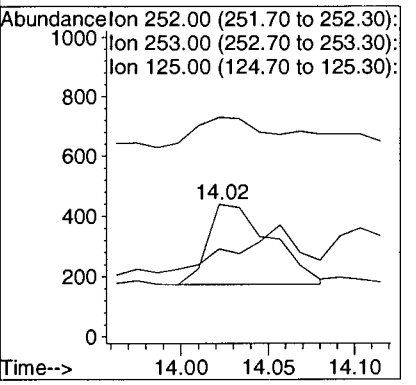


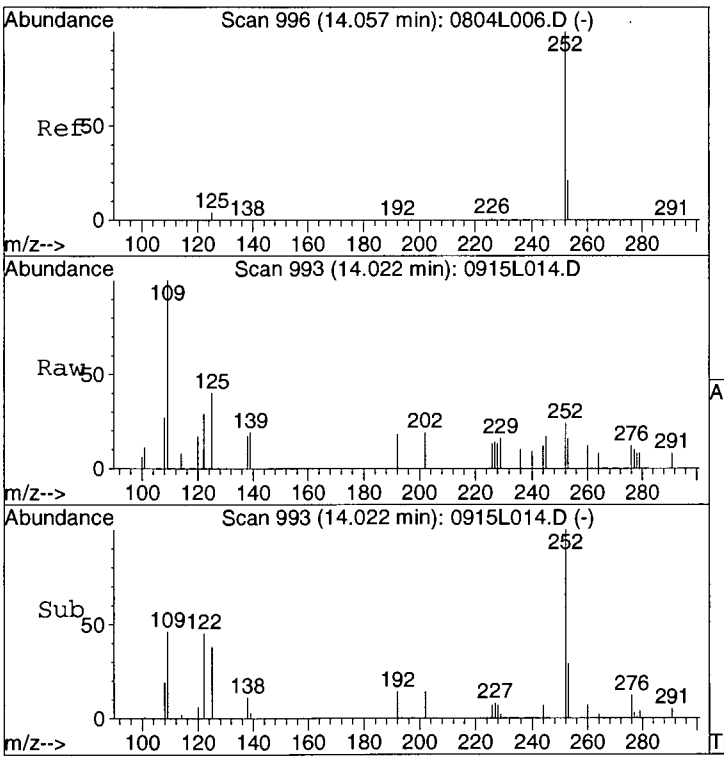


#22
Benzo (b) fluoranthene
Concen: 13.49478 ppb
RT: 14.02 min Scan# 993
Delta R.T. 0.00 min
Lab File: 0915L014.D
Acq: 16 Sep 14 2:57

Tgt Ion:252 Resp: 677

Ion	Ratio	Lower	Upper
252	100		
253	24.8	14.9	27.7
125	32.0	12.3	22.8#

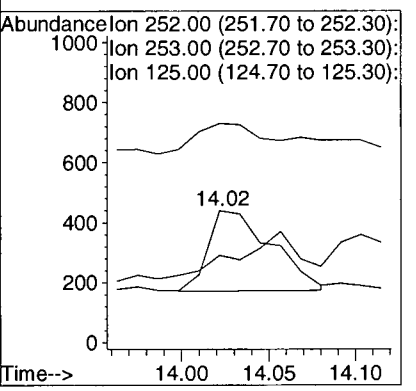


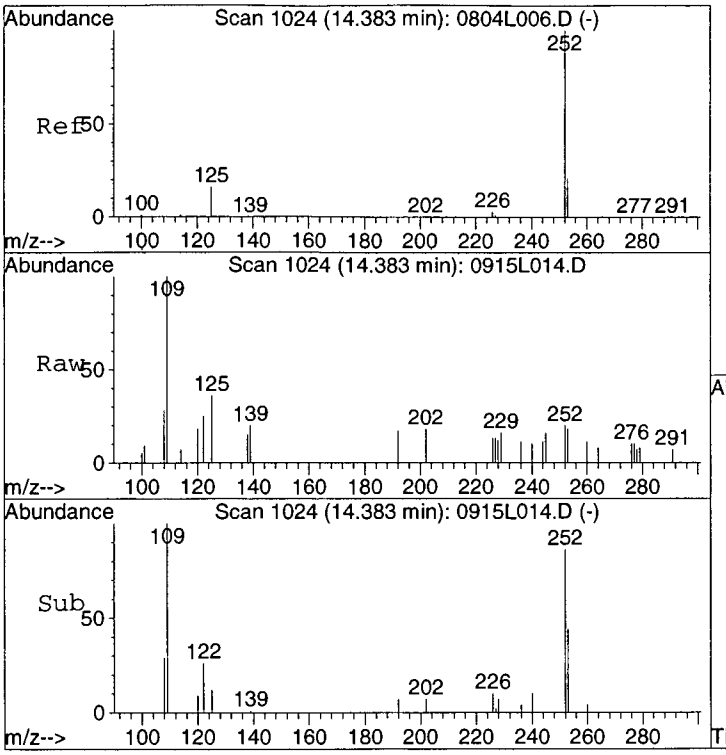


#23
Benzo (k) fluoranthene
Concen: 13.72696 ppb
RT: 14.02 min Scan# 993
Delta R.T. -0.04 min
Lab File: 0915L014.D
Acq: 16 Sep 14 2:57

Tgt Ion:252 Resp: 682

Ion	Ratio	Lower	Upper
252	100		
253	24.8	14.7	27.3
125	32.0	9.2	17.0#

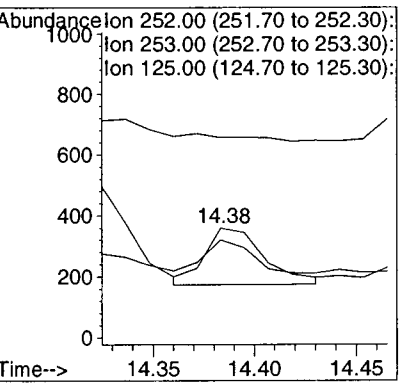


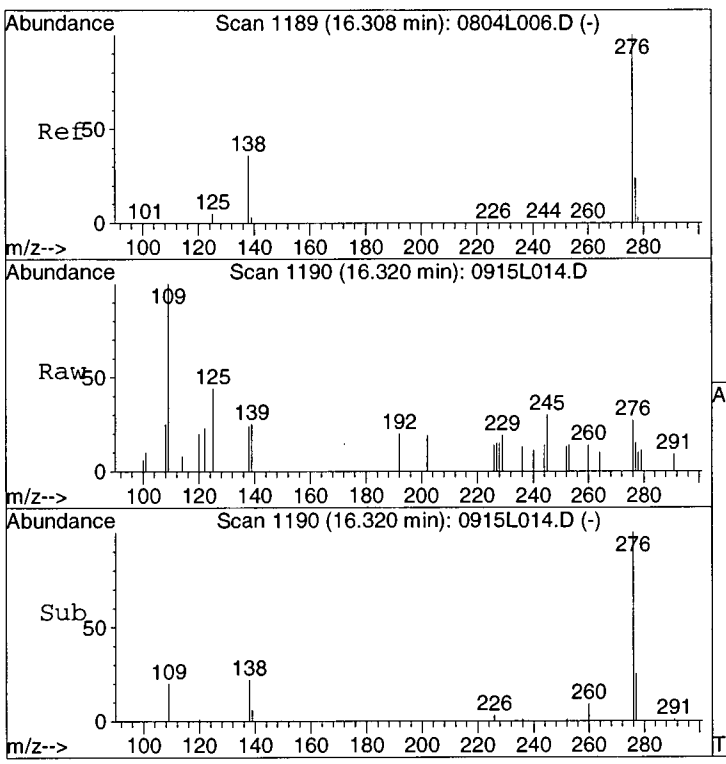


#24
Benzo (a) pyrene
Concen: 8.32038 ppb
RT: 14.38 min Scan# 1024
Delta R.T. -0.01 min
Lab File: 0915L014.D
Acq: 16 Sep 14 2:57

Tgt Ion:252 Resp: 382

Ion	Ratio	Lower	Upper
252	100		
253	68.1	15.4	28.6#
125	5.5	9.5	17.6#

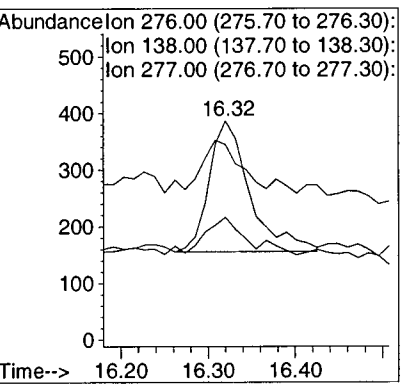




#26
Benzo (g,h,i) perylene
Concen: 17.92206 ppb
RT: 16.32 min Scan# 1190
Delta R.T. -0.00 min
Lab File: 0915L014.D
Acq: 16 Sep 14 2:57

Tgt Ion:276 Resp: 753

Ion	Ratio	Lower	Upper
276	100		
138	31.2	24.4	45.4
277	24.7	17.1	31.7



EPA 8270C SIM IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN004
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02102
QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 11.0 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0065	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0047 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.00099 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0014 J	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.0052	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.0068	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.017	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.015	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.018	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.0070	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.010	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.0062	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.0090	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	87.0	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	83.0	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	118	30-125			%	9/10/14	9/16/14

J = Estimated value.

Quant Method: SIM.M
Run #: 0915L015
Instrument: Linus
Sequence: L140821
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L015.D Vial: 15
Acq On : 16 Sep 14 3:23 Operator: LF
Sample : AZ02102S11 1/33.73G Inst : Linus
Misc : Multiplr: 29.65

Quant Time: Sep 18 22:43 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	2138	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	921	2.50000	ppb		-0.01
11) Phenanthrene-D10(IS)	9.77	188	1319	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	12.85	240	2641	2.50000	ppb		-0.01
21) Perylene-D12(IS)	14.45	264	1115	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.26	82	890	49.22718	ppb		0.00
Spiked Amount 59.294			Recovery = 83.021%				
7) Surrogate Recovery (FBP)	7.29	172	1616	51.61316	ppb		-0.01
Spiked Amount 59.294			Recovery = 87.045%				
17) Surrogate Recovery (TPH)	11.65	244	2863	70.12923	ppb		-0.01
Spiked Amount 59.294			Recovery = 118.273%				
Target Compounds							Qvalue
3) Naphthalene	6.07	128	104	2.12815	ppb		92
4) 2-Methylnaphthalene	6.85	142	113	4.18073	ppb		99
5) 1-Methylnaphthalene	6.97	142	155	5.76088	ppb		92
8) Acenaphthylene	7.89	152	38	0.88016	ppb	#	58
12) Phenanthrene	9.81	178	199	5.53420	ppb		97
13) Anthracene	9.87	178	43	1.27637	ppb	#	28
14) Fluoranthene	11.19	202	551	8.86056	ppb	#	81
16) Pyrene	11.44	202	601	8.02373	ppb	#	69
18) Benz (a) anthracene	12.84	228	282	4.65278	ppb		89
19) Chrysene	12.88	228	368	6.26371	ppb		90
22) Benzo (b) fluoranthene	14.03	252	594	14.90400	ppb	#	18
23) Benzo (k) fluoranthene	14.03	252	631	15.98669	ppb	#	14
24) Benzo (a) pyrene	14.40	252	221	6.05915	ppb	#	1
26) Benzo (g,h,i) perylene	16.32	276	448	13.42178	ppb	#	82

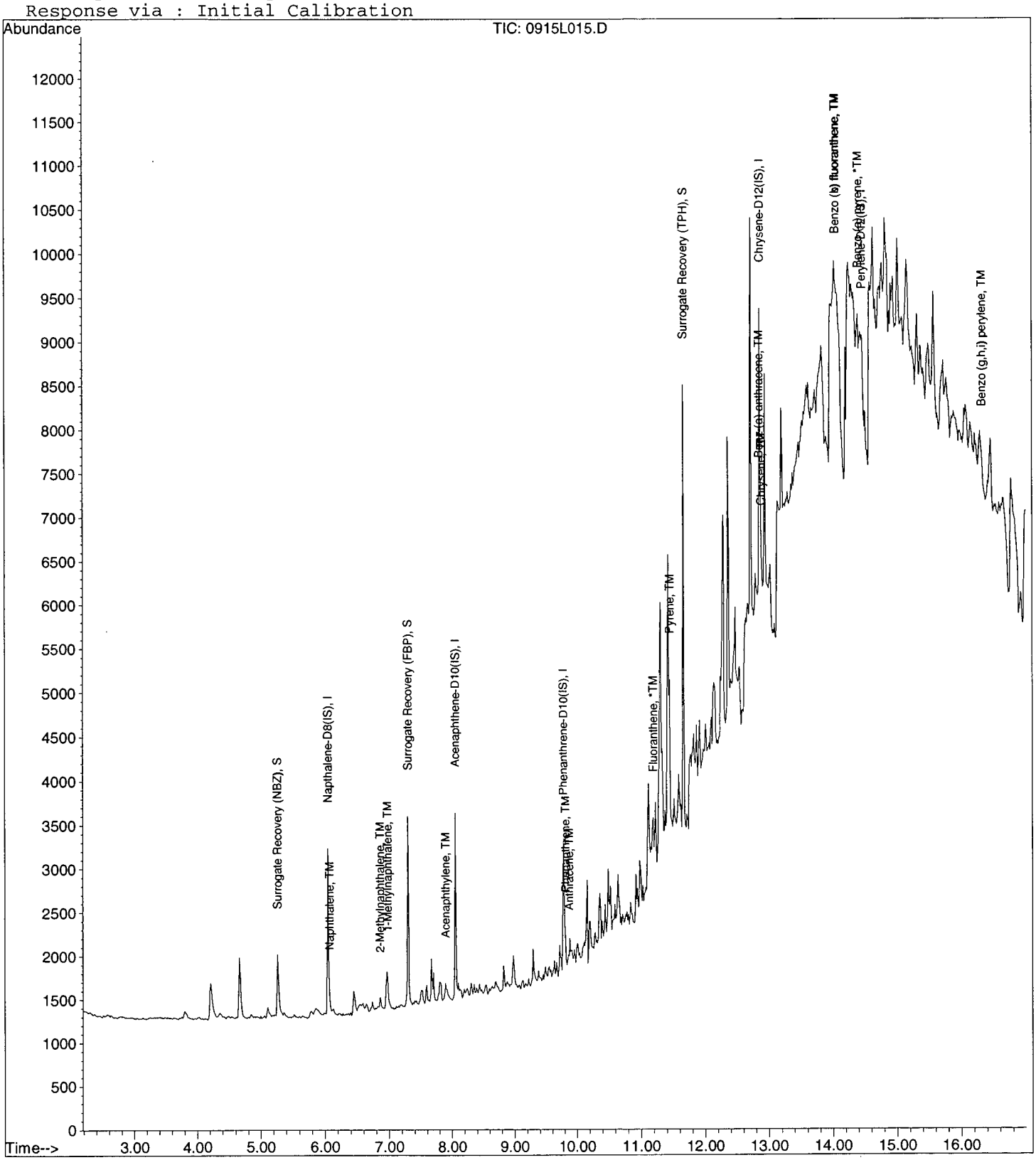
(#) = qualifier out of range (m) = manual integration

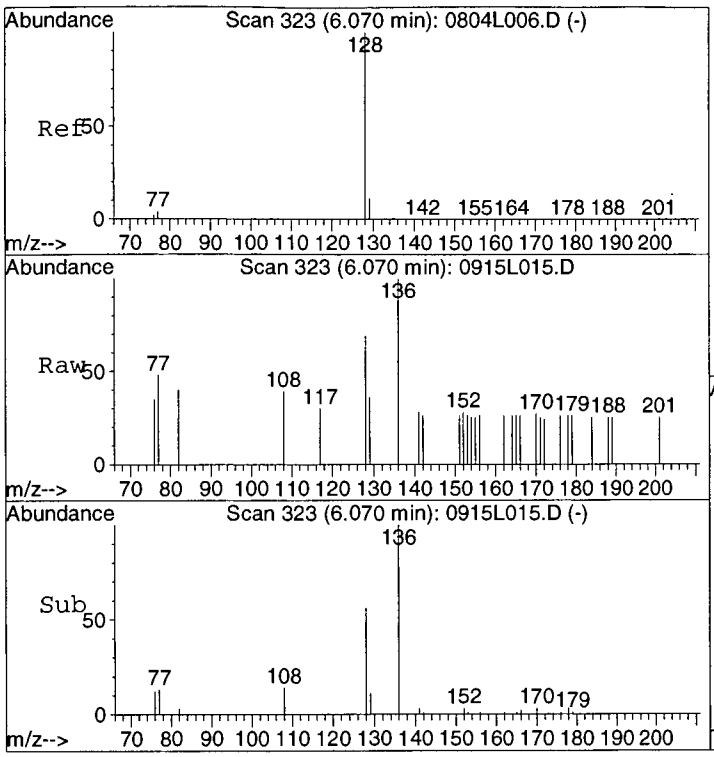
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L015.D Vial: 15
Acq On : 16 Sep 14 3:23 Operator: LF
Sample : AZ02102S11 1/33.73G Inst : Linus
Misc : Multiplr: 29.65

Quant Time: Sep 18 22:43 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

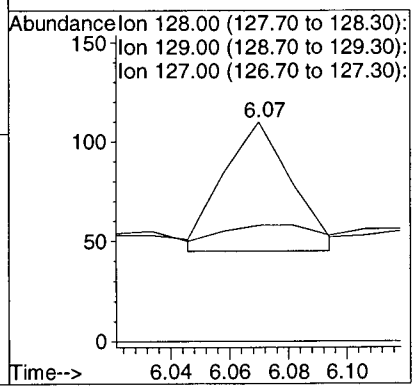


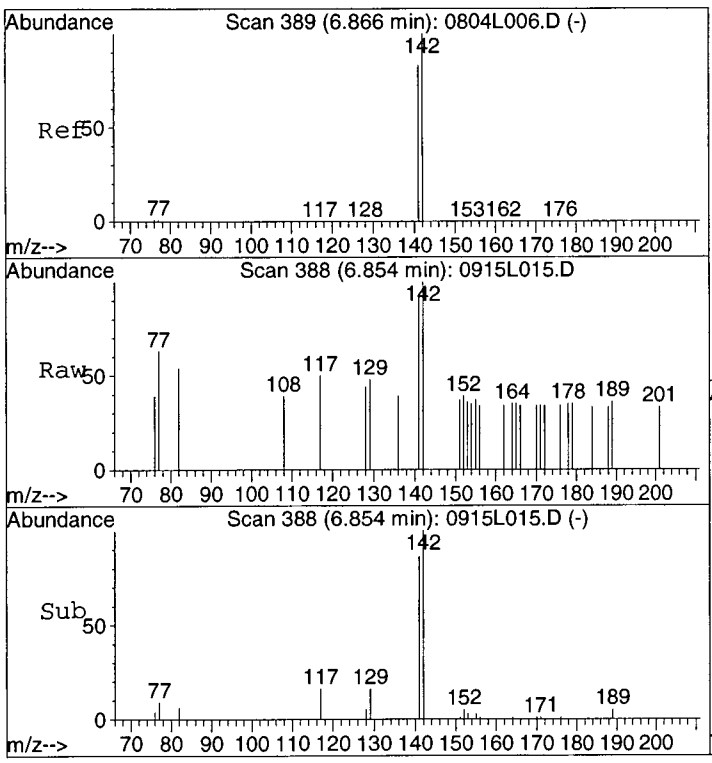


#3
Naphthalene
Concen: 2.12815 ppb
RT: 6.07 min Scan# 323
Delta R.T. 0.00 min
Lab File: 0915L015.D
Acq: 16 Sep 14 3:23

Tgt Ion:128 Resp: 104

Ion	Ratio	Lower	Upper
128	100		
129	13.6	7.5	13.9
127	0.0	0.0	0.0

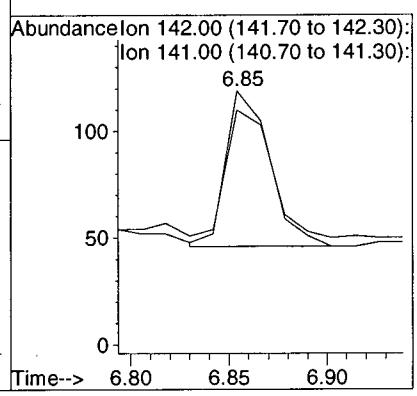


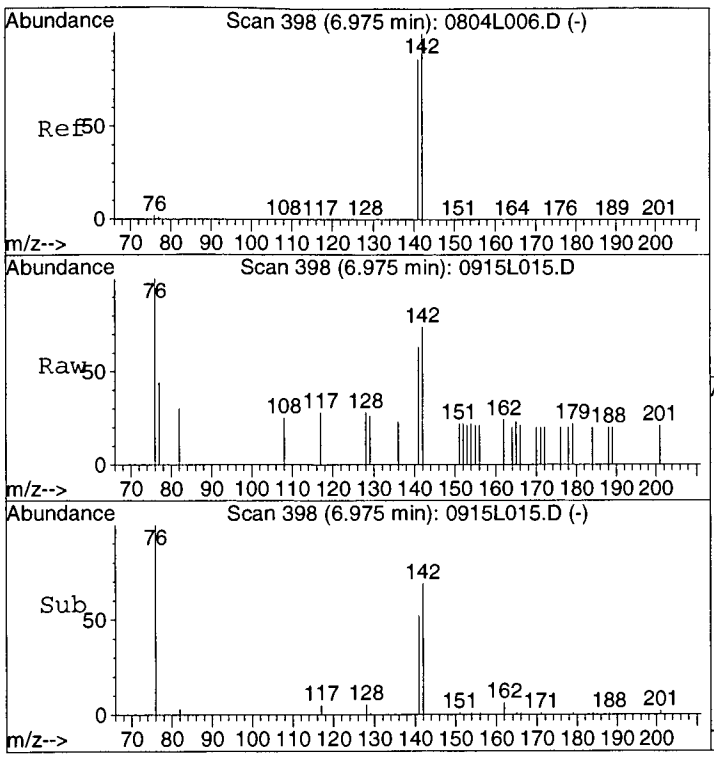


#4
2-Methylnaphthalene
Concen: 4.18073 ppb
RT: 6.85 min Scan# 388
Delta R.T. -0.01 min
Lab File: 0915L015.D
Acq: 16 Sep 14 3:23

Tgt Ion:142 Resp: 113

Ion	Ratio	Lower	Upper
142	100		
141	82.2	58.0	107.6

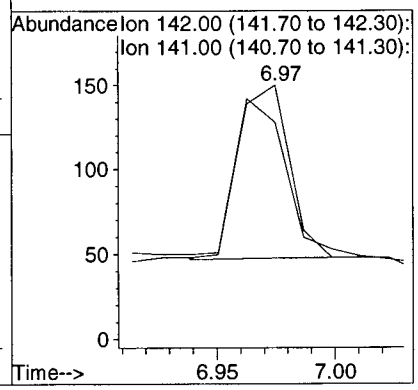


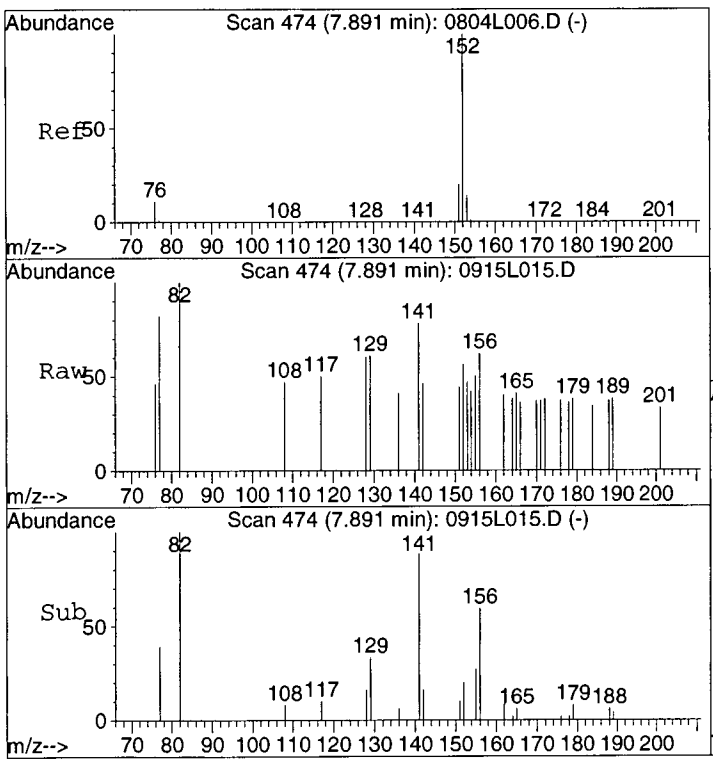


#5
1-Methylnaphthalene
Concen: 5.76088 ppb
RT: 6.97 min Scan# 398
Delta R.T. 0.00 min
Lab File: 0915L015.D
Acq: 16 Sep 14 3:23

Tgt Ion:142 Resp: 155

Ion	Ratio	Lower	Upper
142	100		
141	76.5	58.9	109.3

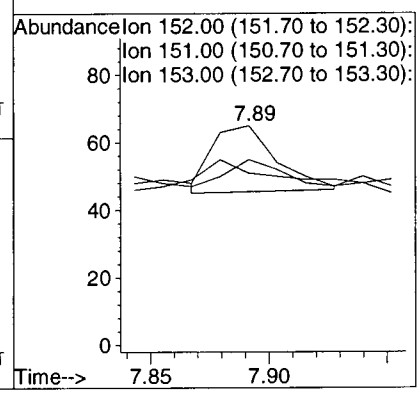


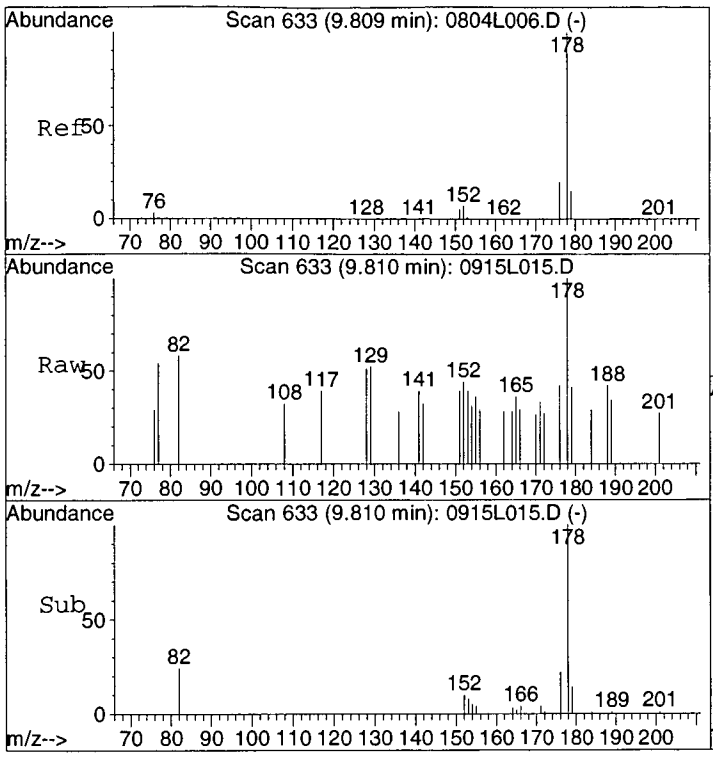


#8
Acenaphthylene
Concen: 0.88016 ppb
RT: 7.89 min Scan# 474
Delta R.T. 0.00 min
Lab File: 0915L015.D
Acq: 16 Sep 14 3:23

Tgt Ion:152 Resp: 38

Ion	Ratio	Lower	Upper
152	100		
151	11.1	13.8	25.6#
153	44.4	9.7	18.1#

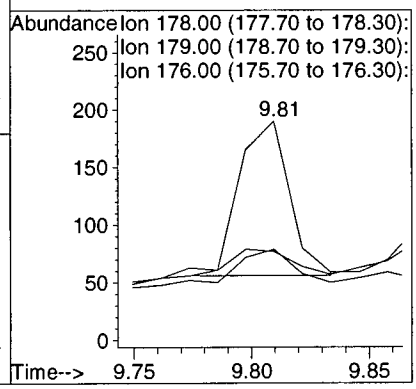


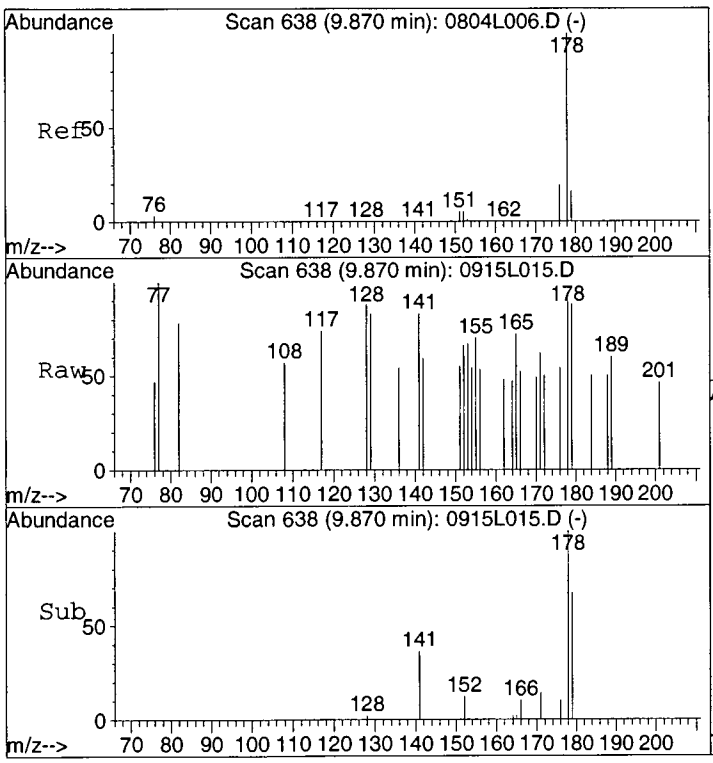


#12
Phenanthrene
Concen: 5.53420 ppb
RT: 9.81 min Scan# 633
Delta R.T. 0.00 min
Lab File: 0915L015.D
Acq: 16 Sep 14 3:23

Tgt Ion:178 Resp: 199

Ion	Ratio	Lower	Upper
178	100		
179	14.9	10.4	19.4
176	21.6	13.4	24.8

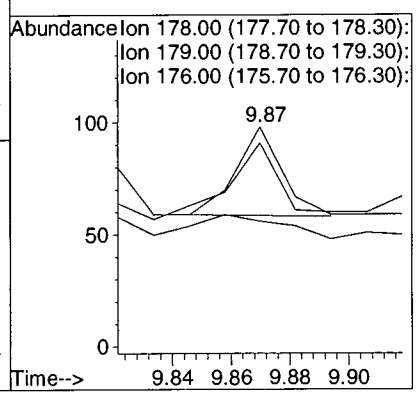


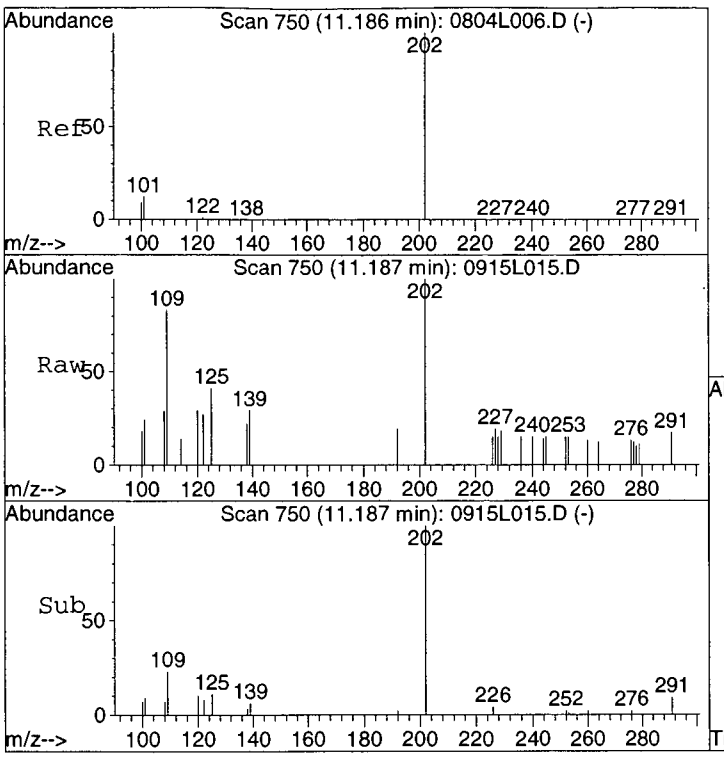


#13
Anthracene
Concen: 1.27637 ppb
RT: 9.87 min Scan# 638
Delta R.T. 0.00 min
Lab File: 0915L015.D
Acq: 16 Sep 14 3:23

Tgt Ion:178 Resp: 43

Ion	Ratio	Lower	Upper
178	100		
179	79.5	10.4	19.2#
176	20.5	13.0	24.1

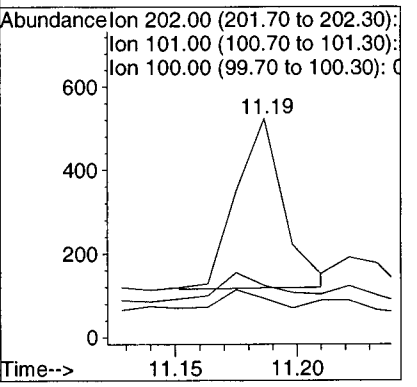


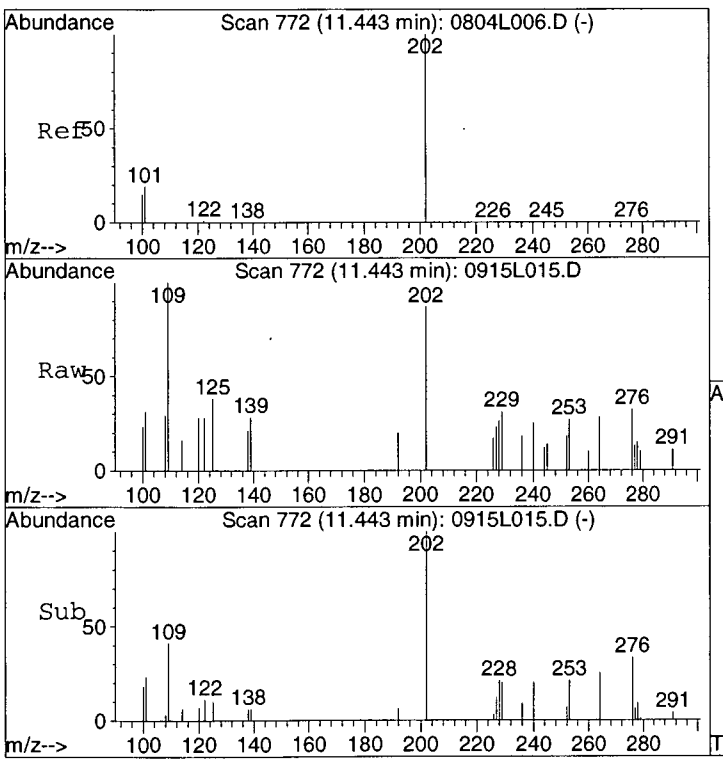


#14
Fluoranthene
Concen: 8.86056 ppb
RT: 11.19 min Scan# 750
Delta R.T. 0.00 min
Lab File: 0915L015.D
Acq: 16 Sep 14 3:23

Tgt Ion:202 Resp: 551

Ion	Ratio	Lower	Upper
202	100		
101	7.9	12.0	22.2#
100	5.7	8.2	15.2#

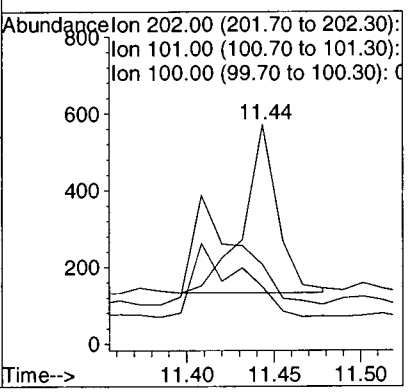


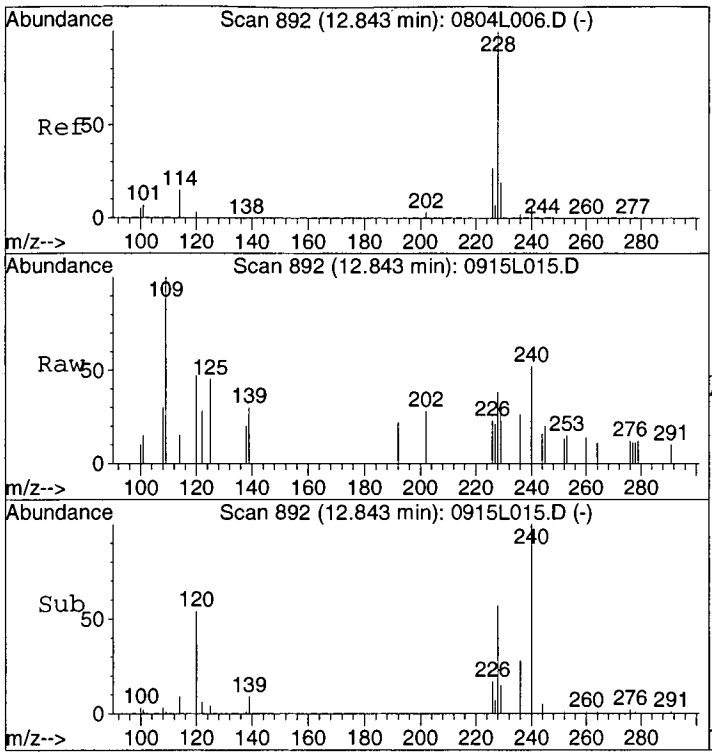


#16
Pyrene
Concen: 8.02373 ppb
RT: 11.44 min Scan# 772
Delta R.T. -0.01 min
Lab File: 0915L015.D
Acq: 16 Sep 14 3:23

Tgt Ion:202 Resp: 601

Ion	Ratio	Lower	Upper
202	100		
101	23.7	7.4	13.8#
100	17.3	5.8	10.8#

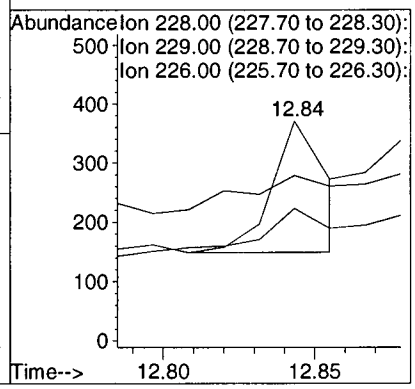


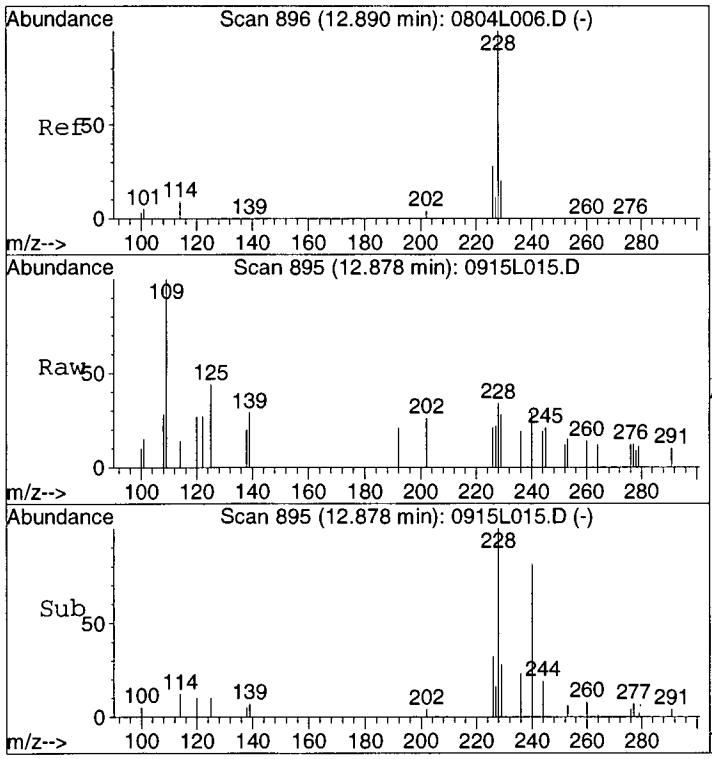


#18
Benz (a) anthracene
Concen: 4.65278 ppb
RT: 12.84 min Scan# 892
Delta R.T. -0.01 min
Lab File: 0915L015.D
Acq: 16 Sep 14 3:23

Tgt Ion:228 Resp: 282

Ion	Ratio	Lower	Upper
228	100		
229	26.1	14.1	26.1
226	29.7	17.5	32.5

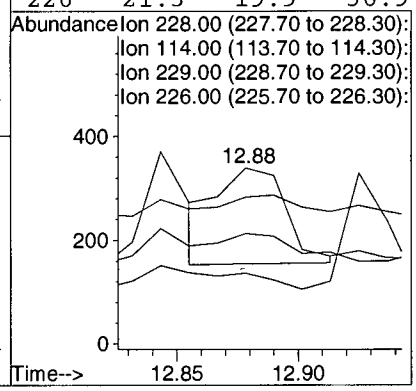


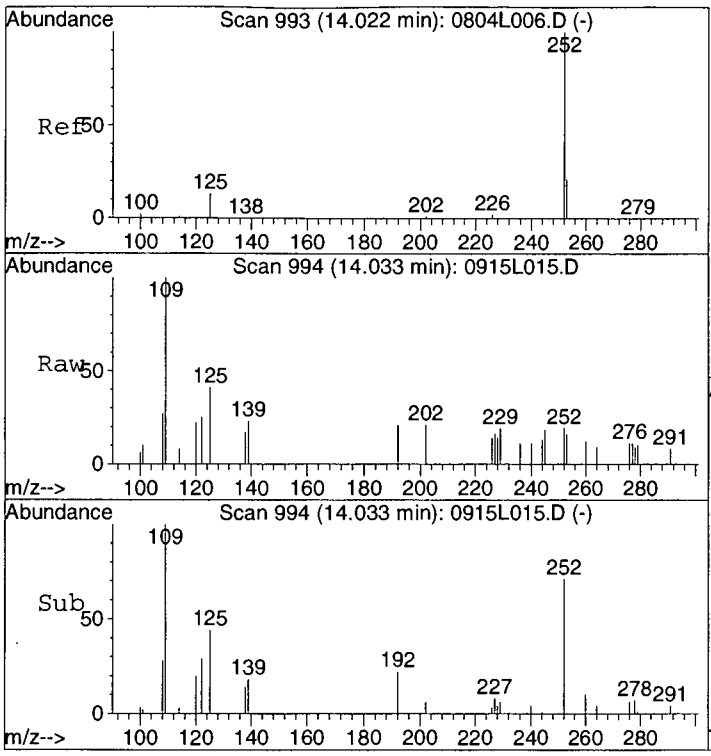


#19
Chrysene
Concen: 6.26371 ppb
RT: 12.88 min Scan# 895
Delta R.T. -0.01 min
Lab File: 0915L015.D
Acq: 16 Sep 14 3:23

Tgt Ion:228 Resp: 368

Ion	Ratio	Lower	Upper
228	100		
114	9.5	8.4	15.6
229	16.6	13.8	25.6
226	21.3	19.9	36.9

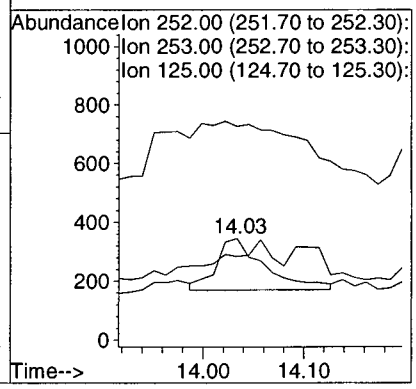


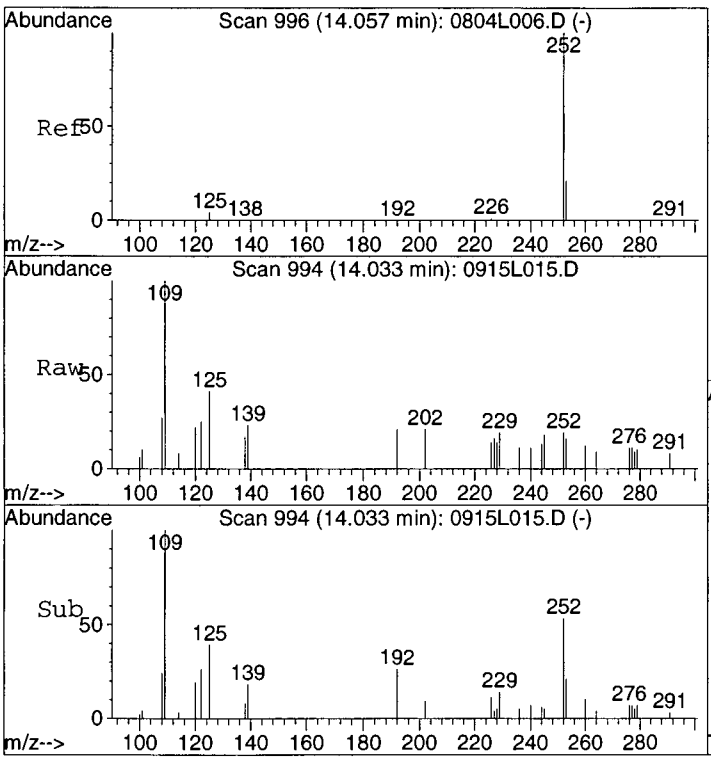


#22
Benzo (b) fluoranthene
Concen: 14.90400 ppb
RT: 14.03 min Scan# 994
Delta R.T. 0.01 min
Lab File: 0915L015.D
Acq: 16 Sep 14 3:23

Tgt Ion:252 Resp: 594

Ion	Ratio	Lower	Upper
252	100		
253	39.7	14.9	27.7#
125	76.3	12.3	22.8#

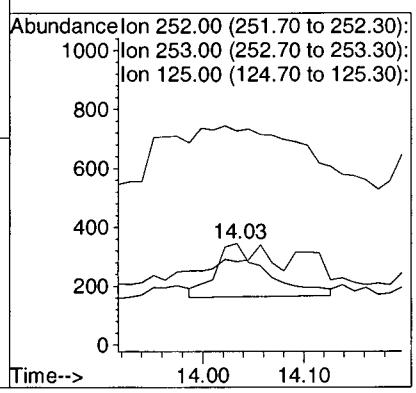


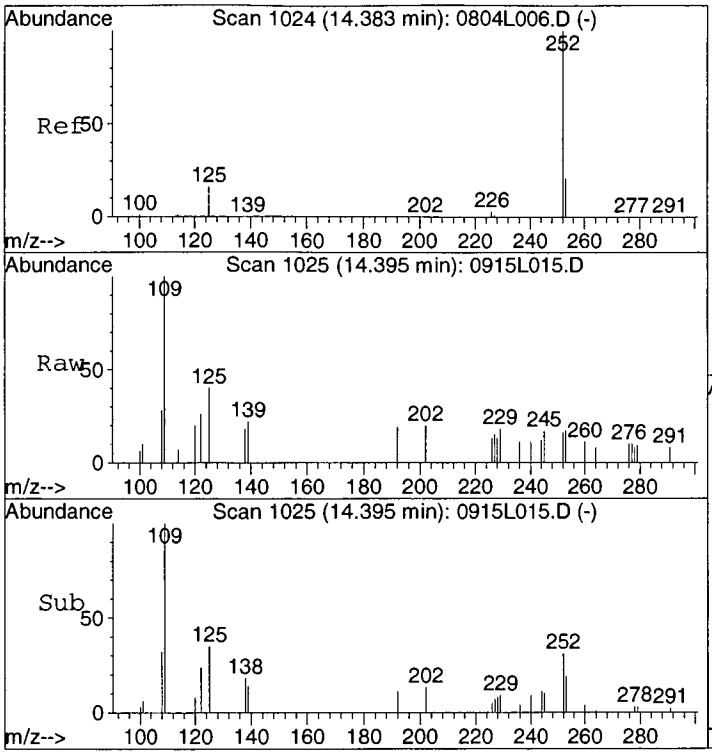


#23
Benzo (k) fluoranthene
Concen: 15.98669 ppb
RT: 14.03 min Scan# 994
Delta R.T. -0.02 min
Lab File: 0915L015.D
Acq: 16 Sep 14 3:23

Tgt Ion:252 Resp: 631

Ion	Ratio	Lower	Upper
252	100		
253	39.7	14.7	27.3#
125	76.3	9.2	17.0#

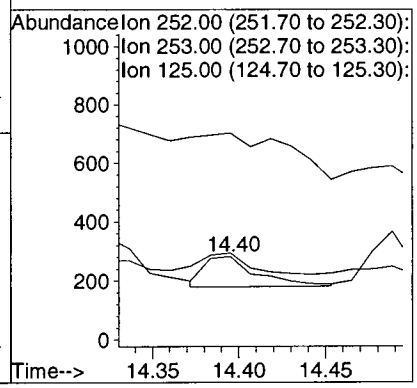


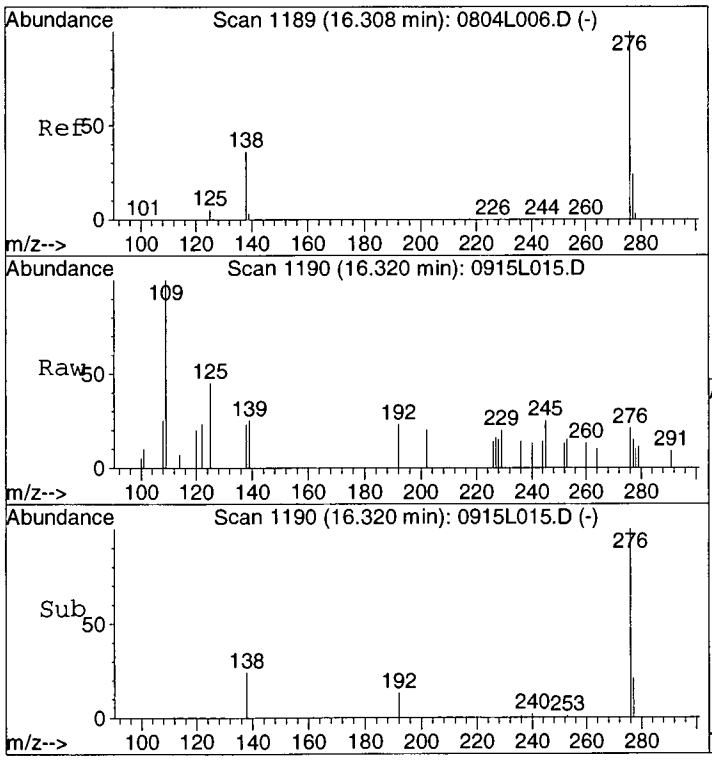


#24
Benzo (a) pyrene
Concen: 6.05915 ppb
RT: 14.40 min Scan# 1025
Delta R.T. 0.00 min
Lab File: 0915L015.D
Acq: 16 Sep 14 3:23

Tgt Ion:252 Resp: 221

Ion	Ratio	Lower	Upper
252	100		
253	74.5	15.4	28.6#
125	169.1	9.5	17.6#

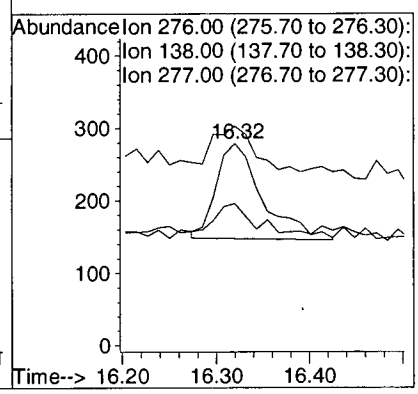




#26
Benzo (g,h,i) perylene
Concen: 13.42178 ppb
RT: 16.32 min Scan# 1190
Delta R.T. 0.00 min
Lab File: 0915L015.D
Acq: 16 Sep 14 3:23

Tgt Ion:276 Resp: 448

Ion	Ratio	Lower	Upper
276	100		
138	48.5	24.4	45.4#
277	29.2	17.1	31.7



EPA 8270C SIM IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN005
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02103
QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 15.8 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0015 J	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.0041 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.0044 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.010	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.011	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.010	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.0039 J	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.0056	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.0025 J	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.0056	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	85.2	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	97.5	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	144 #	30-125			%	9/10/14	9/16/14

J = Estimated value.
= Recovery (or RPD) is outside QC limits.

Quant Method: SIM.M
Run #: 0915L016
Instrument: Linus
Sequence: L140821
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L016.D Vial: 16
Acq On : 16 Sep 14 3:49 Operator: LF
Sample : AZ02103S11 1/35.64G Inst : Linus
Misc : Multiplr: 28.06

Quant Time: Sep 18 22:45 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1934	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	1115	2.50000 ppb		-0.01
11) Phenanthrene-D10(IS)	9.77	188	1796	2.50000 ppb		-0.01
15) Chrysene-D12(IS)	12.85	240	3214	2.50000 ppb		-0.01
21) Perylene-D12(IS)	14.45	264	1560	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	945	54.68605 ppb		0.00
Spiked Amount 56.117			Recovery = 97.450%			
7) Surrogate Recovery (FBP)	7.29	172	1916	47.83854 ppb		-0.01
Spiked Amount 56.117			Recovery = 85.249%			
17) Surrogate Recovery (TPH)	11.65	244	4236	80.69280 ppb		-0.01
Spiked Amount 56.117			Recovery = 143.795%			
Target Compounds						Qvalue
12) Phenanthrene	9.81	178	109	2.10691 ppb		99
13) Anthracene	9.87	178	62	1.27913 ppb	#	93
14) Fluoranthene	11.19	202	421	4.70553 ppb	#	87
16) Pyrene	11.44	202	452	4.69290 ppb	#	85
18) Benz (a) anthracene	12.84	228	272	3.49006 ppb	#	88
19) Chrysene	12.88	228	251	3.32245 ppb	#	90
22) Benzo (b) fluoranthene	14.03	252	515	8.74082 ppb	#	75
23) Benzo (k) fluoranthene	14.03	252	515	8.82603 ppb	#	72
24) Benzo (a) pyrene	14.39	252	199	3.69064 ppb	#	1
26) Benzo (g,h,i) perylene	16.32	276	447	9.05875 ppb		94

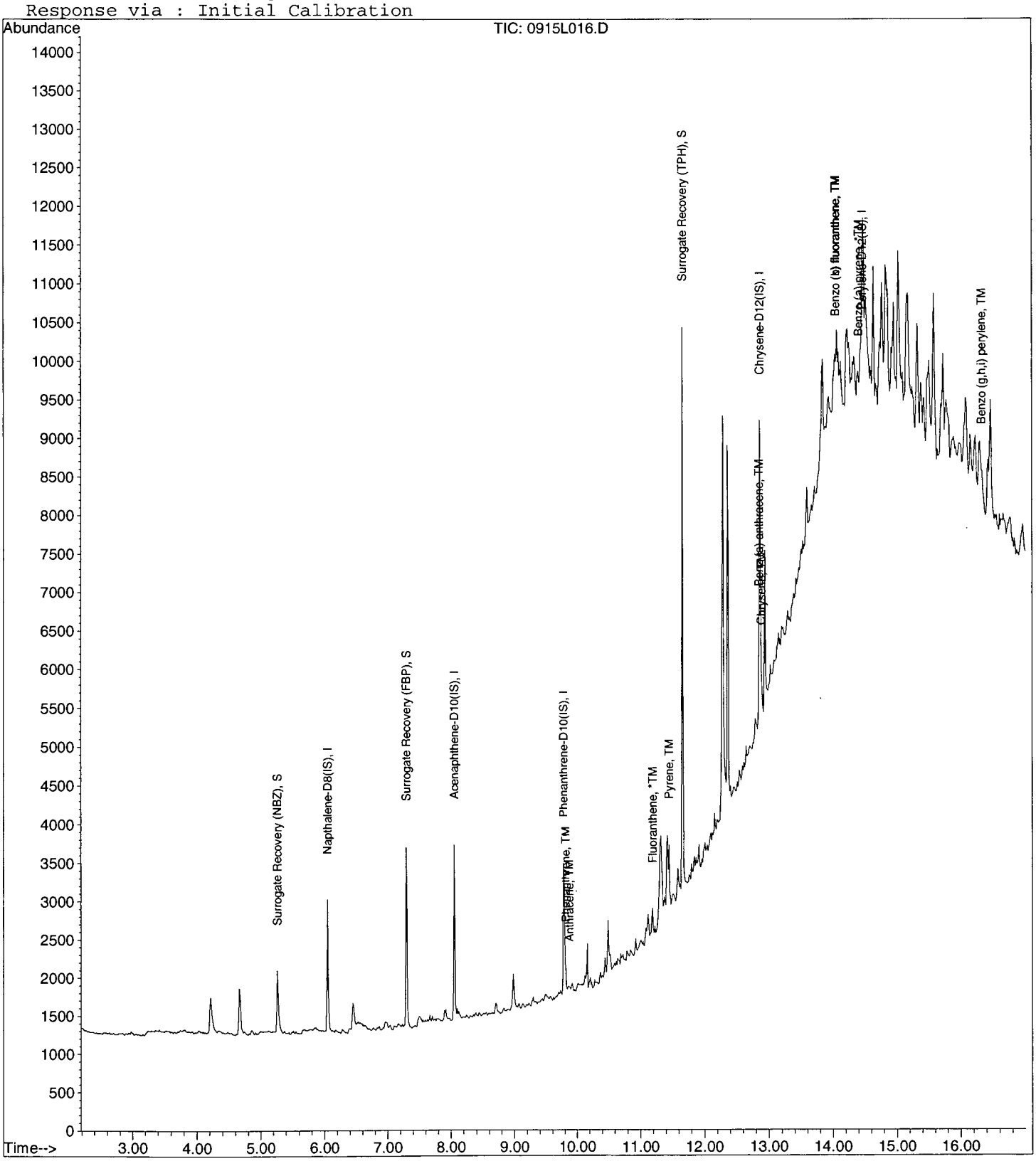
(#) = qualifier out of range (m) = manual integration

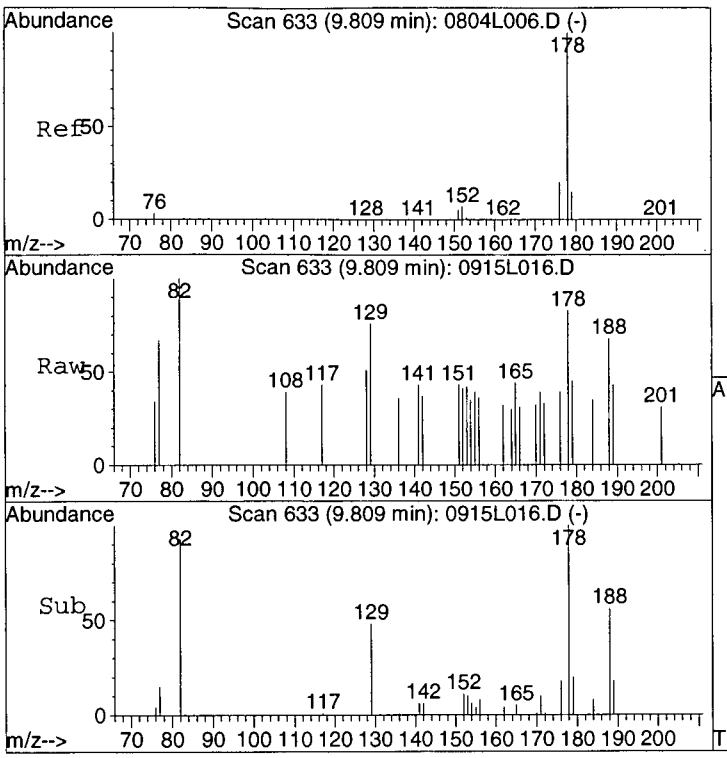
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L016.D Vial: 16
Acq On : 16 Sep 14 3:49 Operator: LF
Sample : AZ02103S11 1/35.64G Inst : Linus
Misc : Multiplr: 28.06

Quant Time: Sep 18 22:45 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

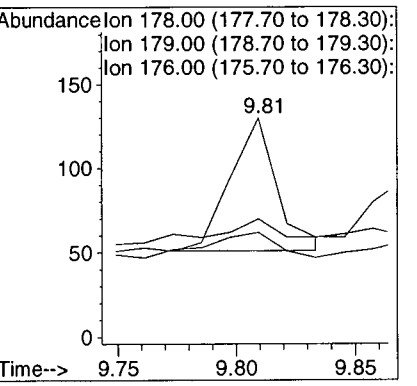


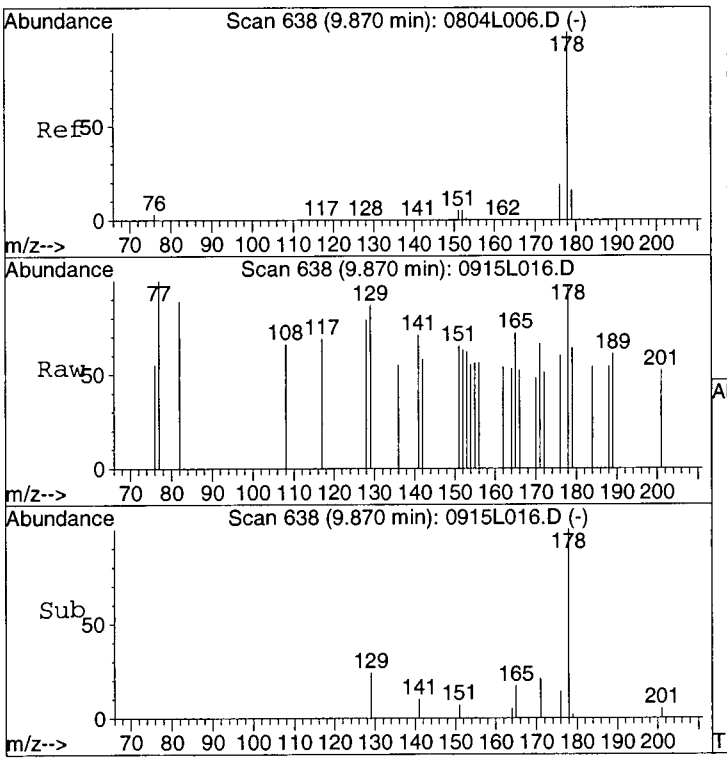


#12
Phenanthrene
Concen: 2.10691 ppb
RT: 9.81 min Scan# 633
Delta R.T. 0.00 min
Lab File: 0915L016.D
Acq: 16 Sep 14 3:49

Tgt Ion:178 Resp: 109

Ion	Ratio	Lower	Upper
178	100		
179	13.9	10.4	19.4
176	19.0	13.4	24.8

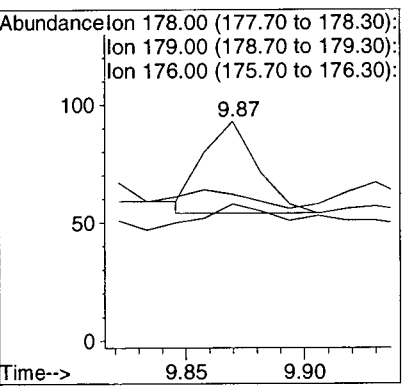


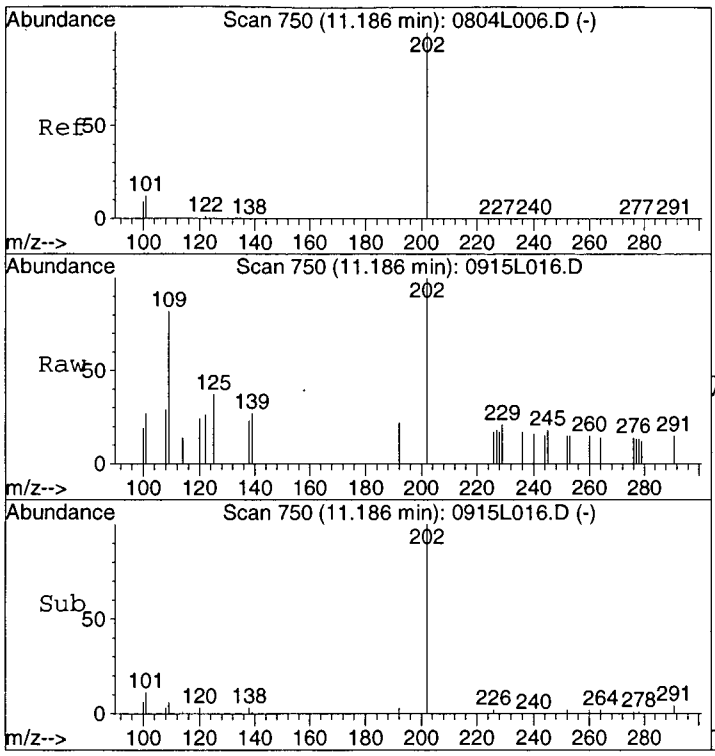


#13
Anthracene
Concen: 1.27913 ppb
RT: 9.87 min Scan# 638
Delta R.T. 0.00 min
Lab File: 0915L016.D
Acq: 16 Sep 14 3:49

Tgt Ion:178 Resp: 62

Ion	Ratio	Lower	Upper
178	100		
179	10.3	10.4	19.2#
176	20.5	13.0	24.1

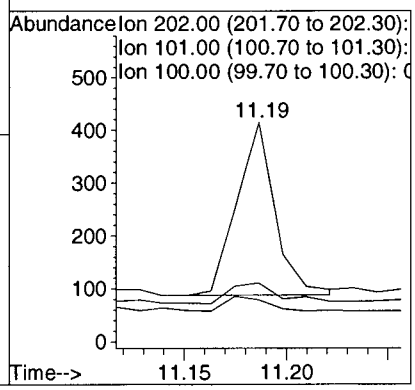


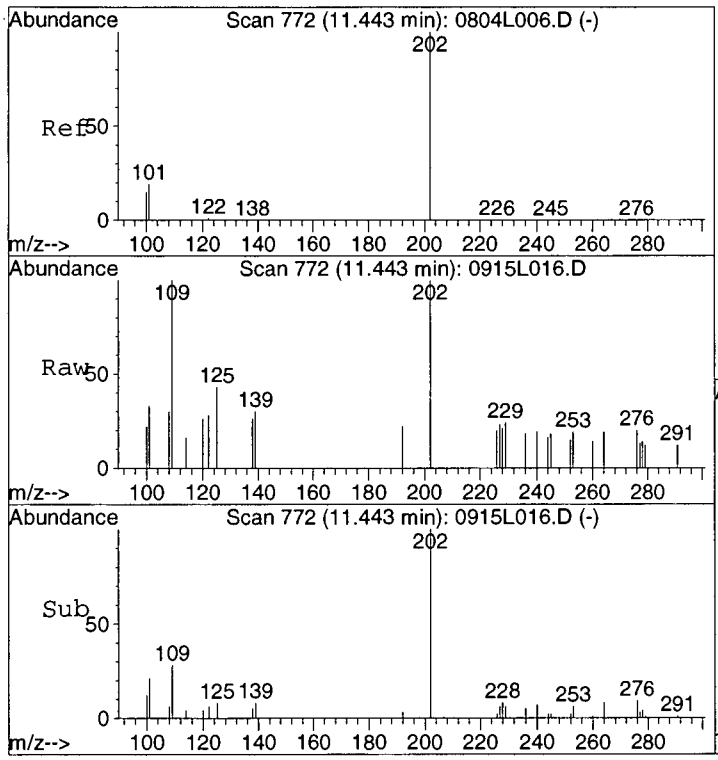


#14
Fluoranthene
Concen: 4.70553 ppb
RT: 11.19 min Scan# 750
Delta R.T. -0.00 min
Lab File: 0915L016.D
Acq: 16 Sep 14 3:49

Tgt Ion:202 Resp: 421

Ion	Ratio	Lower	Upper
202	100		
101	11.6	12.0	22.2#
100	6.1	8.2	15.2#

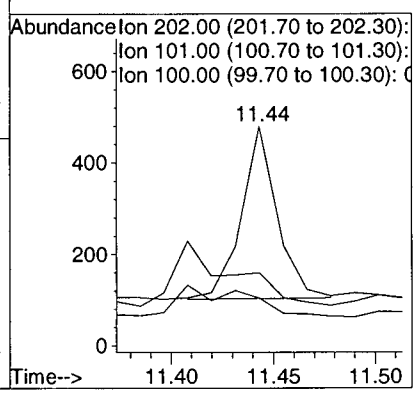


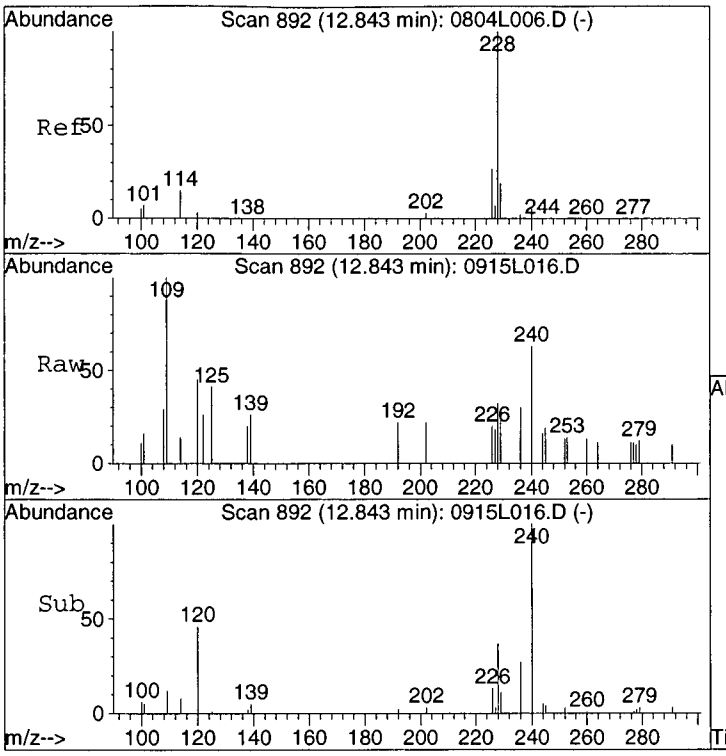


#16
Pyrene
Concen: 4.69290 ppb
RT: 11.44 min Scan# 772
Delta R.T. -0.01 min
Lab File: 0915L016.D
Acq: 16 Sep 14 3:49

Tgt Ion:202 Resp: 452

Ion	Ratio	Lower	Upper
202	100		
101	19.0	7.4	13.8#
100	10.7	5.8	10.8

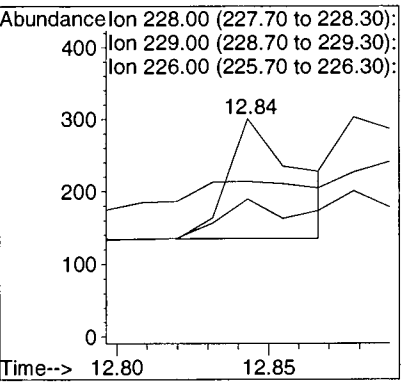


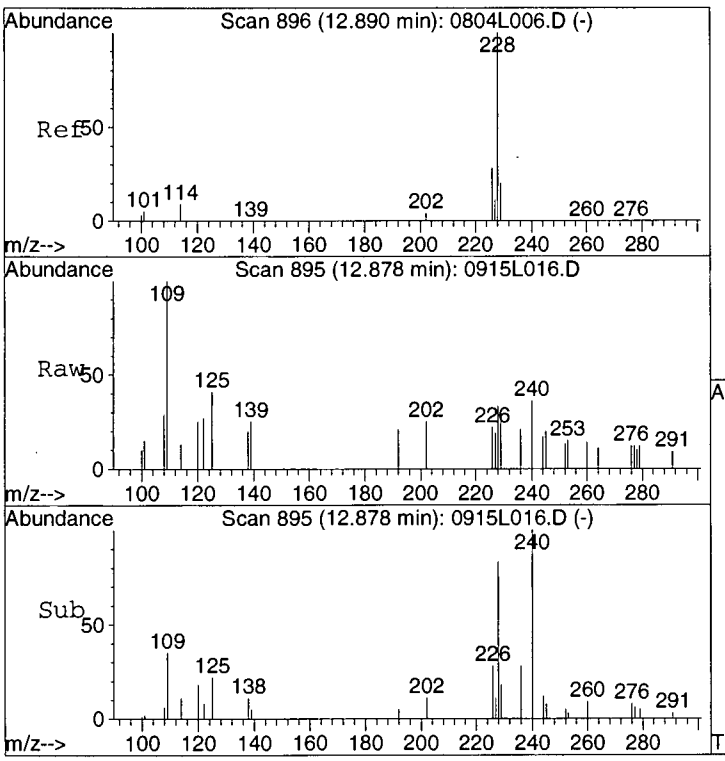


#18
Benz (a) anthracene
Concen: 3.49006 ppb
RT: 12.84 min Scan# 892
Delta R.T. -0.01 min
Lab File: 0915L016.D
Acq: 16 Sep 14 3:49

Tgt Ion:228 Resp: 272

Ion	Ratio	Lower	Upper
228	100		
229	16.3	14.1	26.1
226	32.5	17.5	32.5#

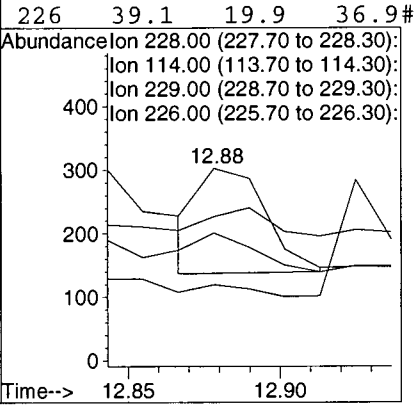


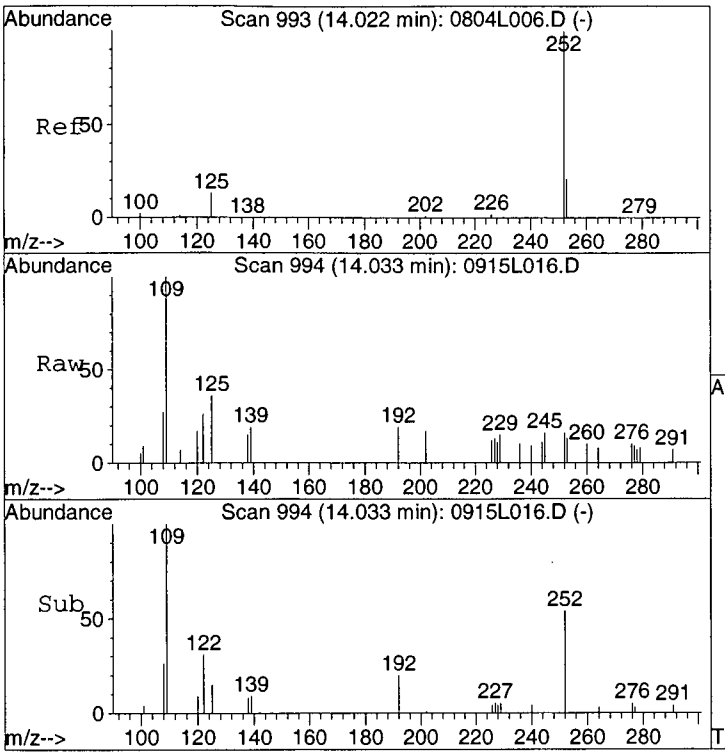


#19
Chrysene
Concen: 3.32245 ppb
RT: 12.88 min Scan# 895
Delta R.T. -0.01 min
Lab File: 0915L016.D
Acq: 16 Sep 14 3:49

Tgt Ion:228 Resp: 251

Ion	Ratio	Lower	Upper
228	100		
114	11.5	8.4	15.6
229	19.9	13.8	25.6
226	39.1	19.9	36.9#

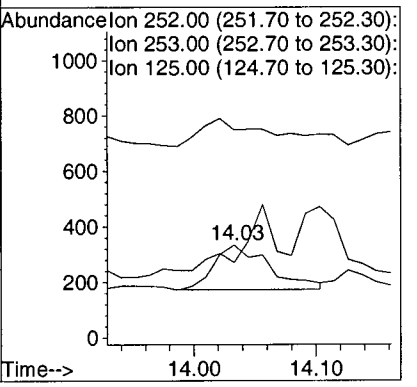


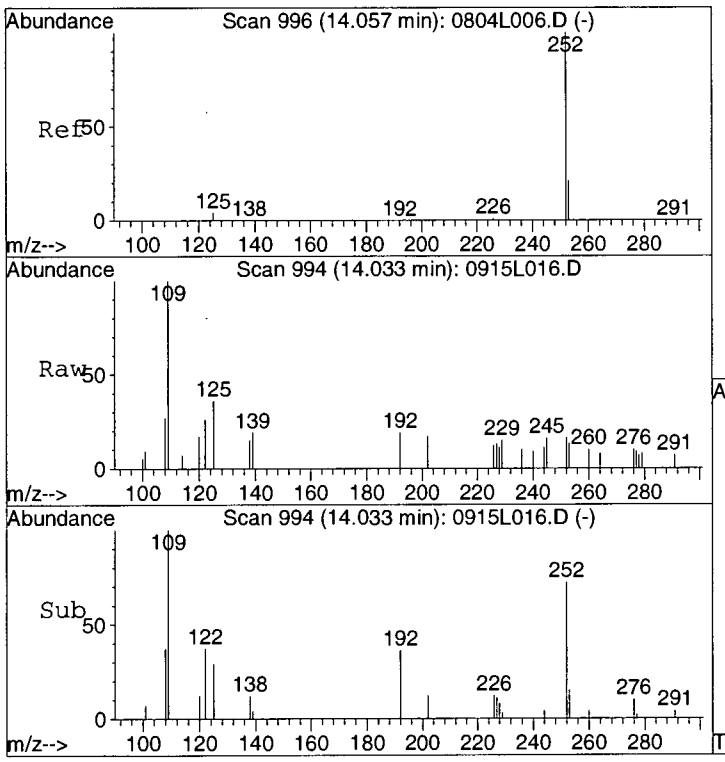


#22
Benzo (b) fluoranthene
Concen: 8.74082 ppb
RT: 14.03 min Scan# 994
Delta R.T. 0.01 min
Lab File: 0915L016.D
Acq: 16 Sep 14 3:49

Tgt Ion:252 Resp: 515

Ion	Ratio	Lower	Upper
252	100		
253	17.9	14.9	27.7
125	37.7	12.3	22.8#

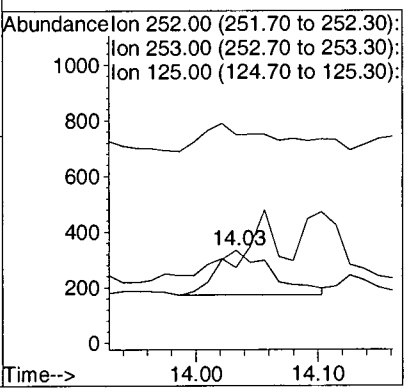


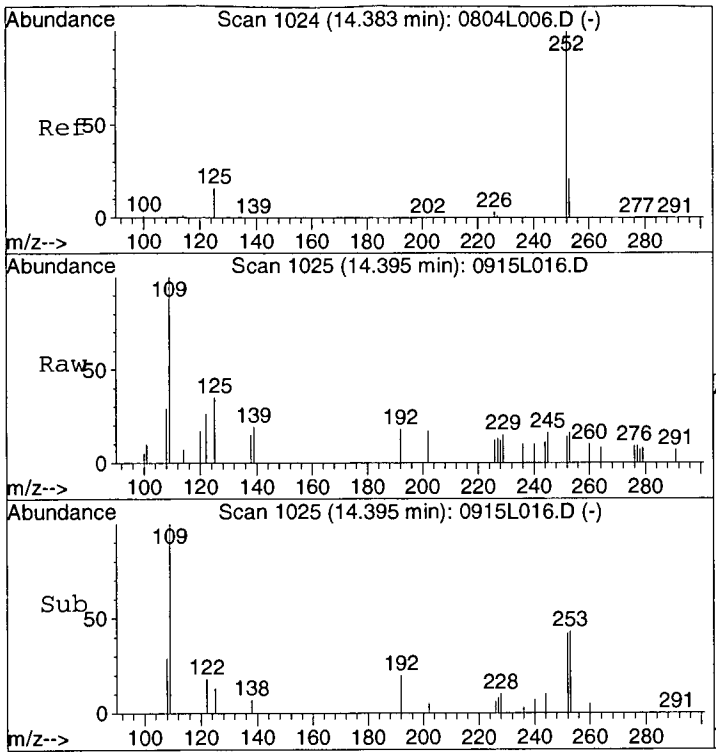


#23
Benzo (k) fluoranthene
Concen: 8.82603 ppb
RT: 14.03 min Scan# 994
Delta R.T. -0.02 min
Lab File: 0915L016.D
Acq: 16 Sep 14 3:49

Tgt Ion:252 Resp: 515

Ion	Ratio	Lower	Upper
252	100		
253	17.9	14.7	27.3
125	37.7	9.2	17.0#

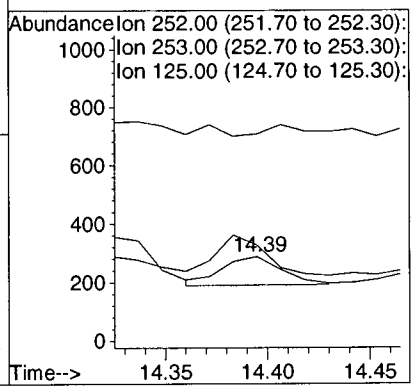


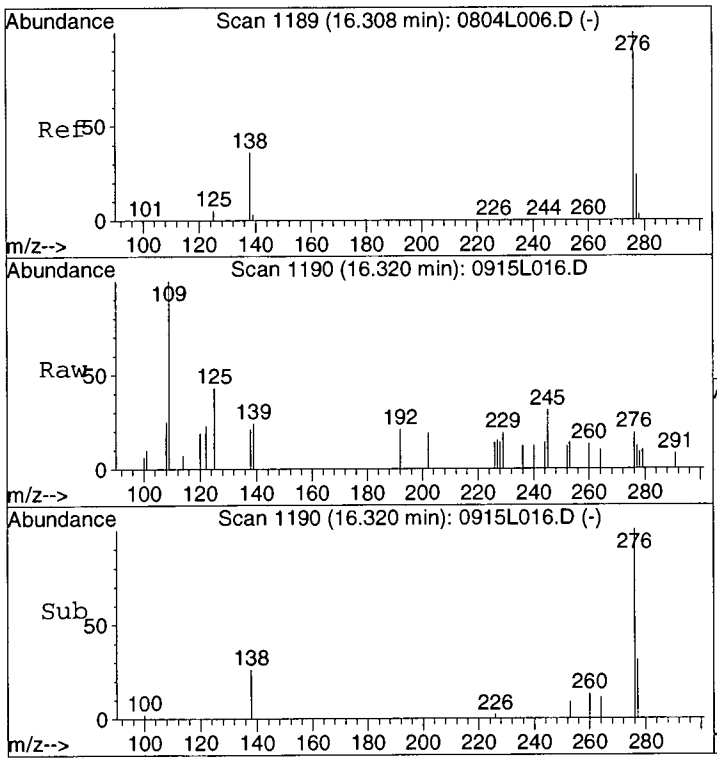


#24
Benzo (a) pyrene
Concen: 3.69064 ppb
RT: 14.39 min Scan# 1025
Delta R.T. -0.00 min
Lab File: 0915L016.D
Acq: 16 Sep 14 3:49

Tgt Ion:252 Resp: 199

Ion	Ratio	Lower	Upper
252	100		
253	116.7	15.4	28.6#
125	1.1	9.5	17.6#

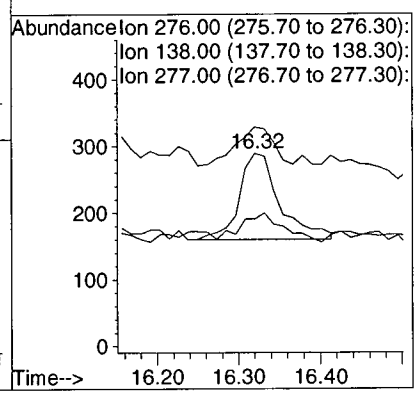




#26
Benzo (g,h,i) perylene
Concen: 9.05875 ppb
RT: 16.32 min Scan# 1190
Delta R.T. -0.00 min
Lab File: 0915L016.D
Acq: 16 Sep 14 3:49

Tgt Ion:276 Resp: 447

Ion	Ratio	Lower	Upper
276	100		
138	33.3	24.4	45.4
277	18.6	17.1	31.7



EPA 8270C SIM IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN006
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02104
QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 14.2 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.0012 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0040 J	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.034	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.032	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.069	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.021	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.069	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.028	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.040	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.012	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.0082	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.045	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	109 #	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	91.9	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	164 #	30-125			%	9/10/14	9/16/14

J = Estimated value.
= Recovery (or RPD) is outside QC limits.

Quant Method:	SIM.M
Run #:	0915L017
Instrument:	Linus
Sequence:	L140821
Dilution Factor:	1
Initials:	LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L017.D Vial: 17
Acq On : 16 Sep 14 4:14 Operator: LF
Sample : AZ02104S11 1/34.98G Inst : Linus
Misc : Multiplr: 28.59

Quant Time: Sep 18 22:46 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1778	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	826	2.50000	ppb		-0.01
11) Phenanthrene-D10(IS)	9.77	188	1559	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	12.85	240	2568	2.50000	ppb		-0.01
21) Perylene-D12(IS)	14.45	264	1383	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.26	82	819	52.52563	ppb		0.00
Spiked Amount 57.176			Recovery = 91.868%				
7) Surrogate Recovery (FBP)	7.29	172	1820	62.49805	ppb		-0.01
Spiked Amount 57.176			Recovery = 109.309%				
17) Surrogate Recovery (TPH)	11.65	244	3851	93.54510	ppb		-0.01
Spiked Amount 57.176			Recovery = 163.610%				
Target Compounds							Qvalue
3) Naphthalene	6.07	128	130	3.08450	ppb		93
8) Acenaphthylene	7.89	152	41	1.02103	ppb	#	89
12) Phenanthrene	9.81	178	311	7.05598	ppb		95
13) Anthracene	9.87	178	140	3.39024	ppb	#	93
14) Fluoranthene	11.19	202	2640	34.63447	ppb	#	81
16) Pyrene	11.44	202	2916	38.60639	ppb		94
18) Benz (a) anthracene	12.84	228	1779	29.10776	ppb		96
19) Chrysene	12.89	228	1398	23.59723	ppb	#	93
20) Indeno (1,2,3-cd) pyrene	15.90	276	548	10.69617	ppb	#	70
22) Benzo (b) fluoranthene	14.03	252	3033	59.16132	ppb	#	90
23) Benzo (k) fluoranthene	14.03	252	3017	59.42287	ppb		94
24) Benzo (a) pyrene	14.40	252	1287	27.43133	ppb	#	88
26) Benzo (g,h,i) perylene	16.32	276	775	18.05024	ppb		93

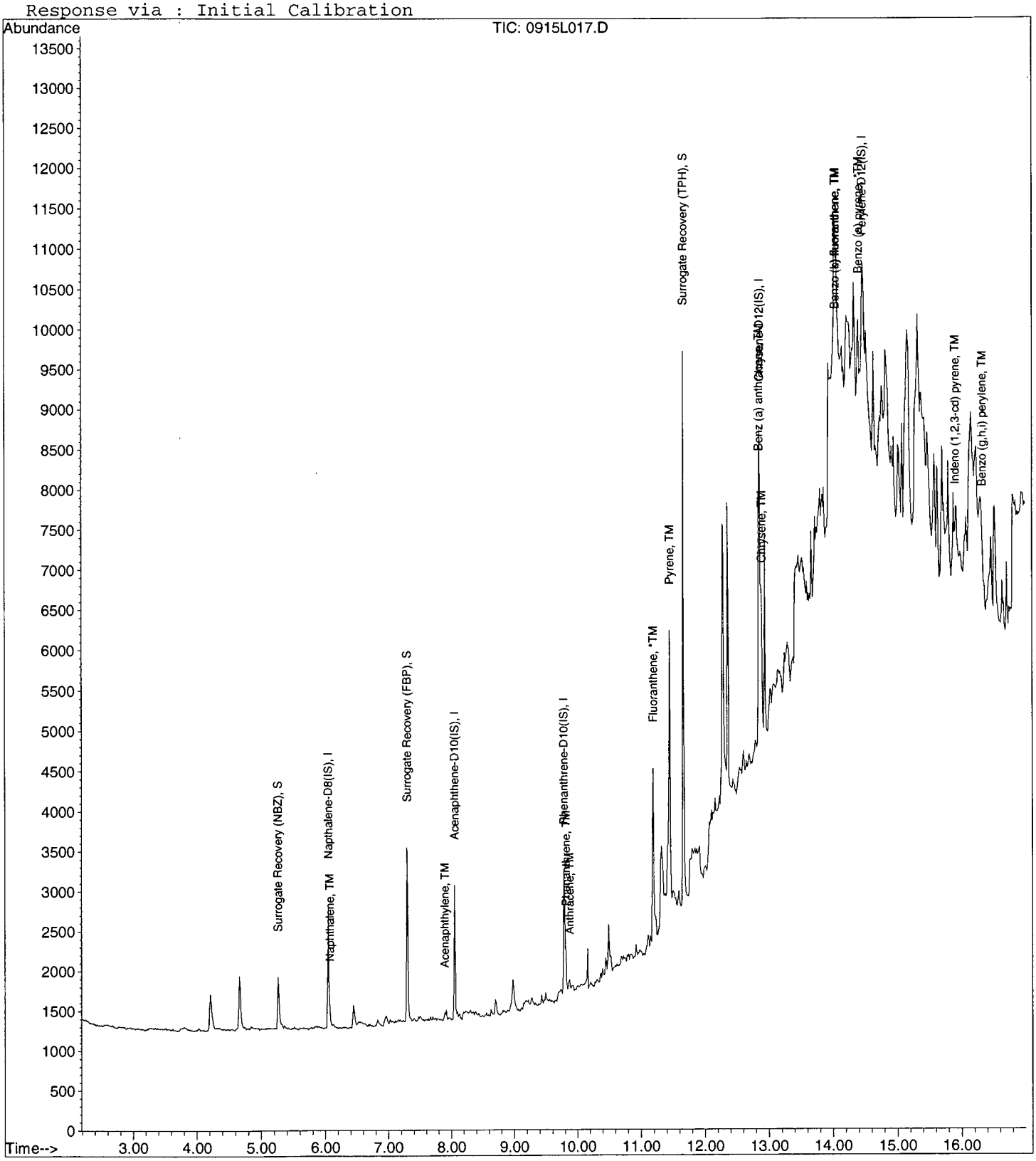
(#) = qualifier out of range (m) = manual integration

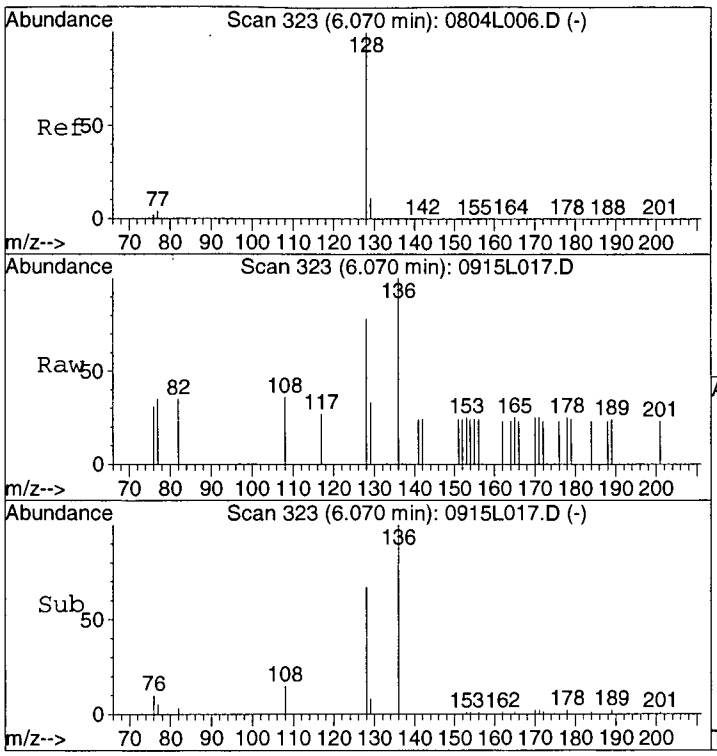
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L017.D Vial: 17
Acq On : 16 Sep 14 4:14 Operator: LF
Sample : AZ02104S11 1/34.98G Inst : Linus
Misc : Multiplr: 28.59

Quant Time: Sep 18 22:46 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

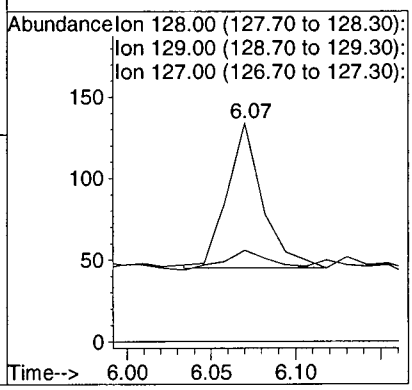


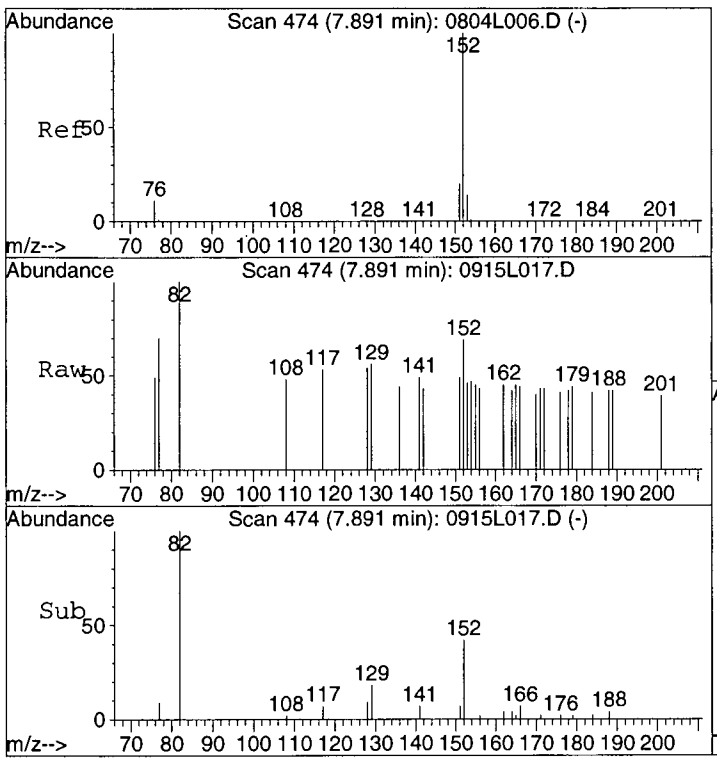


#3
Naphthalene
Concen: 3.08450 ppb
RT: 6.07 min Scan# 323
Delta R.T. 0.00 min
Lab File: 0915L017.D
Acq: 16 Sep 14 4:14

Tgt Ion:128 Resp: 130

Ion	Ratio	Lower	Upper
128	100		
129	13.5	7.5	13.9
127	0.0	0.0	0.0

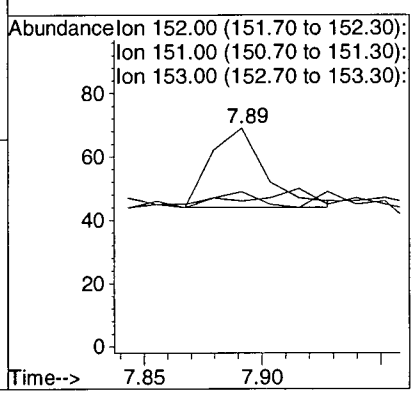


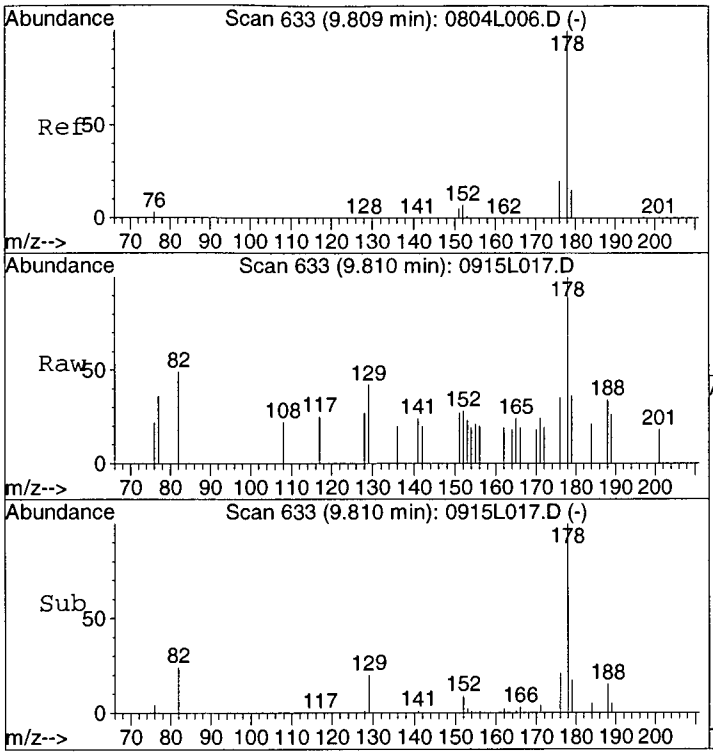


#8
Acenaphthylene
Concen: 1.02103 ppb
RT: 7.89 min Scan# 474
Delta R.T. 0.00 min
Lab File: 0915L017.D
Acq: 16 Sep 14 4:14

Tgt Ion:152 Resp: 41

Ion	Ratio	Lower	Upper
152	100		
151	16.0	13.8	25.6
153	8.0	9.7	18.1#

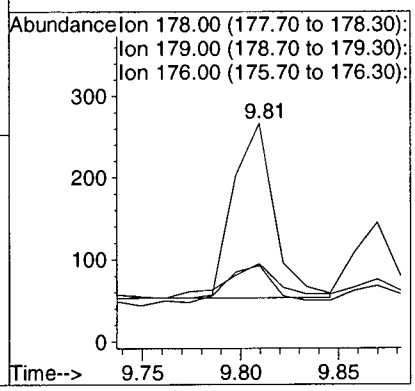


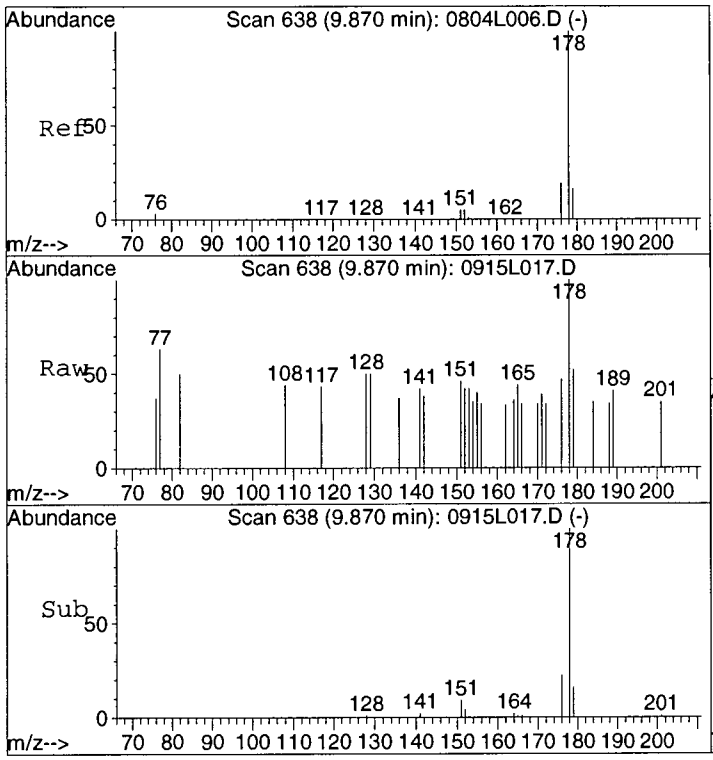


#12
Phenanthrene
Concen: 7.05598 ppb
RT: 9.81 min Scan# 633
Delta R.T. 0.00 min
Lab File: 0915L017.D
Acq: 16 Sep 14 4:14

Tgt Ion:178 Resp: 311

Ion	Ratio	Lower	Upper
178	100		
179	17.3	10.4	19.4
176	21.0	13.4	24.8

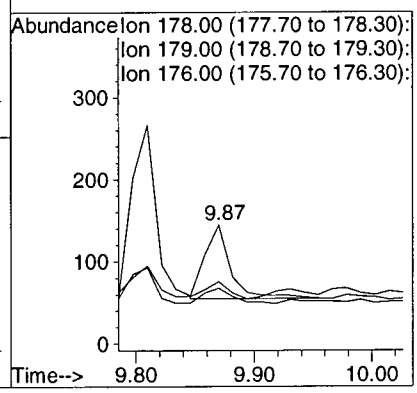


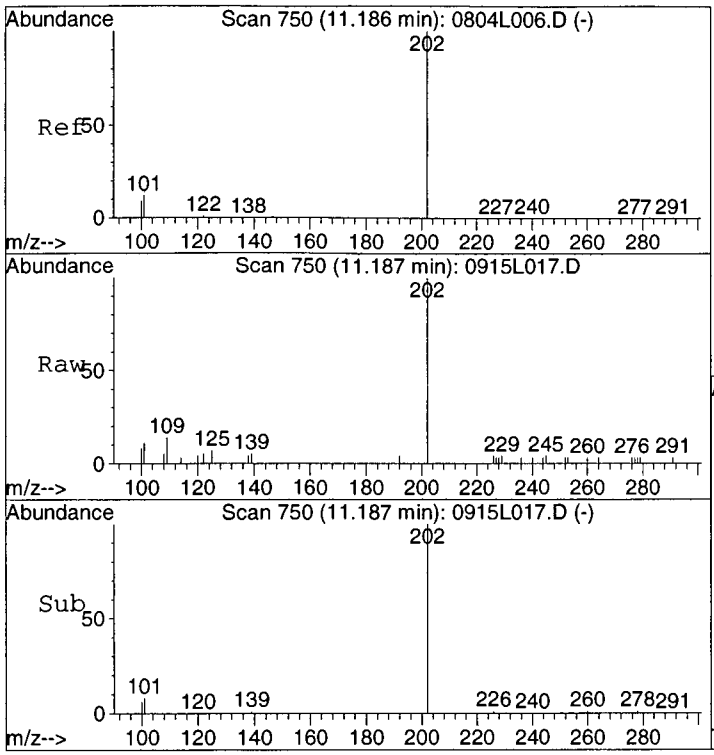


#13
Anthracene
Concen: 3.39024 ppb
RT: 9.87 min Scan# 638
Delta R.T. 0.00 min
Lab File: 0915L017.D
Acq: 16 Sep 14 4:14

Tgt Ion:178 Resp: 140

Ion	Ratio	Lower	Upper
178	100		
179	20.0	10.4	19.2#
176	20.0	13.0	24.1

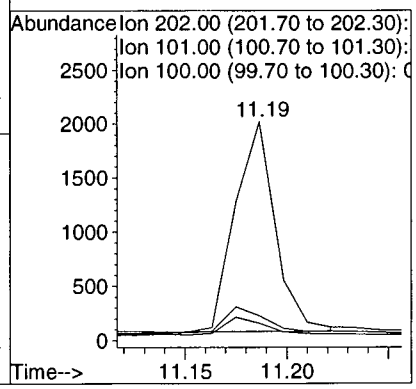


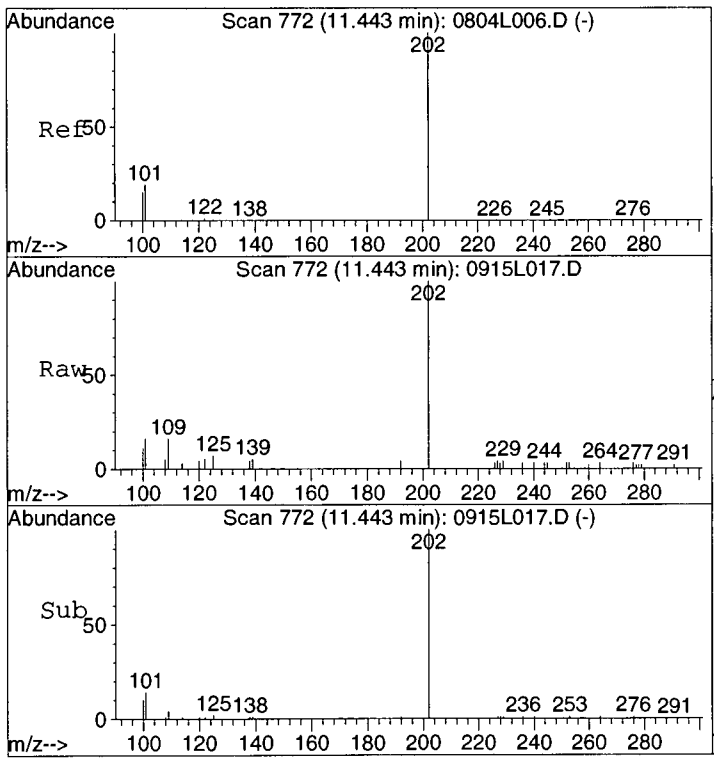


#14
Fluoranthene
Concen: 34.63447 ppb
RT: 11.19 min Scan# 750
Delta R.T. 0.00 min
Lab File: 0915L017.D
Acq: 16 Sep 14 4:14

Tgt Ion:202 Resp: 2640

Ion	Ratio	Lower	Upper
202	100		
101	8.2	12.0	22.2#
100	5.5	8.2	15.2#

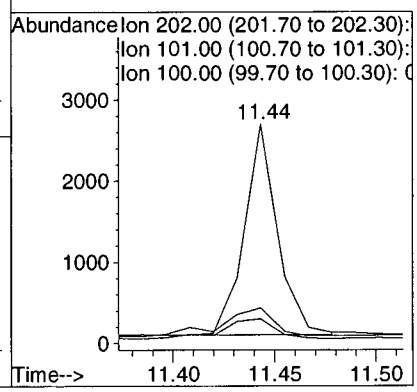


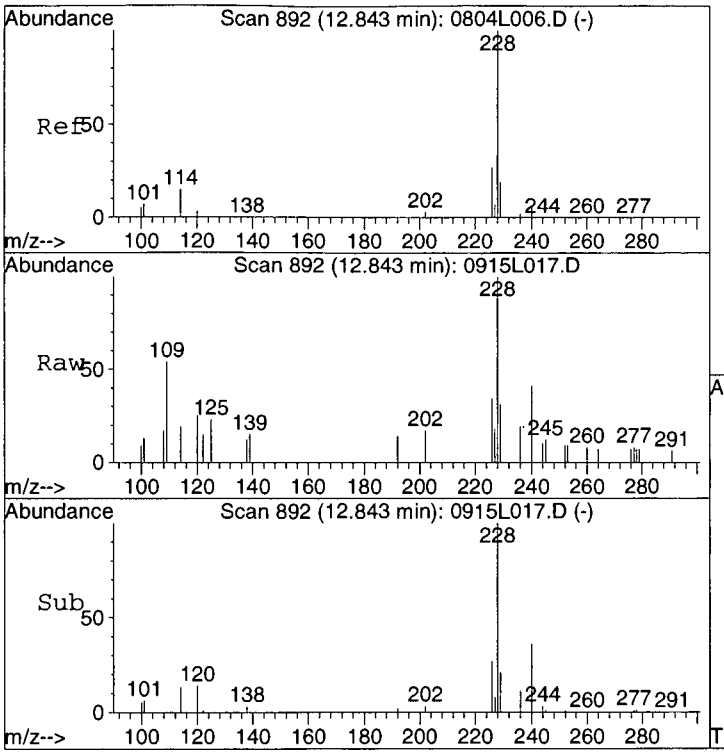


#16
Pyrene
Concen: 38.60639 ppb
RT: 11.44 min Scan# 772
Delta R.T. -0.01 min
Lab File: 0915L017.D
Acq: 16 Sep 14 4:14

Tgt Ion:202 Resp: 2916

Ion	Ratio	Lower	Upper
202	100		
101	13.3	7.4	13.8
100	9.5	5.8	10.8

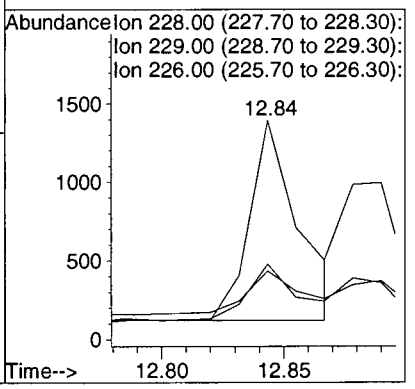


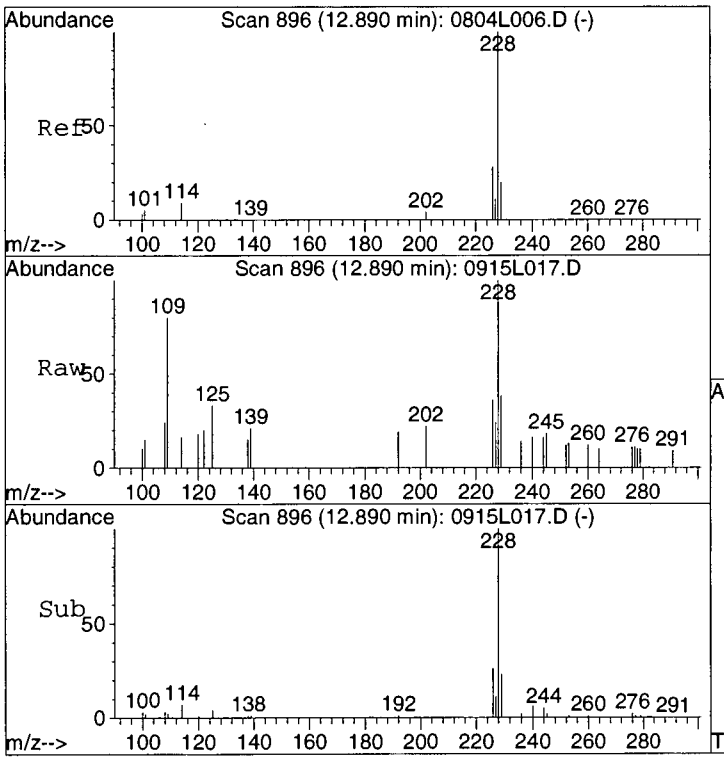


#18
Benz (a) anthracene
Concen: 29.10776 ppb
RT: 12.84 min Scan# 892
Delta R.T. -0.01 min
Lab File: 0915L017.D
Acq: 16 Sep 14 4:14

Tgt Ion:228 Resp: 1779

Ion	Ratio	Lower	Upper
228	100		
229	21.1	14.1	26.1
226	27.7	17.5	32.5

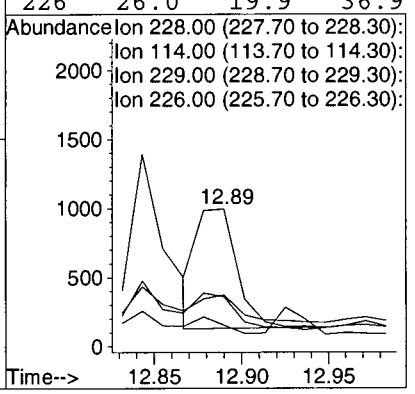


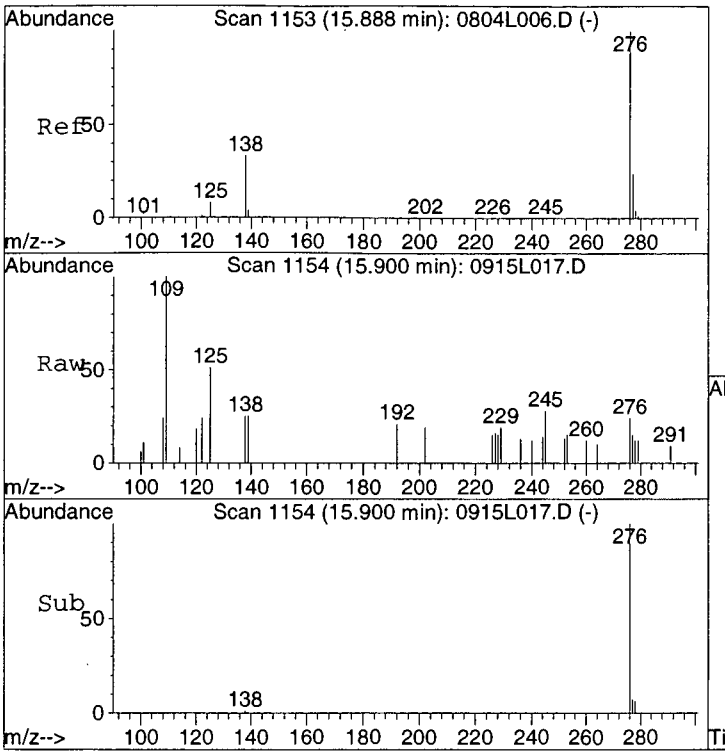


#19
Chrysene
Concen: 23.59723 ppb
RT: 12.89 min Scan# 896
Delta R.T. 0.00 min
Lab File: 0915L017.D
Acq: 16 Sep 14 4:14

Tgt Ion:228 Resp: 1398

Ion	Ratio	Lower	Upper
228	100		
114	7.5	8.4	15.6#
229	23.2	13.8	25.6
226	26.0	19.9	36.9

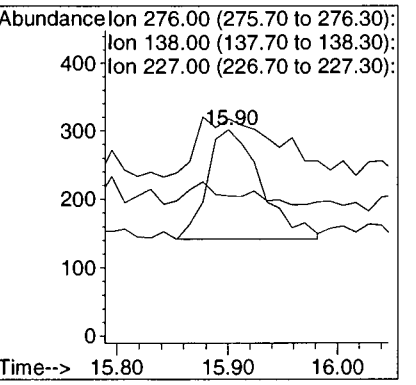


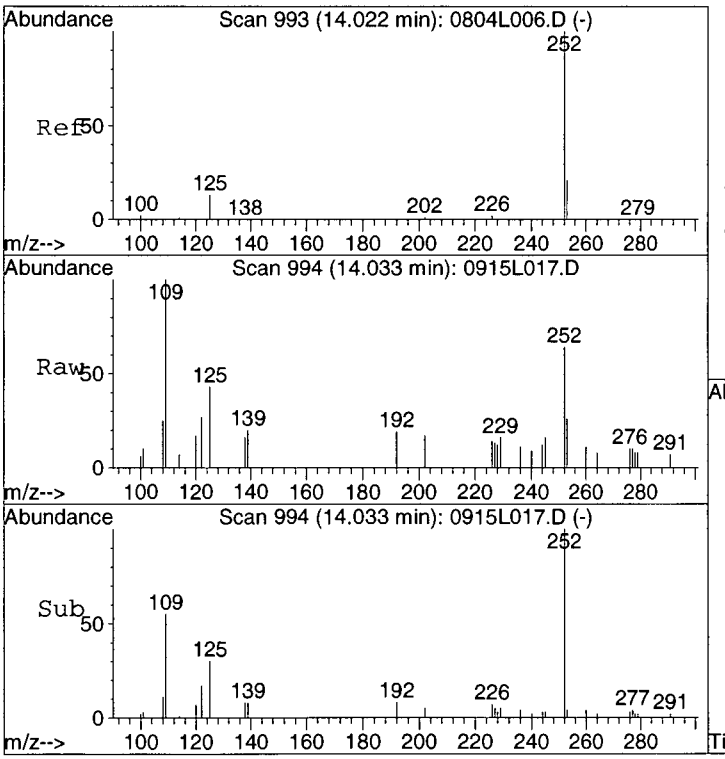


#20
Indeno (1,2,3-cd) pyrene
Concen: 10.69617 ppb
RT: 15.90 min Scan# 1154
Delta R.T. 0.00 min
Lab File: 0915L017.D
Acq: 16 Sep 14 4:14

Tgt Ion:276 Resp: 548

Ion	Ratio	Lower	Upper
276	100		
138	49.4	22.8	42.4#
227	5.6	0.2	0.4#

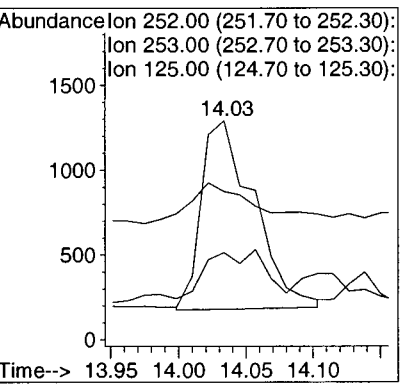


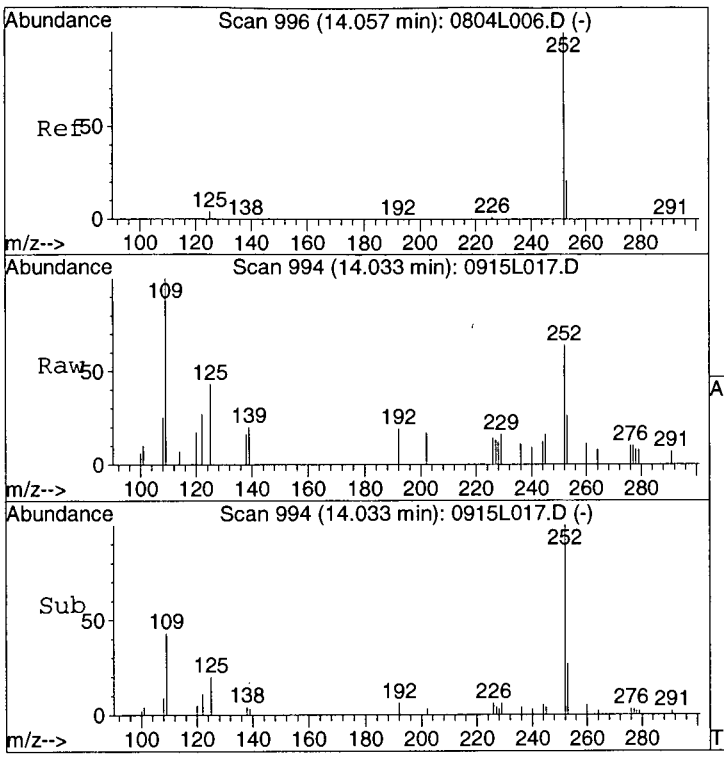


#22
Benzo (b) fluoranthene
Concen: 59.16132 ppb
RT: 14.03 min Scan# 994
Delta R.T. 0.01 min
Lab File: 0915L017.D
Acq: 16 Sep 14 4:14

Tgt Ion:252 Resp: 3033

Ion	Ratio	Lower	Upper
252	100		
253	24.8	14.9	27.7
125	12.2	12.3	22.8#

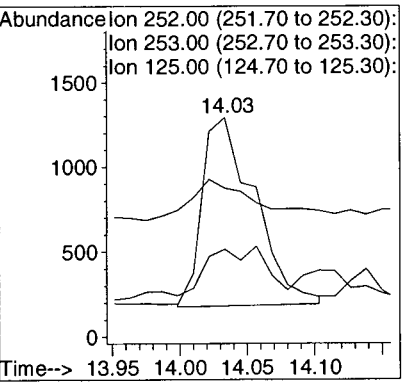


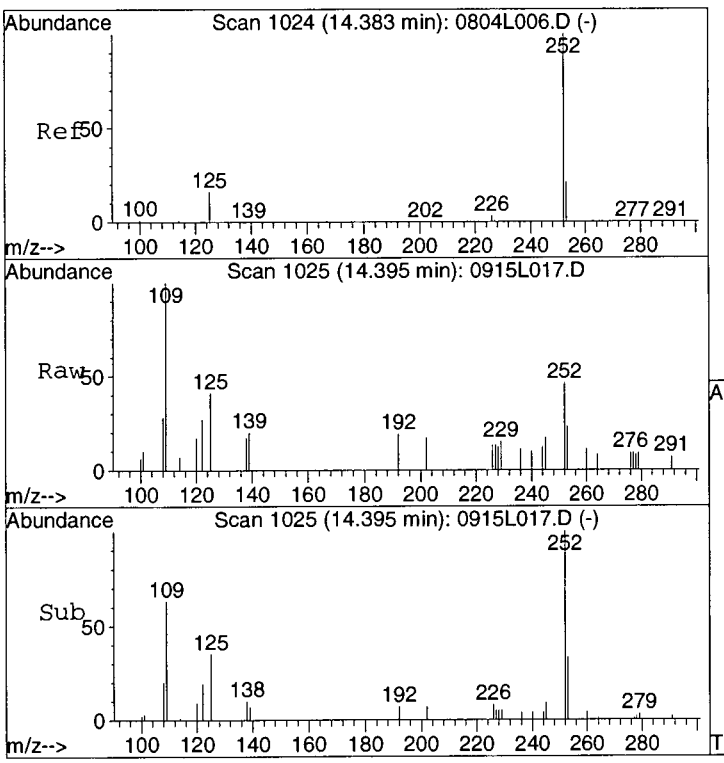


#23
Benzo (k) fluoranthene
Concen: 59.42287 ppb
RT: 14.03 min Scan# 994
Delta R.T. -0.02 min
Lab File: 0915L017.D
Acq: 16 Sep 14 4:14

Tgt Ion:252 Resp: 3017

Ion	Ratio	Lower	Upper
252	100		
253	24.8	14.7	27.3
125	12.2	9.2	17.0

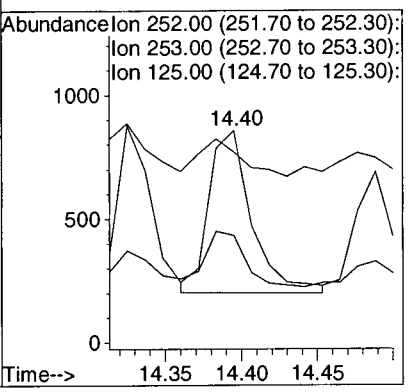


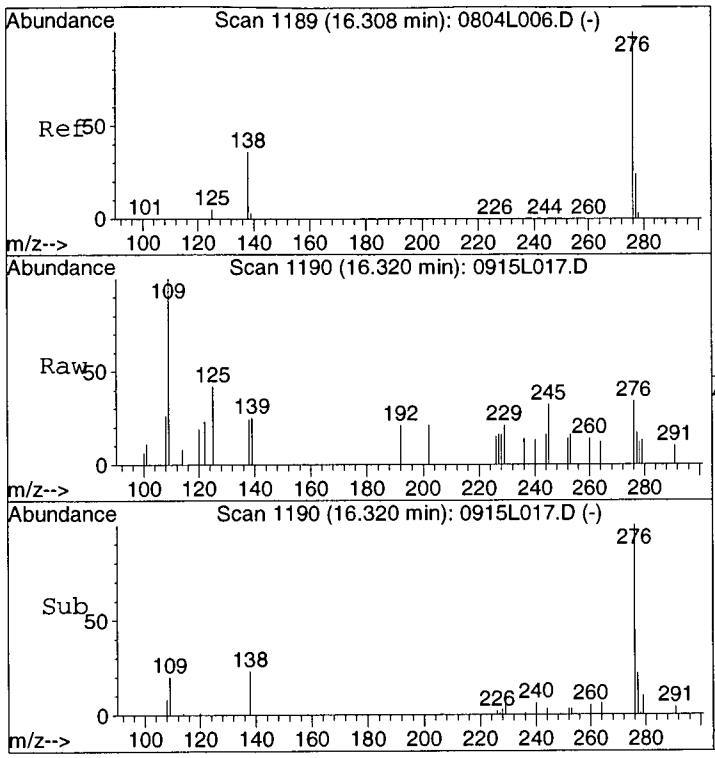


#24
Benzo (a) pyrene
Concen: 27.43133 ppb
RT: 14.40 min Scan# 1025
Delta R.T. 0.00 min
Lab File: 0915L017.D
Acq: 16 Sep 14 4:14

Tgt Ion:252 Resp: 1287

Ion	Ratio	Lower	Upper
252	100		
253	30.8	15.4	28.6#
125	12.8	9.5	17.6

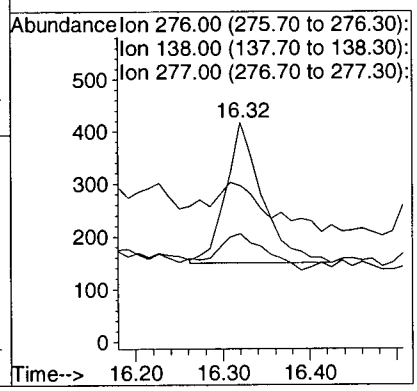




#26
Benzo (g,h,i) perylene
Concen: 18.05024 ppb
RT: 16.32 min Scan# 1190
Delta R.T. 0.00 min
Lab File: 0915L017.D
Acq: 16 Sep 14 4:14

Tgt Ion:276 Resp: 775

Ion	Ratio	Lower	Upper
276	100		
138	28.1	24.4	45.4
277	24.0	17.1	31.7



EPA 8270C SIM IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN007
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02105
QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 24.0 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.014	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.0017 U	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.0071	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.0017 U	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	69.8	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	81.1	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	85.4	30-125			%	9/10/14	9/16/14

Quant Method: SIM.M
Run #: 0915L018
Instrument: Linus
Sequence: L140821
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L018.D Vial: 18
Acq On : 16 Sep 14 4:40 Operator: LF
Sample : AZ02105S11 1/39.46G Inst : Linus
Misc : Multiplr: 25.34

Quant Time: Sep 18 22:47 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1655	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	8.05	164	836	2.50000	ppb	-0.01
11) Phenanthrene-D10(IS)	9.79	188	1425	2.50000	ppb	0.00
15) Chrysene-D12(IS)	12.86	240	2328	2.50000	ppb	-0.01
21) Perylene-D12(IS)	14.45	264	1311	2.50000	ppb	0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	673	41.10541	ppb	0.00
Spiked Amount 50.684			Recovery = 81.100%			
7) Surrogate Recovery (FBP)	7.30	172	1177	35.40040	ppb	0.00
Spiked Amount 50.684			Recovery = 69.844%			
17) Surrogate Recovery (TPH)	11.65	244	1823	43.30211	ppb	-0.01
Spiked Amount 50.684			Recovery = 85.435%			
Target Compounds						Qvalue
20) Indeno (1,2,3-cd) pyrene	15.89	276	283	5.40143	ppb	# 64
26) Benzo (g,h,i) perylene	16.32	276	486	10.58522	ppb	94

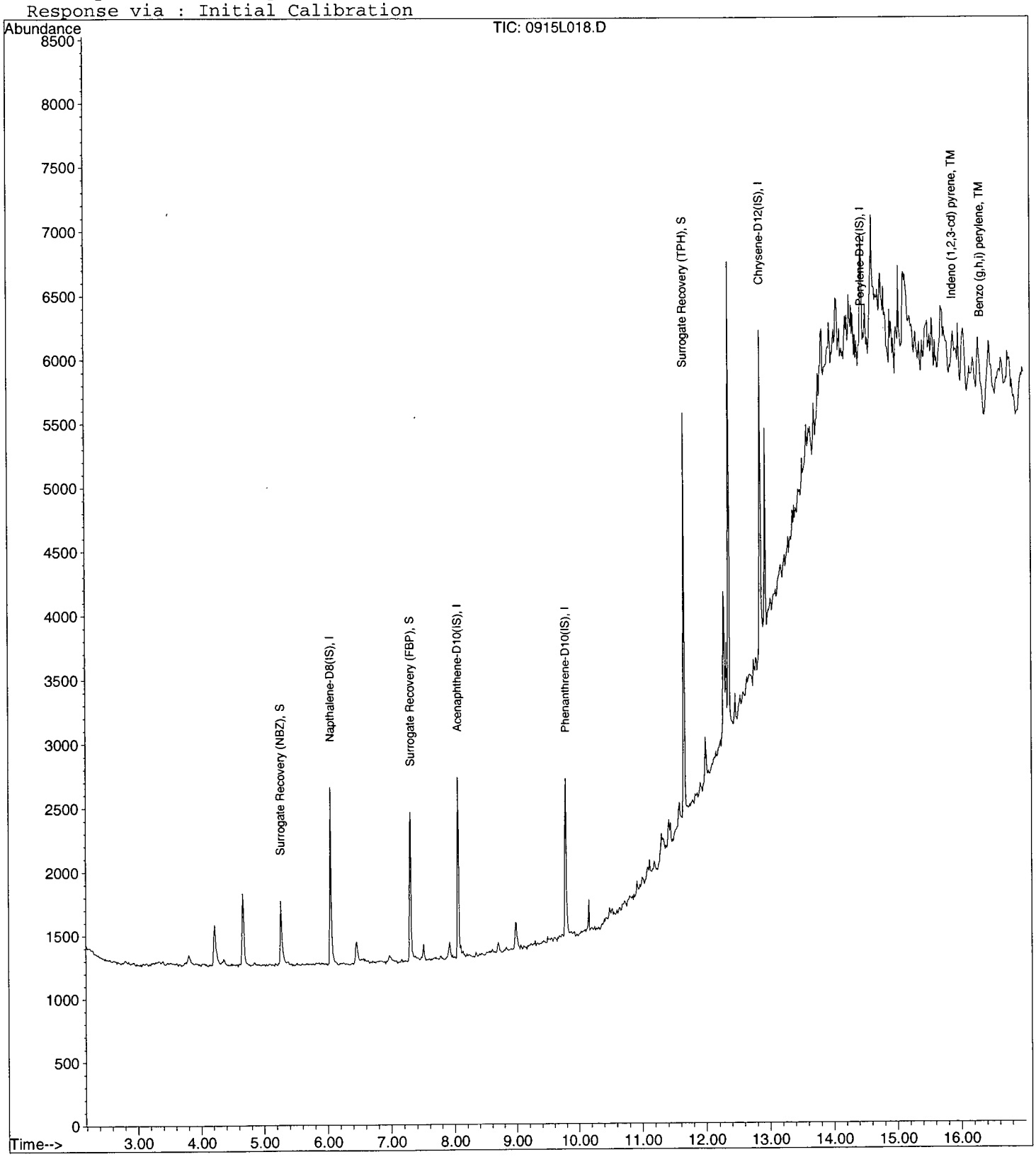
(#) = qualifier out of range (m) = manual integration

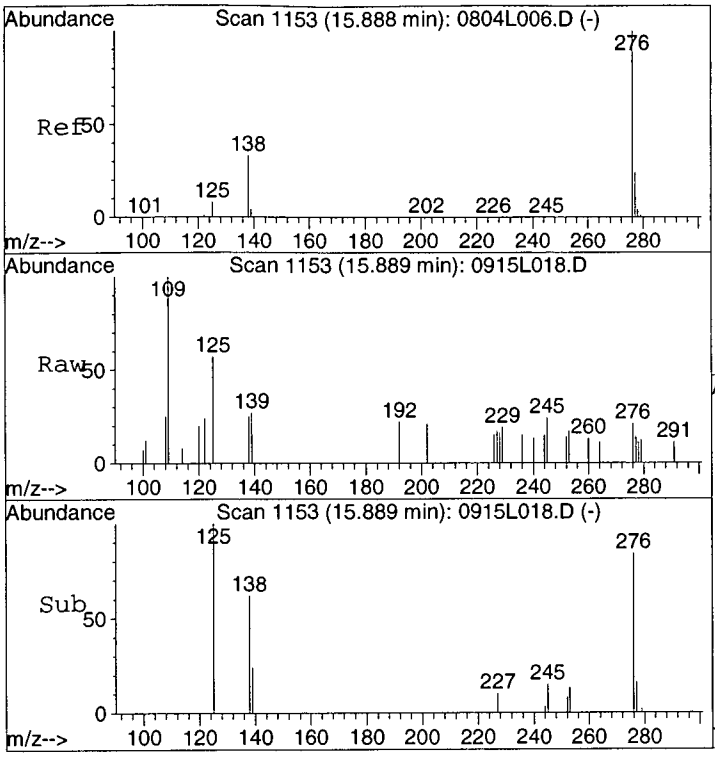
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L018.D Vial: 18
Acq On : 16 Sep 14 4:40 Operator: LF
Sample : AZ02105S11 1/39.46G Inst : Linus
Misc : Multiplr: 25.34

Quant Time: Sep 18 22:47 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

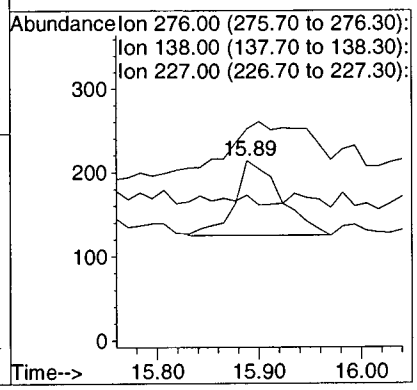


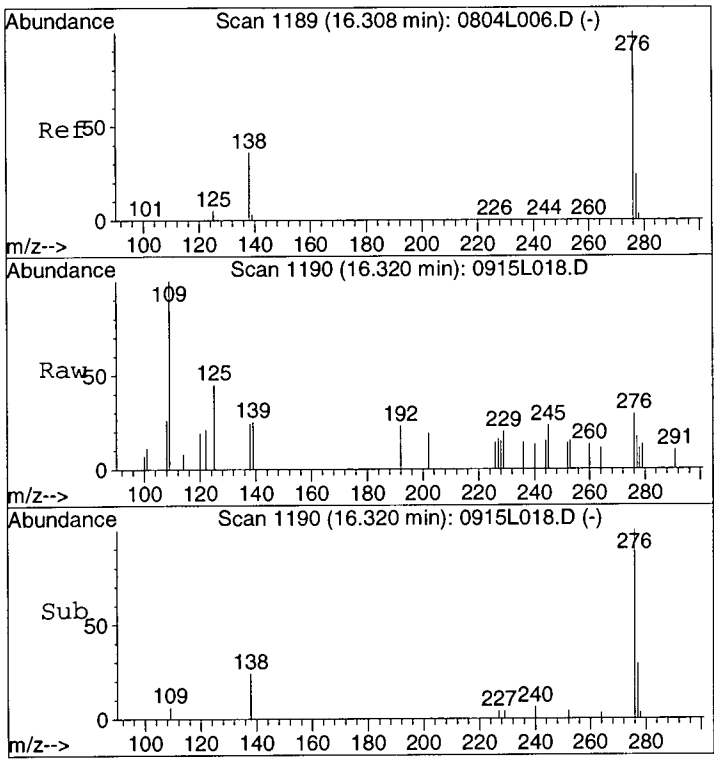


#20
Indeno (1,2,3-cd) pyrene
Concen: 5.40143 ppb
RT: 15.89 min Scan# 1153
Delta R.T. -0.01 min
Lab File: 0915L018.D
Acq: 16 Sep 14 4:40

Tgt Ion:276 Resp: 283

Ion	Ratio	Lower	Upper
276	100		
138	52.8	22.8	42.4#
227	16.9	0.2	0.4#

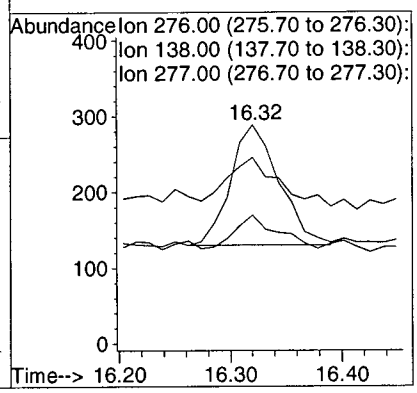




#26
Benzo (g,h,i) perylene
Concen: 10.58522 ppb
RT: 16.32 min Scan# 1190
Delta R.T. 0.00 min
Lab File: 0915L018.D
Acq: 16 Sep 14 4:40

Tgt Ion:276 Resp: 486

Ion	Ratio	Lower	Upper
276	100		
138	40.9	24.4	45.4
277	23.9	17.1	31.7



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Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN008
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02106
QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 29.8 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0013 J	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.024	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.023	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.048	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.012	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.048	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.020	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.017	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.0075	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.0033 J	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.017	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	65.8	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	77.7	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	83.7	30-125			%	9/10/14	9/16/14

J = Estimated value.

Quant Method: SIM.M
Run #: 0915L019
Instrument: Linus
Sequence: L140821
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L019.D Vial: 19
Acq On : 16 Sep 14 5:06 Operator: LF
Sample : AZ02106S11 1/42.78G Inst : Linus
Misc : Multiplr: 23.38

Quant Time: Sep 18 22:49 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1925	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	888	2.50000 ppb		-0.01
11) Phenanthrene-D10(IS)	9.79	188	1513	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.85	240	2617	2.50000 ppb		-0.01
21) Perylene-D12(IS)	14.45	264	1239	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	750	36.32693 ppb		0.00
Spiked Amount 46.751			Recovery = 77.703%			
7) Surrogate Recovery (FBP)	7.30	172	1177	30.74098 ppb		0.00
Spiked Amount 46.751			Recovery = 65.755%			
17) Surrogate Recovery (TPH)	11.65	244	2007	39.11698 ppb		-0.01
Spiked Amount 46.751			Recovery = 83.671%			
Target Compounds						Qvalue
12) Phenanthrene	9.81	178	121	2.31296 ppb	#	85
13) Anthracene	9.87	178	45	0.91812 ppb	#	64
14) Fluoranthene	11.19	202	1087	12.01491 ppb	#	87
16) Pyrene	11.44	202	1133	12.03572 ppb	#	89
18) Benz (a) anthracene	12.84	228	1272	16.69900 ppb		95
19) Chrysene	12.89	228	1023	13.85479 ppb		96
20) Indeno (1,2,3-cd) pyrene	15.90	276	337	5.27774 ppb	#	99
22) Benzo (b) fluoranthene	14.03	252	1875	33.38080 ppb		100
23) Benzo (k) fluoranthene	14.03	252	1875	33.70618 ppb	#	95
24) Benzo (a) pyrene	14.40	252	839	16.32151 ppb	#	86
26) Benzo (g,h,i) perylene	16.32	276	384	8.16286 ppb	#	85

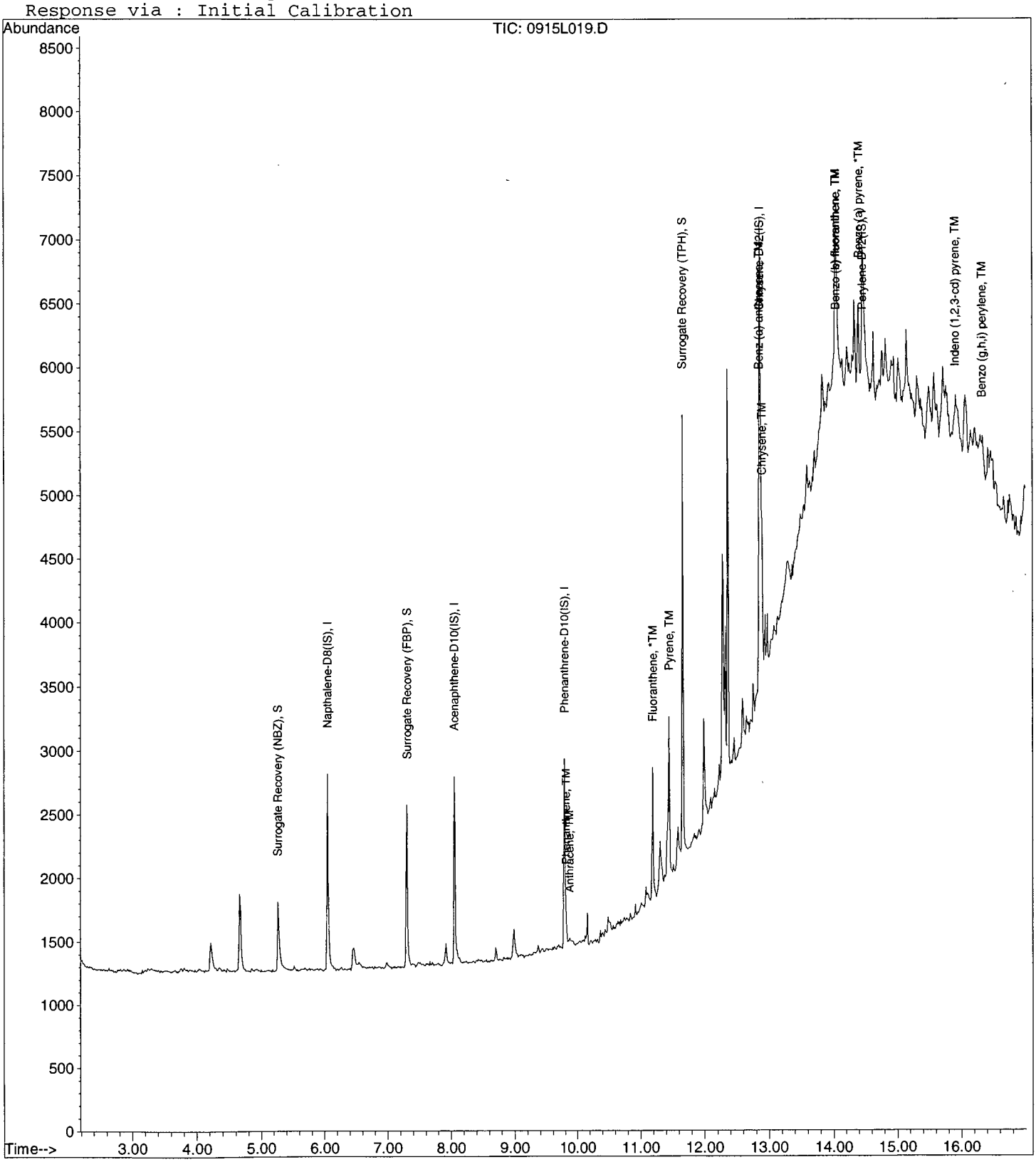
(#) = qualifier out of range (m) = manual integration

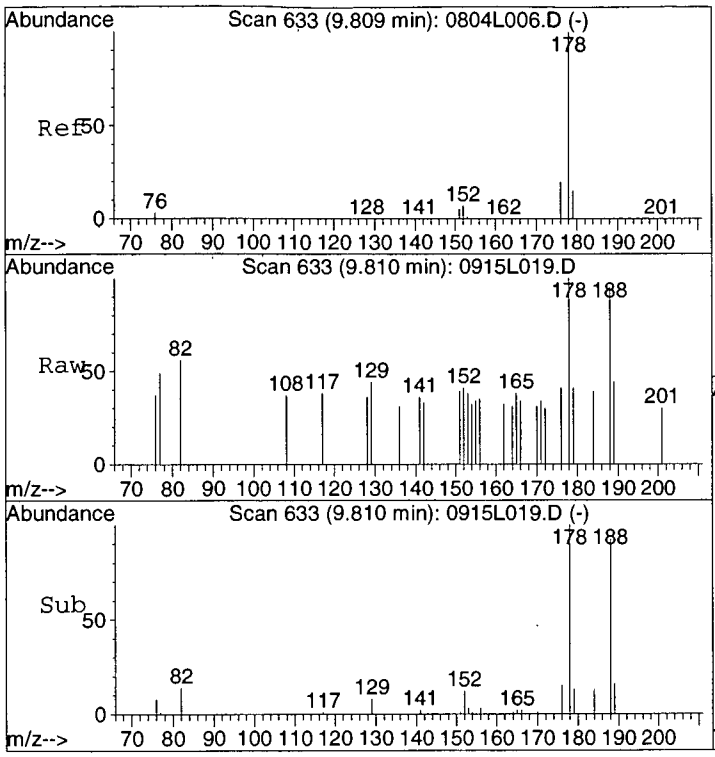
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L019.D Vial: 19
Acq On : 16 Sep 14 5:06 Operator: LF
Sample : AZ02106S11 1/42.78G Inst : Linus
Misc : Multiplr: 23.38

Quant Time: Sep 18 22:49 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

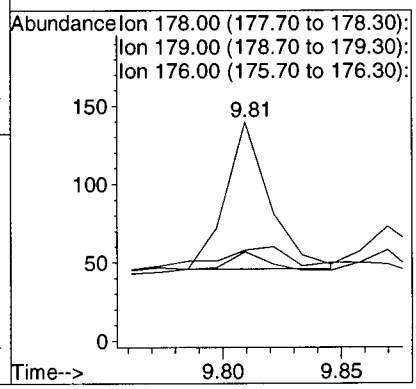


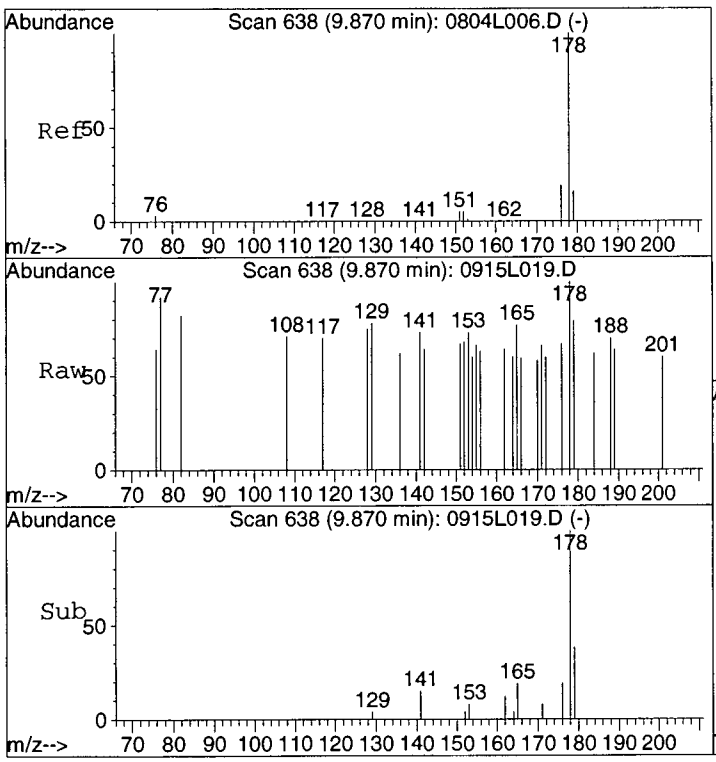


#12
Phenanthrene
Concen: 2.31296 ppb
RT: 9.81 min Scan# 633
Delta R.T. 0.00 min
Lab File: 0915L019.D
Acq: 16 Sep 14 5:06

Tgt Ion:178 Resp: 121

Ion	Ratio	Lower	Upper
178	100		
179	8.5	10.4	19.4#
176	12.8	13.4	24.8#

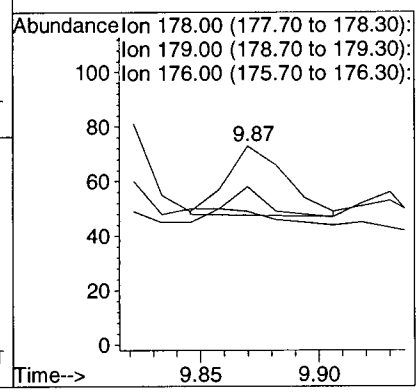


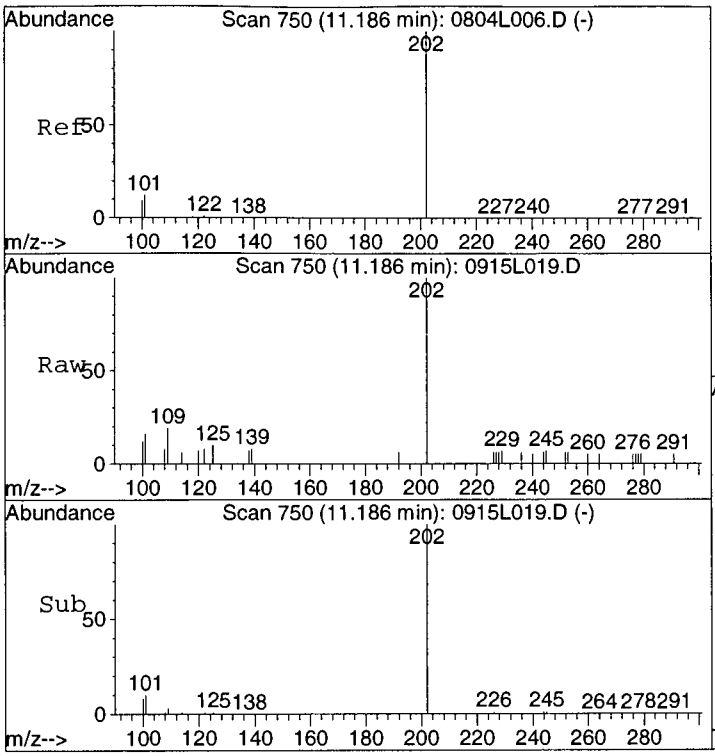


#13
Anthracene
Concen: 0.91812 ppb
RT: 9.87 min Scan# 638
Delta R.T. 0.00 min
Lab File: 0915L019.D
Acq: 16 Sep 14 5:06

Tgt Ion:178 Resp: 45

Ion	Ratio	Lower	Upper
178	100		
179	45.8	10.4	19.2#
176	20.8	13.0	24.1

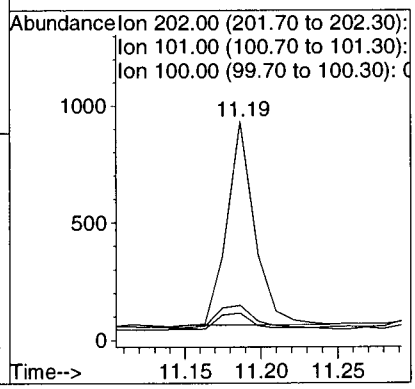


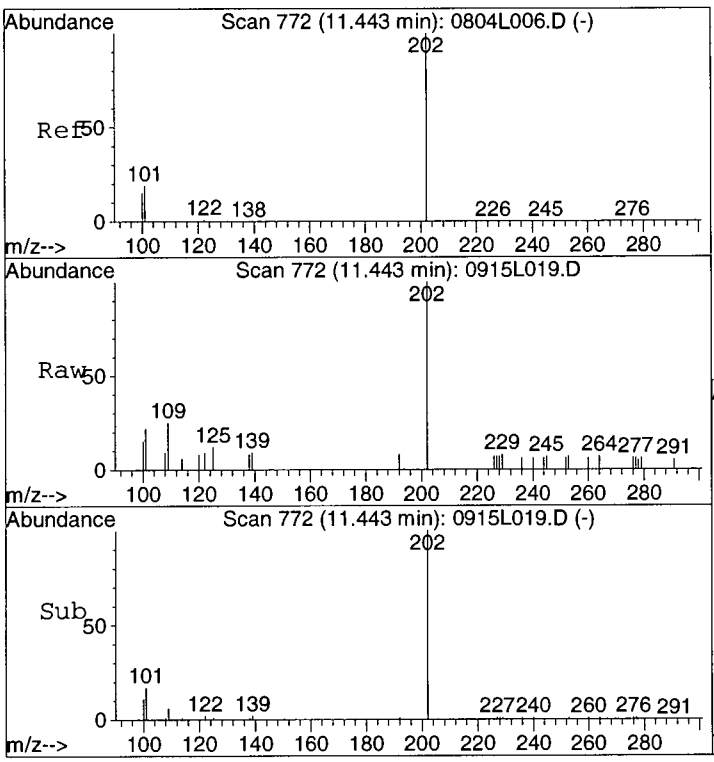


#14
Fluoranthene
Concen: 12.01491 ppb
RT: 11.19 min Scan# 750
Delta R.T. -0.00 min
Lab File: 0915L019.D
Acq: 16 Sep 14 5:06

Tgt Ion:202 Resp: 1087

Ion	Ratio	Lower	Upper
202	100		
101	10.7	12.0	22.2#
100	7.7	8.2	15.2#

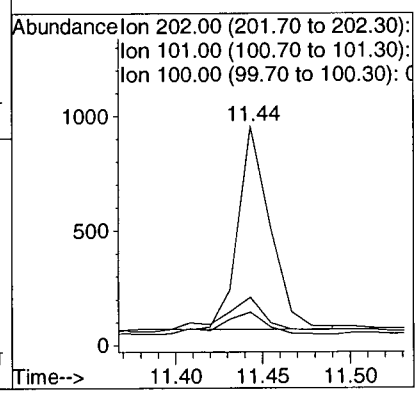


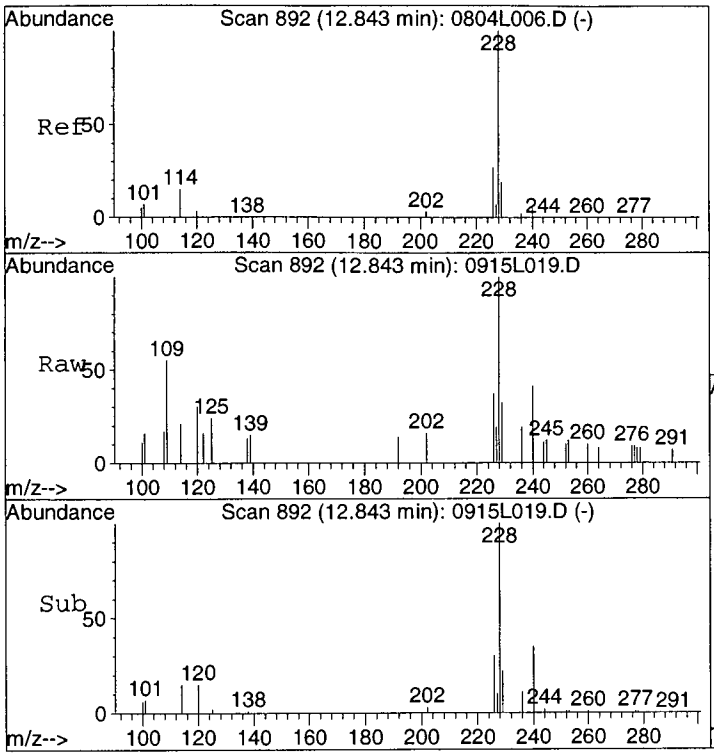


#16
Pyrene
Concen: 12.03572 ppb
RT: 11.44 min Scan# 772
Delta R.T. -0.01 min
Lab File: 0915L019.D
Acq: 16 Sep 14 5:06

Tgt Ion:202 Resp: 1133

Ion	Ratio	Lower	Upper
202	100		
101	15.8	7.4	13.8#
100	11.0	5.8	10.8#

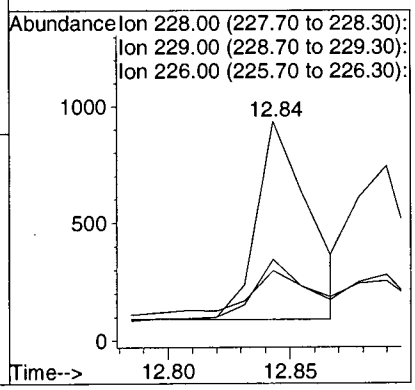


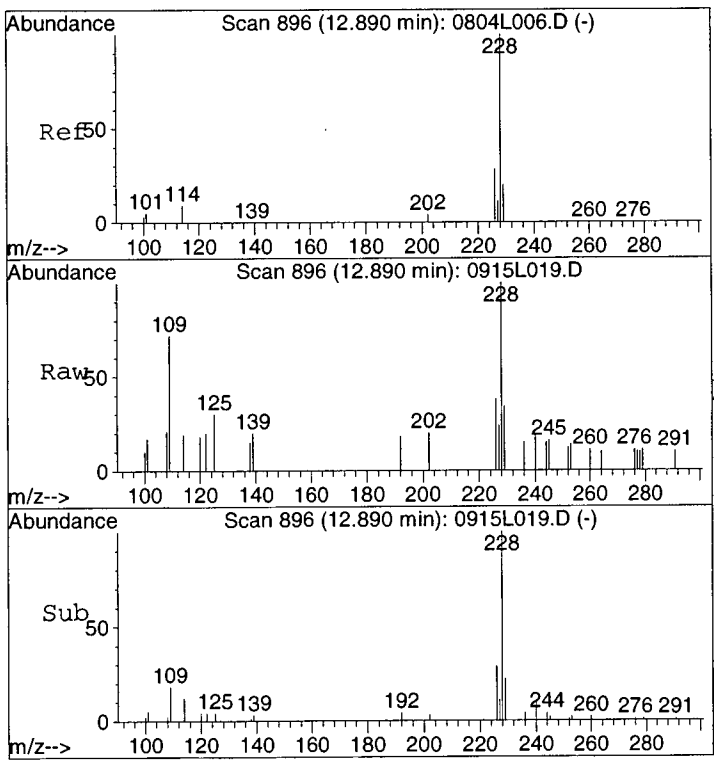


#18
Benz (a) anthracene
Concen: 16.69900 ppb
RT: 12.84 min Scan# 892
Delta R.T. -0.01 min
Lab File: 0915L019.D
Acq: 16 Sep 14 5:06

Tgt Ion:228 Resp: 1272

Ion	Ratio	Lower	Upper
228	100		
229	20.0	14.1	26.1
226	29.7	17.5	32.5

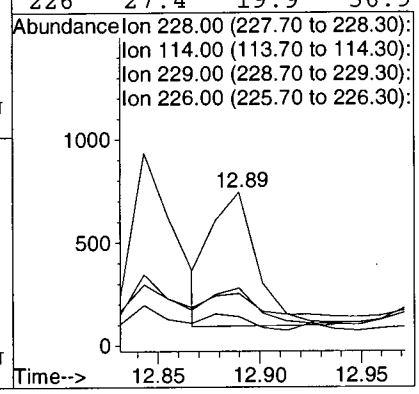


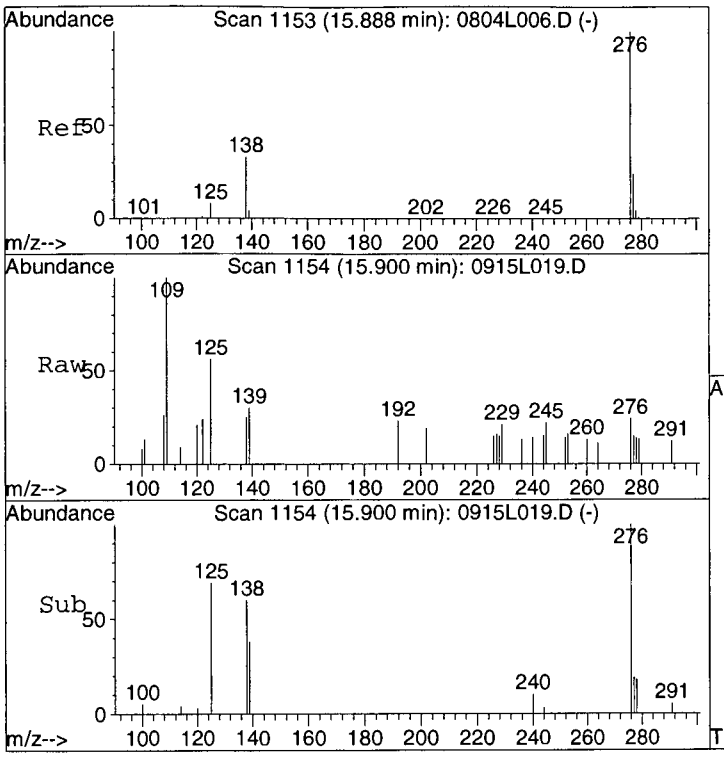


#19
Chrysene
Concen: 13.85479 ppb
RT: 12.89 min Scan# 896
Delta R.T. 0.00 min
Lab File: 0915L019.D
Acq: 16 Sep 14 5:06

Tgt Ion:228 Resp: 1023

Ion	Ratio	Lower	Upper
228	100		
114	9.5	8.4	15.6
229	17.6	13.8	25.6
226	27.4	19.9	36.9

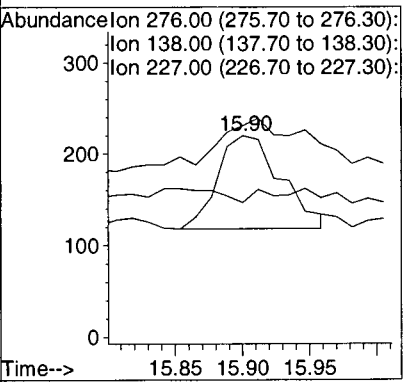


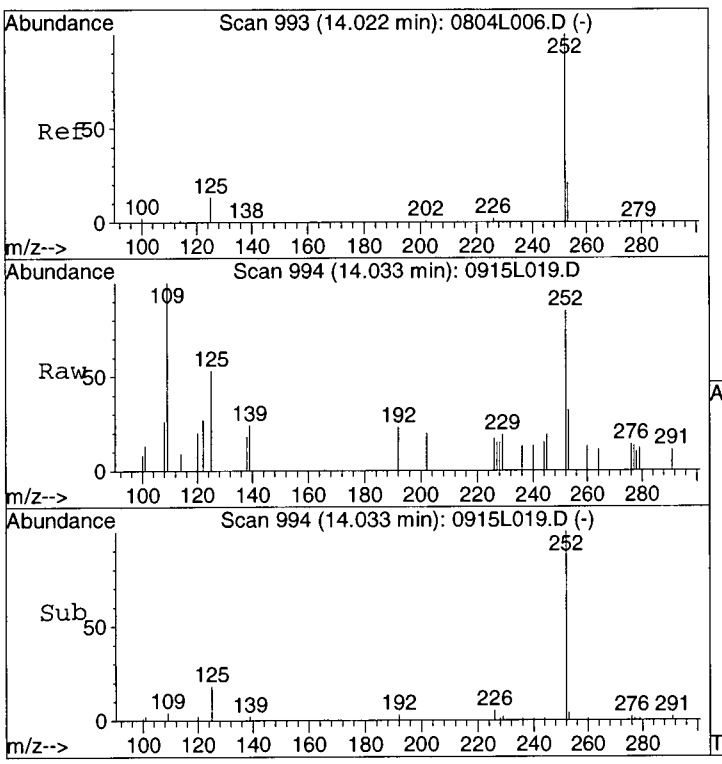


#20
Indeno (1,2,3-cd) pyrene
Concen: 5.27774 ppb
RT: 15.90 min Scan# 1154
Delta R.T. -0.00 min
Lab File: 0915L019.D
Acq: 16 Sep 14 5:06

Tgt Ion:276 Resp: 337

Ion	Ratio	Lower	Upper
276	100		
138	33.3	22.8	42.4
227	0.0	0.2	0.4#

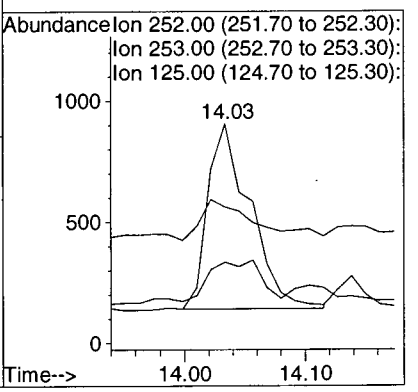


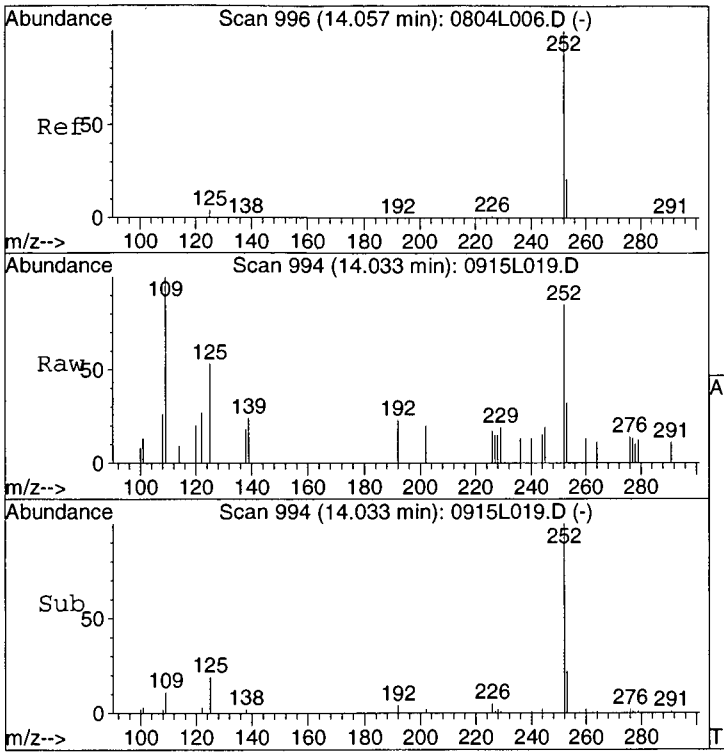


#22
Benzo (b) fluoranthene
Concen: 33.38080 ppb
RT: 14.03 min Scan# 994
Delta R.T. 0.01 min
Lab File: 0915L019.D
Acq: 16 Sep 14 5:06

Tgt Ion:252 Resp: 1875

Ion	Ratio	Lower	Upper
252	100		
253	21.3	14.9	27.7
125	17.9	12.3	22.8

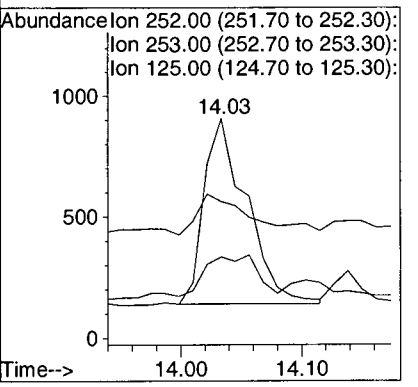


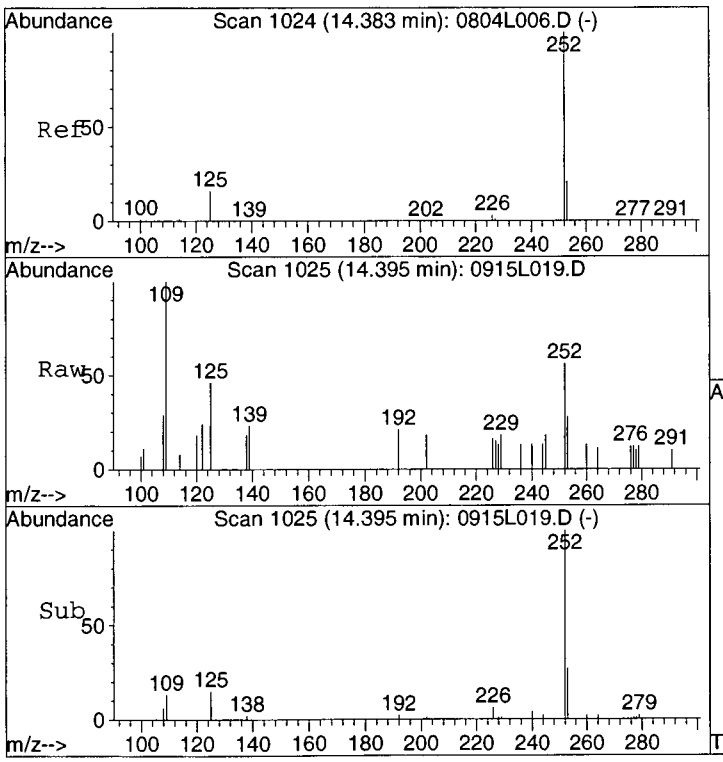


#23
Benzo (k) fluoranthene
Concen: 33.70618 ppb
RT: 14.03 min Scan# 994
Delta R.T. -0.02 min
Lab File: 0915L019.D
Acq: 16 Sep 14 5:06

Tgt Ion:252 Resp: 1875

Ion	Ratio	Lower	Upper
252	100		
253	21.3	14.7	27.3
125	17.9	9.2	17.0#

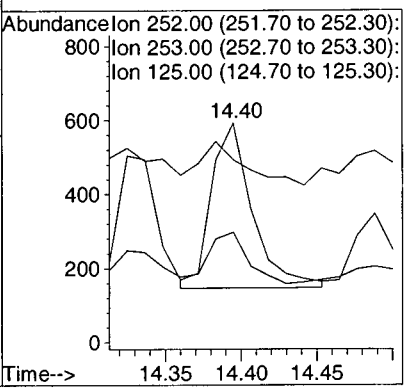


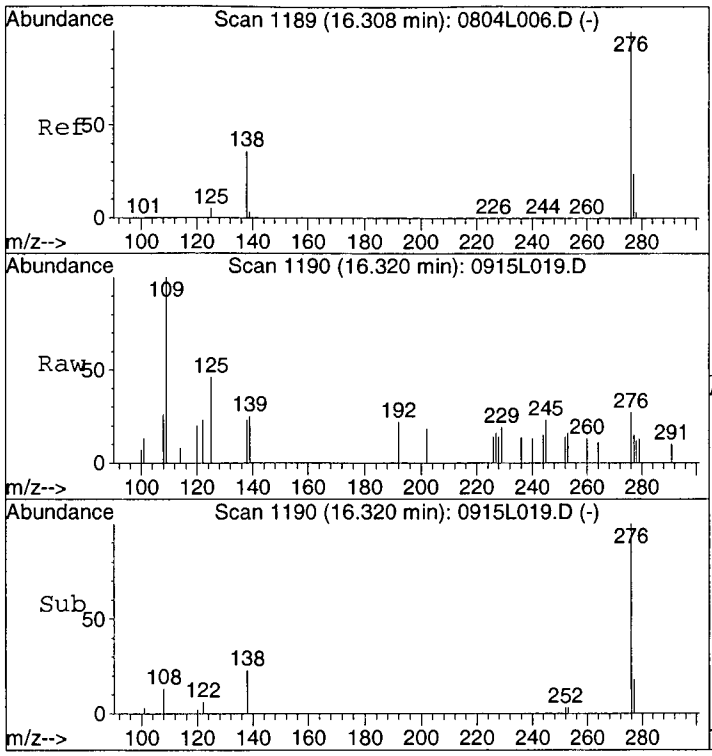


#24
Benzo (a) pyrene
Concen: 16.32151 ppb
RT: 14.40 min Scan# 1025
Delta R.T. -0.00 min
Lab File: 0915L019.D
Acq: 16 Sep 14 5:06

Tgt Ion:252 Resp: 839

Ion	Ratio	Lower	Upper
252	100		
253	29.9	15.4	28.6#
125	9.6	9.5	17.6

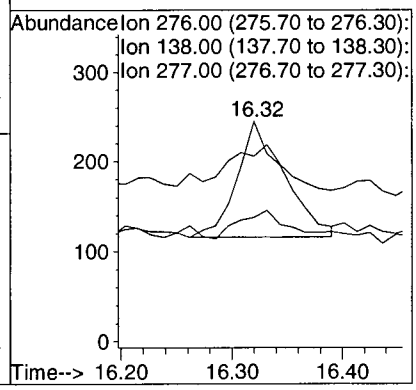




#26
Benzo (g,h,i) perylene
Concen: 8.16286 ppb
RT: 16.32 min Scan# 1190
Delta R.T. -0.00 min
Lab File: 0915L019.D
Acq: 16 Sep 14 5:06

Tgt Ion:276 Resp: 384

Ion	Ratio	Lower	Upper
276	100		
138	29.5	24.4	45.4
277	12.4	17.1	31.7#



EPA 8270C SIM IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN009
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02107
QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 23.4 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.0047 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.0039 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.0080	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.0078	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.0080	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.0038 J	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.0079	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.0047 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.0021 J	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.0079	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	70.4	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	67.7	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	95.0	30-125			%	9/10/14	9/16/14

J = Estimated value.

Quant Method: SIM.M
Run #: 0915L020
Instrument: Linus
Sequence: L140821
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L020.D Vial: 20
Acq On : 16 Sep 14 5:32 Operator: LF
Sample : AZ02107S11 1/39.19G Inst : Linus
Misc : Multiplr: 25.52

Quant Time: Sep 18 22:50 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1973	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	8.06	164	865	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.79	188	1404	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.86	240	2244	2.50000	ppb		-0.01
21) Perylene-D12(IS)	14.47	264	1304	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.26	82	670	34.56299	ppb		0.00
Spiked Amount 51.033			Recovery = 67.726%				
7) Surrogate Recovery (FBP)	7.30	172	1228	35.94198	ppb		0.00
Spiked Amount 51.033			Recovery = 70.428%				
17) Surrogate Recovery (TPH)	11.65	244	1953	48.45811	ppb		-0.01
Spiked Amount 51.033			Recovery = 94.953%				
Target Compounds							Qvalue
12) Phenanthrene	9.81	178	70	1.57405	ppb	#	93
13) Anthracene	9.87	178	25	0.60002	ppb	#	81
14) Fluoranthene	11.19	202	463	6.02018	ppb	#	87
16) Pyrene	11.44	202	450	6.08557	ppb		94
18) Benz (a) anthracene	12.84	228	214	3.57654	ppb	#	82
19) Chrysene	12.89	228	171	2.94827	ppb	#	83
20) Indeno (1,2,3-cd) pyrene	15.90	276	181	3.60864	ppb	#	84
22) Benzo (b) fluoranthene	14.03	252	331	6.11199	ppb		92
23) Benzo (k) fluoranthene	14.03	252	327	6.09699	ppb		89
24) Benzo (a) pyrene	14.40	252	147	2.96603	ppb	#	71
26) Benzo (g,h,i) perylene	16.32	276	272	5.99707	ppb		96

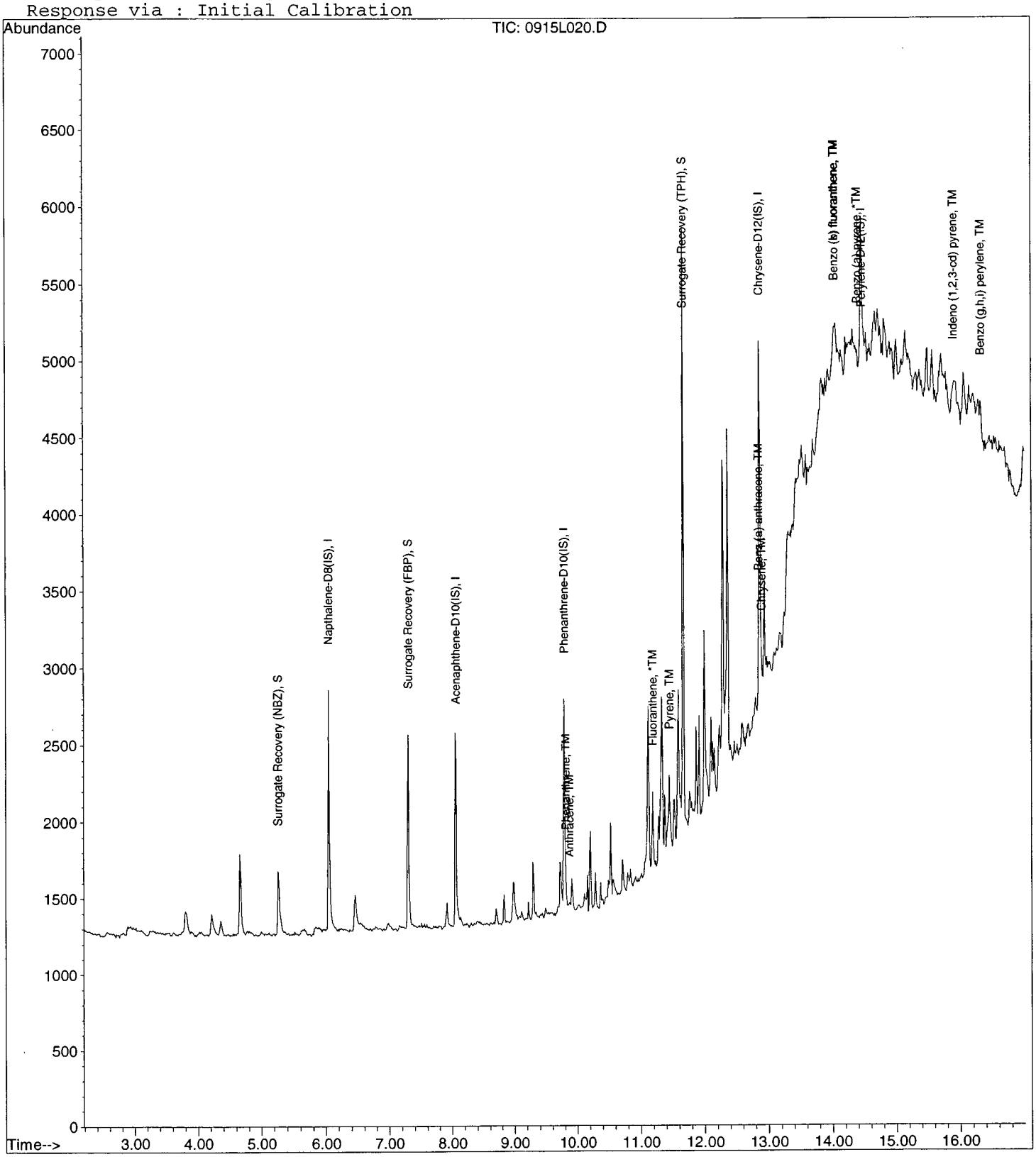
(#) = qualifier out of range (m) = manual integration

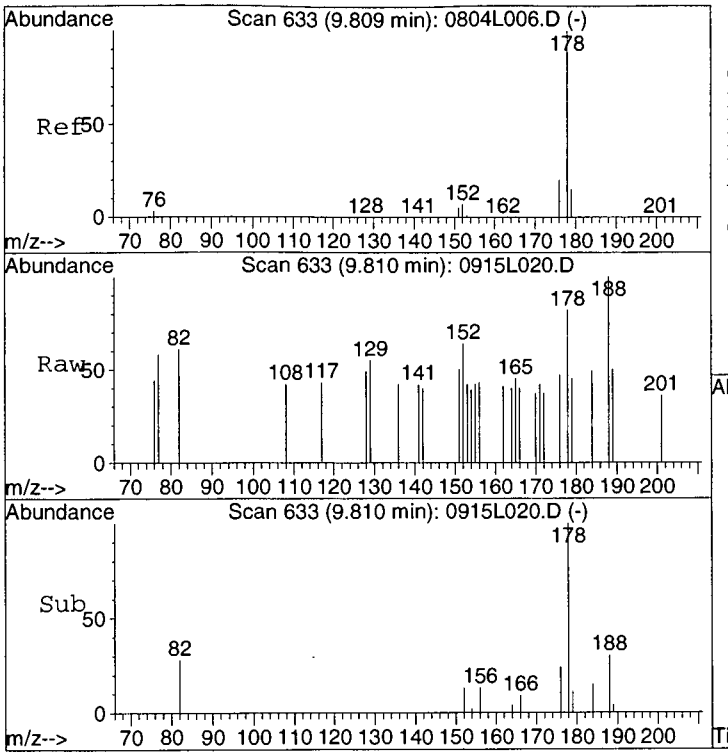
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L020.D Vial: 20
Acq On : 16 Sep 14 5:32 Operator: LF
Sample : AZ02107S11 1/39.19G Inst : Linus
Misc : Multiplr: 25.52

Quant Time: Sep 18 22:50 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

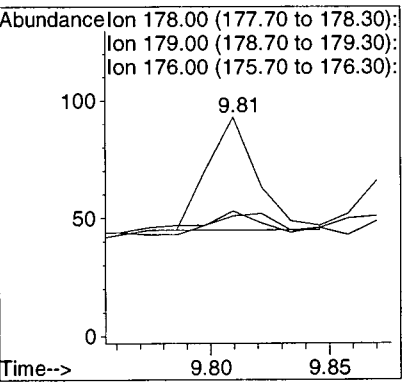


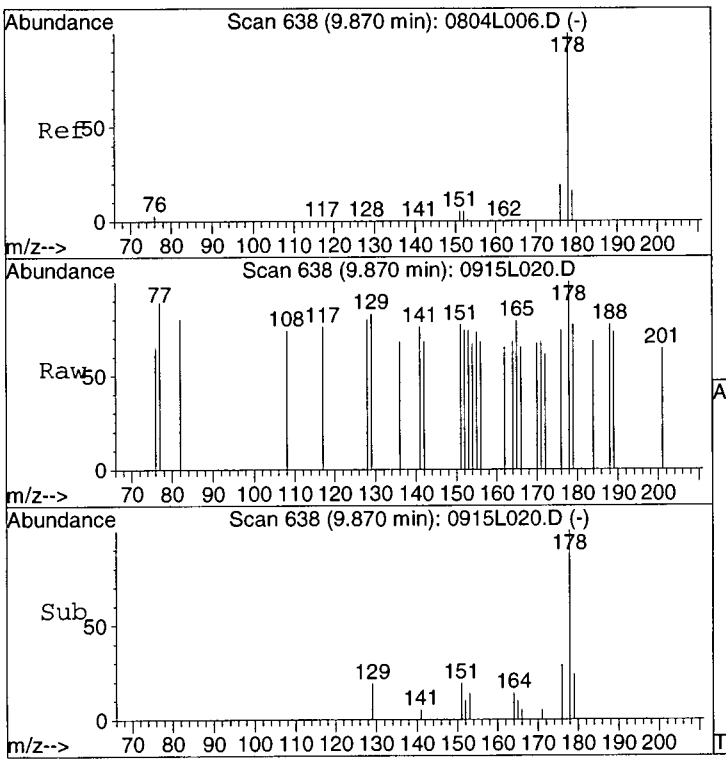


#12
Phenanthrene
Concen: 1.57405 ppb
RT: 9.81 min Scan# 633
Delta R.T. 0.00 min
Lab File: 0915L020.D
Acq: 16 Sep 14 5:32

Tgt Ion:178 Resp: 70

Ion	Ratio	Lower	Upper
178	100		
179	10.4	10.4	19.4#
176	20.8	13.4	24.8

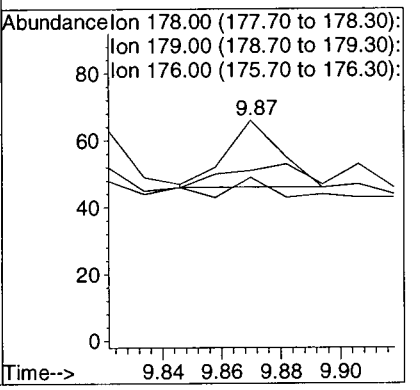


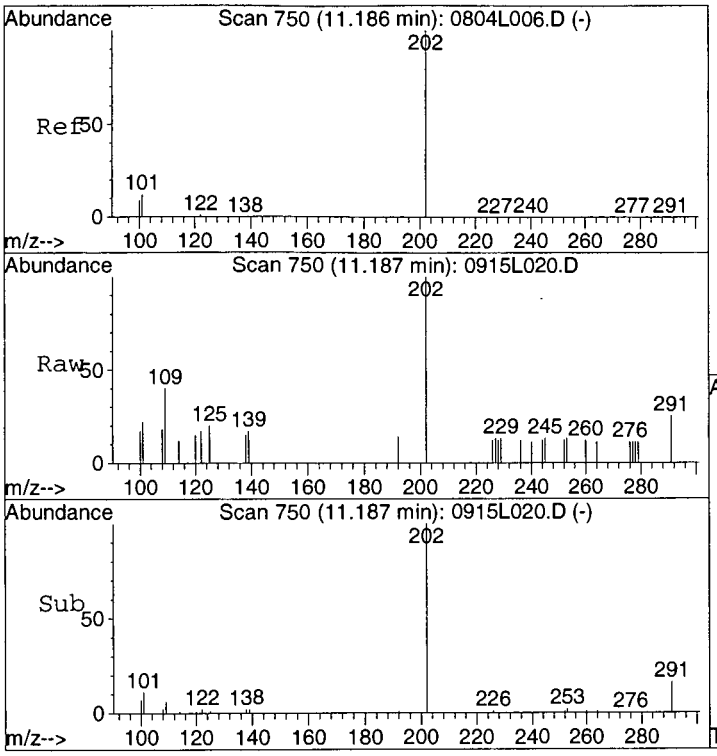


#13
Anthracene
Concen: 0.60002 ppb
RT: 9.87 min Scan# 638
Delta R.T. 0.00 min
Lab File: 0915L020.D
Acq: 16 Sep 14 5:32

Tgt Ion:178 Resp: 25

Ion	Ratio	Lower	Upper
178	100		
179	25.0	10.4	19.2#
176	25.0	13.0	24.1#

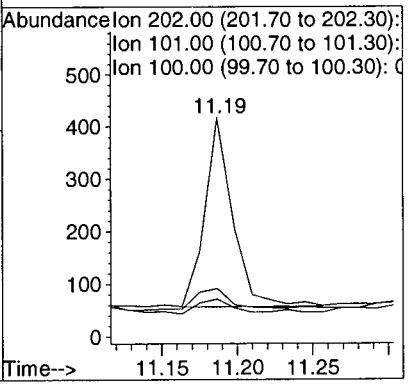


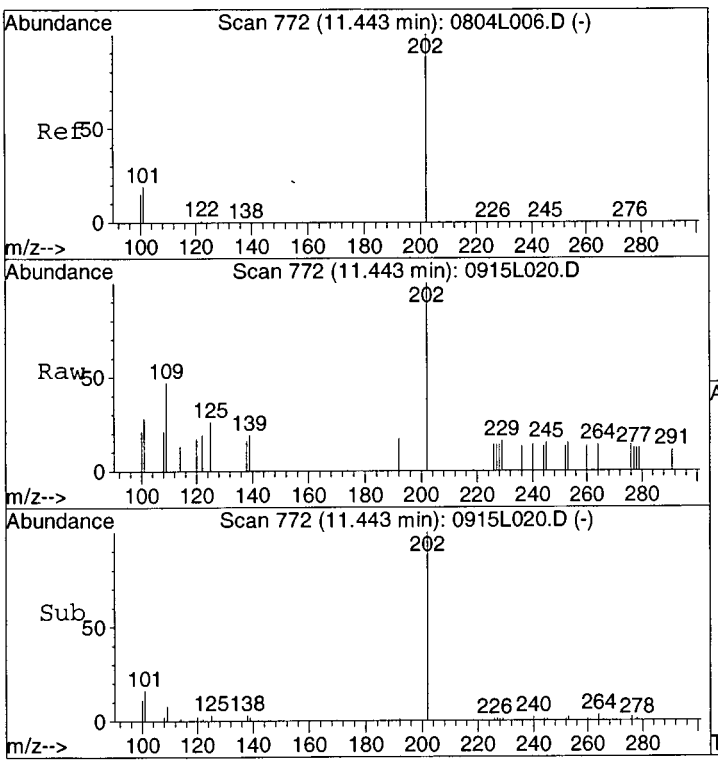


#14
Fluoranthene
Concen: 6.02018 ppb
RT: 11.19 min Scan# 750
Delta R.T. 0.00 min
Lab File: 0915L020.D
Acq: 16 Sep 14 5:32

Tgt Ion:202 Resp: 463

Ion	Ratio	Lower	Upper
202	100		
101	10.9	12.0	22.2#
100	7.8	8.2	15.2#

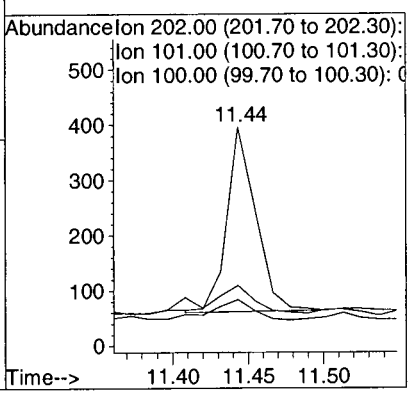


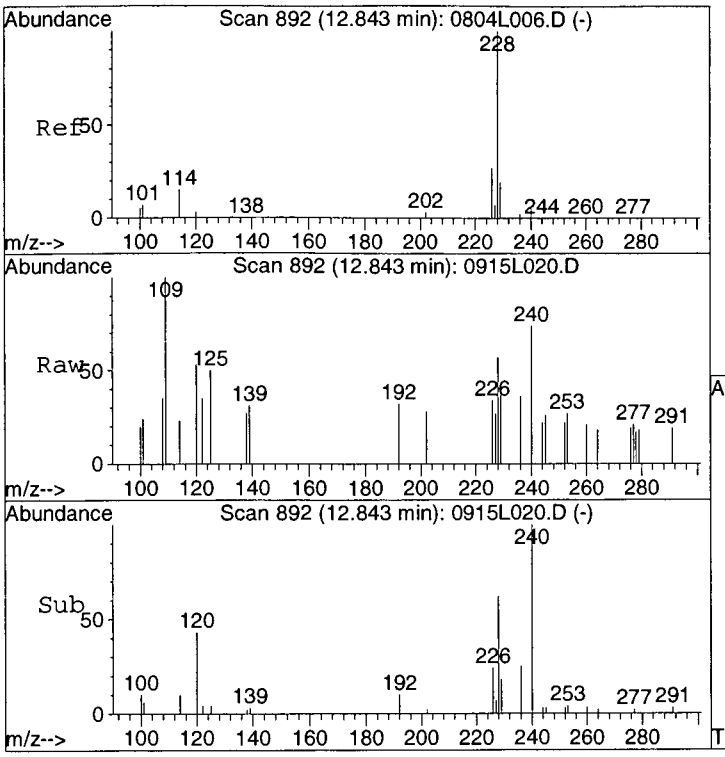


#16
Pyrene
Concen: 6.08557 ppb
RT: 11.44 min Scan# 772
Delta R.T. -0.01 min
Lab File: 0915L020.D
Acq: 16 Sep 14 5:32

Tgt Ion:202 Resp: 450

Ion	Ratio	Lower	Upper
202	100		
101	13.2	7.4	13.8
100	9.6	5.8	10.8

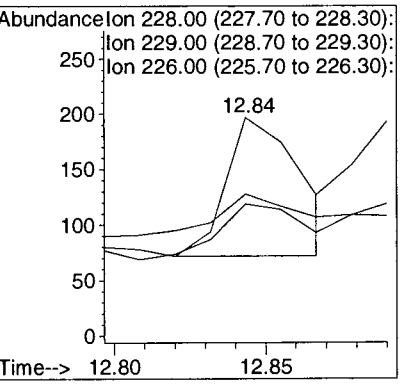


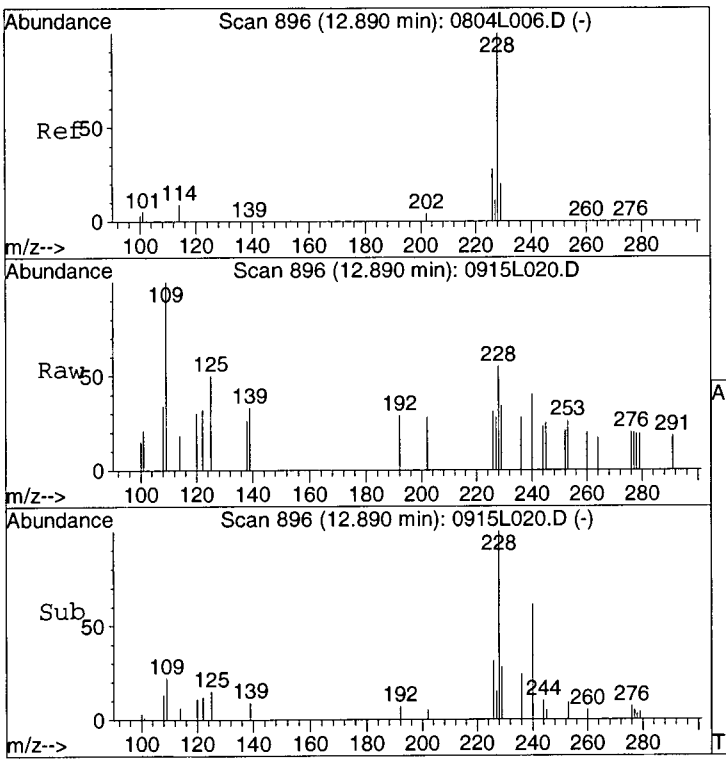


#18
Benz (a) anthracene
Concen: 3.57654 ppb
RT: 12.84 min Scan# 892
Delta R.T. -0.01 min
Lab File: 0915L020.D
Acq: 16 Sep 14 5:32

Tgt Ion:228 Resp: 214

Ion	Ratio	Lower	Upper
228	100		
229	26.4	14.1	26.1#
226	36.0	17.5	32.5#

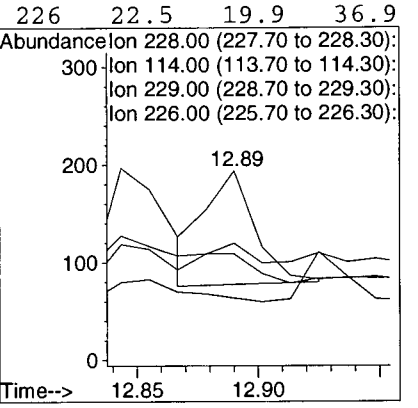


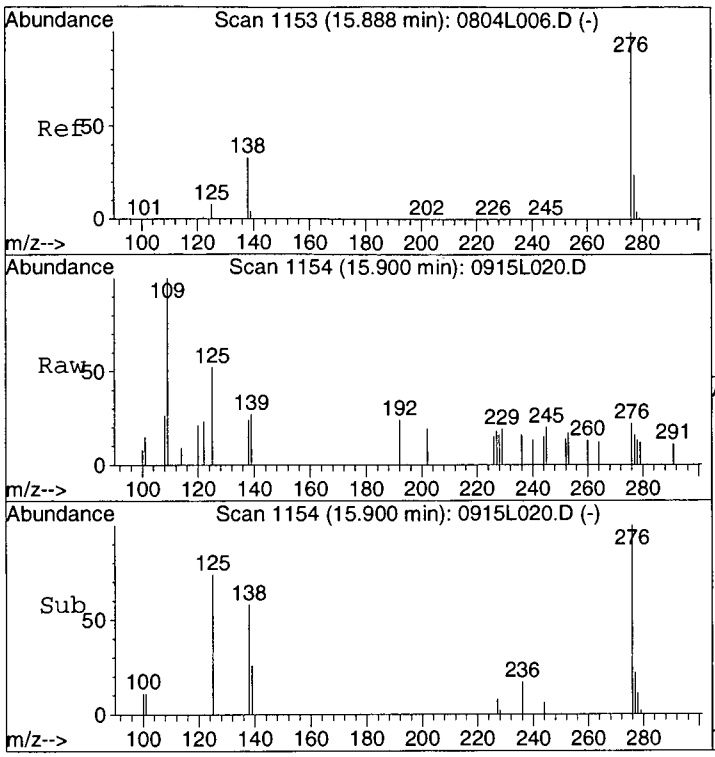


#19
Chrysene
Concen: 2.94827 ppb
RT: 12.89 min Scan# 896
Delta R.T. 0.00 min
Lab File: 0915L020.D
Acq: 16 Sep 14 5:32

Tgt Ion:228 Resp: 171

Ion	Ratio	Lower	Upper
228	100		
114	0.0	8.4	15.6#
229	11.7	13.8	25.6#
226	22.5	19.9	36.9

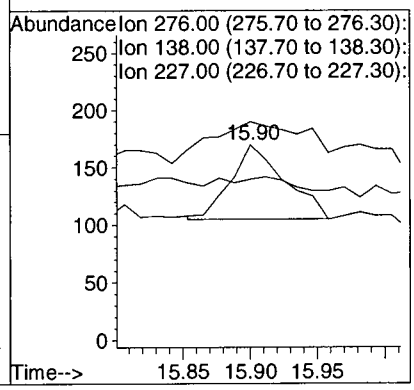


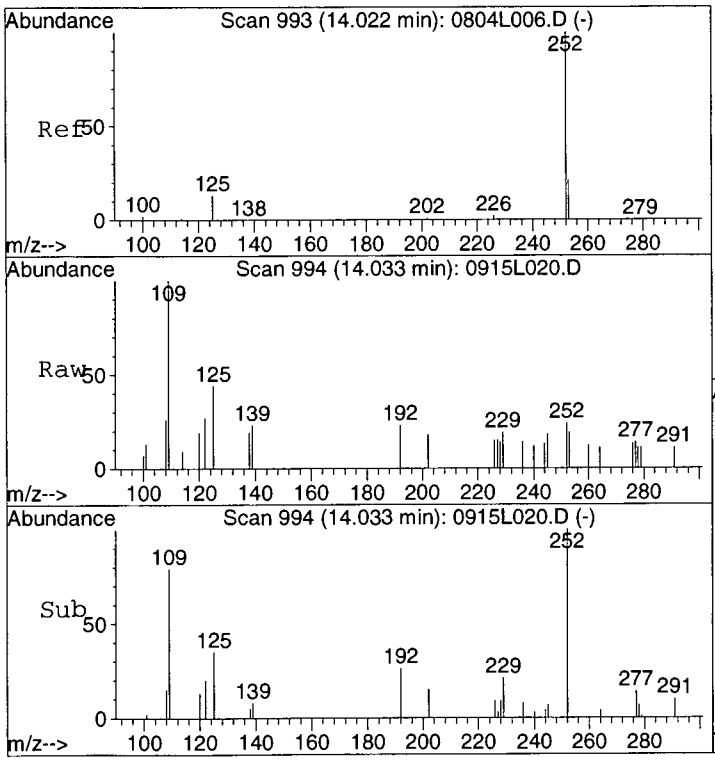


#20
Indeno (1,2,3-cd) pyrene
Concen: 3.60864 ppb
RT: 15.90 min Scan# 1154
Delta R.T. 0.00 min
Lab File: 0915L020.D
Acq: 16 Sep 14 5:32

Tgt Ion:276 Resp: 181

Ion	Ratio	Lower	Upper
276	100		
138	41.5	22.8	42.4
227	15.4	0.2	0.4#

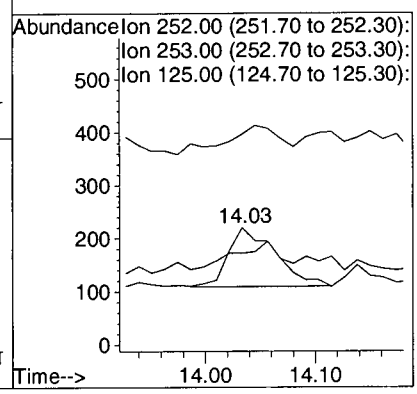


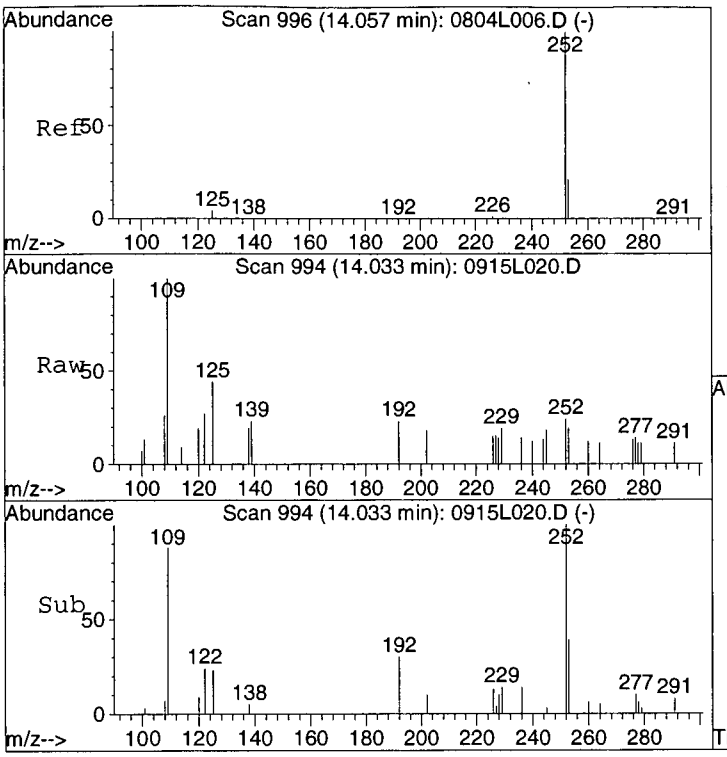


#22
Benzo (b) fluoranthene
Concen: 6.11199 ppb
RT: 14.03 min Scan# 994
Delta R.T. 0.01 min
Lab File: 0915L020.D
Acq: 16 Sep 14 5:32

Tgt Ion:252 Resp: 331

Ion	Ratio	Lower	Upper
252	100		
253	27.3	14.9	27.7
125	16.4	12.3	22.8

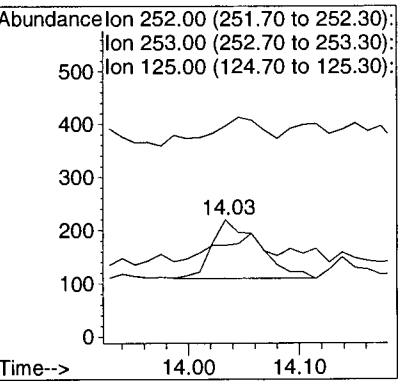


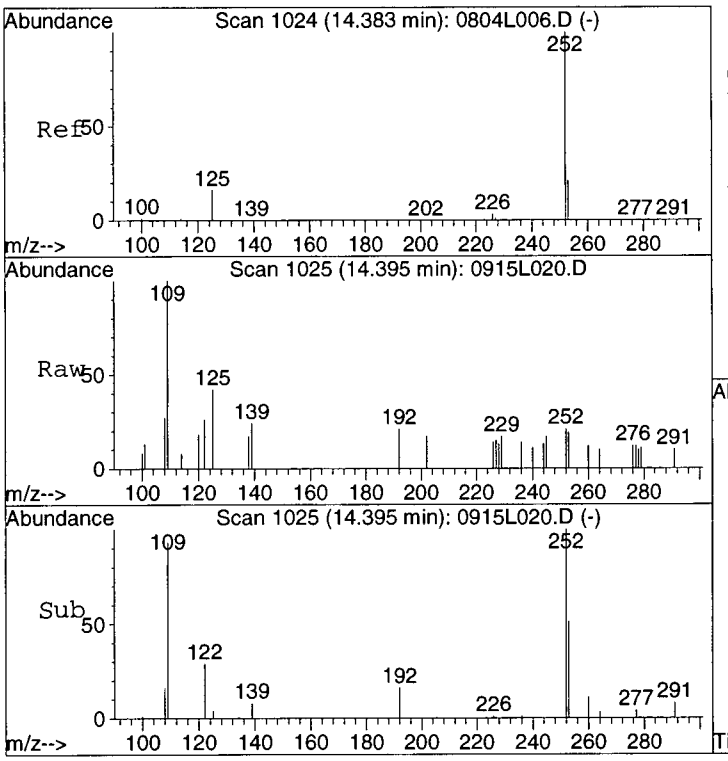


#23
Benzo (k) fluoranthene
Concen: 6.09699 ppb
RT: 14.03 min Scan# 994
Delta R.T. -0.02 min
Lab File: 0915L020.D
Acq: 16 Sep 14 5:32

Tgt Ion:252 Resp: 327

Ion	Ratio	Lower	Upper
252	100		
253	27.3	14.7	27.3
125	16.4	9.2	17.0

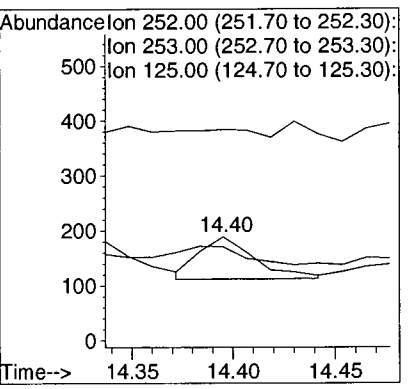


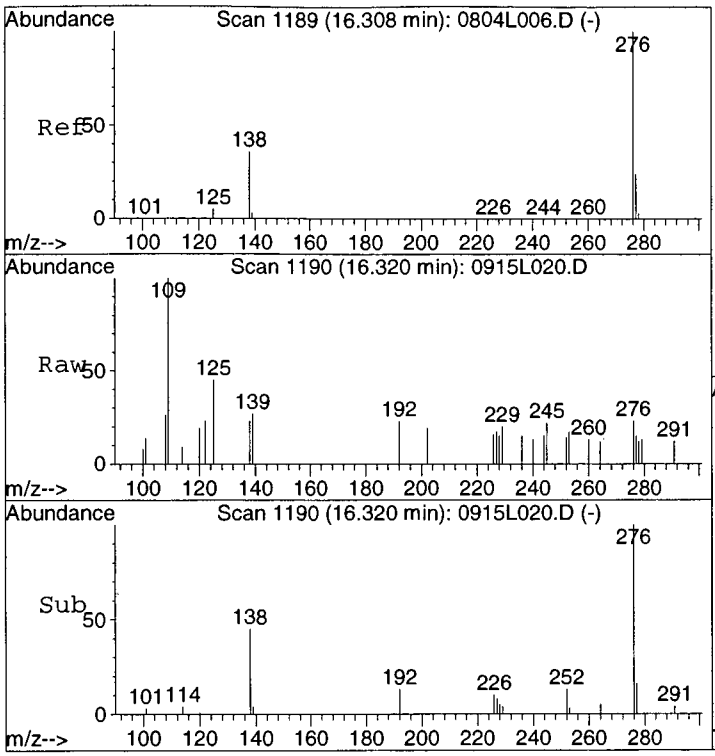


#24
Benzo (a) pyrene
Concen: 2.96603 ppb
RT: 14.40 min Scan# 1025
Delta R.T. 0.00 min
Lab File: 0915L020.D
Acq: 16 Sep 14 5:32

Tgt Ion:252 Resp: 147

Ion	Ratio	Lower	Upper
252	100		
253	42.9	15.4	28.6#
125	11.4	9.5	17.6

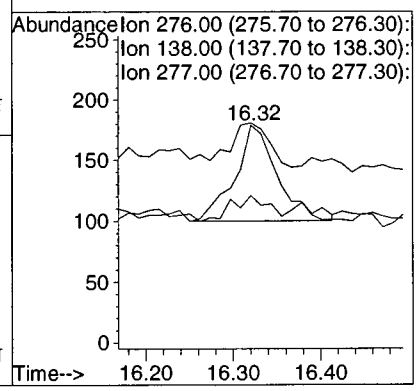




#26
Benzo (g,h,i) perylene
Concen: 5.99707 ppb
RT: 16.32 min Scan# 1190
Delta R.T. 0.00 min
Lab File: 0915L020.D
Acq: 16 Sep 14 5:32

Tgt Ion:276 Resp: 272

Ion	Ratio	Lower	Upper
276	100		
138	38.0	24.4	45.4
277	25.3	17.1	31.7



EPA 8270C SIM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN010
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02108
QCG: #SIMHC-140908A-189931

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270C-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	ACENAPHTHYLENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(A)ANTHRACENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(A)PYRENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(B)FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(GHI)PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(K)FLUORANTHENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
8270C-SIM	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
8270C-SIM	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
8270C-SIM	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
8270C-SIM	FLUORENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	INDENO(1,2,3-CD)PYRENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
8270C-SIM	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
8270C-SIM	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
8270C-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	72.5	50-110			%	9/8/14	9/15/14
8270C-SIM	SURROGATE: NITROBENZENE-D5 (S)	62.6	40-110			%	9/8/14	9/15/14
8270C-SIM	SURROGATE: TERPHENYL-D14 (S)	79.0	50-135			%	9/8/14	9/15/14

Quant Method: SIM.M
Run #: 0915L005
Instrument: Linus
Sequence: L140821
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L005.D Vial: 5
Acq On : 15 Sep 14 23:02 Operator: LF
Sample : AZ02108W10 1/1070 Inst : Linus
Misc : Multiplr: 0.93

Quant Time: Sep 18 22:38 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1936	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	8.06	164	774	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.80	188	1210	2.50000	ppb	0.01
15) Chrysene-D12(IS)	12.87	240	2154	2.50000	ppb	0.00
21) Perylene-D12(IS)	14.49	264	1336	2.50000	ppb	0.04
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	608	1.17072	ppb	0.00
Spiked Amount 1.869			Recovery = 62.649%			
7) Surrogate Recovery (FBP)	7.30	172	1131	1.35498	ppb	0.00
Spiked Amount 1.869			Recovery = 72.493%			
17) Surrogate Recovery (TPH)	11.66	244	1559	1.47598	ppb	0.00
Spiked Amount 1.869			Recovery = 78.966%			

Target Compounds Qvalue

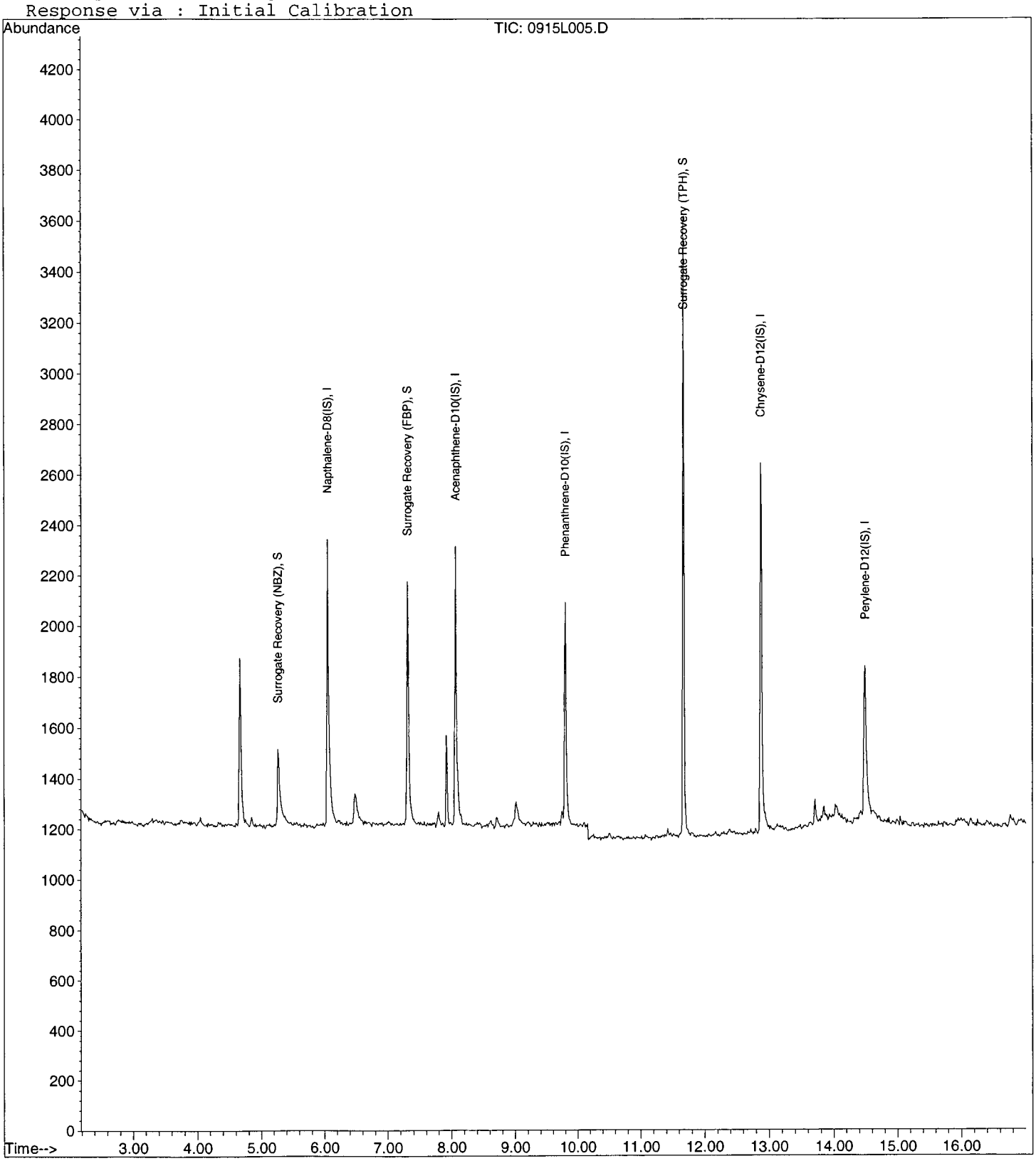
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L005.D Vial: 5
Acq On : 15 Sep 14 23:02 Operator: LF
Sample : AZ02108W10 1/1070 Inst : Linus
Misc : Multiplr: 0.93

Quant Time: Sep 18 22:38 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration



EPA 8270C SIM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN011
Sample Collection Date: 9/2/14

ARF: 74218
APPL ID: AZ02109
QCG: #SIMHC-140908A-189931

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270C-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	ACENAPHTHYLENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(A)ANTHRACENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(A)PYRENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(B)FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(GHI)PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(K)FLUORANTHENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
8270C-SIM	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
8270C-SIM	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
8270C-SIM	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
8270C-SIM	FLUORENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	INDENO(1,2,3-CD)PYRENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
8270C-SIM	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
8270C-SIM	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
8270C-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	58.0	50-110			%	9/8/14	9/15/14
8270C-SIM	SURROGATE: NITROBENZENE-D5 (S)	55.6	40-110			%	9/8/14	9/15/14
8270C-SIM	SURROGATE: TERPHENYL-D14 (S)	97.9	50-135			%	9/8/14	9/15/14

Quant Method: SIM.M
Run #: 0915L006
Instrument: Linus
Sequence: L140821
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L006.D Vial: 6
Acq On : 15 Sep 14 23:28 Operator: LF
Sample : AZ02109W09 1/1070 Inst : Linus
Misc : Multiplr: 0.93

Quant Time: Sep 18 22:38 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1611	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	8.06	164	787	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.80	188	1262	2.50000	ppb	0.01
15) Chrysene-D12(IS)	12.87	240	1910	2.50000	ppb	0.00
21) Perylene-D12(IS)	14.48	264	1320	2.50000	ppb	0.02
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	449	1.03898	ppb	0.00
Spiked Amount 1.869			Recovery = 55.586%			
7) Surrogate Recovery (FBP)	7.30	172	921	1.08517	ppb	0.00
Spiked Amount 1.869			Recovery = 58.048%			
17) Surrogate Recovery (TPH)	11.66	244	1714	1.83002	ppb	0.00
Spiked Amount 1.869			Recovery = 97.905%			

Target Compounds	Qvalue

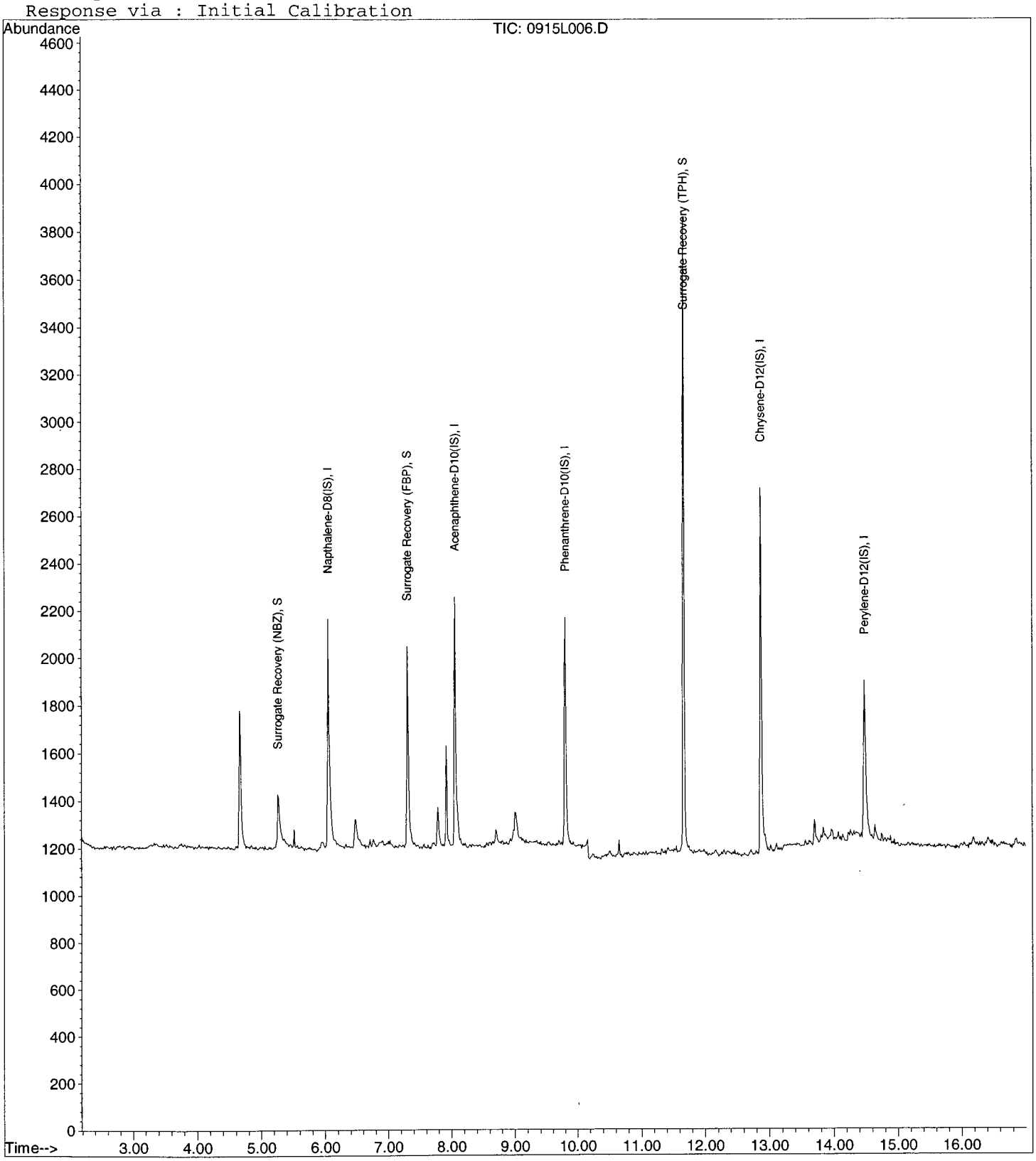
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L006.D Vial: 6
Acq On : 15 Sep 14 23:28 Operator: LF
Sample : AZ02109W09 1/1070 Inst : Linus
Misc : Multiplr: 0.93

Quant Time: Sep 18 22:38 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration



EPA 8270C SIM IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN012
Sample Collection Date: 9/3/14

ARF: 74218
APPL ID: AZ02110
QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 14.1 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0012 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0013 J	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.0075	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.0080	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.011	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.0073	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.011	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.0079	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.0094	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.0041 J	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.011	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	79.5	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	79.8	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	148 #	30-125			%	9/10/14	9/16/14

J = Estimated value.
= Recovery (or RPD) is outside QC limits.

Quant Method:	SIM.M
Run #:	0915L021
Instrument:	Linus
Sequence:	L140821
Dilution Factor:	1
Initials:	LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L021.D Vial: 21
Acq On : 16 Sep 14 5:58 Operator: LF
Sample : AZ02110S11 1/34.96G Inst : Linus
Misc : Multiplr: 28.60

Quant Time: Sep 18 22:52 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1891	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	1002	2.50000 ppb		-0.01
11) Phenanthrene-D10(IS)	9.79	188	1839	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.85	240	2632	2.50000 ppb		-0.01
21) Perylene-D12(IS)	14.45	264	1711	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	757	45.67430 ppb		0.00
Spiked Amount 57.208			Recovery = 79.838%			
7) Surrogate Recovery (FBP)	7.30	172	1605	45.46015 ppb		0.00
Spiked Amount 57.208			Recovery = 79.464%			
17) Surrogate Recovery (TPH)	11.65	244	3578	84.84875 ppb		-0.01
Spiked Amount 57.208			Recovery = 148.316%			
Target Compounds						Qvalue
3) Naphthalene	6.07	128	44	0.98216 ppb	#	90
4) 2-Methylnaphthalene	6.87	142	25	1.00896 ppb		82
5) 1-Methylnaphthalene	6.97	142	16	0.64869 ppb	#	51
12) Phenanthrene	9.81	178	181	3.48328 ppb		92
13) Anthracene	9.87	178	54	1.10920 ppb	#	93
14) Fluoranthene	11.19	202	725	8.06781 ppb	#	83
16) Pyrene	11.44	202	707	9.13795 ppb	#	82
18) Benz (a) anthracene	12.84	228	403	6.43718 ppb		96
19) Chrysene	12.89	228	412	6.78904 ppb	#	93
22) Benzo (b) fluoranthene	14.03	252	578	9.11830 ppb	#	81
23) Benzo (k) fluoranthene	14.03	252	606	9.65321 ppb	#	86
24) Benzo (a) pyrene	14.40	252	397	6.84352 ppb	#	1
26) Benzo (g,h,i) perylene	16.32	276	335	6.31025 ppb		92

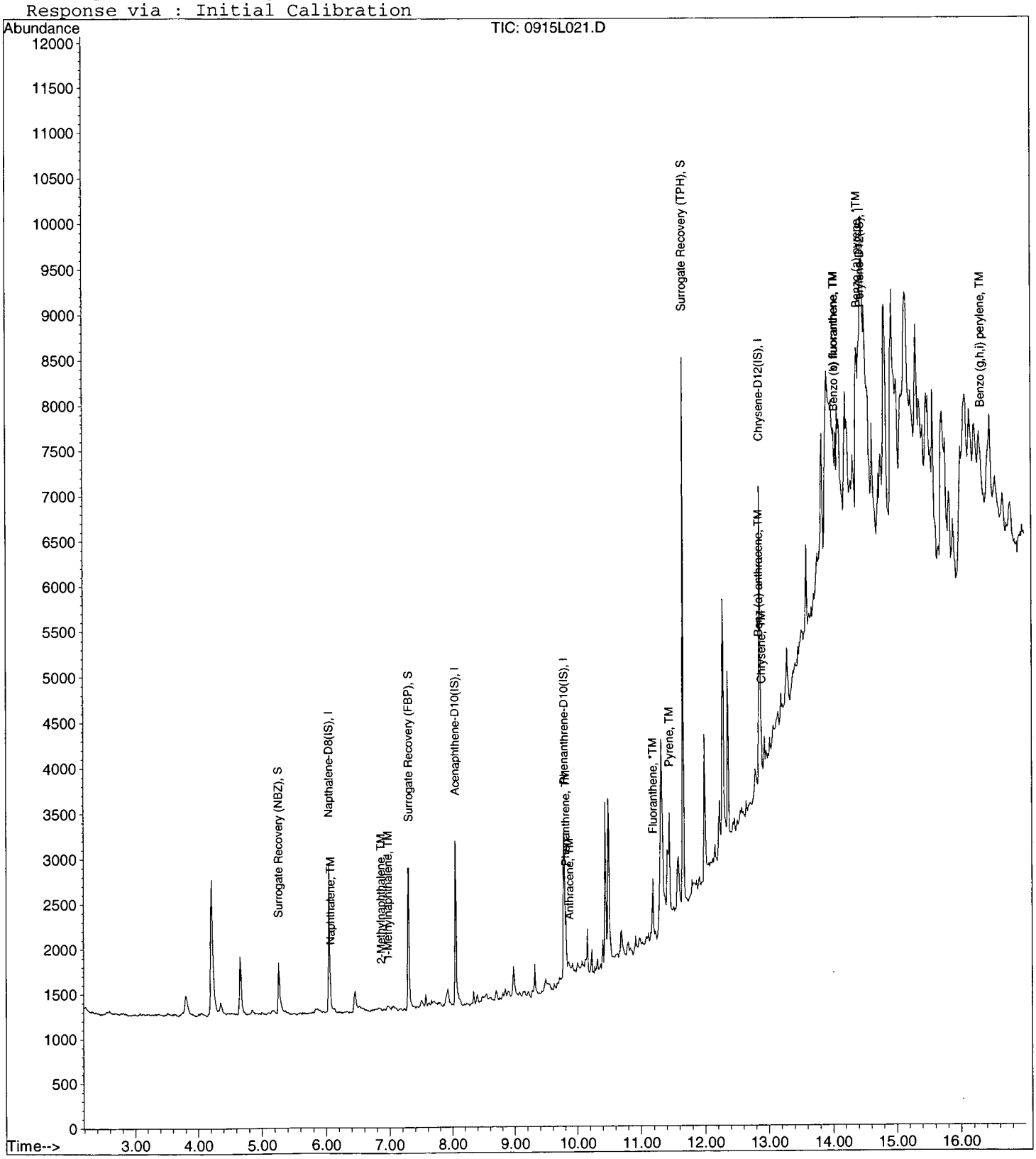
(#) = qualifier out of range (m) = manual integration

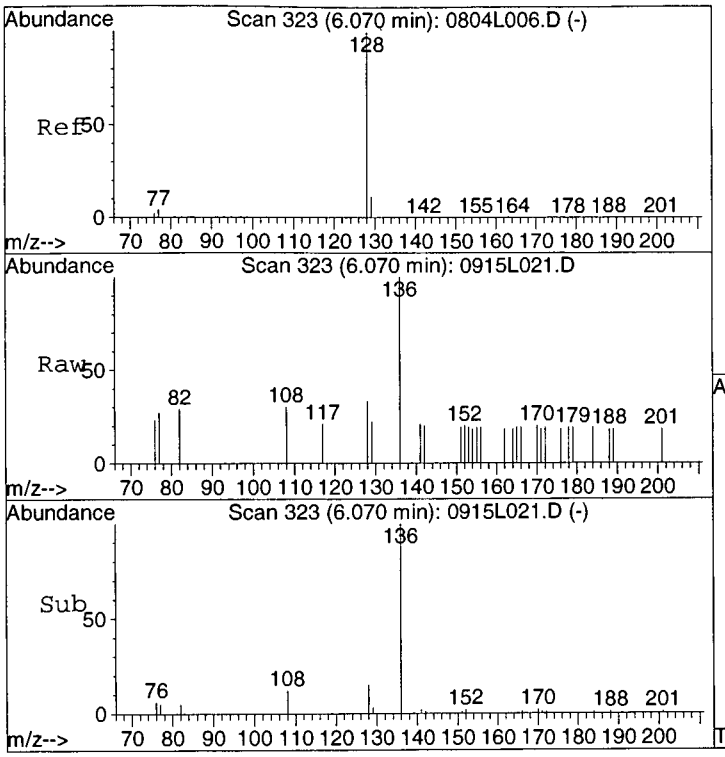
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L021.D Vial: 21
Acq On : 16 Sep 14 5:58 Operator: LF
Sample : AZ02110S11 1/34.96G Inst : Linus
Misc : Multiplr: 28.60

Quant Time: Sep 18 22:52 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

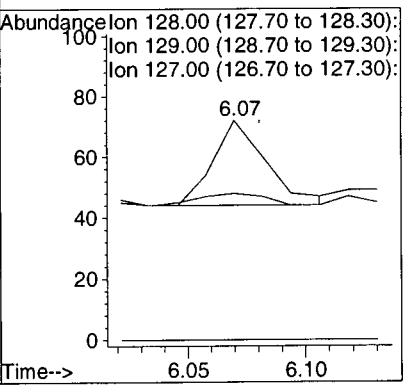


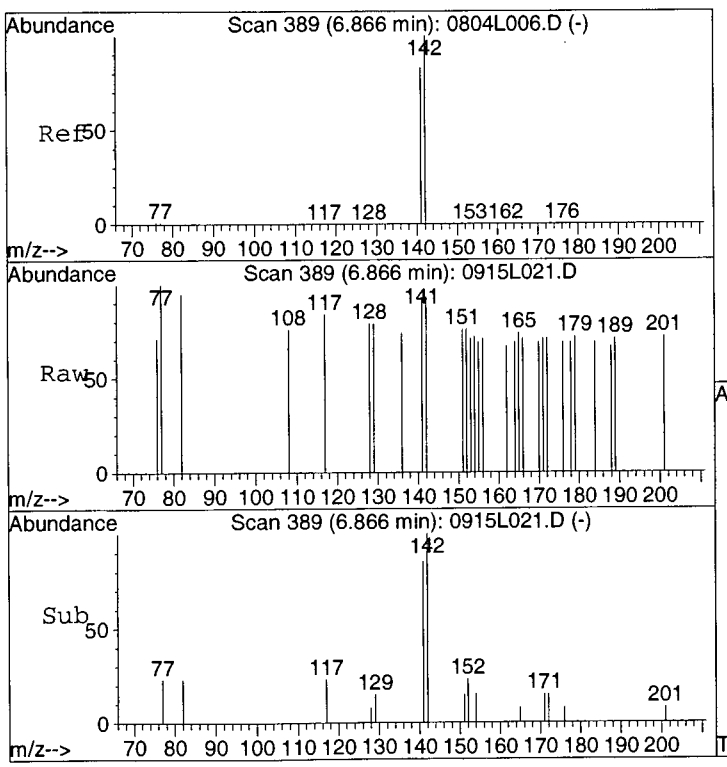


#3
Naphthalene
Concen: 0.98216 ppb
RT: 6.07 min Scan# 323
Delta R.T. 0.00 min
Lab File: 0915L021.D
Acq: 16 Sep 14 5:58

Tgt Ion:128 Resp: 44

Ion	Ratio	Lower	Upper
128	100		
129	14.3	7.5	13.9#
127	0.0	0.0	0.0

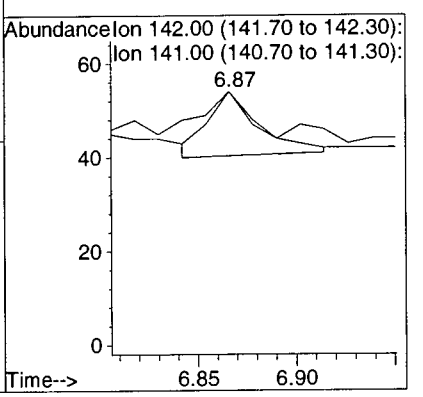


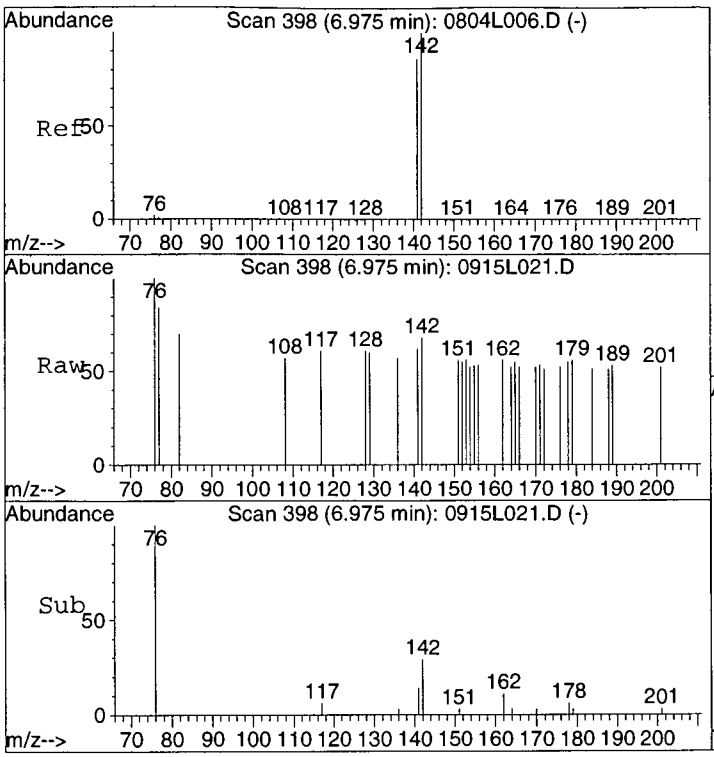


#4
2-Methylnaphthalene
Concen: 1.00896 ppb
RT: 6.87 min Scan# 389
Delta R.T. 0.00 min
Lab File: 0915L021.D
Acq: 16 Sep 14 5:58

Tgt Ion:142 Resp: 25

Ion	Ratio	Lower	Upper
142	100		
141	66.7	58.0	107.6

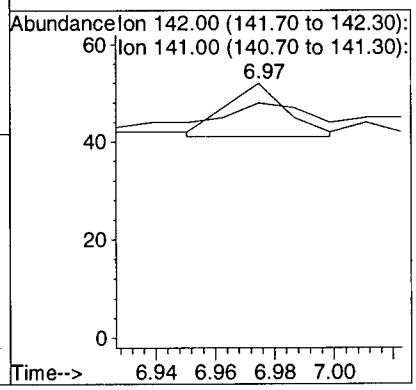


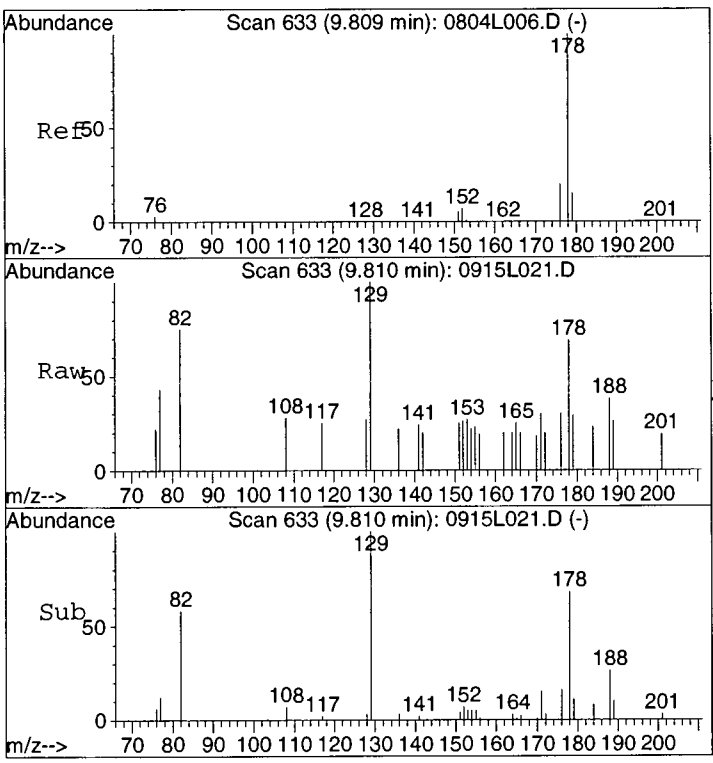


#5
1-Methylnaphthalene
Concen: 0.64869 ppb
RT: 6.97 min Scan# 398
Delta R.T. 0.00 min
Lab File: 0915L021.D
Acq: 16 Sep 14 5:58

Tgt Ion:142 Resp: 16

Ion	Ratio	Lower	Upper
142	100		
141	40.0	58.9	109.3#

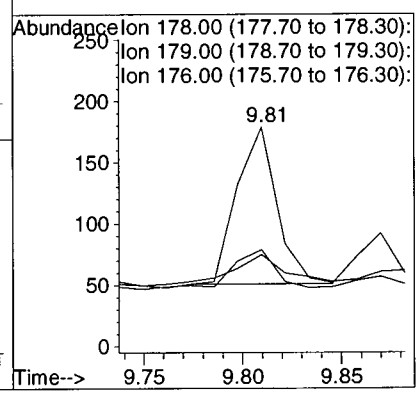


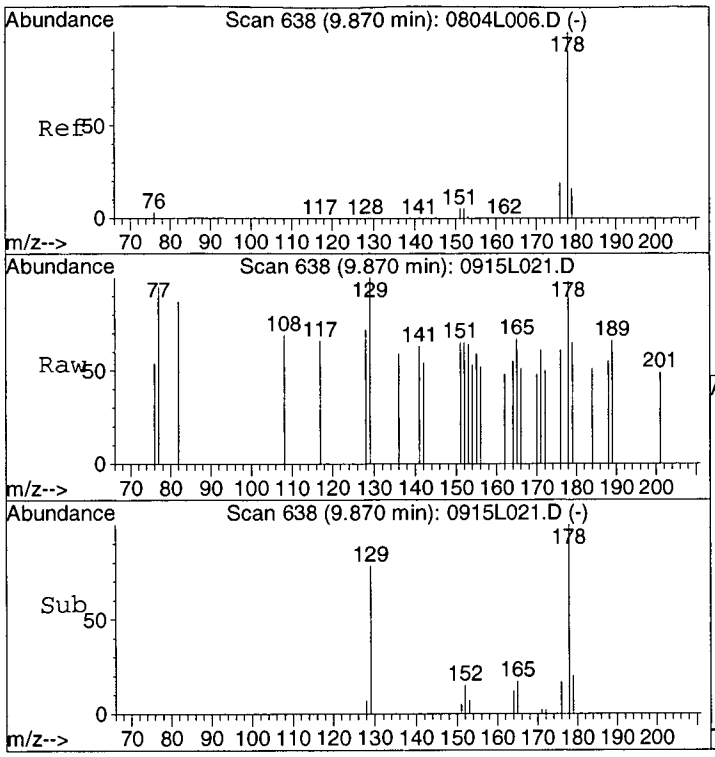


#12
Phenanthrene
Concen: 3.48328 ppb
RT: 9.81 min Scan# 633
Delta R.T. 0.00 min
Lab File: 0915L021.D
Acq: 16 Sep 14 5:58

Tgt Ion:178 Resp: 181

Ion	Ratio	Lower	Upper
178	100		
179	17.2	10.4	19.4
176	23.4	13.4	24.8

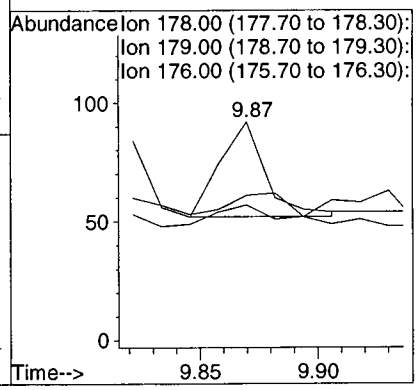


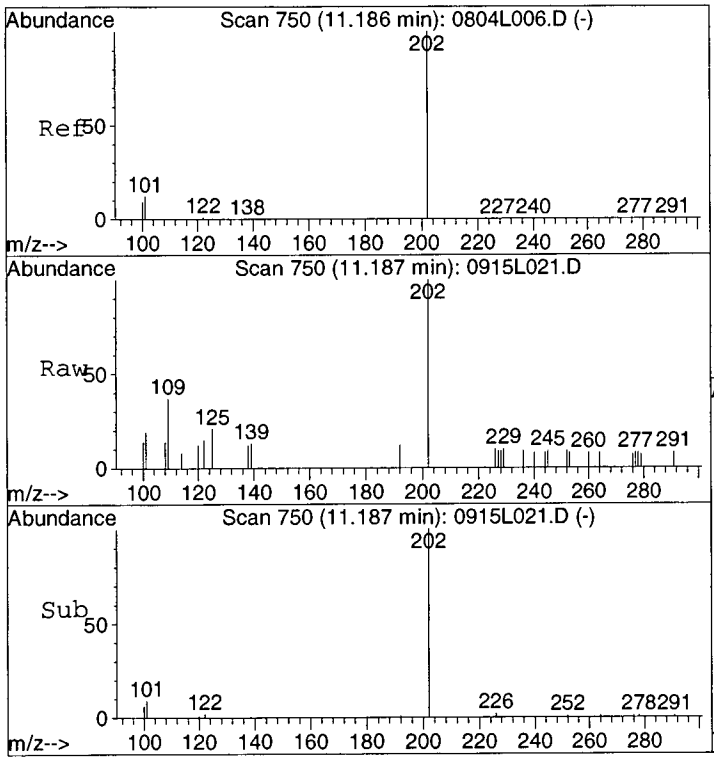


#13
Anthracene
Concen: 1.10920 ppb
RT: 9.87 min Scan# 638
Delta R.T. 0.00 min
Lab File: 0915L021.D
Acq: 16 Sep 14 5:58

Tgt Ion:178 Resp: 54

Ion	Ratio	Lower	Upper
178	100		
179	20.0	10.4	19.2#
176	20.0	13.0	24.1

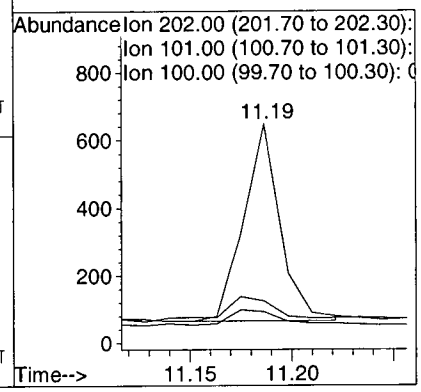


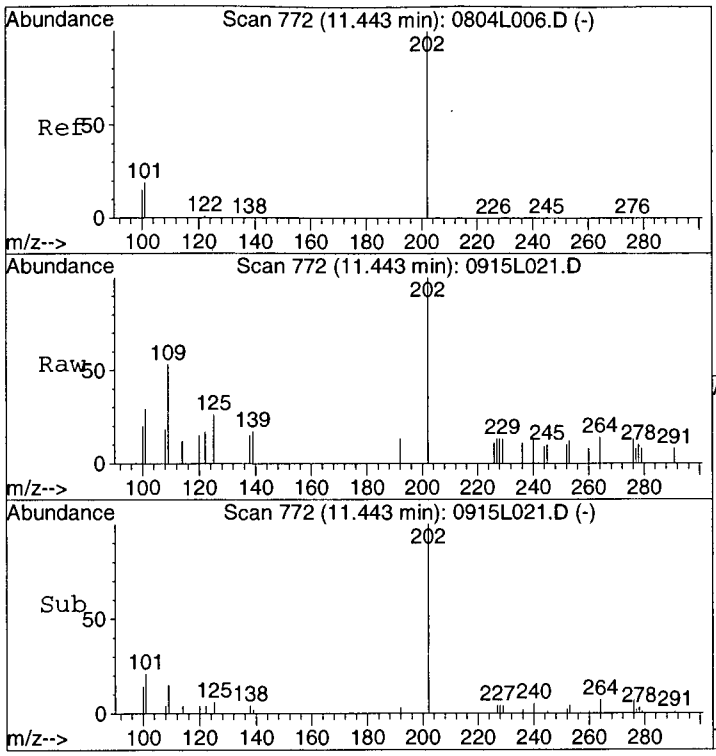


#14
Fluoranthene
Concen: 8.06781 ppb
RT: 11.19 min Scan# 750
Delta R.T. 0.00 min
Lab File: 0915L021.D
Acq: 16 Sep 14 5:58

Tgt Ion:202 Resp: 725

Ion	Ratio	Lower	Upper
202	100		
101	8.7	12.0	22.2#
100	6.7	8.2	15.2#

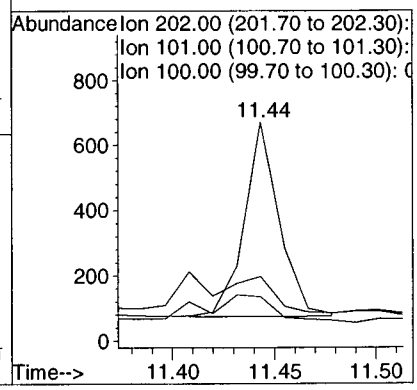


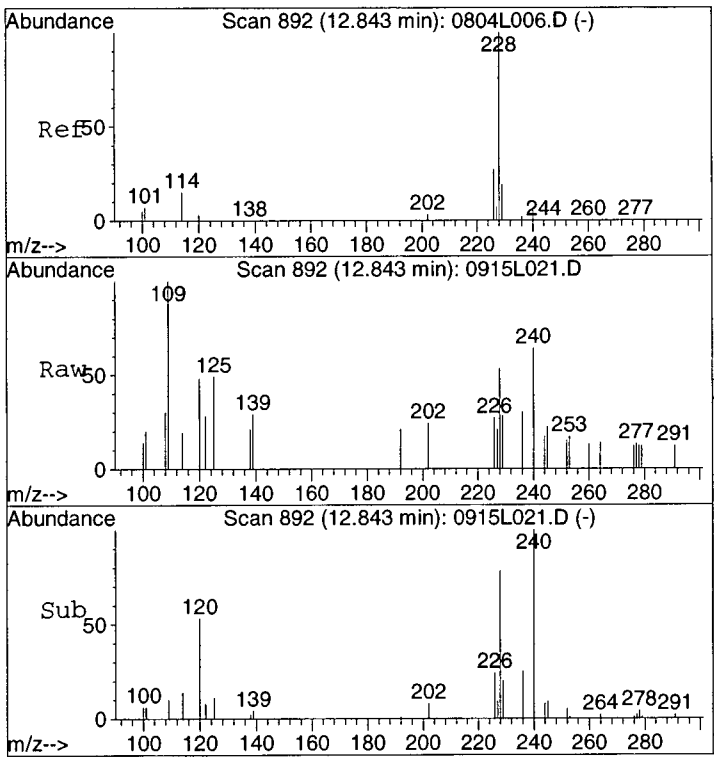


#16
Pyrene
Concen: 9.13795 ppb
RT: 11.44 min Scan# 772
Delta R.T. -0.01 min
Lab File: 0915L021.D
Acq: 16 Sep 14 5:58

Tgt Ion:202 Resp: 707

Ion	Ratio	Lower	Upper
202	100		
101	19.2	7.4	13.8#
100	12.3	5.8	10.8#

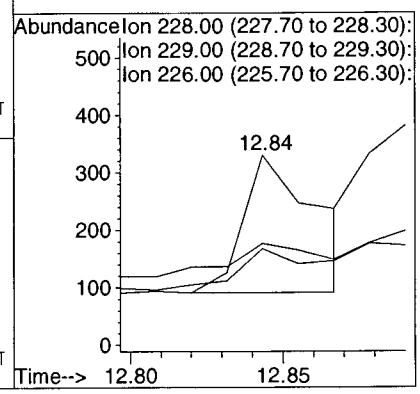


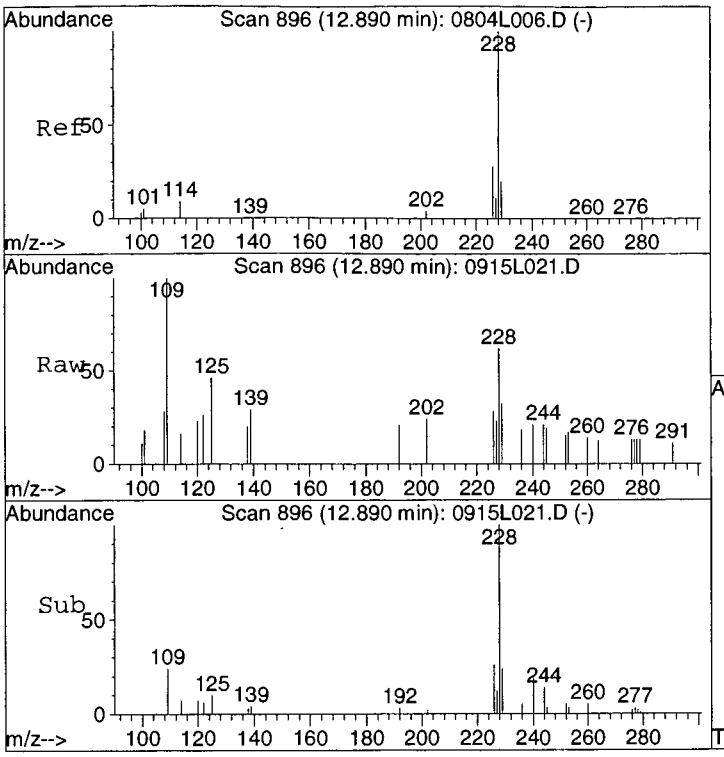


#18
Benz (a) anthracene
Concen: 6.43718 ppb
RT: 12.84 min Scan# 892
Delta R.T. -0.01 min
Lab File: 0915L021.D
Acq: 16 Sep 14 5:58

Tgt Ion:228 Resp: 403

Ion	Ratio	Lower	Upper
228	100		
229	17.2	14.1	26.1
226	26.4	17.5	32.5

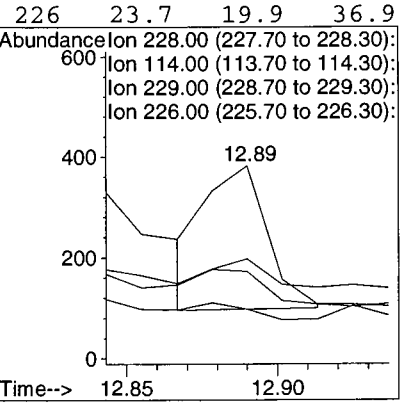


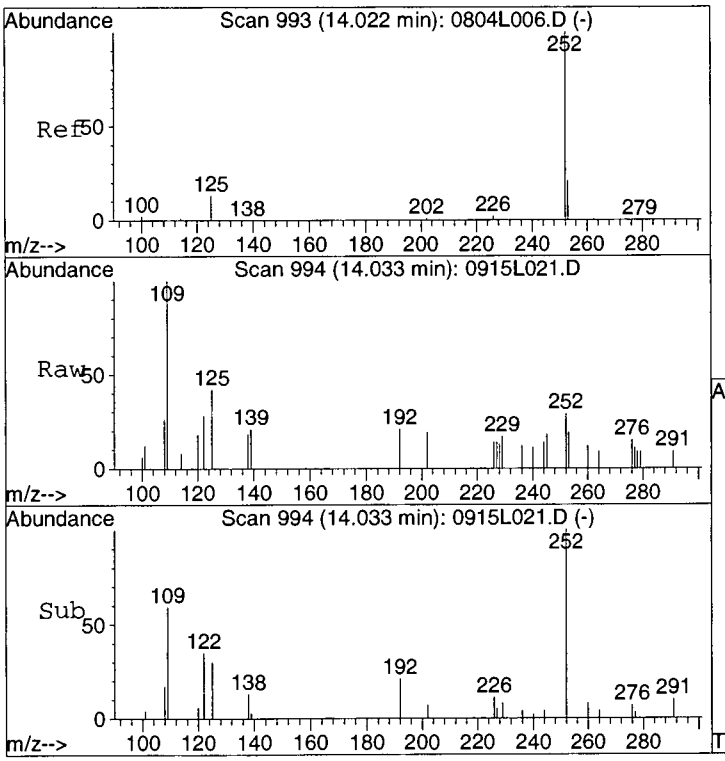


#19
Chrysene
Concen: 6.78904 ppb
RT: 12.89 min Scan# 896
Delta R.T. 0.00 min
Lab File: 0915L021.D
Acq: 16 Sep 14 5:58

Tgt Ion:228 Resp: 412

Ion	Ratio	Lower	Upper
228	100		
114	7.3	8.4	15.6#
229	20.8	13.8	25.6
226	23.7	19.9	36.9

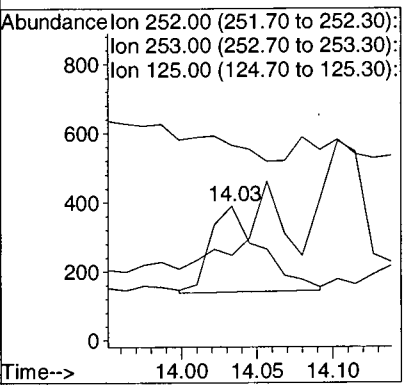


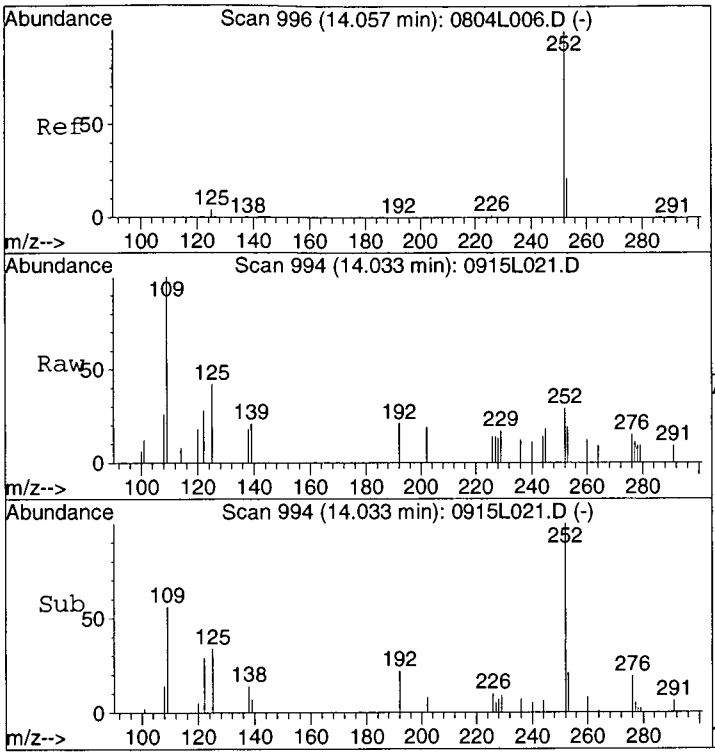


#22
Benzo (b) fluoranthene
Concen: 9.11830 ppb
RT: 14.03 min Scan# 994
Delta R.T. 0.01 min
Lab File: 0915L021.D
Acq: 16 Sep 14 5:58

Tgt Ion:252 Resp: 578

Ion	Ratio	Lower	Upper
252	100		
253	16.0	14.9	27.7
125	5.3	12.3	22.8#

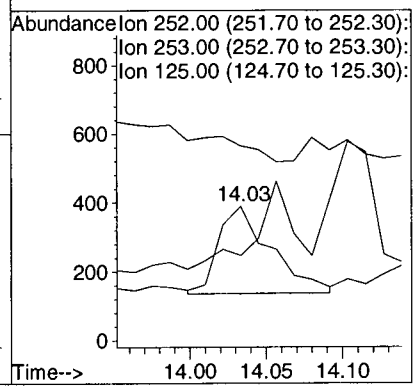


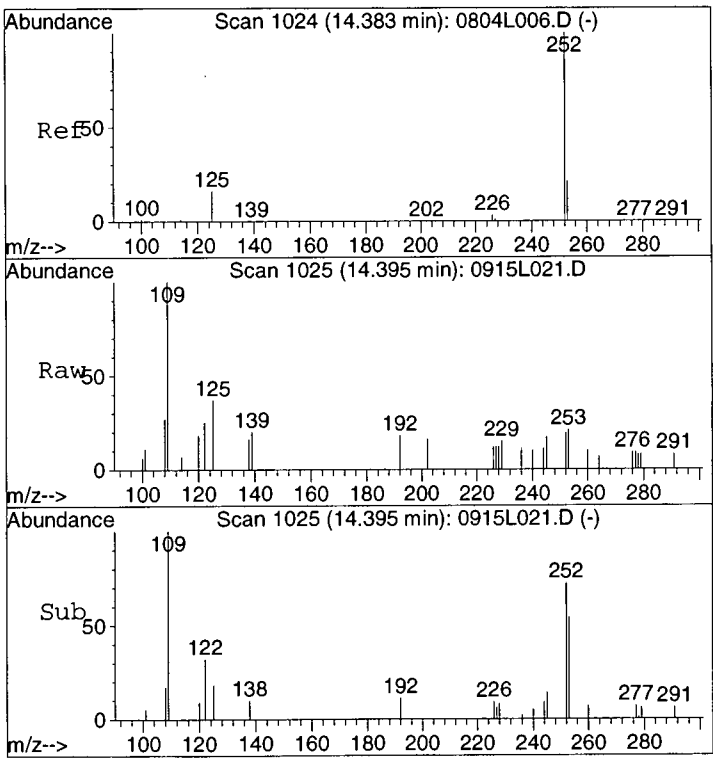


#23
Benzo (k) fluoranthene
Concen: 9.65321 ppb
RT: 14.03 min Scan# 994
Delta R.T. -0.02 min
Lab File: 0915L021.D
Acq: 16 Sep 14 5:58

Tgt Ion:252 Resp: 606

Ion	Ratio	Lower	Upper
252	100		
253	16.0	14.7	27.3
125	5.3	9.2	17.0#

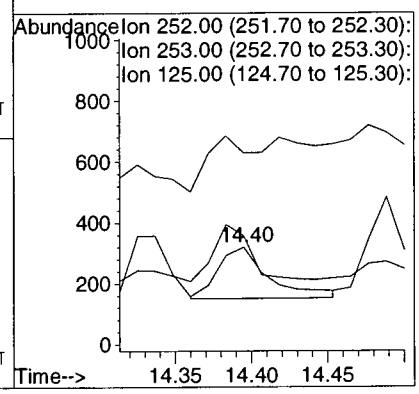


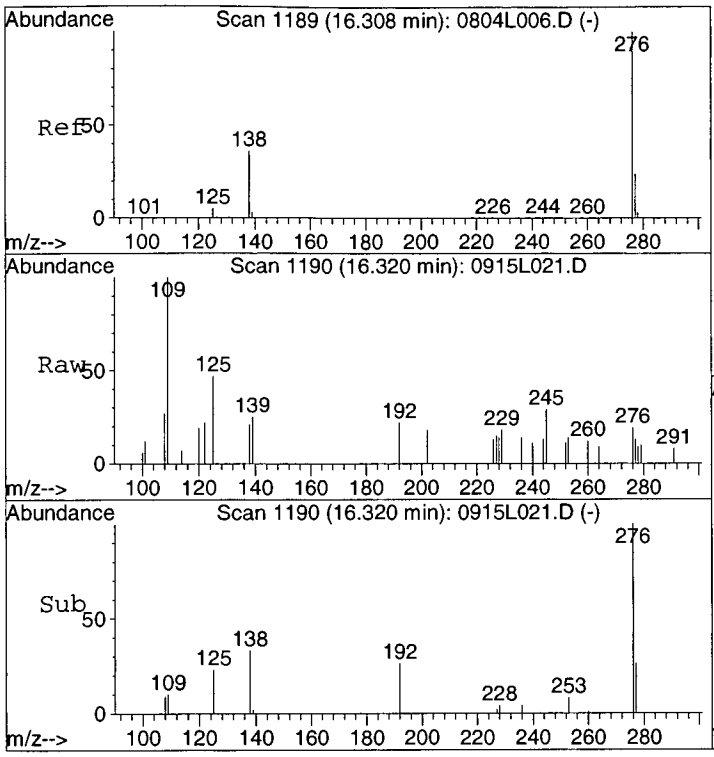


#24
Benzo (a) pyrene
Concen: 6.84352 ppb
RT: 14.40 min Scan# 1025
Delta R.T. 0.00 min
Lab File: 0915L021.D
Acq: 16 Sep 14 5:58

Tgt Ion:252 Resp: 397

Ion	Ratio	Lower	Upper
252	100		
253	92.6	15.4	28.6#
125	77.8	9.5	17.6#

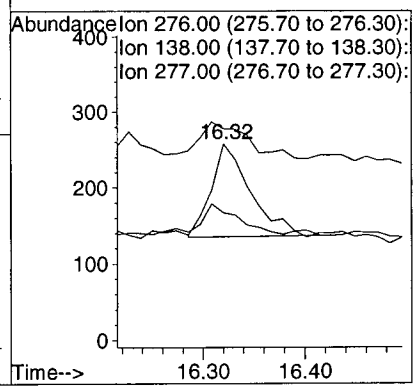




#26
Benzo (g,h,i) perylene
Concen: 6.31025 ppb
RT: 16.32 min Scan# 1190
Delta R.T. 0.00 min
Lab File: 0915L021.D
Acq: 16 Sep 14 5:58

Tgt Ion:276 Resp: 335

Ion	Ratio	Lower	Upper
276	100		
138	28.9	24.4	45.4
277	22.3	17.1	31.7



EPA 8270C SIM IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN013

APPL ID: AZ02111

Sample Collection Date: 9/3/14

QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 16.1 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0015 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0012 J	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.0063	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.0049 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.013	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.014	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.014	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.0081	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.0089	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.0020 J	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.0094	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	98.2	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	82.9	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	127 #	30-125			%	9/10/14	9/16/14

J = Estimated value.
= Recovery (or RPD) is outside QC limits.

Quant Method:	SIM.M
Run #:	0915L022
Instrument:	Linus
Sequence:	L140821
Dilution Factor:	1
Initials:	LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L022.D Vial: 22
Acq On : 16 Sep 14 6:23 Operator: LF
Sample : AZ02111S11 1/35.76G Inst : Linus
Misc : Multiplr: 27.96

Quant Time: Sep 18 22:53 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1847	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	990	2.50000 ppb		-0.01
11) Phenanthrene-D10(IS)	9.79	188	1457	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.86	240	2772	2.50000 ppb		-0.01
21) Perylene-D12(IS)	14.45	264	1330	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	768	46.38054 ppb		0.00
Spiked Amount 55.928			Recovery = 82.929%			
7) Surrogate Recovery (FBP)	7.29	172	1960	54.93112 ppb		-0.01
Spiked Amount 55.928			Recovery = 98.217%			
17) Surrogate Recovery (TPH)	11.65	244	3236	71.23284 ppb		-0.01
Spiked Amount 55.928			Recovery = 127.365%			
Target Compounds						Qvalue
4) 2-Methylnaphthalene	6.87	142	31	1.25226 ppb		88
12) Phenanthrene	9.81	178	72	1.70977 ppb	#	91
13) Anthracene	9.87	178	39	0.98850 ppb	#	88
14) Fluoranthene	11.19	202	546	7.49732 ppb	#	83
16) Pyrene	11.44	202	657	7.88245 ppb	#	80
18) Benz (a) anthracene	12.84	228	356	5.27846 ppb	#	82
19) Chrysene	12.89	228	447	6.83731 ppb	#	90
22) Benzo (b) fluoranthene	14.03	252	561	11.13067 ppb	#	74
23) Benzo (k) fluoranthene	14.03	252	581	11.63985 ppb	#	69
24) Benzo (a) pyrene	14.40	252	188	4.07586 ppb	#	1
26) Benzo (g,h,i) perylene	16.32	276	487	11.53727 ppb		93

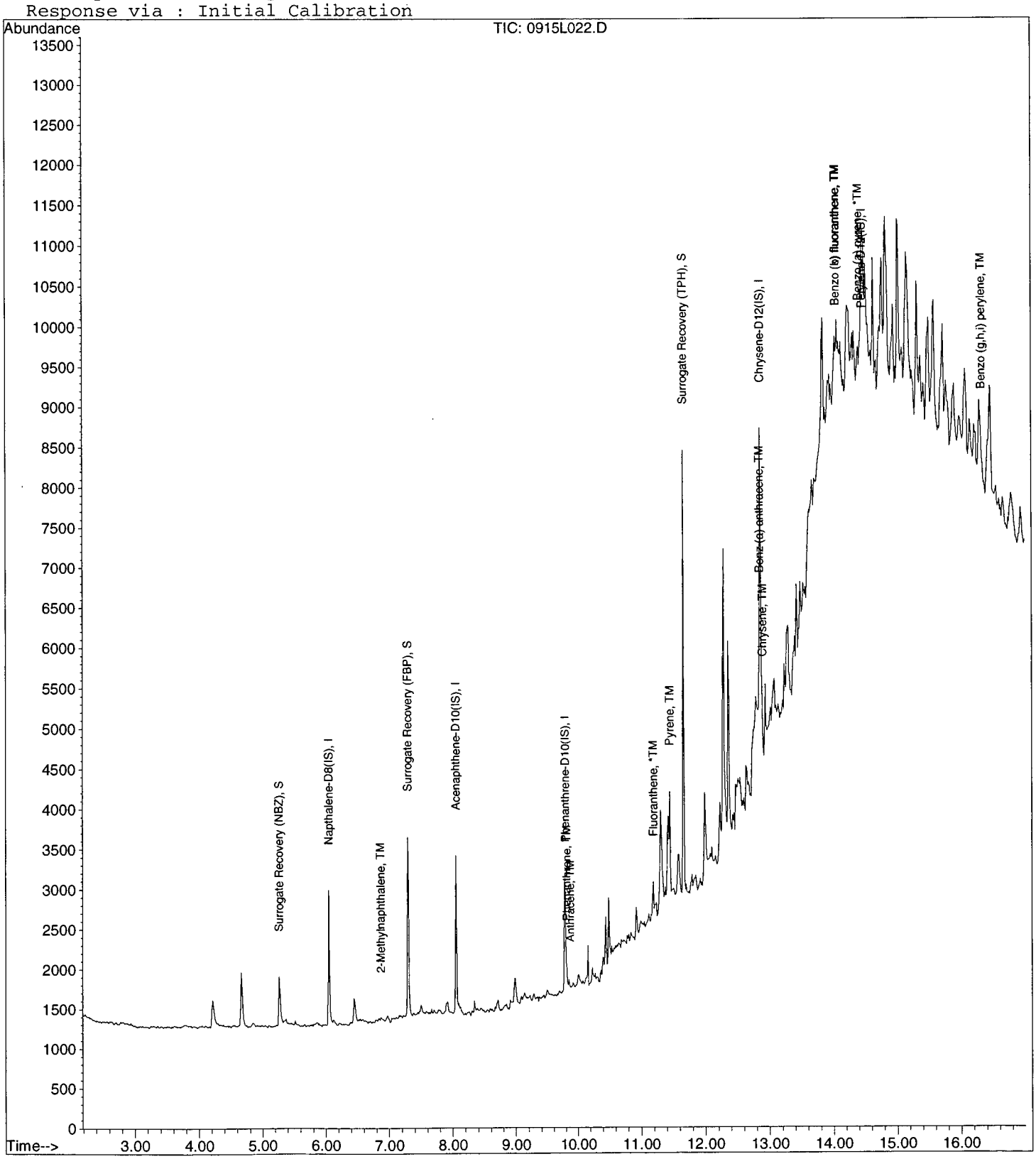
(#) = qualifier out of range (m) = manual integration

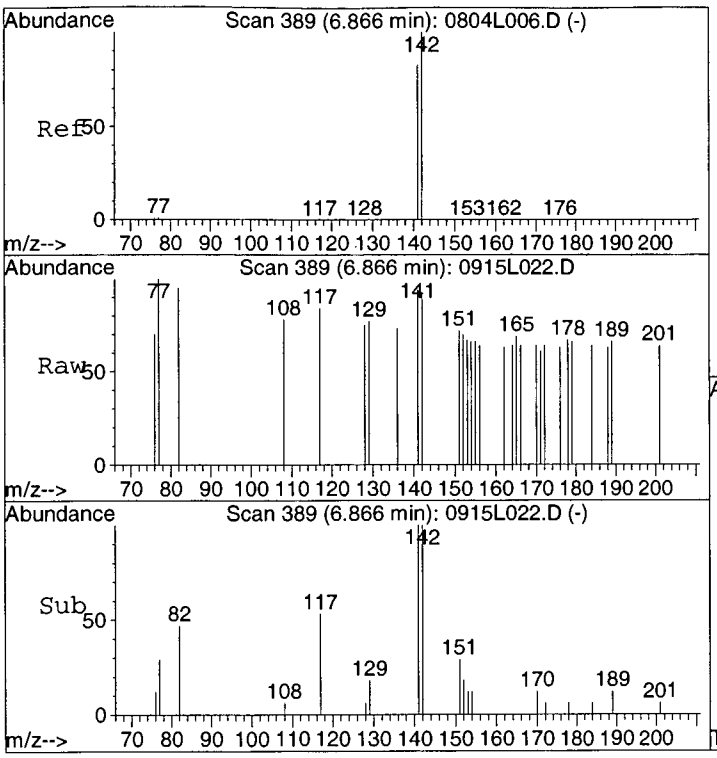
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L022.D Vial: 22
Acq On : 16 Sep 14 6:23 Operator: LF
Sample : AZ02111S11 1/35.76G Inst : Linus
Misc : Multiplr: 27.96

Quant Time: Sep 18 22:53 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

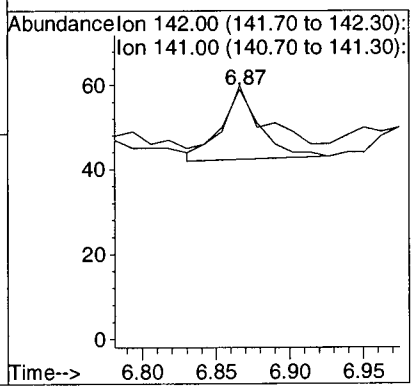


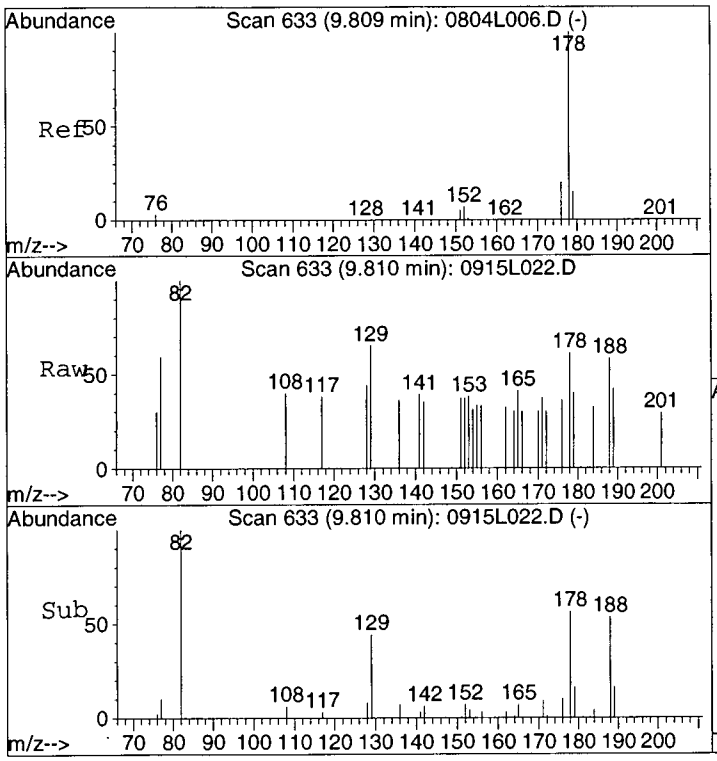


#4
2-Methylnaphthalene
Concen: 1.25226 ppb
RT: 6.87 min Scan# 389
Delta R.T. 0.00 min
Lab File: 0915L022.D
Acq: 16 Sep 14 6:23

Tgt Ion:142 Resp: 31

Ion	Ratio	Lower	Upper
142	100		
141	93.8	58.0	107.6

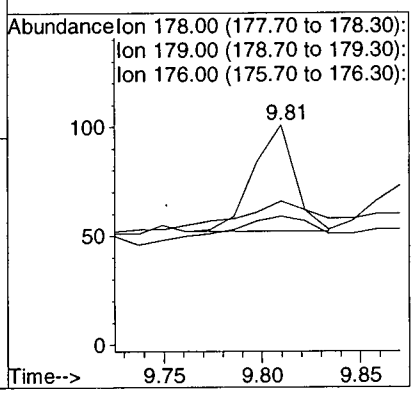


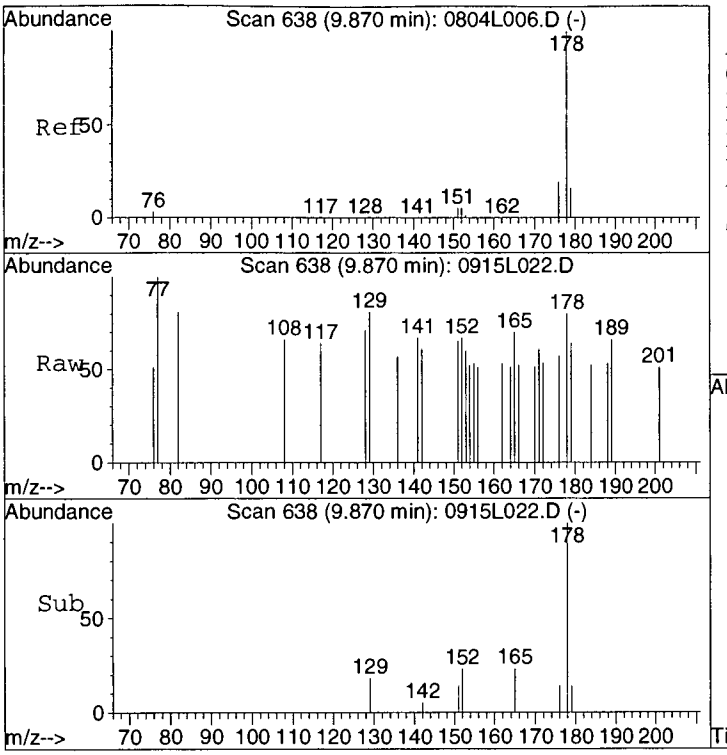


#12
Phenanthrene
Concen: 1.70977 ppb
RT: 9.81 min Scan# 633
Delta R.T. 0.00 min
Lab File: 0915L022.D
Acq: 16 Sep 14 6:23

Tgt Ion:178 Resp: 72

Ion	Ratio	Lower	Upper
178	100		
179	22.4	10.4	19.4#
176	18.4	13.4	24.8

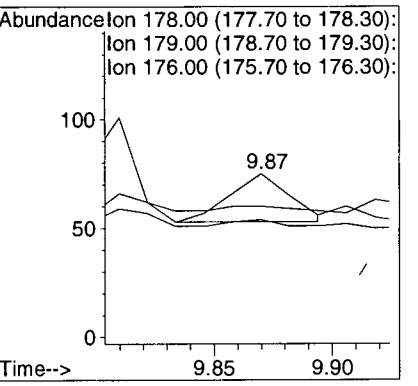


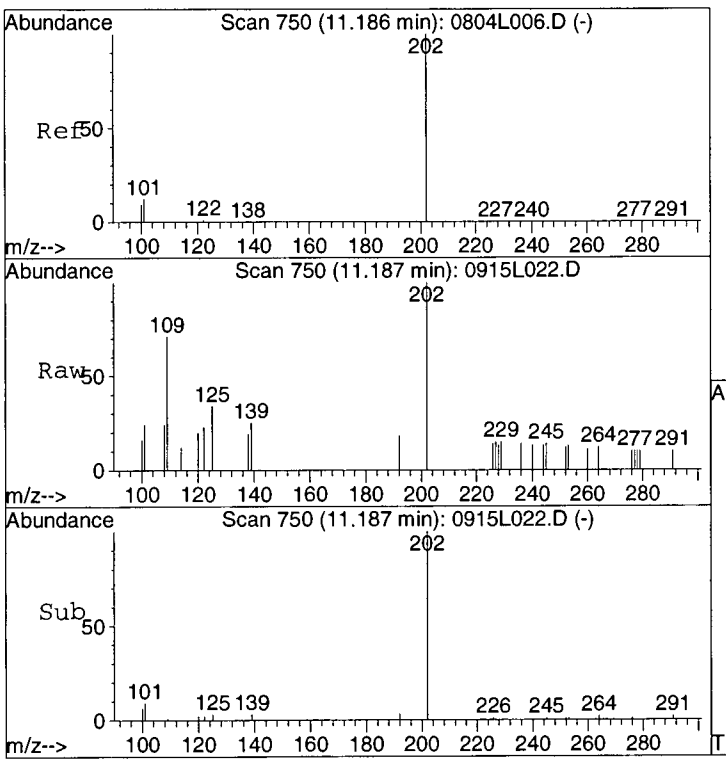


#13
Anthracene
Concen: 0.98850 ppb
RT: 9.87 min Scan# 638
Delta R.T. 0.00 min
Lab File: 0915L022.D
Acq: 16 Sep 14 6:23

Tgt Ion:178 Resp: 39

Ion	Ratio	Lower	Upper
178	100		
179	9.1	10.4	19.2#
176	13.6	13.0	24.1

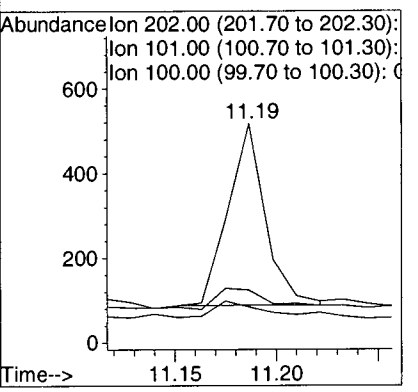


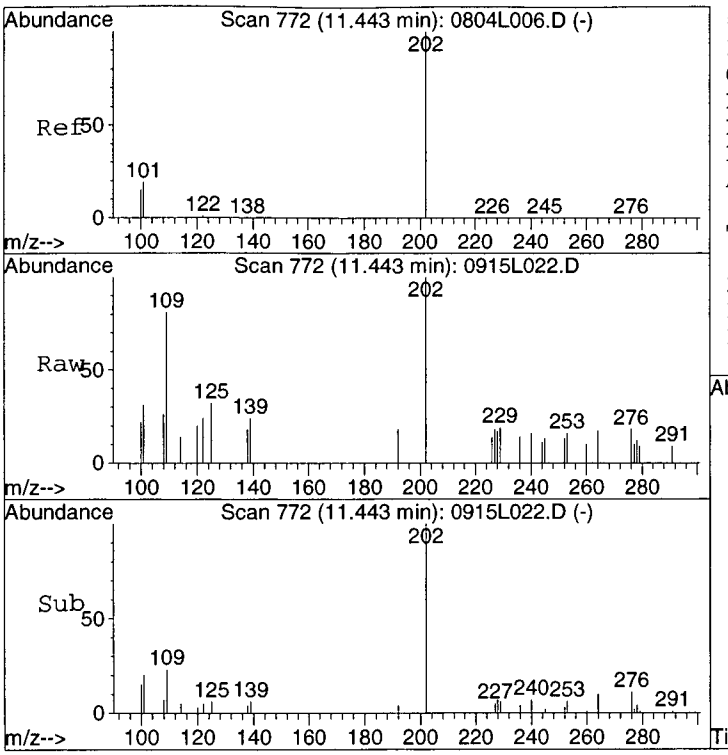


#14
Fluoranthene
Concen: 7.49732 ppb
RT: 11.19 min Scan# 750
Delta R.T. 0.00 min
Lab File: 0915L022.D
Acq: 16 Sep 14 6:23

Tgt Ion:202 Resp: 546

Ion	Ratio	Lower	Upper
202	100		
101	9.5	12.0	22.2#
100	5.6	8.2	15.2#

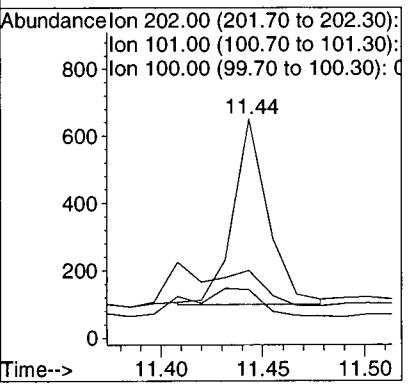


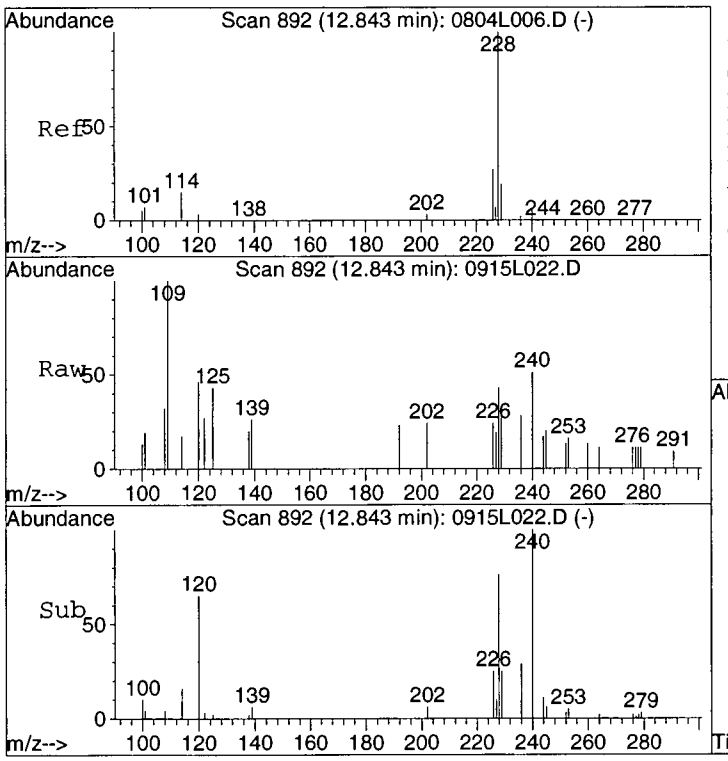


#16
Pyrene
Concen: 7.88245 ppb
RT: 11.44 min Scan# 772
Delta R.T. -0.01 min
Lab File: 0915L022.D
Acq: 16 Sep 14 6:23

Tgt Ion:202 Resp: 657

Ion	Ratio	Lower	Upper
202	100		
101	19.5	7.4	13.8#
100	14.2	5.8	10.8#

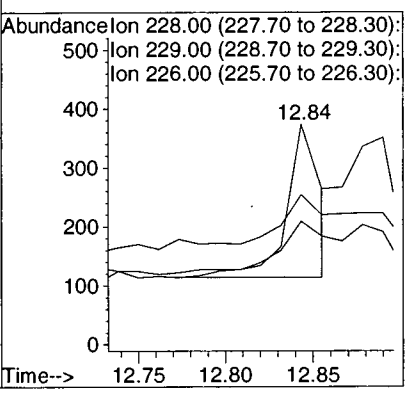


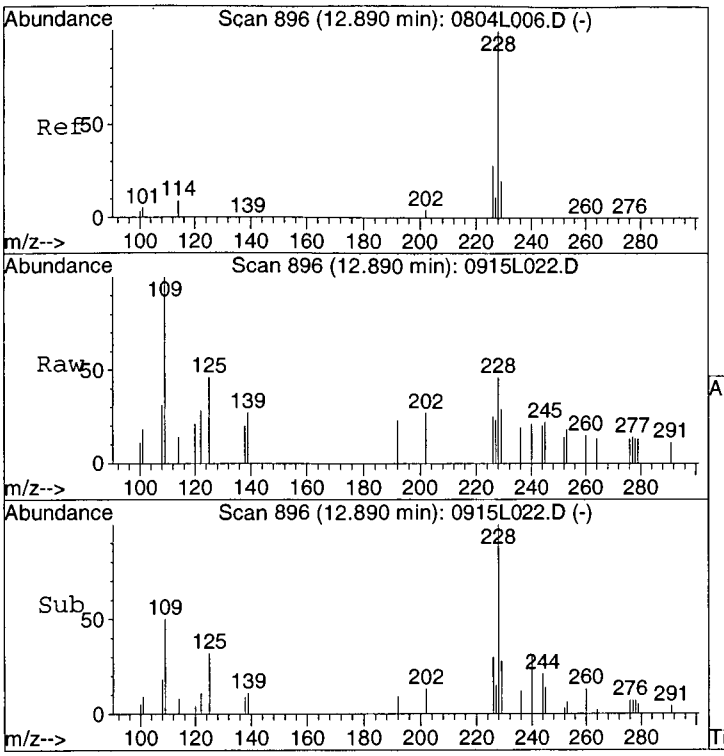


#18
Benz (a) anthracene
Concen: 5.27846 ppb
RT: 12.84 min Scan# 892
Delta R.T. -0.01 min
Lab File: 0915L022.D
Acq: 16 Sep 14 6:23

Tgt Ion:228 Resp: 356

Ion	Ratio	Lower	Upper
228	100		
229	29.0	14.1	26.1#
226	33.6	17.5	32.5#

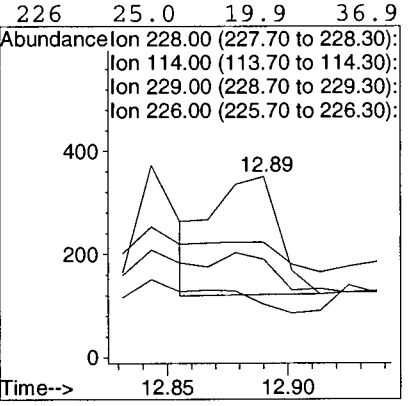


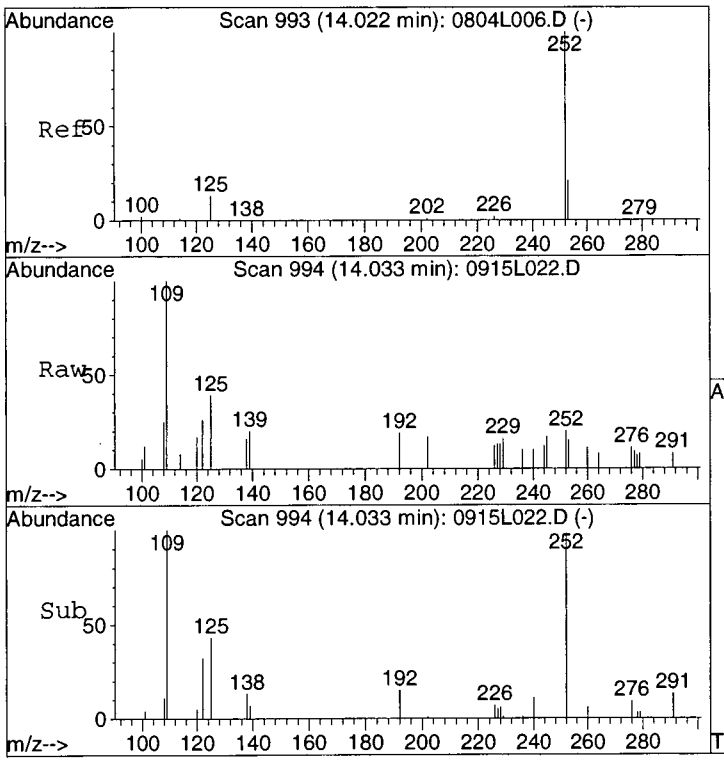


#19
Chrysene
Concen: 6.83731 ppb
RT: 12.89 min Scan# 896
Delta R.T. 0.00 min
Lab File: 0915L022.D
Acq: 16 Sep 14 6:23

Tgt Ion:228 Resp: 447

Ion	Ratio	Lower	Upper
228	100		
114	5.7	8.4	15.6#
229	25.0	13.8	25.6
226	25.0	19.9	36.9

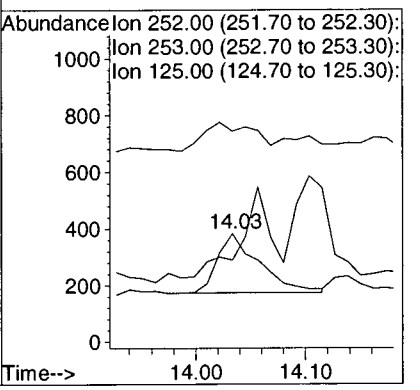


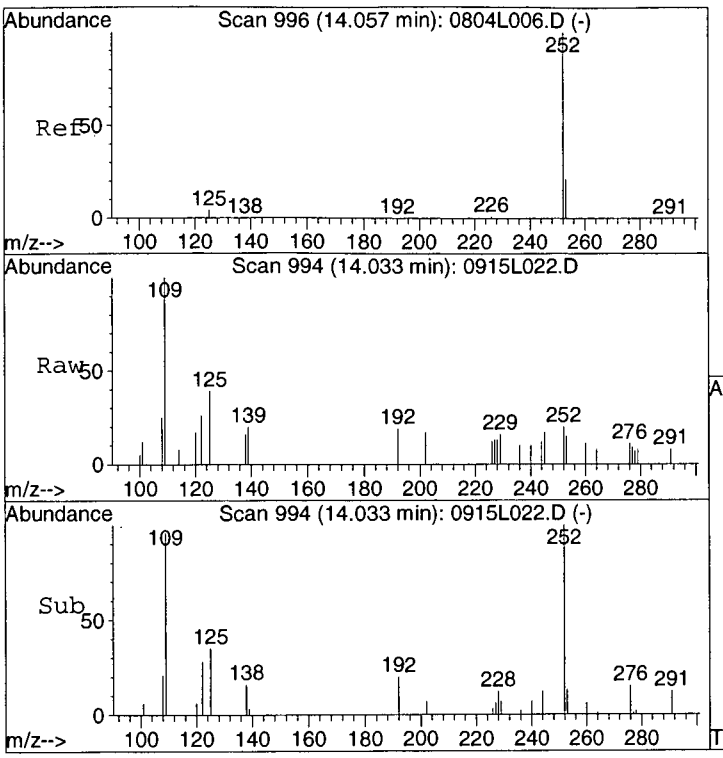


#22
Benzo (b) fluoranthene
Concen: 11.13067 ppb
RT: 14.03 min Scan# 994
Delta R.T. 0.01 min
Lab File: 0915L022.D
Acq: 16 Sep 14 6:23

Tgt Ion:252 Resp: 561

Ion	Ratio	Lower	Upper
252	100		
253	29.5	14.9	27.7#
125	33.3	12.3	22.8#

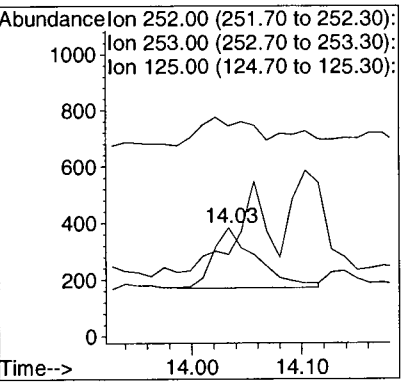


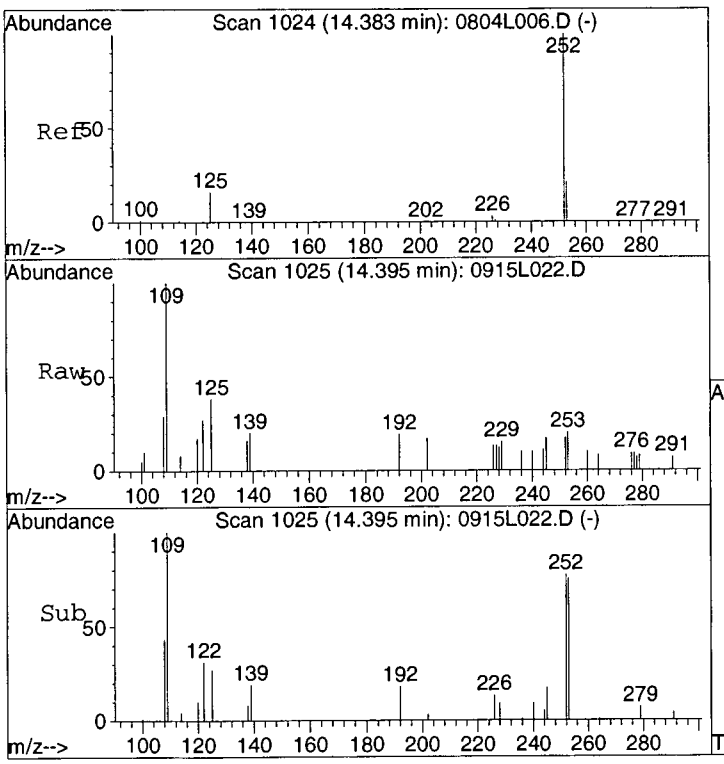


#23
Benzo (k) fluoranthene
Concen: 11.63985 ppb
RT: 14.03 min Scan# 994
Delta R.T. -0.02 min
Lab File: 0915L022.D
Acq: 16 Sep 14 6:23

Tgt Ion:252 Resp: 581

Ion	Ratio	Lower	Upper
252	100		
253	29.5	14.7	27.3#
125	33.3	9.2	17.0#

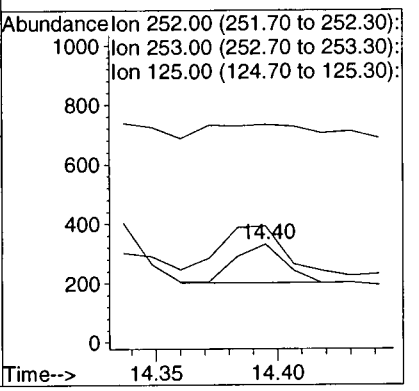


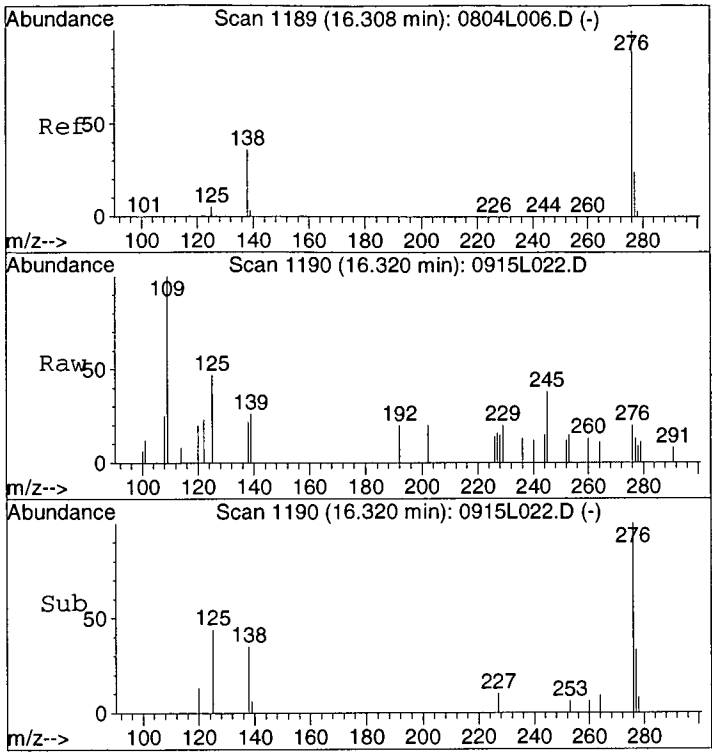


#24
Benzo (a) pyrene
Concen: 4.07586 ppb
RT: 14.40 min Scan# 1025
Delta R.T. 0.00 min
Lab File: 0915L022.D
Acq: 16 Sep 14 6:23

Tgt Ion:252 Resp: 188

Ion	Ratio	Lower	Upper
252	100		
253	114.5	15.4	28.6#
125	34.4	9.5	17.6#

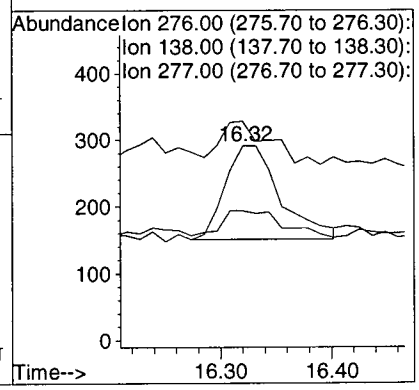




#26
Benzo (g,h,i) perylene
Concen: 11.53727 ppb
RT: 16.32 min Scan# 1190
Delta R.T. 0.00 min
Lab File: 0915L022.D
Acq: 16 Sep 14 6:23

Tgt Ion:276 Resp: 487

Ion	Ratio	Lower	Upper
276	100		
138	38.6	24.4	45.4
277	28.6	17.1	31.7



EPA 8270C SIM IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN014
Sample Collection Date: 9/3/14

ARF: 74218
APPL ID: AZ02112
QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 23.2 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.0027 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.016	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.0014 J	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.0020 J	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	64.7	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	75.5	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	89.2	30-125			%	9/10/14	9/16/14

J = Estimated value.

Quant Method: SIM.M
Run #: 0915L023
Instrument: Linus
Sequence: L140821
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L023.D Vial: 23
Acq On : 16 Sep 14 6:49 Operator: LF
Sample : AZ02112S11 1/39.08G Inst : Linus
Misc : Multiplr: 25.59

Quant Time: Sep 18 22:53 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1950	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	8.05	164	909	2.50000 ppb	-0.01
11) Phenanthrene-D10(IS)	9.79	188	1500	2.50000 ppb	0.00
15) Chrysene-D12(IS)	12.85	240	2353	2.50000 ppb	-0.01
21) Perylene-D12(IS)	14.45	264	1327	2.50000 ppb	0.00
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.26	82	738	38.62836 ppb	0.00
Spiked Amount 51.177			Recovery = 75.479%		
7) Surrogate Recovery (FBP)	7.30	172	1186	33.12541 ppb	0.00
Spiked Amount 51.177			Recovery = 64.726%		
17) Surrogate Recovery (TPH)	11.65	244	1924	45.65529 ppb	-0.01
Spiked Amount 51.177			Recovery = 89.210%		
Target Compounds					Qvalue
14) Fluoranthene	11.19	202	89	1.08621 ppb #	82
16) Pyrene	11.44	202	120	1.55200 ppb #	75
24) Benzo (a) pyrene	14.38	252	106	2.10761 ppb #	1
26) Benzo (g,h,i) perylene	16.32	276	576	12.51470 ppb	87

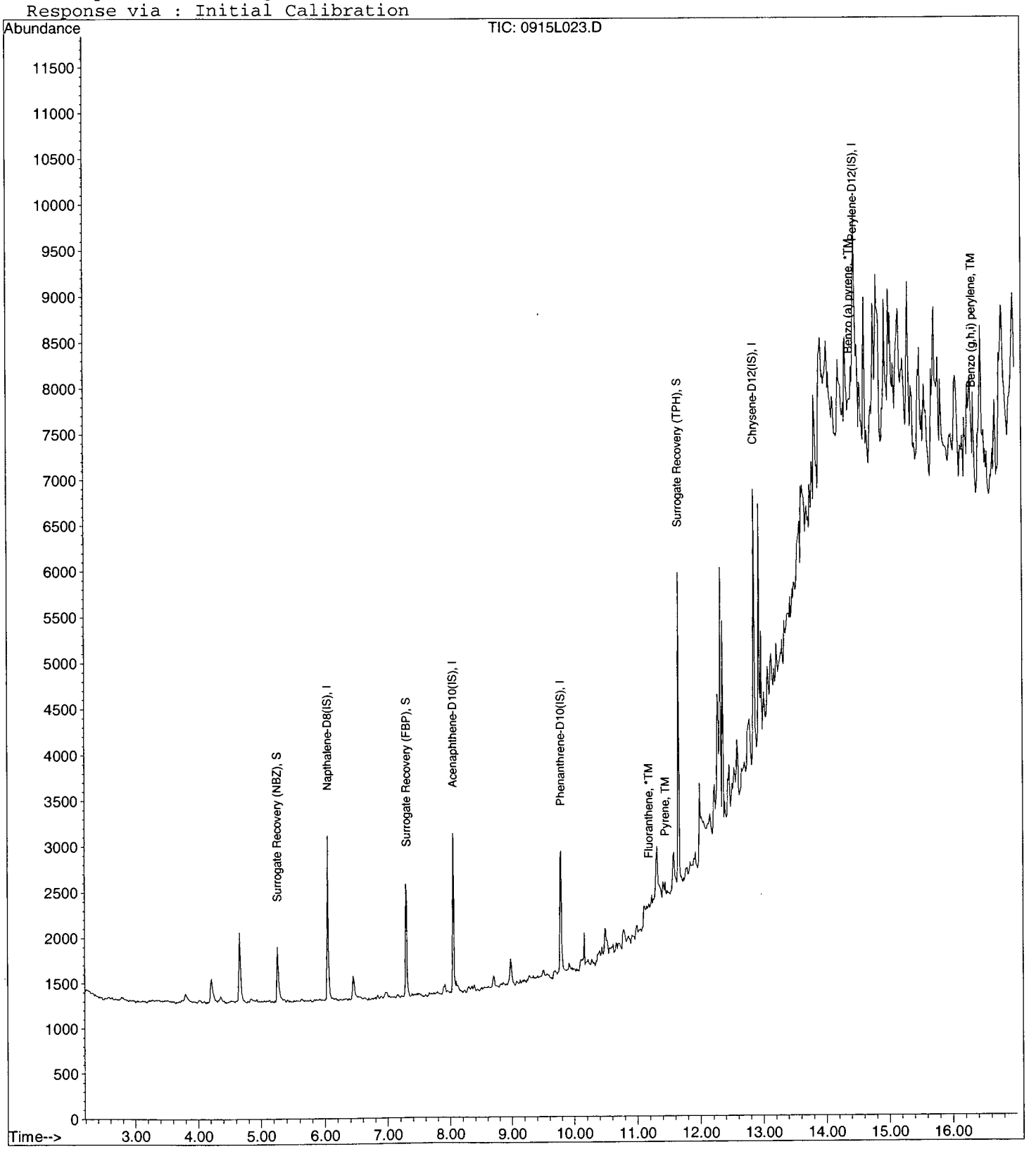
(#) = qualifier out of range (m) = manual integration

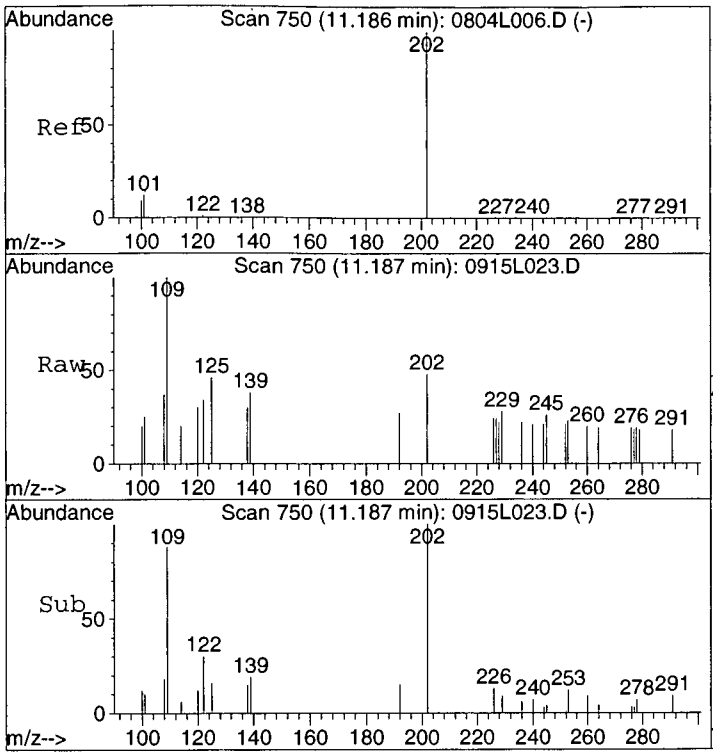
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L023.D Vial: 23
Acq On : 16 Sep 14 6:49 Operator: LF
Sample : AZ02112S11 1/39.08G Inst : Linus
Misc : Multiplr: 25.59

Quant Time: Sep 18 22:53 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

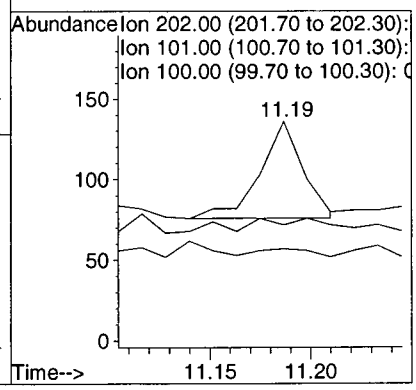


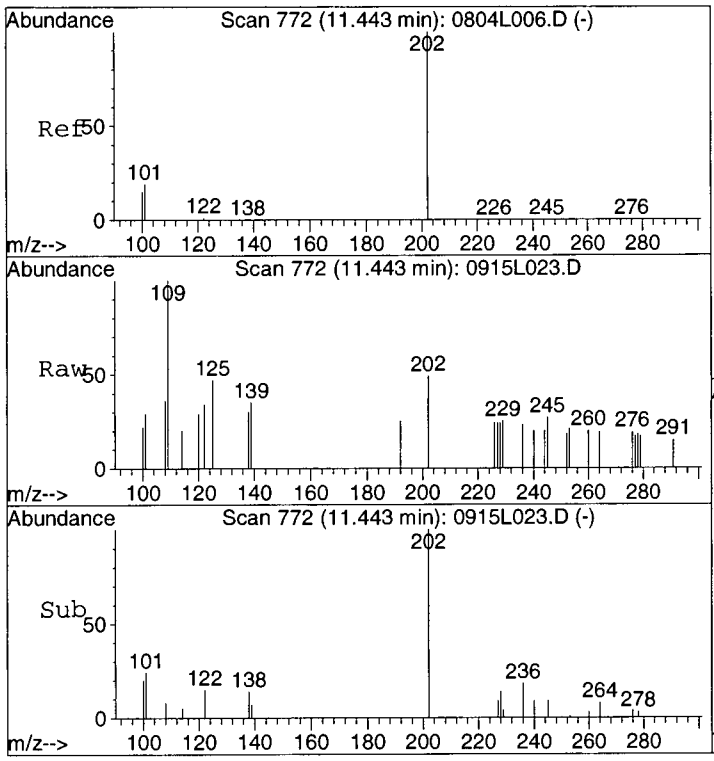


#14
Fluoranthene
Concen: 1.08621 ppb
RT: 11.19 min Scan# 750
Delta R.T. 0.00 min
Lab File: 0915L023.D
Acq: 16 Sep 14 6:49

Tgt Ion:202 Resp: 89

Ion	Ratio	Lower	Upper
202	100		
101	6.7	12.0	22.2#
100	8.3	8.2	15.2

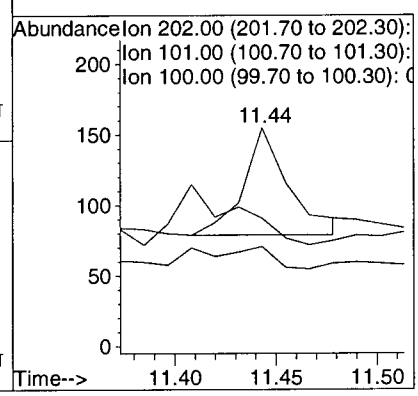


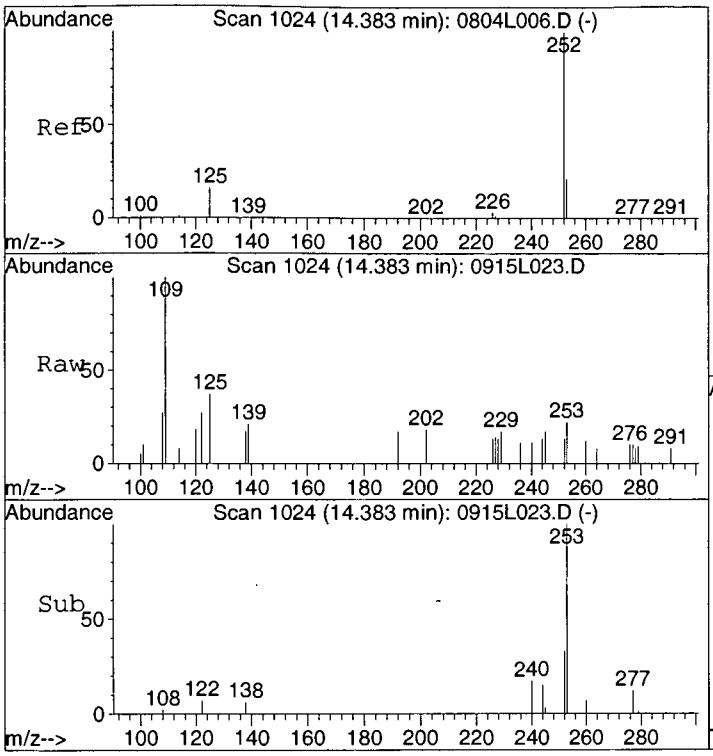


#16
Pyrene
Concen: 1.55200 ppb
RT: 11.44 min Scan# 772
Delta R.T. -0.01 min
Lab File: 0915L023.D
Acq: 16 Sep 14 6:49

Tgt Ion:202 Resp: 120

Ion	Ratio	Lower	Upper
202	100		
101	21.1	7.4	13.8#
100	15.8	5.8	10.8#

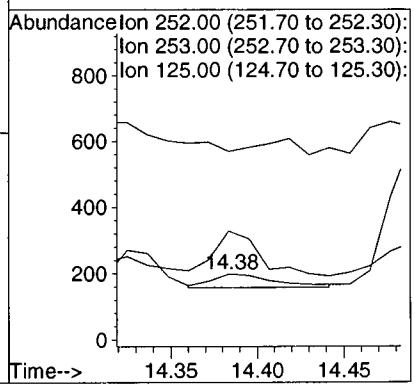


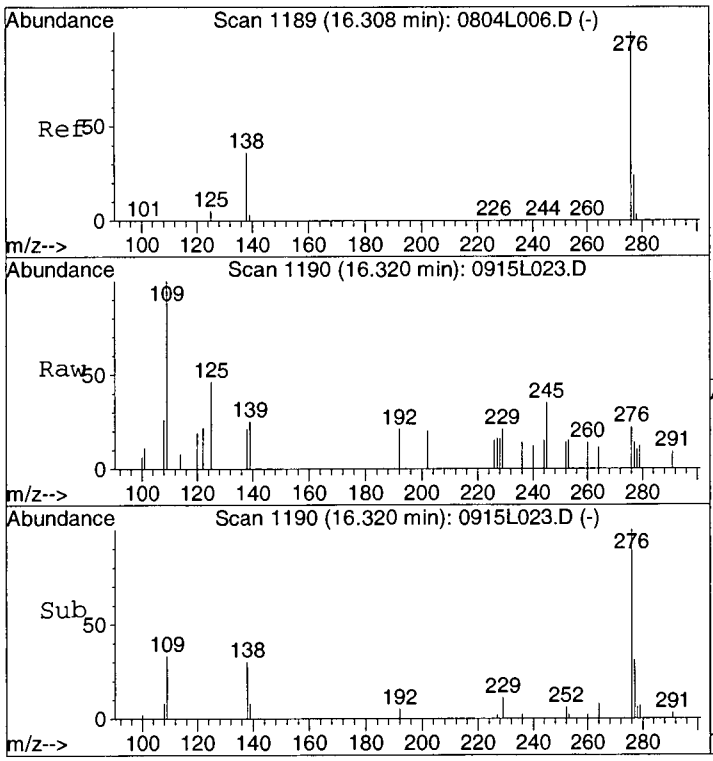


#24
Benzo (a) pyrene
Concen: 2.10761 ppb
RT: 14.38 min Scan# 1024
Delta R.T. -0.01 min
Lab File: 0915L023.D
Acq: 16 Sep 14 6:49

Tgt Ion:252 Resp: 106

Ion	Ratio	Lower	Upper
252	100		
253	400.0	15.4	28.6#
125	0.0	9.5	17.6#

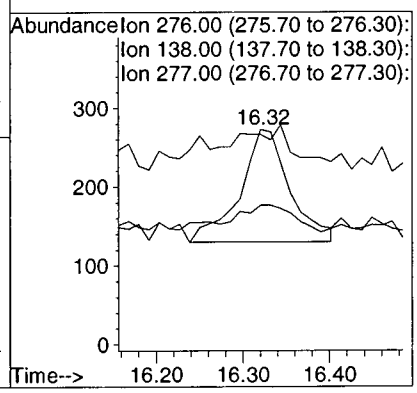




#26
Benzo (g,h,i) perylene
Concen: 12.51470 ppb
RT: 16.32 min Scan# 1190
Delta R.T. 0.00 min
Lab File: 0915L023.D
Acq: 16 Sep 14 6:49

Tgt Ion:276 Resp: 576

Ion	Ratio	Lower	Upper
276	100		
138	24.5	24.4	45.4
277	21.0	17.1	31.7



EPA 8270C SIM IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN015
Sample Collection Date: 9/3/14

ARF: 74218
APPL ID: AZ02113
QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 13.6 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0017 J	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.014	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.013	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.027	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.014	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.027	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.013	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.023	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.0058	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.0074	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.021	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	86.7	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	80.6	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	159 #	30-125			%	9/10/14	9/16/14

J = Estimated value.
= Recovery (or RPD) is outside QC limits.

Quant Method: SIM.M
Run #: 0915L024
Instrument: Linus
Sequence: L140821
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L024.D Vial: 24
Acq On : 16 Sep 14 7:15 Operator: LF
Sample : AZ02113S11 1/34.75G Inst : Linus
Misc : Multiplr: 28.78

Quant Time: Sep 18 22:54 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1980	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	928	2.50000 ppb		-0.01
11) Phenanthrene-D10(IS)	9.79	188	1639	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.85	240	2626	2.50000 ppb		-0.01
21) Perylene-D12(IS)	14.45	264	1338	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	800	46.37768 ppb		0.00
Spiked Amount 57.554			Recovery = 80.582%			
7) Surrogate Recovery (FBP)	7.30	172	1621	49.87412 ppb		0.00
Spiked Amount 57.554			Recovery = 86.656%			
17) Surrogate Recovery (TPH)	11.65	244	3836	91.72580 ppb		-0.01
Spiked Amount 57.554			Recovery = 159.374%			
Target Compounds						Qvalue
12) Phenanthrene	9.81	178	295	6.40842 ppb	#	89
13) Anthracene	9.87	178	62	1.43756 ppb	#	90
14) Fluoranthene	11.19	202	1569	19.70878 ppb	#	85
16) Pyrene	11.44	202	1377	17.94614 ppb	#	87
18) Benz (a) anthracene	12.84	228	774	12.46635 ppb		94
19) Chrysene	12.89	228	698	11.59777 ppb	#	94
20) Indeno (1,2,3-cd) pyrene	15.90	276	260	4.99559 ppb	#	11
22) Benzo (b) fluoranthene	14.03	252	1137	23.07582 ppb		91
23) Benzo (k) fluoranthene	14.03	252	1144	23.44420 ppb	#	85
24) Benzo (a) pyrene	14.39	252	501	11.11059 ppb	#	69
26) Benzo (g,h,i) perylene	16.32	276	493	11.94701 ppb	#	73

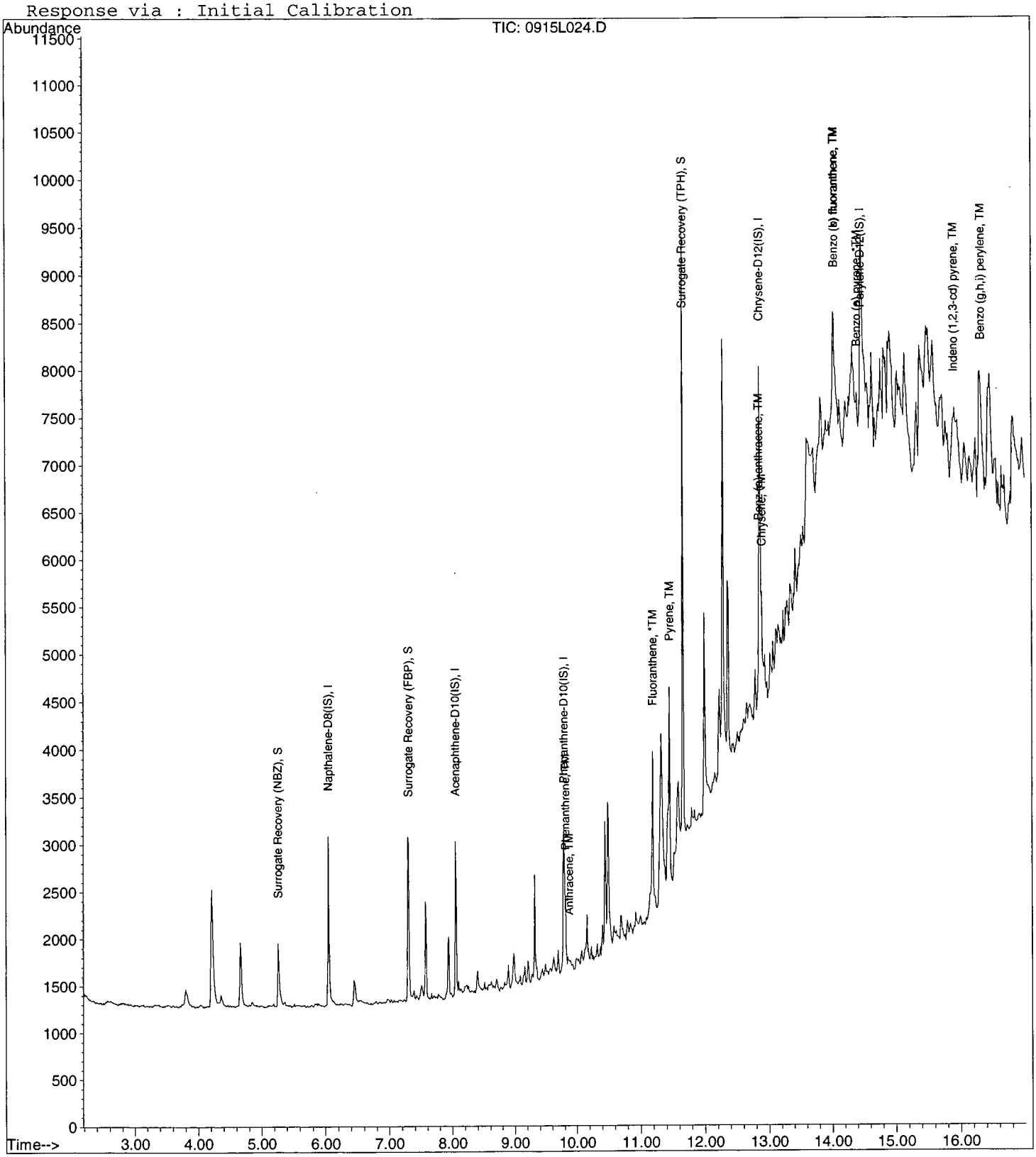
(#) = qualifier out of range (m) = manual integration

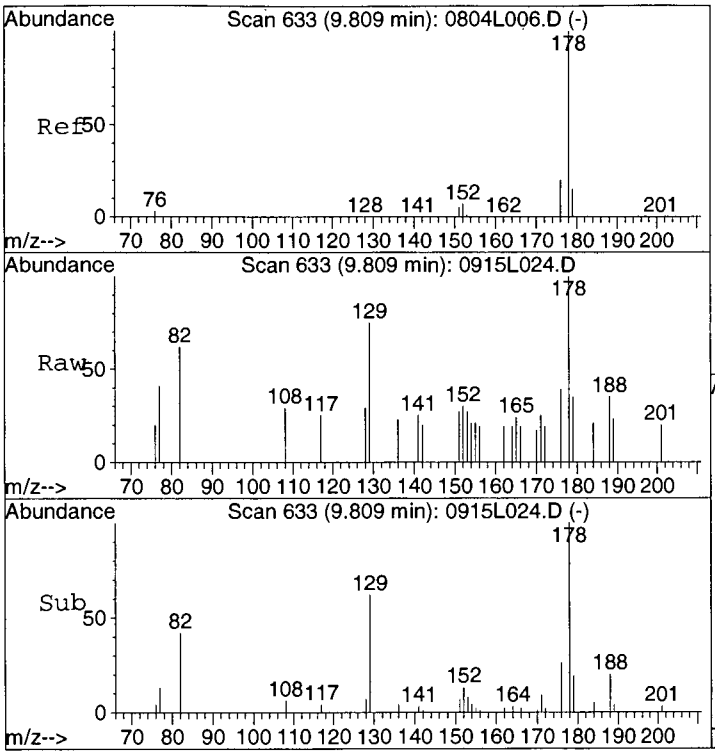
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L024.D Vial: 24
Acq On : 16 Sep 14 7:15 Operator: LF
Sample : AZ02113S11 1/34.75G Inst : Linus
Misc : Multiplr: 28.78

Quant Time: Sep 18 22:54 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

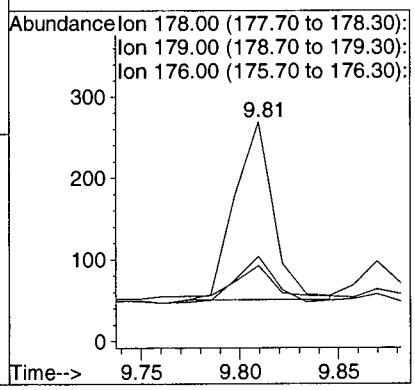


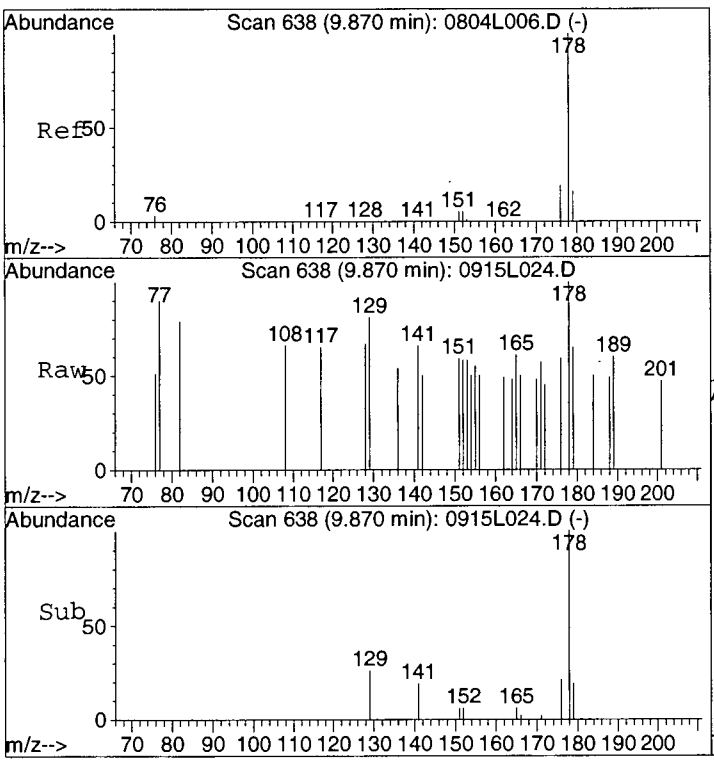


#12
Phenanthrene
Concen: 6.40842 ppb
RT: 9.81 min Scan# 633
Delta R.T. 0.00 min
Lab File: 0915L024.D
Acq: 16 Sep 14 7:15

Tgt Ion:178 Resp: 295

Ion	Ratio	Lower	Upper
178	100		
179	17.4	10.4	19.4
176	25.7	13.4	24.8#

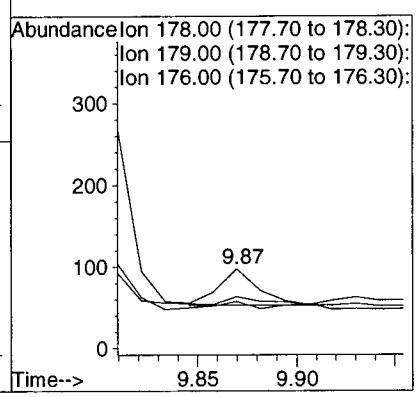


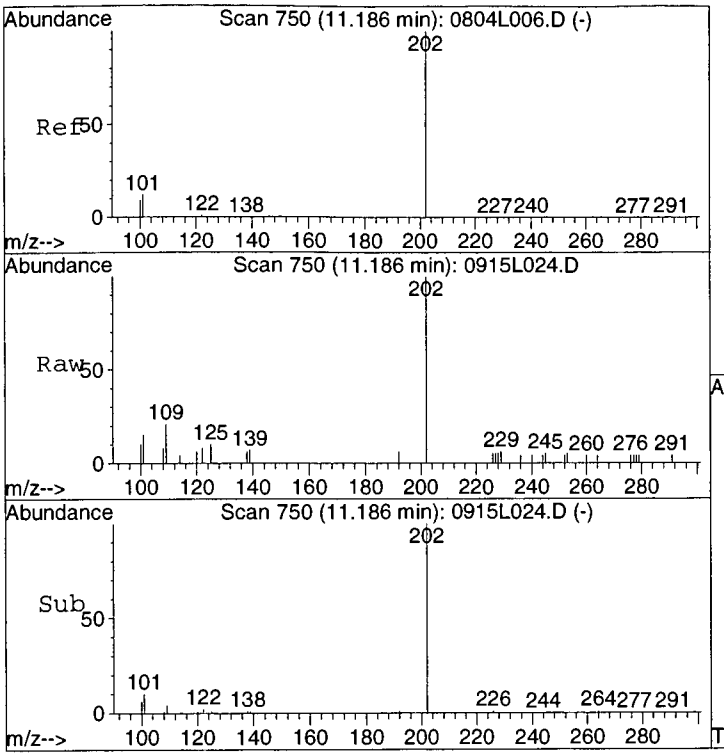


#13
Anthracene
Concen: 1.43756 ppb
RT: 9.87 min Scan# 638
Delta R.T. 0.00 min
Lab File: 0915L024.D
Acq: 16 Sep 14 7:15

Tgt Ion:178 Resp: 62

Ion	Ratio	Lower	Upper
178	100		
179	20.0	10.4	19.2#
176	22.2	13.0	24.1

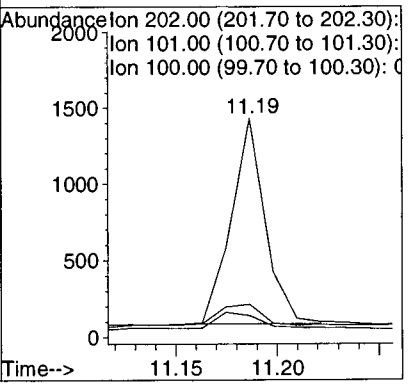


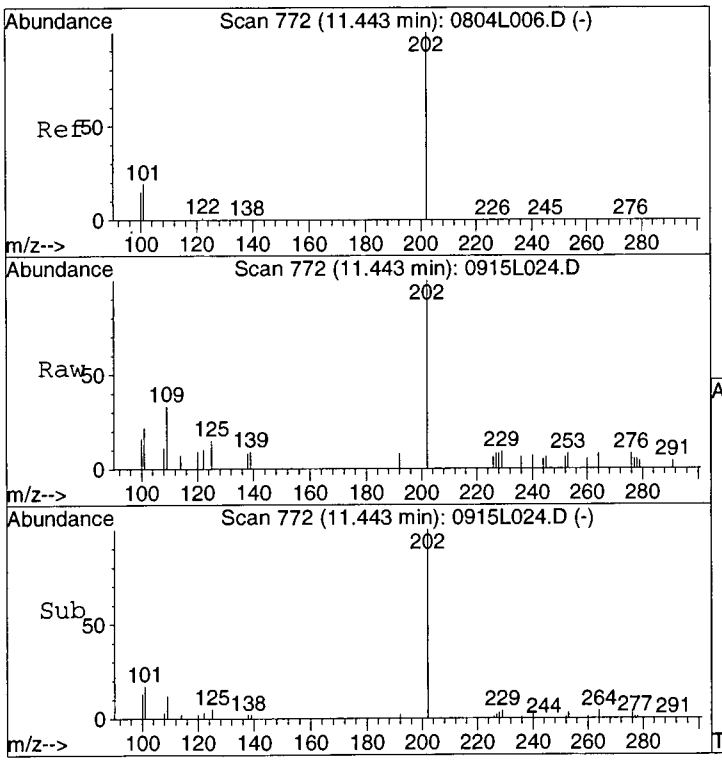


#14
Fluoranthene
Concen: 19.70878 ppb
RT: 11.19 min Scan# 750
Delta R.T. -0.00 min
Lab File: 0915L024.D
Acq: 16 Sep 14 7:15

Tgt Ion:202 Resp: 1569

Ion	Ratio	Lower	Upper
202	100		
101	9.9	12.0	22.2#
100	6.3	8.2	15.2#

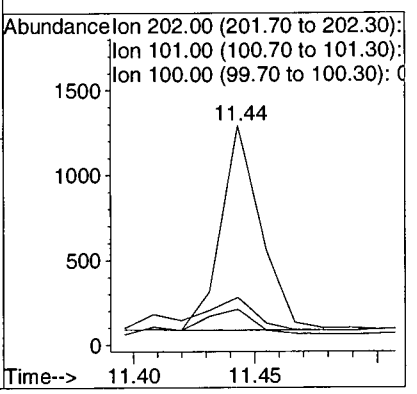


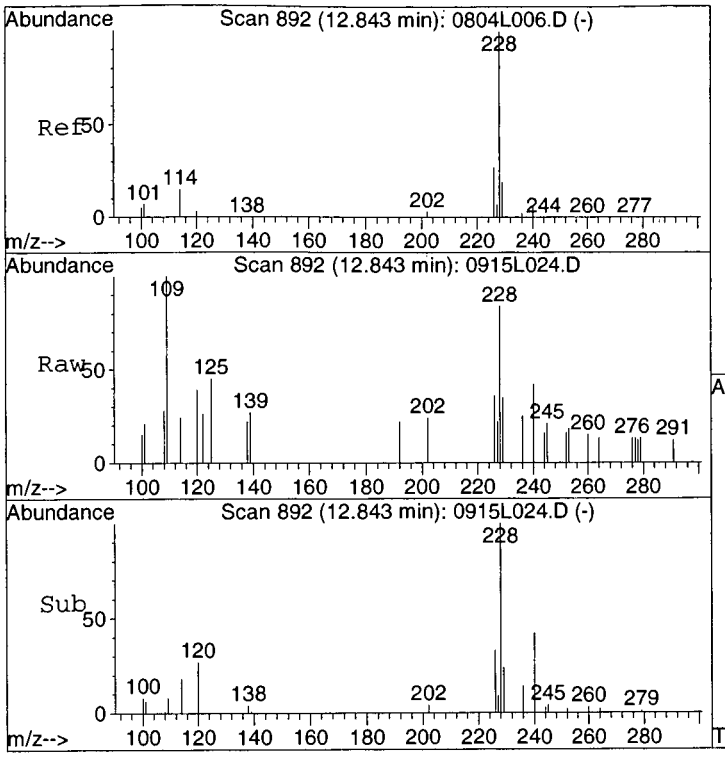


#16
Pyrene
Concen: 17.94614 ppb
RT: 11.44 min Scan# 772
Delta R.T. -0.01 min
Lab File: 0915L024.D
Acq: 16 Sep 14 7:15

Tgt Ion:202 Resp: 1377

Ion	Ratio	Lower	Upper
202	100		
101	16.0	7.4	13.8#
100	12.2	5.8	10.8#

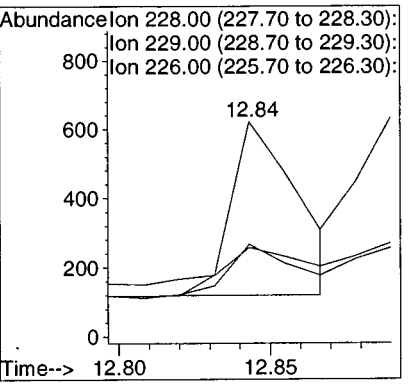


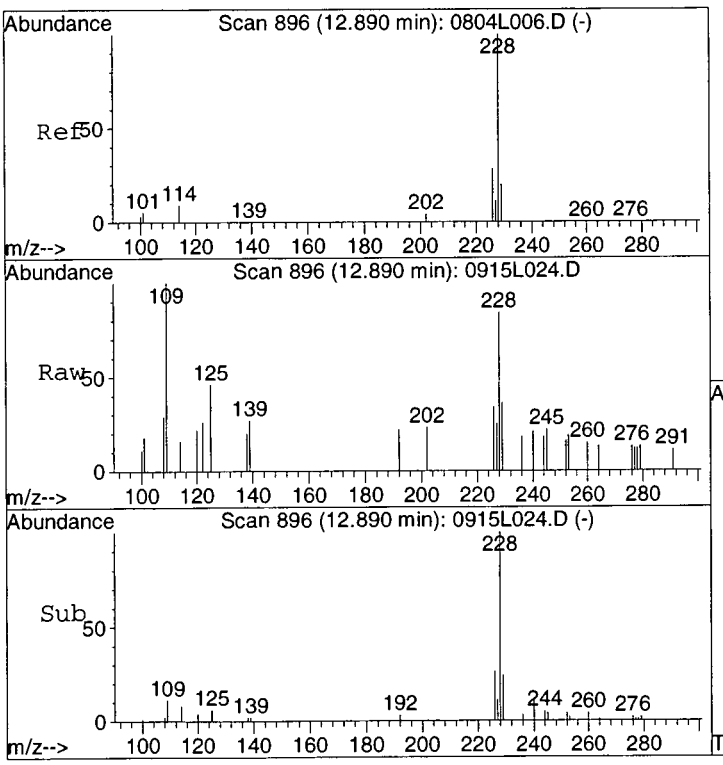


#18
Benz (a) anthracene
Concen: 12.46635 ppb
RT: 12.84 min Scan# 892
Delta R.T. -0.01 min
Lab File: 0915L024.D
Acq: 16 Sep 14 7:15

Tgt Ion:228 Resp: 774

Ion	Ratio	Lower	Upper
228	100		
229	18.1	14.1	26.1
226	28.7	17.5	32.5

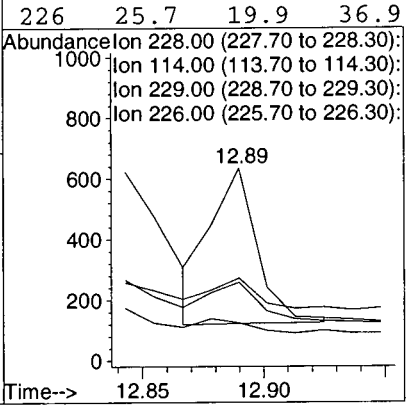


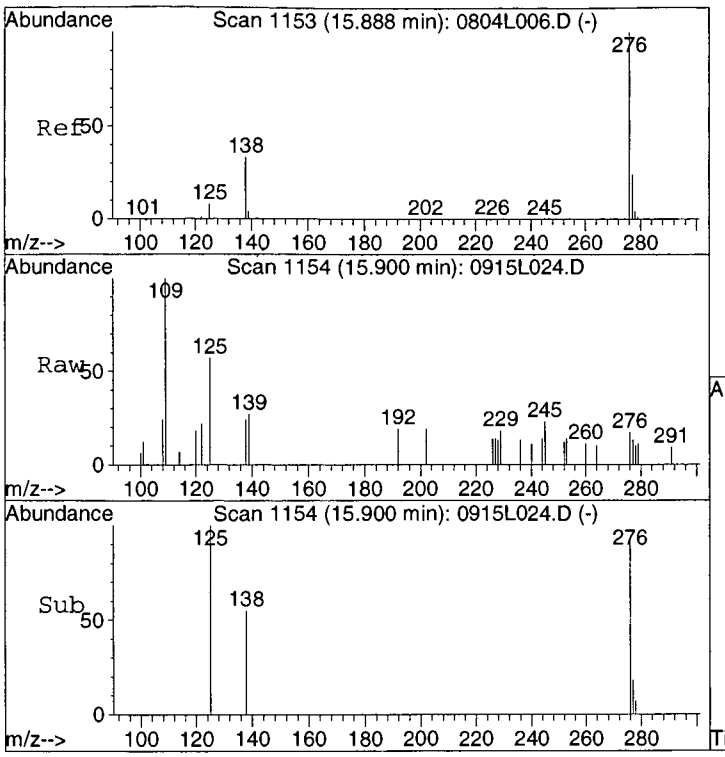


#19
Chrysene
Concen: 11.59777 ppb
RT: 12.89 min Scan# 896
Delta R.T. 0.00 min
Lab File: 0915L024.D
Acq: 16 Sep 14 7:15

Tgt Ion:228 Resp: 698

Ion	Ratio	Lower	Upper
228	100		
114	4.9	8.4	15.6#
229	19.2	13.8	25.6
226	25.7	19.9	36.9

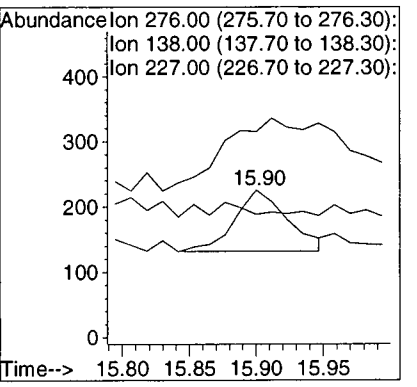


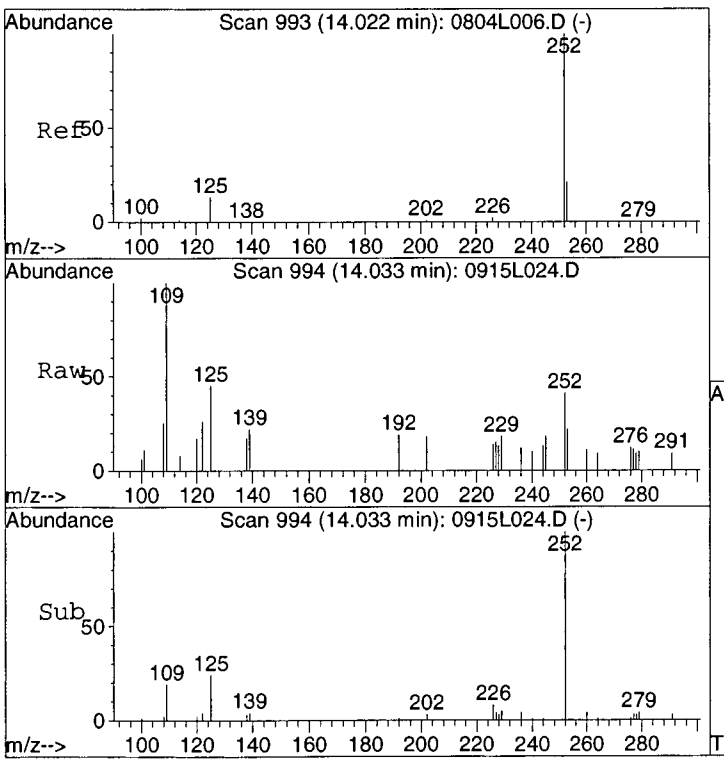


#20
Indeno (1,2,3-cd) pyrene
Concen: 4.99559 ppb
RT: 15.90 min Scan# 1154
Delta R.T. -0.00 min
Lab File: 0915L024.D
Acq: 16 Sep 14 7:15

Tgt Ion:276 Resp: 260

Ion	Ratio	Lower	Upper
276	100		
138	83.0	22.8	42.4#
227	4.3	0.2	0.4#

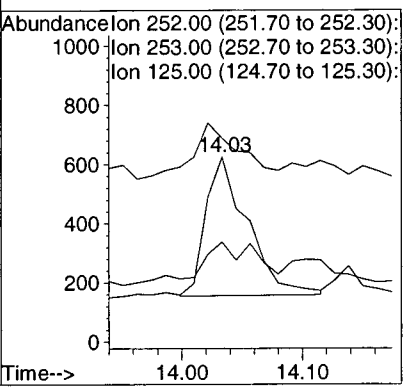


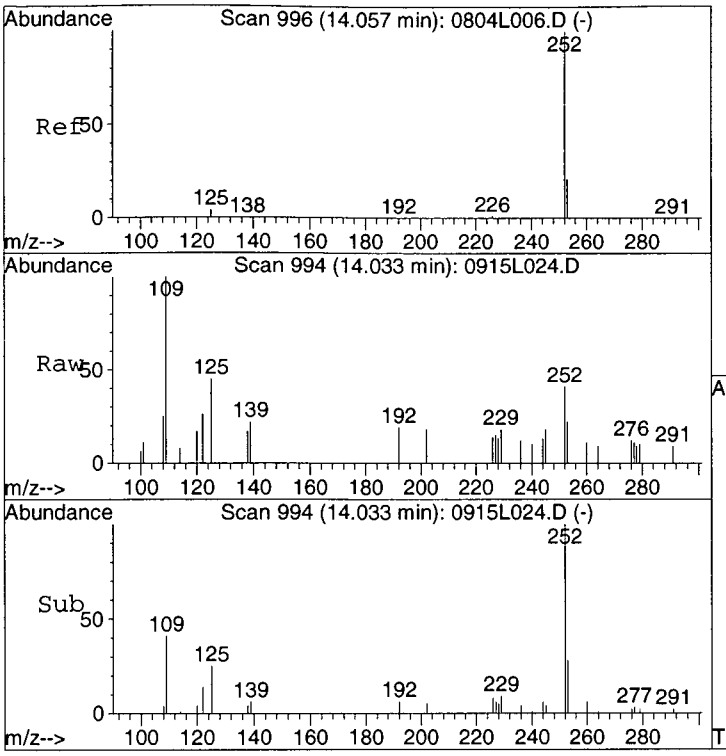


#22
Benzo (b) fluoranthene
Concen: 23.07582 ppb
RT: 14.03 min Scan# 994
Delta R.T. 0.01 min
Lab File: 0915L024.D
Acq: 16 Sep 14 7:15

Tgt Ion:252 Resp: 1137

Ion	Ratio	Lower	Upper
252	100		
253	26.6	14.9	27.7
125	20.8	12.3	22.8

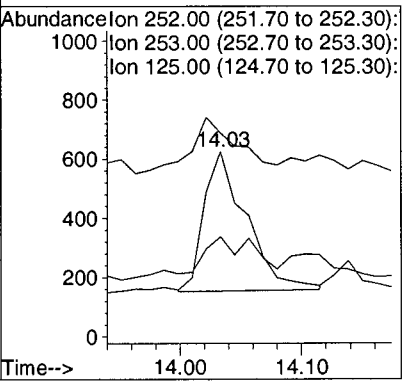


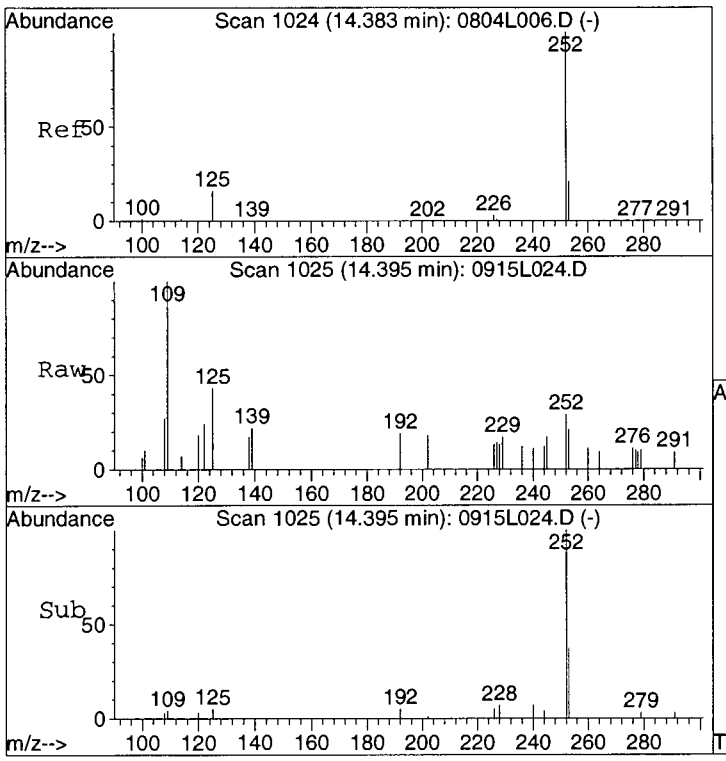


#23
Benzo (k) fluoranthene
Concen: 23.44420 ppb
RT: 14.03 min Scan# 994
Delta R.T. -0.02 min
Lab File: 0915L024.D
Acq: 16 Sep 14 7:15

Tgt Ion:252 Resp: 1144

Ion	Ratio	Lower	Upper
252	100		
253	26.6	14.7	27.3
125	20.8	9.2	17.0#

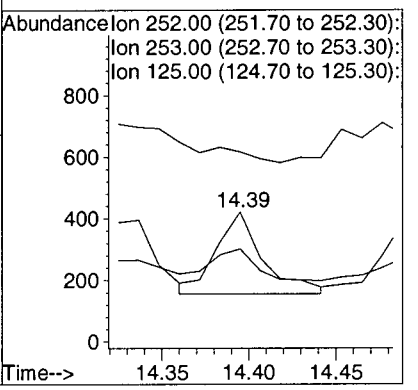


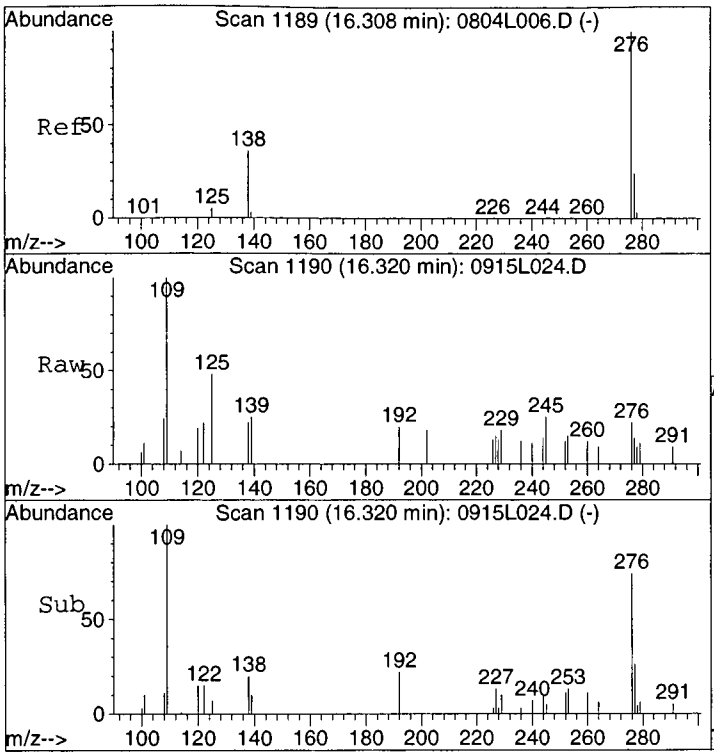


#24
Benzo (a) pyrene
Concen: 11.11059 ppb
RT: 14.39 min Scan# 1025
Delta R.T. -0.00 min
Lab File: 0915L024.D
Acq: 16 Sep 14 7:15

Tgt Ion:252 Resp: 501

Ion	Ratio	Lower	Upper
252	100		
253	42.4	15.4	28.6#
125	8.6	9.5	17.6#

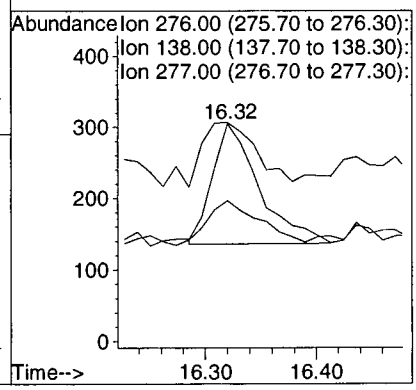




#26
Benzo (g,h,i) perylene
Concen: 11.94701 ppb
RT: 16.32 min Scan# 1190
Delta R.T. -0.00 min
Lab File: 0915L024.D
Acq: 16 Sep 14 7:15

Tgt Ion:276 Resp: 493

Ion	Ratio	Lower	Upper
276	100		
138	54.5	24.4	45.4#
277	32.9	17.1	31.7#



EPA 8270C SIM IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN016
Sample Collection Date: 9/3/14

ARF: 74218
APPL ID: AZ02114
QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 16.4 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0012 J	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.0058	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.0051	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.011	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.012	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.012	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.0064	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.0073	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.0039 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.0019 J	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.0082	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	66.9	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	82.0	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	127 #	30-125			%	9/10/14	9/16/14

J = Estimated value.
= Recovery (or RPD) is outside QC limits.

Quant Method: SIM.M
Run #: 0915L025
Instrument: Linus
Sequence: L140821
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L025.D Vial: 25
Acq On : 16 Sep 14 7:41 Operator: LF
Sample : AZ02114S11 1/35.89G Inst : Linus
Misc : Multiplr: 27.86

Quant Time: Sep 18 22:54 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1788	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	8.05	164	1047	2.50000 ppb	-0.01
11) Phenanthrene-D10(IS)	9.79	188	1613	2.50000 ppb	0.00
15) Chrysene-D12(IS)	12.85	240	2377	2.50000 ppb	-0.01
21) Perylene-D12(IS)	14.47	264	1345	2.50000 ppb	0.01
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.26	82	735	45.68622 ppb	0.00
Spiked Amount 55.726			Recovery = 81.984%		
7) Surrogate Recovery (FBP)	7.30	172	1411	37.25648 ppb	0.00
Spiked Amount 55.726			Recovery = 66.856%		
17) Surrogate Recovery (TPH)	11.65	244	2758	70.54301 ppb	-0.01
Spiked Amount 55.726			Recovery = 126.589%		
Target Compounds					Qvalue
12) Phenanthrene	9.81	178	74	1.58156 ppb #	90
13) Anthracene	9.87	178	43	0.98091 ppb #	88
14) Fluoranthene	11.19	202	496	6.12977 ppb #	88
16) Pyrene	11.44	202	489	6.81699 ppb #	79
18) Benz (a) anthracene	12.84	228	283	4.87564 ppb #	83
19) Chrysene	12.89	228	300	5.33196 ppb #	90
20) Indeno (1,2,3-cd) pyrene	15.90	276	160	3.28836 ppb #	3
22) Benzo (b) fluoranthene	14.03	252	491	9.59827 ppb #	92
23) Benzo (k) fluoranthene	14.03	252	495	9.77079 ppb #	88
24) Benzo (a) pyrene	14.40	252	200	4.27213 ppb #	28
26) Benzo (g,h,i) perylene	16.32	276	418	9.75672 ppb #	54

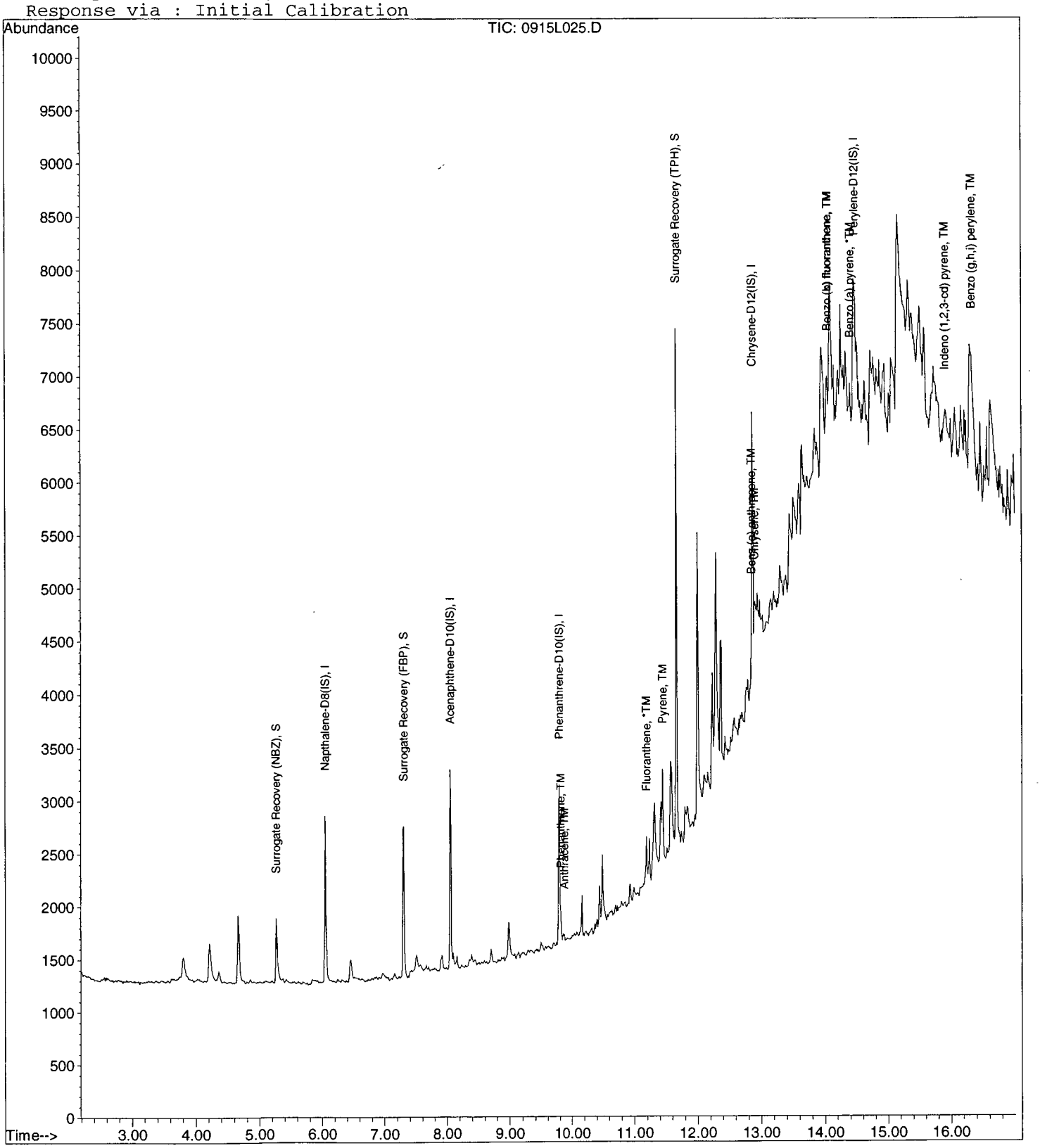
(#) = qualifier out of range (m) = manual integration

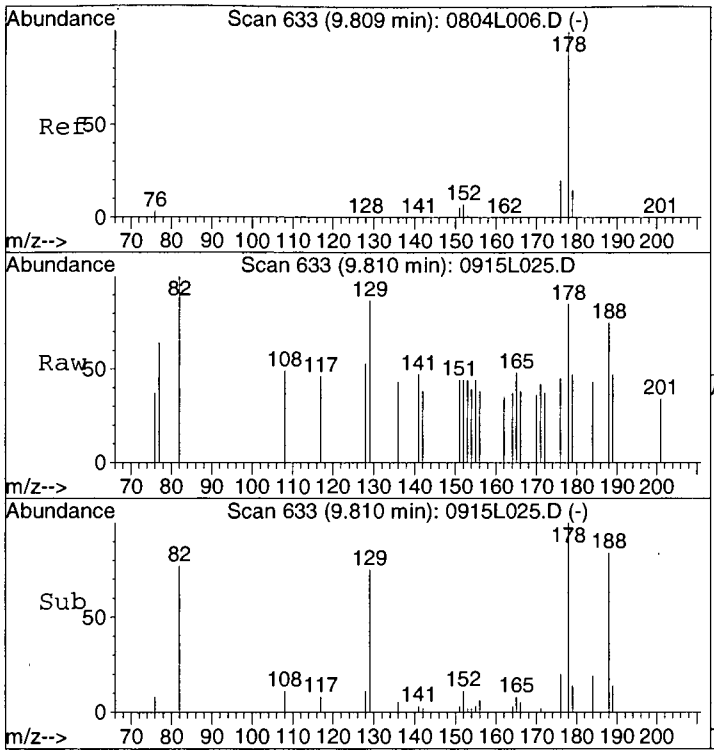
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L025.D Vial: 25
Acq On : 16 Sep 14 7:41 Operator: LF
Sample : AZ02114S11 1/35.89G Inst : Linus
Misc : Multiplr: 27.86

Quant Time: Sep 18 22:54 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

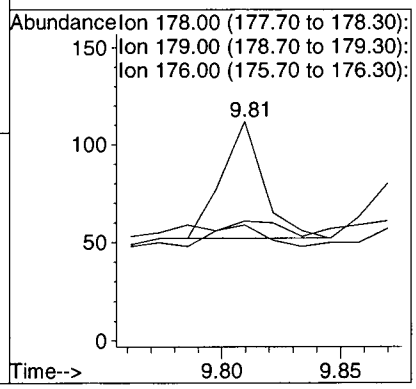


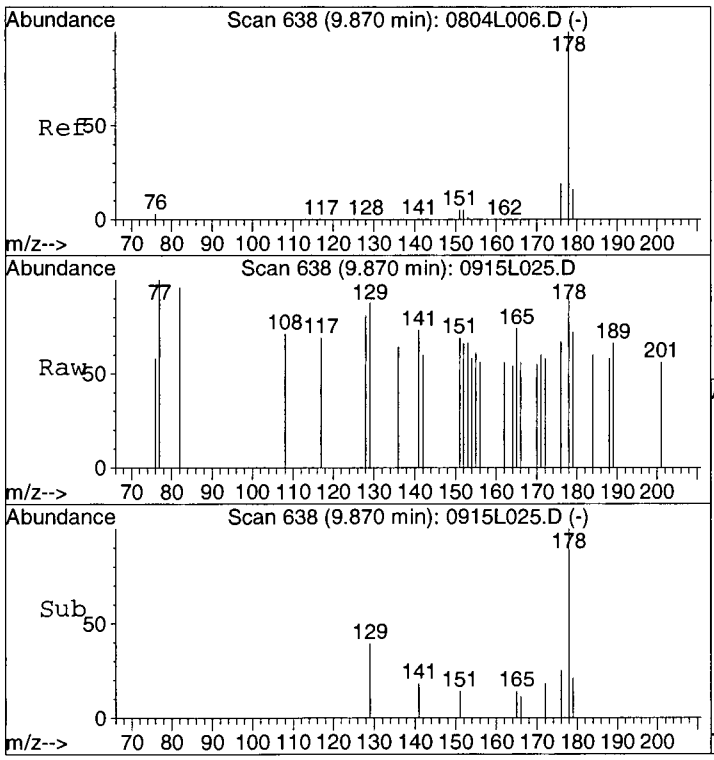


#12
Phenanthrene
Concen: 1.58156 ppb
RT: 9.81 min Scan# 633
Delta R.T. 0.00 min
Lab File: 0915L025.D
Acq: 16 Sep 14 7:41

Tgt Ion:178 Resp: 74

Ion	Ratio	Lower	Upper
178	100		
179	6.7	10.4	19.4#
176	18.3	13.4	24.8

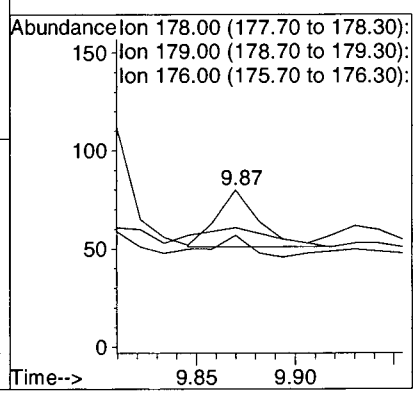


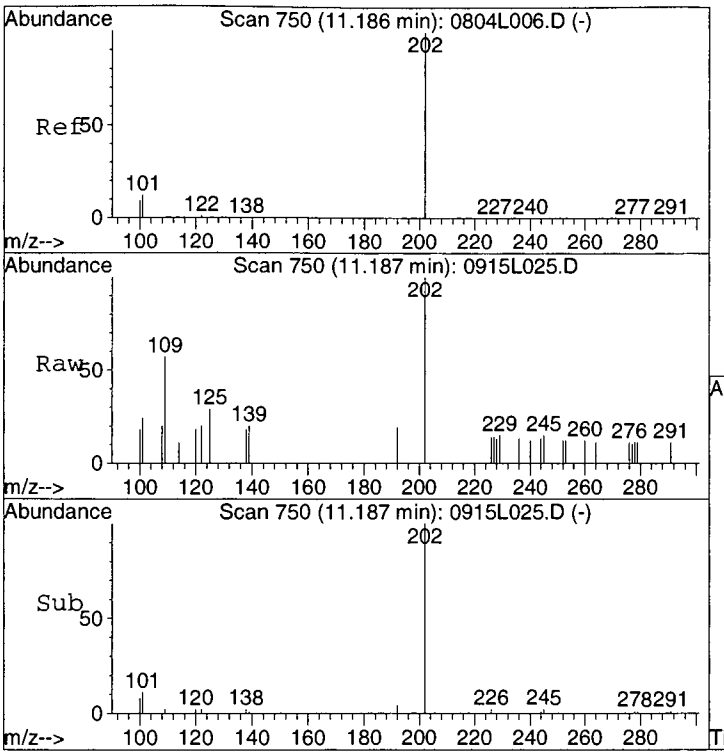


#13
Anthracene
Concen: 0.98091 ppb
RT: 9.87 min Scan# 638
Delta R.T. 0.00 min
Lab File: 0915L025.D
Acq: 16 Sep 14 7:41

Tgt Ion:178 Resp: 43

Ion	Ratio	Lower	Upper
178	100		
179	13.8	10.4	19.2
176	27.6	13.0	24.1#

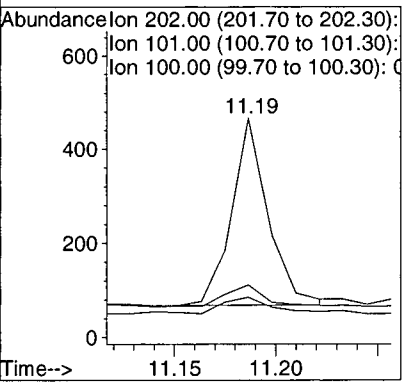


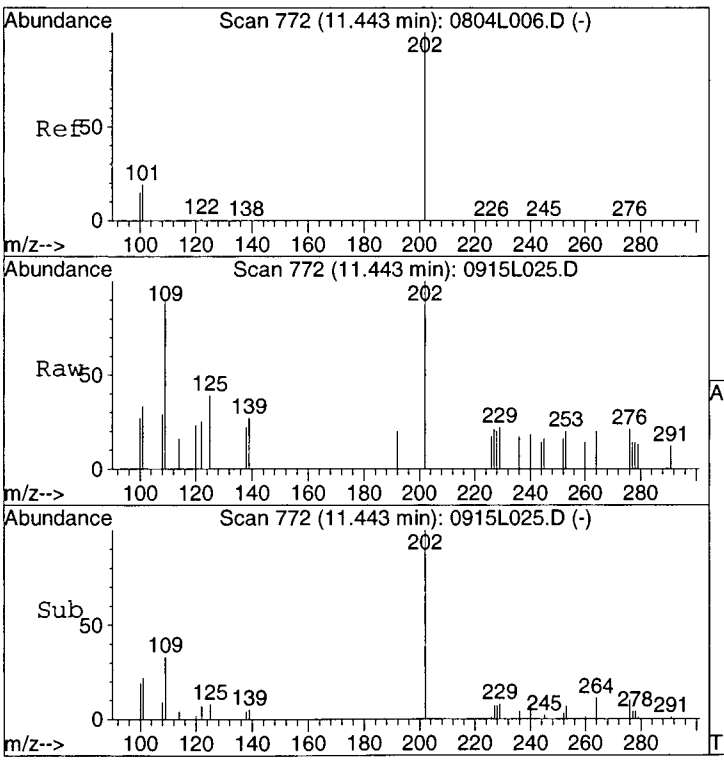


#14
Fluoranthene
Concen: 6.12977 ppb
RT: 11.19 min Scan# 750
Delta R.T. 0.00 min
Lab File: 0915L025.D
Acq: 16 Sep 14 7:41

Tgt Ion:202 Resp: 496

Ion	Ratio	Lower	Upper
202	100		
101	11.3	12.0	22.2#
100	8.0	8.2	15.2#

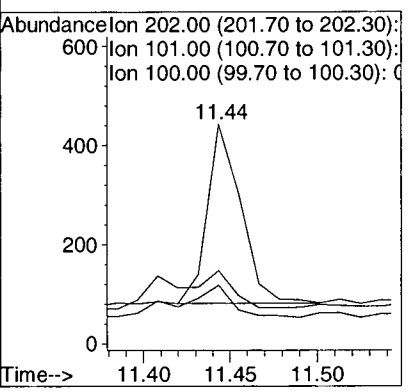


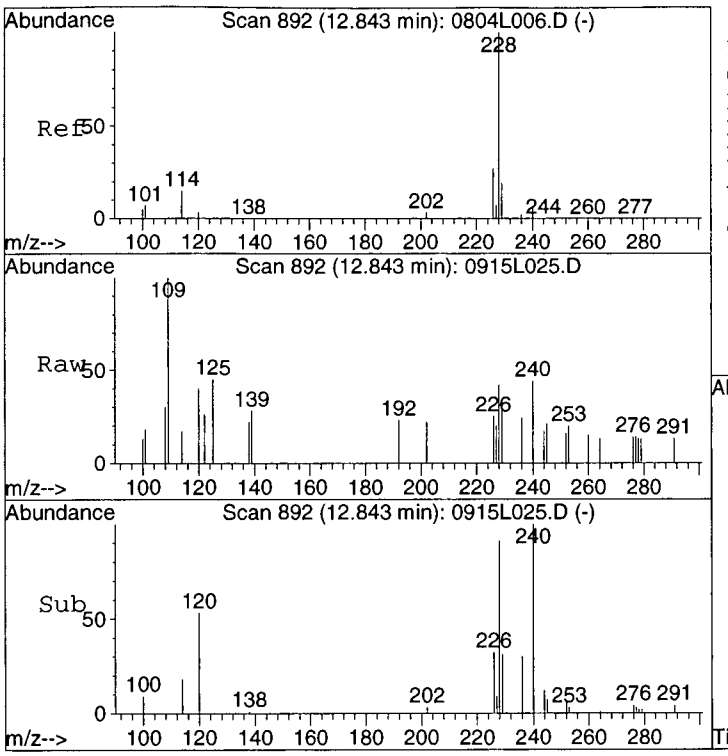


#16
Pyrene
Concen: 6.81699 ppb
RT: 11.44 min Scan# 772
Delta R.T. -0.01 min
Lab File: 0915L025.D
Acq: 16 Sep 14 7:41

Tgt Ion:202 Resp: 489

Ion	Ratio	Lower	Upper
202	100		
101	18.8	7.4	13.8#
100	15.5	5.8	10.8#

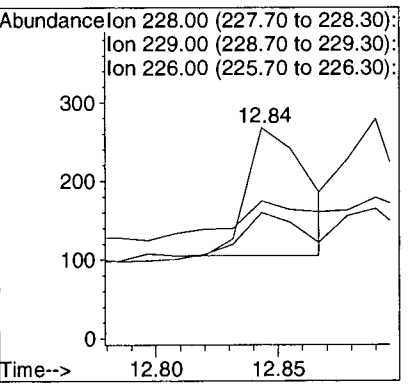


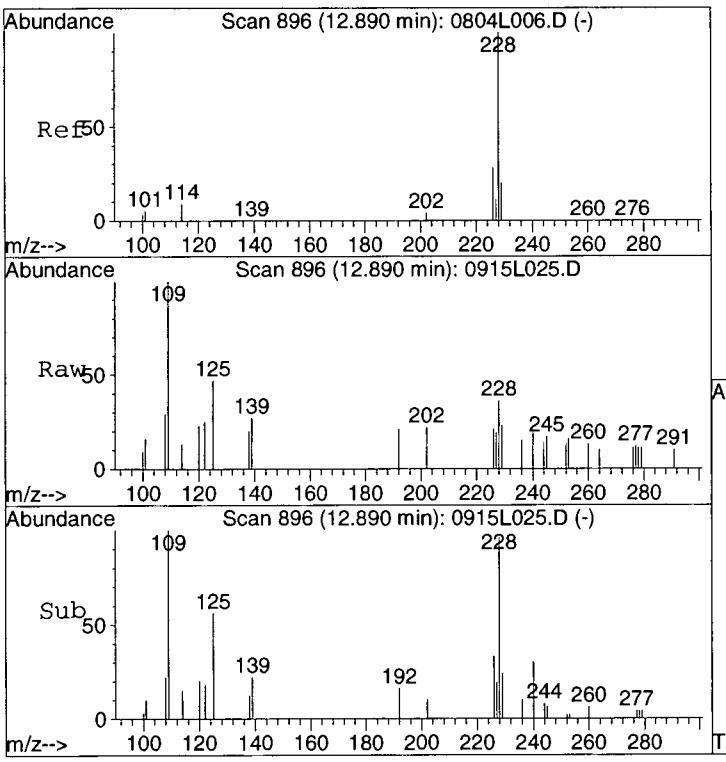


#18
Benz (a) anthracene
Concen: 4.87564 ppb
RT: 12.84 min Scan# 892
Delta R.T. -0.01 min
Lab File: 0915L025.D
Acq: 16 Sep 14 7:41

Tgt Ion:228 Resp: 283

Ion	Ratio	Lower	Upper
228	100		
229	25.2	14.1	26.1
226	36.2	17.5	32.5#

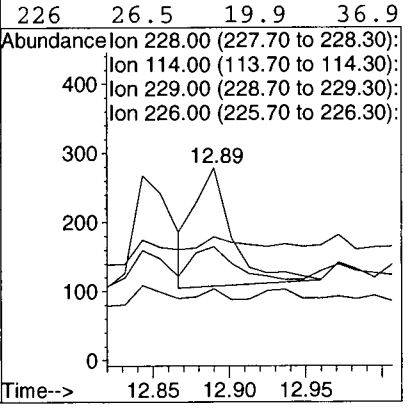


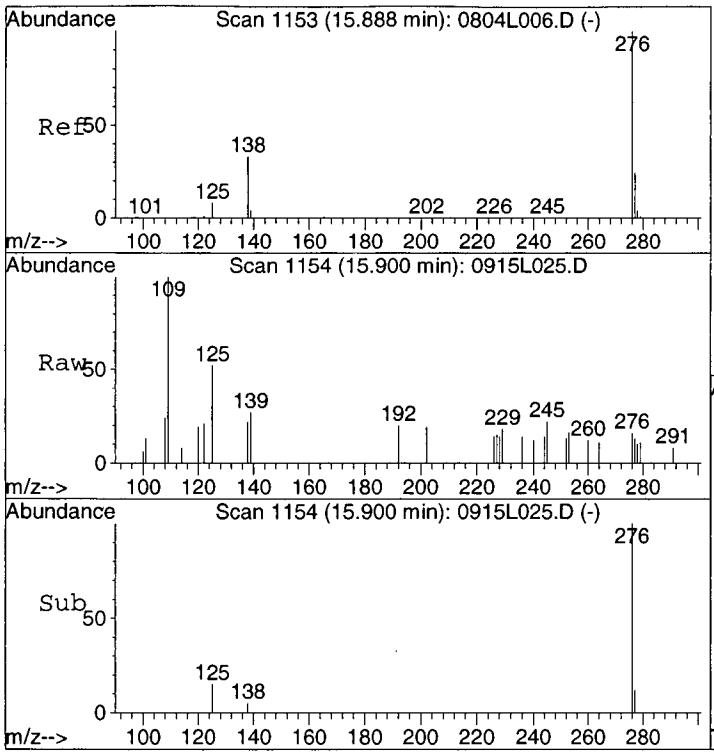


#19
Chrysene
Concen: 5.33196 ppb
RT: 12.89 min Scan# 896
Delta R.T. 0.00 min
Lab File: 0915L025.D
Acq: 16 Sep 14 7:41

Tgt Ion:228 Resp: 300

Ion	Ratio	Lower	Upper
228	100		
114	8.6	8.4	15.6
229	11.1	13.8	25.6#
226	26.5	19.9	36.9

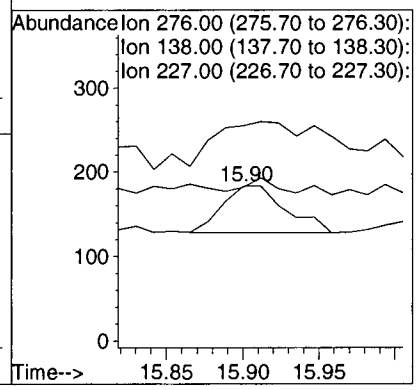


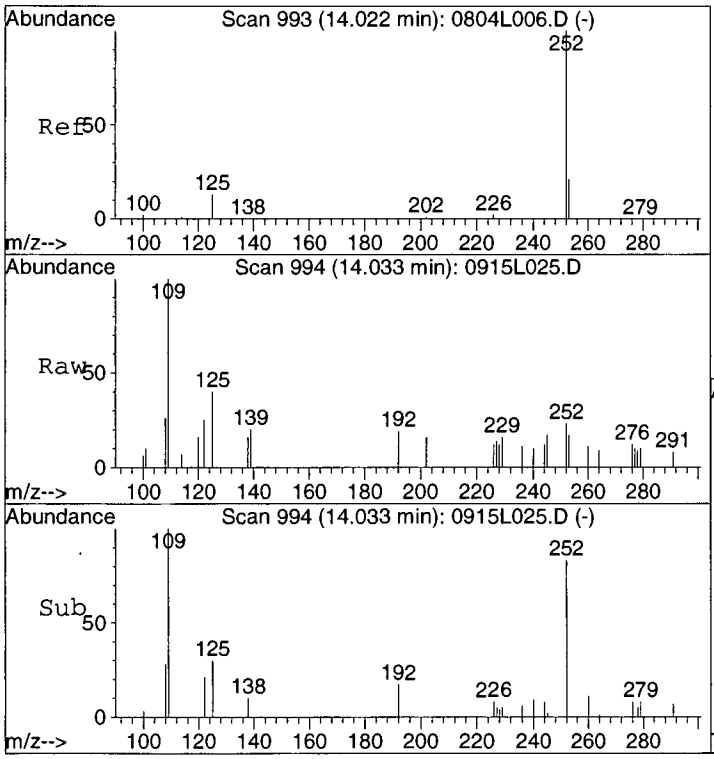


#20
Indeno (1,2,3-cd) pyrene
Concen: 3.28836 ppb
RT: 15.90 min Scan# 1154
Delta R.T. 0.00 min
Lab File: 0915L025.D
Acq: 16 Sep 14 7:41

Tgt Ion:276 Resp: 160

Ion	Ratio	Lower	Upper
276	100		
138	87.3	22.8	42.4#
227	16.4	0.2	0.4#

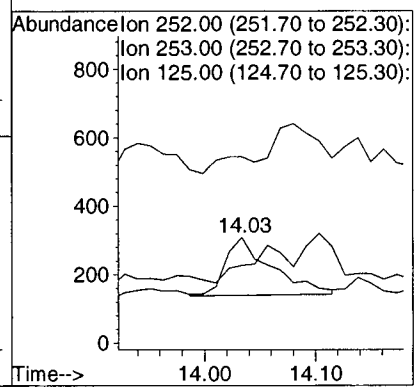


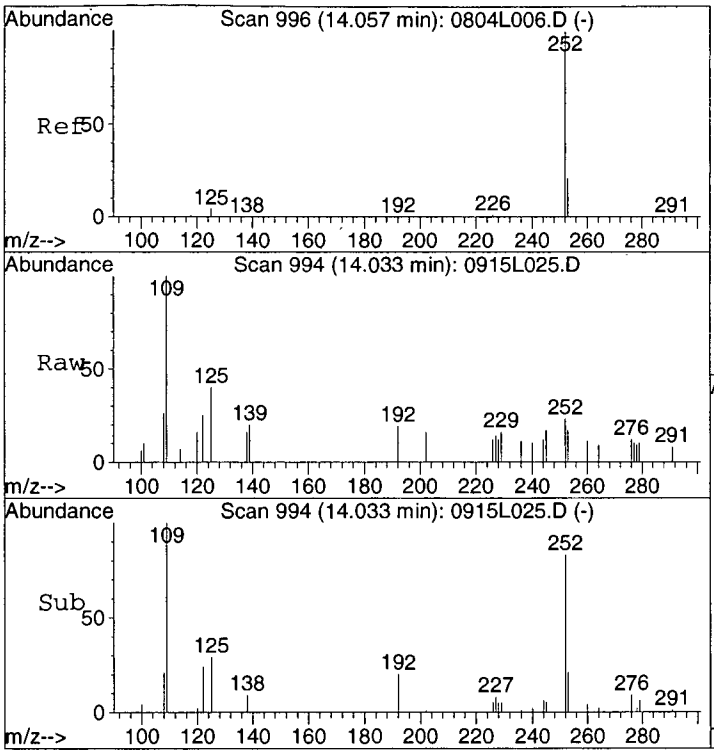


#22
Benzo (b) fluoranthene
Concen: 9.59827 ppb
RT: 14.03 min Scan# 994
Delta R.T. 0.01 min
Lab File: 0915L025.D
Acq: 16 Sep 14 7:41

Tgt Ion:252 Resp: 491

Ion	Ratio	Lower	Upper
252	100		
253	19.3	14.9	27.7
125	22.9	12.3	22.8#

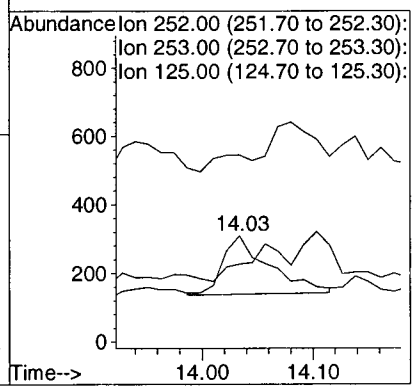


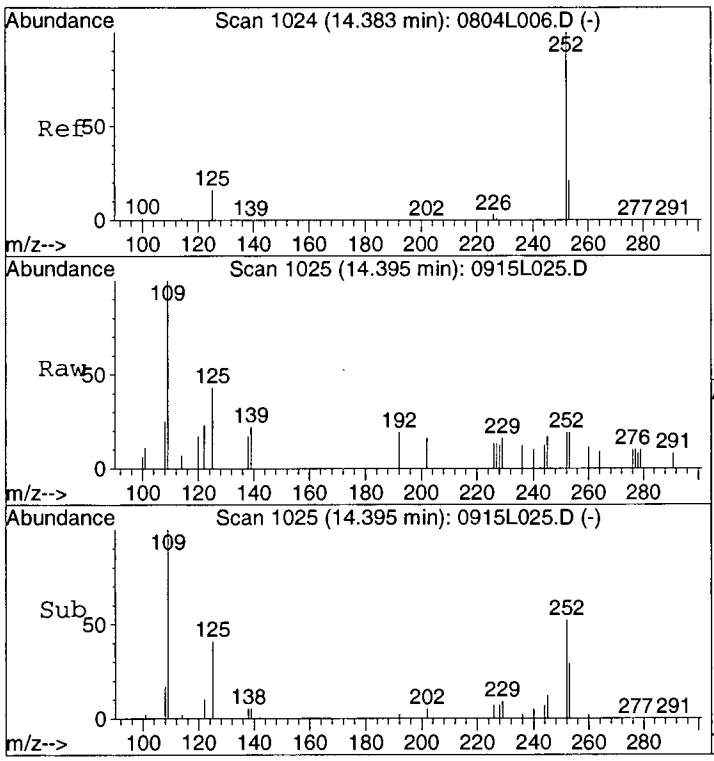


#23
Benzo (k) fluoranthene
Concen: 9.77079 ppb
RT: 14.03 min Scan# 994
Delta R.T. -0.02 min
Lab File: 0915L025.D
Acq: 16 Sep 14 7:41

Tgt Ion:252 Resp: 495

Ion	Ratio	Lower	Upper
252	100		
253	19.3	14.7	27.3
125	22.9	9.2	17.0#

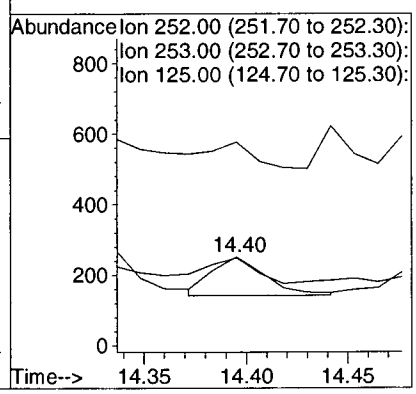


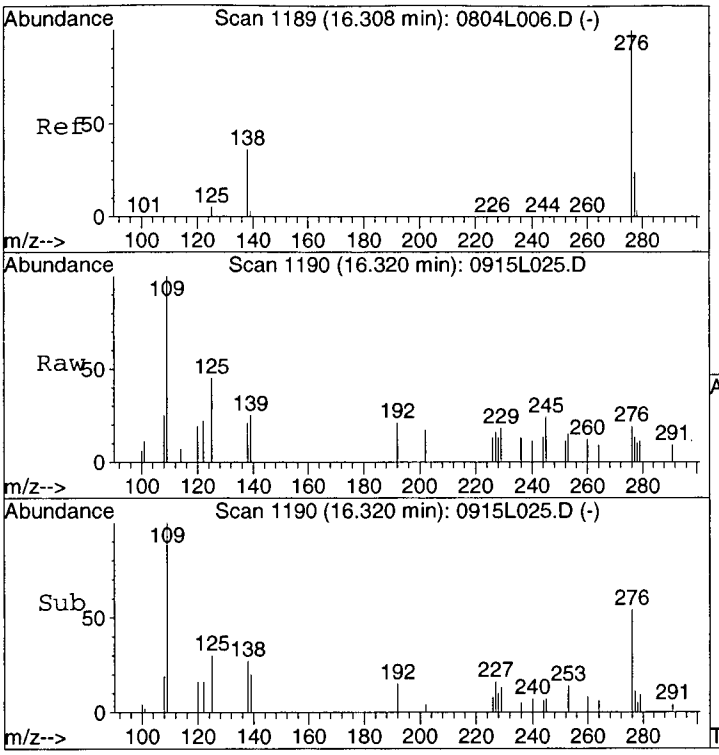


#24
Benzo (a) pyrene
Concen: 4.27213 ppb
RT: 14.40 min Scan# 1025
Delta R.T. 0.00 min
Lab File: 0915L025.D
Acq: 16 Sep 14 7:41

Tgt Ion:252 Resp: 200

Ion	Ratio	Lower	Upper
252	100		
253	62.7	15.4	28.6#
125	33.3	9.5	17.6#

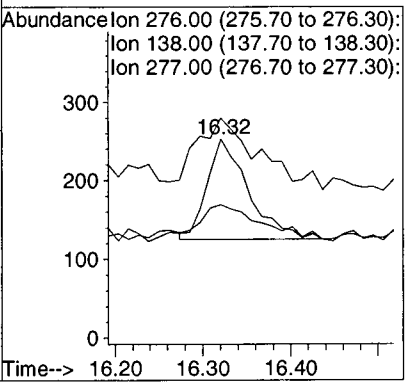




#26
Benzo (g,h,i) perylene
Concen: 9.75672 ppb
RT: 16.32 min Scan# 1190
Delta R.T. 0.00 min
Lab File: 0915L025.D
Acq: 16 Sep 14 7:41

Tgt Ion:276 Resp: 418

Ion	Ratio	Lower	Upper
276	100		
138	71.9	24.4	45.4#
277	34.4	17.1	31.7#



EPA 8270C SIM IS GROSS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN017
Sample Collection Date: 9/3/14

ARF: 74218
APPL ID: AZ02115
QCG: #SIMHC-140910A-189932

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 25.6 Percent Moisture.)								
8270C-LL	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	ANTHRACENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)ANTHRACENE	0.0019 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(A)PYRENE	0.0024 J	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(B)FLUORANTHENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(GHI)PERYLENE	0.0052	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
8270C-LL	BENZO(K)FLUORANTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	CHRYSENE	0.0020 J	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
8270C-LL	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORANTHENE	0.0027 J	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
8270C-LL	INDENO(1,2,3-CD)PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
8270C-LL	PHENANTHRENE	0.0011 J	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
8270C-LL	PYRENE	0.0030 J	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
8270C-LL	SURROGATE: 2-FLUORBIPHENYL (S)	58.9	45-105			%	9/10/14	9/16/14
8270C-LL	SURROGATE: NITROBENZENE-D5 (S)	67.2	35-100			%	9/10/14	9/16/14
8270C-LL	SURROGATE: TERPHENYL-D14 (S)	70.0	30-125			%	9/10/14	9/16/14

J = Estimated value.

Quant Method: SIM.M
Run #: 0915L026
Instrument: Linus
Sequence: L140821
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L026.D Vial: 26
Acq On : 16 Sep 14 8:07 Operator: LF
Sample : AZ02115S11 1/40.38G Inst : Linus
Misc : Multiplr: 24.76

Quant Time: Sep 18 22:54 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	6.05	136	2367	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	8.05	164	1003	2.50000 ppb	-0.01
11) Phenanthrene-D10(IS)	9.79	188	1936	2.50000 ppb	0.00
15) Chrysene-D12(IS)	12.85	240	3251	2.50000 ppb	-0.01
21) Perylene-D12(IS)	14.47	264	1671	2.50000 ppb	0.01
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.26	82	797	33.26081 ppb	0.00
Spiked Amount 49.529			Recovery = 67.154%		
7) Surrogate Recovery (FBP)	7.30	172	1190	29.15243 ppb	0.00
Spiked Amount 49.529			Recovery = 58.858%		
17) Surrogate Recovery (TPH)	11.65	244	2087	34.68979 ppb	-0.01
Spiked Amount 49.529			Recovery = 70.039%		
Target Compounds					Qvalue
12) Phenanthrene	9.81	178	53	0.83882 ppb	# 87
14) Fluoranthene	11.19	202	223	2.04082 ppb	# 88
16) Pyrene	11.44	202	245	2.21957 ppb	# 77
18) Benz (a) anthracene	12.85	228	128	1.43309 ppb	# 82
19) Chrysene	12.89	228	127	1.46686 ppb	# 86
24) Benzo (a) pyrene	14.40	252	115	1.75738 ppb	# 38
26) Benzo (g,h,i) perylene	16.32	276	230	3.84068 ppb	# 83

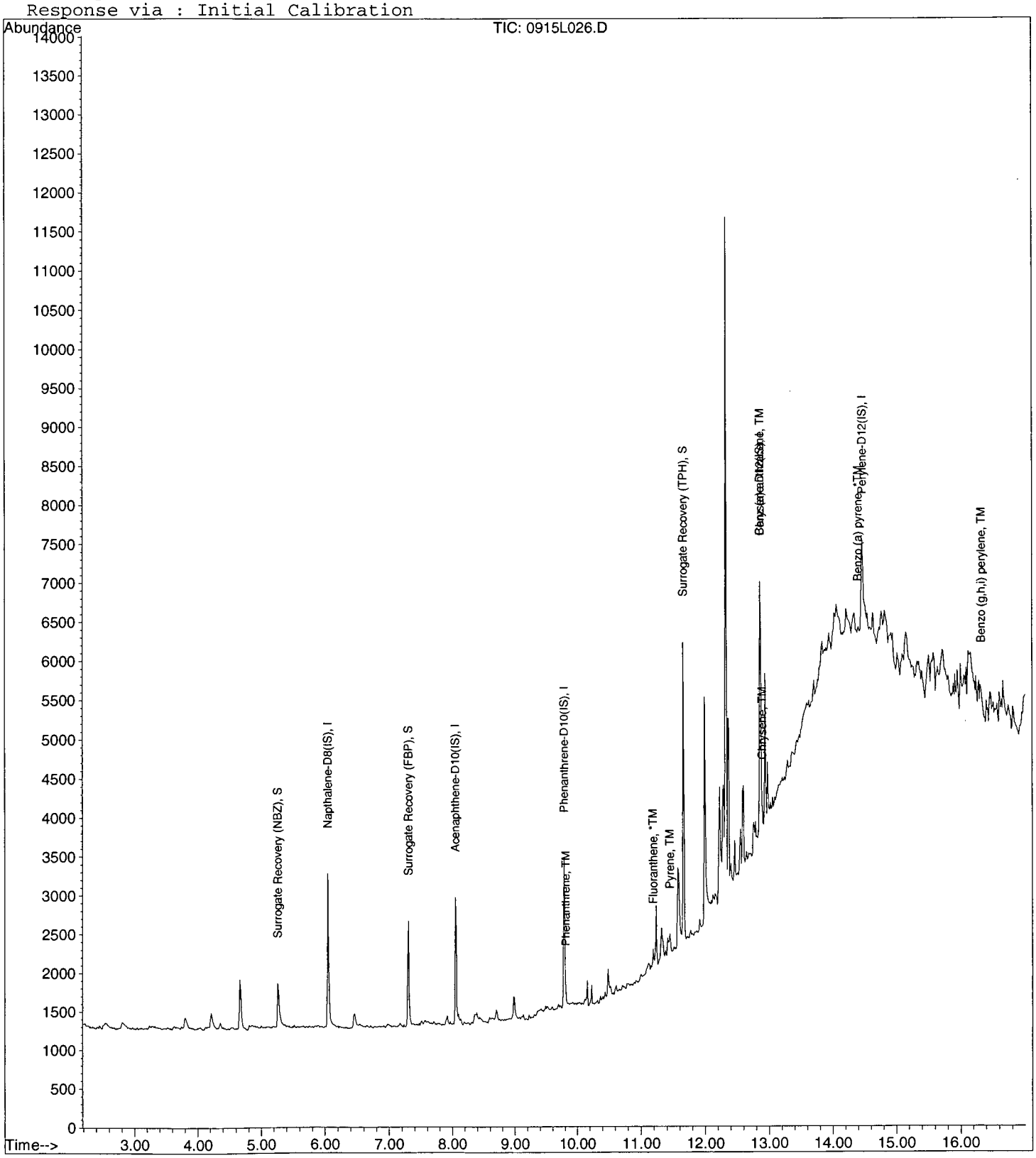
(#) = qualifier out of range (m) = manual integration

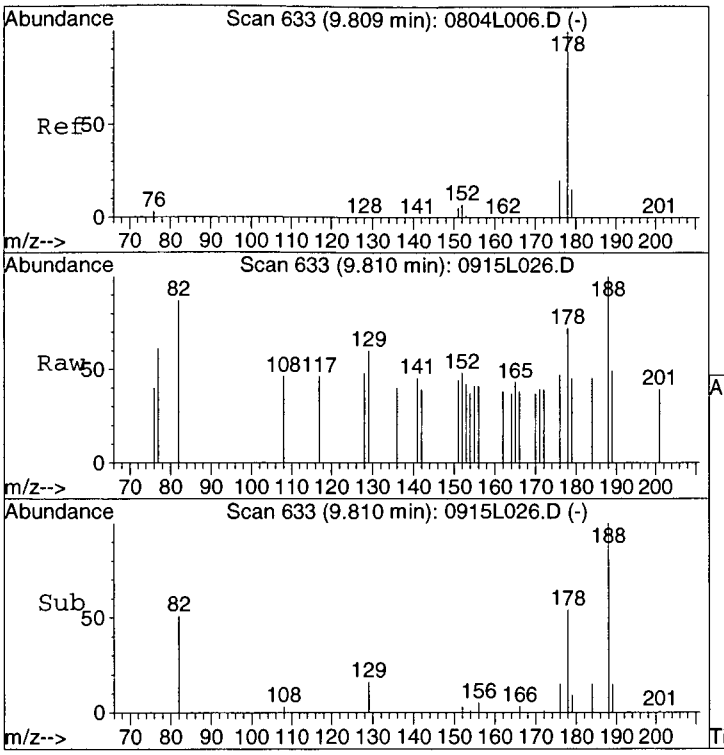
Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L026.D Vial: 26
Acq On : 16 Sep 14 8:07 Operator: LF
Sample : AZ02115S11 1/40.38G Inst : Linus
Misc : Multiplr: 24.76

Quant Time: Sep 18 22:54 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration

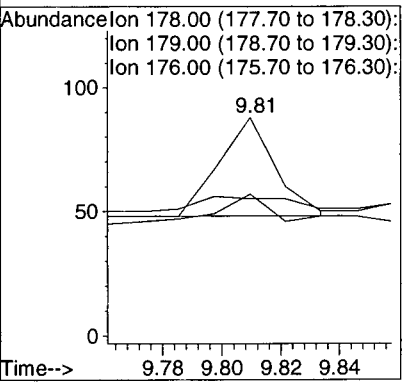


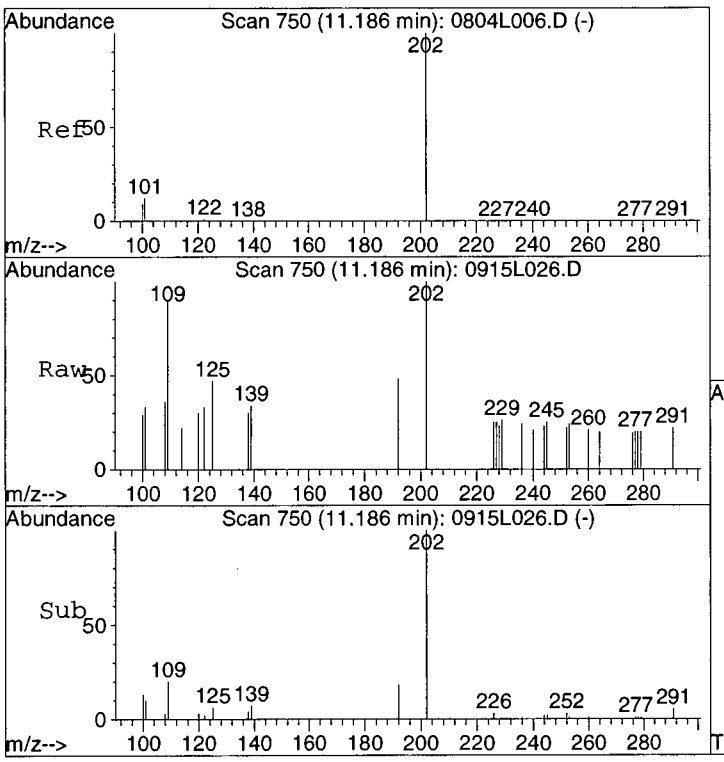


#12
Phenanthrene
Concen: 0.83882 ppb
RT: 9.81 min Scan# 633
Delta R.T. 0.00 min
Lab File: 0915L026.D
Acq: 16 Sep 14 8:07

Tgt Ion:178 Resp: 53

Ion	Ratio	Lower	Upper
178	100		
179	10.0	10.4	19.4#
176	25.0	13.4	24.8#

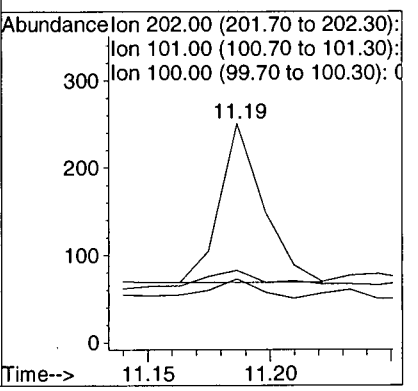


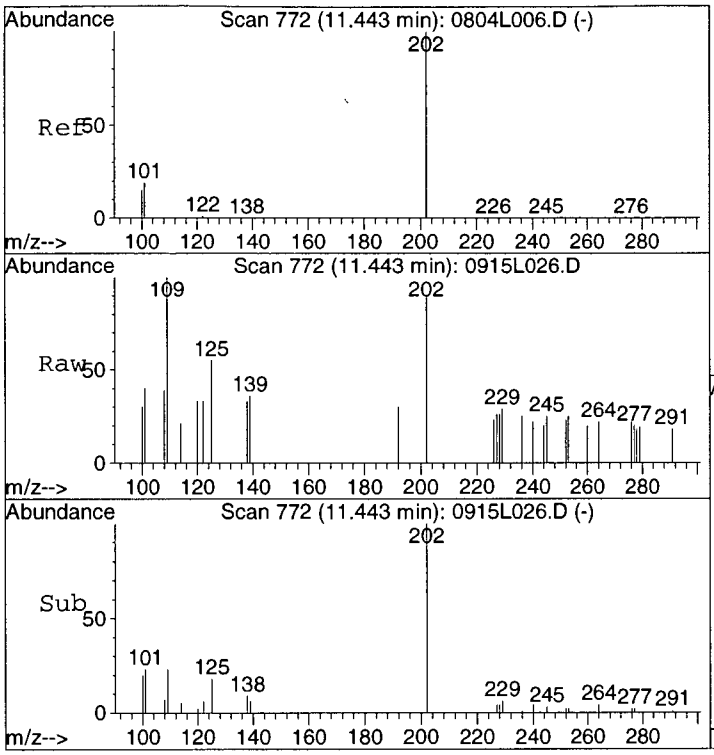


#14
Fluoranthene
Concen: 2.04082 ppb
RT: 11.19 min Scan# 750
Delta R.T. -0.00 min
Lab File: 0915L026.D
Acq: 16 Sep 14 8:07

Tgt Ion:202 Resp: 223

Ion	Ratio	Lower	Upper
202	100		
101	9.9	12.0	22.2#
100	9.9	8.2	15.2

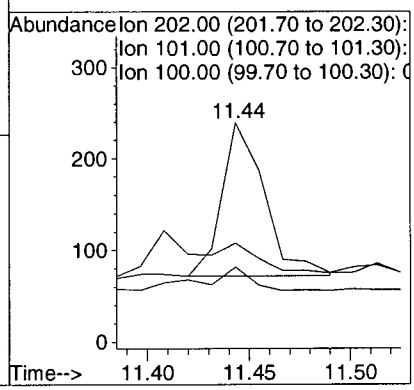


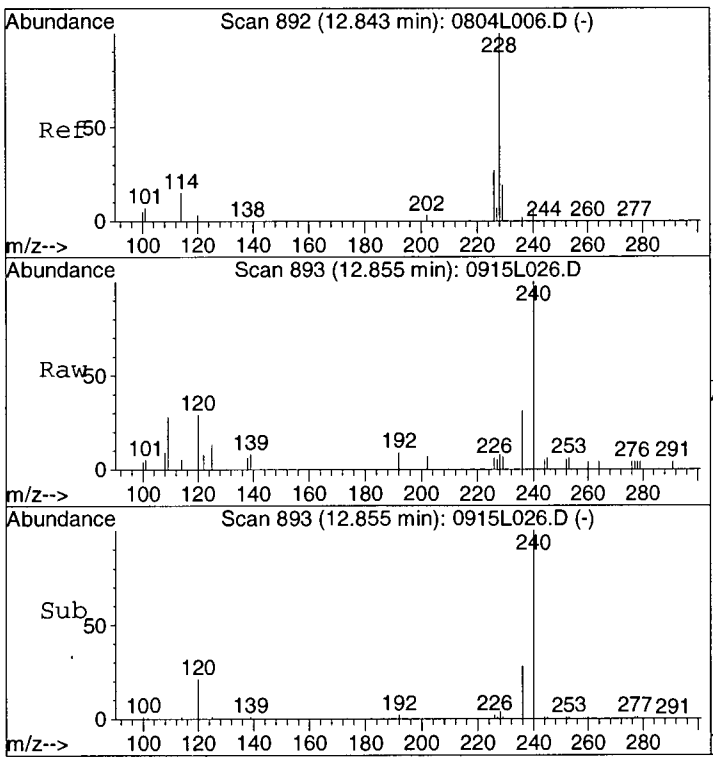


#16
Pyrene
Concen: 2.21957 ppb
RT: 11.44 min Scan# 772
Delta R.T. -0.01 min
Lab File: 0915L026.D
Acq: 16 Sep 14 8:07

Tgt Ion:202 Resp: 245

Ion	Ratio	Lower	Upper
202	100		
101	19.8	7.4	13.8#
100	15.6	5.8	10.8#

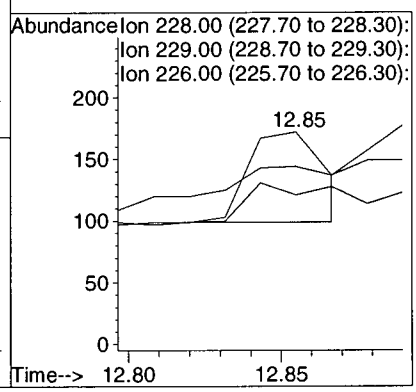


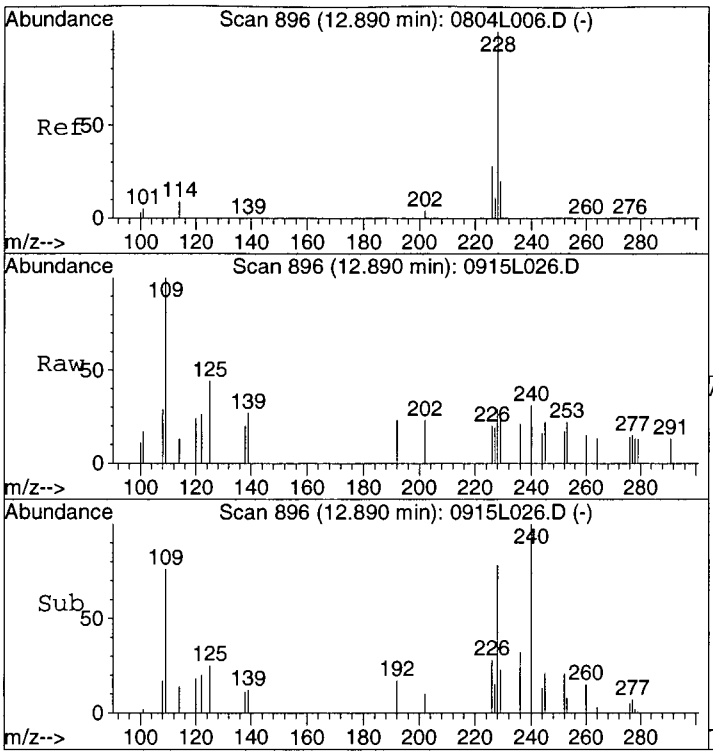


#18
Benz (a) anthracene
Concen: 1.43309 ppb
RT: 12.85 min Scan# 893
Delta R.T. -0.00 min
Lab File: 0915L026.D
Acq: 16 Sep 14 8:07

Tgt Ion:228 Resp: 128

Ion	Ratio	Lower	Upper
228	100		
229	32.9	14.1	26.1#
226	30.1	17.5	32.5

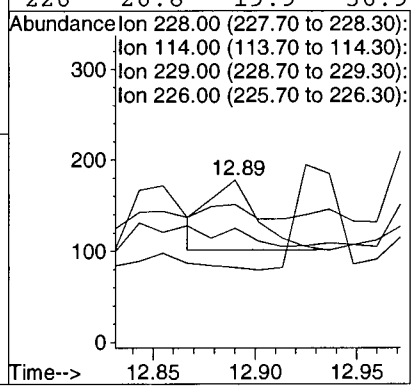


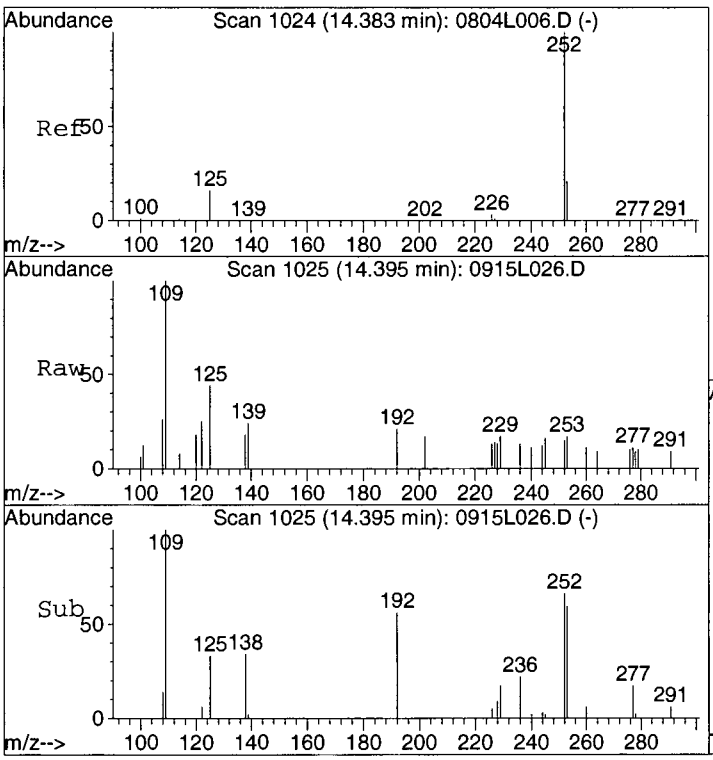


#19
Chrysene
Concen: 1.46686 ppb
RT: 12.89 min Scan# 896
Delta R.T. 0.00 min
Lab File: 0915L026.D
Acq: 16 Sep 14 8:07

Tgt Ion:228 Resp: 127

Ion	Ratio	Lower	Upper
228	100		
114	0.0	8.4	15.6#
229	18.2	13.8	25.6
226	20.8	19.9	36.9

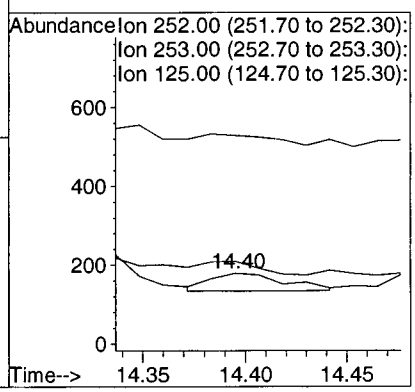


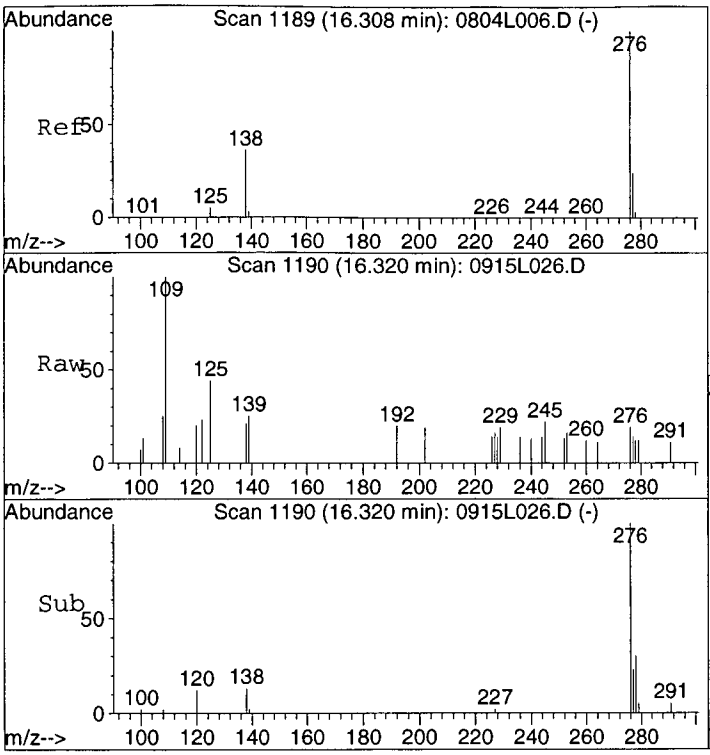


#24
Benzo (a) pyrene
Concen: 1.75738 ppb
RT: 14.40 min Scan# 1025
Delta R.T. -0.00 min
Lab File: 0915L026.D
Acq: 16 Sep 14 8:07

Tgt Ion:252 Resp: 115

Ion	Ratio	Lower	Upper
252	100		
253	60.5	15.4	28.6#
125	26.3	9.5	17.6#

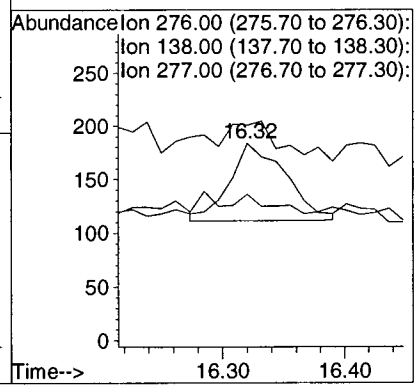




#26
Benzo (g,h,i) perylene
Concen: 3.84068 ppb
RT: 16.32 min Scan# 1190
Delta R.T. -0.00 min
Lab File: 0915L026.D
Acq: 16 Sep 14 8:07

Tgt Ion:276 Resp: 230

Ion	Ratio	Lower	Upper
276	100		
138	51.5	24.4	45.4#
277	24.2	17.1	31.7



EPA 8270C SIM

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN018
Sample Collection Date: 9/3/14

ARF: 74218
APPL ID: AZ02116
QCG: #SIMHC-140908A-189931

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270C-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	ACENAPHTHYLENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(A)ANTHRACENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(A)PYRENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(B)FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(GHI)PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
8270C-SIM	BENZO(K)FLUORANTHENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
8270C-SIM	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
8270C-SIM	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
8270C-SIM	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
8270C-SIM	FLUORENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
8270C-SIM	INDENO(1,2,3-CD)PYRENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
8270C-SIM	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
8270C-SIM	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
8270C-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	70.4	50-110			%	9/8/14	9/15/14
8270C-SIM	SURROGATE: NITROBENZENE-D5 (S)	50.3	40-110			%	9/8/14	9/15/14
8270C-SIM	SURROGATE: TERPHENYL-D14 (S)	103	50-135			%	9/8/14	9/15/14

Quant Method: SIM.M
Run #: 0915L007
Instrument: Linus
Sequence: L140821
Dilution Factor: 1
Initials: LF

Printed: 9/22/14 8:23:24 PM
APPL-F1-SC-MCResOnly-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L007.D Vial: 7
Acq On : 15 Sep 14 23:54 Operator: LF
Sample : AZ02116W11 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Sep 18 22:38 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1571	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	8.06	164	768	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.80	188	1167	2.50000 ppb	0.01
15) Chrysene-D12(IS)	12.87	240	1886	2.50000 ppb	0.00
21) Perylene-D12(IS)	14.48	264	1051	2.50000 ppb	0.02
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.27	82	396	1.00544 ppb	0.01
Spiked Amount 2.000			Recovery = 50.250%		
7) Surrogate Recovery (FBP)	7.30	172	1089	1.40689 ppb	0.00
Spiked Amount 2.000			Recovery = 70.350%		
17) Surrogate Recovery (TPH)	11.66	244	1776	2.05477 ppb	0.00
Spiked Amount 2.000			Recovery = 102.750%		
Target Compounds					Qvalue

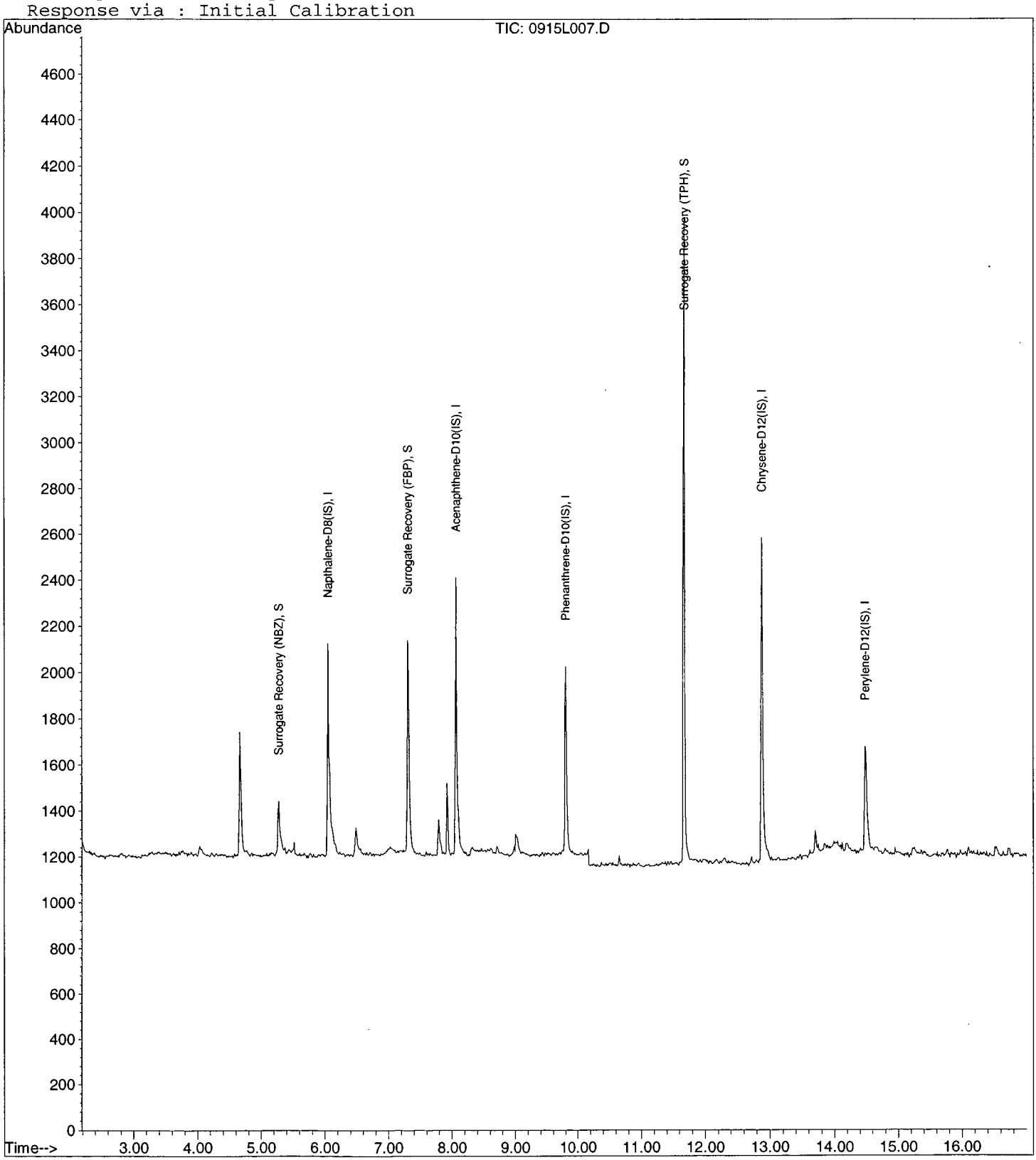
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L007.D Vial: 7
Acq On : 15 Sep 14 23:54 Operator: LF
Sample : AZ02116W11 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Sep 18 22:38 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration



EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 8/21/2014
Matrix: Instrument: Linus Initials:

		Compound	0821L002.D 0.1	0821L003.D 0.2	0821L004.D 0.5	0821L005.D 1	0821L006.D 5	0821L007.D 10	0821L008.D 50	0821L009.D 100			Avg	%RSD		
1	I	Napthalene-D8(IS)														
2	S	Surrogate Recovery (NBZ)	0.6352	0.6086	0.6388	0.6182	0.6643	0.6658	0.6004	0.5829			0.63	4.7	S	
3	TM	Naphthalene	1.898	1.793	1.786	1.730	1.778	1.612	1.516	1.439			1.7	9.2	TM	
4	TM	2-Methylnaphthalene	0.9453	1.043	0.9415	0.9616	0.9792	0.9308	0.8726	0.8224			0.94	7.1	TM	
5	TM	1-Methylnaphthalene	1.034	1.063	0.9047	0.9422	1.002	0.9010	0.8210	0.7937			0.93	10	TM	
6	I	Acenaphthene-D10(IS)														
7	S	Surrogate Recovery (FBP)	2.625	2.708	2.650	2.646	2.723	2.655	2.069	2.080			2.5	11	S	
8	TM	Acenaphthylene	4.231	3.445	3.397	3.519	3.596	3.452	3.075	3.082			3.5	10	TM	
9	*TM	Acenaphthene	2.274	2.045	2.011	2.168	2.228	2.065	1.809	1.777			2.0	8.9	*TM	
10	TM	Fluorene	2.258	2.294	2.350	2.363	2.409	2.331	2.073	2.031			2.3	6.1	TM	
11	I	Phenanthrene-D10(IS)														
12	TM	Phenanthrene	1.899	2.100	2.171	2.003	2.198	2.159	1.922	1.712			2.0	8.4	TM	
13	TM	Anthracene	1.808	1.862	1.899	1.781	2.177	2.086	1.828	1.702			1.9	8.5	TM	
14	*TM	Fluoranthene	3.545	3.502	3.551	3.272	3.857	3.683	3.459	3.086			3.5	6.8	*TM	
15	I	Chrysene-D12(IS)														
16	TM	Pyrene	2.223	2.301	2.245	2.037	2.284	2.068	1.855	1.803			2.1	9.2	TM	
17	S	Surrogate Recovery (TPH)	1.294	1.305	1.235	1.139	1.210	1.153	0.9187	0.9108			1.1	13	S	
18	TM	Benz (a) anthracene	1.925	1.843	1.712	1.634	1.714	1.635	1.576	1.568			1.7	7.5	TM	
19	TM	Chrysene	1.872	1.742	1.682	1.614	1.882	1.643	1.362	1.394			1.6	12	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.327	1.340	1.478	1.325	1.550	1.429	1.453	1.506			1.4	6.1	TM	
21	I	Perylene-D12(IS)														
22	TM	Benzo (b) fluoranthene	3.071	2.903	2.421	2.255	3.208	2.500	2.540	2.296			2.6	14	TM	
23	TM	Benzo (k) fluoranthene	2.588	2.501	2.862	2.645	2.500	2.898	2.511	2.485			2.6	6.4	TM	
24	*TM	Benzo (a) pyrene	2.625	2.470	2.439	2.228	2.628	2.469	2.312	2.225			2.4	6.6	*TM	
25	TM	Dibenz (a,h) anthracene	2.216	1.860	2.062	1.846	2.229	2.208	2.160	2.119			2.1	7.4	TM	
26	TM	Benzo (g,h,i) perylene	2.390	1.967	2.267	1.997	2.360	2.278	2.251	2.241			2.2	7.0	TM	
27																
28																
29																
30																
31																
32																
33																
34																
35																

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0821L002.D Vial: 2
Acq On : 21 Aug 14 16:17 Operator: LF
Sample : 0.1ug/ml PAH 08-21-14 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Aug 22 8:21 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 08:20:41 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	3385	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	8.06	164	1495	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.80	188	2475	2.50000	ppb		0.01
15) Chrysene-D12(IS)	12.87	240	3767	2.50000	ppb		0.00
21) Perylene-D12(IS)	14.47	264	2019	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.27	82	86	0.09905	ppb		0.01
Spiked Amount 2.000			Recovery =	4.950%			
7) Surrogate Recovery (FBP)	7.30	172	157	0.09780	ppb		0.00
Spiked Amount 2.000			Recovery =	4.900%			
17) Surrogate Recovery (TPH)	11.66	244	195	0.11018	ppb		0.00
Spiked Amount 2.000			Recovery =	5.500%			
Target Compounds							Qvalue
3) Naphthalene	6.07	128	257	0.10821	ppb		95
4) 2-Methylnaphthalene	6.88	142	128	0.09742	ppb		85
5) 1-Methylnaphthalene	6.97	142	140	0.10635	ppb		91
8) Acenaphthylene	7.90	152	253	0.11894	ppb		96
9) Acenaphthene	8.10	154	136	0.10347	ppb		98
10) Fluorene	8.71	166	135	0.09462	ppb		95
12) Phenanthrene	9.82	178	188	0.09040	ppb		99
13) Anthracene	9.88	178	179	0.09135	ppb		94
14) Fluoranthene	11.20	202	351	0.09947	ppb	#	86
16) Pyrene	11.45	202	335	0.10290	ppb	#	84
18) Benz (a) anthracene	12.85	228	290	0.11495	ppb		95
19) Chrysene	12.89	228	282	0.10706	ppb		97
20) Indeno (1,2,3-cd) pyrene	15.94	276	200	0.09235	ppb	#	99
22) Benzo (b) fluoranthene	14.05	252	248	0.11242	ppb	#	81
23) Benzo (k) fluoranthene	14.07	252	209	0.10061	ppb		97
24) Benzo (a) pyrene	14.41	252	212	0.10812	ppb	#	85
25) Dibenz (a,h) anthracene	15.96	278	179	0.10878	ppb		98
26) Benzo (g,h,i) perylene	16.34	276	193	0.10971	ppb	#	83

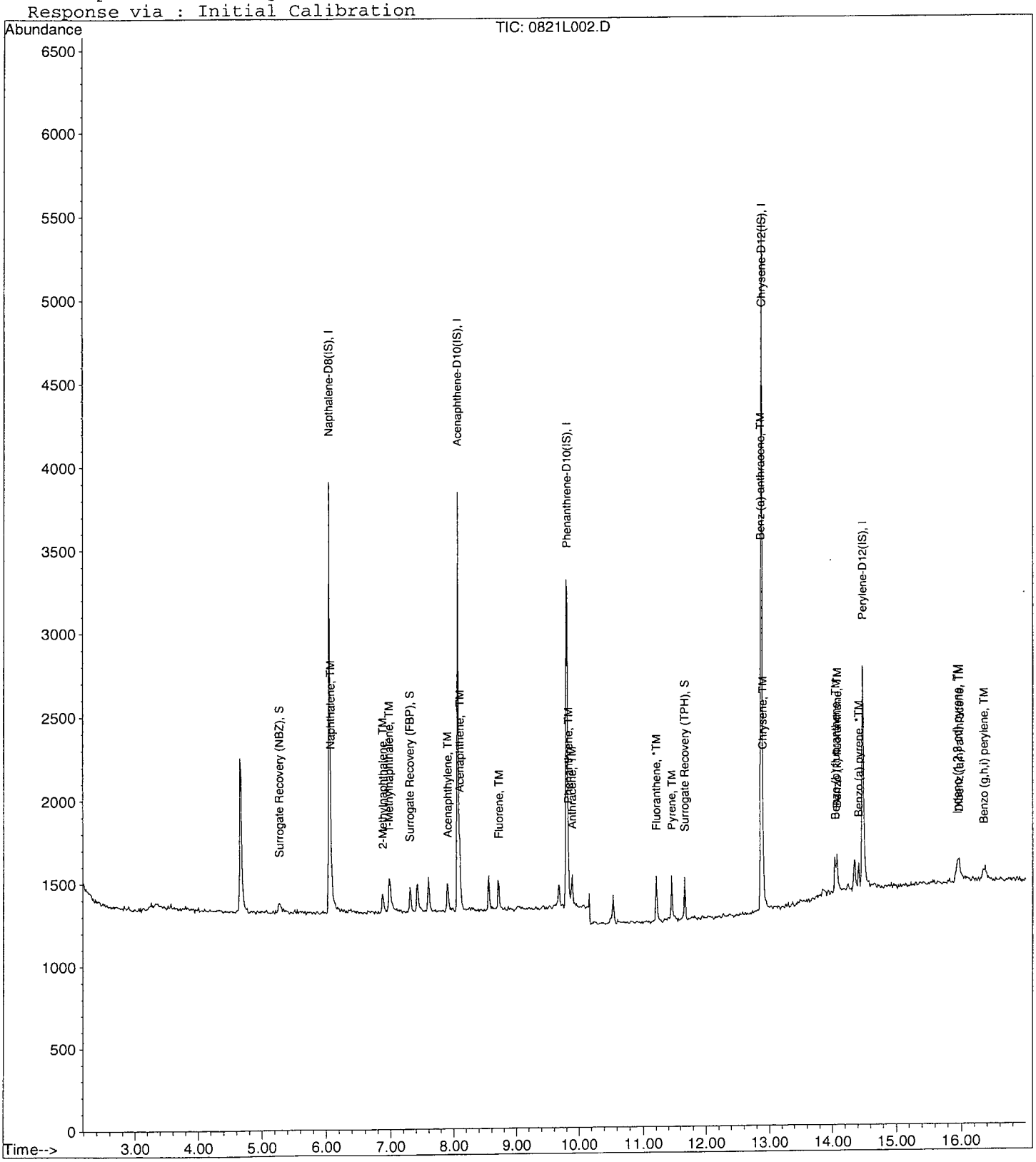
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0821L002.D Vial: 2
Acq On : 21 Aug 14 16:17 Operator: LF
Sample : 0.1ug/ml PAH 08-21-14 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Aug 22 8:21 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 13:36:24 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0821L003.D Vial: 3
Acq On : 21 Aug 14 16:43 Operator: LF
Sample : 0.2ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Aug 22 8:21 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 08:20:41 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	3081	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	8.06	164	1357	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.80	188	2202	2.50000 ppb		0.01
15) Chrysene-D12(IS)	12.87	240	3574	2.50000 ppb		0.00
21) Perylene-D12(IS)	14.47	264	1989	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.27	82	150	0.18981 ppb		0.01
Spiked Amount 2.000			Recovery = 9.500%			
7) Surrogate Recovery (FBP)	7.30	172	294	0.20176 ppb		0.00
Spiked Amount 2.000			Recovery = 10.100%			
17) Surrogate Recovery (TPH)	11.66	244	373	0.22213 ppb		0.00
Spiked Amount 2.000			Recovery = 11.100%			
Target Compounds						Qvalue
3) Naphthalene	6.07	128	442	0.20446 ppb		97
4) 2-Methylnaphthalene	6.87	142	257	0.21489 ppb		97
5) 1-Methylnaphthalene	6.97	142	262	0.21867 ppb		94
8) Acenaphthylene	7.89	152	374	0.19370 ppb		98
9) Acenaphthene	8.10	154	222	0.18608 ppb		98
10) Fluorene	8.71	166	249	0.19227 ppb		95
12) Phenanthrene	9.82	178	370	0.19997 ppb		98
13) Anthracene	9.88	178	328	0.18814 ppb		92
14) Fluoranthene	11.20	202	617	0.19652 ppb		91
16) Pyrene	11.45	202	658	0.21303 ppb	#	87
18) Benz (a) anthracene	12.85	228	527	0.22018 ppb		96
19) Chrysene	12.89	228	498	0.19927 ppb		96
20) Indeno (1,2,3-cd) pyrene	15.94	276	383	0.18640 ppb	#	97
22) Benzo (b) fluoranthene	14.03	252	462	0.21259 ppb		93
23) Benzo (k) fluoranthene	14.07	252	398	0.19449 ppb		95
24) Benzo (a) pyrene	14.41	252	393	0.20346 ppb	#	95
25) Dibenz (a,h) anthracene	15.96	278	296	0.18259 ppb		93
26) Benzo (g,h,i) perylene	16.34	276	313	0.18061 ppb		99

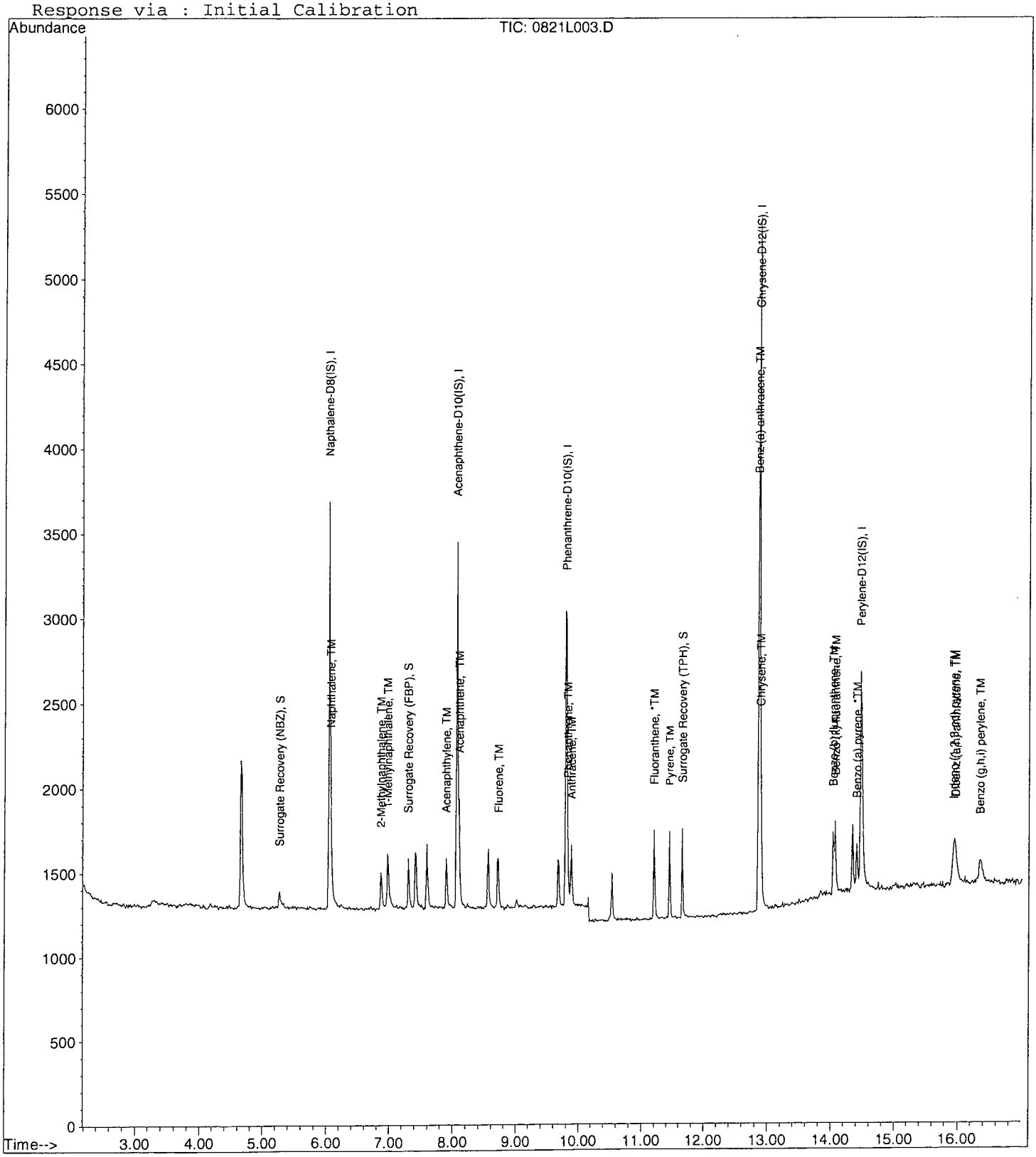
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0821L003.D Vial: 3
Acq On : 21 Aug 14 16:43 Operator: LF
Sample : 0.2ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Aug 22 8:21 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 13:36:24 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0821L004.D Vial: 4
Acq On : 21 Aug 14 17:09 Operator: LF
Sample : 0.5ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Aug 22 8:21 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 08:20:41 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	2990	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	8.06	164	1313	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.79	188	2098	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.87	240	3437	2.50000 ppb		0.00
21) Perylene-D12(IS)	14.47	264	1857	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.27	82	382	0.49809 ppb		0.01
Spiked Amount 2.000			Recovery	= 24.900%		
7) Surrogate Recovery (FBP)	7.30	172	696	0.49364 ppb		0.00
Spiked Amount 2.000			Recovery	= 24.700%		
17) Surrogate Recovery (TPH)	11.66	244	849	0.52575 ppb		0.00
Spiked Amount 2.000			Recovery	= 26.300%		
Target Compounds						Qvalue
3) Naphthalene	6.07	128	1068	0.50908 ppb		98
4) 2-Methylnaphthalene	6.87	142	563	0.48508 ppb		94
5) 1-Methylnaphthalene	6.97	142	541	0.46526 ppb		90
8) Acenaphthylene	7.89	152	892	0.47747 ppb		97
9) Acenaphthene	8.10	154	528	0.45741 ppb		96
10) Fluorene	8.70	166	617	0.49239 ppb		95
12) Phenanthrene	9.82	178	911	0.51677 ppb		98
13) Anthracene	9.88	178	797	0.47982 ppb		97
14) Fluoranthene	11.20	202	1490	0.49811 ppb	#	91
16) Pyrene	11.45	202	1543	0.51947 ppb	#	90
18) Benz (a) anthracene	12.86	228	1177	0.51135 ppb		99
19) Chrysene	12.89	228	1156	0.48099 ppb	#	93
20) Indeno (1,2,3-cd) pyrene	15.92	276	1016	0.51418 ppb	#	97
22) Benzo (b) fluoranthene	14.03	252	899	0.44307 ppb		97
23) Benzo (k) fluoranthene	14.07	252	1063	0.55636 ppb		94
24) Benzo (a) pyrene	14.41	252	906	0.50239 ppb		99
25) Dibenz (a,h) anthracene	15.95	278	766	0.50611 ppb		96
26) Benzo (g,h,i) perylene	16.34	276	842	0.52038 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

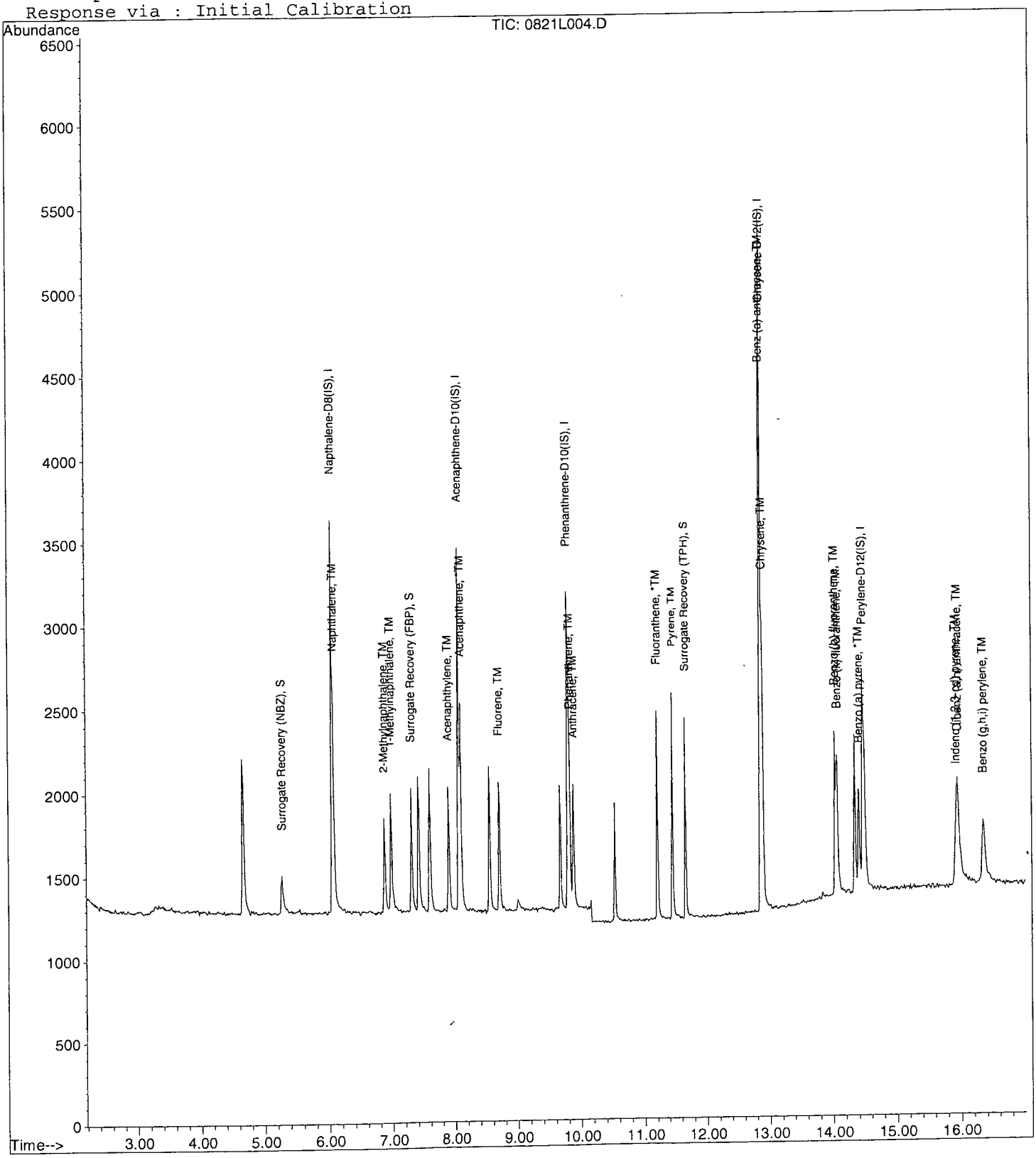
Data File : M:\LINUS\DATA\L140821\0821L004.D
Acq On : 21 Aug 14 17:09
Sample : 0.5ug/ml PAH
Misc :

Vial: 4
Operator: LF
Inst : Linus
Multiplr: 1.00

Quant Time: Aug 22 8:21 2014

Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 13:36:24 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0821L005.D Vial: 5
Acq On : 21 Aug 14 17:36 Operator: LF
Sample : 1.0ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Aug 22 8:21 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 08:20:41 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	2839	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	8.06	164	1183	2.50000 ppb		0.00
11) Phenanthrene-D10(IS)	9.79	188	2049	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.87	240	3442	2.50000 ppb		0.00
21) Perylene-D12(IS)	14.46	264	1918	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	702	0.96402 ppb		0.00
Spiked Amount 2.000			Recovery = 48.200%			
7) Surrogate Recovery (FBP)	7.30	172	1252	0.98557 ppb		0.00
Spiked Amount 2.000			Recovery = 49.300%			
17) Surrogate Recovery (TPH)	11.66	244	1568	0.96958 ppb		0.00
Spiked Amount 2.000			Recovery = 48.500%			
Target Compounds						Qvalue
3) Naphthalene	6.07	128	1965	0.98647 ppb		100
4) 2-Methylnaphthalene	6.87	142	1092	0.99092 ppb		95
5) 1-Methylnaphthalene	6.97	142	1070	0.96915 ppb		98
8) Acenaphthylene	7.89	152	1665	0.98918 ppb		98
9) Acenaphthene	8.10	154	1026	0.98651 ppb		97
10) Fluorene	8.70	166	1118	0.99025 ppb		93
12) Phenanthrene	9.81	178	1642	0.95371 ppb		99
13) Anthracene	9.88	178	1460	0.89999 ppb		98
14) Fluoranthene	11.20	202	2682	0.91804 ppb	#	88
16) Pyrene	11.45	202	2805	0.94296 ppb	#	90
18) Benz (a) anthracene	12.85	228	2250	0.97609 ppb		98
19) Chrysene	12.89	228	2222	0.92319 ppb	#	96
20) Indeno (1,2,3-cd) pyrene	15.91	276	1824	0.92175 ppb	#	100
22) Benzo (b) fluoranthene	14.03	252	1730	0.82551 ppb	#	94
23) Benzo (k) fluoranthene	14.06	252	2029	1.02819 ppb	#	95
24) Benzo (a) pyrene	14.39	252	1709	0.91752 ppb	#	94
25) Dibenz (a,h) anthracene	15.95	278	1416	0.90581 ppb		96
26) Benzo (g,h,i) perylene	16.34	276	1532	0.91671 ppb		98

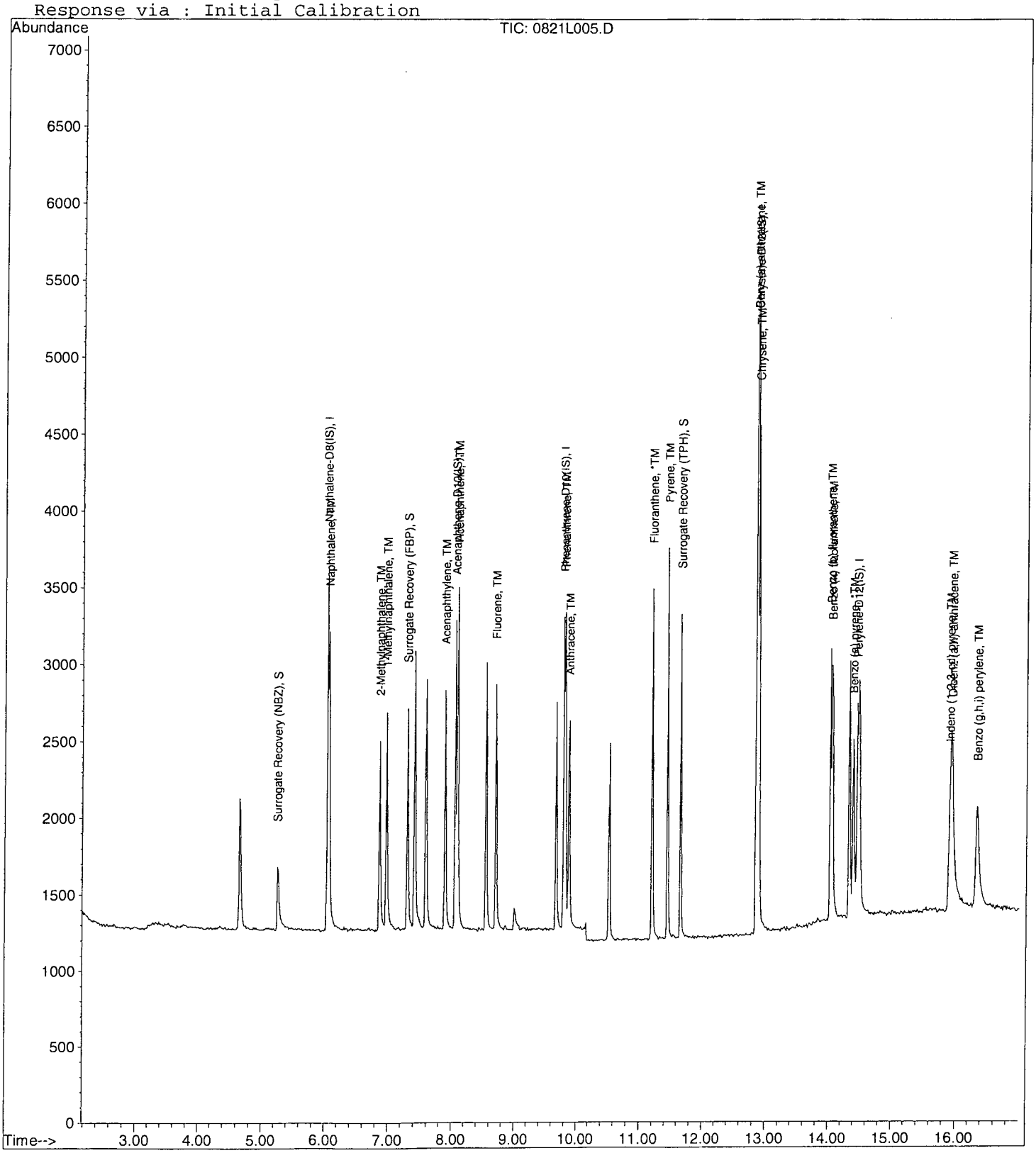
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0821L005.D Vial: 5
Acq On : 21 Aug 14 17:36 Operator: LF
Sample : 1.0ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Aug 22 8:21 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 13:36:24 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0821L006.D
Acq On : 21 Aug 14 18:02
Sample : 5.0ug/ml PAH
Misc :

Vial: 6
Operator: LF
Inst : Linus
Multiplr: 1.00

Quant Time: Aug 22 8:21 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 08:20:41 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	6.05	136	2480	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	8.06	164	1057	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.79	188	1670	2.50000 ppb	0.00
15) Chrysene-D12(IS)	12.87	240	2905	2.50000 ppb	0.00
21) Perylene-D12(IS)	14.45	264	1597	2.50000 ppb	0.00
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.26	82	3295	5.17988 ppb	0.00
Spiked Amount 2.000			Recovery	= 259.000%	
7) Surrogate Recovery (FBP)	7.30	172	5757	5.07213 ppb	0.00
Spiked Amount 2.000			Recovery	= 253.600%	
17) Surrogate Recovery (TPH)	11.66	244	7032	5.15208 ppb	0.00
Spiked Amount 2.000			Recovery	= 257.600%	
Target Compounds					Qvalue
3) Naphthalene	6.07	128	8818	5.06764 ppb	100
4) 2-Methylnaphthalene	6.87	142	4857	5.04541 ppb	100
5) 1-Methylnaphthalene	6.97	142	4971	5.15425 ppb	100
8) Acenaphthylene	7.89	152	7601	5.05409 ppb	100
9) Acenaphthene	8.10	154	4709	5.06747 ppb	100
10) Fluorene	8.70	166	5093	5.04877 ppb	100
12) Phenanthrene	9.81	178	7341	5.23146 ppb	100
13) Anthracene	9.87	178	7272	5.50004 ppb	100
14) Fluoranthene	11.19	202	12881	5.40978 ppb	100
16) Pyrene	11.45	202	13269	5.28521 ppb	100
18) Benz (a) anthracene	12.85	228	9960	5.11955 ppb	100
19) Chrysene	12.89	228	10937	5.38406 ppb	100
20) Indeno (1,2,3-cd) pyrene	15.90	276	9004	5.39124 ppb	100
22) Benzo (b) fluoranthene	14.02	252	10247	5.87244 ppb	100
23) Benzo (k) fluoranthene	14.06	252	7984	4.85907 ppb	100
24) Benzo (a) pyrene	14.40	252	8394	5.41238 ppb	100
25) Dibenz (a,h) anthracene	15.94	278	7121	5.47093 ppb	100
26) Benzo (g,h,i) perylene	16.32	276	7537	5.41645 ppb	100

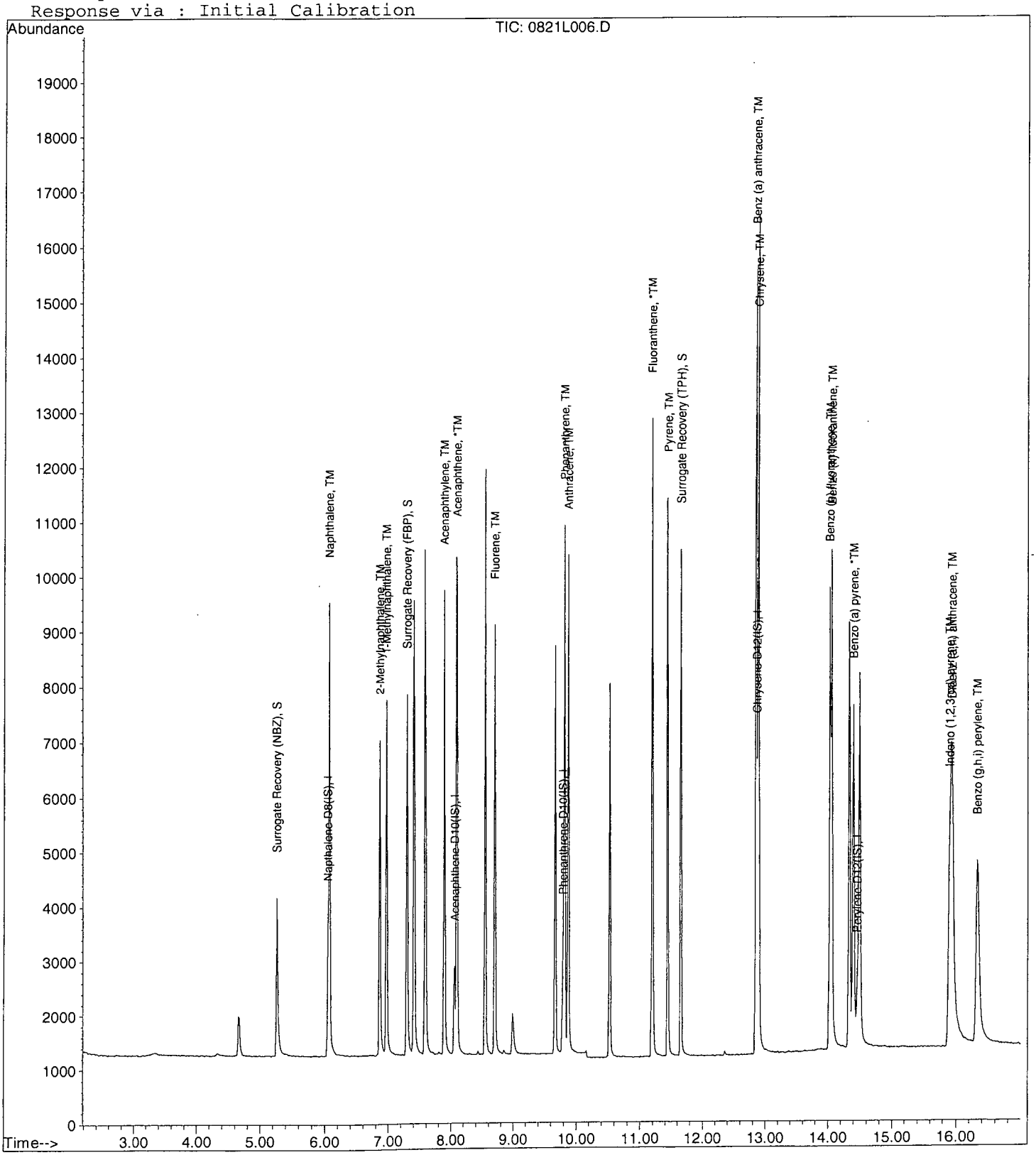
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0821L006.D Vial: 6
Acq On : 21 Aug 14 18:02 Operator: LF
Sample : 5.0ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Aug 22 8:21 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 13:36:24 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0821L007.D Vial: 7
Acq On : 21 Aug 14 18:27 Operator: LF
Sample : 10ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Aug 22 8:21 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 08:20:41 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	3196	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	1353	2.50000 ppb		-0.01
11) Phenanthrene-D10(IS)	9.79	188	2168	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.85	240	4025	2.50000 ppb		-0.01
21) Perylene-D12(IS)	14.45	264	2154	2.50000 ppb		0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	8511	10.38221 ppb		0.00
Spiked Amount 2.000			Recovery	= 519.100%		
7) Surrogate Recovery (FBP)	7.29	172	14369	9.89004 ppb		-0.01
Spiked Amount 2.000			Recovery	= 494.500%		
17) Surrogate Recovery (TPH)	11.66	244	18568	9.81859 ppb		0.00
Spiked Amount 2.000			Recovery	= 490.950%		
Target Compounds						Qvalue
3) Naphthalene	6.07	128	20605	9.18868 ppb		100
4) 2-Methylnaphthalene	6.85	142	11899	9.59144 ppb		92
5) 1-Methylnaphthalene	6.97	142	11519	9.26789 ppb		99
8) Acenaphthylene	7.89	152	18683	9.70501 ppb		99
9) Acenaphthene	8.08	154	11176	9.39563 ppb		92
10) Fluorene	8.69	166	12616	9.77036 ppb		93
12) Phenanthrene	9.81	178	18722	10.27726 ppb		99
13) Anthracene	9.87	178	18092	10.54036 ppb		99
14) Fluoranthene	11.19	202	31938	10.33225 ppb		90
16) Pyrene	11.44	202	33297	9.57215 ppb	#	85
18) Benz (a) anthracene	12.84	228	26331	9.76832 ppb		97
19) Chrysene	12.89	228	26458	9.40045 ppb		98
20) Indeno (1,2,3-cd) pyrene	15.90	276	23002	9.94030 ppb	#	94
22) Benzo (b) fluoranthene	14.02	252	21542	9.15307 ppb		95
23) Benzo (k) fluoranthene	14.06	252	24970	11.26706 ppb		96
24) Benzo (a) pyrene	14.38	252	21274	10.17015 ppb	#	92
25) Dibenz (a,h) anthracene	15.92	278	19022	10.83516 ppb		97
26) Benzo (g,h,i) perylene	16.32	276	19627	10.45754 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

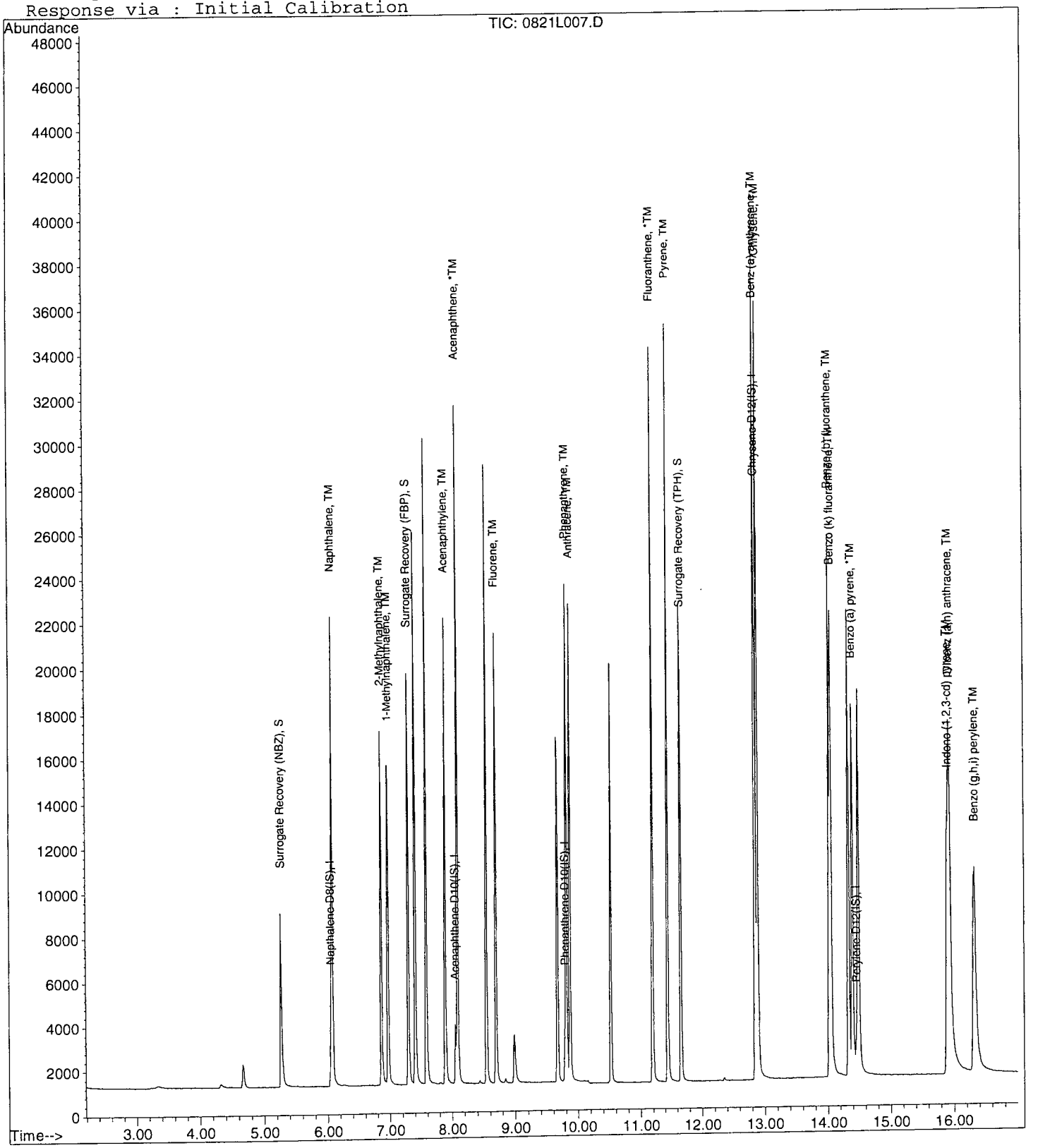
Data File : M:\LINUS\DATA\L140821\0821L007.D
Acq On : 21 Aug 14 18:27
Sample : 10ug/ml PAH
Misc :

Vial: 7
Operator: LF
Inst : Linus
Multiplr: 1.00

Quant Time: Aug 22 8:21 2014

Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 13:36:24 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0821L008.D
Acq On : 21 Aug 14 18:53
Sample : 50ug/ml PAH
Misc :

Vial: 8
Operator: LF
Inst : Linus
Multiplr: 1.00

Quant Time: Aug 22 8:21 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 08:20:41 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	3272	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	1424	2.50000	ppb		-0.01
11) Phenanthrene-D10(IS)	9.77	188	2245	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	12.85	240	4224	2.50000	ppb		-0.01
21) Perylene-D12(IS)	14.45	264	2304	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.26	82	39292	46.81736	ppb		0.00
Spiked Amount 2.000			Recovery = 2340.850%				
7) Surrogate Recovery (FBP)	7.29	172	58932	38.53990	ppb		-0.01
Spiked Amount 2.000			Recovery = 1927.000%				
17) Surrogate Recovery (TPH)	11.65	244	77608	39.10503	ppb		-0.01
Spiked Amount 2.000			Recovery = 1955.250%				
Target Compounds							Qvalue
3) Naphthalene	6.07	128	99238	43.22671	ppb		98
4) 2-Methylnaphthalene	6.85	142	57101	44.95838	ppb		95
5) 1-Methylnaphthalene	6.96	142	53729	42.22489	ppb		90
8) Acenaphthylene	7.89	152	87570	43.22075	ppb		97
9) Acenaphthene	8.08	154	51524	41.15635	ppb		93
10) Fluorene	8.69	166	59050	43.45066	ppb		96
12) Phenanthrene	9.81	178	86301	45.74922	ppb		99
13) Anthracene	9.87	178	82094	46.18737	ppb		99
14) Fluoranthene	11.19	202	155294	48.51599	ppb	#	83
16) Pyrene	11.44	202	156743	42.93728	ppb	#	92
18) Benz (a) anthracene	12.84	228	133125	47.06024	ppb		98
19) Chrysene	12.89	228	115088	38.96400	ppb	#	94
20) Indeno (1,2,3-cd) pyrene	15.89	276	122738	50.54228	ppb	#	94
22) Benzo (b) fluoranthene	14.02	252	117062	46.50074	ppb	#	93
23) Benzo (k) fluoranthene	14.04	252	115720	48.81619	ppb	#	93
24) Benzo (a) pyrene	14.38	252	106541	47.61660	ppb		97
25) Dibenz (a,h) anthracene	15.92	278	99524	52.99930	ppb		94
26) Benzo (g,h,i) perylene	16.31	276	103713	51.66211	ppb		97

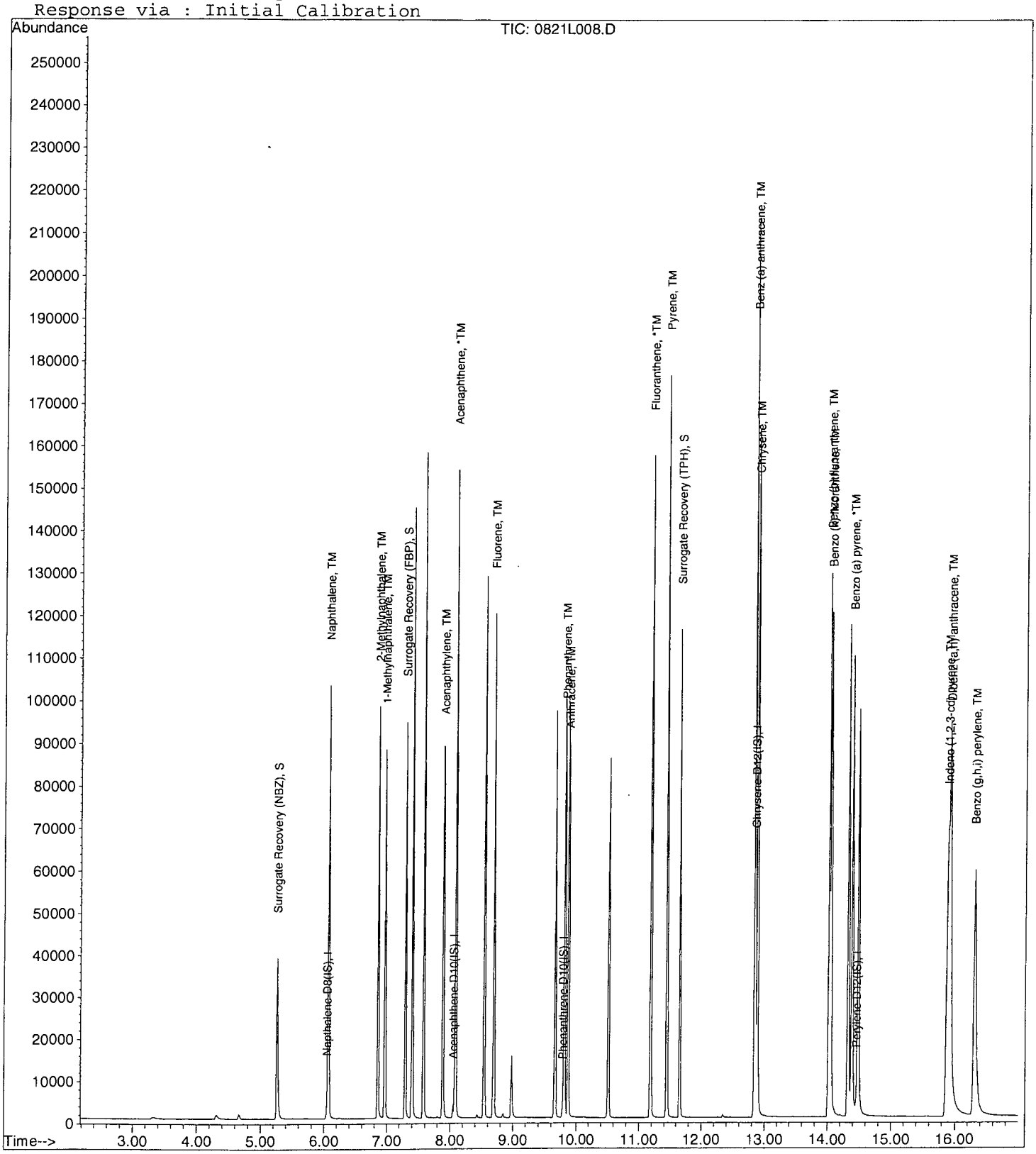
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0821L008.D Vial: 8
Acq On : 21 Aug 14 18:53 Operator: LF
Sample : 50ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Aug 22 8:21 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 13:36:24 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0821L009.D Vial: 9
Acq On : 21 Aug 14 19:19 Operator: LF
Sample : 100ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Aug 22 8:21 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 08:20:41 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	2942	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	1228	2.50000	ppb		-0.01
11) Phenanthrene-D10(IS)	9.77	188	2128	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	12.85	240	3656	2.50000	ppb		-0.01
21) Perylene-D12(IS)	14.45	264	2097	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.26	82	68594	90.89908	ppb		0.00
Spiked Amount 2.000			Recovery	= 4544.950%			
7) Surrogate Recovery (FBP)	7.29	172	102172	77.48237	ppb		-0.01
Spiked Amount 2.000			Recovery	= 3874.100%			
17) Surrogate Recovery (TPH)	11.65	244	133197	77.54223	ppb		-0.01
Spiked Amount 2.000			Recovery	= 3877.100%			
Target Compounds							Qvalue
3) Naphthalene	6.07	128	169382	82.05632	ppb		97
4) 2-Methylnaphthalene	6.85	142	96775	84.74240	ppb		94
5) 1-Methylnaphthalene	6.97	142	93405	81.63953	ppb		99
8) Acenaphthylene	7.89	152	151380	86.63973	ppb		98
9) Acenaphthene	8.08	154	87286	80.85065	ppb		92
10) Fluorene	8.69	166	99758	85.12083	ppb		95
12) Phenanthrene	9.81	178	145719	81.49458	ppb		98
13) Anthracene	9.87	178	144879	85.99277	ppb		98
14) Fluoranthene	11.19	202	262644	86.56502	ppb	#	87
16) Pyrene	11.44	202	263647	83.44242	ppb	#	88
18) Benz (a) anthracene	12.84	228	229275	93.64162	ppb		97
19) Chrysene	12.89	228	203792	79.71469	ppb	#	96
20) Indeno (1,2,3-cd) pyrene	15.89	276	220222	104.77416	ppb	#	97
22) Benzo (b) fluoranthene	14.02	252	192572	84.04679	ppb		96
23) Benzo (k) fluoranthene	14.06	252	208425	96.60270	ppb		93
24) Benzo (a) pyrene	14.38	252	186647	91.65300	ppb	#	93
25) Dibenz (a,h) anthracene	15.92	278	177761	104.00706	ppb		98
26) Benzo (g,h,i) perylene	16.31	276	187982	102.88197	ppb		99

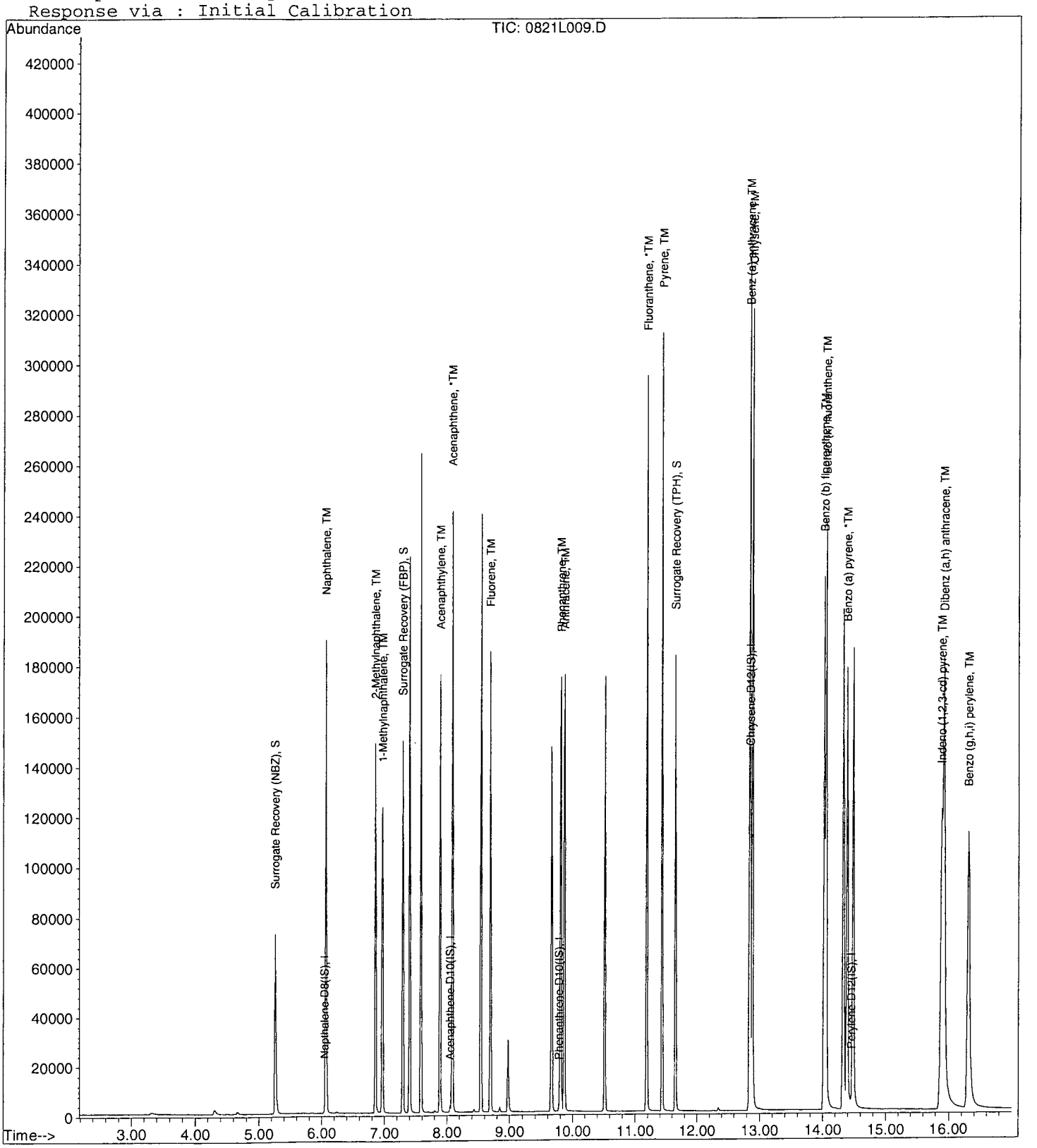
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0821L009.D Vial: 9
Acq On : 21 Aug 14 19:19 Operator: LF
Sample : 100ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Aug 22 8:21 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 13:36:24 2014
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 8/21/2014
Instrument: Linus
Initial Cal. Date: 8/21/2014
Data File: 0821L010.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.694	1.820	7.5	TM	
3	TM	2-Methylnaphthalene	0.9370	1.007	7.4	TM	
4	TM	1-Methylnaphthalene	0.9327	1.006	7.9	TM	
5	I	Acenaphthene-D10(IS)	ISTD			I	
6	TM	Acenaphthylene	3.474	3.583	3.1	TM	
7	*TM	Acenaphthene	2.047	2.227	8.8	*TM	
8	TM	Fluorene	2.264	2.446	8.1	TM	
9	I	Phenanthrene-D10(IS)	ISTD			I	
10	TM	Phenanthrene	2.021	2.257	12	TM	
11	TM	Anthracene	1.893	2.188	16	TM	
12	*TM	Fluoranthene	3.494	3.909	12	*TM	
13	I	Chrysene-D12(IS)	ISTD			I	
14	TM	Pyrene	2.102	2.228	6.0	TM	
15	TM	Benz (a) anthracene	1.701	1.693	0.44	TM	
16	TM	Chrysene	1.649	1.894	15	TM	
17	TM	Indeno (1,2,3-cd) pyrene	1.426	1.648	16	TM	
18	I	Perylene-D12(IS)	ISTD			I	
19	TM	Benzo (b) fluoranthene	2.649	2.835	7.0	TM	
20	TM	Benzo (k) fluoranthene	2.624	2.765	5.4	TM	
21	*TM	Benzo (a) pyrene	2.425	2.826	17	*TM	
22	TM	Dibenz (a,h) anthracene	2.088	2.501	20	TM	
23	TM	Benzo (g,h,i) perylene	2.219	2.579	16	TM	
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			10.3		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0821L010.D Vial: 10
Acq On : 21 Aug 14 19:46 Operator: LF
Sample : 5.0ug/ml PAH SS 8-21-14 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Aug 22 8:24 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 08:23:37 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	2540	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	8.06	164	1077	2.50000	ppb		0.00
11) Phenanthrene-D10(IS)	9.79	188	1700	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.87	240	2993	2.50000	ppb		0.00
21) Perylene-D12(IS)	14.46	264	1549	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	0.00	82	0d	0.00000	ppb		
Spiked Amount 2.000			Recovery	=	0.000%		
7) Surrogate Recovery (FBP)	0.00	172	0d	0.00000	ppb		
Spiked Amount 2.000			Recovery	=	0.000%		
17) Surrogate Recovery (TPH)	0.00	244	0d	0.00000	ppb		
Spiked Amount 2.000			Recovery	=	0.000%		
Target Compounds							Qvalue
3) Naphthalene	6.07	128	9248	5.37287	ppb		100
4) 2-Methylnaphthalene	6.87	142	5113	5.37081	ppb		98
5) 1-Methylnaphthalene	6.97	142	5111	5.39329	ppb		97
8) Acenaphthylene	7.89	152	7717	5.15569	ppb		99
9) Acenaphthene	8.10	154	4797	5.43946	ppb		98
10) Fluorene	8.70	166	5269	5.40346	ppb		99
12) Phenanthrene	9.81	178	7673	5.58443	ppb		98
13) Anthracene	9.87	178	7440	5.77953	ppb		98
14) Fluoranthene	11.19	202	13291	5.59344	ppb		99
16) Pyrene	11.45	202	13336	5.29914	ppb		98
18) Benz (a) anthracene	12.85	228	10137	4.97795	ppb		100
19) Chrysene	12.89	228	11338	5.74379	ppb		100
20) Indeno (1,2,3-cd) pyrene	15.90	276	9862	5.77725	ppb	#	100
22) Benzo (b) fluoranthene	14.02	252	8782	5.34995	ppb		97
23) Benzo (k) fluoranthene	14.06	252	8567	5.26984	ppb		98
24) Benzo (a) pyrene	14.39	252	8754	5.82728	ppb		97
25) Dibenz (a,h) anthracene	15.94	278	7748	5.98995	ppb		98
26) Benzo (g,h,i) perylene	16.32	276	7990	5.81191	ppb		98

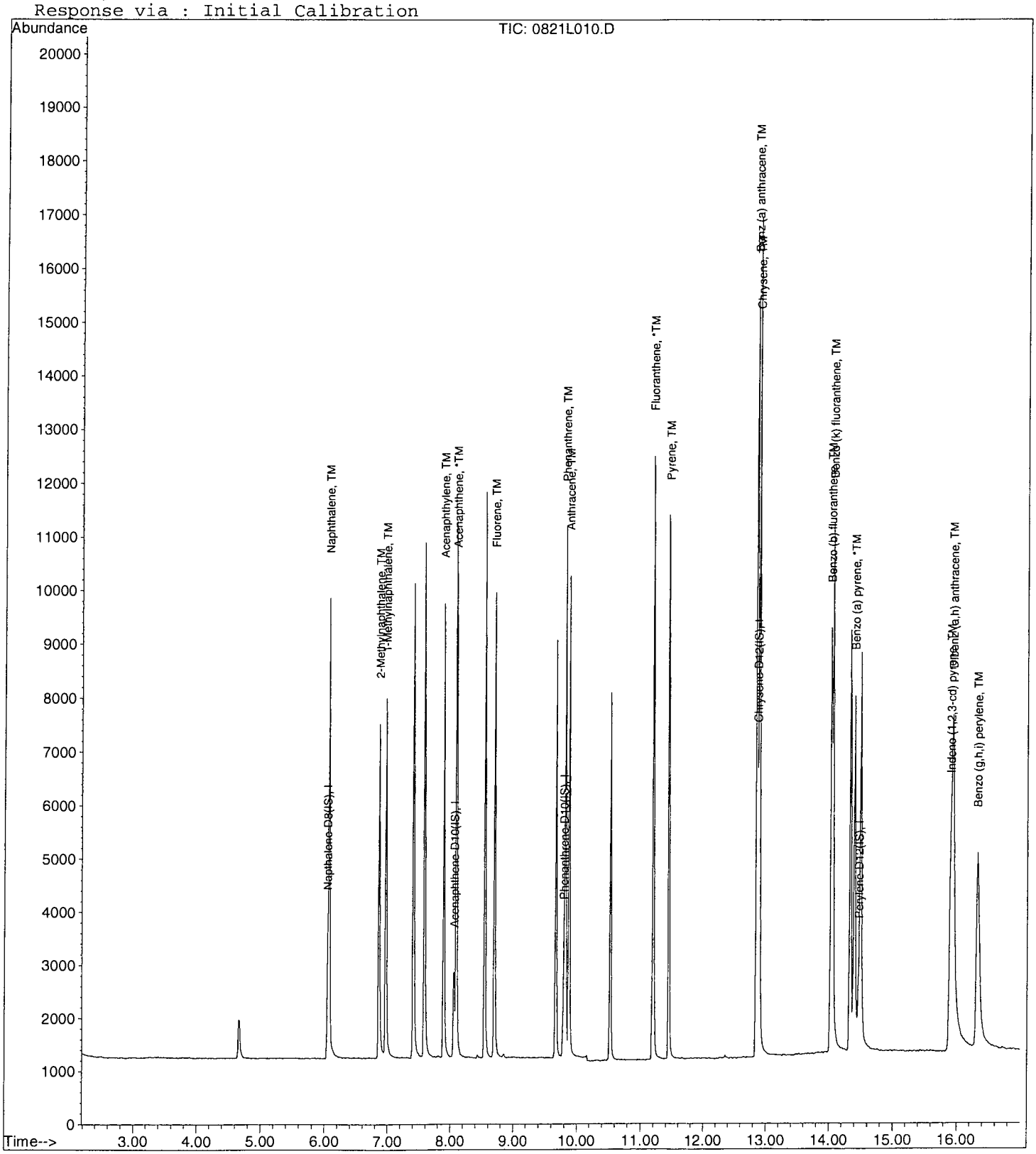
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0821L010.D Vial: 10
Acq On : 21 Aug 14 19:46 Operator: LF
Sample : 5.0ug/ml PAH SS 8-21-14 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Aug 22 8:24 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Fri Aug 22 13:36:24 2014
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 9/15/2014
Instrument: Linus
Initial Cal. Date: 8/21/2014
Data File: 0915L002.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	S	Surrogate Recovery (NBZ)	0.6268	0.6397	2.1	S	
3	TM	Naphthalene	1.694	1.533	9.5	TM	
4	TM	2-Methylnaphthalene	0.9370	1.045	12	TM	
5	TM	1-Methylnaphthalene	0.9327	1.003	7.6	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	2.520	2.337	7.2	S	
8	TM	Acenaphthylene	3.474	3.189	8.2	TM	
9	*TM	Acenaphthene	2.047	1.937	5.4	*TM	
10	TM	Fluorene	2.264	2.220	1.9	TM	
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TM	Phenanthrene	2.021	2.022	0.06	TM	
13	TM	Anthracene	1.893	1.941	2.5	TM	
14	*TM	Fluoranthene	3.494	3.457	1.1	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	2.102	2.092	0.47	TM	
17	S	Surrogate Recovery (TPH)	1.146	1.247	8.9	S	
18	TM	Benz (a) anthracene	1.701	1.616	5.0	TM	
19	TM	Chrysene	1.649	1.890	15	TM	
20	TM	Indeno (1,2,3-cd) pyrene	1.426	1.358	4.8	TM	
21	I	Perylene-D12(IS)	ISTD			I	
22	TM	Benzo (b) fluoranthene	2.649	2.948	11	TM	
23	TM	Benzo (k) fluoranthene	2.624	2.791	6.4	TM	
24	*TM	Benzo (a) pyrene	2.425	2.511	3.6	*TM	
25	TM	Dibenz (a,h) anthracene	2.088	1.884	9.8	TM	
26	TM	Benzo (g,h,i) perylene	2.219	2.200	0.84	TM	
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.9		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L002.D Vial: 2
Acq On : 15 Sep 14 21:39 Operator: LF
Sample : 5.0ug/ml PAH 08-21-14 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Sep 15 21:57 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Sep 15 21:57:06 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	2265	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	1175	2.50000 ppb		-0.01
11) Phenanthrene-D10(IS)	9.79	188	1876	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.85	240	3160	2.50000 ppb		-0.01
21) Perylene-D12(IS)	14.47	264	1749	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	2898	5.10351 ppb		0.00
Spiked Amount 2.000			Recovery = 255.200%			
7) Surrogate Recovery (FBP)	7.29	172	5493	4.63838 ppb		-0.01
Spiked Amount 2.000			Recovery = 231.900%			
17) Surrogate Recovery (TPH)	11.65	244	7883	5.44336 ppb		-0.01
Spiked Amount 2.000			Recovery = 272.150%			
Target Compounds						Qvalue
3) Naphthalene	6.07	128	6946	4.52542 ppb		99
4) 2-Methylnaphthalene	6.85	142	4734	5.57645 ppb		95
5) 1-Methylnaphthalene	6.96	142	4545	5.37833 ppb		89
8) Acenaphthylene	7.89	152	7493	4.58851 ppb		99
9) Acenaphthene	8.08	154	4552	4.73114 ppb		94
10) Fluorene	8.69	166	5218	4.90485 ppb		94
12) Phenanthrene	9.81	178	7586	5.00314 ppb		99
13) Anthracene	9.87	178	7283	5.12679 ppb		99
14) Fluoranthene	11.19	202	12969	4.94589 ppb	#	85
16) Pyrene	11.44	202	13223	4.97656 ppb	#	92
18) Benz (a) anthracene	12.84	228	10214	4.75069 ppb		97
19) Chrysene	12.89	228	11942	5.73005 ppb		99
20) Indeno (1,2,3-cd) pyrene	15.92	276	8580	4.76061 ppb	#	100
22) Benzo (b) fluoranthene	14.03	252	10312	5.56366 ppb	#	92
23) Benzo (k) fluoranthene	14.06	252	9762	5.31826 ppb		97
24) Benzo (a) pyrene	14.40	252	8784	5.17861 ppb		99
25) Dibenz (a,h) anthracene	15.95	278	6590	4.51212 ppb		96
26) Benzo (g,h,i) perylene	16.34	276	7696	4.95791 ppb		93

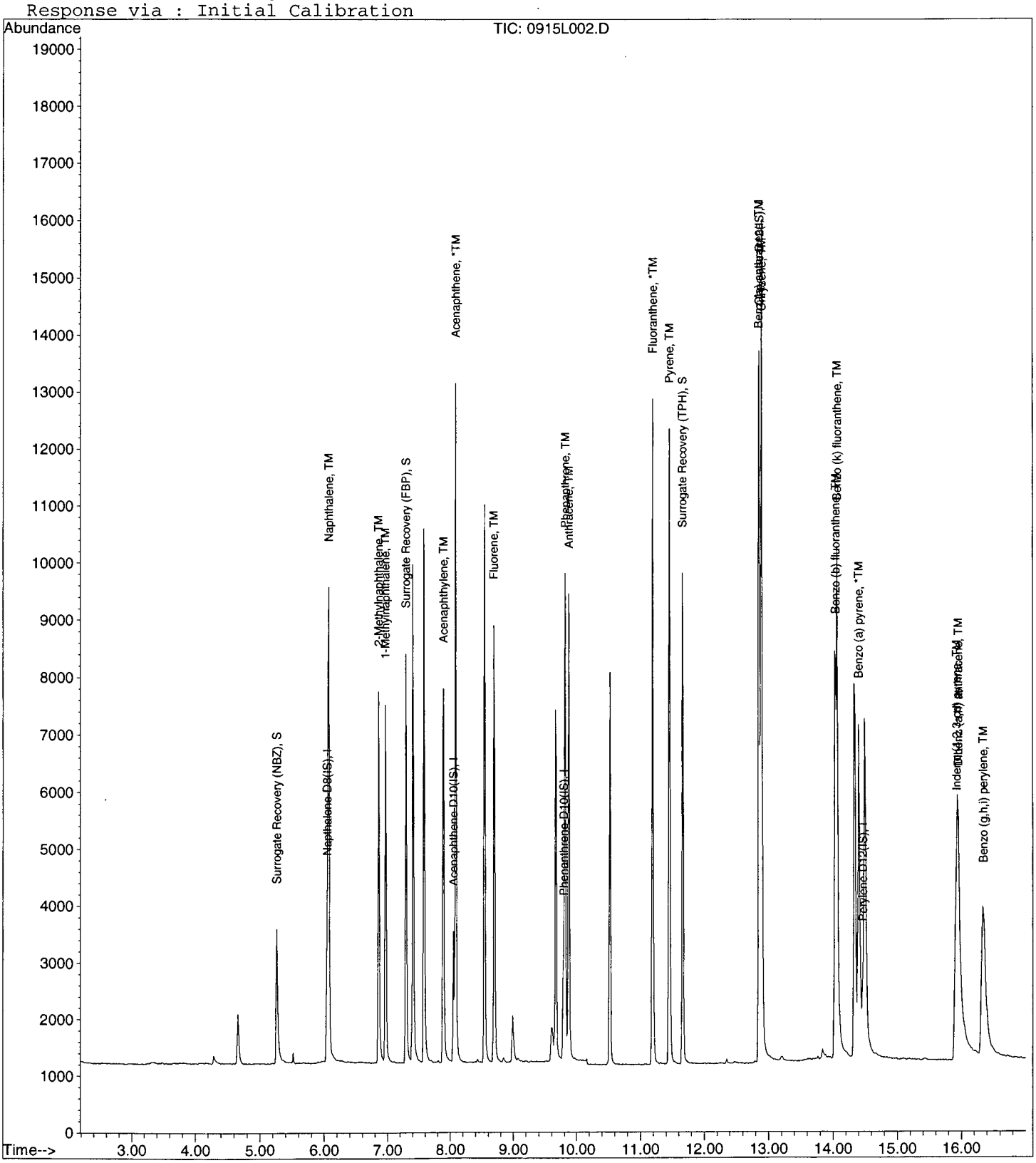
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L002.D Vial: 2
Acq On : 15 Sep 14 21:39 Operator: LF
Sample : 5.0ug/ml PAH 08-21-14 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Sep 15 21:57 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration



EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
Raw Data

APPL, INC.

Method Blank
EPA 8270C SIM

Blank Name/QCG: **140908W-02108 - 189931**
Batch ID: #SIMHC-140908A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
BLANK	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
BLANK	ACENAPHTHYLENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
BLANK	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
BLANK	BENZO(A)ANTHRACENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
BLANK	BENZO(A)PYRENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
BLANK	BENZO(B)FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
BLANK	BENZO(GHI)PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
BLANK	BENZO(K)FLUORANTHENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
BLANK	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
BLANK	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	9/8/14	9/15/14
BLANK	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
BLANK	FLUORENE	0.10 U	0.2	0.10	0.06	ug/L	9/8/14	9/15/14
BLANK	INDENO(1,2,3-CD)PYRENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
BLANK	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	9/8/14	9/15/14
BLANK	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	9/8/14	9/15/14
BLANK	SURROGATE: 2-FLUORBIPHENY	75.1	50-110			%	9/8/14	9/15/14
BLANK	SURROGATE: NITROBENZENE-	44.4	40-110			%	9/8/14	9/15/14
BLANK	SURROGATE: TERPHENYL-D14 (	82.0	50-135			%	9/8/14	9/15/14

Quant Method: SIM.M
Run #: 0915L003
Instrument: Linus
Sequence: L140821
Initials: LF

GC SC-Blank-REG MDLs
Printed: 9/22/14 8:23:27 PM

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L003.D Vial: 3
Acq On : 15 Sep 14 22:09 Operator: LF
Sample : 140908A BLK 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Sep 18 22:32 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:32:38 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1740	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	8.06	164	610	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.80	188	1579	2.50000	ppb	0.01
15) Chrysene-D12(IS)	12.87	240	1981	2.50000	ppb	0.00
21) Perylene-D12(IS)	14.49	264	1252	2.50000	ppb	0.04
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	387	0.88716	ppb	0.00
Spiked Amount 2.000			Recovery = 44.350%			
7) Surrogate Recovery (FBP)	7.30	172	923	1.50130	ppb	0.00
Spiked Amount 2.000			Recovery = 75.050%			
17) Surrogate Recovery (TPH)	11.66	244	1489	1.64011	ppb	0.00
Spiked Amount 2.000			Recovery = 82.000%			

Target Compounds	Qvalue

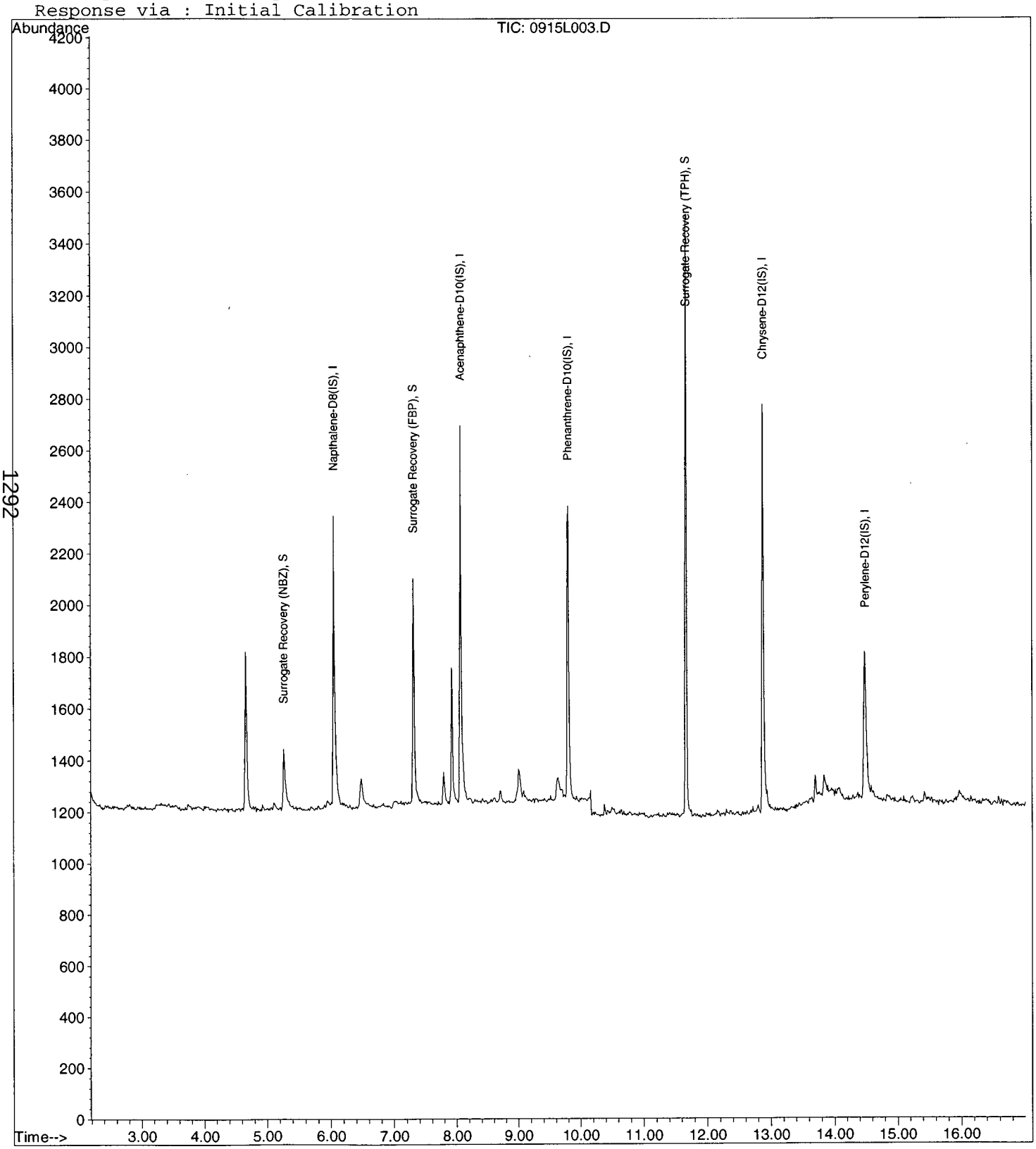
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L003.D Vial: 3
Acq On : 15 Sep 14 22:09 Operator: LF
Sample : 140908A BLK 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Sep 18 22:32 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration



Method Blank
EPA 8270C SIM IS GROSS

Blank Name/QCG: **140910S-02100 - 189932**
Batch ID: #SIMHC-140910A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
BLANK	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
BLANK	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
BLANK	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
BLANK	ANTHRACENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
BLANK	BENZO(A)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
BLANK	BENZO(A)PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
BLANK	BENZO(B)FLUORANTHENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
BLANK	BENZO(GHI)PERYLENE	0.0017 U	0.005	0.0017	0.0013	mg/kg	9/10/14	9/16/14
BLANK	BENZO(K)FLUORANTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
BLANK	CHRYSENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	9/10/14	9/16/14
BLANK	DIBENZ(A,H)ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
BLANK	FLUORANTHENE	0.0017 U	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
BLANK	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	9/10/14	9/16/14
BLANK	INDENO(1,2,3-CD)PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	9/10/14	9/16/14
BLANK	PHENANTHRENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	9/10/14	9/16/14
BLANK	PYRENE	0.0017 U	0.005	0.0017	0.0012	mg/kg	9/10/14	9/16/14
BLANK	SURROGATE: 2-FLUORBIPHENY	71.6	45-105			%	9/10/14	9/16/14
BLANK	SURROGATE: NITROBENZENE-	45.5	35-100			%	9/10/14	9/16/14
BLANK	SURROGATE: TERPHENYL-D14 (	90.7	30-125			%	9/10/14	9/16/14

Quant Method: SIM.M
Run #: 0915L008
Instrument: Linus
Sequence: L140821
Initials: LF

GC SC-Blank-REG MDLs
Printed: 9/22/14 8:23:27 PM

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L008.D Vial: 8
Acq On : 16 Sep 14 00:20 Operator: LF
Sample : 140910A BLK 1/30.19G Inst : Linus
Misc : Multiplr: 33.12

Quant Time: Sep 18 22:39 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1905	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	8.06	164	843	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.79	188	1518	2.50000	ppb	0.00
15) Chrysene-D12(IS)	12.87	240	2563	2.50000	ppb	0.00
21) Perylene-D12(IS)	14.49	264	1343	2.50000	ppb	0.03
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.27	82	435	30.16964	ppb	0.01
Spiked Amount 66.247			Recovery = 45.542%			
7) Surrogate Recovery (FBP)	7.30	172	1216	47.40650	ppb	0.00
Spiked Amount 66.247			Recovery = 71.559%			
17) Surrogate Recovery (TPH)	11.66	244	2130	60.06622	ppb	0.00
Spiked Amount 66.247			Recovery = 90.670%			
Target Compounds						Qvalue

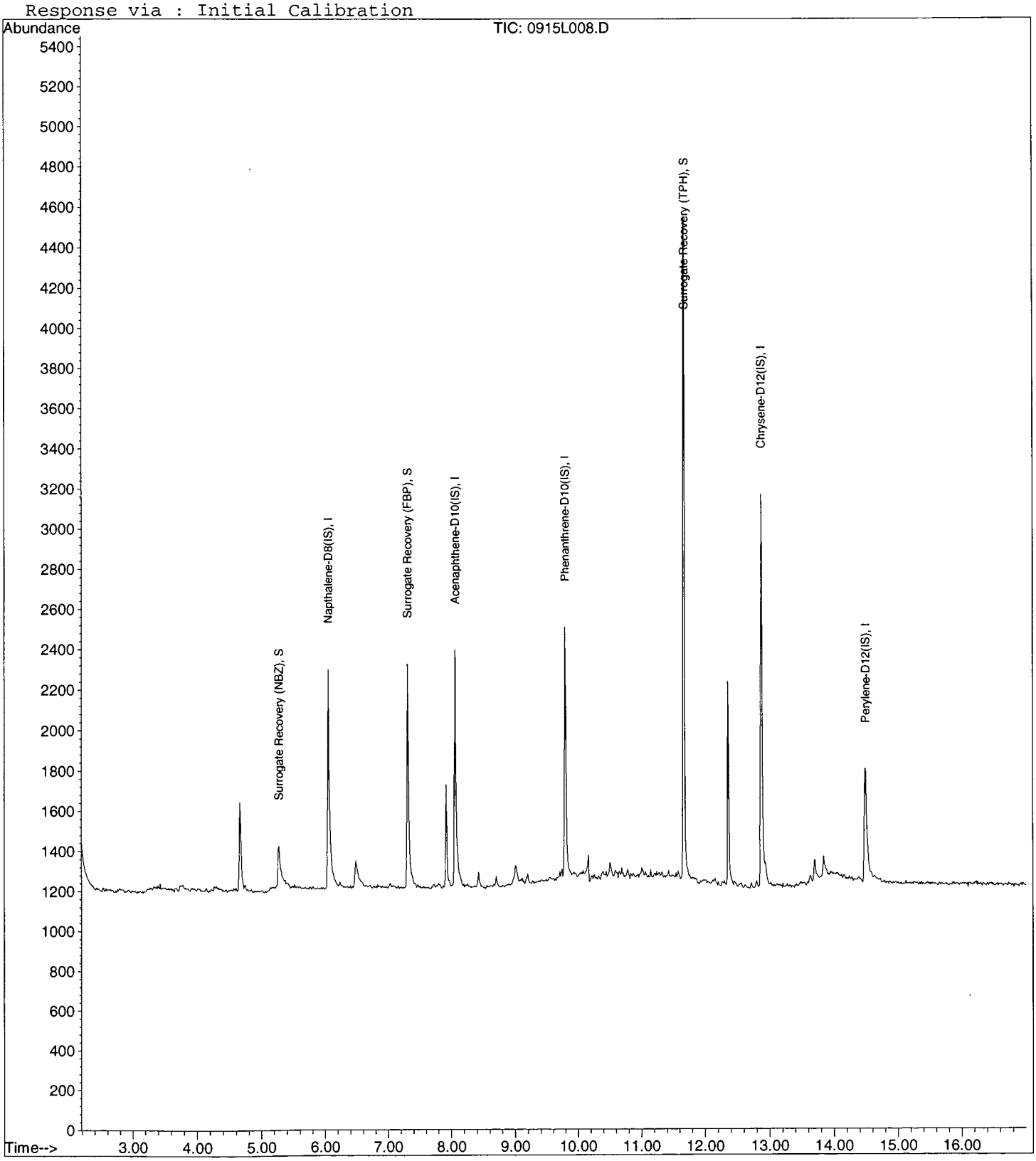
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L008.D Vial: 8
Acq On : 16 Sep 14 00:20 Operator: LF
Sample : 140910A BLK 1/30.19G Inst : Linus
Misc : Multiplr: 33.12

Quant Time: Sep 18 22:39 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270C SIM

APPL ID: **140908W-02108 LCS - 189931**
Batch ID: #SIMHC-140908A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	4.00	3.01	75.3	45-105
2-METHYLNAPHTHALENE	4.00	2.64	66.0	45-105
ACENAPHTHENE	4.00	2.81	70.3	45-110
ACENAPHTHYLENE	4.00	2.84	71.0	50-105
ANTHRACENE	4.00	3.37	84.3	55-110
BENZO(A)ANTHRACENE	4.00	2.89	72.3	55-110
BENZO(A)PYRENE	4.00	3.14	78.5	55-110
BENZO(B)FLUORANTHENE	4.00	2.82	70.5	45-120
BENZO(GHI)PERYLENE	4.00	2.95	73.8	40-125
BENZO(K)FLUORANTHENE	4.00	3.74	93.5	45-125
CHRYSENE	4.00	3.64	91.0	55-110
DIBENZ(A,H)ANTHRACENE	4.00	2.80	70.0	40-125
FLUORANTHENE	4.00	3.43	85.8	55-115
FLUORENE	4.00	2.96	74.0	50-110
INDENO(1,2,3-CD)PYRENE	4.00	2.91	72.8	45-125
PHENANTHRENE	4.00	3.30	82.5	50-115
PYRENE	4.00	3.37	84.3	50-130
SURROGATE: 2-FLUORBIPHENYL (S)	2.00	1.24	62.0	50-110
SURROGATE: NITROBENZENE-D5 (S)	2.00	1.23	61.5	40-110
SURROGATE: TERPHENYL-D14 (S)	2.00	1.49	74.5	50-135

Comments: _____

Primary	SPK
Quant Method :	SIM.M
Extraction Date :	9/8/14
Analysis Date :	9/15/14
Instrument :	Linus
Run :	0915L004
Initials :	LF

Printed: 9/22/14 8:23:28 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L004.D Vial: 4
Acq On : 15 Sep 14 22:35 Operator: LF
Sample : 140908A LCS-1 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Sep 18 22:31 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1487	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	960	2.50000 ppb		-0.01
11) Phenanthrene-D10(IS)	9.79	188	1532	2.50000 ppb		0.00
15) Chrysene-D12(IS)	12.87	240	2669	2.50000 ppb		0.00
21) Perylene-D12(IS)	14.47	264	1504	2.50000 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.26	82	460	1.23392 ppb		0.00
Spiked Amount 2.000			Recovery = 61.700%			
7) Surrogate Recovery (FBP)	7.30	172	1198	1.23817 ppb		0.00
Spiked Amount 2.000			Recovery = 61.900%			
17) Surrogate Recovery (TPH)	11.66	244	1828	1.49448 ppb		0.00
Spiked Amount 2.000			Recovery = 74.700%			
Target Compounds						Qvalue
3) Naphthalene	6.07	128	2617	2.59708 ppb		98
4) 2-Methylnaphthalene	6.87	142	1474	2.64475 ppb		99
5) 1-Methylnaphthalene	6.97	142	1668	3.00654 ppb		93
8) Acenaphthylene	7.89	152	3791	2.84143 ppb		98
9) Acenaphthene	8.08	154	2206	2.80631 ppb		92
10) Fluorene	8.70	166	2576	2.96370 ppb		99
12) Phenanthrene	9.81	178	4089	3.30233 ppb		99
13) Anthracene	9.87	178	3904	3.36526 ppb		99
14) Fluoranthene	11.19	202	7343	3.42914 ppb		95
16) Pyrene	11.45	202	7567	3.37180 ppb		99
18) Benz (a) anthracene	12.86	228	5242	2.88666 ppb		99
19) Chrysene	12.89	228	6404	3.63807 ppb		99
20) Indeno (1,2,3-cd) pyrene	15.94	276	4423	2.90557 ppb	#	96
22) Benzo (b) fluoranthene	14.03	252	4498	2.82214 ppb		95
23) Benzo (k) fluoranthene	14.06	252	5910	3.74421 ppb		97
24) Benzo (a) pyrene	14.41	252	4577	3.13793 ppb		98
25) Dibenz (a,h) anthracene	15.96	278	3515	2.79874 ppb		97
26) Benzo (g,h,i) perylene	16.34	276	3936	2.94870 ppb		98

$\frac{2617 \times 2.5}{1487 \times 1.664} = 2.66$ ug/mL

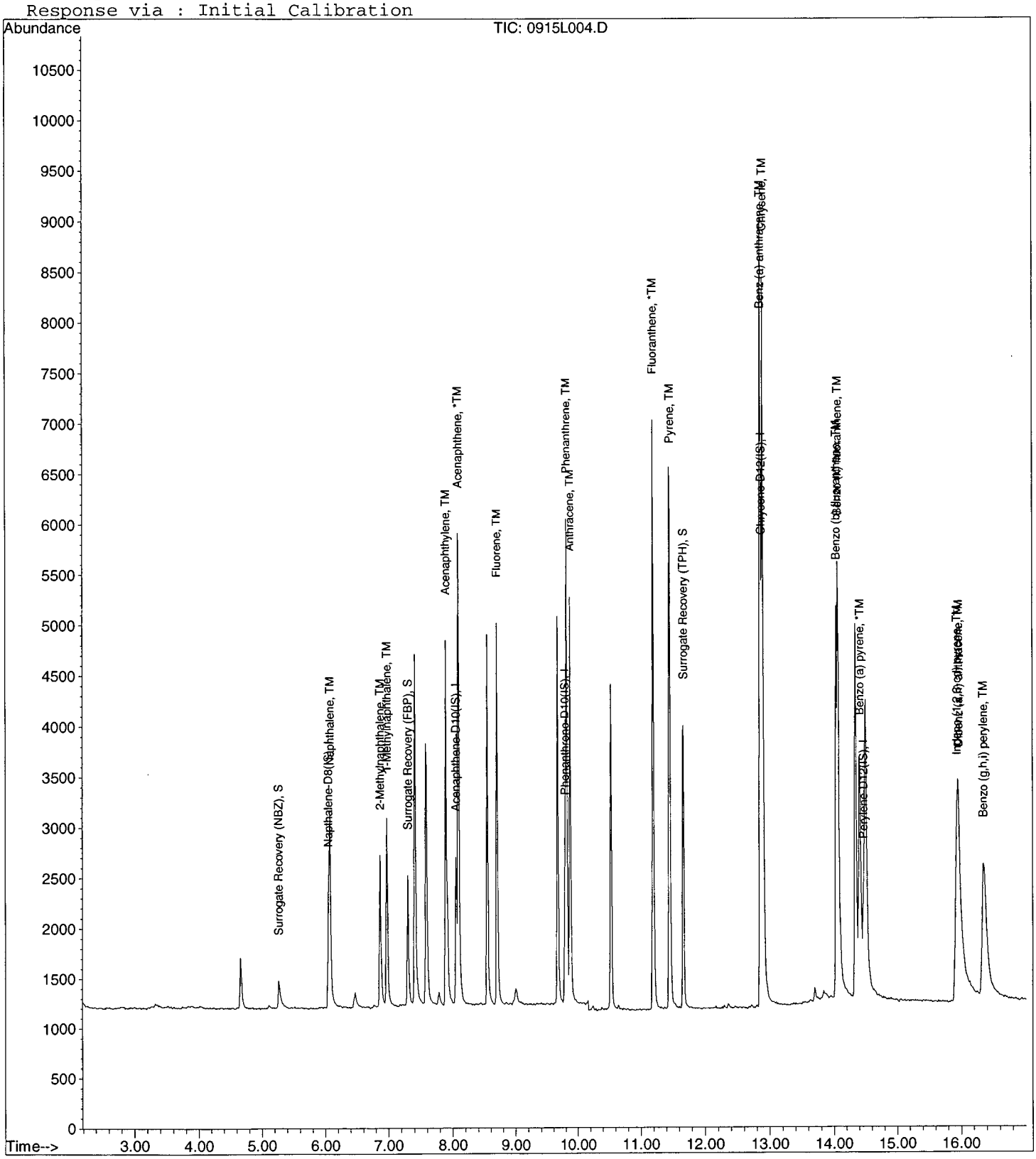
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L004.D Vial: 4
Acq On : 15 Sep 14 22:35 Operator: LF
Sample : 140908A LCS-1 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Sep 18 22:31 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270C SIM IS GROSS

APPL ID: **140910S-02100 LCS - 189932**
Batch ID: #SIMHC-140910A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	0.133	0.104	78.2	45-105
2-METHYLNAPHTHALENE	0.133	0.115	86.5	45-105
ACENAPHTHENE	0.133	0.0983	73.9	45-110
ACENAPHTHYLENE	0.133	0.120	90.2	45-105
ANTHRACENE	0.133	0.132	99.2	55-105
BENZO(A)ANTHRACENE	0.133	0.122	91.7	50-110
BENZO(A)PYRENE	0.133	0.139	105	50-110
BENZO(B)FLUORANTHENE	0.133	0.119	89.5	45-115
BENZO(GHI)PERYLENE	0.133	0.128	96.2	40-125
BENZO(K)FLUORANTHENE	0.133	0.0803	60.4	45-125
CHRYSENE	0.133	0.144	108	55-110
DIBENZ(A,H)ANTHRACENE	0.133	0.115	86.5	40-125
FLUORANTHENE	0.133	0.102	76.7	55-115
FLUORENE	0.133	0.104	78.2	50-110
INDENO(1,2,3-CD)PYRENE	0.133	0.101	75.9	40-120
PHENANTHRENE	0.133	0.131	98.5	50-110
PYRENE	0.133	0.099	74.4	45-125
SURROGATE: 2-FLUORBIPHENYL (S)	0.0666	0.0488	73.3	45-105
SURROGATE: NITROBENZENE-D5 (S)	0.0666	0.0265	39.8	35-100
SURROGATE: TERPHENYL-D14 (S)	0.0666	0.0644	96.7	30-125

Comments: _____

Primary	SPK
Quant Method :	SIM.M
Extraction Date :	9/10/14
Analysis Date :	9/16/14
Instrument :	Linus
Run :	0915L009
Initials :	LF

Printed: 9/22/14 8:23:28 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L009.D Vial: 9
Acq On : 16 Sep 14 00:46 Operator: LF
Sample : 140910A LCS-1 1/30.05G Inst : Linus
Misc : Multiplr: 33.28

Quant Time: Sep 18 22:40 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:40:23 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1564	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	663	2.50000	ppb		-0.01
11) Phenanthrene-D10(IS)	9.79	188	1484	2.50000	ppb		0.00
15) Chrysene-D12(IS)	12.85	240	2286	2.50000	ppb		-0.01
21) Perylene-D12(IS)	14.47	264	1129	2.50000	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.27	82	312	26.47966	ppb		0.01
Spiked Amount 66.556			Recovery = 39.786%				
7) Surrogate Recovery (FBP)	7.30	172	979	48.75506	ppb		0.00
Spiked Amount 66.556			Recovery = 73.254%				
17) Surrogate Recovery (TPH)	11.65	244	2027	64.38660	ppb		-0.01
Spiked Amount 66.556			Recovery = 96.741%				
Target Compounds							Qvalue
3) Naphthalene	6.07	128	2617	82.17032	ppb		99
4) 2-Methylnaphthalene	6.87	142	2018	114.56133	ppb		98
5) 1-Methylnaphthalene	6.97	142	1823	103.96495	ppb		98
8) Acenaphthylene	7.89	152	3328	120.19305	ppb		99
9) Acenaphthene	8.08	154	1603	98.26009	ppb		92
10) Fluorene	8.70	166	1873	103.83400	ppb		98
12) Phenanthrene	9.81	178	4729	131.20598	ppb		98
13) Anthracene	9.87	178	4452	131.83932	ppb		97
14) Fluoranthene	11.19	202	6384	102.42008	ppb	#	88
16) Pyrene	11.44	202	5719	99.01158	ppb	#	88
18) Benz (a) anthracene	12.85	228	5706	122.08402	ppb		99
19) Chrysene	12.89	228	6527	144.06603	ppb		99
20) Indeno (1,2,3-cd) pyrene	15.92	276	3954	100.92032	ppb		97
22) Benzo (b) fluoranthene	14.03	252	4262	118.54481	ppb	#	91
23) Benzo (k) fluoranthene	14.06	252	2859	80.29640	ppb		99
24) Benzo (a) pyrene	14.40	252	4572	138.95630	ppb		97
25) Dibenz (a,h) anthracene	15.96	278	3255	114.89405	ppb		93
26) Benzo (g,h,i) perylene	16.34	276	3859	128.16210	ppb		94

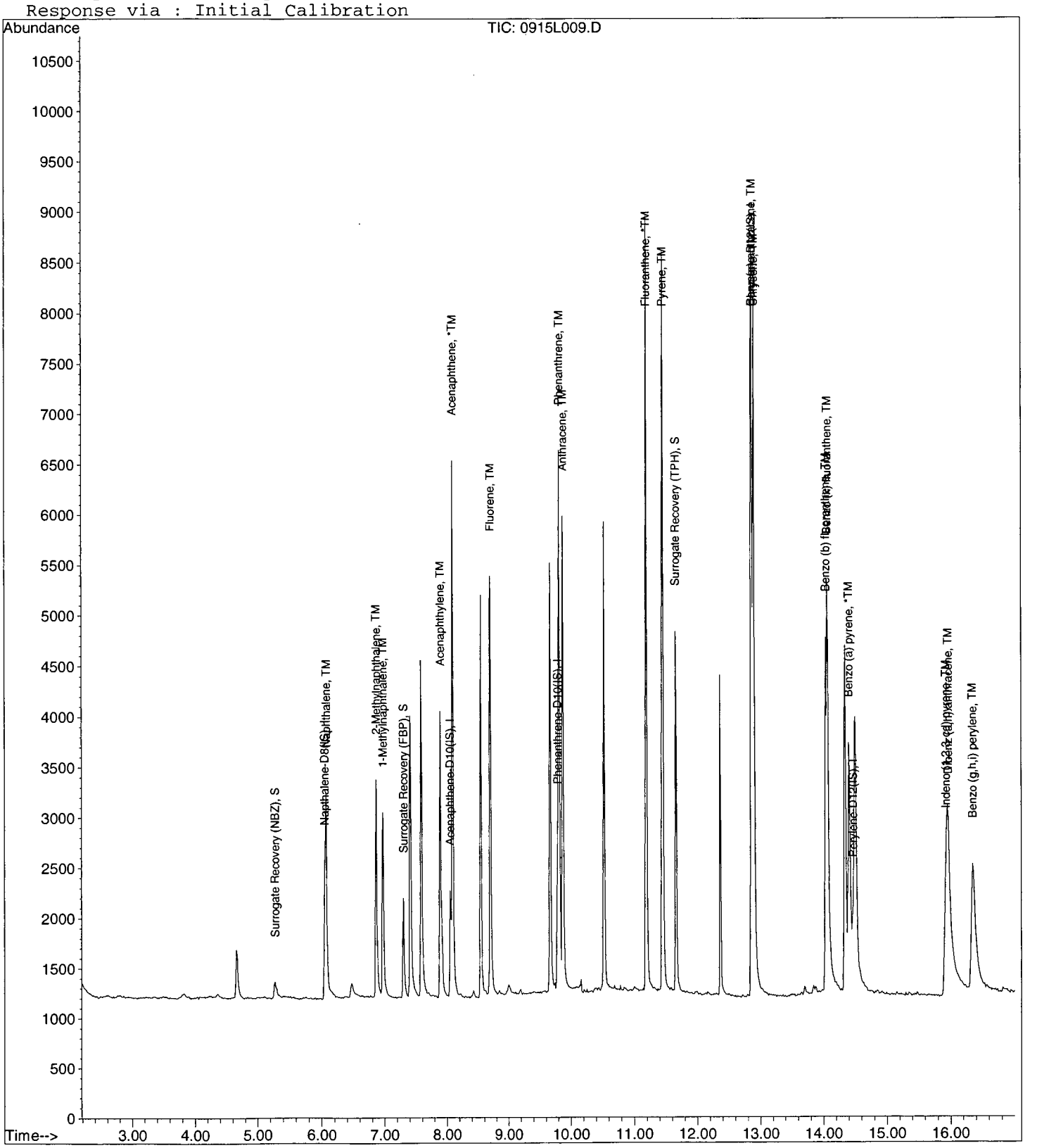
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L009.D Vial: 9
Acq On : 16 Sep 14 00:46 Operator: LF
Sample : 140910A LCS-1 1/30.05G Inst : Linus
Misc : Multiplr: 33.28

Quant Time: Sep 18 22:40 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration



Matrix Spike Recoveries

EPA 8270C SIM IS GROSS

APPL ID: **140910S-02100 MS - 189932**
Batch ID: #SIMHC-140910A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	0.118	0.00080	0.163	0.131	137 #	110 #	45-105	21.8	30
2-METHYLNAPHTHALENE	0.118	0.0011	0.118	0.137	99.1	115 #	45-105	14.9	30
ACENAPHTHENE	0.118	ND	0.134	0.135	114 #	114 #	45-110	0.74	30
ACENAPHTHYLENE	0.118	ND	0.133	0.129	113 #	109 #	45-105	3.1	30
ANTHRACENE	0.118	0.0012	0.154	0.135	129 #	113 #	55-105	13.1	30
BENZO(A)ANTHRACENE	0.118	0.0088	0.157	0.147	126 #	117 #	50-110	6.6	30
BENZO(A)PYRENE	0.118	0.0083	0.147	0.122	118 #	96.4	50-110	18.6	30
BENZO(B)FLUORANTHENE	0.118	0.016	0.147	0.109	111	78.8	45-115	29.7	30
BENZO(GHI)PERYLENE	0.118	0.023	0.144	0.149	103	107	40-125	3.4	30
BENZO(K)FLUORANTHENE	0.118	0.016	0.156	0.114	119	83.1	45-125	31.1 #	30
CHRYSENE	0.118	0.0089	0.133	0.132	105	104	55-110	0.75	30
DIBENZ(A,H)ANTHRACENE	0.118	0.0088	0.130	0.145	103	115	40-125	10.9	30
FLUORANTHENE	0.118	0.013	0.168	0.122	131 #	92.4	55-115	31.7 #	30
FLUORENE	0.118	ND	0.137	0.129	116 #	109	50-110	6.0	30
INDENO(1,2,3-CD)PYRENE	0.118	0.011	0.133	0.185	103	147 #	40-120	32.7 #	30
PHENANTHRENE	0.118	0.0038	0.151	0.138	125 #	114 #	50-110	9.0	30
PYRENE	0.118	0.012	0.151	0.147	118	114	45-125	2.7	30
SURROGATE: 2-FLUORBIPHENYL (S)	0.0591	NA	0.0583	0.0586	98.6	99.2	45-105		
SURROGATE: NITROBENZENE-D5 (S)	0.0591	NA	0.0368	0.0553	62.3	93.6	35-100		
SURROGATE: TERPHENYL-D14 (S)	0.0591	NA	0.0894	0.0923	151 #	156 #	30-125		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	SIM.M	SIM.M
Extraction Date :	9/10/14	9/10/14
Analysis Date :	9/16/14	9/16/14
Instrument :	Linus	Linus
Run :	0915L011	0915L012
Initials :	LF	

Printed: 9/22/14 8:23:30 PM
APPL MSD SCII

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L011.D Vial: 11
Acq On : 16 Sep 14 1:39 Operator: LF
Sample : AZ02100S11 MS-1 1/33.82G Inst : Linus
Misc : Multiplr: 29.57

Quant Time: Sep 18 22:31 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1852	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	924	2.50000	ppb		-0.01
11) Phenanthrene-D10(IS)	9.77	188	1412	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	12.85	240	2625	2.50000	ppb		-0.01
21) Perylene-D12(IS)	14.45	264	1360	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.26	82	578	36.80884	ppb		0.00
Spiked Amount 59.137			Recovery = 62.244%				
7) Surrogate Recovery (FBP)	7.29	172	1835	58.26201	ppb		-0.01
Spiked Amount 59.137			Recovery = 98.521%				
17) Surrogate Recovery (TPH)	11.65	244	3639	89.44201	ppb		-0.01
Spiked Amount 59.137			Recovery = 151.246%				
Target Compounds							Qvalue
3) Naphthalene	6.07	128	5980	140.88963	ppb		98
4) 2-Methylnaphthalene	6.85	142	2781	118.46347	ppb		96
5) 1-Methylnaphthalene	6.96	142	3807	162.91076	ppb		94
8) Acenaphthylene	7.88	152	5776	132.99509	ppb		99
9) Acenaphthene	8.08	154	3420	133.65405	ppb		94
10) Fluorene	8.69	166	3871	136.81615	ppb		96
12) Phenanthrene	9.80	178	5832	151.10258	ppb		97
13) Anthracene	9.86	178	5578	154.25468	ppb		98
14) Fluoranthene	11.17	202	11209	167.93033	ppb		97
16) Pyrene	11.44	202	11236	150.52040	ppb		99
18) Benz (a) anthracene	12.84	228	9453	156.50004	ppb		99
19) Chrysene	12.88	228	7769	132.68776	ppb		98
20) Indeno (1,2,3-cd) pyrene	15.89	276	6740	133.11273	ppb	#	95
22) Benzo (b) fluoranthene	14.02	252	7156	146.81326	ppb	#	93
23) Benzo (k) fluoranthene	14.04	252	7508	155.53641	ppb	#	94
24) Benzo (a) pyrene	14.38	252	6535	146.50197	ppb		97
25) Dibenz (a,h) anthracene	15.92	278	5011	130.46584	ppb		98
26) Benzo (g,h,i) perylene	16.31	276	5896	144.43359	ppb		98

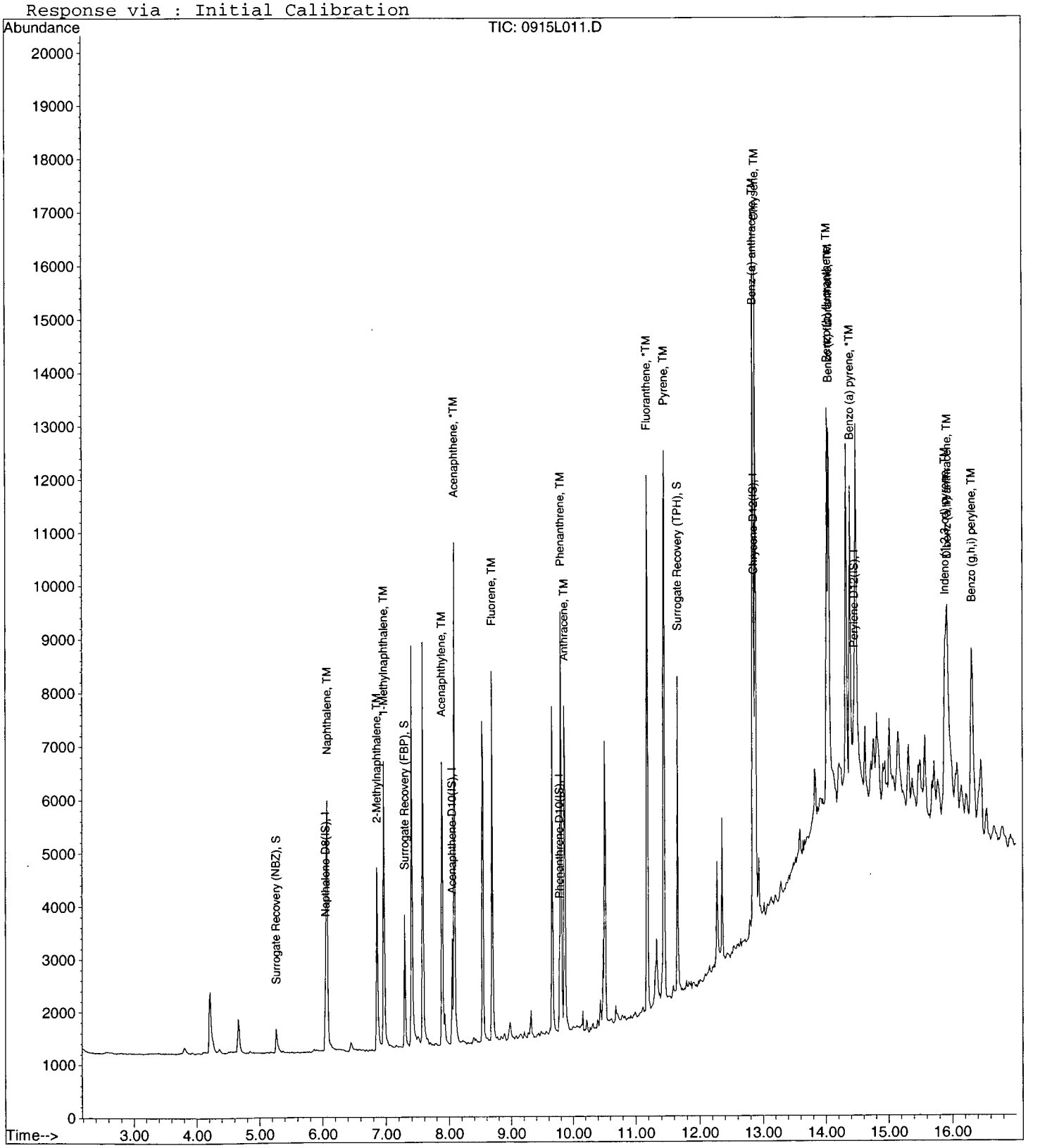
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L011.D Vial: 11
Acq On : 16 Sep 14 1:39 Operator: LF
Sample : AZ02100S11 MS-1 1/33.82G Inst : Linus
Misc : Multiplr: 29.57

Quant Time: Sep 18 22:31 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L140821\0915L012.D Vial: 12
Acq On : 16 Sep 14 2:05 Operator: LF
Sample : AZ02100S11 MSD-1 1/33.85G Inst : Linus
Misc : Multiplr: 29.54

Quant Time: Sep 18 22:31 2014 Quant Results File: SIM.RES

Quant Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Sep 18 22:09:13 2014
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.05	136	1894	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	8.05	164	838	2.50000	ppb		-0.01
11) Phenanthrene-D10(IS)	9.77	188	1321	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	12.85	240	1793	2.50000	ppb		-0.01
21) Perylene-D12(IS)	14.45	264	1224	2.50000	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.26	82	889	55.30980	ppb		0.00
Spiked Amount 59.084			Recovery = 93.612%				
7) Surrogate Recovery (FBP)	7.29	172	1674	58.55282	ppb		-0.01
Spiked Amount 59.084			Recovery = 99.101%				
17) Surrogate Recovery (TPH)	11.65	244	2566	92.25293	ppb		-0.01
Spiked Amount 59.084			Recovery = 156.138%				
Target Compounds							Qvalue
3) Naphthalene	6.07	128	5768	132.76363	ppb		99
4) 2-Methylnaphthalene	6.85	142	3285	136.70829	ppb		96
5) 1-Methylnaphthalene	6.96	142	3141	131.31394	ppb		91
8) Acenaphthylene	7.88	152	5092	129.16349	ppb		99
9) Acenaphthene	8.08	154	3126	134.58230	ppb		96
10) Fluorene	8.69	166	3325	129.46393	ppb		96
12) Phenanthrene	9.80	178	4973	137.60040	ppb		97
13) Anthracene	9.86	178	4585	135.40855	ppb		98
14) Fluoranthene	11.17	202	7638	122.20496	ppb		95
16) Pyrene	11.44	202	7518	147.31602	ppb		93
18) Benz (a) anthracene	12.84	228	6082	147.28389	ppb		98
19) Chrysene	12.88	228	5299	132.38040	ppb		97
20) Indeno (1,2,3-cd) pyrene	15.89	276	6396	184.77031	ppb	#	98
22) Benzo (b) fluoranthene	14.02	252	4769	108.61624	ppb	#	91
23) Benzo (k) fluoranthene	14.04	252	4954	113.92953	ppb		96
24) Benzo (a) pyrene	14.38	252	4883	121.52262	ppb		98
25) Dibenz (a,h) anthracene	15.92	278	5014	144.92030	ppb		97
26) Benzo (g,h,i) perylene	16.32	276	5465	148.61868	ppb		95

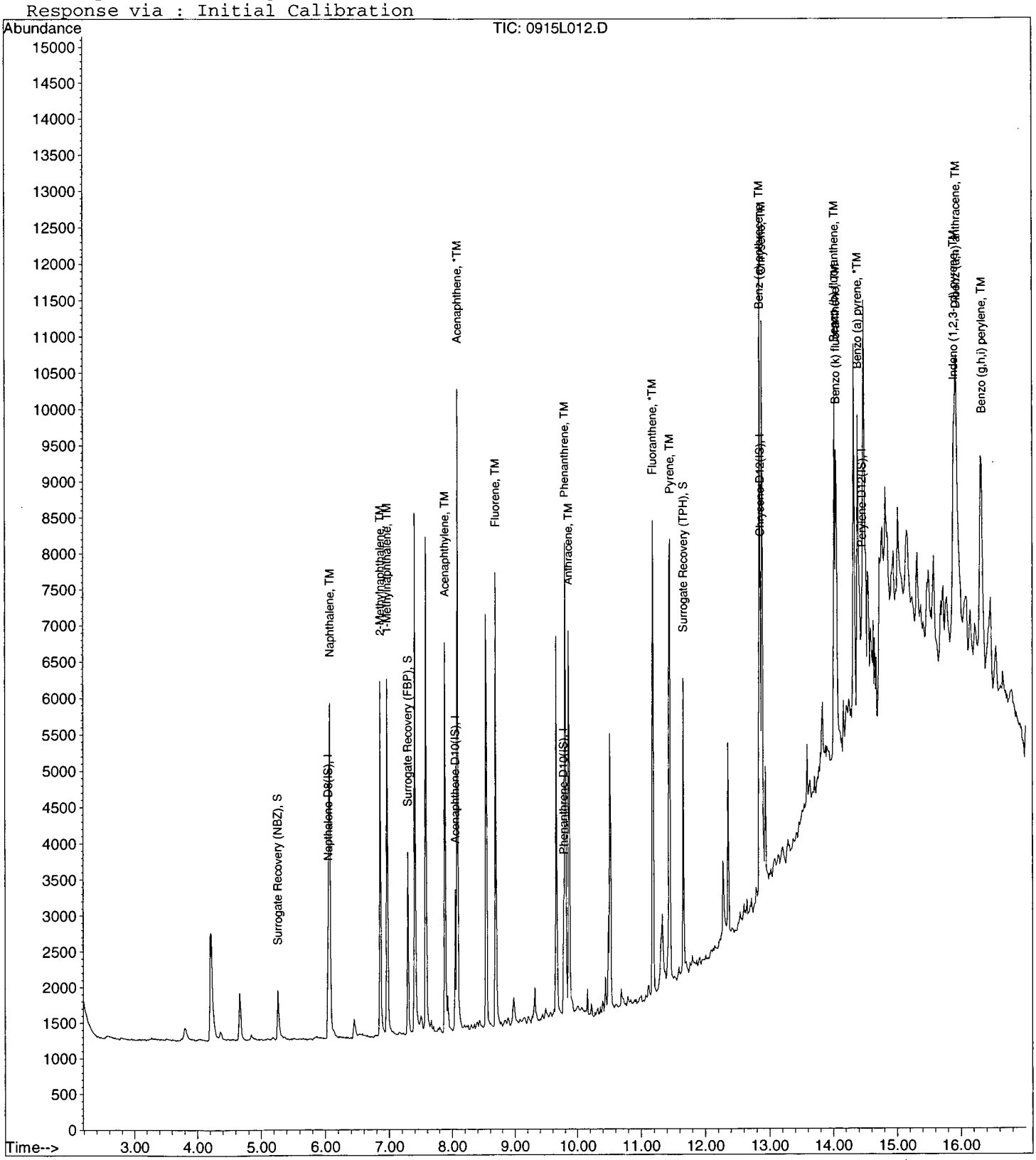
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L140821\0915L012.D Vial: 12
Acq On : 16 Sep 14 2:05 Operator: LF
Sample : AZ02100S11 MSD-1 1/33.85G Inst : Linus
Misc : Multiplr: 29.54

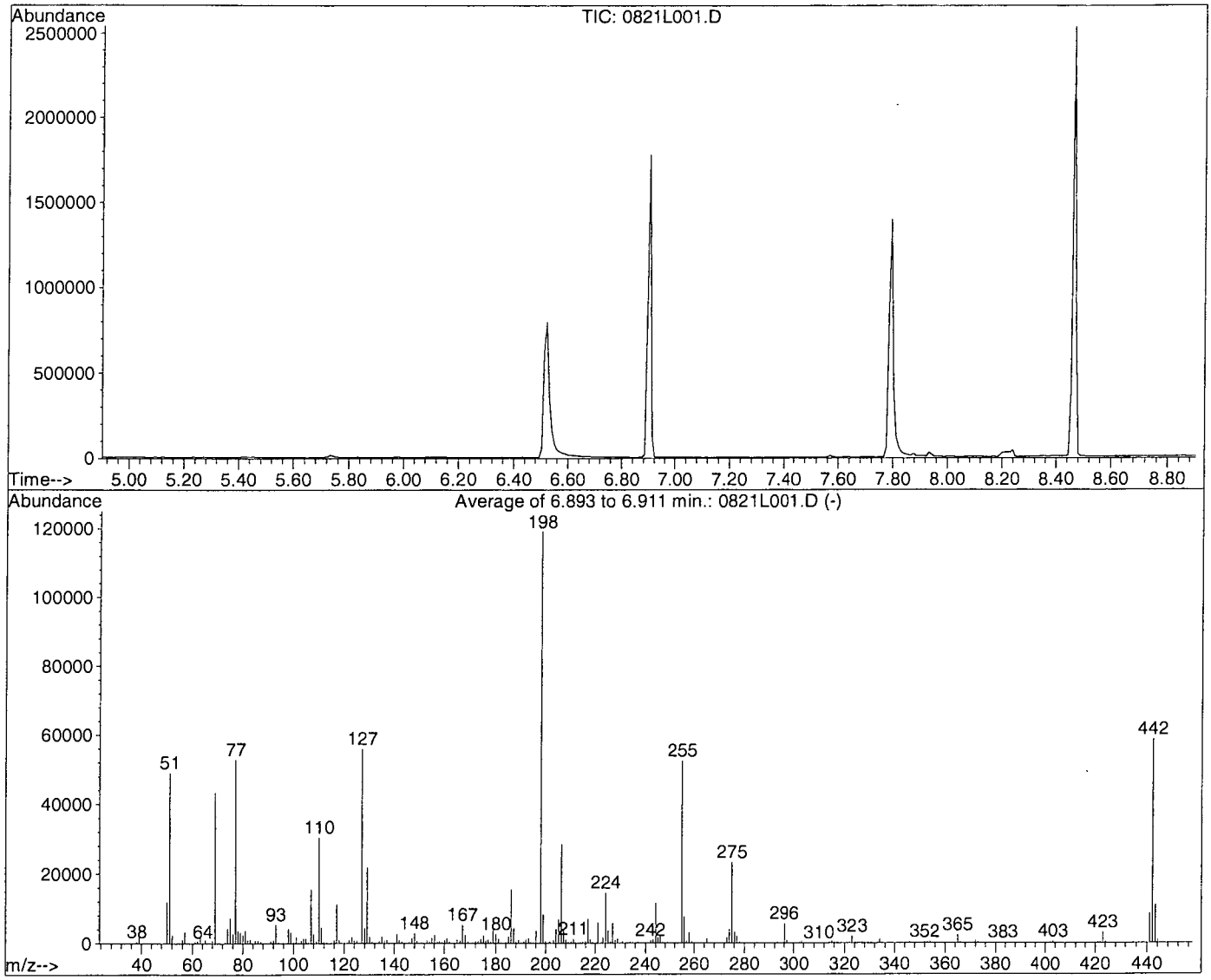
Quant Time: Sep 18 22:31 2014 Quant Results File: SIM.RES

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Aug 25 06:55:16 2014
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L140821\0821L001.D Vial: 1
Acq On : 21 Aug 14 15:59 Operator: LF
Sample : SVTUNE 02-04-14 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270

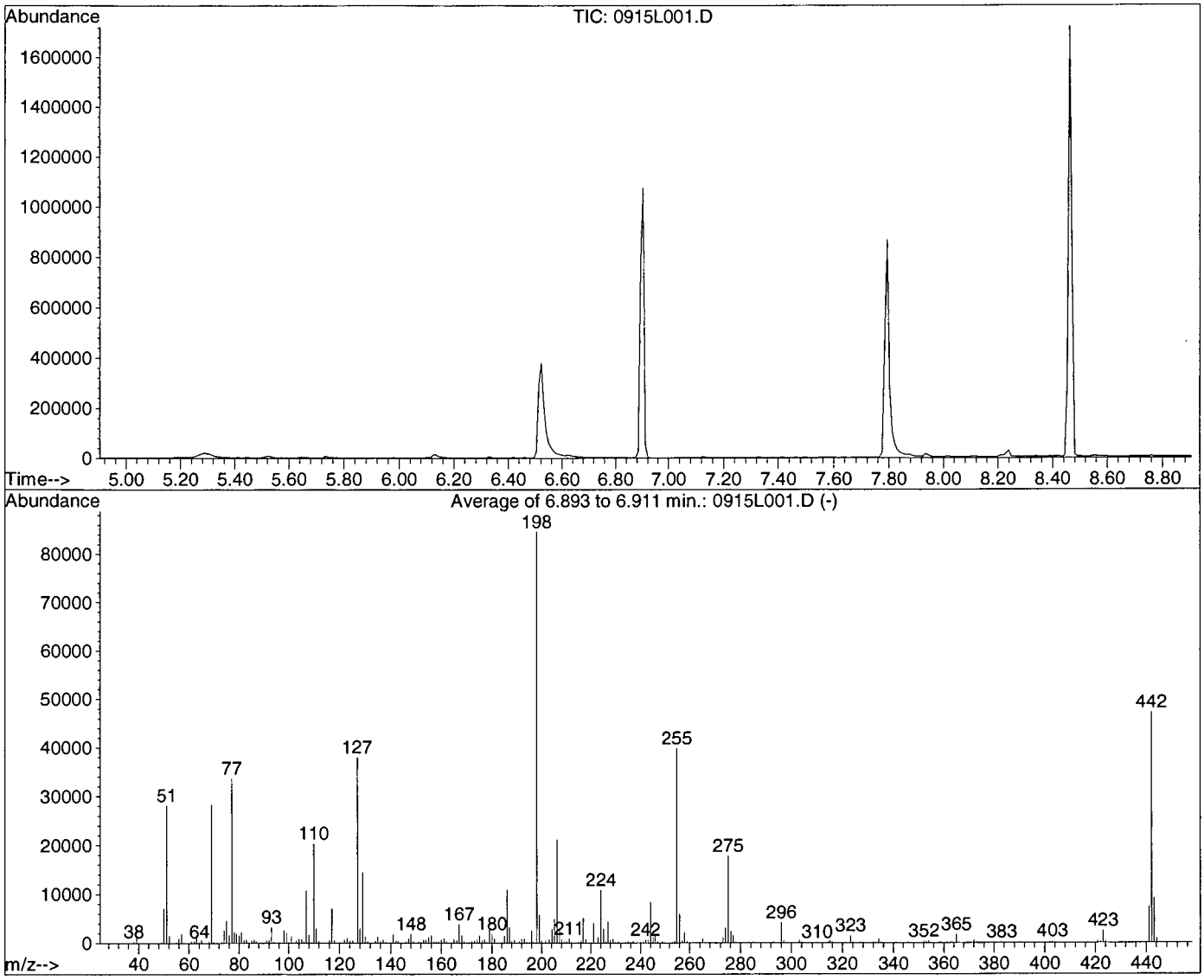


Spectrum Information: Average of 6.893 to 6.911 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	41.2	49124	PASS
68	69	0.00	2	1.6	708	PASS
70	69	0.00	2	0.3	131	PASS
127	198	40	60	47.0	56020	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	119120	PASS
199	198	5	9	7.0	8280	PASS
275	198	10	30	19.5	23261	PASS
365	198	1	100	2.0	2325	PASS
441	443	0.01	100	77.2	8549	PASS
442	198	40	150	49.3	58688	PASS
443	442	17	23	18.9	11077	PASS

Data File : M:\LINUS\DATA\L140821\0915L001.D Vial: 1
Acq On : 15 Sep 14 21:21 Operator: LF
Sample : SVTUNE 02-04-14 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L140821\SIM.M (RTE Integrator)
Title : EPA 8270



Spectrum Information: Average of 6.893 to 6.911 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	33.3	28142	PASS
68	69	0.00	2	1.2	339	PASS
70	69	0.00	2	0.7	207	PASS
127	198	40	60	44.9	38044	PASS
197	198	0.00	1	0.2	167	PASS
198	198	100	100	100.0	84637	PASS
199	198	5	9	6.7	5688	PASS
275	198	10	30	21.0	17746	PASS
365	198	1	100	1.9	1631	PASS
441	443	0.01	100	79.4	7213	PASS
442	198	40	150	55.8	47207	PASS
443	442	17	23	19.3	9090	PASS

UF 7/18/14

PREP DATE:	07-08-14					
8270 Second Source (SS) 50ug/mL						
						50
Supplier	ID #	Conc. ug/mL	Lot #	Date Code	CODE: Exp.Date	µL
	8270 SS	200		2/18/2014	08-18-14	25
EM Science	Methylene Chloride		52104			75
					Final Vol.	100

UF 7/24/14

PREP DATE:	07-24-14												
8270 STANDARD CURVE													
Exp:	07-31-14					5	10	20	40	50	60	80	100
Supplier	ID #	Conc. ug/mL	Lot #	Date Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
	8270 Stock	200		3/20/2014	09-20-14	5	5	10	20	25	30	40	50
	Surrogate Stock	VAR	196130-31983	12/5/2013	09-24-14	5	5	10	20	25	30	40	50
EM Science	Methylene Chloride		52104			190	90	80	60	50	40	20	0
					Final Vol.	200	100	100	100	100	100	100	100

UF 7/24/14

PREP DATE:	07-24-14					
8270 Second Source (SS) 50ug/mL						
						50
Supplier	ID #	Conc. ug/mL	Lot #	Date Code	CODE: Exp.Date	µL
	8270 SS	200		2/18/2014	08-18-14	25
EM Science	Methylene Chloride		52104			75
					Final Vol.	100

UF 7/24/14

PREP DATE:	07-24-14												
8270 SIM STANDARD CURVE													
						0.10	0.20	0.50	1.00	5.00	10.00	50.00	100.00
Supplier	ID #	Conc. ug/mL	Lot #	Date Code	CODE: Exp.Date	A µL	A µL	C µL	D µL	E µL	F µL	G µL	H µL
	8270D PAH SIM	200	195512-31986	4/22/2014	09-10-14	0	0	0	0	5	5	25	50
	5.0ug/mL	5		7/24/2014		0	0	10	20	0	0	0	0
	1.0ug/mL	1		7/24/2014		10	20	0	0	0	0	0	0
	Surrogate Stock	VAR	196130-31983	12/5/2013	09-24-14	0	0	0	0	5	5	25	50
EM Science	Methylene Chloride		52104			90	80	90	80	190	90	50	0
					Final Vol.	100	100	100	100	200	100	100	100

UF 7/24/14

PREP DATE:	07-24-14				
SIM 8270 Second Source (5µg/mL)					
Exp:	08-07-14				
Supplier	ID #	Lot #	Conc. µg/mL	Date Code	CODE: Exp.Date	µL
	8270D PAH SIM (SS)	203014-31989	200	4/22/2014	01-30-15	5
EM Science	MeCl2		Lot#52104			195
				Final Volume		200

UF 7/24/14

NOTEBOOK INSERT LABEL

Semivolatile Internal Standard Mix **4-8902**

Lot: LB94031 EXP: JUL/2015 STORAGE: REFRIGERATE 2 x 1ml

DATE RECEIVED:_____

SUPELCO
Solutions you can
595 North Harrison Road • Bellefonte, PA
16823-0048 USA • Phone 814-359-3441

exp 7/24/15

STANDARD TRANSFER LABEL

Date of Preparation:

Reference Number:

Description: Semivolatile Internal Standard Mix
Lot #: LB94031 - 32287
Rec: 4/23/13 MFR exp. 7/31/15

Exp. Date: EXP: JUL/2015

Storage: REFRIGERATE

VF 7/27/14

PREP DATE: 07-27-14 EXP: 8:27:00 A

Sulfolane Standard Curve

Supplier	ID #	Conc ug/mL	Lot #	Date Code	CODE: Exp Date	1	2	10	20	40	50	60	80	100
	Sulfolane Stock	200		7-27-14	9-24-14	5	5	5	10	20	25	30	40	50
	Standard													
EM Science	Methylene Chloride		92104			995	995	995	990	980	975	970	960	950
					Final Vol	1000	200	100	100	100	100	100	100	100

VF 7/31/14

PREP DATE: 07-31-14 EXP: 8:31:00 A

Sulfolane Standard Curve

Supplier	ID #	Conc ug/mL	Lot #	Date Code	CODE: Exp Date	1	2	10	20	40	50	60	80	100
	Sulfolane Stock	200		7-27-14	9-24-14	5	5	5	10	20	25	30	40	50
	Standard													
EM Science	Methylene Chloride		92104			995	995	995	990	980	975	970	960	950
					Final Vol	1000	200	100	100	100	100	100	100	100

VF 8/4/14

PREP DATE: 08-04-14

8270 SIM STANDARD CURVE

Supplier	ID #	Conc ug/mL	Lot #	Date Code	CODE: Exp Date	0.10 A µL	0.20 A µL	0.50 C µL	1.00 D µL	5.00 E µL	10.00 F µL	50.00 G µL	100.00 H µL
	8270 PAH SIM	200		1-22-2014	09-10-14	0	0	0	0	5	5	25	50
		5		8-4-2014		0	0	10	20	0	0	0	0
		1		8-4-2014		10	20	0	0	0	0	0	0
	Surrogate Stock	200		12-5-2013	09-24-14	0	0	0	0	5	5	25	50
EM Science	Methylene Chloride		92104			90	80	90	80	190	90	50	0
					Final Vol	100	100	100	100	200	100	100	100

VF 8/4/14

PREP DATE 08-01-14

SIM 8270 Second Source (5µg/mL)

Exp. 08-18-14

Supplier:	ID #	Lot #	Conc ug/mL	Date Code	CODE: Exp Date	µL
	8270D PAH SIM (SS)		200			5
EM Science	MeCl2					195
					Final Volume	200

VF 8/13/14

10001
061812 061815 Storage 0 °C

CLP Semi-Volatiles Base/Neutrals Mix #1
14 components
2000 ug/mL in me

ABSOLUTE STANDARD

CLP Semi-Volatiles Base/Neutrals Mix #1
Lot #: 061812 - 33386
Rec. 3/13/14 MFR exp 6/18/15

Exp 6/18/15

VF 8/13/14

10001
061812 061815 Storage 0 °C

CLP Semi-Volatiles Base/Neutrals Mix #1
14 components
2000 ug/mL in meth

ABSOLUTE STANDARD

CLP Semi-Volatiles Base/Neutrals Mix #1
Lot #: 061812 - 33385
Rec 3/13/14 MFR exp 6/18/15

exp 6/18/15

0	100
L	µL
0	50
0	50
0	100

VF 8/13/14

Part #: 10002
Lot #: 112811
Laboratory Use Only - See MSDS
Exp: 112814 Storage 4 °C
CLP Semi-Volatiles Base/Neutrals Mix #2
14 components
2000 ug/mL in m
ABSOLUTE STANDA
CLP Semi-Volatiles Base Neutrals Mix #2
Lot #: 112811 - 33392
Rec: 3/13/14 MFR exp. 11/28/14

VF exp 11/28/14

)	100
.	µL
)	50
)	50
0	100

VF 8/13/14

Part #: 10002
Lot #: 112811
Laboratory Use Only - See MSDS
Exp: 112814 Storage 4 °C
CLP Semi-Volatiles Base/Neutrals Mix #2
14 components
2000 ug/mL in me
ABSOLUTE STANDAR
CLP Semi-Volatiles Base Neutrals Mix #2
Lot #: 112811 - 33391
Rec: 3/13/14 MFR exp. 11/28/14

VF exp 11/28/14

	100.00
	H
	µL
	50
	0
	0
	50
	0
	100

VF 8/13/14

Part #: 10004
Lot #: 091911
Laboratory Use Only - See MSDS
Exp: 091916 Storage 4 °C
CLP Semi-Volatiles Toxic Substances #1
4 components
2000 ug/mL in me
ABSOLUTE STANDAI
CLP Semi-Volatiles Toxic Substances #1
Lot #: 091911 - 33401
Rec: 3/13/14 MFR exp. 9/19/16

VF exp 9/19/16

VF 8/13/14

Part #: 10004
Lot #: 091911
Laboratory Use Only - See MSDS
Exp: 091916 Storage 4 °C
CLP Semi-Volatiles Toxic Substances #1
4 components
2000 ug/mL in metl
ABSOLUTE STANDARI
CLP Semi-Volatiles Toxic Substances #1
Lot #: 091911 - 33400
Rec: 3/13/14 MFR exp. 9/19/16

VF exp 9/19/16

VF 8/13/14

Part #: 10005
Lot #: 081011
Laboratory Use Only - See MSDS
Exp: 081016 Storage 4 °C
CLP Semi-Volatile Toxic Substances #2
8 components
2000 ug/mL in m
ABSOLUTE STANDA
CLP Semi-Volatiles Toxic Substances #2
Lot #: 081011 - 33407
Rec: 3/13/14 MFR exp. 8/10/16

VF exp 8/10/16

VF 8/13/14

Part #: 10005
Lot #: 081011
Laboratory Use Only - See MSDS
Exp: 081016 Storage 4 °C
CLP Semi-Volatiles Toxic Substances #2
8 components
2000 ug/mL in m
ABSOLUTE STANDA
CLP Semi-Volatiles Toxic Substances #2
Lot #: 081011 - 33406
Rec: 3/13/14 MFR exp. 8/10/16

VF exp 8/10/16

VF 8/13/14

Part #: 10006
Lot #: 120313
Laboratory Use Only - See MSDS
Exp: 120316 Storage 4 °C
CLP Semi-Volatiles - Benzidines
2 components
2000 ug/mL in met
ABSOLUTE STANDAR
CLP Semi-Volatiles - Benzidines
Lot #: 120313 - 33440
Rec: 3/13/14 MFR exp. 12/3/16

VF exp 12/3/16

VF 5/13/14

Lot # 10006
Lot # 120313 120316 Storage 4 °C



CLP Semi-Volatiles - Benzidines
2 components
2000 ug/mL in me

ABSOLUTE STAND

CLP Semi-Volatiles - Benzidines
Lot #: 120313 - 33439
Rec: 3/13/14 MFR exp. 12/3/16

VF

Exp 12/3/16

VF

VF 5/13/14

Lot # 10007
Lot # 071013 071018 Storage 4 °C



CLP Semi-Volatiles - PAH Standard
17 components
2000 ug/mL in meth

ABSOLUTE STAND

CLP Semi-Volatiles - PAH Mix
Lot #: 071013 - 33413
Rec: 3/13/14 MFR exp. 7/10/18

VF

Exp 7/10/18

VF

VF 5/13/14

Lot # 10007
Lot # 071013 071018 Storage 4 °C



CLP Semi-Volatiles - PAH Standard
17 components
2000 ug/mL in me

ABSOLUTE STANDA

CLP Semi-Volatiles - PAH Mix
Lot #: 071013 - 33412
Rec: 3/13/14 MFR exp. 7/10/18

VF

Exp 7/10/18

VF 5/13/14

Lot # 10018
Lot # 050213 050218 Storage 4 °C



EPA Method 8270A - Analytes Mix #8
13 components - Ph
2000 ug/mL in meth

ABSOLUTE STANDAR

CLP Semi-Volatiles Mix #8 - Phenols
Lot #: 050213 - 33419
Rec: 3/13/14 MFR exp 5/2/18

VF

Exp 5/2/18

VF 5/13/14

Lot # 10018
Lot # 050213 050218 Storage 4 °C



EPA Method 8270A - Analytes Mix #8
13 components - Ph
2000 ug/mL in met

ABSOLUTE STANDAR

CLP Semi-Volatiles Mix #8 - Phenols
Lot #: 050213 - 33418
Rec: 3/13/14 MFR exp. 5/2/18

VF

Exp 5/2/18

VF

VF 5/13/14

Lot # 70023
Lot # 062513 062518 Storage 4 °C



Atrazine
1000 ug/mL in ac

ABSOLUTE STANDA

Atrazine
Lot #: 062513 - 33423
Rec: 3/13/14 MFR exp. 6/25/18

VF

Exp 6/25/18

VF 5/13/14

Lot # 70023
Lot # 062513 062518 Storage 4 °C



Atrazine
1000 ug/mL in ac

ABSOLUTE STANDA

Atrazine
Lot #: 062513 - 33422
Rec: 3/13/14 MFR exp 6/25/18

VF

Exp 6/25/18

GC/MS STANDARD PREPARATION BOOK # K PAGE

VF 8/13/14

Part #: 82705 Laboratory Use Only - See MSDS
Lot #: 121713 Exp: 121716 Storage 4 °C
EPA Method 8270A - Mix #11
4 components EPA Method 8270A-Mix#11
2000 ug/mL in ac Lot #: 121713 - 33431
ABSOLUTE STANDA. Rec: 3/13/14 MFR exp. 12/17/16

VF exp 12/17/16

VF 8/13/14

Part #: 82705 Laboratory Use Only - See MSDS
Lot #: 121713 Exp: 121716 Storage 4 °C
EPA Method 8270A - Mix #11
4 components EPA Method 8270A-Mix#11
2000 ug/mL in ac Lot #: 121713 - 33430
ABSOLUTE STANDA Rec: 3/13/14 MFR exp. 12/17/16

VF exp 12/17/16

VF 8/13/14

Part #: 94552 Laboratory Use Only - See MSDS
Lot #: 030411 Exp: 030416 Storage 4 °C
Semi-Volatile Standard
11 components Semi-Volatile Standard
Varied ug/mL in r Lot #: 030411 - 33437
ABSOLUTE STANDA Rec: 3/13/14 MFR exp. 3/4/16

VF exp 3/4/16

VF 8/13/14

Part #: 94552 Laboratory Use Only - See MSDS
Lot #: 030411 Exp: 030416 Storage 4 °C
Semi-Volatile Standard
11 components Semi-Volatile Standard
Varied ug/mL in r Lot #: 030411 - 33436
ABSOLUTE STANDA Rec: 3/13/14 MFR exp. 3/4/16

VF exp 3/4/16

VF 8/13/14

PREP DATE:	08-13-14					
8270 Stock/Spike Standard						
Exp:	11-28-14					
		Conc.		Date	CODE:	P
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Absolute	10001	2000	061812-33386	8/13/2014	06-08-15	1000
Absolute	10001	2000	061812-33385	8/13/2014	06-08-15	1000
Absolute	10002	2000	112811-33392	8/13/2014	11-28-14	1000
Absolute	10002	2000	112811-33391	8/13/2014	11-28-14	1000
Absolute	10004	2000	091911-33401	8/13/2014	09-19-16	1000
Absolute	10004	2000	091911-33400	8/13/2014	09-19-16	1000
Absolute	10005	2000	081011-33407	8/13/2014	08-10-16	1000
Absolute	10005	2000	081011-33406	8/13/2014	08-10-16	1000
Absolute	10006	2000	120313-33440	8/13/2014	12-03-16	1000
Absolute	10006	2000	120313-33439	8/13/2014	12-03-16	1000
Absolute	10007	2000	071013-33413	8/13/2014	07-10-18	1000
Absolute	10007	2000	071013-33412	8/13/2014	07-10-18	1000
Absolute	10018	2000	050213-33419	8/13/2014	05-02-18	1000
Absolute	10018	2000	050213-33418	8/13/2014	05-02-18	1000
Absolute	70023	1000	062513-33423	8/13/2014	06-25-18	1000
Absolute	70023	1000	062513-33422	8/13/2014	06-25-18	1000
Absolute	82705	2000	121713-33431	8/13/2014	12-17-16	1000
Absolute	82705	2000	121713-33430	8/13/2014	12-17-16	1000
Absolute	94552	2000	030411-33437	8/13/2014	03-04-16	1000
Absolute	94552	2000	030411-33436	8/13/2014	03-04-16	1000
					Final Vol	20000

VF

11/19/14 VF

8270 BN Solution 14-4,
2,000 mg/L, 1 ml

110391-01

Lot #	Storage	Expiry
193470	≤ -10 Degrees C	7/28/15

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

8270BN Solution 14-4
Lot #: 193470 - 33143
Rec: 11/19/13 MFR exp. 7/28/15

11/19/14 VF

8270 BN Solution 14-3, 2,000 mg/L, 1 ml

110392-01

Lot #	Storage	Expiry
218075	≤ -10 Degrees C	11/22/16

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

8270BN Solution 14-3
Lot #: 218075 - 33145
Rec: 11/19/13 MFR exp. 11/22/16

11/19/14 VF

8270 Acid Solution 4-6,
2,000 mg/L, 1 ml

110393-01

Lot #	Storage	Expiry
193473	≤ -10 Degrees C	7/28/15

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

8270B Acid Solution 4-6
Lot #: 193473 - 33147
Rec: 11/19/13 MFR exp. 7/28/15

11/19/14 VF

TCL Hazardous Substances
Solution 2, 2,000 mg/L, 1 ml

110394-01

Lot #	Storage	Expiry
193476	≤ -10 Degrees C	7/28/15

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

TCL Hzd. Soln. 2
Lot #: 193476 - 33149
Rec: 11/19/13 MFR exp. 7/28/15

100
µL
50
50
100

11/19/14 VF

PAH Solution 17-3, 2,000 mg/L, 1 ml

116070-02

Lot #	Storage	Expiry
193478	≤ -10 Degrees C	7/28/15

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

PAH Solution
Lot #: 193478 - 33151
Rec: 11/19/13 MFR exp. 7/28/15

11/19/14 VF

8270 BN Solution 4-21,
2,000 mg/L, 1 ml

110395-01

Lot #	Storage	Expiry
193480	≤ -10 Degrees C	7/28/15

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

8270BN Solution 4-21
Lot #: 193480 - 33153
Rec: 11/19/13 MFR exp. 7/28/15

GC/MS STANDARD PREPARATION BOOK # K

9/10/14 VF

8270 Acid Solution 13-4, 2,000 mg/L, 1 ml

110396-01

Lot #	Storage	Expiry
193479	-10 Degrees C	7/28/15

Solv: Methylene Chloride

Made in the USA. R&D only, not for human consumption.

8270 Acid Solution 13-4
Lot #: 193479 - 33155
Rec: 11/19/13 MFR exp. 7/28/15

9/10/14 VF

8270 11 Compound Custom Mix, 200:2,000 mg/L, 1 mL

110397-01

Lot #	Storage	Expiry
234699	≤ -10 °C	21/Nov/2014

Solv: Methylene Chloride

Made in the USA. R&D only, not for human consumption.

8270 11 Compound Mix
Lot #: 234699 - 33987
Rec: 8/27/14 MFR exp. 11/21/14

9/10/14 VF

Atrazine Solution, 1,000 mg/L, 1 mL

010337-01

Lot #	Storage	Expiry
217950	≤ -10 Degrees C	11/14/15

Solv: Methylene Chloride

Made in the USA. R&D only, not for human consumption.

Atrazine
Lot #: 217950 - 33159
Rec: 11/19/13 MFR exp. 11/14/15

9/10/14 VF

8270 BN:A (200:400) Surrogate Solution, 1 mL

110004-17

Lot #	Storage	Expiry
224251	≤ -10 Degrees C	3/16/16

Solv: Methylene Chloride

Made in the USA. R&D only, not for human consumption.

exp 9/10/15

8270 BN:A (200:400) Surrogate Solution
Lot #: 224251 - 33495
Rec: 4/15/14 MFR exp. 3/16/16

9/10/14 VF-9/10/14

PREP DATE:	09-10-14					
8270C Second Source Stock Standard						
Exp:	11-21-14					
		Conc.		Date	CODE:	P
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
O2SI	110391-01	2000	193470-33143	9/10/2014	7/28/2015	1000
O2SI	110392-01	2000	218075-33145	9/10/2014	11/22/2016	1000
O2SI	110393-01	2000	193473-33147	9/10/2014	7/28/2015	1000
O2SI	110394-01	2000	193476-33149	9/10/2014	7/28/2015	1000
O2SI	116070-02	2000	193478-33151	9/10/2014	7/28/2015	1000
O2SI	110395-01	2000	193480-33153	9/10/2014	7/28/2015	1000
O2SI	110396-01	2000	193479-33155	9/10/2014	7/28/2015	1000
O2SI	110397-01	2000	234699-33987	9/10/2014	11/21/2014	1000
O2SI	010337-01	1000	217950-33159	9/10/2014	11/14/2015	1000
EM Science	MeCl2		52104			1000
					Final Vol	10000

CSC 9/20/14

PREP DATE:	09-20-14					
8270 Second Source (SS) 50ug/mL						CSC
						50
		Conc.		Date	CODE:	
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	8270 SS	200		09/10/14	11-21-14	25
EM Science	Methylene Chloride		54128			75
					Final Vol.	100
Internal Standard						2

CSC 9/20/14

PREP DATE:	09-20-14													CSC
8270 STANDARD CURVE														
Exp:	09-27-14						5	10	20	40	50	60	80	100
		Conc.		Date										
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date		µL	µL	µL	µL	µL	µL	µL	µL
	8270 Stock	200		08/13/14	11-28-14		5	5	10	20	25	30	40	50
	Surrogate Stock	VAR	224251-33495	09/10/14	09-10-15		5	5	10	20	25	30	40	50
EM Science	Methylene Chloride		54128				190	90	80	60	50	40	20	0
						Final Vol.	200	100	100	100	100	100	100	100
Internal Standard							4	2	2	2	2	2	2	2

_SEP004S

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	140908A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	SIM Spike 213931-32839		Surrogate ID 1	8270 SIM Surrogate 222525-33362	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	09/08/14 13:45	
Spiked ID 8			Ext. End Time:	09/09/14 12:40	
			GC Requires Extract By:	**09/19/14 0:00**	

pH1	2	09/08/14 1:45:00 PM	Water Bath Temp Criteria	78 °C
pH2	14	09/08/14 2:30:00 PM		
pH3				

Spiked By: DL **Date** 09/08/14 **Witnessed By:** RMM **Date** 09/08/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	140908A Blk				0.0250	1	1000	1	2/1	09/08/14 13:35	
						equip	E-WB7				
2	140908A LCS-1		0.0250	1	0.0250	1	1000	1	2/1	09/08/14 13:35	
						equip	E-WB7				
3	AZ02108	AZ02108W10			0.0250	1	1070	1	2/1	09/08/14 13:35	74218 RUSH 2 WEEKS
						equip	E-WB7				
4	AZ02109	AZ02109W09			0.0250	1	1070	1	2/1	09/08/14 13:45	74218 RUSH 2 WEEKS
						equip	E-WB7				
5	AZ02116	AZ02116W11			0.0250	1	1000	1	2/1	09/08/14 13:45	74218 RUSH 2 WEEKS
						equip	E-WB7				

KY 9/9/14

Solvent and Lot#	
MC	54128
Na2SO4	WE05D
10N NaOH	6-31-14
1+1 Acid	9-5-14
A. Na2SO4	8-28-14
ph strips	HC413032
Filter Paper	400038

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	9/15/14
Time	2:10
Refrigerator	

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	IC

Modified	09/09/14 3:07:33 PM

Reviewed By: KY **Date** 9/9/14

_SON009SG

Organic Extraction Worksheet

Method	SIM Sonicat Ext. Methyl c 3550 (MIS+GR)	Extraction Set	140910A	Extraction Method	SON009SGRMIS	Units	mL

Spiked ID 1	SIM Spike 213931-32839		Surrogate ID 1	8270 SIM Surrogate 222525-33362	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	09/10/14 14:25	
Spiked ID 8			Ext. End Time:	09/12/14 17:00	
			GC Requires Extract By:	**09/19/14 0:00**	

pH1			Water Bath Temp Criteria	78,80 °C
pH2				
pH3				

Spiked By: KY **Date** 09/10/14 **Witnessed By:** CFM **Date** 09/10/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	140910A Blk				0.0250	1 equip	30.19g E-S5 E-WB6	1	NA	09/10/14 14:25	
2	140910A LCS-1		0.0250	1	0.0250	1 equip	30.05g E-S4 E-WB6	1	NA	09/10/14 14:25	
3	AZ02099	AZ02099S11			0.0250	1 equip	34.23g E-S3.1 E-WB6	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
4	AZ02100 MS-1	AZ02100S11	0.0250	1	0.0250	1 equip	33.82g E-S1.2 E-WB6	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
5	AZ02100 MSD-1	AZ02100S11	0.0250	1	0.0250	1 equip	33.85g E-S1.1 E-WB6	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
6	AZ02100	AZ02100S11			0.0250	1 equip	33.89g E-S2 E-WB6	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
7	AZ02101	AZ02101S11			0.0250	1 equip	33.96g E-S6 E-WB6	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
8	AZ02102	AZ02102S11			0.0250	1 equip	33.73g E-S7 E-WB6	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
9	AZ02103	AZ02103S11			0.0250	1 equip	35.64g E-S5 E-WB7	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
10	AZ02104	AZ02104S11			0.0250	1 equip	34.98g E-S4 E-WB7	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
11	AZ02105	AZ02105S11			0.0250	1 equip	39.46g E-S3.1 E-WB7	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
12	AZ02106	AZ02106S11			0.0250	1 equip	42.78g E-S2 E-WB7	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
13	AZ02107	AZ02107S11			0.0250	1 equip	39.19g E-S1.2 E-WB7	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
14	AZ02110	AZ02110S11			0.0250	1 equip	34.96g E-S1.1 E-WB7	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
15	AZ02111	AZ02111S11			0.0250	1 equip	35.76g E-S6 E-WB7	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
16	AZ02112	AZ02112S11			0.0250	1 equip	39.08g E-S7 E-WB7	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS

Solvent and Lot#	
MC	54128
Na2SO4	WE05D
SAND	WF27C
Filter Paper	FC010442

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	JF
Date	9/15/14
Time	2100
Refrigerator	inwm

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	IC
Concentration	IC,KY

Modified	09/12/14 5:18:00 PM

Reviewed By: Ky **Date** 9/12/14

09/12/14 5:22:53 PM Ext_ID 1318 45059

_SON009SG

Organic Extraction Worksheet

Method	SIM Sonicat Ext. Methyl c 3550 (MIS+GR)	Extraction Set	140910A	Extraction Method	SON009SGRMIS	Units	mL

Spiked ID 1	SIM Spike 213931-32839		Surrogate ID 1	8270 SIM Surrogate 222525-33362	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	09/10/14 14:25	
Spiked ID 8			Ext. End Time:	09/12/14 17:00	
			GC Requires Extract By:	09/19/14 0:00	

pH1			Water Bath Temp Criteria	78,80 °C
pH2				
pH3				

Spiked By: KY **Date** 09/10/14 **Witnessed By:** CFM **Date** 09/10/14

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ02113	AZ02113S11			0.0250	1	34.75g	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
						equip	E-S5 E-WB6				
18	AZ02114	AZ02114S11			0.0250	1	35.89g	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
						equip	E-S4 E-WB6				
19	AZ02115	AZ02115S11			0.0250	1	40.38g	1	NA	09/10/14 14:25	74218 RUSH 2 WEEKS
						equip	E-S3.1 E-WB6				

KY 9/12/14

Solvent and Lot#	
MC	54128
Na2SO4	WE05D
SAND	WF27C
Filter Paper	FC010442

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	KY
Sample Preparation	KY
Extraction	IC
Concentration	IC,KY

Modified	09/12/14 5:18:00 PM

Reviewed By: KY **Date** 9/12/14

Injection Log

Directory: M:\LINUS\DATA\L140821\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0821L001.D	1	SVTUNE 02-04-14		21 Aug 14 15:59
2	2	0821L002.D	1	0.1ug/ml PAH 08-21-14		21 Aug 14 16:17
3	3	0821L003.D	1	0.2ug/ml PAH		21 Aug 14 16:43
4	4	0821L004.D	1	0.5ug/ml PAH		21 Aug 14 17:09
5	5	0821L005.D	1	1.0ug/ml PAH		21 Aug 14 17:36
6	6	0821L006.D	1	5.0ug/ml PAH		21 Aug 14 18:02
7	7	0821L007.D	1	10ug/ml PAH		21 Aug 14 18:27
8	8	0821L008.D	1	50ug/ml PAH		21 Aug 14 18:53
9	9	0821L009.D	1	100ug/ml PAH		21 Aug 14 19:19
10	10	0821L010.D	1	5.0ug/ml PAH SS 8-21-14		21 Aug 14 19:46
11	1	0915L001.D	1	SVTUNE 02-04-14		15 Sep 14 21:21
12	2	0915L002.D	1	5.0ug/ml PAH 08-21-14		15 Sep 14 21:39
13	3	0915L003.D	1	140908A BLK 1/1000		15 Sep 14 22:09
14	4	0915L004.D	1	140908A LCS-1 1/1000		15 Sep 14 22:35
15	5	0915L005.D	0.93458	AZ02108W10 1/1070		15 Sep 14 23:02
16	6	0915L006.D	0.93458	AZ02109W09 1/1070		15 Sep 14 23:28
17	7	0915L007.D	1	AZ02116W11 1/1000		15 Sep 14 23:54
18	8	0915L008.D	33.1236	140910A BLK 1/30.19G		16 Sep 14 00:20
19	9	0915L009.D	33.2779	140910A LCS-1 1/30.05G		16 Sep 14 00:46
20	10	0915L010.D	29.2141	AZ02099S11 1/34.23G		16 Sep 14 1:12
21	11	0915L011.D	29.5683	AZ02100S11 MS-1 1/33.82G		16 Sep 14 1:39
22	12	0915L012.D	29.5421	AZ02100S11 MSD-1 1/33.85G		16 Sep 14 2:05
23	13	0915L013.D	29.5072	AZ02100S11 1/33.89G		16 Sep 14 2:31
24	14	0915L014.D	29.4464	AZ02101S11 1/33.96G		16 Sep 14 2:57
25	15	0915L015.D	29.6472	AZ02102S11 1/33.73G		16 Sep 14 3:23
26	16	0915L016.D	28.0584	AZ02103S11 1/35.64G		16 Sep 14 3:49
27	17	0915L017.D	28.5878	AZ02104S11 1/34.98G		16 Sep 14 4:14
28	18	0915L018.D	25.3421	AZ02105S11 1/39.46G		16 Sep 14 4:40
29	19	0915L019.D	23.3754	AZ02106S11 1/42.78G		16 Sep 14 5:06
30	20	0915L020.D	25.5167	AZ02107S11 1/39.19G		16 Sep 14 5:32
31	21	0915L021.D	28.6041	AZ02110S11 1/34.96G		16 Sep 14 5:58
32	22	0915L022.D	27.9642	AZ02111S11 1/35.76G		16 Sep 14 6:23
33	23	0915L023.D	25.5885	AZ02112S11 1/39.08G		16 Sep 14 6:49
34	24	0915L024.D	28.777	AZ02113S11 1/34.75G		16 Sep 14 7:15
35	25	0915L025.D	27.8629	AZ02114S11 1/35.89G		16 Sep 14 7:41
36	26	0915L026.D	24.7647	AZ02115S11 1/40.38G		16 Sep 14 8:07

EPA METHOD 8260B
Volatile Organic Compounds

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank

EPA 8260B SOIL MEOH

Blank Name/QCG: **140911S-02100 - 189818**
Batch ID: #86BHC-140911AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,1,1-TRICHLOROETHANE	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/11/14	09/11/14
BLANK	1,1,2,2-TETRACHLOROETHANE	0.7500 U	2.500	0.7500	0.6750	mg/kg	09/11/14	09/11/14
BLANK	1,1,2-TRICHLOROETHANE	1.2500 U	2.500	1.2500	0.5000	mg/kg	09/11/14	09/11/14
BLANK	1,1-DICHLOROETHANE	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/11/14	09/11/14
BLANK	1,1-DICHLOROETHENE	1.2500 U	2.500	1.2500	0.7500	mg/kg	09/11/14	09/11/14
BLANK	1,2,3-TRICHLOROPROPANE	2.5000 U	5.000	2.5000	0.9750	mg/kg	09/11/14	09/11/14
BLANK	1,2-DIBROMOETHANE	0.7500 U	2.500	0.7500	0.5000	mg/kg	09/11/14	09/11/14
BLANK	1,2-DICHLOROETHANE	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/11/14	09/11/14
BLANK	1,2-DICHLOROPROPANE	0.7500 U	2.500	0.7500	0.4250	mg/kg	09/11/14	09/11/14
BLANK	2-BUTANONE	5.0000 U	25.000	5.0000	1.5000	mg/kg	09/11/14	09/11/14
BLANK	4-METHYL-2-PENTANONE	12.5000 U	25.000	12.5000	4.7500	mg/kg	09/11/14	09/11/14
BLANK	ACETONE	12.5000 U	25.000	12.5000	7.0000	mg/kg	09/11/14	09/11/14
BLANK	BENZENE	0.7500 U	2.500	0.7500	0.4000	mg/kg	09/11/14	09/11/14
BLANK	BROMODICHLOROMETHANE	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/11/14	09/11/14
BLANK	BROMOFORM	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/11/14	09/11/14
BLANK	BROMOMETHANE	1.2500 U	5.000	1.2500	0.6000	mg/kg	09/11/14	09/11/14
BLANK	CARBON TETRACHLORIDE	0.7500 U	2.500	0.7500	0.2500	mg/kg	09/11/14	09/11/14
BLANK	CHLOROBENZENE	1.2500 U	2.500	1.2500	0.5250	mg/kg	09/11/14	09/11/14
BLANK	CHLOROETHANE	1.2500 U	2.500	1.2500	0.5250	mg/kg	09/11/14	09/11/14
BLANK	CHLOROFORM	0.6250 U	2.500	0.6250	0.4000	mg/kg	09/11/14	09/11/14
BLANK	CHLOROMETHANE	1.2500 U	2.500	1.2500	0.7750	mg/kg	09/11/14	09/11/14
BLANK	CIS-1,2-DICHLOROETHENE	0.7500 U	2.500	0.7500	0.4000	mg/kg	09/11/14	09/11/14
BLANK	CIS-1,3-DICHLOROPROPENE	0.7500 U	2.500	0.7500	0.3750	mg/kg	09/11/14	09/11/14
BLANK	DIBROMOCHLOROMETHANE	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/11/14	09/11/14
BLANK	ETHYLBENZENE	1.2500 U	2.500	1.2500	0.5750	mg/kg	09/11/14	09/11/14
BLANK	METHYLENE CHLORIDE	2.5000 U	12.500	2.5000	0.8750	mg/kg	09/11/14	09/11/14
BLANK	NAPHTHALENE	1.2500 U	2.500	1.2500	0.9000	mg/kg	09/11/14	09/11/14
BLANK	STYRENE	1.2500 U	2.500	1.2500	0.6250	mg/kg	09/11/14	09/11/14
BLANK	TETRACHLOROETHENE	0.7500 U	2.500	0.7500	0.3750	mg/kg	09/11/14	09/11/14
BLANK	TOLUENE	0.7500 U	2.500	0.7500	0.4250	mg/kg	09/11/14	09/11/14
BLANK	TRANS-1,2-DICHLOROETHENE	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/11/14	09/11/14
BLANK	TRANS-1,3-DICHLOROPROPEN	0.7500 U	2.500	0.7500	0.4500	mg/kg	09/11/14	09/11/14
BLANK	TRICHLOROETHENE	0.7500 U	2.500	0.7500	0.4000	mg/kg	09/11/14	09/11/14
BLANK	VINYL CHLORIDE	0.7500 U	2.500	0.7500	0.5750	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L12
Instrument: Loki
Sequence: 140909
Initials: SV

GC SC-Blank-REG MDLs
Printed: 09/17/14 7:35:37 AM

Method Blank
EPA 8260B SOIL MEOH

Blank Name/QCG: **140911S-02100 - 189818**
Batch ID: #86BHC-140911AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	XYLENES (TOTAL)	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/11/14	09/11/14
BLANK	SURROGATE: 1,2-DICHLOROET	102	54-154			%	09/11/14	09/11/14
BLANK	SURROGATE: 4-BROMOFLUOR	99.9	85-120			%	09/11/14	09/11/14
BLANK	SURROGATE: TOLUENE-D8 (S)	100	85-115			%	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L12
Instrument: Loki
Sequence: 140909
Initials: SV

GC SC-Blank-REG MDLs
Printed: 09/17/14 7:35:38 AM

Method Blank
EPA 8260B SOIL MEOH

Blank Name/QCG: **140911S-02114 - 189823**
Batch ID: #86BHC-140911BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,1,1-TRICHLOROETHANE	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/12/14	09/12/14
BLANK	1,1,2,2-TETRACHLOROETHANE	0.7500 U	2.500	0.7500	0.6750	mg/kg	09/12/14	09/12/14
BLANK	1,1,2-TRICHLOROETHANE	1.2500 U	2.500	1.2500	0.5000	mg/kg	09/12/14	09/12/14
BLANK	1,1-DICHLOROETHANE	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/12/14	09/12/14
BLANK	1,1-DICHLOROETHENE	1.2500 U	2.500	1.2500	0.7500	mg/kg	09/12/14	09/12/14
BLANK	1,2,3-TRICHLOROPROPANE	2.5000 U	5.000	2.5000	0.9750	mg/kg	09/12/14	09/12/14
BLANK	1,2-DIBROMOETHANE	0.7500 U	2.500	0.7500	0.5000	mg/kg	09/12/14	09/12/14
BLANK	1,2-DICHLOROETHANE	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/12/14	09/12/14
BLANK	1,2-DICHLOROPROPANE	0.7500 U	2.500	0.7500	0.4250	mg/kg	09/12/14	09/12/14
BLANK	2-BUTANONE	5.0000 U	25.000	5.0000	1.5000	mg/kg	09/12/14	09/12/14
BLANK	4-METHYL-2-PENTANONE	12.5000 U	25.000	12.5000	4.7500	mg/kg	09/12/14	09/12/14
BLANK	ACETONE	12.5000 U	25.000	12.5000	7.0000	mg/kg	09/12/14	09/12/14
BLANK	BENZENE	0.7500 U	2.500	0.7500	0.4000	mg/kg	09/12/14	09/12/14
BLANK	BROMODICHLOROMETHANE	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/12/14	09/12/14
BLANK	BROMOFORM	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/12/14	09/12/14
BLANK	BROMOMETHANE	1.2500 U	5.000	1.2500	0.6000	mg/kg	09/12/14	09/12/14
BLANK	CARBON TETRACHLORIDE	0.7500 U	2.500	0.7500	0.2500	mg/kg	09/12/14	09/12/14
BLANK	CHLOROBENZENE	1.2500 U	2.500	1.2500	0.5250	mg/kg	09/12/14	09/12/14
BLANK	CHLOROETHANE	1.2500 U	2.500	1.2500	0.5250	mg/kg	09/12/14	09/12/14
BLANK	CHLOROFORM	0.6250 U	2.500	0.6250	0.4000	mg/kg	09/12/14	09/12/14
BLANK	CHLOROMETHANE	1.2500 U	2.500	1.2500	0.7750	mg/kg	09/12/14	09/12/14
BLANK	CIS-1,2-DICHLOROETHENE	0.7500 U	2.500	0.7500	0.4000	mg/kg	09/12/14	09/12/14
BLANK	CIS-1,3-DICHLOROPROPENE	0.7500 U	2.500	0.7500	0.3750	mg/kg	09/12/14	09/12/14
BLANK	DIBROMOCHLOROMETHANE	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/12/14	09/12/14
BLANK	ETHYLBENZENE	1.2500 U	2.500	1.2500	0.5750	mg/kg	09/12/14	09/12/14
BLANK	METHYLENE CHLORIDE	2.5000 U	12.500	2.5000	0.8750	mg/kg	09/12/14	09/12/14
BLANK	NAPHTHALENE	1.2500 U	2.500	1.2500	0.9000	mg/kg	09/12/14	09/12/14
BLANK	STYRENE	1.2500 U	2.500	1.2500	0.6250	mg/kg	09/12/14	09/12/14
BLANK	TETRACHLOROETHENE	0.7500 U	2.500	0.7500	0.3750	mg/kg	09/12/14	09/12/14
BLANK	TOLUENE	0.7500 U	2.500	0.7500	0.4250	mg/kg	09/12/14	09/12/14
BLANK	TRANS-1,2-DICHLOROETHENE	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/12/14	09/12/14
BLANK	TRANS-1,3-DICHLOROPROPEN	0.7500 U	2.500	0.7500	0.4500	mg/kg	09/12/14	09/12/14
BLANK	TRICHLOROETHENE	0.7500 U	2.500	0.7500	0.4000	mg/kg	09/12/14	09/12/14
BLANK	VINYL CHLORIDE	0.7500 U	2.500	0.7500	0.5750	mg/kg	09/12/14	09/12/14

Quant Method: LALLW.M
Run #: 0911L41
Instrument: Loki
Sequence: 140909
Initials: SV

GC SC-Blank-REG MDLs
Printed: 09/17/14 7:35:38 AM

Method Blank
EPA 8260B SOIL MEOH

Blank Name/QCG: **140911S-02114 - 189823**
Batch ID: #86BHC-140911BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	XYLENES (TOTAL)	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/12/14	09/12/14
BLANK	SURROGATE: 1,2-DICHLOROET	104	54-154			%	09/12/14	09/12/14
BLANK	SURROGATE: 4-BROMOFLUOR	97.6	85-120			%	09/12/14	09/12/14
BLANK	SURROGATE: TOLUENE-D8 (S)	98.6	85-115			%	09/12/14	09/12/14

Quant Method: LALLW.M
Run #: 0911L41
Instrument: Loki
Sequence: 140909
Initials: SV

GC SC-Blank-REG MDLs
Printed: 09/17/14 7:35:38 AM

Method Blank
EPA 8260B WATER

Blank Name/QCG: **140910W-02108 - 189834**
Batch ID: #86BHC-140910AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
BLANK	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	09/10/14	09/10/14
BLANK	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	09/10/14	09/10/14
BLANK	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
BLANK	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.30	ug/L	09/10/14	09/10/14
BLANK	1,2,3-TRICHLOROPROPANE	1.00 U	2.0	1.00	0.39	ug/L	09/10/14	09/10/14
BLANK	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	09/10/14	09/10/14
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
BLANK	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.17	ug/L	09/10/14	09/10/14
BLANK	2-BUTANONE	2.00 U	10.0	2.00	0.60	ug/L	09/10/14	09/10/14
BLANK	4-METHYL-2-PENTANONE	5.00 U	10.0	5.00	1.90	ug/L	09/10/14	09/10/14
BLANK	ACETONE	2.00 U	10.0	2.00	0.95	ug/L	09/10/14	09/10/14
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
BLANK	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
BLANK	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
BLANK	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	09/10/14	09/10/14
BLANK	CARBON TETRACHLORIDE	0.30 U	1.0	0.30	0.10	ug/L	09/10/14	09/10/14
BLANK	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	09/10/14	09/10/14
BLANK	CHLOROETHANE	0.50 U	1.0	0.50	0.21	ug/L	09/10/14	09/10/14
BLANK	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	09/10/14	09/10/14
BLANK	CHLOROMETHANE	0.50 U	1.0	0.50	0.42	ug/L	09/10/14	09/10/14
BLANK	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
BLANK	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	09/10/14	09/10/14
BLANK	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	09/10/14	09/10/14
BLANK	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	09/10/14	09/10/14
BLANK	NAPHTHALENE	0.50 U	1.0	0.50	0.36	ug/L	09/10/14	09/10/14
BLANK	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	09/10/14	09/10/14
BLANK	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.24	ug/L	09/10/14	09/10/14
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	09/10/14	09/10/14
BLANK	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
BLANK	TRANS-1,3-DICHLOROPROPEN	0.30 U	1.0	0.30	0.18	ug/L	09/10/14	09/10/14
BLANK	TRICHLOROETHENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
BLANK	VINYL CHLORIDE	0.30 U	1.0	0.30	0.23	ug/L	09/10/14	09/10/14

Quant Method: LALLW.M
Run #: 0910L11
Instrument: Loki
Sequence: 140909
Initials: SV

GC SC-Blank-REG MDLs
Printed: 09/17/14 7:35:38 AM

Method Blank
EPA 8260B WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **140910W-02108 - 189834**
Batch ID: #86BHC-140910AL

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	XYLENES (TOTAL)	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
BLANK	SURROGATE: 1,2-DICHLOROET	101	70-120			%	09/10/14	09/10/14
BLANK	SURROGATE: 4-BROMOFLUOR	99.2	75-120			%	09/10/14	09/10/14
BLANK	SURROGATE: DIBROMOFLUOR	101	85-115			%	09/10/14	09/10/14
BLANK	SURROGATE: TOLUENE-D8 (S)	100	85-120			%	09/10/14	09/10/14

Quant Method: LALLW.M
Run #: 0910L11
Instrument: Loki
Sequence: 140909
Initials: SV

GC SC-Blank-REG MDLs
Printed: 09/17/14 7:35:38 AM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/11/14

Matrix: SOIL Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140911AL-LCS	Lab Control Spike	54-154	95.7		85-120	111	
140911AL-BLK	Blank	54-154	102		85-120	99.9	
AZ02099	EN001	54-154	105		85-120	106	
AZ02100	EN002	54-154	107		85-120	105	
AZ02101	EN003	54-154	104		85-120	104	
AZ02102	EN004	54-154	104		85-120	107	
AZ02103	EN005	54-154	104		85-120	103	
AZ02104	EN006	54-154	104		85-120	104	
AZ02105	EN007	54-154	107		85-120	104	
AZ02106	EN008	54-154	107		85-120	102	
AZ02107	EN009	54-154	106		85-120	103	
AZ02110	EN012	54-154	107		85-120	101	
AZ02111	EN013	54-154	101		85-120	105	
AZ02112	EN014	54-154	105		85-120	102	
AZ02113	EN015	54-154	110		85-120	106	
AZ02100-MS	Matrix Spike	54-154	95.7		85-120	117	
AZ02100-MSD	Matrix SpikeD	54-154	98.9		85-120	118	

Comments: Batch: #86BHC-140911AL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/11/14

Matrix: SOIL Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: TOLUENE-D8 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
140911AL-LCS	Lab Control Spike	85-115	103				
140911AL-BLK	Blank	85-115	100				
AZ02099	EN001	85-115	98.8				
AZ02100	EN002	85-115	98.3				
AZ02101	EN003	85-115	98.4				
AZ02102	EN004	85-115	102				
AZ02103	EN005	85-115	97.2				
AZ02104	EN006	85-115	101				
AZ02105	EN007	85-115	101				
AZ02106	EN008	85-115	99.0				
AZ02107	EN009	85-115	98.1				
AZ02110	EN012	85-115	98.9				
AZ02111	EN013	85-115	101				
AZ02112	EN014	85-115	100				
AZ02113	EN015	85-115	101				
AZ02100-MS	Matrix Spike	85-115	103				
AZ02100-MSD	Matrix SpikeD	85-115	104				

Comments: Batch: #86BHC-140911AL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/12/14

Matrix: SOIL Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140911BL-LCS	Lab Control Spike	54-154	94.9		85-120	113	
140911BL-BLK	Blank	54-154	104		85-120	97.6	
AZ02114	EN016	54-154	102		85-120	101	
AZ02115	EN017	54-154	103		85-120	104	

Comments: Batch: #86BHC-140911BL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/12/14

Matrix: SOIL Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: TOLUENE-D8 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
140911BL-LCS	Lab Control Spike	85-115	104				
140911BL-BLK	Blank	85-115	98.6				
AZ02114	EN016	85-115	98.0				
AZ02115	EN017	85-115	102				

Comments: Batch: #86BHC-140911BL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/10/14

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140910AL-LCS	Lab Control Spike	70-120	92.9		75-120	113	
140910AL-BLK	Blank	70-120	101		75-120	99.2	
AZ02108	EN010	70-120	104		75-120	102	
AZ02109	EN011	70-120	104		75-120	99.8	
AZ02116	EN018	70-120	104		75-120	96.6	
AZ02235	Trip Blank	70-120	106		75-120	98.9	

Comments: Batch: #86BHC-140910AL

Printed: 09/17/14 7:35:42 AM

Form 2 & 8, Surrogate Recovery Summary

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/10/14

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140910AL-LCS	Lab Control Spike	85-115	95.6		85-120	104	
140910AL-BLK	Blank	85-115	101		85-120	100	
AZ02108	EN010	85-115	103		85-120	103	
AZ02109	EN011	85-115	102		85-120	99.2	
AZ02116	EN018	85-115	103		85-120	97.9	
AZ02235	Trip Blank	85-115	104		85-120	100	

Comments: Batch: #86BHC-140910AL

Laboratory Control Spike Recovery
EPA 8260B SOIL MEOH

APPL ID: **140911S-02100 LCS - 189818**
Batch ID: #86BHC-140911AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
1,1,1-TRICHLOROETHANE	0.500	0.482	96.4	70-135
1,1,2,2-TETRACHLOROETHANE	0.500	0.467	93.4	55-130
1,1,2-TRICHLOROETHANE	0.500	0.477	95.4	60-125
1,1-DICHLOROETHANE	0.500	0.473	94.6	75-125
1,1-DICHLOROETHENE	0.500	0.453	90.6	65-135
1,2,3-TRICHLOROPROPANE	0.500	0.476	95.2	65-130
1,2-DIBROMOETHANE	0.500	0.466	93.2	70-125
1,2-DICHLOROETHANE	0.500	0.487	97.4	70-135
1,2-DICHLOROPROPANE	0.500	0.468	93.6	70-120
2-BUTANONE	0.500	0.543	109	30-160
4-METHYL-2-PENTANONE	0.500	0.484	96.8	45-145
ACETONE	0.500	0.555	111	20-160
BENZENE	0.500	0.453	90.6	75-125
BROMODICHLOROMETHANE	0.500	0.476	95.2	70-130
BROMOFORM	0.500	0.499	99.8	55-135
BROMOMETHANE	0.500	0.549	110	30-160
CARBON TETRACHLORIDE	0.500	0.491	98.2	65-135
CHLOROBENZENE	0.500	0.477	95.4	75-125
CHLOROETHANE	0.500	0.424	84.8	40-155
CHLOROFORM	0.500	0.470	94.0	70-125
CHLOROMETHANE	0.500	0.477	95.4	50-130
CIS-1,2-DICHLOROETHENE	0.500	0.465	93.0	65-125
CIS-1,3-DICHLOROPROPENE	0.500	0.488	97.6	70-125
DIBROMOCHLOROMETHANE	0.500	0.485	97.0	65-130
ETHYLBENZENE	0.500	0.493	98.6	75-125
METHYLENE CHLORIDE	0.500	0.552	110	55-140
NAPHTHALENE	0.500	0.441	88.2	40-125
STYRENE	0.500	0.506	101	75-125
TETRACHLOROETHENE	0.500	0.463	92.6	65-140
TOLUENE	0.500	0.481	96.2	70-125
TRANS-1,2-DICHLOROETHENE	0.500	0.459	91.8	65-135

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	09/11/14
Analysis Date :	09/11/14
Instrument :	Loki
Run :	0911L08
Initials :	SV

Comments: _____

Printed: 09/17/14 7:35:48 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B SOIL MEOH

APPL ID: **140911S-02100 LCS - 189818**
Batch ID: #86BHC-140911AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
TRANS-1,3-DICHLOROPROPENE	0.500	0.502	100	65-125
TRICHLOROETHENE	0.500	0.478	95.6	75-125
VINYL CHLORIDE	0.500	0.441	88.2	60-125
XYLENES (TOTAL)	1.50	1.49	99.3	75-125
SURROGATE: 1,2-DICHLOROETHANE-	0.0248	0.0237	95.7	54-154
SURROGATE: 4-BROMOFLUOROBENZ	0.0238	0.0264	111	85-120
SURROGATE: TOLUENE-D8 (S)	0.0256	0.0264	103	85-115

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	09/11/14
Analysis Date :	09/11/14
Instrument :	Loki
Run :	0911L08
Initials :	SV

Printed: 09/17/14 7:35:48 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B SOIL MEOH

APPL ID: **140912S-02114 LCS - 189823**
Batch ID: #86BHC-140911BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
1,1,1-TRICHLOROETHANE	0.500	0.491	98.2	70-135
1,1,2,2-TETRACHLOROETHANE	0.500	0.360	72.0	55-130
1,1,2-TRICHLOROETHANE	0.500	0.468	93.6	60-125
1,1-DICHLOROETHANE	0.500	0.475	95.0	75-125
1,1-DICHLOROETHENE	0.500	0.461	92.2	65-135
1,2,3-TRICHLOROPROPANE	0.500	0.488	97.6	65-130
1,2-DIBROMOETHANE	0.500	0.480	96.0	70-125
1,2-DICHLOROETHANE	0.500	0.477	95.4	70-135
1,2-DICHLOROPROPANE	0.500	0.482	96.4	70-120
2-BUTANONE	0.500	0.454	90.8	30-160
4-METHYL-2-PENTANONE	0.500	0.456	91.2	45-145
ACETONE	0.500	0.581	116	20-160
BENZENE	0.500	0.458	91.6	75-125
BROMODICHLOROMETHANE	0.500	0.479	95.8	70-130
BROMOFORM	0.500	0.484	96.8	55-135
BROMOMETHANE	0.500	0.593	119	30-160
CARBON TETRACHLORIDE	0.500	0.507	101	65-135
CHLOROBENZENE	0.500	0.484	96.8	75-125
CHLOROETHANE	0.500	0.427	85.4	40-155
CHLOROFORM	0.500	0.476	95.2	70-125
CHLOROMETHANE	0.500	0.508	102	50-130
CIS-1,2-DICHLOROETHENE	0.500	0.450	90.0	65-125
CIS-1,3-DICHLOROPROPENE	0.500	0.458	91.6	70-125
DIBROMOCHLOROMETHANE	0.500	0.498	99.6	65-130
ETHYLBENZENE	0.500	0.496	99.2	75-125
METHYLENE CHLORIDE	0.500	0.517	103	55-140
NAPHTHALENE	0.500	0.401	80.2	40-125
STYRENE	0.500	0.520	104	75-125
TETRACHLOROETHENE	0.500	0.480	96.0	65-140
TOLUENE	0.500	0.495	99.0	70-125
TRANS-1,2-DICHLOROETHENE	0.500	0.476	95.2	65-135

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	09/12/14
Analysis Date :	09/12/14
Instrument :	Loki
Run :	0911L35
Initials :	SV

Comments: _____

Printed: 09/17/14 7:35:48 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B SOIL MEOH

APPL ID: **140912S-02114 LCS - 189823**
Batch ID: #86BHC-140911BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
TRANS-1,3-DICHLOROPROPENE	0.500	0.457	91.4	65-125
TRICHLOROETHENE	0.500	0.584	117	75-125
VINYL CHLORIDE	0.500	0.476	95.2	60-125
XYLENES (TOTAL)	1.50	1.52	101	75-125
SURROGATE: 1,2-DICHLOROETHANE-	0.0248	0.0235	94.9	54-154
SURROGATE: 4-BROMOFLUOROBENZ	0.0238	0.0268	113	85-120
SURROGATE: TOLUENE-D8 (S)	0.0256	0.0266	104	85-115

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	09/12/14
Analysis Date :	09/12/14
Instrument :	Loki
Run :	0911L35
Initials :	SV

Printed: 09/17/14 7:35:48 AM
APPL Standard LCS

Laboratory Control Spike Recovery

EPA 8260B WATER

APPL ID: **140910W-02108 LCS - 189834**
Batch ID: #86BHC-140910AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,1,1-TRICHLOROETHANE	10.00	9.61	96.1	65-130
1,1,2,2-TETRACHLOROETHANE	10.00	9.76	97.6	65-130
1,1,2-TRICHLOROETHANE	10.00	9.29	92.9	75-125
1,1-DICHLOROETHANE	10.00	9.47	94.7	70-135
1,1-DICHLOROETHENE	10.00	9.35	93.5	70-130
1,2,3-TRICHLOROPROPANE	10.00	9.49	94.9	75-125
1,2-DIBROMOETHANE	10.00	9.24	92.4	70-130
1,2-DICHLOROETHANE	10.00	9.78	97.8	70-130
1,2-DICHLOROPROPANE	10.00	9.66	96.6	75-125
2-BUTANONE	10.00	9.86	98.6	30-150
4-METHYL-2-PENTANONE	10.00	9.05	90.5	60-135
ACETONE	10.00	9.04	90.4	40-140
BENZENE	10.00	9.03	90.3	80-120
BROMODICHLOROMETHANE	10.00	9.37	93.7	75-120
BROMOFORM	10.00	9.68	96.8	70-130
BROMOMETHANE	10.00	10.9	109	30-145
CARBON TETRACHLORIDE	10.00	9.82	98.2	65-140
CHLOROBENZENE	10.00	9.60	96.0	80-120
CHLOROETHANE	10.00	8.52	85.2	60-135
CHLOROFORM	10.00	9.41	94.1	65-135
CHLOROMETHANE	10.00	10.1	101	40-125
CIS-1,2-DICHLOROETHENE	10.00	9.47	94.7	70-125
CIS-1,3-DICHLOROPROPENE	10.00	9.85	98.5	70-130
DIBROMOCHLOROMETHANE	10.00	9.69	96.9	60-135
ETHYLBENZENE	10.00	10.0	100	75-125
METHYLENE CHLORIDE	10.00	9.88	98.8	55-140
NAPHTHALENE	10.00	8.81	88.1	55-140
STYRENE	10.00	10.2	102	65-135
TETRACHLOROETHENE	10.00	9.11	91.1	45-150
TOLUENE	10.00	9.68	96.8	75-120
TRANS-1,2-DICHLOROETHENE	10.00	9.38	93.8	60-140

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	09/10/14
Analysis Date :	09/10/14
Instrument :	Loki
Run :	0910L04
Initials :	SV

Comments: _____

Printed: 09/17/14 7:35:48 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B WATER

APPL ID: **140910W-02108 LCS - 189834**
Batch ID: #86BHC-140910AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
TRANS-1,3-DICHLOROPROPENE	10.00	10.0	100	55-140
TRICHLOROETHENE	10.00	9.56	95.6	70-125
VINYL CHLORIDE	10.00	9.37	93.7	50-145
XYLENES (TOTAL)	30.0	30.2	101	80-120
SURROGATE: 1,2-DICHLOROETHANE-	24.8	23.0	92.9	70-120
SURROGATE: 4-BROMOFLUOROBENZ	23.8	26.9	113	75-120
SURROGATE: DIBROMOFLUOROMETH	25.4	24.3	95.6	85-115
SURROGATE: TOLUENE-D8 (S)	25.6	26.6	104	85-120

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	09/10/14
Analysis Date :	09/10/14
Instrument :	Loki
Run :	0910L04
Initials :	SV

Printed: 09/17/14 7:35:48 AM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8260B SOIL MEOH

APPL ID: **140912S-02100 MS - 189818**
Batch ID: #86BHC-140911AL
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,1,1-TRICHLOROETHANE	0.500	ND	0.465	0.475	93.0	95.0	70-135	2.1	30
1,1,2,2-TETRACHLOROETHANE	0.500	ND	0.345	0.373	69.0	74.6	55-130	7.8	30
1,1,2-TRICHLOROETHANE	0.500	ND	0.484	0.489	96.8	97.8	60-125	1.0	30
1,1-DICHLOROETHANE	0.500	ND	0.473	0.485	94.6	97.0	75-125	2.5	30
1,1-DICHLOROETHENE	0.500	ND	0.455	0.446	91.0	89.2	65-135	2.0	30
1,2,3-TRICHLOROPROPANE	0.500	ND	0.438	0.421	87.6	84.2	65-130	4.0	30
1,2-DIBROMOETHANE	0.500	ND	0.448	0.460	89.6	92.0	70-125	2.6	30
1,2-DICHLOROETHANE	0.500	ND	0.479	0.485	95.8	97.0	70-135	1.2	30
1,2-DICHLOROPROPANE	0.500	ND	0.484	0.481	96.8	96.2	70-120	0.62	30
2-BUTANONE	0.500	ND	0.531	0.553	106	111	30-160	4.1	30
4-METHYL-2-PENTANONE	0.500	ND	0.457	0.492	91.4	98.4	45-145	7.4	30
ACETONE	0.500	ND	0.647	0.686	129	137	20-160	5.9	30
BENZENE	0.500	ND	0.457	0.454	91.4	90.8	75-125	0.66	30
BROMODICHLOROMETHANE	0.500	ND	0.464	0.468	92.8	93.6	70-130	0.86	30
BROMOFORM	0.500	ND	0.474	0.466	94.8	93.2	55-135	1.7	30
BROMOMETHANE	0.500	ND	0.534	0.511	107	102	30-160	4.4	30
CARBON TETRACHLORIDE	0.500	ND	0.480	0.484	96.0	96.8	65-135	0.83	30
CHLOROBENZENE	0.500	ND	0.473	0.469	94.6	93.8	75-125	0.85	30
CHLOROETHANE	0.500	ND	0.362	0.329	72.4	65.8	40-155	9.6	30
CHLOROFORM	0.500	ND	0.467	0.477	93.4	95.4	70-125	2.1	30
CHLOROMETHANE	0.500	ND	0.523	0.587	105	117	50-130	11.5	30
CIS-1,2-DICHLOROETHENE	0.500	ND	0.462	0.463	92.4	92.6	65-125	0.22	30
CIS-1,3-DICHLOROPROPENE	0.500	ND	0.442	0.457	88.4	91.4	70-125	3.3	30
DIBROMOCHLOROMETHANE	0.500	ND	0.477	0.468	95.4	93.6	65-130	1.9	30
ETHYLBENZENE	0.500	ND	0.476	0.476	95.2	95.2	75-125	0.0	30
METHYLENE CHLORIDE	0.500	ND	0.540	0.531	108	106	55-140	1.7	30
NAPHTHALENE	0.500	ND	0.394	0.392	78.8	78.4	40-125	0.51	30
STYRENE	0.500	ND	0.518	0.498	104	99.6	75-125	3.9	30
TETRACHLOROETHENE	0.500	ND	0.448	0.422	89.6	84.4	65-140	6.0	30
TOLUENE	0.500	ND	0.486	0.491	97.2	98.2	70-125	1.0	30

Primary	SPK	DUP
Quant Method :	LALLW.M	LALLW.M
Extraction Date :	09/12/14	09/12/14
Analysis Date :	09/12/14	09/12/14
Instrument :	Loki	Loki
Run :	0911L37	0911L38
Initials :	SV	

Comments: _____

Printed: 09/17/14 7:35:54 AM
APPL MSD SCII

Matrix Spike Recoveries

EPA 8260B SOIL MEOH

APPL ID: **140912S-02100 MS - 189818**
Batch ID: #86BHC-140911AL
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
TRANS-1,2-DICHLOROETHENE	0.500	ND	0.455	0.460	91.0	92.0	65-135	1.1	30
TRANS-1,3-DICHLOROPROPENE	0.500	ND	0.454	0.477	90.8	95.4	65-125	4.9	30
TRICHLOROETHENE	0.500	ND	0.528	0.547	106	109	75-125	3.5	30
VINYL CHLORIDE	0.500	ND	0.471	0.490	94.2	98.0	60-125	4.0	30
XYLENES (TOTAL)	1.50	ND	1.46	1.49	97.3	99.3	75-125	2.0	30
SURROGATE: 1,2-DICHLOROETHANE-D	0.0248	NA	0.0237	0.0245	95.7	98.9	54-154		
SURROGATE: 4-BROMOFLUOROBENZ	0.0238	NA	0.0278	0.0282	117	118	85-120		
SURROGATE: TOLUENE-D8 (S)	0.0256	NA	0.0265	0.0267	103	104	85-115		

Comments: _____

Primary	SPK	DUP
Quant Method :	LALLW.M	LALLW.M
Extraction Date :	09/12/14	09/12/14
Analysis Date :	09/12/14	09/12/14
Instrument :	Loki	Loki
Run :	0911L37	0911L38
Initials :	SV	

Printed: 09/17/14 7:35:54 AM
APPL MSD SCII

Form 5
Tune Summary

mp 9-26-14

Lab Name: APPL Inc.
Case No: 0909L01.D 74218
Matrix: Water
ID: 25ug/mL BFB Std 08-21-14

SDG No: ~~Loki~~ 74218
Date Analyzed: 9/9/2014
Instrument: Loki
Time Analyzed: 8:10

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1ug/L Vol Std 09-0	0909L04.D	9/9/2014 9:28
2		0.3ug/L Vol Std 09-0	0909L05.D	9/9/2014 9:55
3		0.5ug/L Vol Std 09-0	0909L06.D	9/9/2014 10:23
4		1.0ug/L Vol Std 09-0	0909L07.D	9/9/2014 10:51
5		5.0ug/L Vol Std 09-0	0909L08.D	9/9/2014 11:19
6		10ug/L Vol Std 09-09	0909L09.D	9/9/2014 11:46
7		20ug/L Vol Std 09-09	0909L10.D	9/9/2014 12:14
8		40ug/L Vol Std 09-09	0909L11.D	9/9/2014 12:42
9		100ug/L Vol Std 09-0	0909L12.D	9/9/2014 13:10
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m/e		
50	15 - 40% of mass 95	16.9
75	30 - 60% of mass 95	47.7
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.5
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	95.1
175	5 - 9% of mass 174	8.3
176	95 - 101% of mass 174	98.0
177	5 - 9% of mass 176	6.6

EPA 8260B-M

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/11/14

Matrix: SOIL Instrument: Loki

Blank ID: 140911AL-BLK Time Analyzed: 1533

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140911AL-LCS	Lab Control Spike	0911L08	09/11/14 1342
140911AL-BLK	Blank	0911L12	09/11/14 1533
AZ02099	EN001	0911L16	09/11/14 1726
AZ02100	EN002	0911L17	09/11/14 1754
AZ02101	EN003	0911L18	09/11/14 1822
AZ02102	EN004	0911L19	09/11/14 1850
AZ02103	EN005	0911L20	09/11/14 1918
AZ02104	EN006	0911L21	09/11/14 1946
AZ02105	EN007	0911L22	09/11/14 2013
AZ02106	EN008	0911L23	09/11/14 2041
AZ02107	EN009	0911L24	09/11/14 2109
AZ02110	EN012	0911L25	09/11/14 2137
AZ02111	EN013	0911L26	09/11/14 2205
AZ02112	EN014	0911L27	09/11/14 2233
AZ02113	EN015	0911L28	09/11/14 2301
140911AL-MS	Matrix Spike	0911L37	09/12/14 0311
140911AL-MSD	Matrix SpikeD	0911L38	09/12/14 0339

Comments: Batch: #86BHC-140911AL

EPA 8260B-M

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/12/14

Matrix: SOIL Instrument: Loki

Blank ID: 140911BL-BLK Time Analyzed: 0502

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140911BL-LCS	Lab Control Spike	0911L35	09/12/14 0216
140911BL-BLK	Blank	0911L41	09/12/14 0502
AZ02114	EN016	0911L42	09/12/14 0530
AZ02115	EN017	0911L43	09/12/14 0558

Comments: Batch: #86BHC-140911BL

Printed: 09/17/14 7:35:59 AM
Form 4, Blank Summary

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/10/14

Matrix: WATER Instrument: Loki

Blank ID: 140910AL-BLK Time Analyzed: 1345

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140910AL-LCS	Lab Control Spike	0910L04	09/10/14 1030
140910AL-BLK	Blank	0910L11	09/10/14 1345
AZ02108	EN010	0910L14	09/10/14 1508
AZ02109	EN011	0910L15	09/10/14 1536
AZ02116	EN018	0910L16	09/10/14 1604
AZ02235	Trip Blank	0910L17	09/10/14 1632

Comments: Batch: #86BHC-140910AL

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~0909L15.D~~ 74218
Matrix: Water 9-26-14
ID: 25ug/mL BFB Std 08-21-14

SDG No: ~~Loki~~ 74218 9-26-14
Date Analyzed: 9/9/2014
Instrument: Loki
Time Analyzed: 14:33

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		10ug/L Vol Std 09-09	0909L17.D	9/9/2014 15:29
2	Lab Control Spike	140909A LCS-1WL (SS)	0909L18.D	9/9/2014 15:57
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m/e		
50	15 - 40% of mass 95	16.9
75	30 - 60% of mass 95	47.3
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.6
173	0 - 2% of mass 174	0.4
174	50 - 100% of mass 95	98.8
175	5 - 9% of mass 174	7.3
176	95 - 101% of mass 174	98.3
177	5 - 9% of mass 176	6.6

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 74218
Matrix: Water
ID: 25ug/mL BFB Std 08-21-14

SDG No: 74218
Date Analyzed: 9/10/2014
Instrument: Loki
Time Analyzed: 9:11

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		10ug/L Vol Std 09-10	0910L03.D	9/10/2014 10:02
2	Lab Control Spike	140910A LCS-1WL	0910L04.D	9/10/2014 10:30
3	Blank	140910A BLK-1WL	0910L11.D	9/10/2014 13:45
4	EN011	AZ02109W01	0910L15.D	9/10/2014 15:36
5	EN018	AZ02116W01	0910L16.D	9/10/2014 16:04
6	Trip Blank	AZ02235W01	0910L17.D	9/10/2014 16:32
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19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	16.7
75	30 - 60% of mass 95	48.3
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.7
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	94.5
175	5 - 9% of mass 174	8.2
176	95 - 101% of mass 174	98.5
177	5 - 9% of mass 176	6.7

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 74218
Matrix: Water
ID: 25ug/mL BFB Std 08-21-14

SDG No: 74218
Date Analyzed: 9/11/2014
Instrument: Loki
Time Analyzed: 11:28

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		10ug/L Vol Std 09-11	0911L05.D	9/11/2014 12:18
2	Lab Control Spike	140911A LCS-1WL MeOH	0911L08.D	9/11/2014 13:42
3	Blank	140911A BLK-1WL MeOH	0911L12.D	9/11/2014 15:33
4	EN001	AZ02099S01 151.018g	0911L16.D	9/11/2014 17:26
5	EN002	AZ02100S01 154.72g	0911L17.D	9/11/2014 17:54
6	EN003	AZ02101S01 153.88	0911L18.D	9/11/2014 18:22
7	EN004	AZ02102S01 162.82	0911L19.D	9/11/2014 18:50
8	EN005	AZ02103S01 162.10	0911L20.D	9/11/2014 19:18
9	EN006	AZ02104S01 158.75	0911L21.D	9/11/2014 19:46
10	EN007	AZ02105S01 157.44	0911L22.D	9/11/2014 20:13
11	EN008	AZ02106S01 158.89	0911L23.D	9/11/2014 20:41
12	EN009	AZ02107S01 154.53	0911L24.D	9/11/2014 21:09
13	EN012	AZ02110S01 166.82g	0911L25.D	9/11/2014 21:37
14	EN013	AZ02111S01 172.86g	0911L26.D	9/11/2014 22:05
15	EN014	AZ02112S01 171.07g	0911L27.D	9/11/2014 22:33
16	EN015	AZ02113S01 163.03g	0911L28.D	9/11/2014 23:01
17				
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20				
21				
22				

m/e		
50	15 - 40% of mass 95	16.9
75	30 - 60% of mass 95	47.6
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.2
173	0 - 2% of mass 174	0.0
174	50 - 100% of mass 95	94.6
175	5 - 9% of mass 174	9.0
176	95 - 101% of mass 174	95.7
177	5 - 9% of mass 176	6.7

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 74218
Matrix: Water
ID: 25ug/mL BFB Std 08-21-14

SDG No: 74218
Date Analyzed: 9/12/2014
Instrument: Loki
Time Analyzed: 0:24

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		10ug/L Vol Std 09-11	0911L34.D	9/12/2014 1:48
2	Lab Control Spike	140911B LCS-1WL(MeOH	0911L35.D	9/12/2014 2:16
3		AZ02100S01 MS-1WL DF	0911L37.D	9/12/2014 3:11
4		AZ02100S01 MSD-1WL D	0911L38.D	9/12/2014 3:39
5	Blank	140911B BLK-1WL(MeOH	0911L41.D	9/12/2014 5:02
6	EN016	AZ02114S01 172.644g	0911L42.D	9/12/2014 5:30
7	EN017	AZ02115S01 DF50 163.	0911L43.D	9/12/2014 5:58
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m/e		
50	15 - 40% of mass 95	15.9
75	30 - 60% of mass 95	47.0
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.6
173	0 - 2% of mass 174	1.1
174	50 - 100% of mass 95	99.5
175	5 - 9% of mass 174	8.0
176	95 - 101% of mass 174	99.0
177	5 - 9% of mass 176	6.8

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 74218

Lab File ID (Standard): 0909L10.D Date Analyzed: 9 Sep 14 12:14

Instrument ID: Loki Time Analyzed: 9 Sep 14 12:14

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	495360	5.95	437632	9.18	272384	11.51
	UPPER LIMIT	990720	6.45	875264	9.68	544768	12.01
	LOWER LIMIT	247680	5.45	218816	8.68	136192	11.01
	SAMPLE NO.						
01	10ug/L Vol Std 09-09-14	493056	5.95	445312	9.18	282176	11.51
02	140909A LCS-1WL (SS	499456	5.95	458688	9.18	278208	11.51
03	10ug/L Vol Std 09-10-14	460224	5.95	422208	9.18	262336	11.51
04	140910A LCS-1WL	478784	5.95	436160	9.18	266752	11.51
05	140910A BLK-1WL	429696	5.95	404224	9.18	214528	11.51
06	AZ02109W01	415040	5.95	391296	9.18	211136	11.51
07	AZ02116W01	411328	5.95	388160	9.18	210432	11.51
08	AZ02235W01	406976	5.95	387392	9.18	206976	11.51
09	10ug/L Vol Std 09-11-14	470912	5.95	429248	9.18	271808	11.51
10	140911A LCS-1WL MeC	479872	5.95	441408	9.18	279360	11.51
11	140911A BLK-1WL MeC	430016	5.95	400768	9.18	214784	11.51
12	AZ02099S01 151.018g	397440	5.95	381056	9.18	219968	11.51
13	AZ02100S01 154.72g	391104	5.95	375168	9.18	217984	11.51
14	AZ02101S01 153.88	400320	5.95	379648	9.18	216512	11.51
15	AZ02102S01 162.82	395840	5.95	369024	9.18	211072	11.51
16	AZ02103S01 162.10	395776	5.95	376000	9.18	220224	11.51
17	AZ02104S01 158.75	393088	5.95	373248	9.18	214464	11.51
18	AZ02105S01 157.44	392256	5.95	369600	9.18	212736	11.51
19	AZ02106S01 158.89	393024	5.95	381760	9.18	211712	11.51
20	AZ02107S01 154.53	395072	5.95	385920	9.18	213888	11.51
21	AZ02110S01 166.82g	393600	5.95	383488	9.18	214400	11.51
22	AZ02111S01 172.86g	403968	5.95	378176	9.18	210816	11.51

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 74218

Lab File ID (Standard): 0909L10.D Date Analyzed: 9 Sep 14 12:14

Instrument ID: Loki Time Analyzed: 9 Sep 14 12:14

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	495360	5.9496	437632	9.1778	272384	11.506
	UPPER LIMIT	990720	6.4496	875264	9.6778	544768	12.006
	LOWER LIMIT	247680	5.4496	218816	8.6778	136192	11.006
	SAMPLE NO.						
23	AZ02112S01 171.07g	390016	5.95	373120	9.18	205760	11.51
24	AZ02113S01 163.03g	379648	5.95	369728	9.18	215232	11.51
25	10ug/L Vol Std 09-11-14	440704	5.95	399168	9.18	259904	11.51
26	140911B LCS-1WL(MeC	447808	5.95	401280	9.18	254080	11.51
27	AZ02100S01 MS-1WL D	424256	5.95	395200	9.18	267328	11.51
28	AZ02100S01 MSD-1WL	420544	5.95	399680	9.18	266112	11.51
29	140911B BLK-1WL(MeC	392320	5.95	377152	9.18	205696	11.51
30	AZ02114S01 172.644g	398336	5.95	388544	9.18	219904	11.51
31	AZ02115S01 DF50 163.	384512	5.95	366912	9.18	214656	11.51
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA METHOD 8260B
Volatile Organic Compounds
Sample Data

APPL, INC.

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN001

APPL ID: AZ02099

Sample Collection Date: 09/02/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 12.2 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	0.8500 U	2.800	0.8500	0.4000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.8500 U	2.800	0.8500	0.7700	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.4000 U	2.800	1.4000	0.5700	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHANE	0.8500 U	2.800	0.8500	0.5400	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHENE	1.4000 U	2.800	1.4000	0.8500	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	2.8000 U	5.700	2.8000	1.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DIBROMOETHANE	0.8500 U	2.800	0.8500	0.5700	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROETHANE	0.8500 U	2.800	0.8500	0.4000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROPROPANE	0.8500 U	2.800	0.8500	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	2-BUTANONE	5.7000 U	28.000	5.7000	1.7000	mg/kg	09/11/14	09/11/14
EPA 8260B	4-METHYL-2-PENTANONE	14.0000 U	28.000	14.0000	5.4000	mg/kg	09/11/14	09/11/14
EPA 8260B	ACETONE	14.0000 U	28.000	14.0000	8.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	BENZENE	0.8500 U	2.800	0.8500	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMODICHLOROMETHANE	0.8500 U	2.800	0.8500	0.4000	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOFORM	0.8500 U	2.800	0.8500	0.4000	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOMETHANE	1.4000 U	5.700	1.4000	0.6800	mg/kg	09/11/14	09/11/14
EPA 8260B	CARBON TETRACHLORIDE	0.8500 U	2.800	0.8500	0.2800	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROBENZENE	1.4000 U	2.800	1.4000	0.6000	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROETHANE	1.4000 U	2.800	1.4000	0.6000	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROFORM	0.7100 U	2.800	0.7100	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROMETHANE	1.4000 U	2.800	1.4000	0.8800	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.8500 U	2.800	0.8500	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.8500 U	2.800	0.8500	0.4300	mg/kg	09/11/14	09/11/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.8500 U	2.800	0.8500	0.5400	mg/kg	09/11/14	09/11/14
EPA 8260B	ETHYLBENZENE	1.4000 U	2.800	1.4000	0.6500	mg/kg	09/11/14	09/11/14
EPA 8260B	METHYLENE CHLORIDE	2.8000 U	14.000	2.8000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	NAPHTHALENE	1.4000 U	2.800	1.4000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	STYRENE	1.4000 U	2.800	1.4000	0.7100	mg/kg	09/11/14	09/11/14
EPA 8260B	TETRACHLOROETHENE	0.8500 U	2.800	0.8500	0.4300	mg/kg	09/11/14	09/11/14
EPA 8260B	TOLUENE	0.8500 U	2.800	0.8500	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.8500 U	2.800	0.8500	0.5400	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.8500 U	2.800	0.8500	0.5100	mg/kg	09/11/14	09/11/14
EPA 8260B	TRICHLOROETHENE	0.8500 U	2.800	0.8500	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	VINYL CHLORIDE	0.8500 U	2.800	0.8500	0.6500	mg/kg	09/11/14	09/11/14
EPA 8260B	XYLENES (TOTAL)	0.8500 U	2.800	0.8500	0.5400	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L16
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:53 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN001

APPL ID: AZ02099

Sample Collection Date: 09/02/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	105	54-154			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	106	85-120			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.8	85-115			%	09/11/14	09/11/14

Quant Method:	LALLW.M
Run #:	0911L16
Instrument:	Loki
Sequence:	140909
Dilution Factor:	50
Initials:	SV

Printed: 09/19/14 11:57:53 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L16.D Vial: 13
Acq On : 11 Sep 14 17:26 Operator: DG,SV,RS
Sample : AZ02099S01 151.018g Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 49.66

Quant Time: Sep 16 14:20 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	397440	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	381056	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	219968	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	253277	26.29902 ppb	0.00
Spiked Amount 25.423			Recovery = 103.447%		
38) 1,2-DCA-D4(S)	5.52	65	264484	26.08308 ppb	0.00
Spiked Amount 24.764			Recovery = 105.326%		
58) Toluene-D8(S)	7.71	98	782742	25.34017 ppb	0.00
Spiked Amount 25.636			Recovery = 98.845%		
66) 4-Bromofluorobenzene(S)	10.36	95	291926	25.30806 ppb	0.00
Spiked Amount 23.806			Recovery = 106.308%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

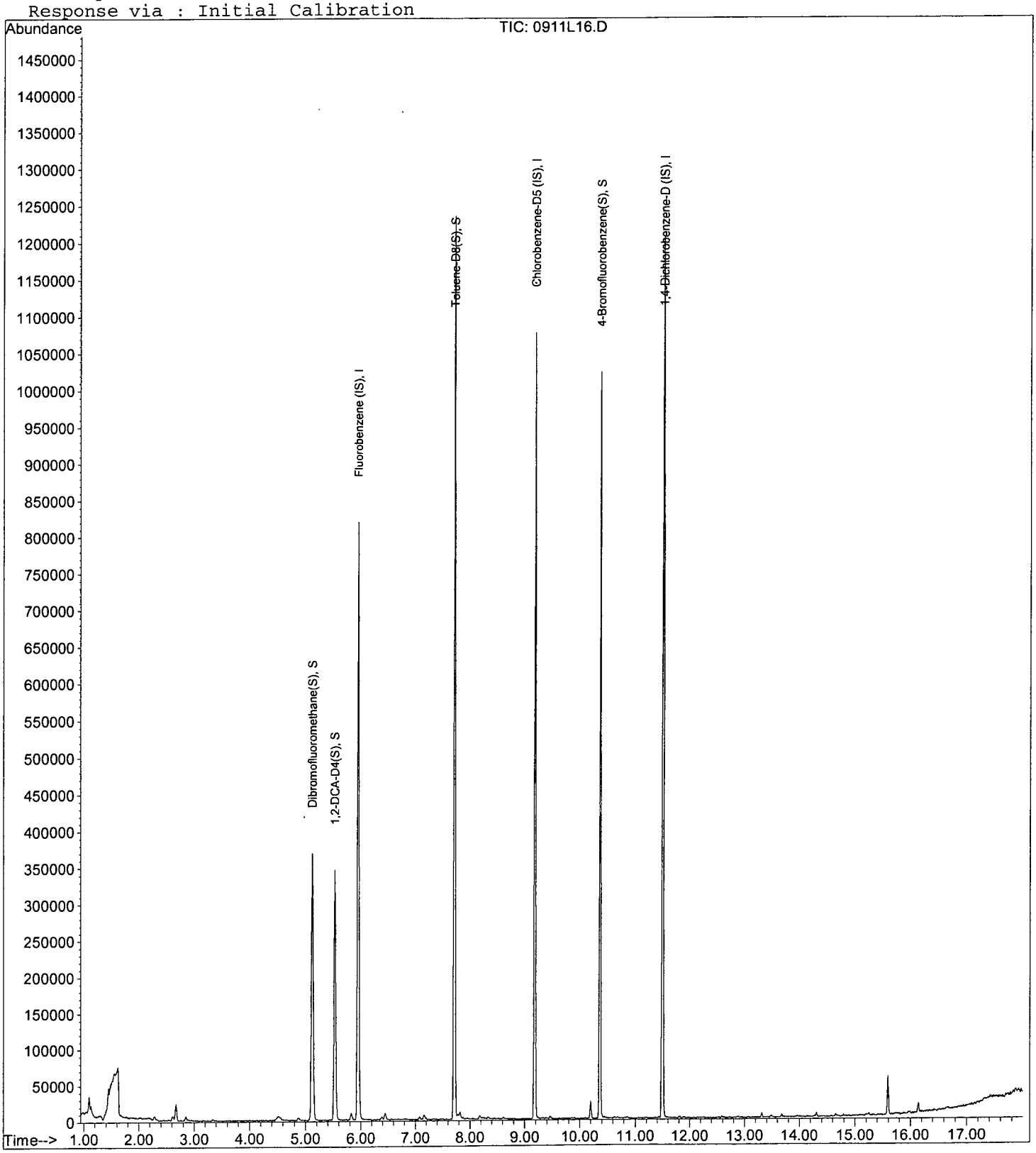
Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L16.D
Acq On : 11 Sep 14 17:26
Sample : AZ02099S01 151.018g
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 13
Operator: DG,SV,RS
Inst : Loki
Multiplr: 49.66

Quant Time: Sep 16 14:20 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN002

Sample Collection Date: 09/02/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02100

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 11.3 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	0.8500 U	2.800	0.8500	0.3900	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.8500 U	2.800	0.8500	0.7600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.4000 U	2.800	1.4000	0.5600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHANE	0.8500 U	2.800	0.8500	0.5400	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHENE	1.4000 U	2.800	1.4000	0.8500	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	2.8000 U	5.600	2.8000	1.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DIBROMOETHANE	0.8500 U	2.800	0.8500	0.5600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROETHANE	0.8500 U	2.800	0.8500	0.3900	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROPROPANE	0.8500 U	2.800	0.8500	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	2-BUTANONE	5.6000 U	28.000	5.6000	1.7000	mg/kg	09/11/14	09/11/14
EPA 8260B	4-METHYL-2-PENTANONE	14.0000 U	28.000	14.0000	5.4000	mg/kg	09/11/14	09/11/14
EPA 8260B	ACETONE	14.0000 U	28.000	14.0000	7.9000	mg/kg	09/11/14	09/11/14
EPA 8260B	BENZENE	0.8500 U	2.800	0.8500	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMODICHLOROMETHANE	0.8500 U	2.800	0.8500	0.3900	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOFORM	0.8500 U	2.800	0.8500	0.3900	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOMETHANE	1.4000 U	5.600	1.4000	0.6800	mg/kg	09/11/14	09/11/14
EPA 8260B	CARBON TETRACHLORIDE	0.8500 U	2.800	0.8500	0.2800	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROBENZENE	1.4000 U	2.800	1.4000	0.5900	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROETHANE	1.4000 U	2.800	1.4000	0.5900	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROFORM	0.7000 U	2.800	0.7000	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROMETHANE	1.4000 U	2.800	1.4000	0.8700	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.8500 U	2.800	0.8500	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.8500 U	2.800	0.8500	0.4200	mg/kg	09/11/14	09/11/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.8500 U	2.800	0.8500	0.5400	mg/kg	09/11/14	09/11/14
EPA 8260B	ETHYLBENZENE	1.4000 U	2.800	1.4000	0.6500	mg/kg	09/11/14	09/11/14
EPA 8260B	METHYLENE CHLORIDE	2.8000 U	14.000	2.8000	0.9900	mg/kg	09/11/14	09/11/14
EPA 8260B	NAPHTHALENE	1.4000 U	2.800	1.4000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	STYRENE	1.4000 U	2.800	1.4000	0.7000	mg/kg	09/11/14	09/11/14
EPA 8260B	TETRACHLOROETHENE	0.8500 U	2.800	0.8500	0.4200	mg/kg	09/11/14	09/11/14
EPA 8260B	TOLUENE	0.8500 U	2.800	0.8500	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.8500 U	2.800	0.8500	0.5400	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.8500 U	2.800	0.8500	0.5100	mg/kg	09/11/14	09/11/14
EPA 8260B	TRICHLOROETHENE	0.8500 U	2.800	0.8500	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	VINYL CHLORIDE	0.8500 U	2.800	0.8500	0.6500	mg/kg	09/11/14	09/11/14
EPA 8260B	XYLENES (TOTAL)	0.8500 U	2.800	0.8500	0.5400	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L17
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:53 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN002

APPL ID: AZ02100

Sample Collection Date: 09/02/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	107	54-154			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	105	85-120			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.3	85-115			%	09/11/14	09/11/14

Quant Method:	LALLW.M
Run #:	0911L17
Instrument:	Loki
Sequence:	140909
Dilution Factor:	50
Initials:	SV

Printed: 09/19/14 11:57:53 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L17.D Vial: 14
Acq On : 11 Sep 14 17:54 Operator: DG,SV,RS
Sample : AZ02100S01 154.72g Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 48.47

Quant Time: Sep 16 14:23 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	391104	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	375168	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	217984	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	246015	25.95880 ppb	0.00
Spiked Amount 25.423			Recovery = 102.110%		
38) 1,2-DCA-D4(S)	5.53	65	264625	26.51977 ppb	0.00
Spiked Amount 24.764			Recovery = 107.091%		
58) Toluene-D8(S)	7.71	98	766733	25.21147 ppb	0.00
Spiked Amount 25.636			Recovery = 98.342%		
66) 4-Bromofluorobenzene(S)	10.36	95	283385	24.95318 ppb	0.00
Spiked Amount 23.806			Recovery = 104.817%		

Target Compounds Qvalue

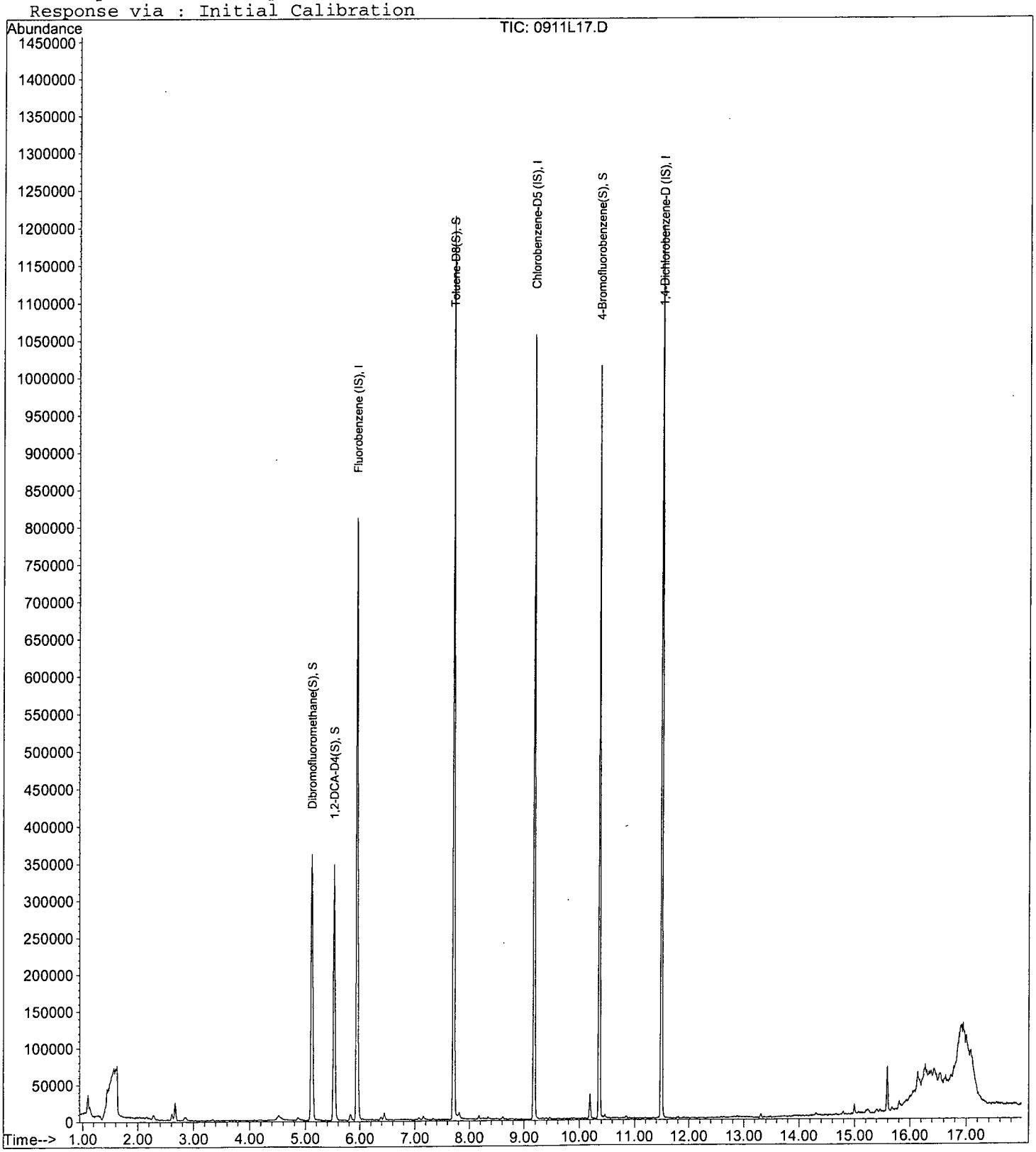
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L17.D Vial: 14
Acq On : 11 Sep 14 17:54 Operator: DG,SV,RS
Sample : AZ02100S01 154.72g Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 48.47

Quant Time: Sep 16 14:23 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN003
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02101
QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 11.5 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	0.8500 U	2.800	0.8500	0.4000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.8500 U	2.800	0.8500	0.7600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.4000 U	2.800	1.4000	0.5600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHANE	0.8500 U	2.800	0.8500	0.5400	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHENE	1.4000 U	2.800	1.4000	0.8500	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	2.8000 U	5.600	2.8000	1.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DIBROMOETHANE	0.8500 U	2.800	0.8500	0.5600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROETHANE	0.8500 U	2.800	0.8500	0.4000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROPROPANE	0.8500 U	2.800	0.8500	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	2-BUTANONE	5.6000 U	28.000	5.6000	1.7000	mg/kg	09/11/14	09/11/14
EPA 8260B	4-METHYL-2-PENTANONE	14.0000 U	28.000	14.0000	5.4000	mg/kg	09/11/14	09/11/14
EPA 8260B	ACETONE	14.0000 U	28.000	14.0000	7.9000	mg/kg	09/11/14	09/11/14
EPA 8260B	BENZENE	0.8500 U	2.800	0.8500	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMODICHLOROMETHANE	0.8500 U	2.800	0.8500	0.4000	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOFORM	0.8500 U	2.800	0.8500	0.4000	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOMETHANE	1.4000 U	5.600	1.4000	0.6800	mg/kg	09/11/14	09/11/14
EPA 8260B	CARBON TETRACHLORIDE	0.8500 U	2.800	0.8500	0.2800	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROBENZENE	1.4000 U	2.800	1.4000	0.5900	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROETHANE	1.4000 U	2.800	1.4000	0.5900	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROFORM	0.7100 U	2.800	0.7100	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROMETHANE	1.4000 U	2.800	1.4000	0.8800	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.8500 U	2.800	0.8500	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.8500 U	2.800	0.8500	0.4200	mg/kg	09/11/14	09/11/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.8500 U	2.800	0.8500	0.5400	mg/kg	09/11/14	09/11/14
EPA 8260B	ETHYLBENZENE	1.4000 U	2.800	1.4000	0.6500	mg/kg	09/11/14	09/11/14
EPA 8260B	METHYLENE CHLORIDE	2.8000 U	14.000	2.8000	0.9900	mg/kg	09/11/14	09/11/14
EPA 8260B	NAPHTHALENE	1.4000 U	2.800	1.4000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	STYRENE	1.4000 U	2.800	1.4000	0.7100	mg/kg	09/11/14	09/11/14
EPA 8260B	TETRACHLOROETHENE	0.8500 U	2.800	0.8500	0.4200	mg/kg	09/11/14	09/11/14
EPA 8260B	TOLUENE	0.8500 U	2.800	0.8500	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.8500 U	2.800	0.8500	0.5400	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.8500 U	2.800	0.8500	0.5100	mg/kg	09/11/14	09/11/14
EPA 8260B	TRICHLOROETHENE	0.8500 U	2.800	0.8500	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	VINYL CHLORIDE	0.8500 U	2.800	0.8500	0.6500	mg/kg	09/11/14	09/11/14
EPA 8260B	XYLENES (TOTAL)	0.8500 U	2.800	0.8500	0.5400	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L18
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:53 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN003

APPL ID: AZ02101

Sample Collection Date: 09/02/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	104	54-154			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	104	85-120			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.4	85-115			%	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L18
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:53 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L18.D Vial: 15
Acq On : 11 Sep 14 18:22 Operator: DG,SV,RS
Sample : AZ02101S01 153.88 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 48.74

Quant Time: Sep 16 14:24 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	400320	25.00000	ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	379648	25.00000	ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	216512	25.00000	ppb	0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.12	111	248343	25.60118	ppb	0.00
Spiked Amount 25.423			Recovery = 100.701%			
38) 1,2-DCA-D4(S)	5.53	65	263510	25.80007	ppb	0.00
Spiked Amount 24.764			Recovery = 104.183%			
58) Toluene-D8(S)	7.71	98	776552	25.23302	ppb	0.00
Spiked Amount 25.636			Recovery = 98.428%			
66) 4-Bromofluorobenzene(S)	10.36	95	284191	24.72886	ppb	0.00
Spiked Amount 23.806			Recovery = 103.876%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

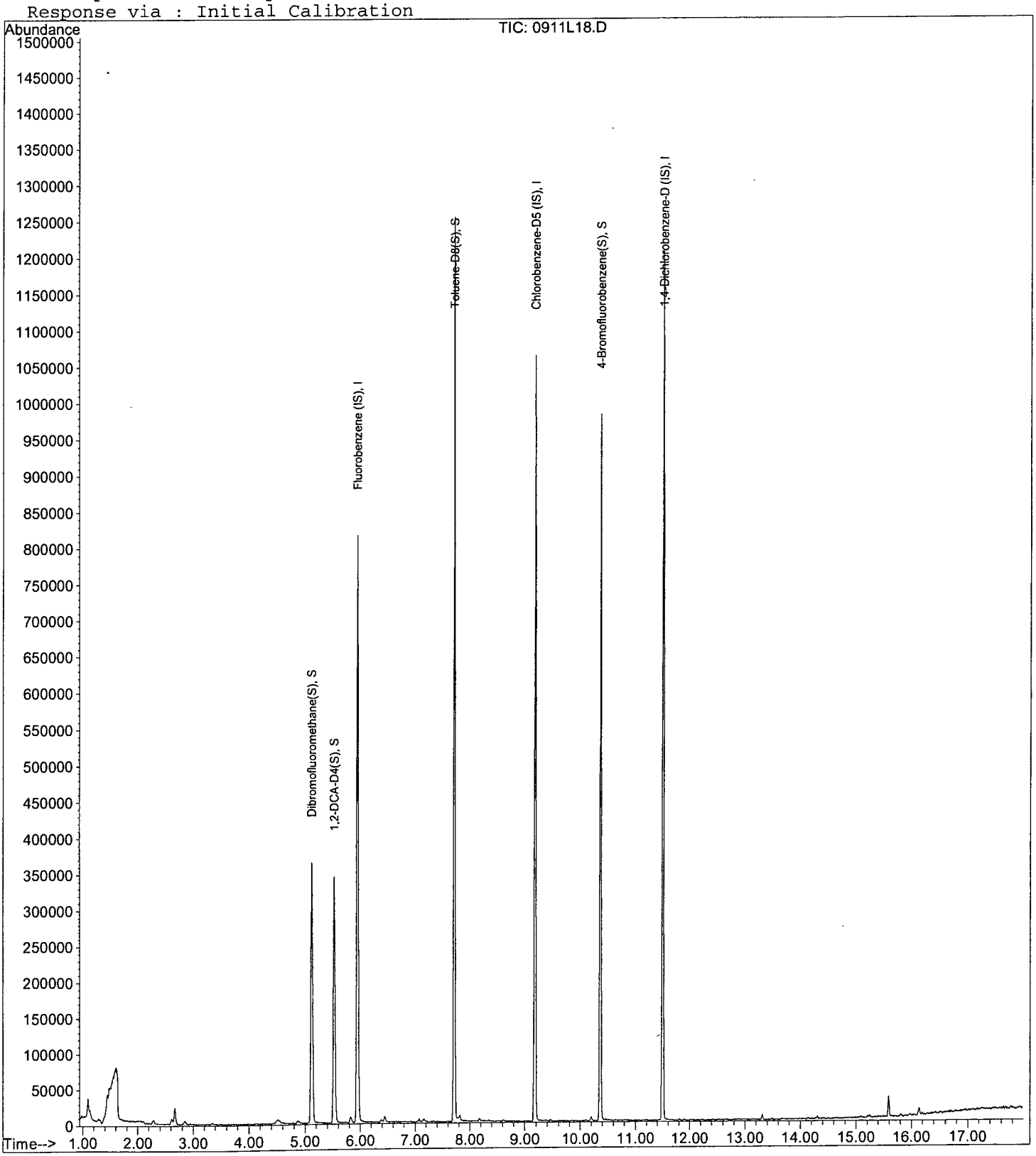
Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L18.D
Acq On : 11 Sep 14 18:22
Sample : AZ02101S01 153.88
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 15
Operator: DG,SV,RS
Inst : Loki
Multiplr: 48.74

Quant Time: Sep 16 14:24 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN004

Sample Collection Date: 09/02/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02102

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 11.0 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	0.8400 U	2.800	0.8400	0.3900	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.8400 U	2.800	0.8400	0.7600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.4000 U	2.800	1.4000	0.5600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHANE	0.8400 U	2.800	0.8400	0.5300	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHENE	1.4000 U	2.800	1.4000	0.8400	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	2.8000 U	5.600	2.8000	1.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DIBROMOETHANE	0.8400 U	2.800	0.8400	0.5600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROETHANE	0.8400 U	2.800	0.8400	0.3900	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROPROPANE	0.8400 U	2.800	0.8400	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	2-BUTANONE	5.6000 U	28.000	5.6000	1.7000	mg/kg	09/11/14	09/11/14
EPA 8260B	4-METHYL-2-PENTANONE	14.0000 U	28.000	14.0000	5.3000	mg/kg	09/11/14	09/11/14
EPA 8260B	ACETONE	14.0000 U	28.000	14.0000	7.9000	mg/kg	09/11/14	09/11/14
EPA 8260B	BENZENE	0.8400 U	2.800	0.8400	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMODICHLOROMETHANE	0.8400 U	2.800	0.8400	0.3900	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOFORM	0.8400 U	2.800	0.8400	0.3900	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOMETHANE	1.4000 U	5.600	1.4000	0.6700	mg/kg	09/11/14	09/11/14
EPA 8260B	CARBON TETRACHLORIDE	0.8400 U	2.800	0.8400	0.2800	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROBENZENE	1.4000 U	2.800	1.4000	0.5900	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROETHANE	1.4000 U	2.800	1.4000	0.5900	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROFORM	0.7000 U	2.800	0.7000	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROMETHANE	1.4000 U	2.800	1.4000	0.8700	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.8400 U	2.800	0.8400	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.8400 U	2.800	0.8400	0.4200	mg/kg	09/11/14	09/11/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.8400 U	2.800	0.8400	0.5300	mg/kg	09/11/14	09/11/14
EPA 8260B	ETHYLBENZENE	1.4000 U	2.800	1.4000	0.6500	mg/kg	09/11/14	09/11/14
EPA 8260B	METHYLENE CHLORIDE	2.8000 U	14.000	2.8000	0.9800	mg/kg	09/11/14	09/11/14
EPA 8260B	NAPHTHALENE	1.4000 U	2.800	1.4000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	STYRENE	1.4000 U	2.800	1.4000	0.7000	mg/kg	09/11/14	09/11/14
EPA 8260B	TETRACHLOROETHENE	0.8400 U	2.800	0.8400	0.4200	mg/kg	09/11/14	09/11/14
EPA 8260B	TOLUENE	0.8400 U	2.800	0.8400	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.8400 U	2.800	0.8400	0.5300	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.8400 U	2.800	0.8400	0.5100	mg/kg	09/11/14	09/11/14
EPA 8260B	TRICHLOROETHENE	0.8400 U	2.800	0.8400	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	VINYL CHLORIDE	0.8400 U	2.800	0.8400	0.6500	mg/kg	09/11/14	09/11/14
EPA 8260B	XYLENES (TOTAL)	0.8400 U	2.800	0.8400	0.5300	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L19
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:53 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN004

APPL ID: AZ02102

Sample Collection Date: 09/02/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	104	54-154			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	107	85-120			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	102	85-115			%	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L19
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:54 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L19.D Vial: 16
Acq On : 11 Sep 14 18:50 Operator: DG,SV,RS
Sample : AZ02102S01 162.82 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 46.06

Quant Time: Sep 16 14:26 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	395840	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	369024	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	211072	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	247720	25.82597 ppb	0.00
Spiked Amount 25.423			Recovery = 101.586%		
38) 1,2-DCA-D4(S)	5.53	65	260905	25.83413 ppb	0.00
Spiked Amount 24.764			Recovery = 104.321%		
58) Toluene-D8(S)	7.71	98	778675	26.03043 ppb	0.00
Spiked Amount 25.636			Recovery = 101.537%		
66) 4-Bromofluorobenzene(S)	10.36	95	284499	25.46836 ppb	0.00
Spiked Amount 23.806			Recovery = 106.980%		

Target Compounds Qvalue

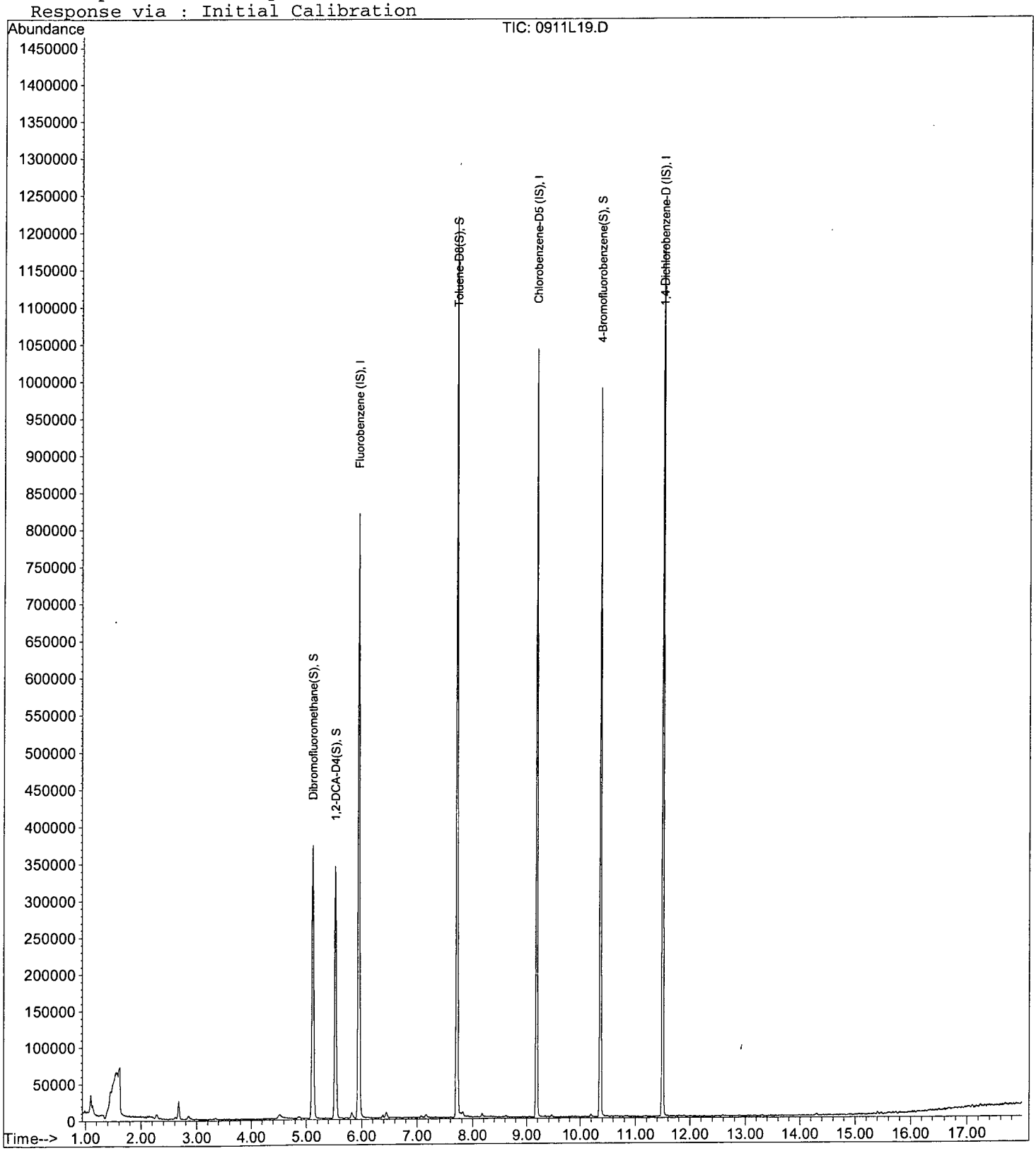
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L19.D Vial: 16
Acq On : 11 Sep 14 18:50 Operator: DG,SV,RS
Sample : AZ02102S01 162.82 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 46.06

Quant Time: Sep 16 14:26 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN005

Sample Collection Date: 09/02/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02103

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 15.8 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	0.8900 U	3.000	0.8900	0.4200	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.8900 U	3.000	0.8900	0.8000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.5000 U	3.000	1.5000	0.5900	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHANE	0.8900 U	3.000	0.8900	0.5600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHENE	1.5000 U	3.000	1.5000	0.8900	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	3.0000 U	5.900	3.0000	1.2000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DIBROMOETHANE	0.8900 U	3.000	0.8900	0.5900	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROETHANE	0.8900 U	3.000	0.8900	0.4200	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROPROPANE	0.8900 U	3.000	0.8900	0.5000	mg/kg	09/11/14	09/11/14
EPA 8260B	2-BUTANONE	5.9000 U	30.000	5.9000	1.8000	mg/kg	09/11/14	09/11/14
EPA 8260B	4-METHYL-2-PENTANONE	15.0000 U	30.000	15.0000	5.6000	mg/kg	09/11/14	09/11/14
EPA 8260B	ACETONE	15.0000 U	30.000	15.0000	8.3000	mg/kg	09/11/14	09/11/14
EPA 8260B	BENZENE	0.8900 U	3.000	0.8900	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMODICHLOROMETHANE	0.8900 U	3.000	0.8900	0.4200	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOFORM	0.8900 U	3.000	0.8900	0.4200	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOMETHANE	1.5000 U	5.900	1.5000	0.7100	mg/kg	09/11/14	09/11/14
EPA 8260B	CARBON TETRACHLORIDE	0.8900 U	3.000	0.8900	0.3000	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROBENZENE	1.5000 U	3.000	1.5000	0.6200	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROETHANE	1.5000 U	3.000	1.5000	0.6200	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROFORM	0.7400 U	3.000	0.7400	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROMETHANE	1.5000 U	3.000	1.5000	0.9200	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.8900 U	3.000	0.8900	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.8900 U	3.000	0.8900	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.8900 U	3.000	0.8900	0.5600	mg/kg	09/11/14	09/11/14
EPA 8260B	ETHYLBENZENE	1.5000 U	3.000	1.5000	0.6800	mg/kg	09/11/14	09/11/14
EPA 8260B	METHYLENE CHLORIDE	3.0000 U	15.000	3.0000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	NAPHTHALENE	1.5000 U	3.000	1.5000	1.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	STYRENE	1.5000 U	3.000	1.5000	0.7400	mg/kg	09/11/14	09/11/14
EPA 8260B	TETRACHLOROETHENE	0.8900 U	3.000	0.8900	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	TOLUENE	0.8900 U	3.000	0.8900	0.5000	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.8900 U	3.000	0.8900	0.5600	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.8900 U	3.000	0.8900	0.5300	mg/kg	09/11/14	09/11/14
EPA 8260B	TRICHLOROETHENE	0.8900 U	3.000	0.8900	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	VINYL CHLORIDE	0.8900 U	3.000	0.8900	0.6800	mg/kg	09/11/14	09/11/14
EPA 8260B	XYLENES (TOTAL)	0.8900 U	3.000	0.8900	0.5600	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L20
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:54 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN005

APPL ID: AZ02103

Sample Collection Date: 09/02/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	104	54-154			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	103	85-120			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	97.2	85-115			%	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L20
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:54 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L20.D Vial: 17
Acq On : 11 Sep 14 19:18 Operator: DG,SV,RS
Sample : AZ02103S01 162.10 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 46.28

Quant Time: Sep 16 14:27 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	395776	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	376000	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	220224	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	248739	25.93640 ppb	0.00
Spiked Amount 25.423			Recovery = 102.019%		
38) 1,2-DCA-D4(S)	5.52	65	259561	25.70521 ppb	0.00
Spiked Amount 24.764			Recovery = 103.800%		
58) Toluene-D8(S)	7.71	98	759433	24.91618 ppb	0.00
Spiked Amount 25.636			Recovery = 97.191%		
66) 4-Bromofluorobenzene(S)	10.36	95	278167	24.43952 ppb	0.00
Spiked Amount 23.806			Recovery = 102.662%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

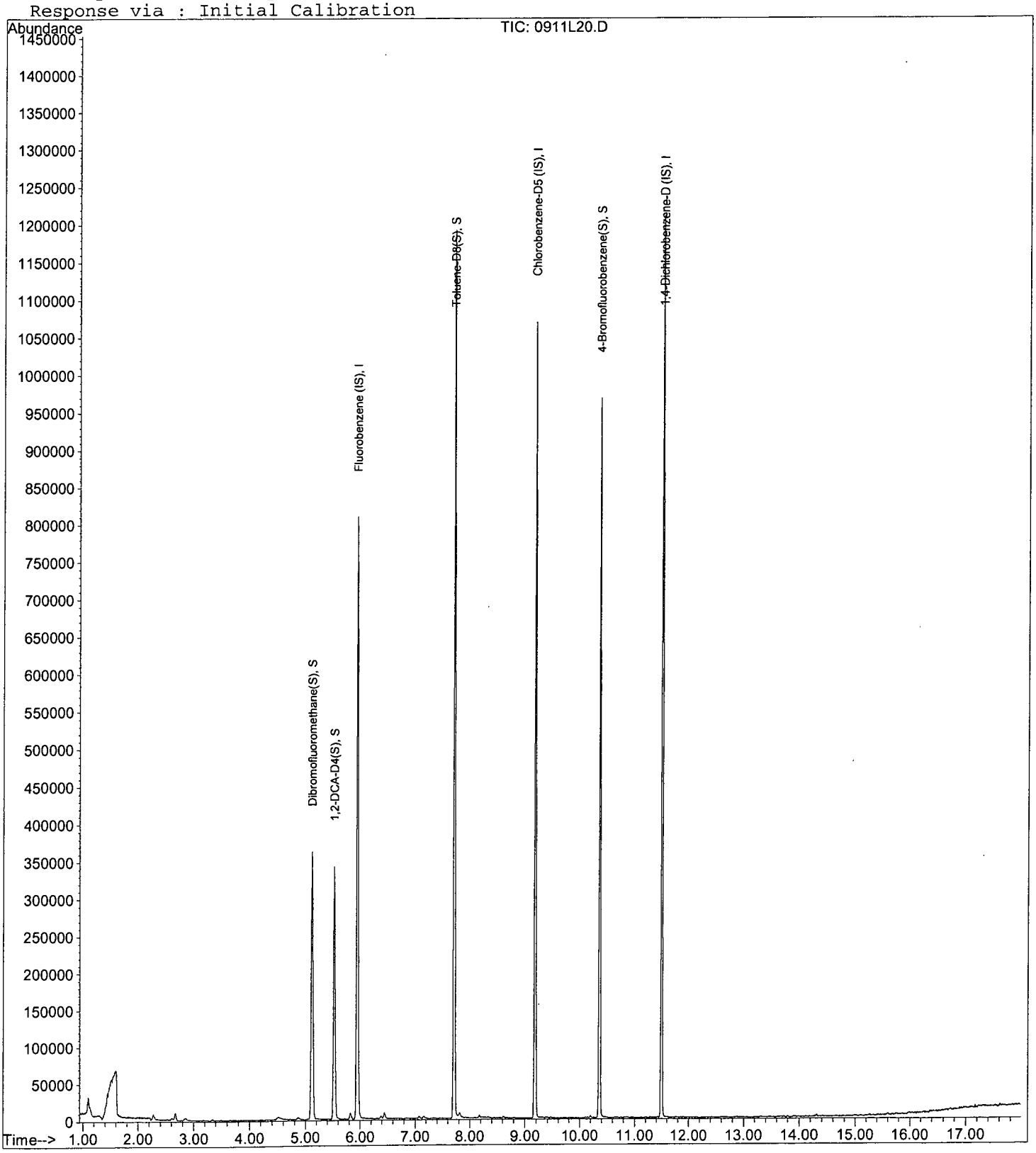
Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L20.D
Acq On : 11 Sep 14 19:18
Sample : AZ02103S01 162.10
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 17
Operator: DG,SV,RS
Inst : Loki
Multiplr: 46.28

Quant Time: Sep 16 14:27 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN006

APPL ID: AZ02104

Sample Collection Date: 09/02/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 14.2 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	0.8700 U	2.900	0.8700	0.4100	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.8700 U	2.900	0.8700	0.7900	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.5000 U	2.900	1.5000	0.5800	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHANE	0.8700 U	2.900	0.8700	0.5500	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHENE	1.5000 U	2.900	1.5000	0.8700	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	2.9000 U	5.800	2.9000	1.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DIBROMOETHANE	0.8700 U	2.900	0.8700	0.5800	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROETHANE	0.8700 U	2.900	0.8700	0.4100	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROPROPANE	0.8700 U	2.900	0.8700	0.5000	mg/kg	09/11/14	09/11/14
EPA 8260B	2-BUTANONE	5.8000 U	29.000	5.8000	1.7000	mg/kg	09/11/14	09/11/14
EPA 8260B	4-METHYL-2-PENTANONE	15.0000 U	29.000	15.0000	5.5000	mg/kg	09/11/14	09/11/14
EPA 8260B	ACETONE	15.0000 U	29.000	15.0000	8.2000	mg/kg	09/11/14	09/11/14
EPA 8260B	BENZENE	0.8700 U	2.900	0.8700	0.4700	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMODICHLOROMETHANE	0.8700 U	2.900	0.8700	0.4100	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOFORM	0.8700 U	2.900	0.8700	0.4100	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOMETHANE	1.5000 U	5.800	1.5000	0.7000	mg/kg	09/11/14	09/11/14
EPA 8260B	CARBON TETRACHLORIDE	0.8700 U	2.900	0.8700	0.2900	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROBENZENE	1.5000 U	2.900	1.5000	0.6100	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROETHANE	1.5000 U	2.900	1.5000	0.6100	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROFORM	0.7300 U	2.900	0.7300	0.4700	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROMETHANE	1.5000 U	2.900	1.5000	0.9000	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.8700 U	2.900	0.8700	0.4700	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.8700 U	2.900	0.8700	0.4400	mg/kg	09/11/14	09/11/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.8700 U	2.900	0.8700	0.5500	mg/kg	09/11/14	09/11/14
EPA 8260B	ETHYLBENZENE	1.5000 U	2.900	1.5000	0.6700	mg/kg	09/11/14	09/11/14
EPA 8260B	METHYLENE CHLORIDE	2.9000 U	15.000	2.9000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	NAPHTHALENE	1.5000 U	2.900	1.5000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	STYRENE	1.5000 U	2.900	1.5000	0.7300	mg/kg	09/11/14	09/11/14
EPA 8260B	TETRACHLOROETHENE	0.8700 U	2.900	0.8700	0.4400	mg/kg	09/11/14	09/11/14
EPA 8260B	TOLUENE	0.8700 U	2.900	0.8700	0.5000	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.8700 U	2.900	0.8700	0.5500	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.8700 U	2.900	0.8700	0.5200	mg/kg	09/11/14	09/11/14
EPA 8260B	TRICHLOROETHENE	0.8700 U	2.900	0.8700	0.4700	mg/kg	09/11/14	09/11/14
EPA 8260B	VINYL CHLORIDE	0.8700 U	2.900	0.8700	0.6700	mg/kg	09/11/14	09/11/14
EPA 8260B	XYLENES (TOTAL)	0.8700 U	2.900	0.8700	0.5500	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L21
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:54 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN006

Sample Collection Date: 09/02/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02104

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	104	54-154			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	104	85-120			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	85-115			%	09/11/14	09/11/14

Quant Method:	LALLW.M
Run #:	0911L21
Instrument:	Loki
Sequence:	140909
Dilution Factor:	50
Initials:	SV

Printed: 09/19/14 11:57:54 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L21.D Vial: 18
Acq On : 11 Sep 14 19:46 Operator: DG,SV,RS
Sample : AZ02104S01 158.75 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 47.24

Quant Time: Sep 16 14:28 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	393088	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	373248	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	214464	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	247964	26.03240 ppb	0.00
Spiked Amount 25.423			Recovery = 102.397%		
38) 1,2-DCA-D4(S)	5.52	65	259483	25.87321 ppb	0.00
Spiked Amount 24.764			Recovery = 104.478%		
58) Toluene-D8(S)	7.71	98	782494	25.86207 ppb	0.00
Spiked Amount 25.636			Recovery = 100.882%		
66) 4-Bromofluorobenzene(S)	10.36	95	280439	24.82080 ppb	0.00
Spiked Amount 23.806			Recovery = 104.262%		

Target Compounds Qvalue

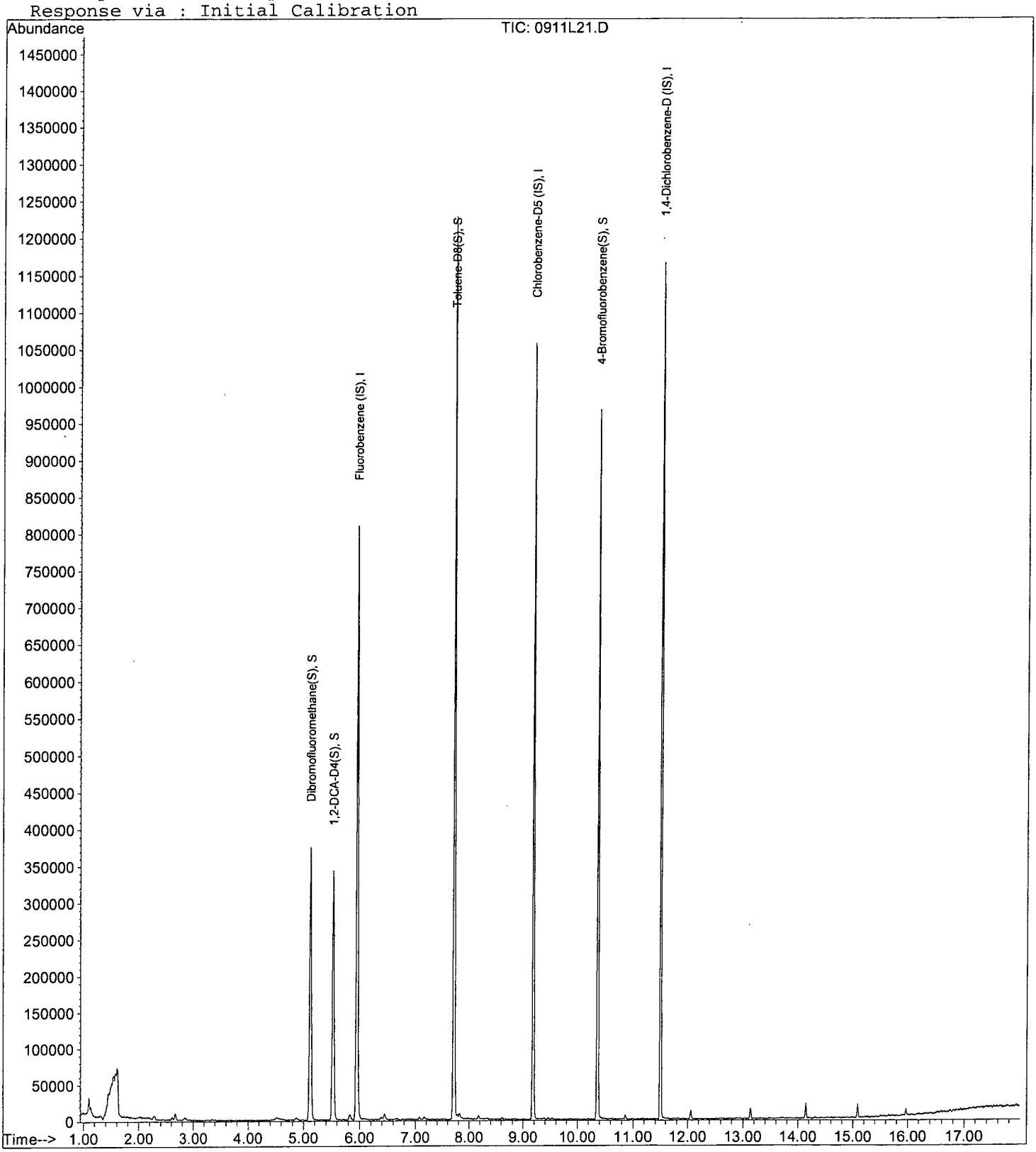
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L21.D Vial: 18
Acq On : 11 Sep 14 19:46 Operator: DG,SV,RS
Sample : AZ02104S01 158.75 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 47.24

Quant Time: Sep 16 14:28 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN007

APPL ID: AZ02105

Sample Collection Date: 09/02/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 24.0 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	0.9900 U	3.300	0.9900	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.9900 U	3.300	0.9900	0.8900	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.6000 U	3.300	1.6000	0.6600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHANE	0.9900 U	3.300	0.9900	0.6300	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHENE	1.6000 U	3.300	1.6000	0.9900	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	3.3000 U	6.600	3.3000	1.3000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DIBROMOETHANE	0.9900 U	3.300	0.9900	0.6600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROETHANE	0.9900 U	3.300	0.9900	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROPROPANE	0.9900 U	3.300	0.9900	0.5600	mg/kg	09/11/14	09/11/14
EPA 8260B	2-BUTANONE	6.6000 U	33.000	6.6000	2.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	4-METHYL-2-PENTANONE	16.0000 U	33.000	16.0000	6.3000	mg/kg	09/11/14	09/11/14
EPA 8260B	ACETONE	16.0000 U	33.000	16.0000	9.2000	mg/kg	09/11/14	09/11/14
EPA 8260B	BENZENE	0.9900 U	3.300	0.9900	0.5300	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMODICHLOROMETHANE	0.9900 U	3.300	0.9900	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOFORM	0.9900 U	3.300	0.9900	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOMETHANE	1.6000 U	6.600	1.6000	0.7900	mg/kg	09/11/14	09/11/14
EPA 8260B	CARBON TETRACHLORIDE	0.9900 U	3.300	0.9900	0.3300	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROBENZENE	1.6000 U	3.300	1.6000	0.6900	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROETHANE	1.6000 U	3.300	1.6000	0.6900	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROFORM	0.8200 U	3.300	0.8200	0.5300	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROMETHANE	1.6000 U	3.300	1.6000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.9900 U	3.300	0.9900	0.5300	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.9900 U	3.300	0.9900	0.4900	mg/kg	09/11/14	09/11/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.9900 U	3.300	0.9900	0.6300	mg/kg	09/11/14	09/11/14
EPA 8260B	ETHYLBENZENE	1.6000 U	3.300	1.6000	0.7600	mg/kg	09/11/14	09/11/14
EPA 8260B	METHYLENE CHLORIDE	3.3000 U	16.000	3.3000	1.2000	mg/kg	09/11/14	09/11/14
EPA 8260B	NAPHTHALENE	1.6000 U	3.300	1.6000	1.2000	mg/kg	09/11/14	09/11/14
EPA 8260B	STYRENE	1.6000 U	3.300	1.6000	0.8200	mg/kg	09/11/14	09/11/14
EPA 8260B	TETRACHLOROETHENE	0.9900 U	3.300	0.9900	0.4900	mg/kg	09/11/14	09/11/14
EPA 8260B	TOLUENE	0.9900 U	3.300	0.9900	0.5600	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.9900 U	3.300	0.9900	0.6300	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.9900 U	3.300	0.9900	0.5900	mg/kg	09/11/14	09/11/14
EPA 8260B	TRICHLOROETHENE	0.9900 U	3.300	0.9900	0.5300	mg/kg	09/11/14	09/11/14
EPA 8260B	VINYL CHLORIDE	0.9900 U	3.300	0.9900	0.7600	mg/kg	09/11/14	09/11/14
EPA 8260B	XYLENES (TOTAL)	0.9900 U	3.300	0.9900	0.6300	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L22
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:54 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN007

APPL ID: AZ02105

Sample Collection Date: 09/02/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	107	54-154			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	104	85-120			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	85-115			%	09/11/14	09/11/14

Quant Method:	LALLW.M
Run #:	0911L22
Instrument:	Loki
Sequence:	140909
Dilution Factor:	50
Initials:	SV

Printed: 09/19/14 11:57:54 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L22.D Vial: 19
Acq On : 11 Sep 14 20:13 Operator: DG,SV,RS
Sample : AZ02105S01 157.44 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 47.64

Quant Time: Sep 16 14:30 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	392256	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	369600	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	212736	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.11	111	251597	26.46983 ppb	0.00
Spiked Amount 25.423			Recovery = 104.120%		
38) 1,2-DCA-D4(S)	5.52	65	265467	26.52602 ppb	0.00
Spiked Amount 24.764			Recovery = 107.115%		
58) Toluene-D8(S)	7.71	98	778875	25.99654 ppb	0.00
Spiked Amount 25.636			Recovery = 101.408%		
66) 4-Bromofluorobenzene(S)	10.36	95	276969	24.75564 ppb	0.00
Spiked Amount 23.806			Recovery = 103.989%		

Target Compounds Qvalue

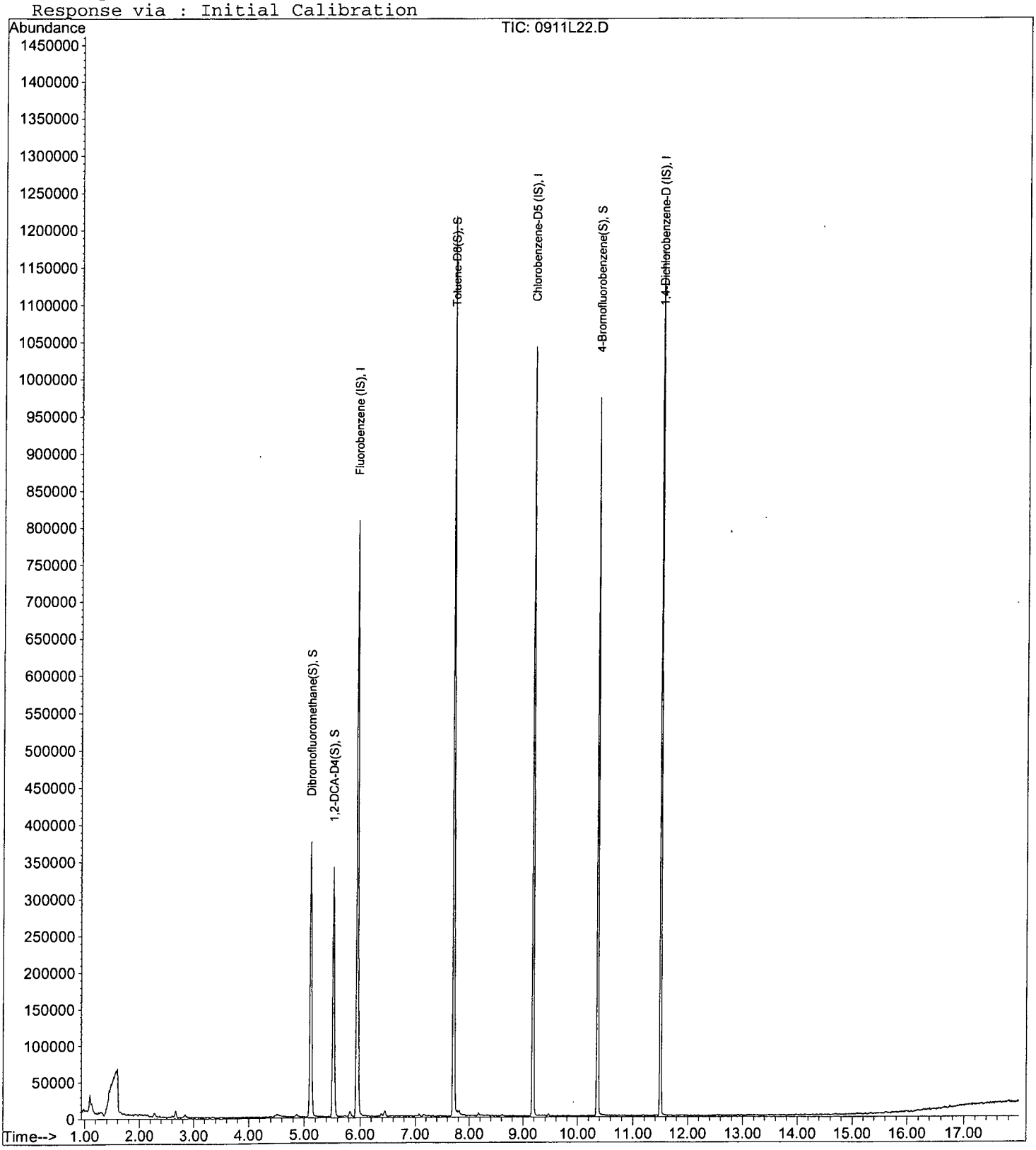
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L22.D Vial: 19
Acq On : 11 Sep 14 20:13 Operator: DG,SV,RS
Sample : AZ02105S01 157.44 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 47.64

Quant Time: Sep 16 14:30 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN008

Sample Collection Date: 09/02/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02106

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 29.8 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	1.1000 U	3.600	1.1000	0.5000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	1.1000 U	3.600	1.1000	0.9600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.8000 U	3.600	1.8000	0.7100	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHANE	1.1000 U	3.600	1.1000	0.6800	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHENE	1.8000 U	3.600	1.8000	1.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	3.6000 U	7.100	3.6000	1.4000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DIBROMOETHANE	1.1000 U	3.600	1.1000	0.7100	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROETHANE	1.1000 U	3.600	1.1000	0.5000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROPROPANE	1.1000 U	3.600	1.1000	0.6100	mg/kg	09/11/14	09/11/14
EPA 8260B	2-BUTANONE	7.1000 U	36.000	7.1000	2.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	4-METHYL-2-PENTANONE	18.0000 U	36.000	18.0000	6.8000	mg/kg	09/11/14	09/11/14
EPA 8260B	ACETONE	18.0000 U	36.000	18.0000	10.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	BENZENE	1.1000 U	3.600	1.1000	0.5700	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMODICHLOROMETHANE	1.1000 U	3.600	1.1000	0.5000	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOFORM	1.1000 U	3.600	1.1000	0.5000	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOMETHANE	1.8000 U	7.100	1.8000	0.8500	mg/kg	09/11/14	09/11/14
EPA 8260B	CARBON TETRACHLORIDE	1.1000 U	3.600	1.1000	0.3600	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROBENZENE	1.8000 U	3.600	1.8000	0.7500	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROETHANE	1.8000 U	3.600	1.8000	0.7500	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROFORM	0.8900 U	3.600	0.8900	0.5700	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROMETHANE	1.8000 U	3.600	1.8000	1.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	1.1000 U	3.600	1.1000	0.5700	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	1.1000 U	3.600	1.1000	0.5300	mg/kg	09/11/14	09/11/14
EPA 8260B	DIBROMOCHLOROMETHANE	1.1000 U	3.600	1.1000	0.6800	mg/kg	09/11/14	09/11/14
EPA 8260B	ETHYLBENZENE	1.8000 U	3.600	1.8000	0.8200	mg/kg	09/11/14	09/11/14
EPA 8260B	METHYLENE CHLORIDE	3.6000 U	18.000	3.6000	1.2000	mg/kg	09/11/14	09/11/14
EPA 8260B	NAPHTHALENE	1.8000 U	3.600	1.8000	1.3000	mg/kg	09/11/14	09/11/14
EPA 8260B	STYRENE	1.8000 U	3.600	1.8000	0.8900	mg/kg	09/11/14	09/11/14
EPA 8260B	TETRACHLOROETHENE	1.1000 U	3.600	1.1000	0.5300	mg/kg	09/11/14	09/11/14
EPA 8260B	TOLUENE	1.1000 U	3.600	1.1000	0.6100	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	1.1000 U	3.600	1.1000	0.6800	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	1.1000 U	3.600	1.1000	0.6400	mg/kg	09/11/14	09/11/14
EPA 8260B	TRICHLOROETHENE	1.1000 U	3.600	1.1000	0.5700	mg/kg	09/11/14	09/11/14
EPA 8260B	VINYL CHLORIDE	1.1000 U	3.600	1.1000	0.8200	mg/kg	09/11/14	09/11/14
EPA 8260B	XYLENES (TOTAL)	1.1000 U	3.600	1.1000	0.6800	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L23
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:54 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN008

APPL ID: AZ02106

Sample Collection Date: 09/02/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	107	54-154			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	102	85-120			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.0	85-115			%	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L23
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:54 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L23.D
Acq On : 11 Sep 14 20:41
Sample : AZ02106S01 158.89
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 20
Operator: DG,SV,RS
Inst : Loki
Multiplr: 47.20

Quant Time: Sep 16 14:31 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	393024	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	381760	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	211712	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	251461	26.40383 ppb	0.00
Spiked Amount 25.423			Recovery = 103.860%		
38) 1,2-DCA-D4(S)	5.53	65	264714	26.39909 ppb	0.00
Spiked Amount 24.764			Recovery = 106.602%		
58) Toluene-D8(S)	7.71	98	785241	25.37420 ppb	0.00
Spiked Amount 25.636			Recovery = 98.978%		
66) 4-Bromofluorobenzene(S)	10.36	95	280849	24.30286 ppb	0.00
Spiked Amount 23.806			Recovery = 102.086%		

Target Compounds Qvalue

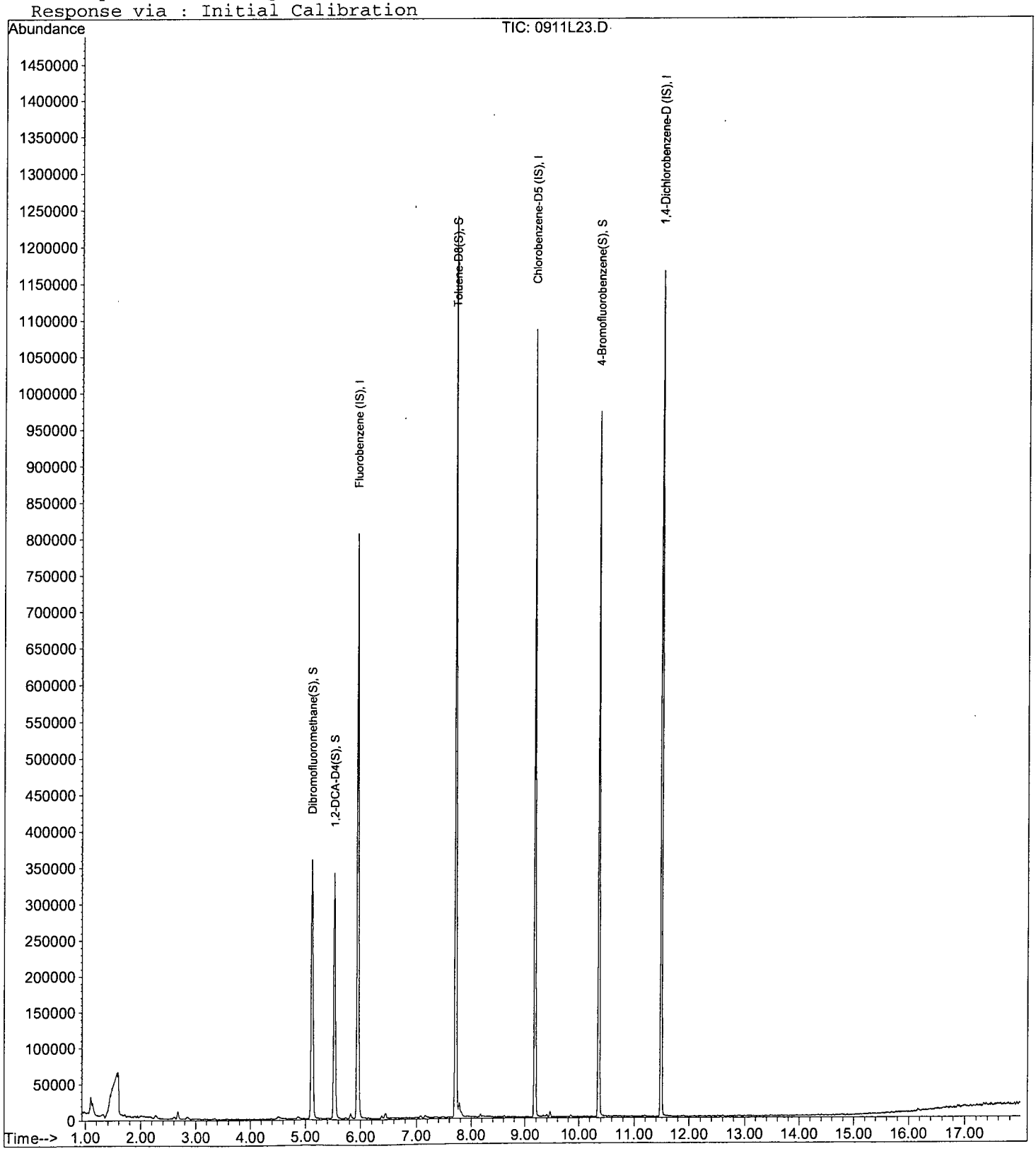
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L23.D Vial: 20
Acq On : 11 Sep 14 20:41 Operator: DG,SV,RS
Sample : AZ02106S01 158.89 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 47.20

Quant Time: Sep 16 14:31 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN009

Sample Collection Date: 09/02/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02107

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 23.4 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	0.9800 U	3.300	0.9800	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.9800 U	3.300	0.9800	0.8800	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.6000 U	3.300	1.6000	0.6500	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHANE	0.9800 U	3.300	0.9800	0.6200	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHENE	1.6000 U	3.300	1.6000	0.9800	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	3.3000 U	6.500	3.3000	1.3000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DIBROMOETHANE	0.9800 U	3.300	0.9800	0.6500	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROETHANE	0.9800 U	3.300	0.9800	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROPROPANE	0.9800 U	3.300	0.9800	0.5500	mg/kg	09/11/14	09/11/14
EPA 8260B	2-BUTANONE	6.5000 U	33.000	6.5000	2.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	4-METHYL-2-PENTANONE	16.0000 U	33.000	16.0000	6.2000	mg/kg	09/11/14	09/11/14
EPA 8260B	ACETONE	16.0000 U	33.000	16.0000	9.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	BENZENE	0.9800 U	3.300	0.9800	0.5200	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMODICHLOROMETHANE	0.9800 U	3.300	0.9800	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOFORM	0.9800 U	3.300	0.9800	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOMETHANE	1.6000 U	6.500	1.6000	0.7800	mg/kg	09/11/14	09/11/14
EPA 8260B	CARBON TETRACHLORIDE	0.9800 U	3.300	0.9800	0.3300	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROBENZENE	1.6000 U	3.300	1.6000	0.6900	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROETHANE	1.6000 U	3.300	1.6000	0.6900	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROFORM	0.8200 U	3.300	0.8200	0.5200	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROMETHANE	1.6000 U	3.300	1.6000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.9800 U	3.300	0.9800	0.5200	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.9800 U	3.300	0.9800	0.4900	mg/kg	09/11/14	09/11/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.9800 U	3.300	0.9800	0.6200	mg/kg	09/11/14	09/11/14
EPA 8260B	ETHYLBENZENE	1.6000 U	3.300	1.6000	0.7500	mg/kg	09/11/14	09/11/14
EPA 8260B	METHYLENE CHLORIDE	3.3000 U	16.000	3.3000	1.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	NAPHTHALENE	1.6000 U	3.300	1.6000	1.2000	mg/kg	09/11/14	09/11/14
EPA 8260B	STYRENE	1.6000 U	3.300	1.6000	0.8200	mg/kg	09/11/14	09/11/14
EPA 8260B	TETRACHLOROETHENE	0.9800 U	3.300	0.9800	0.4900	mg/kg	09/11/14	09/11/14
EPA 8260B	TOLUENE	0.9800 U	3.300	0.9800	0.5500	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.9800 U	3.300	0.9800	0.6200	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.9800 U	3.300	0.9800	0.5900	mg/kg	09/11/14	09/11/14
EPA 8260B	TRICHLOROETHENE	0.9800 U	3.300	0.9800	0.5200	mg/kg	09/11/14	09/11/14
EPA 8260B	VINYL CHLORIDE	0.9800 U	3.300	0.9800	0.7500	mg/kg	09/11/14	09/11/14
EPA 8260B	XYLENES (TOTAL)	0.9800 U	3.300	0.9800	0.6200	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L24
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:54 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN009

APPL ID: AZ02107

Sample Collection Date: 09/02/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	106	54-154			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	103	85-120			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.1	85-115			%	09/11/14	09/11/14

Quant Method:	LALLW.M
Run #:	0911L24
Instrument:	Loki
Sequence:	140909
Dilution Factor:	50
Initials:	SV

Printed: 09/19/14 11:57:54 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L24.D Vial: 21
Acq On : 11 Sep 14 21:09 Operator: DG,SV,RS
Sample : AZ02107S01 154.53 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 48.53

Quant Time: Sep 16 14:32 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	395072	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	385920	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	213888	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	250585	26.17545 ppb	0.00
Spiked Amount 25.423			Recovery = 102.959%		
38) 1,2-DCA-D4(S)	5.53	65	264691	26.25996 ppb	0.00
Spiked Amount 24.764			Recovery = 106.041%		
58) Toluene-D8(S)	7.71	98	786808	25.15077 ppb	0.00
Spiked Amount 25.636			Recovery = 98.108%		
66) 4-Bromofluorobenzene(S)	10.36	95	286083	24.48892 ppb	0.00
Spiked Amount 23.806			Recovery = 102.868%		

Target Compounds Qvalue

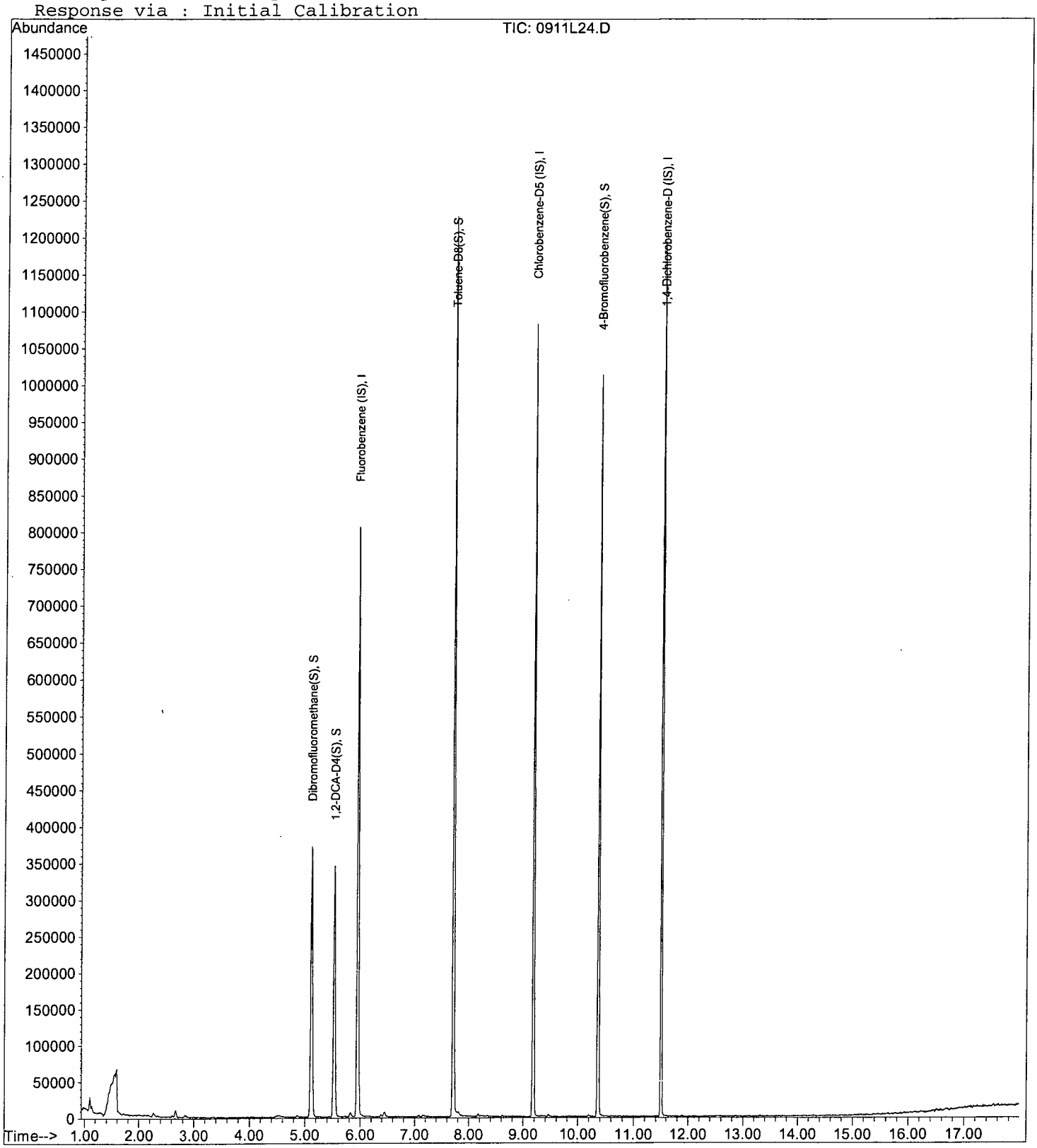
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L24.D Vial: 21
Acq On : 11 Sep 14 21:09 Operator: DG,SV,RS
Sample : AZ02107S01 154.53 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 48.53

Quant Time: Sep 16 14:32 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN010
Sample Collection Date: 09/02/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218
APPL ID: AZ02108
QCG: #86BHC-140910AL-189834

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	09/10/14	09/10/14
EPA 8260B	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	09/10/14	09/10/14
EPA 8260B	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
EPA 8260B	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.30	ug/L	09/10/14	09/10/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	1.00 U	2.0	1.00	0.39	ug/L	09/10/14	09/10/14
EPA 8260B	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	09/10/14	09/10/14
EPA 8260B	1,2-DICHLOROETHANE	0.24 J	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.17	ug/L	09/10/14	09/10/14
EPA 8260B	2-BUTANONE	2.00 U	10.0	2.00	0.60	ug/L	09/10/14	09/10/14
EPA 8260B	4-METHYL-2-PENTANONE	5.00 U	10.0	5.00	1.90	ug/L	09/10/14	09/10/14
EPA 8260B	ACETONE	1.7 J	10.0	2.00	0.95	ug/L	09/10/14	09/10/14
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
EPA 8260B	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	09/10/14	09/10/14
EPA 8260B	CARBON TETRACHLORIDE	0.30 U	1.0	0.30	0.10	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROETHANE	0.50 U	1.0	0.50	0.21	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROMETHANE	0.50 U	1.0	0.50	0.42	ug/L	09/10/14	09/10/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	09/10/14	09/10/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	09/10/14	09/10/14
EPA 8260B	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	09/10/14	09/10/14
EPA 8260B	NAPHTHALENE	0.50 U	1.0	0.50	0.36	ug/L	09/10/14	09/10/14
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	09/10/14	09/10/14
EPA 8260B	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.24	ug/L	09/10/14	09/10/14
EPA 8260B	TOLUENE	0.28 J	1.0	0.30	0.17	ug/L	09/10/14	09/10/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.18	ug/L	09/10/14	09/10/14
EPA 8260B	TRICHLOROETHENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
EPA 8260B	VINYL CHLORIDE	0.30 U	1.0	0.30	0.23	ug/L	09/10/14	09/10/14
EPA 8260B	XYLENES (TOTAL)	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14

J = Estimated value.

Quant Method: LALLW.M
Run #: 0910L14
Instrument: Loki
Sequence: 140909
Dilution Factor: 1
Initials: SV

Printed: 09/17/14 7:36:04 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN010

APPL ID: AZ02108

Sample Collection Date: 09/02/14

QCG: #86BHC-140910AL-189834

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	104	70-120			%	09/10/14	09/10/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	102	75-120			%	09/10/14	09/10/14
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	103	85-115			%	09/10/14	09/10/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	103	85-120			%	09/10/14	09/10/14

J = Estimated value.

Quant Method:	LALLW.M
Run #:	0910L14
Instrument:	Loki
Sequence:	140909
Dilution Factor:	1
Initials:	SV

Printed: 09/17/14 7:36:04 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN011
Sample Collection Date: 09/02/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218
APPL ID: AZ02109
QCG: #86BHC-140910AL-189834

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	09/10/14	09/10/14
EPA 8260B	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	09/10/14	09/10/14
EPA 8260B	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
EPA 8260B	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.30	ug/L	09/10/14	09/10/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	1.00 U	2.0	1.00	0.39	ug/L	09/10/14	09/10/14
EPA 8260B	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	09/10/14	09/10/14
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.17	ug/L	09/10/14	09/10/14
EPA 8260B	2-BUTANONE	2.00 U	10.0	2.00	0.60	ug/L	09/10/14	09/10/14
EPA 8260B	4-METHYL-2-PENTANONE	5.00 U	10.0	5.00	1.90	ug/L	09/10/14	09/10/14
EPA 8260B	ACETONE	1.8 J	10.0	2.00	0.95	ug/L	09/10/14	09/10/14
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
EPA 8260B	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	09/10/14	09/10/14
EPA 8260B	CARBON TETRACHLORIDE	0.30 U	1.0	0.30	0.10	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROETHANE	0.50 U	1.0	0.50	0.21	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROMETHANE	0.45 J	1.0	0.50	0.42	ug/L	09/10/14	09/10/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	09/10/14	09/10/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	09/10/14	09/10/14
EPA 8260B	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	09/10/14	09/10/14
EPA 8260B	NAPHTHALENE	0.50 U	1.0	0.50	0.36	ug/L	09/10/14	09/10/14
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	09/10/14	09/10/14
EPA 8260B	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.24	ug/L	09/10/14	09/10/14
EPA 8260B	TOLUENE	0.32 J	1.0	0.30	0.17	ug/L	09/10/14	09/10/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.18	ug/L	09/10/14	09/10/14
EPA 8260B	TRICHLOROETHENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
EPA 8260B	VINYL CHLORIDE	0.30 U	1.0	0.30	0.23	ug/L	09/10/14	09/10/14
EPA 8260B	XYLENES (TOTAL)	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14

J = Estimated value.

Quant Method: LALLW.M
Run #: 0910L15
Instrument: Loki
Sequence: 140909
Dilution Factor: 1
Initials: SV

Printed: 09/17/14 7:36:04 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN011

Sample Collection Date: 09/02/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02109

QCG: #86BHC-140910AL-189834

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	104	70-120			%	09/10/14	09/10/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.8	75-120			%	09/10/14	09/10/14
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	102	85-115			%	09/10/14	09/10/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.2	85-120			%	09/10/14	09/10/14

J = Estimated value.

Quant Method: LALLW.M
Run #: 0910L15
Instrument: Loki
Sequence: 140909
Dilution Factor: 1
Initials: SV

Printed: 09/17/14 7:36:04 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0910L15.D Vial: 14
Acq On : 10 Sep 14 15:36 Operator: DG,SV,RS
Sample : AZ02109W01 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 11 12:53 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	415040	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	391296	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	211136	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	260082	25.86043 ppb	0.00
Spiked Amount 25.423			Recovery = 101.720%		
38) 1,2-DCA-D4(S)	5.52	65	272894	25.77123 ppb	0.00
Spiked Amount 24.764			Recovery = 104.066%		
58) Toluene-D8(S)	7.71	98	806466	25.42497 ppb	0.00
Spiked Amount 25.636			Recovery = 99.177%		
66) 4-Bromofluorobenzene(S)	10.36	95	281459	23.76209 ppb	0.00
Spiked Amount 23.806			Recovery = 99.814%		
Target Compounds					Qvalue
4) Chloromethane	1.14	50	3768	0.44907 ppb	94
11) Acetone	2.25	43	5243	1.76579 ppb	93
53) Toluene	7.78	91	11699	0.32384 ppb	92

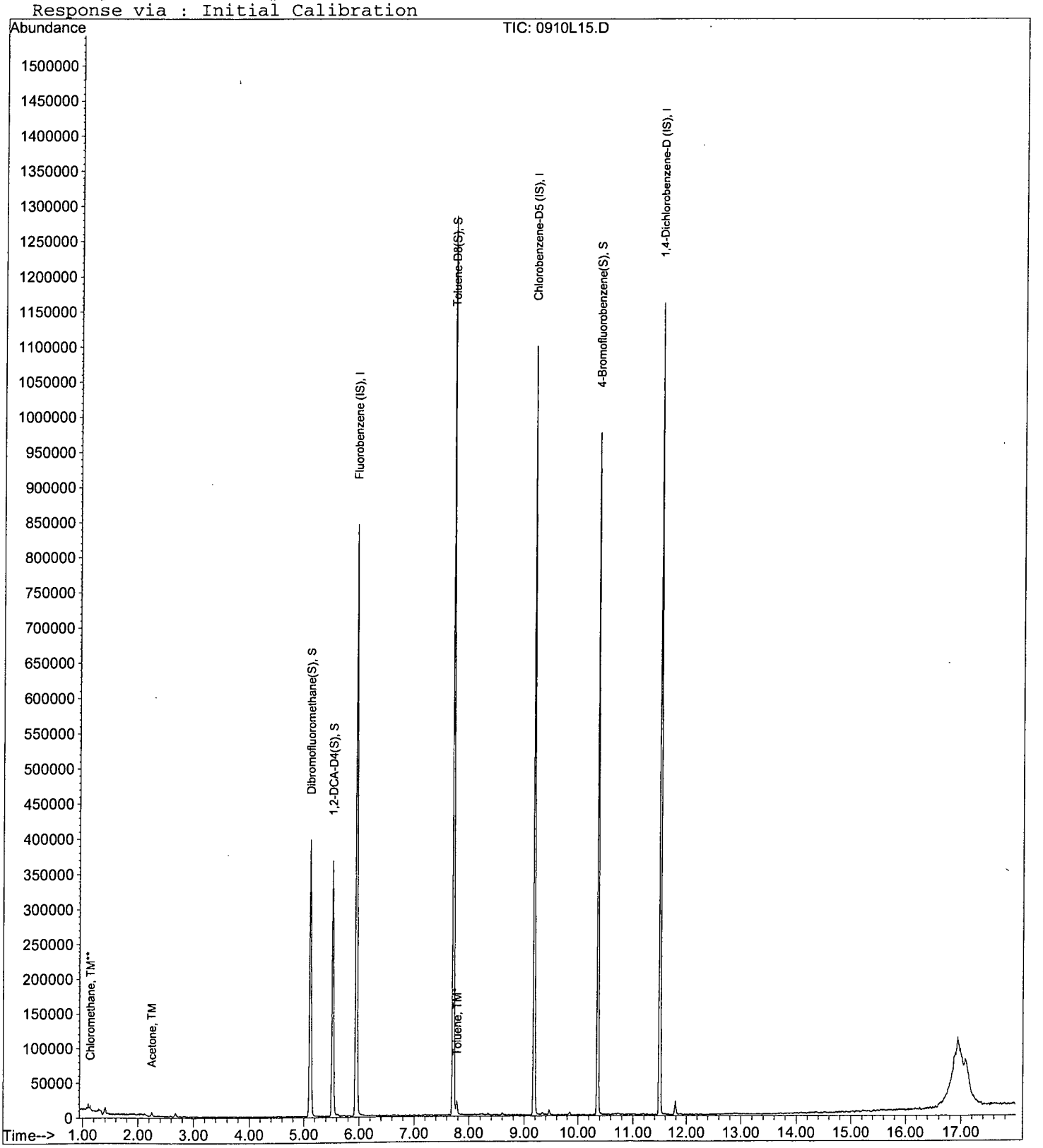
(#) = qualifier out of range (m) = manual integration

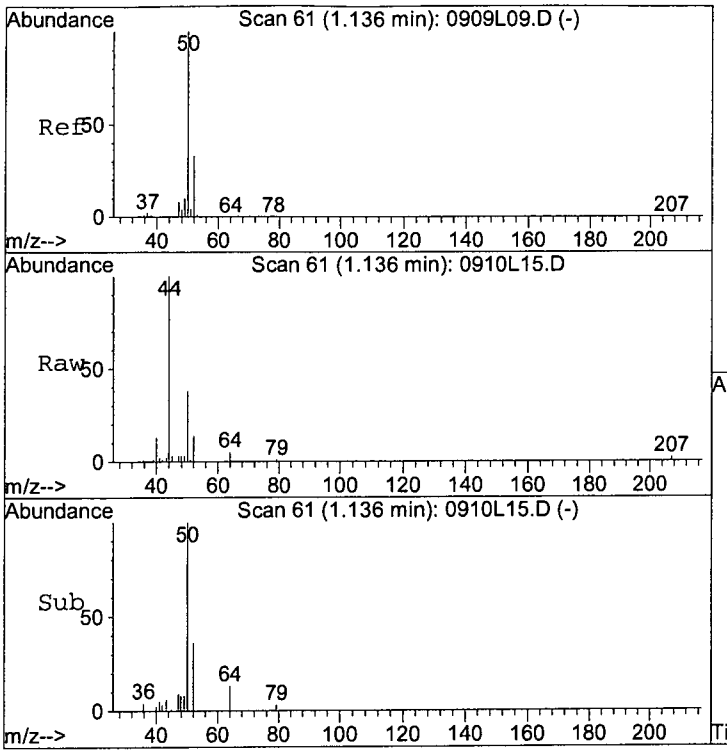
Quantitation Report

Data File : M:\LOKI\DATA\140909\0910L15.D Vial: 14
Acq On : 10 Sep 14 15:36 Operator: DG,SV,RS
Sample : AZ02109W01 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 11 12:53 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration

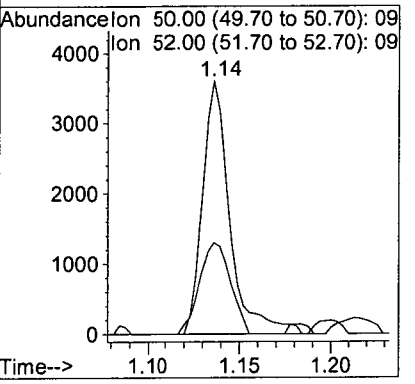


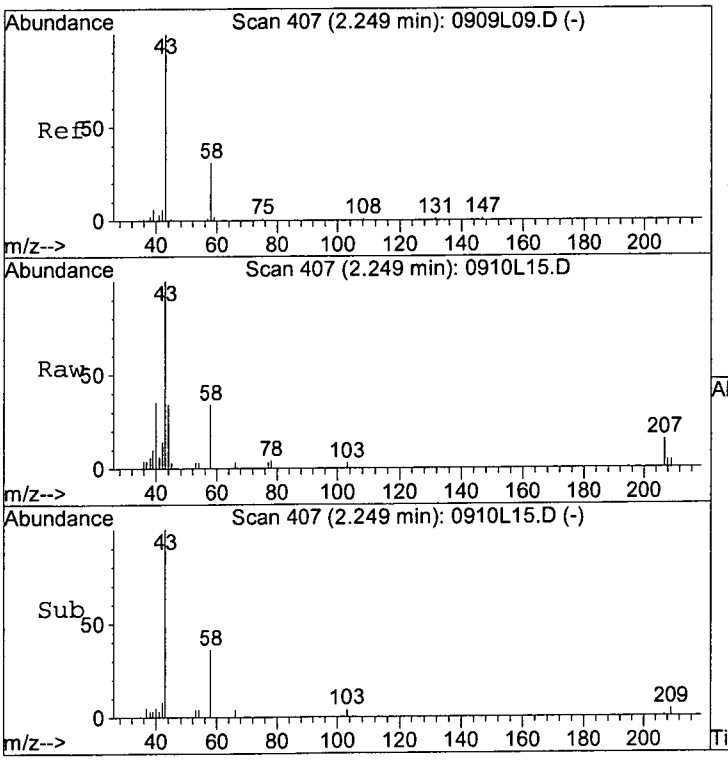


#4
Chloromethane
Concen: 0.44907 ppb
RT: 1.14 min Scan# 61
Delta R.T. 0.00 min
Lab File: 0910L15.D
Acq: 10 Sep 14 15:36

Tgt Ion: 50 Resp: 3768

Ion	Ratio	Lower	Upper
50	100		
52	36.1	22.8	42.4

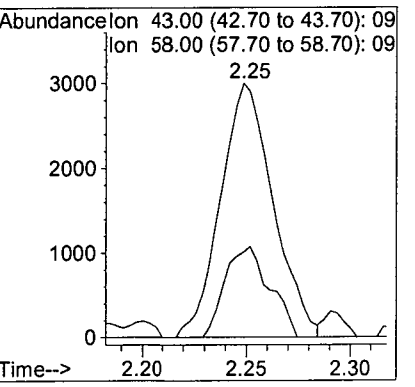


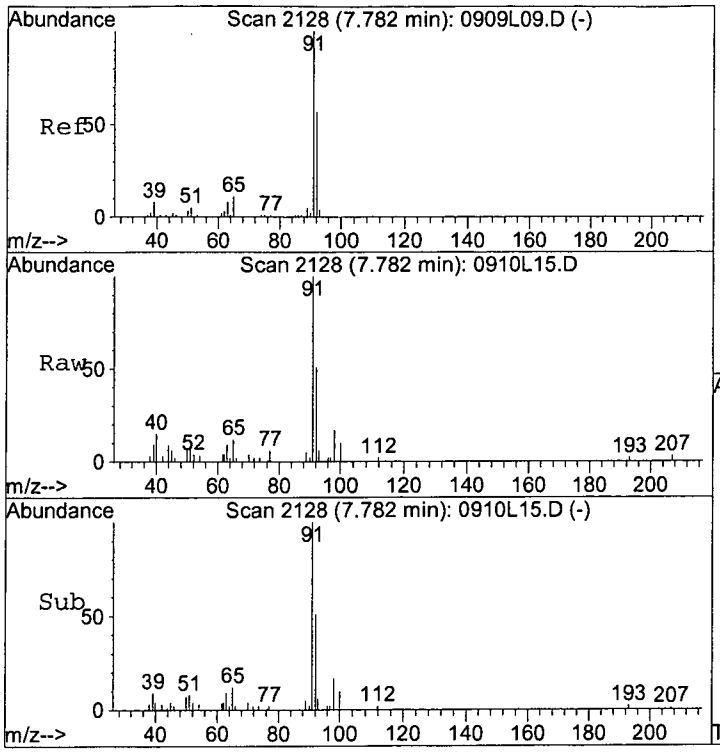


#11
Acetone
Concen: 1.76579 ppb
RT: 2.25 min Scan# 407
Delta R.T. 0.00 min
Lab File: 0910L15.D
Acq: 10 Sep 14 15:36

Tgt Ion: 43 Resp: 5243

Ion	Ratio	Lower	Upper
43	100		
58	33.8	21.1	39.1

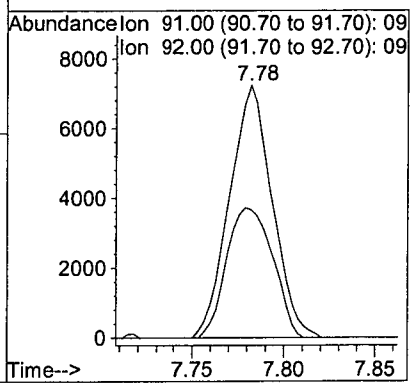




#53
Toluene
Concen: 0.32384 ppb
RT: 7.78 min Scan# 2128
Delta R.T. -0.00 min
Lab File: 0910L15.D
Acq: 10 Sep 14 15:36

Tgt Ion: 91 Resp: 11699

Ion	Ratio	Lower	Upper
91	100		
92	50.7	39.6	73.6



EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN012

Sample Collection Date: 09/03/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02110

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 14.1 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	0.8700 U	2.900	0.8700	0.4100	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.8700 U	2.900	0.8700	0.7900	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.5000 U	2.900	1.5000	0.5800	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHANE	0.8700 U	2.900	0.8700	0.5500	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHENE	1.5000 U	2.900	1.5000	0.8700	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	2.9000 U	5.800	2.9000	1.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DIBROMOETHANE	0.8700 U	2.900	0.8700	0.5800	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROETHANE	0.8700 U	2.900	0.8700	0.4100	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROPROPANE	0.8700 U	2.900	0.8700	0.4900	mg/kg	09/11/14	09/11/14
EPA 8260B	2-BUTANONE	5.8000 U	29.000	5.8000	1.7000	mg/kg	09/11/14	09/11/14
EPA 8260B	4-METHYL-2-PENTANONE	15.0000 U	29.000	15.0000	5.5000	mg/kg	09/11/14	09/11/14
EPA 8260B	ACETONE	15.0000 U	29.000	15.0000	8.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	BENZENE	0.8700 U	2.900	0.8700	0.4700	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMODICHLOROMETHANE	0.8700 U	2.900	0.8700	0.4100	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOFORM	0.8700 U	2.900	0.8700	0.4100	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOMETHANE	1.5000 U	5.800	1.5000	0.7000	mg/kg	09/11/14	09/11/14
EPA 8260B	CARBON TETRACHLORIDE	0.8700 U	2.900	0.8700	0.2900	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROBENZENE	1.5000 U	2.900	1.5000	0.6100	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROETHANE	1.5000 U	2.900	1.5000	0.6100	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROFORM	0.7300 U	2.900	0.7300	0.4700	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROMETHANE	1.5000 U	2.900	1.5000	0.9000	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.8700 U	2.900	0.8700	0.4700	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.8700 U	2.900	0.8700	0.4400	mg/kg	09/11/14	09/11/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.8700 U	2.900	0.8700	0.5500	mg/kg	09/11/14	09/11/14
EPA 8260B	ETHYLBENZENE	1.5000 U	2.900	1.5000	0.6700	mg/kg	09/11/14	09/11/14
EPA 8260B	METHYLENE CHLORIDE	2.9000 U	15.000	2.9000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	NAPHTHALENE	1.5000 U	2.900	1.5000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	STYRENE	1.5000 U	2.900	1.5000	0.7300	mg/kg	09/11/14	09/11/14
EPA 8260B	TETRACHLOROETHENE	0.8700 U	2.900	0.8700	0.4400	mg/kg	09/11/14	09/11/14
EPA 8260B	TOLUENE	0.8700 U	2.900	0.8700	0.4900	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.8700 U	2.900	0.8700	0.5500	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.8700 U	2.900	0.8700	0.5200	mg/kg	09/11/14	09/11/14
EPA 8260B	TRICHLOROETHENE	0.8700 U	2.900	0.8700	0.4700	mg/kg	09/11/14	09/11/14
EPA 8260B	VINYL CHLORIDE	0.8700 U	2.900	0.8700	0.6700	mg/kg	09/11/14	09/11/14
EPA 8260B	XYLENES (TOTAL)	0.8700 U	2.900	0.8700	0.5500	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L25
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:54 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN012

Sample Collection Date: 09/03/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02110

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	107	54-154			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	101	85-120			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.9	85-115			%	09/11/14	09/11/14

Quant Method:	LALLW.M
Run #:	0911L25
Instrument:	Loki
Sequence:	140909
Dilution Factor:	50
Initials:	SV

Printed: 09/19/14 11:57:54 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L25.D Vial: 22
Acq On : 11 Sep 14 21:37 Operator: DG,SV,RS
Sample : AZ02110S01 166.82g Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 44.96

Quant Time: Sep 16 14:34 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	393600	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	383488	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	214400	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	251018	26.31874 ppb	0.00
Spiked Amount 25.423			Recovery = 103.526%		
38) 1,2-DCA-D4(S)	5.52	65	265502	26.43893 ppb	0.00
Spiked Amount 24.764			Recovery = 106.764%		
58) Toluene-D8(S)	7.71	98	788088	25.35144 ppb	0.00
Spiked Amount 25.636			Recovery = 98.888%		
66) 4-Bromofluorobenzene(S)	10.36	95	278801	24.01693 ppb	0.00
Spiked Amount 23.806			Recovery = 100.885%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

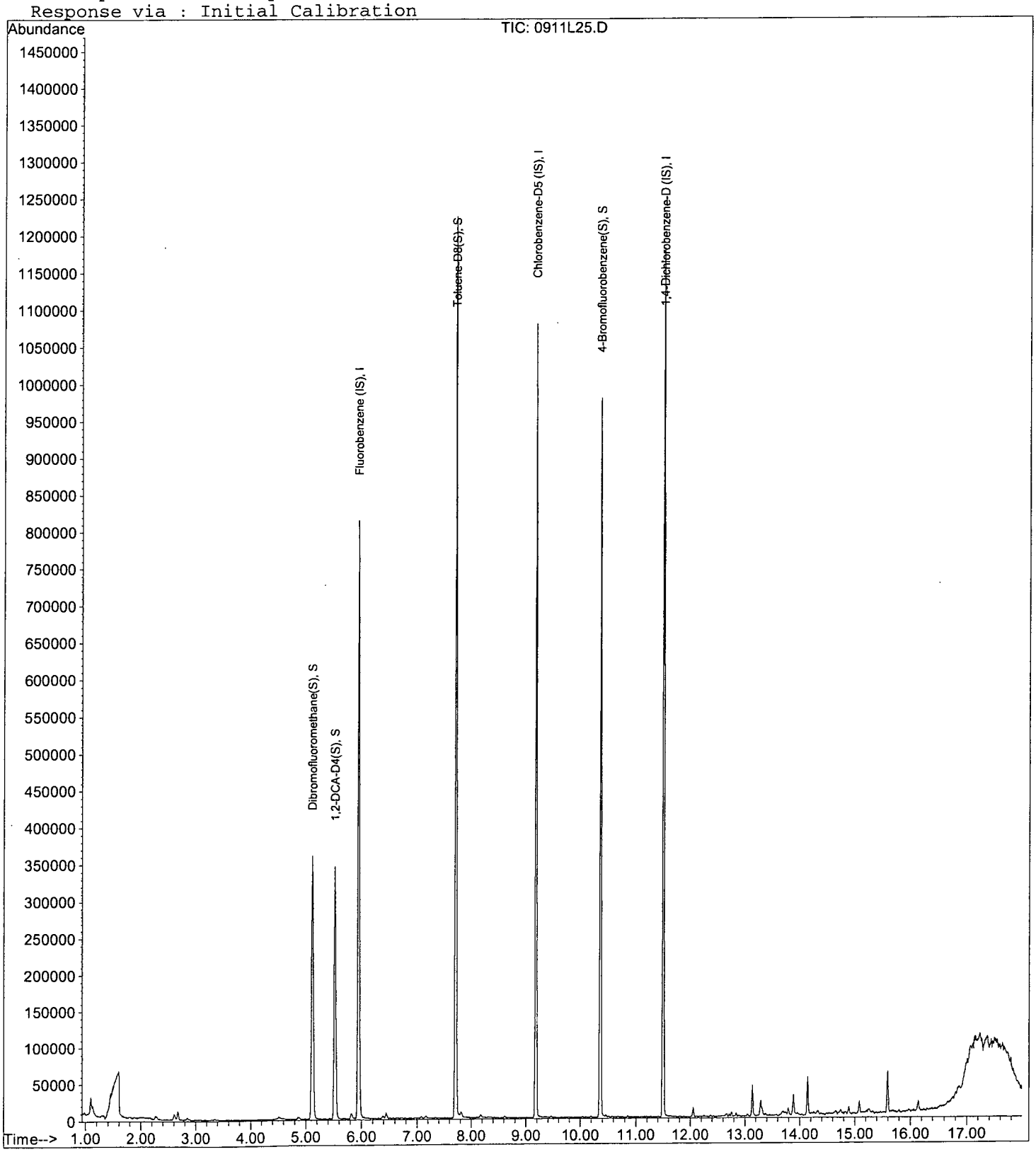
Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L25.D
Acq On : 11 Sep 14 21:37
Sample : AZ02110S01 166.82g
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 22
Operator: DG,SV,RS
Inst : Loki
Multiplr: 44.96

Quant Time: Sep 16 14:34 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN013

APPL ID: AZ02111

Sample Collection Date: 09/03/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 16.1 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	0.8900 U	3.000	0.8900	0.4200	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.8900 U	3.000	0.8900	0.8000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.5000 U	3.000	1.5000	0.6000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHANE	0.8900 U	3.000	0.8900	0.5700	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHENE	1.5000 U	3.000	1.5000	0.8900	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	3.0000 U	6.000	3.0000	1.2000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DIBROMOETHANE	0.8900 U	3.000	0.8900	0.6000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROETHANE	0.8900 U	3.000	0.8900	0.4200	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROPROPANE	0.8900 U	3.000	0.8900	0.5100	mg/kg	09/11/14	09/11/14
EPA 8260B	2-BUTANONE	6.0000 U	30.000	6.0000	1.8000	mg/kg	09/11/14	09/11/14
EPA 8260B	4-METHYL-2-PENTANONE	15.0000 U	30.000	15.0000	5.7000	mg/kg	09/11/14	09/11/14
EPA 8260B	ACETONE	15.0000 U	30.000	15.0000	8.3000	mg/kg	09/11/14	09/11/14
EPA 8260B	BENZENE	0.8900 U	3.000	0.8900	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMODICHLOROMETHANE	0.8900 U	3.000	0.8900	0.4200	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOFORM	0.8900 U	3.000	0.8900	0.4200	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOMETHANE	1.5000 U	6.000	1.5000	0.7200	mg/kg	09/11/14	09/11/14
EPA 8260B	CARBON TETRACHLORIDE	0.8900 U	3.000	0.8900	0.3000	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROBENZENE	1.5000 U	3.000	1.5000	0.6300	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROETHANE	1.5000 U	3.000	1.5000	0.6300	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROFORM	0.7400 U	3.000	0.7400	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROMETHANE	1.5000 U	3.000	1.5000	0.9200	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.8900 U	3.000	0.8900	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.8900 U	3.000	0.8900	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.8900 U	3.000	0.8900	0.5700	mg/kg	09/11/14	09/11/14
EPA 8260B	ETHYLBENZENE	1.5000 U	3.000	1.5000	0.6900	mg/kg	09/11/14	09/11/14
EPA 8260B	METHYLENE CHLORIDE	3.0000 U	15.000	3.0000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	NAPHTHALENE	1.5000 U	3.000	1.5000	1.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	STYRENE	1.5000 U	3.000	1.5000	0.7400	mg/kg	09/11/14	09/11/14
EPA 8260B	TETRACHLOROETHENE	0.8900 U	3.000	0.8900	0.4500	mg/kg	09/11/14	09/11/14
EPA 8260B	TOLUENE	0.8900 U	3.000	0.8900	0.5100	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.8900 U	3.000	0.8900	0.5700	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.8900 U	3.000	0.8900	0.5400	mg/kg	09/11/14	09/11/14
EPA 8260B	TRICHLOROETHENE	0.8900 U	3.000	0.8900	0.4800	mg/kg	09/11/14	09/11/14
EPA 8260B	VINYL CHLORIDE	0.8900 U	3.000	0.8900	0.6900	mg/kg	09/11/14	09/11/14
EPA 8260B	XYLENES (TOTAL)	0.8900 U	3.000	0.8900	0.5700	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L26
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:54 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN013

APPL ID: AZ02111

Sample Collection Date: 09/03/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	101	54-154			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	105	85-120			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	85-115			%	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L26
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:54 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L26.D Vial: 23
Acq On : 11 Sep 14 22:05 Operator: DG,SV,RS
Sample : AZ02111S01 172.86g Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 43.39

Quant Time: Sep 16 14:35 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	403968	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	378176	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	210816	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.11	111	250635	25.60413 ppb	0.00
Spiked Amount 25.423			Recovery = 100.713%		
38) 1,2-DCA-D4(S)	5.52	65	258744	25.10467 ppb	0.00
Spiked Amount 24.764			Recovery = 101.377%		
58) Toluene-D8(S)	7.71	98	797053	25.99998 ppb	0.00
Spiked Amount 25.636			Recovery = 101.420%		
66) 4-Bromofluorobenzene(S)	10.36	95	285415	24.93203 ppb	0.00
Spiked Amount 23.806			Recovery = 104.729%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

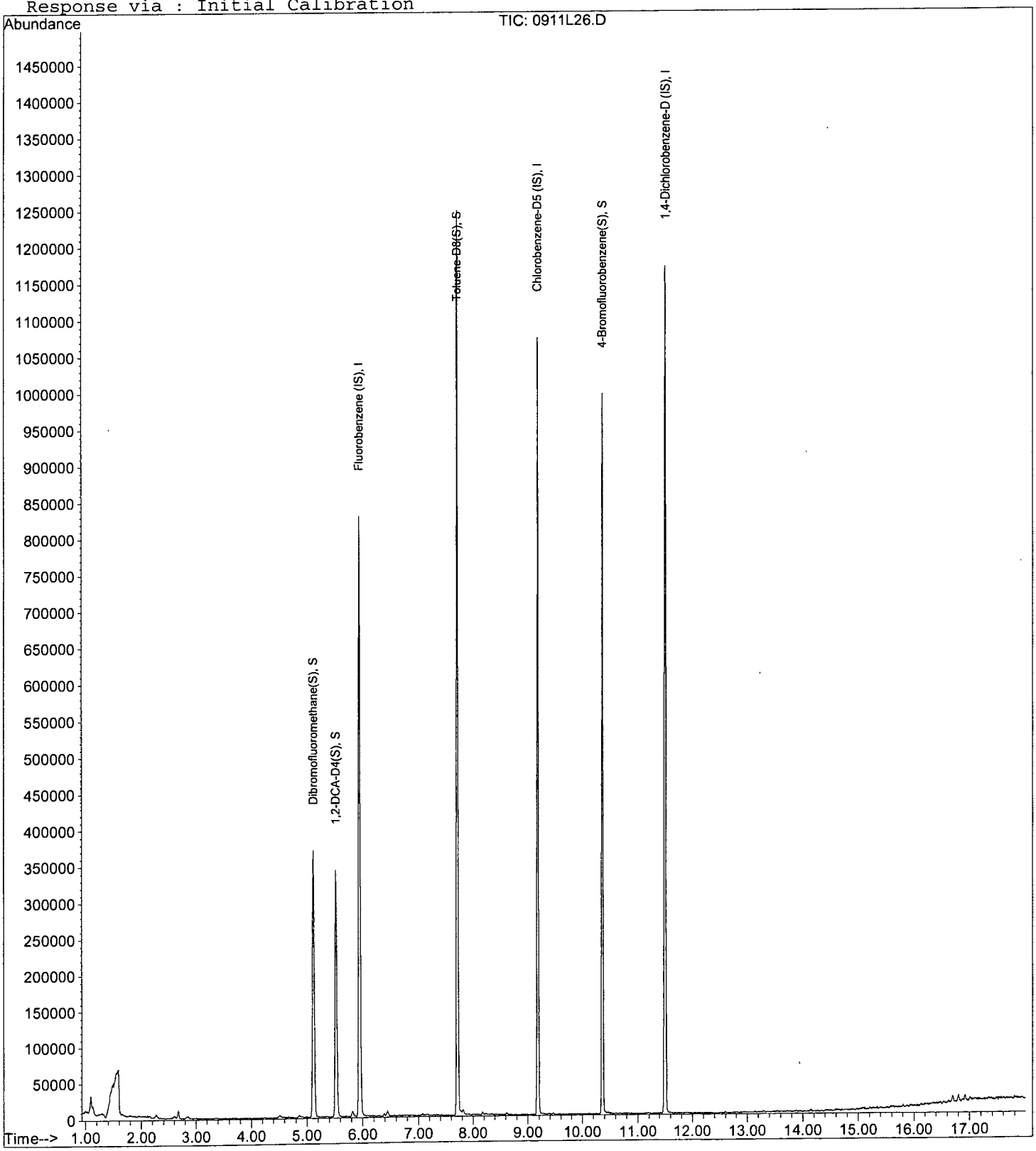
Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L26.D
Acq On : 11 Sep 14 22:05
Sample : AZ02111S01 172.86g
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 23
Operator: DG,SV,RS
Inst : Loki
Multiplr: 43.39

Quant Time: Sep 16 14:35 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN014

Sample Collection Date: 09/03/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02112

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 23.2 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	0.9800 U	3.300	0.9800	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.9800 U	3.300	0.9800	0.8800	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.6000 U	3.300	1.6000	0.6500	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHANE	0.9800 U	3.300	0.9800	0.6200	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHENE	1.6000 U	3.300	1.6000	0.9800	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	3.3000 U	6.500	3.3000	1.3000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DIBROMOETHANE	0.9800 U	3.300	0.9800	0.6500	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROETHANE	0.9800 U	3.300	0.9800	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROPROPANE	0.9800 U	3.300	0.9800	0.5500	mg/kg	09/11/14	09/11/14
EPA 8260B	2-BUTANONE	6.5000 U	33.000	6.5000	2.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	4-METHYL-2-PENTANONE	16.0000 U	33.000	16.0000	6.2000	mg/kg	09/11/14	09/11/14
EPA 8260B	ACETONE	16.0000 U	33.000	16.0000	9.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	BENZENE	0.9800 U	3.300	0.9800	0.5200	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMODICHLOROMETHANE	0.9800 U	3.300	0.9800	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOFORM	0.9800 U	3.300	0.9800	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOMETHANE	1.6000 U	6.500	1.6000	0.7800	mg/kg	09/11/14	09/11/14
EPA 8260B	CARBON TETRACHLORIDE	0.9800 U	3.300	0.9800	0.3300	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROBENZENE	1.6000 U	3.300	1.6000	0.6800	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROETHANE	1.6000 U	3.300	1.6000	0.6800	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROFORM	0.8100 U	3.300	0.8100	0.5200	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROMETHANE	1.6000 U	3.300	1.6000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.9800 U	3.300	0.9800	0.5200	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.9800 U	3.300	0.9800	0.4900	mg/kg	09/11/14	09/11/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.9800 U	3.300	0.9800	0.6200	mg/kg	09/11/14	09/11/14
EPA 8260B	ETHYLBENZENE	1.6000 U	3.300	1.6000	0.7500	mg/kg	09/11/14	09/11/14
EPA 8260B	METHYLENE CHLORIDE	3.3000 U	16.000	3.3000	1.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	NAPHTHALENE	1.6000 U	3.300	1.6000	1.2000	mg/kg	09/11/14	09/11/14
EPA 8260B	STYRENE	1.6000 U	3.300	1.6000	0.8100	mg/kg	09/11/14	09/11/14
EPA 8260B	TETRACHLOROETHENE	0.9800 U	3.300	0.9800	0.4900	mg/kg	09/11/14	09/11/14
EPA 8260B	TOLUENE	0.9800 U	3.300	0.9800	0.5500	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.9800 U	3.300	0.9800	0.6200	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.9800 U	3.300	0.9800	0.5900	mg/kg	09/11/14	09/11/14
EPA 8260B	TRICHLOROETHENE	0.9800 U	3.300	0.9800	0.5200	mg/kg	09/11/14	09/11/14
EPA 8260B	VINYL CHLORIDE	0.9800 U	3.300	0.9800	0.7500	mg/kg	09/11/14	09/11/14
EPA 8260B	XYLENES (TOTAL)	0.9800 U	3.300	0.9800	0.6200	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L27
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:55 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN014

Sample Collection Date: 09/03/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02112

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	105	54-154			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	102	85-120			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	100	85-115			%	09/11/14	09/11/14

Quant Method:	LALLW.M
Run #:	0911L27
Instrument:	Loki
Sequence:	140909
Dilution Factor:	50
Initials:	SV

Printed: 09/19/14 11:57:55 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L27.D Vial: 24
Acq On : 11 Sep 14 22:33 Operator: DG,SV,RS
Sample : AZ02112S01 171.07g Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 43.84

Quant Time: Sep 16 14:37 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	390016	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	373120	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	205760	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	248433	26.28707 ppb	0.00
Spiked Amount 25.423			Recovery = 103.400%		
38) 1,2-DCA-D4(S)	5.52	65	258571	25.98535 ppb	0.00
Spiked Amount 24.764			Recovery = 104.931%		
58) Toluene-D8(S)	7.71	98	778027	25.72325 ppb	0.00
Spiked Amount 25.636			Recovery = 100.339%		
66) 4-Bromofluorobenzene(S)	10.36	95	273821	24.24338 ppb	0.00
Spiked Amount 23.806			Recovery = 101.834%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

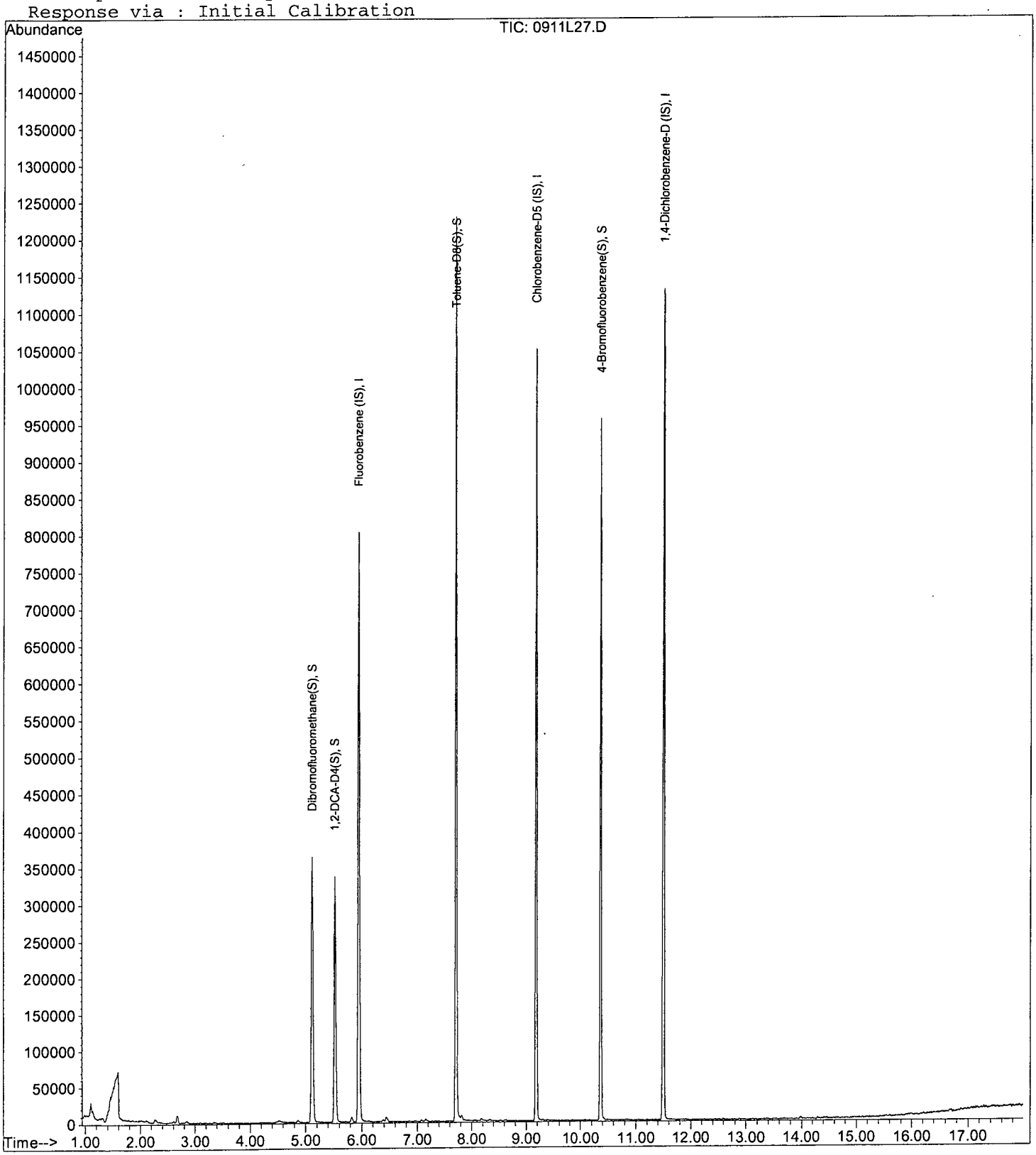
Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L27.D
Acq On : 11 Sep 14 22:33
Sample : AZ02112S01 171.07g
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 24
Operator: DG,SV,RS
Inst : Loki
Multiplr: 43.84

Quant Time: Sep 16 14:37 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN015

APPL ID: AZ02113

Sample Collection Date: 09/03/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 13.6 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	0.8700 U	2.900	0.8700	0.4100	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.8700 U	2.900	0.8700	0.7800	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.4000 U	2.900	1.4000	0.5800	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHANE	0.8700 U	2.900	0.8700	0.5500	mg/kg	09/11/14	09/11/14
EPA 8260B	1,1-DICHLOROETHENE	1.4000 U	2.900	1.4000	0.8700	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	2.9000 U	5.800	2.9000	1.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DIBROMOETHANE	0.8700 U	2.900	0.8700	0.5800	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROETHANE	0.8700 U	2.900	0.8700	0.4100	mg/kg	09/11/14	09/11/14
EPA 8260B	1,2-DICHLOROPROPANE	0.8700 U	2.900	0.8700	0.4900	mg/kg	09/11/14	09/11/14
EPA 8260B	2-BUTANONE	5.8000 U	29.000	5.8000	1.7000	mg/kg	09/11/14	09/11/14
EPA 8260B	4-METHYL-2-PENTANONE	14.0000 U	29.000	14.0000	5.5000	mg/kg	09/11/14	09/11/14
EPA 8260B	ACETONE	14.0000 U	29.000	14.0000	8.1000	mg/kg	09/11/14	09/11/14
EPA 8260B	BENZENE	0.8700 U	2.900	0.8700	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMODICHLOROMETHANE	0.8700 U	2.900	0.8700	0.4100	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOFORM	0.8700 U	2.900	0.8700	0.4100	mg/kg	09/11/14	09/11/14
EPA 8260B	BROMOMETHANE	1.4000 U	5.800	1.4000	0.6900	mg/kg	09/11/14	09/11/14
EPA 8260B	CARBON TETRACHLORIDE	0.8700 U	2.900	0.8700	0.2900	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROBENZENE	1.4000 U	2.900	1.4000	0.6100	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROETHANE	1.4000 U	2.900	1.4000	0.6100	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROFORM	0.7200 U	2.900	0.7200	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	CHLOROMETHANE	1.4000 U	2.900	1.4000	0.9000	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.8700 U	2.900	0.8700	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.8700 U	2.900	0.8700	0.4300	mg/kg	09/11/14	09/11/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.8700 U	2.900	0.8700	0.5500	mg/kg	09/11/14	09/11/14
EPA 8260B	ETHYLBENZENE	1.4000 U	2.900	1.4000	0.6700	mg/kg	09/11/14	09/11/14
EPA 8260B	METHYLENE CHLORIDE	2.9000 U	14.000	2.9000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	NAPHTHALENE	1.4000 U	2.900	1.4000	1.0000	mg/kg	09/11/14	09/11/14
EPA 8260B	STYRENE	1.4000 U	2.900	1.4000	0.7200	mg/kg	09/11/14	09/11/14
EPA 8260B	TETRACHLOROETHENE	0.8700 U	2.900	0.8700	0.4300	mg/kg	09/11/14	09/11/14
EPA 8260B	TOLUENE	0.8700 U	2.900	0.8700	0.4900	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.8700 U	2.900	0.8700	0.5500	mg/kg	09/11/14	09/11/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.8700 U	2.900	0.8700	0.5200	mg/kg	09/11/14	09/11/14
EPA 8260B	TRICHLOROETHENE	0.8700 U	2.900	0.8700	0.4600	mg/kg	09/11/14	09/11/14
EPA 8260B	VINYL CHLORIDE	0.8700 U	2.900	0.8700	0.6700	mg/kg	09/11/14	09/11/14
EPA 8260B	XYLENES (TOTAL)	0.8700 U	2.900	0.8700	0.5500	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L28
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:55 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN015

APPL ID: AZ02113

Sample Collection Date: 09/03/14

QCG: #86BHC-140911AL-189818

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	110	54-154			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	106	85-120			%	09/11/14	09/11/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	85-115			%	09/11/14	09/11/14

Quant Method:	LALLW.M
Run #:	0911L28
Instrument:	Loki
Sequence:	140909
Dilution Factor:	50
Initials:	SV

Printed: 09/19/14 11:57:55 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L28.D Vial: 25
Acq On : 11 Sep 14 23:01 Operator: DG,SV,RS
Sample : AZ02113S01 163.03g Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 46.00

Quant Time: Sep 16 14:38 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	379648	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	369728	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	215232	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	249209	27.08931 ppb	0.00
Spiked Amount 25.423			Recovery = 106.554%		
38) 1,2-DCA-D4(S)	5.52	65	264577	27.31506 ppb	0.00
Spiked Amount 24.764			Recovery = 110.301%		
58) Toluene-D8(S)	7.71	98	773148	25.79646 ppb	0.00
Spiked Amount 25.636			Recovery = 100.624%		
66) 4-Bromofluorobenzene(S)	10.36	95	282003	25.19685 ppb	0.00
Spiked Amount 23.806			Recovery = 105.842%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

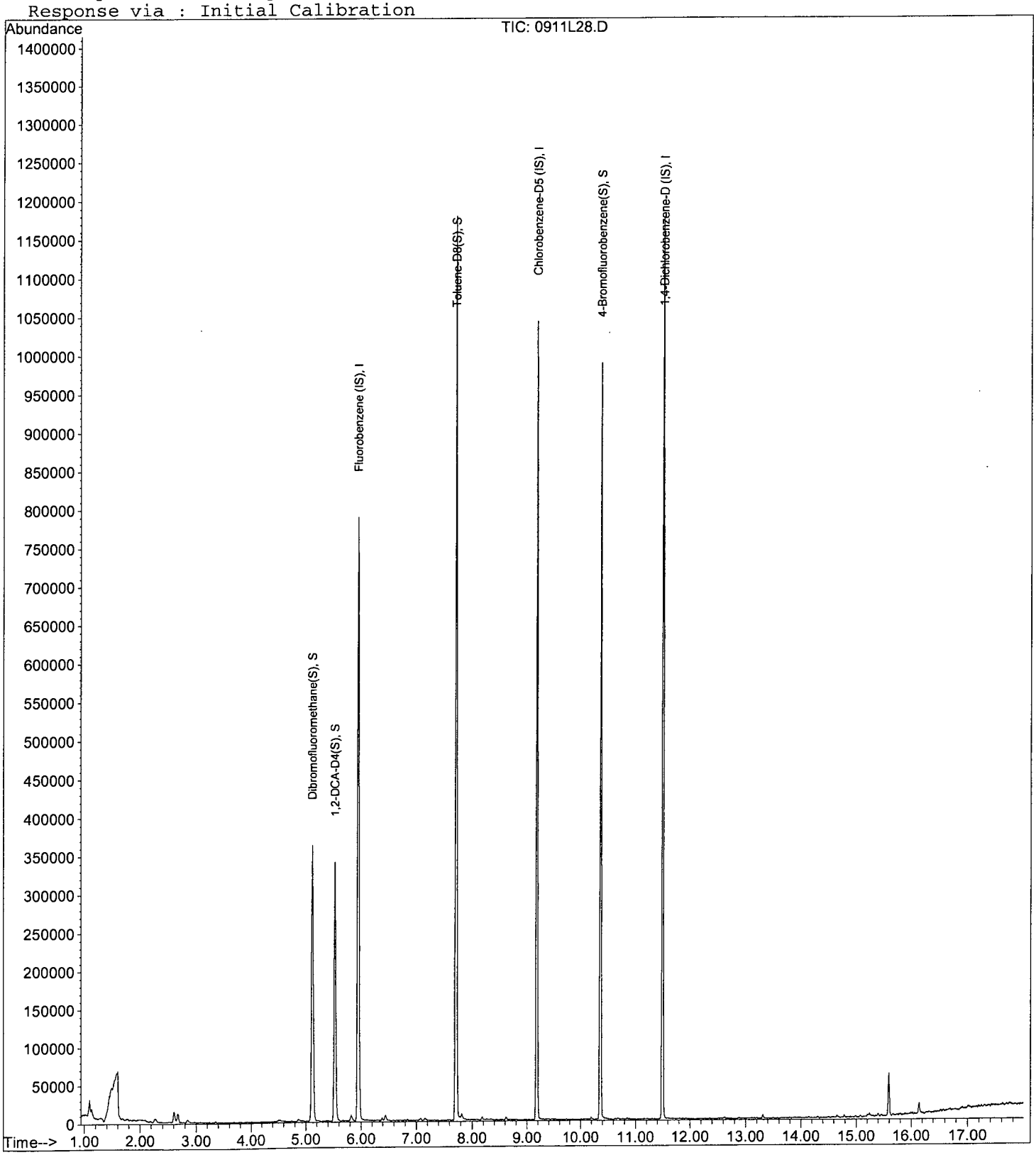
Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L28.D
Acq On : 11 Sep 14 23:01
Sample : AZ02113S01 163.03g
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 25
Operator: DG,SV,RS
Inst : Loki
Multiplr: 46.00

Quant Time: Sep 16 14:38 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN016
Sample Collection Date: 09/03/14

ARF: 74218
APPL ID: AZ02114
QCG: #86BHC-140911BL-189823

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 16.4 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	0.9000 U	3.000	0.9000	0.4200	mg/kg	09/12/14	09/12/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.9000 U	3.000	0.9000	0.8100	mg/kg	09/12/14	09/12/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.5000 U	3.000	1.5000	0.6000	mg/kg	09/12/14	09/12/14
EPA 8260B	1,1-DICHLOROETHANE	0.9000 U	3.000	0.9000	0.5700	mg/kg	09/12/14	09/12/14
EPA 8260B	1,1-DICHLOROETHENE	1.5000 U	3.000	1.5000	0.9000	mg/kg	09/12/14	09/12/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	3.0000 U	6.000	3.0000	1.2000	mg/kg	09/12/14	09/12/14
EPA 8260B	1,2-DIBROMOETHANE	0.9000 U	3.000	0.9000	0.6000	mg/kg	09/12/14	09/12/14
EPA 8260B	1,2-DICHLOROETHANE	0.9000 U	3.000	0.9000	0.4200	mg/kg	09/12/14	09/12/14
EPA 8260B	1,2-DICHLOROPROPANE	0.9000 U	3.000	0.9000	0.5100	mg/kg	09/12/14	09/12/14
EPA 8260B	2-BUTANONE	6.0000 U	30.000	6.0000	1.8000	mg/kg	09/12/14	09/12/14
EPA 8260B	4-METHYL-2-PENTANONE	15.0000 U	30.000	15.0000	5.7000	mg/kg	09/12/14	09/12/14
EPA 8260B	ACETONE	15.0000 U	30.000	15.0000	8.4000	mg/kg	09/12/14	09/12/14
EPA 8260B	BENZENE	0.9000 U	3.000	0.9000	0.4800	mg/kg	09/12/14	09/12/14
EPA 8260B	BROMODICHLOROMETHANE	0.9000 U	3.000	0.9000	0.4200	mg/kg	09/12/14	09/12/14
EPA 8260B	BROMOFORM	0.9000 U	3.000	0.9000	0.4200	mg/kg	09/12/14	09/12/14
EPA 8260B	BROMOMETHANE	1.5000 U	6.000	1.5000	0.7200	mg/kg	09/12/14	09/12/14
EPA 8260B	CARBON TETRACHLORIDE	0.9000 U	3.000	0.9000	0.3000	mg/kg	09/12/14	09/12/14
EPA 8260B	CHLOROBENZENE	1.5000 U	3.000	1.5000	0.6300	mg/kg	09/12/14	09/12/14
EPA 8260B	CHLOROETHANE	1.5000 U	3.000	1.5000	0.6300	mg/kg	09/12/14	09/12/14
EPA 8260B	CHLOROFORM	0.7500 U	3.000	0.7500	0.4800	mg/kg	09/12/14	09/12/14
EPA 8260B	CHLOROMETHANE	1.5000 U	3.000	1.5000	0.9300	mg/kg	09/12/14	09/12/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.9000 U	3.000	0.9000	0.4800	mg/kg	09/12/14	09/12/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.9000 U	3.000	0.9000	0.4500	mg/kg	09/12/14	09/12/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.9000 U	3.000	0.9000	0.5700	mg/kg	09/12/14	09/12/14
EPA 8260B	ETHYLBENZENE	1.5000 U	3.000	1.5000	0.6900	mg/kg	09/12/14	09/12/14
EPA 8260B	METHYLENE CHLORIDE	3.0000 U	15.000	3.0000	1.0000	mg/kg	09/12/14	09/12/14
EPA 8260B	NAPHTHALENE	1.5000 U	3.000	1.5000	1.1000	mg/kg	09/12/14	09/12/14
EPA 8260B	STYRENE	1.5000 U	3.000	1.5000	0.7500	mg/kg	09/12/14	09/12/14
EPA 8260B	TETRACHLOROETHENE	0.9000 U	3.000	0.9000	0.4500	mg/kg	09/12/14	09/12/14
EPA 8260B	TOLUENE	0.9000 U	3.000	0.9000	0.5100	mg/kg	09/12/14	09/12/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.9000 U	3.000	0.9000	0.5700	mg/kg	09/12/14	09/12/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.9000 U	3.000	0.9000	0.5400	mg/kg	09/12/14	09/12/14
EPA 8260B	TRICHLOROETHENE	0.9000 U	3.000	0.9000	0.4800	mg/kg	09/12/14	09/12/14
EPA 8260B	VINYL CHLORIDE	0.9000 U	3.000	0.9000	0.6900	mg/kg	09/12/14	09/12/14
EPA 8260B	XYLENES (TOTAL)	0.9000 U	3.000	0.9000	0.5700	mg/kg	09/12/14	09/12/14

Quant Method: LALLW.M
Run #: 0911L42
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:55 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN016

APPL ID: AZ02114

Sample Collection Date: 09/03/14

QCG: #86BHC-140911BL-189823

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	102	54-154			%	09/12/14	09/12/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	101	85-120			%	09/12/14	09/12/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.0	85-115			%	09/12/14	09/12/14

Quant Method: LALLW.M
Run #: 0911L42
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:55 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L42.D Vial: 39
Acq On : 12 Sep 14 5:30 Operator: DG,SV,RS
Sample : AZ02114S01 172.644g DF50 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 43.44

Quant Time: Sep 16 14:40 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	398336	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	388544	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	219904	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	248971	25.79375 ppb	0.00
Spiked Amount 25.423			Recovery = 101.461%		
38) 1,2-DCA-D4(S)	5.52	65	256965	25.28457 ppb	0.00
Spiked Amount 24.764			Recovery = 102.104%		
58) Toluene-D8(S)	7.71	98	790964	25.11287 ppb	0.00
Spiked Amount 25.636			Recovery = 97.960%		
66) 4-Bromofluorobenzene(S)	10.36	95	282942	24.05648 ppb	0.00
Spiked Amount 23.806			Recovery = 101.049%		

Target Compounds Qvalue

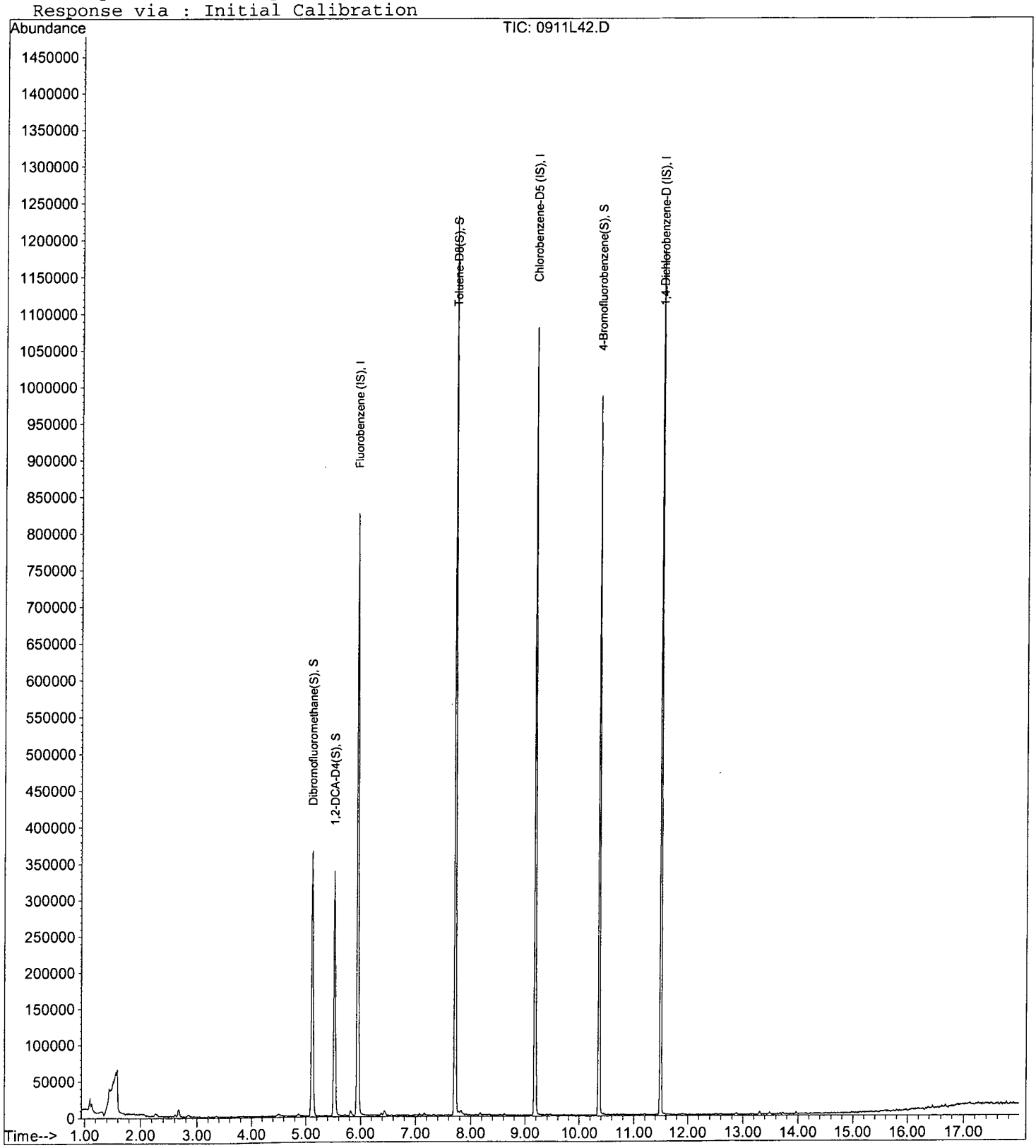
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L42.D Vial: 39
Acq On : 12 Sep 14 5:30 Operator: DG,SV,RS
Sample : AZ02114S01 172.644g DF50 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 43.44

Quant Time: Sep 16 14:40 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN017

APPL ID: AZ02115

Sample Collection Date: 09/03/14

QCG: #86BHC-140911BL-189823

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 25.6 Percent Moisture.)								
EPA 8260B	1,1,1-TRICHLOROETHANE	1.0000 U	3.400	1.0000	0.4700	mg/kg	09/12/14	09/12/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	1.0000 U	3.400	1.0000	0.9100	mg/kg	09/12/14	09/12/14
EPA 8260B	1,1,2-TRICHLOROETHANE	1.7000 U	3.400	1.7000	0.6700	mg/kg	09/12/14	09/12/14
EPA 8260B	1,1-DICHLOROETHANE	1.0000 U	3.400	1.0000	0.6400	mg/kg	09/12/14	09/12/14
EPA 8260B	1,1-DICHLOROETHENE	1.7000 U	3.400	1.7000	1.0000	mg/kg	09/12/14	09/12/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	3.4000 U	6.700	3.4000	1.3000	mg/kg	09/12/14	09/12/14
EPA 8260B	1,2-DIBROMOETHANE	1.0000 U	3.400	1.0000	0.6700	mg/kg	09/12/14	09/12/14
EPA 8260B	1,2-DICHLOROETHANE	1.0000 U	3.400	1.0000	0.4700	mg/kg	09/12/14	09/12/14
EPA 8260B	1,2-DICHLOROPROPANE	1.0000 U	3.400	1.0000	0.5700	mg/kg	09/12/14	09/12/14
EPA 8260B	2-BUTANONE	6.7000 U	34.000	6.7000	2.0000	mg/kg	09/12/14	09/12/14
EPA 8260B	4-METHYL-2-PENTANONE	17.0000 U	34.000	17.0000	6.4000	mg/kg	09/12/14	09/12/14
EPA 8260B	ACETONE	17.0000 U	34.000	17.0000	9.4000	mg/kg	09/12/14	09/12/14
EPA 8260B	BENZENE	1.0000 U	3.400	1.0000	0.5400	mg/kg	09/12/14	09/12/14
EPA 8260B	BROMODICHLOROMETHANE	1.0000 U	3.400	1.0000	0.4700	mg/kg	09/12/14	09/12/14
EPA 8260B	BROMOFORM	1.0000 U	3.400	1.0000	0.4700	mg/kg	09/12/14	09/12/14
EPA 8260B	BROMOMETHANE	1.7000 U	6.700	1.7000	0.8100	mg/kg	09/12/14	09/12/14
EPA 8260B	CARBON TETRACHLORIDE	1.0000 U	3.400	1.0000	0.3400	mg/kg	09/12/14	09/12/14
EPA 8260B	CHLOROBENZENE	1.7000 U	3.400	1.7000	0.7100	mg/kg	09/12/14	09/12/14
EPA 8260B	CHLOROETHANE	1.7000 U	3.400	1.7000	0.7100	mg/kg	09/12/14	09/12/14
EPA 8260B	CHLOROFORM	0.8400 U	3.400	0.8400	0.5400	mg/kg	09/12/14	09/12/14
EPA 8260B	CHLOROMETHANE	1.7000 U	3.400	1.7000	1.0000	mg/kg	09/12/14	09/12/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	1.0000 U	3.400	1.0000	0.5400	mg/kg	09/12/14	09/12/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	1.0000 U	3.400	1.0000	0.5000	mg/kg	09/12/14	09/12/14
EPA 8260B	DIBROMOCHLOROMETHANE	1.0000 U	3.400	1.0000	0.6400	mg/kg	09/12/14	09/12/14
EPA 8260B	ETHYLBENZENE	1.7000 U	3.400	1.7000	0.7700	mg/kg	09/12/14	09/12/14
EPA 8260B	METHYLENE CHLORIDE	3.4000 U	17.000	3.4000	1.2000	mg/kg	09/12/14	09/12/14
EPA 8260B	NAPHTHALENE	1.7000 U	3.400	1.7000	1.2000	mg/kg	09/12/14	09/12/14
EPA 8260B	STYRENE	1.7000 U	3.400	1.7000	0.8400	mg/kg	09/12/14	09/12/14
EPA 8260B	TETRACHLOROETHENE	1.0000 U	3.400	1.0000	0.5000	mg/kg	09/12/14	09/12/14
EPA 8260B	TOLUENE	1.0000 U	3.400	1.0000	0.5700	mg/kg	09/12/14	09/12/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	1.0000 U	3.400	1.0000	0.6400	mg/kg	09/12/14	09/12/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	1.0000 U	3.400	1.0000	0.6000	mg/kg	09/12/14	09/12/14
EPA 8260B	TRICHLOROETHENE	1.0000 U	3.400	1.0000	0.5400	mg/kg	09/12/14	09/12/14
EPA 8260B	VINYL CHLORIDE	1.0000 U	3.400	1.0000	0.7700	mg/kg	09/12/14	09/12/14
EPA 8260B	XYLENES (TOTAL)	1.0000 U	3.400	1.0000	0.6400	mg/kg	09/12/14	09/12/14

Quant Method: LALLW.M
Run #: 0911L43
Instrument: Loki
Sequence: 140909
Dilution Factor: 50
Initials: SV

Printed: 09/19/14 11:57:55 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B SOIL MEOH

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN017

Sample Collection Date: 09/03/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02115

QCG: #86BHC-140911BL-189823

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	103	54-154			%	09/12/14	09/12/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	104	85-120			%	09/12/14	09/12/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	102	85-115			%	09/12/14	09/12/14

Quant Method:	LALLW.M
Run #:	0911L43
Instrument:	Loki
Sequence:	140909
Dilution Factor:	50
Initials:	SV

Printed: 09/19/14 11:57:55 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L43.D Vial: 40
Acq On : 12 Sep 14 5:58 Operator: DG,SV,RS
Sample : AZ02115S01 DF50 163.34g Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 45.92

Quant Time: Sep 16 14:42 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	384512	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	366912	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	214656	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	246433	26.44870 ppb	0.00
Spiked Amount 25.423			Recovery = 104.037%		
38) 1,2-DCA-D4(S)	5.52	65	249789	25.46212 ppb	0.00
Spiked Amount 24.764			Recovery = 102.819%		
58) Toluene-D8(S)	7.71	98	779459	26.20663 ppb	0.00
Spiked Amount 25.636			Recovery = 102.227%		
66) 4-Bromofluorobenzene(S)	10.36	95	275698	24.82256 ppb	0.00
Spiked Amount 23.806			Recovery = 104.271%		

Target Compounds Qvalue

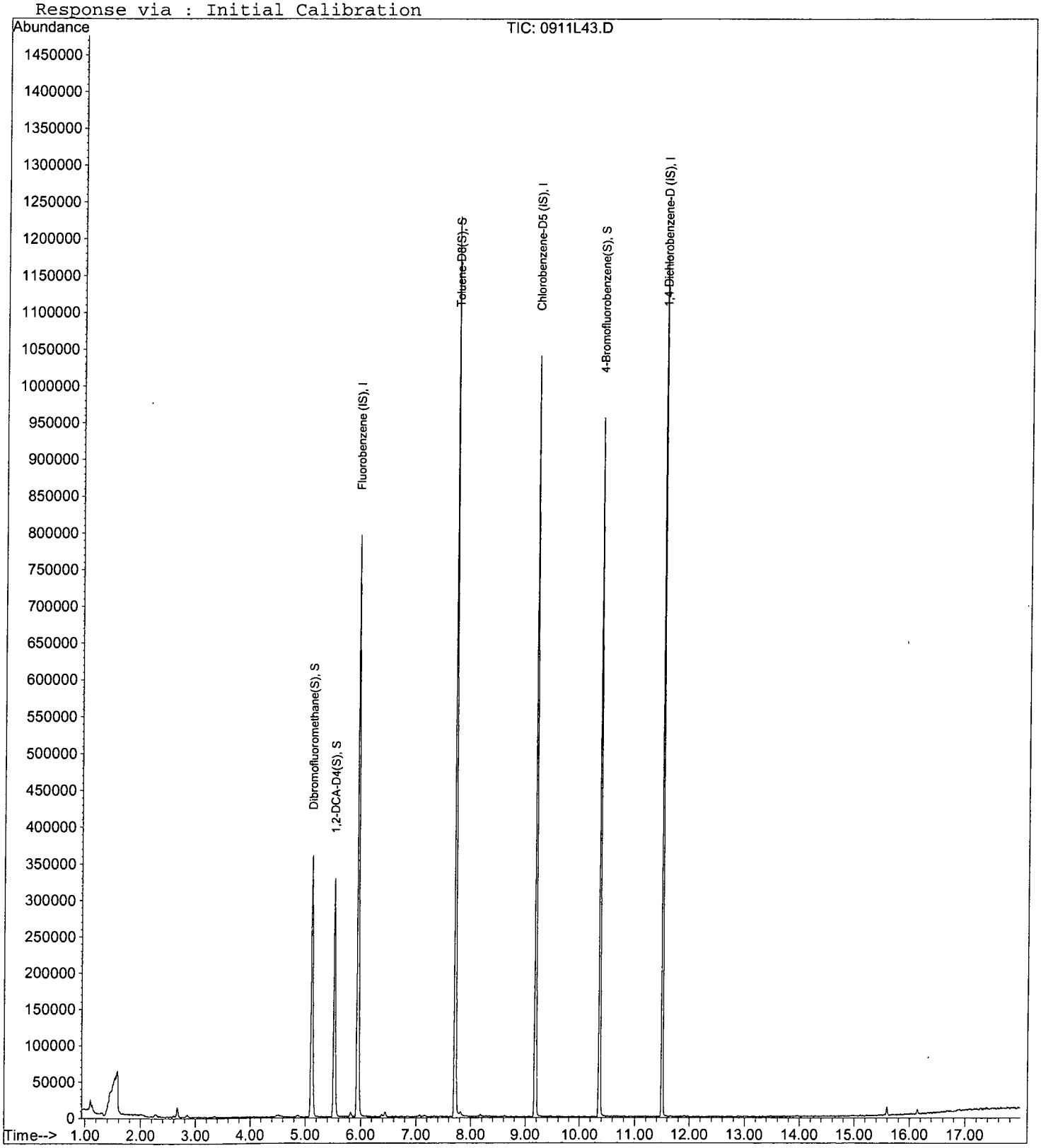
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L43.D Vial: 40
Acq On : 12 Sep 14 5:58 Operator: DG,SV,RS
Sample : AZ02115S01 DF50 163.34g Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 45.92

Quant Time: Sep 16 14:42 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



EPA 8260B WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN018
Sample Collection Date: 09/03/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218
APPL ID: AZ02116
QCG: #86BHC-140910AL-189834

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	09/10/14	09/10/14
EPA 8260B	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	09/10/14	09/10/14
EPA 8260B	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
EPA 8260B	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.30	ug/L	09/10/14	09/10/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	1.00 U	2.0	1.00	0.39	ug/L	09/10/14	09/10/14
EPA 8260B	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	09/10/14	09/10/14
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.17	ug/L	09/10/14	09/10/14
EPA 8260B	2-BUTANONE	2.00 U	10.0	2.00	0.60	ug/L	09/10/14	09/10/14
EPA 8260B	4-METHYL-2-PENTANONE	5.00 U	10.0	5.00	1.90	ug/L	09/10/14	09/10/14
EPA 8260B	ACETONE	2.6 J	10.0	2.00	0.95	ug/L	09/10/14	09/10/14
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
EPA 8260B	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	09/10/14	09/10/14
EPA 8260B	CARBON TETRACHLORIDE	0.30 U	1.0	0.30	0.10	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROETHANE	0.50 U	1.0	0.50	0.21	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROMETHANE	0.50 U	1.0	0.50	0.42	ug/L	09/10/14	09/10/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	09/10/14	09/10/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	09/10/14	09/10/14
EPA 8260B	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	09/10/14	09/10/14
EPA 8260B	NAPHTHALENE	0.50 U	1.0	0.50	0.36	ug/L	09/10/14	09/10/14
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	09/10/14	09/10/14
EPA 8260B	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.24	ug/L	09/10/14	09/10/14
EPA 8260B	TOLUENE	0.19 J	1.0	0.30	0.17	ug/L	09/10/14	09/10/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.18	ug/L	09/10/14	09/10/14
EPA 8260B	TRICHLOROETHENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
EPA 8260B	VINYL CHLORIDE	0.30 U	1.0	0.30	0.23	ug/L	09/10/14	09/10/14
EPA 8260B	XYLENES (TOTAL)	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14

J = Estimated value.

Quant Method: LALLW.M
Run #: 0910L16
Instrument: Loki
Sequence: 140909
Dilution Factor: 1
Initials: SV

Printed: 09/17/14 7:36:05 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

Sample ID: EN018

Sample Collection Date: 09/03/14

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 74218

APPL ID: AZ02116

QCG: #86BHC-140910AL-189834

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	104	70-120			%	09/10/14	09/10/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.6	75-120			%	09/10/14	09/10/14
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	103	85-115			%	09/10/14	09/10/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	97.9	85-120			%	09/10/14	09/10/14

J = Estimated value.

Quant Method: LALLW.M
Run #: 0910L16
Instrument: Loki
Sequence: 140909
Dilution Factor: 1
Initials: SV

Printed: 09/17/14 7:36:05 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0910L16.D
Acq On : 10 Sep 14 16:04
Sample : AZ02116W01
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 15
Operator: DG,SV,RS
Inst : Loki
Multiplr: 1.00

Quant Time: Sep 11 12:54 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	411328	25.00000	ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	388160	25.00000	ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	210432	25.00000	ppb	0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.12	111	260407	26.12641	ppb	0.00
Spiked Amount 25.423			Recovery = 102.766%			
38) 1,2-DCA-D4(S)	5.52	65	269169	25.64885	ppb	0.00
Spiked Amount 24.764			Recovery = 103.574%			
58) Toluene-D8(S)	7.71	98	789605	25.09452	ppb	0.00
Spiked Amount 25.636			Recovery = 97.890%			
66) 4-Bromofluorobenzene(S)	10.36	95	270199	22.99576	ppb	0.00
Spiked Amount 23.806			Recovery = 96.596%			
Target Compounds						Qvalue
11) Acetone	2.25	43	6831	2.63855	ppb	85
53) Toluene	7.78	91	6689	0.18683	ppb	96

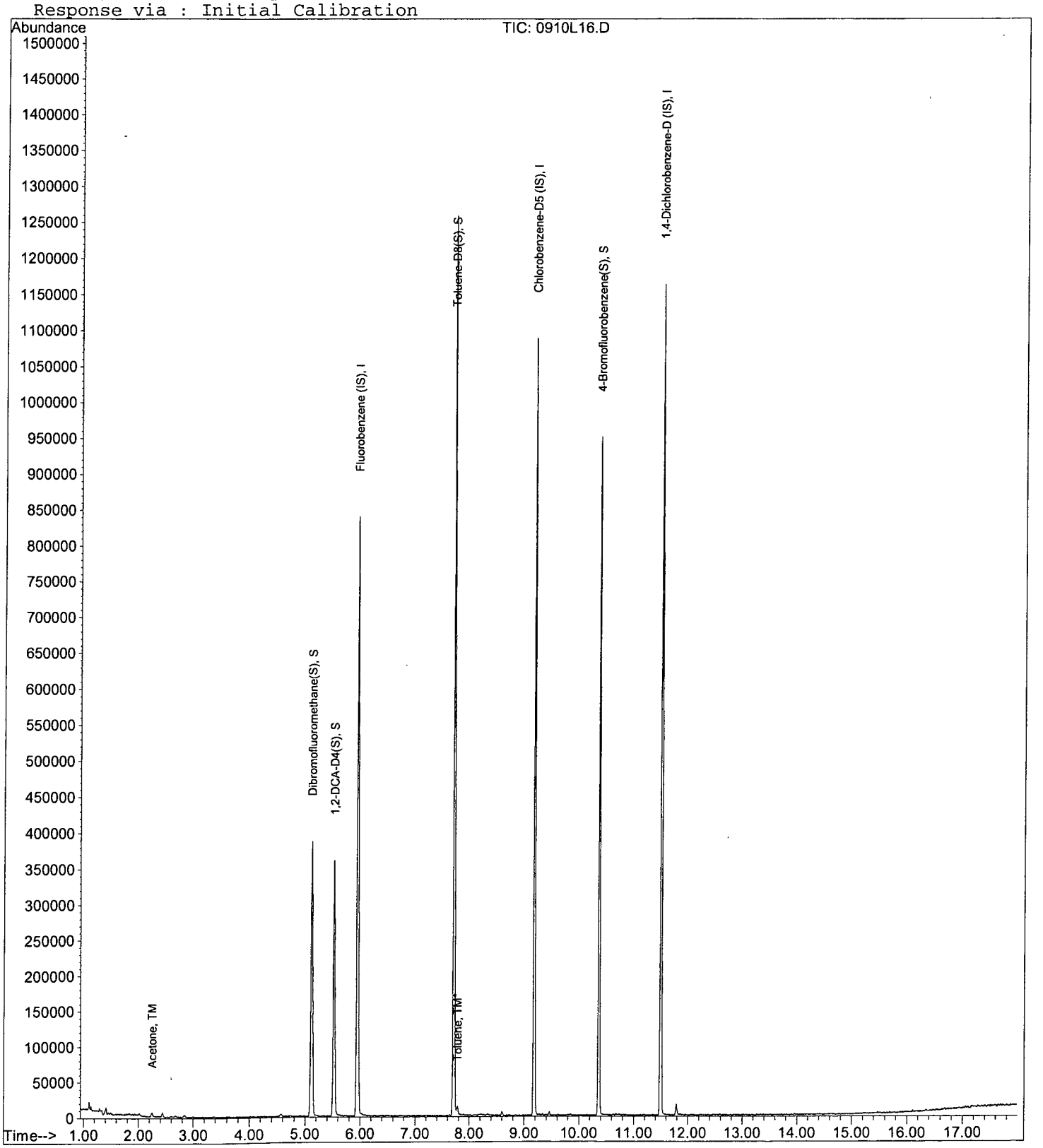
(#) = qualifier out of range (m) = manual integration

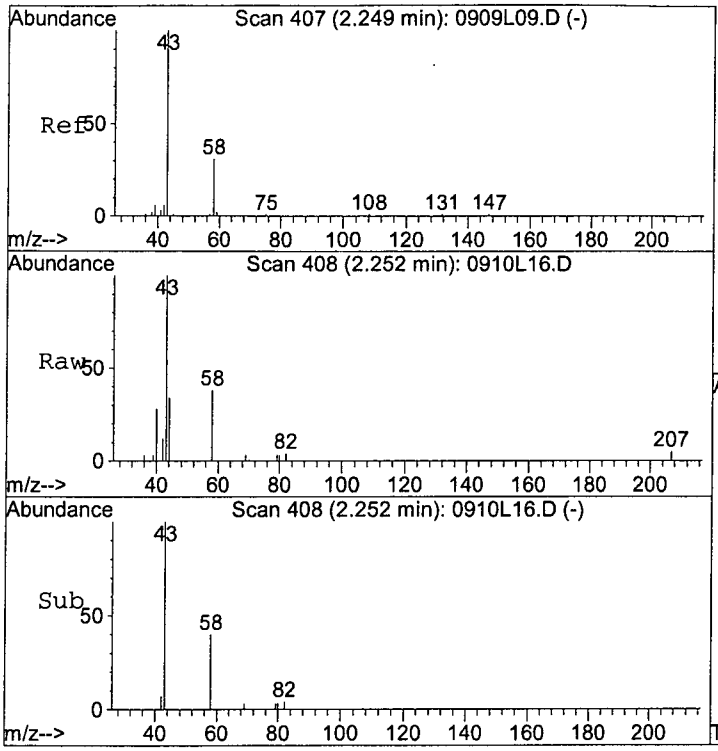
Quantitation Report

Data File : M:\LOKI\DATA\140909\0910L16.D Vial: 15
Acq On : 10 Sep 14 16:04 Operator: DG,SV,RS
Sample : AZ02116W01 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 11 12:54 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration

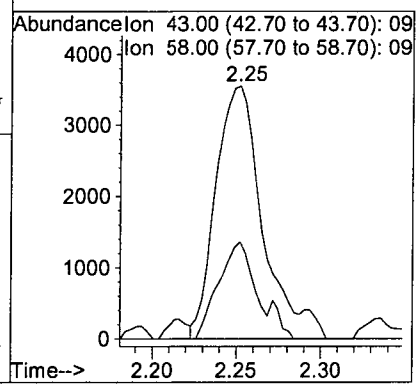


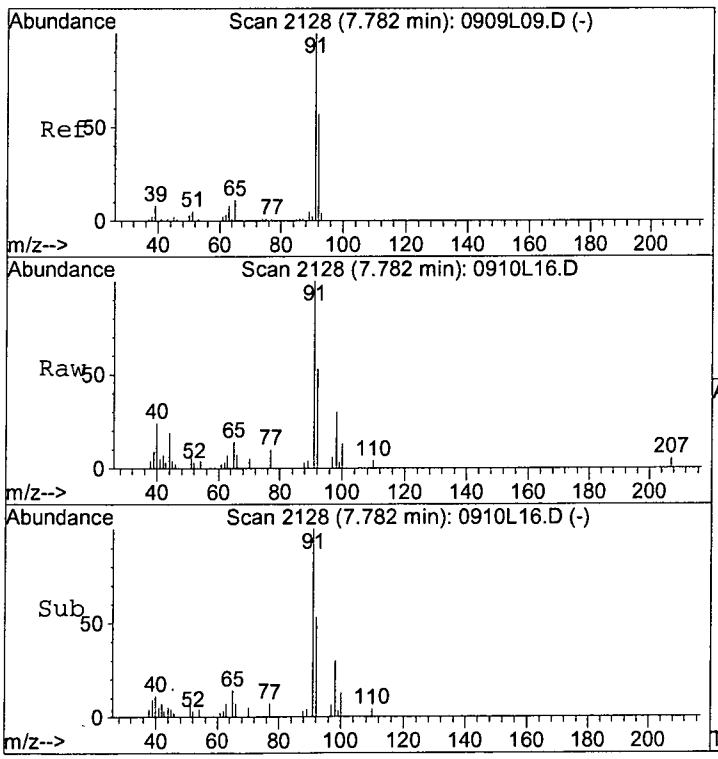


#11
Acetone
Concen: 2.63855 ppb
RT: 2.25 min Scan# 408
Delta R.T. 0.00 min
Lab File: 0910L16.D
Acq: 10 Sep 14 16:04

Tgt Ion: 43 Resp: 6831

Ion	Ratio	Lower	Upper
43	100		
58	38.4	21.1	39.1

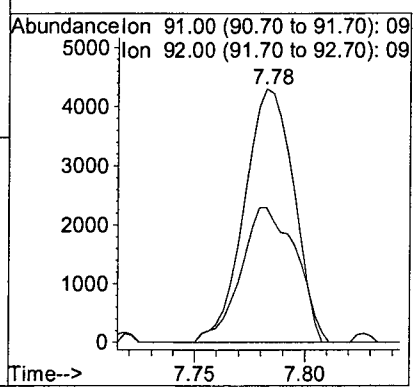




#53
Toluene
Concen: 0.18683 ppb
RT: 7.78 min Scan# 2128
Delta R.T. 0.00 min
Lab File: 0910L16.D
Acq: 10 Sep 14 16:04

Tgt Ion: 91 Resp: 6689

Ion	Ratio	Lower	Upper
91	100		
92	53.5	39.6	73.6



EPA 8260B WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: Trip Blank
Sample Collection Date: 09/05/14

ARF: 74218
APPL ID: AZ02235
QCG: #86BHC-140910AL-189834

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	09/10/14	09/10/14
EPA 8260B	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	09/10/14	09/10/14
EPA 8260B	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
EPA 8260B	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.30	ug/L	09/10/14	09/10/14
EPA 8260B	1,2,3-TRICHLOROPROPANE	1.00 U	2.0	1.00	0.39	ug/L	09/10/14	09/10/14
EPA 8260B	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	09/10/14	09/10/14
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.17	ug/L	09/10/14	09/10/14
EPA 8260B	2-BUTANONE	2.00 U	10.0	2.00	0.60	ug/L	09/10/14	09/10/14
EPA 8260B	4-METHYL-2-PENTANONE	5.00 U	10.0	5.00	1.90	ug/L	09/10/14	09/10/14
EPA 8260B	ACETONE	2.00 U	10.0	2.00	0.95	ug/L	09/10/14	09/10/14
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
EPA 8260B	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
EPA 8260B	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	09/10/14	09/10/14
EPA 8260B	CARBON TETRACHLORIDE	0.30 U	1.0	0.30	0.10	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROETHANE	0.50 U	1.0	0.50	0.21	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	09/10/14	09/10/14
EPA 8260B	CHLOROMETHANE	0.53 J	1.0	0.50	0.42	ug/L	09/10/14	09/10/14
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	09/10/14	09/10/14
EPA 8260B	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	09/10/14	09/10/14
EPA 8260B	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	09/10/14	09/10/14
EPA 8260B	NAPHTHALENE	0.50 U	1.0	0.50	0.36	ug/L	09/10/14	09/10/14
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	09/10/14	09/10/14
EPA 8260B	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.24	ug/L	09/10/14	09/10/14
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	09/10/14	09/10/14
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.18	ug/L	09/10/14	09/10/14
EPA 8260B	TRICHLOROETHENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
EPA 8260B	VINYL CHLORIDE	0.30 U	1.0	0.30	0.23	ug/L	09/10/14	09/10/14
EPA 8260B	XYLENES (TOTAL)	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14

J = Estimated value.

Quant Method: LALLW.M
Run #: 0910L17
Instrument: Loki
Sequence: 140909
Dilution Factor: 1
Initials: SV

Printed: 09/17/14 7:36:05 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B WATER

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: Trip Blank

APPL ID: AZ02235

Sample Collection Date: 09/05/14

QCG: #86BHC-140910AL-189834

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	106	70-120			%	09/10/14	09/10/14
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.9	75-120			%	09/10/14	09/10/14
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	104	85-115			%	09/10/14	09/10/14
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	100	85-120			%	09/10/14	09/10/14

J = Estimated value.

Quant Method: LALLW.M
Run #: 0910L17
Instrument: Loki
Sequence: 140909
Dilution Factor: 1
Initials: SV

Printed: 09/17/14 7:36:05 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0910L17.D Vial: 16
Acq On : 10 Sep 14 16:32 Operator: DG,SV,RS
Sample : AZ02235W01 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 11 12:55 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	406976	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	387392	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	206976	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	259854	26.34972 ppb	0.00
Spiked Amount 25.423			Recovery = 103.648%		
38) 1,2-DCA-D4(S)	5.53	65	271774	26.17401 ppb	0.00
Spiked Amount 24.764			Recovery = 105.694%		
58) Toluene-D8(S)	7.71	98	806334	25.67699 ppb	0.00
Spiked Amount 25.636			Recovery = 100.160%		
66) 4-Bromofluorobenzene(S)	10.36	95	276229	23.55556 ppb	0.00
Spiked Amount 23.806			Recovery = 98.949%		
Target Compounds					Qvalue
4) Chloromethane	1.14	50	4376	0.53428 ppb	97

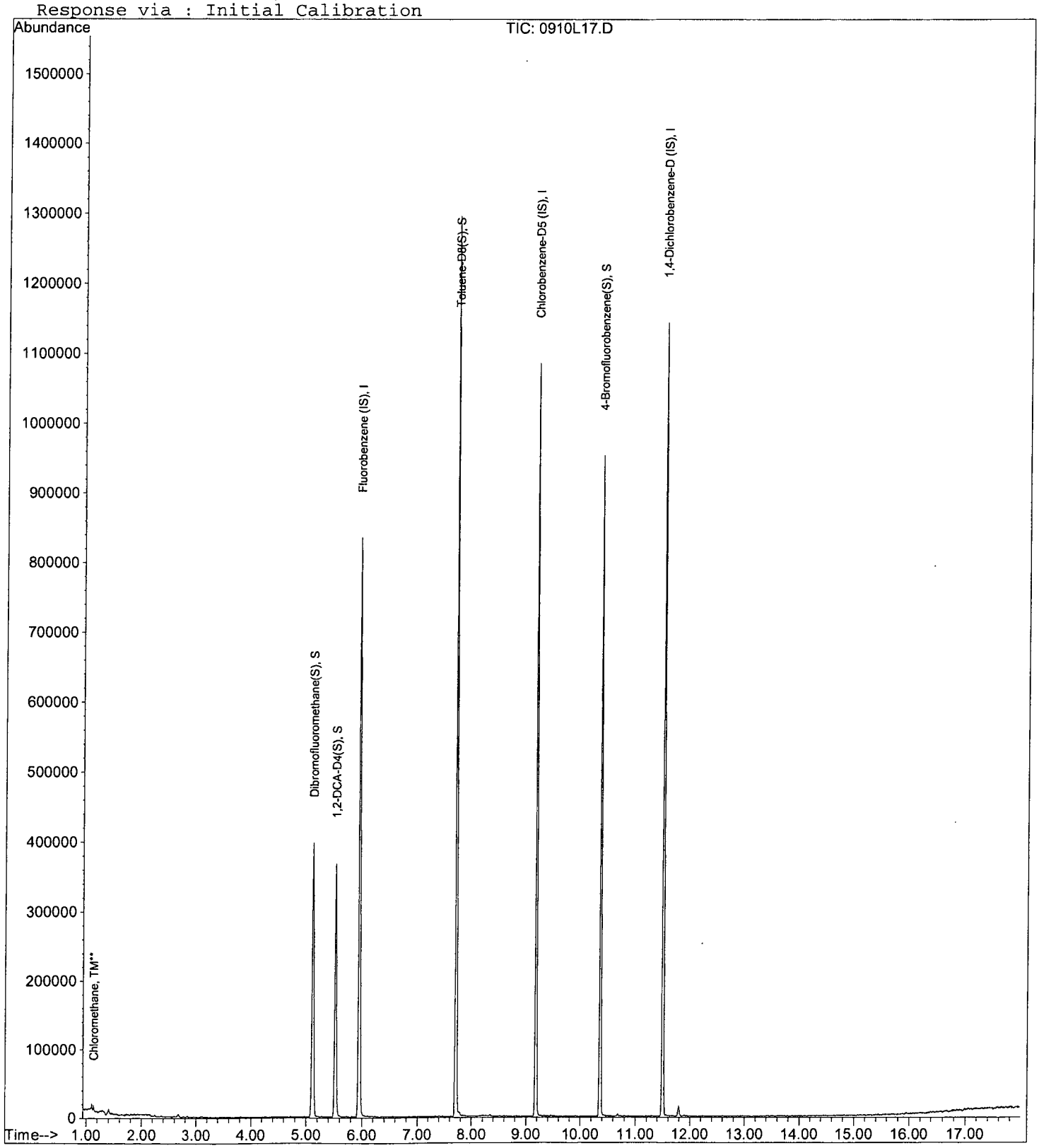
(#) = qualifier out of range (m) = manual integration

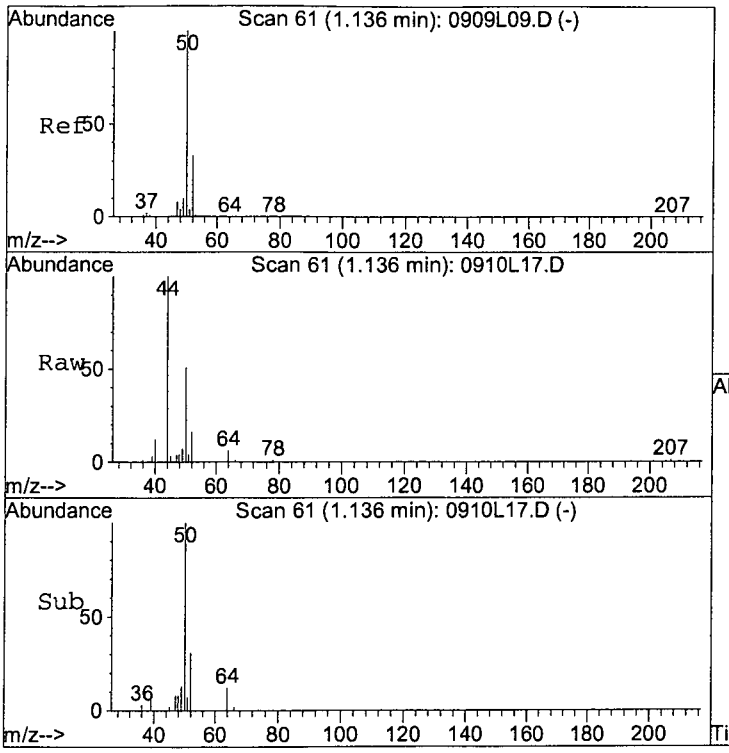
Quantitation Report

Data File : M:\LOKI\DATA\140909\0910L17.D Vial: 16
Acq On : 10 Sep 14 16:32 Operator: DG,SV,RS
Sample : AZ02235W01 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 11 12:55 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration

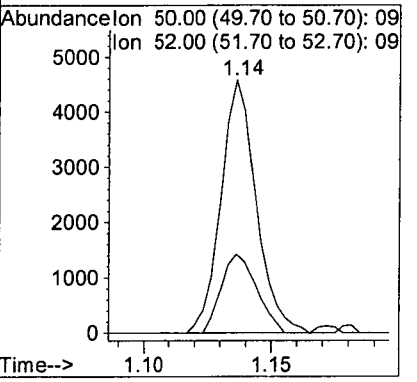




#4
Chloromethane
Concen: 0.53428 ppb
RT: 1.14 min Scan# 61
Delta R.T. 0.00 min
Lab File: 0910L17.D
Acq: 10 Sep 14 16:32

Tgt Ion: 50 Resp: 4376

Ion	Ratio	Lower	Upper
50	100		
52	31.2	22.8	42.4



EPA METHOD 8260B
Volatile Organic Compounds
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 74218
Case No: Initial Cal. Date: 9/9/2014
Matrix: Soil Instrument: Loki Initials:

		Compound	0.1	0.3	0.5	1	5	10	20	40	100		Avg	%RSD		
			0909L04.D	0909L05.D	0909L06.D	0909L07.D	0909L08.D	0909L09.D	0909L10.D	0909L11.D	0909L12.D					
1	I	Fluorobenzene (IS)	ISTD													
2	TM	Dichlorodifluoromethane		0.5830	0.5223	0.5203	0.4272	0.4249	0.4588	0.4775	0.4537		0.48	11	TM	
3	TM	Freon 114		0.4321	0.5643	0.4542	0.3985	0.3624	0.3793	0.3876	0.4105		0.42	15	TM	
4	TM**L	Chloromethane			0.7451	0.6950	0.5298	0.4872	0.4782	0.4812	0.4932		0.56	20	TM**L	1.000
5	TM*	Vinyl chloride		0.5667	0.6190	0.5868	0.5171	0.5134	0.4983	0.5078	0.5383		0.54	8.0	TM*	
6	TML	Bromomethane			0.4073	0.3703	0.2935	0.2776	0.2499	0.2458	0.2651		0.30	21	TML	0.999
7	TM	Chloroethane		0.3131	0.3560	0.3055	0.2716	0.2472	0.2436	0.2422			0.28	15	TM	
8	TM	Dichlorofluoromethane		1.266	1.078	1.001	0.9638	0.9274	0.9014	0.9099	0.9219		1.00	12	TM	
9	TM	Trichlorofluoromethane		0.9009	0.8453	0.8635	0.7090	0.7197	0.7129	0.7442	0.7166		0.78	10	TM	
10	TML	Acrolein		0.0938	0.0639	0.0631	0.0607	0.0581	0.0581	0.0583	0.0562		0.06	19	TML	0.999
11	TML	Acetone			0.3712	0.2339	0.1242	0.1301	0.1203	0.1162	0.1150		0.17	56	TML	1.000
12	TM	Freon-113		0.5779	0.5746	0.4816	0.4588	0.4226	0.4290	0.4365	0.4244		0.48	14	TM	
13	TM*	1,1-DCE		0.8306	0.7462	0.7206	0.6386	0.6348	0.6170	0.6402	0.6200		0.68	11	TM*	
14	TML	t-Butanol		0.0254	0.0160	0.0153	0.0159	0.0160	0.0166				0.02	22	TML	0.997
15	TML	Acetonitrile		0.0818	0.0549	0.0527	0.0521	0.0520	0.0509	0.0510	0.0531		0.06	19	TML	0.998
16	TML	Methyl Acetate		0.5518	0.4493	0.4095	0.3582	0.3170	0.3081	0.3160	0.3356		0.38	22	TML	0.999
17	TML	Iodomethane		0.1369	0.0787	0.0944	0.1343	0.1592	0.1834	0.1988	0.2194		0.15	33	TML	0.998
18	TM	Acrylonitrile		0.1475	0.1264	0.1586	0.1235	0.1276	0.1276	0.1228	0.1244		0.13	10	TM	
19	TML	Methylene chloride		0.8457	0.6803	0.6022	0.5493	0.5156	0.5118	0.5128	0.5144		0.59	20	TML	1.00
20	TM	Carbon disulfide			1.614	1.461	1.196	1.162	1.146	1.142	1.170		1.3	15	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.522	1.474	1.376	1.317	1.239	1.240	1.253	1.292	1.365		1.3	7.6	TM	
22	TM	Trans-1,2-DCE		0.5637	0.5336	0.5724	0.4980	0.4815	0.4712	0.4802	0.4952		0.51	7.7	TM	
23	TM	Diisopropyl Ether		1.461	1.422	1.350	1.357	1.369	1.408	1.459	1.522		1.4	4.2	TM	
24	TM**	1,1-DCA		0.9933	1.011	0.9188	0.9092	0.8700	0.8650	0.8538	0.8611		0.91	6.7	TM**	
25	TM	Hexane			0.4941	0.4144	0.3870	0.3606	0.4025	0.4267	0.4501		0.42	10	TM	
26	TM	Vinyl Acetate		0.3683	0.3522	0.3124	0.2892	0.2873	0.2731	0.2822	0.2690		0.30	12	TM	
27	TM	Ethyl tert Butyl Ether		1.383	1.231	1.270	1.226	1.260	1.301	1.380	1.460		1.3	6.4	TM	
28	TML	MEK (2-Butanone)			0.2713	0.1734	0.1658	0.1659	0.1705	0.1713	0.1736		0.18	21	TML	1.000
29	TM	Cis-1,2-DCE		0.6582	0.6700	0.6524	0.5356	0.5696	0.5695	0.5621	0.5789		0.60	8.7	TM	
30	TM	2,2-Dichloropropane		0.2880	0.3303	0.2961	0.2604	0.2512	0.2542	0.2448	0.2452		0.27	11	TM	
31	TM*	Chloroform		1.149	1.095	0.9815	0.9414	0.9187	0.8986	0.8879	0.8927		0.97	10	TM*	
32	TM	Bromochloromethane		0.3578	0.3076	0.3715	0.2944	0.2861	0.2750	0.2720	0.2725		0.30	13	TM	
33	S	Dibromofluoromethane(S)		0.6861	0.6423	0.6321	0.5840	0.5795	0.5815	0.5696	0.5712		0.61	7.0	S	
34	TM	1,1,1-TCA		0.8726	0.9580	0.8757	0.8329	0.7741	0.7870	0.7761	0.7874		0.83	7.8	TM	
35	TM	Cyclohexane		0.4253	0.3806	0.3734	0.3348	0.3160	0.3289	0.3473	0.3548		0.36	9.8	TM	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Initial Cal. Date: 9/9/2014
Instrument: Loki

Initials:

		Compound	0.1	0.3	0.5	1	5	10	20	40	100		Avg	%RSD		
36	TM	1,1-Dichloropropene		0.7154	0.6411	0.6363	0.5890	0.5937	0.6120	0.6370	0.6481		0.63	6.3	TM	
37	TM	2,2,4-Trimethylpentane		1.144	1.228	1.198	1.182	1.085	1.200	1.279	1.313		1.2	6.0	TM	
38	S	1,2-DCA-D4(S)		0.7353	0.7362	0.6840	0.6191	0.5892	0.5909	0.5742	0.5736		0.64	11	S	
39	TM	Carbon Tetrachloride		0.5899	0.7362	0.7399	0.7017	0.6774	0.6891	0.6956	0.7106		0.69	6.8	TM	
40	TM	Tert Amyl Methyl Ether		1.147	1.169	1.232	1.201	1.274	1.312	1.351	1.401		1.3	7.1	TM	
41	TM	1,2-DCA		0.7263	0.7388	0.7318	0.6968	0.6642	0.6538	0.6544	0.6566		0.69	5.4	TM	
42	TM	Benzene	2.687	2.310	2.158	2.138	1.923	1.912	1.914	1.939	1.939		2.1	12	TM	
43	TM	TCE		0.5235	0.5405	0.5401	0.5203	0.5087	0.5149	0.5053	0.5293		0.52	2.5	TM	
44	TM	2-Pentanone		0.4110	0.2972	0.3028	0.3217	0.3248	0.3260	0.3277	0.3383		0.33	11	TM	
45	TM*	1,2-Dichloropropane		0.5466	0.5801	0.5506	0.5580	0.5429	0.5286	0.5202	0.5229		0.54	3.7	TM*	
46	TM	Bromodichloromethane		0.8502	0.8365	0.7751	0.7362	0.7139	0.6998	0.6923	0.6995		0.75	8.4	TM	
47	TM	Methyl Cyclohexane		0.7431	0.6695	0.6552	0.6109	0.5719	0.6355	0.6840	0.7348		0.66	8.8	TM	
48	TM	Dibromomethane		0.3710	0.3808	0.3811	0.3424	0.3333	0.3169	0.3139	0.3166		0.34	8.5	TM	
49	TML	2-Chloroethyl vinyl ether				0.0475	0.0635	0.0623	0.0674	0.0729	0.0832		0.07	18	TML	0.997
50	TM	MIBK (methyl isobutyl ketone)		0.4266	0.4196	0.4010	0.3447	0.3312	0.3508	0.3660	0.4035		0.38	9.6	TM	
51	TM	1-Bromo-2-chloroethane		0.4534	0.4157	0.4495	0.3994	0.4118	0.3960	0.3966	0.4031		0.42	5.6	TM	
52	TM	Cis-1,3-Dichloropropene		0.8419	0.7312	0.8062	0.7746	0.7744	0.7991	0.8290	0.8586		0.80	5.2	TM	
53	TM*	Toluene	2.625	2.258	2.105	1.960	2.069	2.129	2.123	2.142	2.173		2.2	8.6	TM*	
54	TM	Trans-1,3-Dichloropropene		0.7129	0.7250	0.6053	0.6720	0.6950	0.6931	0.7233	0.7493		0.70	6.3	TM	
55	TM	1,1,2-TCA		0.4562	0.4409	0.4163	0.4018	0.3784	0.3713	0.3799	0.3767		0.40	8.0	TM	
56	TM	2-Hexanone		0.2248	0.2303	0.2525	0.2273	0.2473	0.2394	0.2498	0.2878		0.24	8.3	TM	
57	I	Chlorobenzene-D5 (IS)	ISTD													
58	S	Toluene-D8(S)		2.049	1.980	1.945	1.921	1.996	2.176	2.066	2.078		2.0	4.1	S	
59	TM	1,2-EDB		0.5742	0.5746	0.5289	0.5222	0.5095	0.5183	0.4907	0.5000		0.53	6.0	TM	
60	TM	Tetrachloroethene		0.9963	0.8042	0.7712	0.7286	0.6902	0.7113	0.6709	0.6666		0.75	14	TM	
61	TM	1-Chlorohexane		0.5626	0.5808	0.5890	0.5979	0.5918	0.6804	0.6857	0.7162		0.63	9.4	TM	
62	TM	1,1,1,2-Tetrachloroethane		0.7329	0.7776	0.6599	0.6707	0.6609	0.6722	0.6285	0.6316		0.68	7.5	TM	
63	TM	m&p-Xylene	1.134	0.8930	0.9218	0.8230	0.9226	0.9547	1.059	1.024	1.042		0.97	9.9	TM	
64	TM	o-Xylene	0.9543	0.9257	0.8232	0.8217	0.8644	0.9040	0.9925	0.9879	1.026		0.92	8.1	TM	
65	TM	Styrene			1.327	1.326	1.485	1.579	1.770	1.723	1.796		1.6	13	TM	
66	S	4-Bromofluorobenzene(S)		0.7349	0.7171	0.6726	0.7366	0.7527	0.8315	0.7812	0.8276		0.76	7.2	S	
67	TM	1,3-Dichloropropane		0.9914	0.8122	0.8150	0.8699	0.8342	0.8518	0.8128	0.8140		0.85	7.2	TM	
68	TM	Dibromochloromethane		0.7434	0.7020	0.6361	0.6368	0.6420	0.6488	0.6170	0.6379		0.66	6.4	TM	
69	TM**	Chlorobenzene		1.816	1.778	1.802	1.682	1.590	1.692	1.593	1.627		1.7	5.4	TM**	
70	TM*	Ethylbenzene	2.632	2.309	2.449	2.316	2.377	2.397	2.653	2.555	2.628		2.5	5.6	TM*	

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Initial Cal. Date: 9/9/2014
Instrument: Loki

Initials:

		Compound	0.1	0.3	0.5	1	5	10	20	40	100		Avg	%RSD		
71	TM**	Bromoform		0.4931	0.5220	0.4460	0.4969	0.4478	0.4646	0.4408	0.4846		0.47	6.2	TM**	
72	I	1,4-Dichlorobenzene-D (IS)	ISTD													
73	TM	Isopropylbenzene		3.431	3.448	3.385	3.490	3.669	3.957	4.040	3.829		3.7	7.0	TM	
74	TM**	1,1,2,2-Tetrachloroethane		1.299	1.248	1.137	1.123	1.032	0.9959	0.9609	0.9123		1.1	13	TM**	
75	TM	1,2,3-Trichloropropane		0.3718	0.4104	0.3618	0.3226	0.3245	0.3260	0.3172	0.3023		0.34	11	TM	
76	TM	t-1,4-Dichloro-2-Butene		0.2186	0.1690	0.2123	0.2069	0.2131	0.2095	0.2062	0.2075		0.21	7.4	TM	
77	TM	Bromobenzene		1.097	1.430	1.313	1.286	1.222	1.258	1.211	1.158		1.2	8.1	TM	
78	TM	n-Propylbenzene		4.111	3.889	3.920	4.166	4.397	4.760	4.781	4.438		4.3	8.0	TM	
79	TM	4-Ethyltoluene		3.345	3.372	3.231	3.832	4.048	4.395	4.392	4.097		3.8	12	TM	
80	TM	2-Chlorotoluene		2.841	2.650	2.709	2.798	2.842	3.001	2.918	2.702		2.8	4.2	TM	
81	TM	1,3,5-Trimethylbenzene		2.616	2.693	2.804	3.461	3.603	3.748	3.670	3.437		3.3	14	TM	
82	TM	4-Chlorotoluene		2.849	3.091	2.885	3.324	3.463	3.524	3.418	3.235		3.2	8.0	TM	
83	TM	Tert-Butylbenzene		2.481	2.488	2.532	2.727	2.742	3.009	3.058	2.976		2.8	8.7	TM	
84	TM	1,2,4-Trimethylbenzene		2.704	2.942	2.668	3.186	3.457	3.772	3.715	3.595		3.3	14	TM	
85	TM	Sec-Butylbenzene		3.519	3.499	3.424	3.930	4.095	4.407	4.381	4.256		3.9	10	TM	
86	TM	p-Isopropyltoluene		2.975	3.019	3.032	3.407	3.515	3.845	3.860	3.812		3.4	11	TM	
87	TM	Benzyl Chloride		1.834	1.636	1.643	1.448	1.445	1.502	1.472	1.528		1.6	8.6	TM	
88	TM	1,3-DCB		2.488	2.504	2.271	2.392	2.304	2.335	2.235	2.228		2.3	4.6	TM	
89	TM	1,4-DCB		2.694	2.744	2.404	2.452	2.383	2.416	2.288	2.279		2.5	7.0	TM	
90	TM	n-Butylbenzene		2.563	2.812	2.558	2.867	3.108	3.396	3.436	3.491		3.0	13	TM	
91	TM	1,2-DCB		2.461	2.351	2.197	2.244	2.194	2.212	2.141	2.170		2.2	4.8	TM	
92	TM	Hexachloroethane		0.7958	0.8935	0.8257	0.7497	0.7168	0.7403	0.7285	0.7301		0.77	8.0	TM	
93	TML	1,2-Dibromo-3-chloropropane			0.2198	0.1419	0.1614	0.1530	0.1492	0.1573	0.1561		0.16	16	TML	1.000
94	TM	1,2,4-Trichlorobenzene		1.408	1.605	1.444	1.455	1.444	1.544	1.677	1.719		1.5	7.7	TM	
95	TM	Hexachlorobutadiene		0.7517	0.9791	0.9615	0.9104	0.8612	0.8735	0.8776	0.8798		0.89	7.8	TM	
96	TML	Naphthalene		1.298	1.425	1.465	1.498	1.591	1.840	2.241	2.306		1.7	22	TML	0.998
97	TM	1,2,3-Trichlorobenzene		1.338	1.468	1.334	1.405	1.428	1.551	1.673	1.617		1.5	8.5	TM	
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L04.D Vial: 3
Acq On : 9 Sep 14 9:28 Operator: DG,SV,RS
Sample : 0.1ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	448512	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	407616	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	212096	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.12	111	3659	0.33667 ppb		0.00
Spiked Amount 25.423			Recovery = 1.326%			
38) 1,2-DCA-D4(S)	5.53	65	4081	0.35663 ppb		0.00
Spiked Amount 24.764			Recovery = 1.442%			
58) Toluene-D8(S)	7.71	98	9317	0.28197 ppb		0.00
Spiked Amount 25.636			Recovery = 1.100%			
66) 4-Bromofluorobenzene(S)	10.37	95	3277	0.26558 ppb		0.00
Spiked Amount 23.806			Recovery = 1.117%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	1013	0.11679 ppb	#	81
3) Freon 114	1.10	85	887	0.11672 ppb		85
4) Chloromethane	1.14	50	3340	0.36600 ppb		89
5) Vinyl chloride	1.22	62	1259	0.12913 ppb		86
6) Bromomethane	1.45	94	1199	0.36238 ppb		96
7) Chloroethane	1.53	64	762	0.15022 ppb		86
8) Dichlorofluoromethane	1.70	67	2170	0.12142 ppb	#	65
9) Trichlorofluoromethane	1.73	101	1299	0.09325 ppb		84
10) Acrolein	2.09	56	5582	-0.98803 ppb	#	98
11) Acetone	2.26	43	1767	-0.14296 ppb		92
12) Freon-113	2.19	101	801	0.09386 ppb	#	71
13) 1,1-DCE	2.18	61	1447	0.11844 ppb	#	75
14) t-Butanol	2.88	59	1382	3.62017 ppb	#	70
15) Acetonitrile	2.52	41	5224	2.92456 ppb	#	1
16) Methyl Acetate	2.60	43	1522	0.57272 ppb		91
17) Iodomethane	2.30	142	194	1.70697 ppb	#	69
18) Acrylonitrile	2.98	52	283	0.11925 ppb	#	1
19) Methylene chloride	2.67	84	2125	0.09592 ppb	#	72
20) Carbon disulfide	2.37	76	2994	0.13140 ppb	#	87
21) Methyl t-butyl ether (MtBE	3.03	73	2730	0.11341 ppb	#	83
22) Trans-1,2-DCE	2.99	96	1353	0.14730 ppb	#	64
23) Diisopropyl Ether	3.71	45	2696	0.10594 ppb		97
24) 1,1-DCA	3.53	63	1952	0.11954 ppb	#	71
25) Hexane	3.36	57	729	0.09690 ppb	#	78
26) Vinyl Acetate	3.72	43	736	0.13485 ppb	#	97
27) Ethyl tert Butyl Ether	4.29	59	2234	0.09477 ppb		97
28) MEK (2-Butanone)	4.50	43	184	0.23549 ppb	#	44
29) Cis-1,2-DCE	4.42	96	1454	0.13517 ppb		85
30) 2,2-Dichloropropane	4.42	77	729	0.14979 ppb	#	84
31) Chloroform	4.91	83	2359	0.13548 ppb		82
32) Bromochloromethane	4.75	128	510	0.09332 ppb		71
34) 1,1,1-TCA	5.10	97	1967	0.13162 ppb		82
35) Cyclohexane	5.15	41	711	0.11082 ppb	#	42
36) 1,1-Dichloropropene	5.33	75	1454	0.12782 ppb	#	81
37) 2,2,4-Trimethylpentane	5.73	57	1986	0.09197 ppb		92
39) Carbon Tetrachloride	5.33	117	1384	0.11139 ppb		84
40) Tert Amyl Methyl Ether	5.80	73	2881	0.12737 ppb		97
41) 1,2-DCA	5.62	62	1287	0.10391 ppb	#	72
42) Benzene	5.58	78	4821	0.12783 ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L04.D Vial: 3
Acq On : 9 Sep 14 9:28 Operator: DG,SV,RS
Sample : 0.1ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	TCE	6.38	95	1359	0.14489	ppb	#	70
44)	2-Pentanone	6.64	43	23900	4.02239	ppb		98
45)	1,2-Dichloropropane	6.62	63	1170	0.11994	ppb	#	85
46)	Bromodichloromethane	6.96	83	1455	0.10807	ppb	#	55
47)	Methyl Cyclohexane	6.58	83	1246	0.10474	ppb		82
48)	Dibromomethane	6.75	93	743	0.12022	ppb		87
49)	2-Chloroethyl vinyl ether	7.33	106	66	2.47098	ppb	#	30
50)	MIBK (methyl isobutyl ket	7.64	43	1176	0.17231	ppb	#	40
51)	1-Bromo-2-chloroethane	7.26	63	1064	0.14267	ppb	#	77
52)	Cis-1,3-Dichloropropene	7.44	75	1911	0.13284	ppb		90
53)	Toluene	7.78	91	4710	0.12065	ppb		86
54)	Trans-1,3-Dichloropropene	8.04	75	1256	0.10044	ppb	#	67
55)	1,1,2-TCA	8.21	83	740	0.10243	ppb		80
56)	2-Hexanone	8.50	43	562	0.12792	ppb	#	64
59)	1,2-EDB	8.69	107	1239	0.14411	ppb	#	77
60)	Tetrachloroethene	8.34	166	1396	0.11342	ppb	#	80
61)	1-Chlorohexane	9.22	91	1188	0.11648	ppb		90
62)	1,1,1,2-Tetrachloroethane	9.30	131	984	0.08884	ppb		84
63)	m&p-Xylene	9.46	106	3699	0.23272	ppb		82
64)	o-Xylene	9.85	106	1556	0.10348	ppb		96
65)	Styrene	9.87	104	2536	0.09894	ppb	#	78
67)	1,3-Dichloropropane	8.38	76	1427	0.10295	ppb	#	61
68)	Dibromochloromethane	8.60	129	994	0.09265	ppb		99
69)	Chlorobenzene	9.21	112	3486	0.12594	ppb		97
70)	Ethylbenzene	9.34	91	4291	0.10613	ppb		90
71)	Bromoform	10.03	173	751	0.09708	ppb		80
73)	Isopropylbenzene	10.22	105	3489	0.11249	ppb		100
74)	1,1,2,2-Tetrachloroethane	10.52	83	1064	0.11523	ppb	#	93
77)	Bromobenzene	10.50	156	1617	0.15286	ppb		81
78)	n-Propylbenzene	10.63	91	4362	0.11936	ppb		90
79)	4-Ethyltoluene	10.75	105	3553	0.10909	ppb		95
80)	2-Chlorotoluene	10.70	91	2691	0.11298	ppb		97
81)	1,3,5-Trimethylbenzene	10.82	105	2768	0.10027	ppb		94
82)	4-Chlorotoluene	10.81	91	2838	0.10377	ppb		84
83)	Tert-Butylbenzene	11.14	119	2009	0.08606	ppb	#	79
84)	1,2,4-Trimethylbenzene	11.18	105	2439	0.08833	ppb		82
85)	Sec-Butylbenzene	11.35	105	2924	0.08750	ppb		99
86)	p-Isopropyltoluene	11.50	119	3315	0.11381	ppb	#	69
87)	Benzyl Chloride	11.67	91	1550	0.11684	ppb	#	90
88)	1,3-DCB	11.44	146	2499	0.12563	ppb		90
89)	1,4-DCB	11.53	146	2327	0.11161	ppb		95
90)	n-Butylbenzene	11.90	91	2764	0.10757	ppb		96
91)	1,2-DCB	11.89	146	2092	0.10978	ppb		94
92)	Hexachloroethane	12.14	117	514	0.07842	ppb	#	76
93)	1,2-Dibromo-3-chloropropan	12.66	157	188	0.23325	ppb	#	11
94)	1,2,4-Trichlorobenzene	13.49	180	1731	0.13274	ppb	#	77
95)	Hexachlorobutadiene	13.68	225	871	0.11576	ppb		89
96)	Naphthalene	13.72	128	1535	1.59281	ppb	#	87
97)	1,2,3-Trichlorobenzene	13.97	180	1363	0.10879	ppb		96

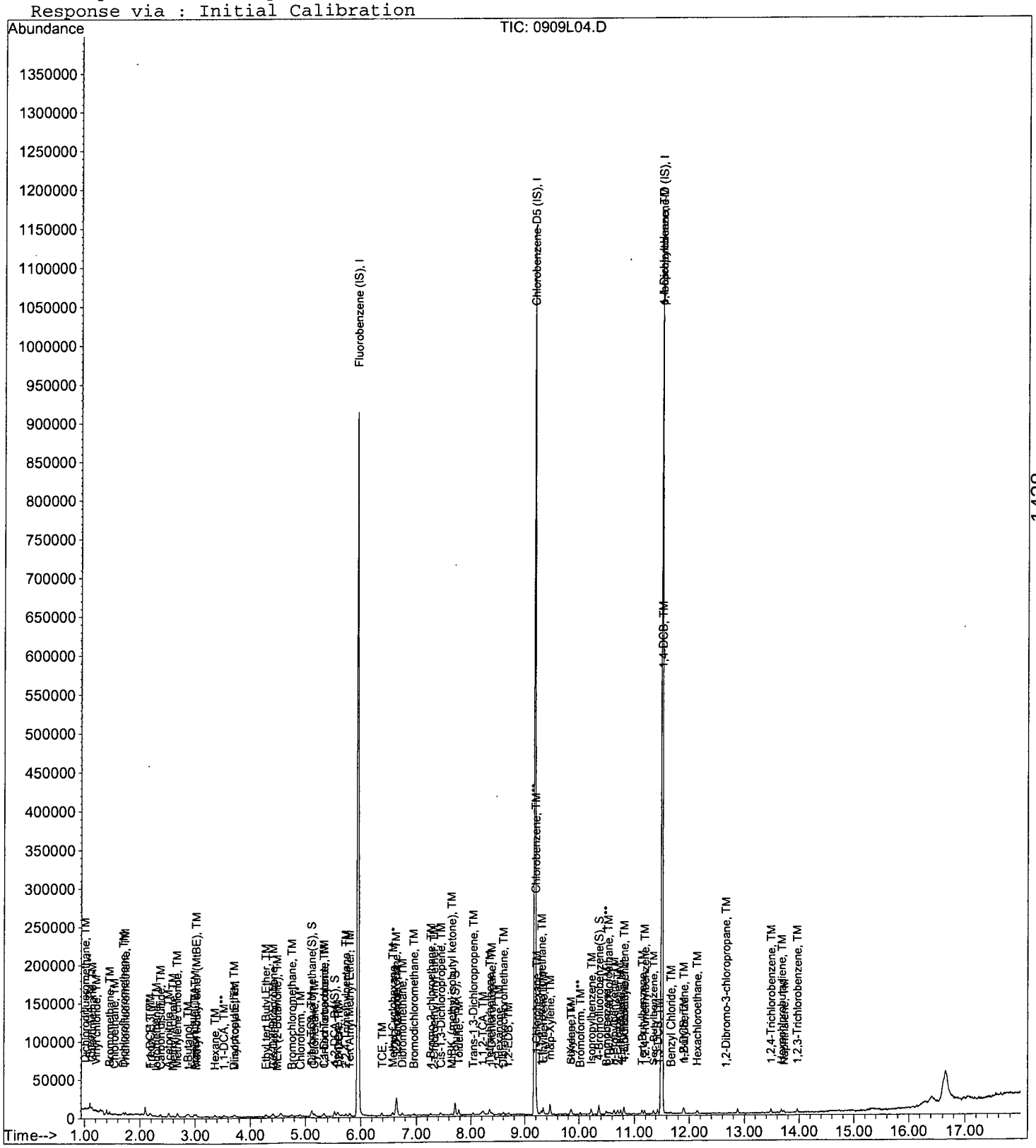
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0909L04.D Vial: 3
Acq On : 9 Sep 14 9:28 Operator: DG,SV,RS
Sample : 0.1ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L05.D Vial: 4
Acq On : 9 Sep 14 9:55 Operator: DG,SV,RS
Sample : 0.3ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	441856	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	397824	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	226816	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.12	111	7276	0.67956 ppb		0.00
Spiked Amount 25.423			Recovery = 2.675%			
38) 1,2-DCA-D4(S)	5.52	65	7798	0.69173 ppb		0.00
Spiked Amount 24.764			Recovery = 2.794%			
58) Toluene-D8(S)	7.71	98	19565	0.60669 ppb		0.00
Spiked Amount 25.636			Recovery = 2.368%			
66) 4-Bromofluorobenzene(S)	10.36	95	7017	0.58269 ppb		0.00
Spiked Amount 23.806			Recovery = 2.449%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	3091	0.36175 ppb		90
3) Freon 114	1.10	85	2291	0.30600 ppb	#	44
4) Chloromethane	1.14	50	5333	0.60133 ppb		93
5) Vinyl chloride	1.21	62	3005	0.31286 ppb		99
6) Bromomethane	1.45	94	2238	0.59006 ppb		97
7) Chloroethane	1.53	64	1660	0.33219 ppb		89
8) Dichlorofluoromethane	1.70	67	6712	0.38123 ppb		92
9) Trichlorofluoromethane	1.74	101	4777	0.34807 ppb		98
10) Acrolein	2.10	56	16576	10.32645 ppb	#	94
11) Acetone	2.25	43	2336	0.15283 ppb		99
12) Freon-113	2.20	101	3064	0.36445 ppb		93
13) 1,1-DCE	2.18	61	4404	0.36591 ppb		91
14) t-Butanol	2.87	59	4496	14.65961 ppb	#	91
15) Acetonitrile	2.52	41	14466	13.26869 ppb		91
16) Methyl Acetate	2.60	43	2926	0.81472 ppb	#	72
17) Iodomethane	2.30	142	726	1.84447 ppb	#	85
18) Acrylonitrile	2.96	52	782	0.33447 ppb	#	26
19) Methylene chloride	2.67	84	4484	0.35947 ppb		88
20) Carbon disulfide	2.36	76	8984	0.40022 ppb		96
21) Methyl t-butyl ether (MtBE	3.02	73	7813	0.32944 ppb		92
22) Trans-1,2-DCE	2.99	96	2989	0.33031 ppb		82
23) Diisopropyl Ether	3.72	45	7749	0.30909 ppb		95
24) 1,1-DCA	3.54	63	5267	0.32740 ppb		96
25) Hexane	3.37	57	3393	0.45778 ppb	#	85
26) Vinyl Acetate	3.70	43	1953	0.36323 ppb	#	97
27) Ethyl tert Butyl Ether	4.28	59	7333	0.31577 ppb	#	83
28) MEK (2-Butanone)	4.50	43	1272	0.59107 ppb	#	44
29) Cis-1,2-DCE	4.43	96	3490	0.32934 ppb		93
30) 2,2-Dichloropropane	4.41	77	1527	0.31849 ppb		99
31) Chloroform	4.90	83	6092	0.35513 ppb		97
32) Bromochloromethane	4.76	128	1897	0.35235 ppb		77
34) 1,1,1-TCA	5.11	97	4627	0.31429 ppb		97
35) Cyclohexane	5.16	41	2255	0.35676 ppb	#	68
36) 1,1-Dichloropropene	5.33	75	3793	0.33845 ppb	#	83
37) 2,2,4-Trimethylpentane	5.73	57	6067	0.28519 ppb	#	68
39) Carbon Tetrachloride	5.31	117	3128	0.25555 ppb		81
40) Tert Amyl Methyl Ether	5.80	73	6081	0.27288 ppb		96
41) 1,2-DCA	5.62	62	3851	0.31562 ppb		97
42) Benzene	5.58	78	12247	0.32963 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L05.D Vial: 4
Acq On : 9 Sep 14 9:55 Operator: DG,SV,RS
Sample : 0.3ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	TCE	6.38	95	2776	0.30042	ppb		92
44)	2-Pentanone	6.64	43	72649	12.41107	ppb		99
45)	1,2-Dichloropropane	6.62	63	2898	0.30155	ppb	#	77
46)	Bromodichloromethane	6.95	83	4508	0.33988	ppb	#	90
47)	Methyl Cyclohexane	6.57	83	3940	0.33618	ppb		89
48)	Dibromomethane	6.75	93	1967	0.32306	ppb		97
49)	2-Chloroethyl vinyl ether	7.34	106	500	2.76364	ppb	#	71
50)	MIBK (methyl isobutyl ket	7.64	43	2262	0.33642	ppb	#	82
51)	1-Bromo-2-chloroethane	7.27	63	2404	0.32721	ppb		98
52)	Cis-1,3-Dichloropropene	7.45	75	4464	0.31497	ppb		92
53)	Toluene	7.79	91	11973	0.31131	ppb		90
54)	Trans-1,3-Dichloropropene	8.04	75	3780	0.30685	ppb		92
55)	1,1,2-TCA	8.21	83	2419	0.33989	ppb	#	80
56)	2-Hexanone	8.51	43	1192	0.27539	ppb	#	78
59)	1,2-EDB	8.69	107	2741	0.32667	ppb		88
60)	Tetrachloroethene	8.34	166	4756	0.39591	ppb	#	83
61)	1-Chlorohexane	9.22	91	2686	0.26983	ppb		82
62)	1,1,1,2-Tetrachloroethane	9.30	131	3499	0.32369	ppb		98
63)	m&p-Xylene	9.46	106	8526	0.54961	ppb		96
64)	o-Xylene	9.85	106	4419	0.30112	ppb		84
65)	Styrene	9.87	104	5352	0.21395	ppb	#	86
67)	1,3-Dichloropropane	8.38	76	4733	0.34985	ppb		95
68)	Dibromochloromethane	8.60	129	3549	0.33895	ppb		82
69)	Chlorobenzene	9.21	112	8670	0.32094	ppb		97
70)	Ethylbenzene	9.34	91	11024	0.27937	ppb		100
71)	Bromoform	10.02	173	2354	0.31177	ppb	#	67
73)	Isopropylbenzene	10.22	105	9339	0.28155	ppb		91
74)	1,1,2,2-Tetrachloroethane	10.52	83	3535	0.35798	ppb		88
75)	1,2,3-Trichloropropane	10.55	110	1012	0.32608	ppb	#	51
76)	t-1,4-Dichloro-2-Butene	10.59	53	595	0.31931	ppb	#	66
77)	Bromobenzene	10.49	156	2985	0.26386	ppb	#	51
78)	n-Propylbenzene	10.63	91	11188	0.28627	ppb		86
79)	4-Ethyltoluene	10.75	105	9105	0.26142	ppb		97
80)	2-Chlorotoluene	10.70	91	7733	0.30358	ppb		94
81)	1,3,5-Trimethylbenzene	10.82	105	7121	0.24121	ppb		98
82)	4-Chlorotoluene	10.81	91	7755	0.26516	ppb		94
83)	Tert-Butylbenzene	11.13	119	6753	0.27050	ppb	#	92
84)	1,2,4-Trimethylbenzene	11.18	105	7359	0.24921	ppb		93
85)	Sec-Butylbenzene	11.35	105	9577	0.26800	ppb		98
86)	p-Isopropyltoluene	11.50	119	8097	0.25995	ppb		95
87)	Benzyl Chloride	11.67	91	4992	0.35189	ppb		93
88)	1,3-DCB	11.44	146	6773	0.31838	ppb		94
89)	1,4-DCB	11.53	146	7333	0.32890	ppb		91
90)	n-Butylbenzene	11.91	91	6977	0.25390	ppb		92
91)	1,2-DCB	11.89	146	6698	0.32868	ppb		93
92)	Hexachloroethane	12.14	117	2166	0.30903	ppb		86
93)	1,2-Dibromo-3-chloropropan	12.65	157	512	0.45260	ppb	#	54
94)	1,2,4-Trichlorobenzene	13.49	180	3832	0.27478	ppb		86
95)	Hexachlorobutadiene	13.68	225	2046	0.25429	ppb		99
96)	Naphthalene	13.72	128	3533	1.68244	ppb	#	87
97)	1,2,3-Trichlorobenzene	13.97	180	3643	0.27189	ppb		92

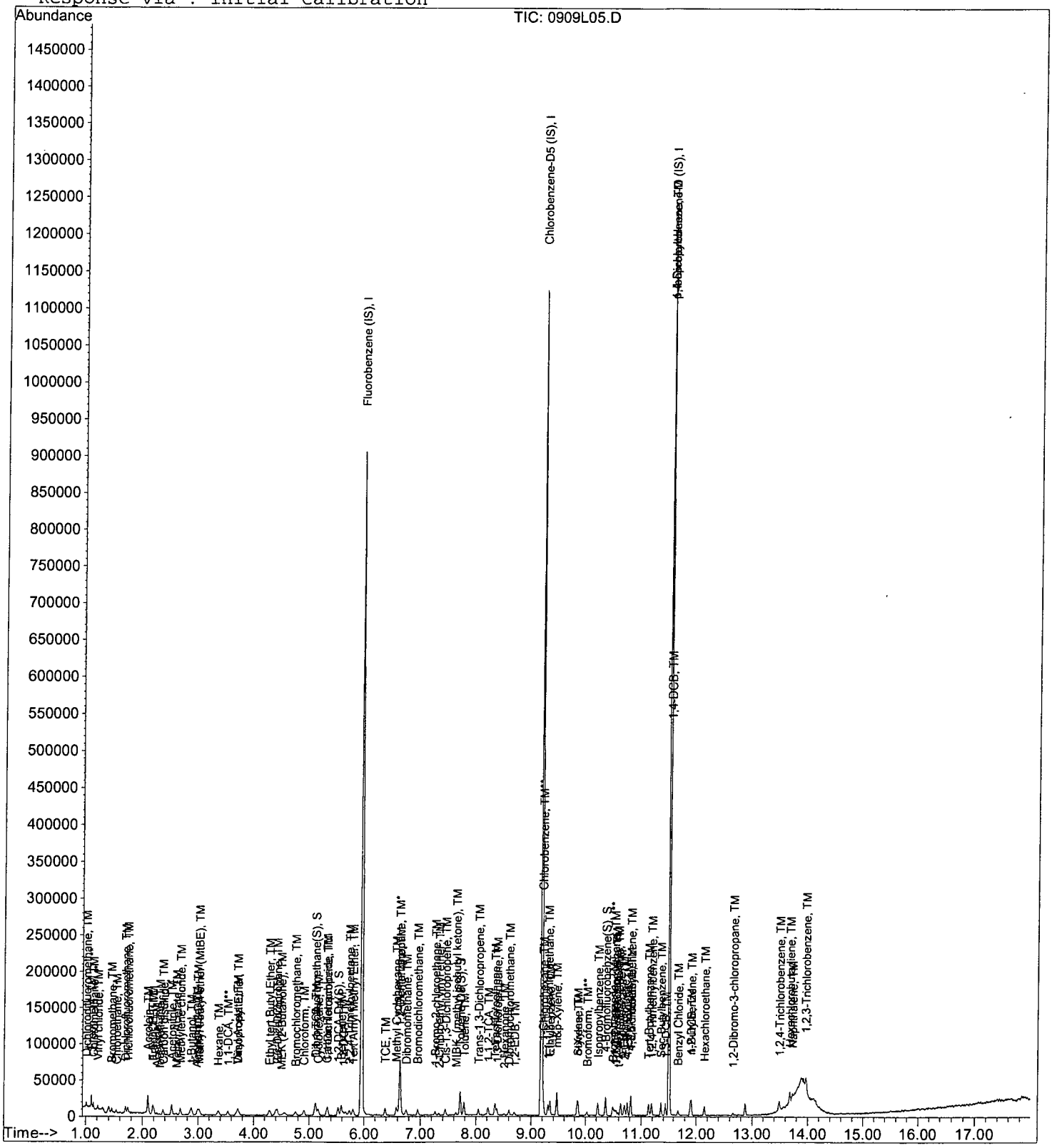
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0909L05.D Vial: 4
Acq On : 9 Sep 14 9:55 Operator: DG,SV,RS
Sample : 0.3ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L06.D Vial: 5
Acq On : 9 Sep 14 10:23 Operator: DG,SV,RS
Sample : 0.5ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	441984	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	400640	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	220416	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.12	111	11356	1.06031 ppb		0.00
Spiked Amount 25.423			Recovery = 4.170%			
38) 1,2-DCA-D4(S)	5.53	65	13016	1.15426 ppb		0.00
Spiked Amount 24.764			Recovery = 4.660%			
58) Toluene-D8(S)	7.71	98	31732	0.97706 ppb		0.00
Spiked Amount 25.636			Recovery = 3.811%			
66) 4-Bromofluorobenzene(S)	10.36	95	11492	0.94758 ppb		0.00
Spiked Amount 23.806			Recovery = 3.982%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	4617	0.54018 ppb		92
3) Freon 114	1.10	85	4988	0.66604 ppb		82
4) Chloromethane	1.14	50	6586	0.74547 ppb		84
5) Vinyl chloride	1.21	62	5472	0.56955 ppb		92
6) Bromomethane	1.45	94	3600	0.88328 ppb		99
7) Chloroethane	1.53	64	3147	0.62957 ppb		98
8) Dichlorofluoromethane	1.70	67	9529	0.54108 ppb		97
9) Trichlorofluoromethane	1.74	101	7472	0.54428 ppb		86
10) Acrolein	2.09	56	28237	22.22927 ppb	#	92
11) Acetone	2.25	43	3281	0.62197 ppb		85
12) Freon-113	2.20	101	5079	0.60395 ppb		91
13) 1,1-DCE	2.18	61	6596	0.54787 ppb	#	79
14) t-Butanol	2.87	59	7053	23.65793 ppb		96
15) Acetonitrile	2.52	41	24280	24.15386 ppb	#	85
16) Methyl Acetate	2.59	43	3972	0.99197 ppb	#	85
17) Iodomethane	2.31	142	696	1.83671 ppb	#	55
18) Acrylonitrile	2.97	52	1117	0.47762 ppb		91
19) Methylene chloride	2.67	84	6014	0.52795 ppb		92
20) Carbon disulfide	2.36	76	14265	0.63529 ppb		100
21) Methyl t-butyl ether (MtBE	3.02	73	12164	0.51276 ppb	#	84
22) Trans-1,2-DCE	2.99	96	4717	0.52112 ppb		92
23) Diisopropyl Ether	3.71	45	12569	0.50120 ppb		92
24) 1,1-DCA	3.53	63	8934	0.55518 ppb	#	93
25) Hexane	3.36	57	4368	0.58915 ppb	#	85
26) Vinyl Acetate	3.71	43	3113	0.57880 ppb	#	90
27) Ethyl tert Butyl Ether	4.29	59	10882	0.46846 ppb		90
28) MEK (2-Butanone)	4.52	43	2398	0.95793 ppb	#	44
29) Cis-1,2-DCE	4.42	96	5923	0.55878 ppb		90
30) 2,2-Dichloropropane	4.40	77	2920	0.60885 ppb	#	85
31) Chloroform	4.90	83	9678	0.56402 ppb		96
32) Bromochloromethane	4.75	128	2719	0.50488 ppb		98
34) 1,1,1-TCA	5.11	97	8468	0.57502 ppb		92
35) Cyclohexane	5.16	41	3364	0.53205 ppb		77
36) 1,1-Dichloropropene	5.33	75	5667	0.50552 ppb		92
37) 2,2,4-Trimethylpentane	5.73	57	10851	0.50993 ppb	#	81
39) Carbon Tetrachloride	5.33	117	6508	0.53152 ppb		83
40) Tert Amyl Methyl Ether	5.80	73	10336	0.46369 ppb	#	95
41) 1,2-DCA	5.62	62	6531	0.53511 ppb		98
42) Benzene	5.58	78	19072	0.51318 ppb		94

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\140909\0909L06.D Vial: 5
Acq On : 9 Sep 14 10:23 Operator: DG,SV,RS
Sample : 0.5ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	TCE	6.38	95	4778	0.51692 ppb		95
44)	2-Pentanone	6.64	43	131341	22.43128 ppb		94
45)	1,2-Dichloropropane	6.62	63	5128	0.53345 ppb	#	85
46)	Bromodichloromethane	6.95	83	7394	0.55730 ppb		84
47)	Methyl Cyclohexane	6.57	83	5918	0.50481 ppb		84
48)	Dibromomethane	6.75	93	3366	0.55266 ppb		94
49)	2-Chloroethyl vinyl ether	7.34	106	236	2.58597 ppb	#	84
50)	MIBK (methyl isobutyl ket	7.65	43	3709	0.55147 ppb	#	86
51)	1-Bromo-2-chloroethane	7.26	63	3675	0.50006 ppb		88
52)	Cis-1,3-Dichloropropene	7.45	75	6464	0.45596 ppb	#	82
53)	Toluene	7.78	91	18609	0.48371 ppb		97
54)	Trans-1,3-Dichloropropene	8.04	75	6409	0.52011 ppb		88
55)	1,1,2-TCA	8.21	83	3897	0.54740 ppb		95
56)	2-Hexanone	8.51	43	2036	0.47025 ppb	#	96
59)	1,2-EDB	8.69	107	4604	0.54484 ppb		86
60)	Tetrachloroethene	8.34	166	6444	0.53266 ppb		93
61)	1-Chlorohexane	9.22	91	4654	0.46424 ppb		81
62)	1,1,1,2-Tetrachloroethane	9.30	131	6231	0.57238 ppb		100
63)	m&p-Xylene	9.46	106	14773	0.94562 ppb		98
64)	o-Xylene	9.84	106	6596	0.44630 ppb		86
65)	Styrene	9.86	104	10634	0.42212 ppb		96
67)	1,3-Dichloropropane	8.38	76	6508	0.47768 ppb		91
68)	Dibromochloromethane	8.60	129	5625	0.53344 ppb		90
69)	Chlorobenzene	9.21	112	14247	0.52368 ppb		90
70)	Ethylbenzene	9.34	91	19627	0.49389 ppb		93
71)	Bromoform	10.03	173	4183	0.55012 ppb		90
73)	Isopropylbenzene	10.22	105	15199	0.47152 ppb		98
74)	1,1,2,2-Tetrachloroethane	10.52	83	5501	0.57325 ppb		92
75)	1,2,3-Trichloropropane	10.55	110	1809	0.59981 ppb		85
76)	t-1,4-Dichloro-2-Butene	10.59	53	745	0.41141 ppb		81
77)	Bromobenzene	10.49	156	6302	0.57324 ppb		92
78)	n-Propylbenzene	10.63	91	17142	0.45135 ppb		99
79)	4-Ethyltoluene	10.75	105	14863	0.43913 ppb		88
80)	2-Chlorotoluene	10.70	91	11680	0.47185 ppb		95
81)	1,3,5-Trimethylbenzene	10.82	105	11870	0.41375 ppb		93
82)	4-Chlorotoluene	10.81	91	13626	0.47942 ppb		99
83)	Tert-Butylbenzene	11.13	119	10968	0.45209 ppb		96
84)	1,2,4-Trimethylbenzene	11.18	105	12968	0.45191 ppb		97
85)	Sec-Butylbenzene	11.35	105	15424	0.44416 ppb		96
86)	p-Isopropyltoluene	11.50	119	13309	0.43969 ppb		88
87)	Benzyl Chloride	11.67	91	7211	0.52306 ppb		97
88)	1,3-DCB	11.44	146	11037	0.53389 ppb		94
89)	1,4-DCB	11.52	146	12096	0.55829 ppb		90
90)	n-Butylbenzene	11.91	91	12394	0.46413 ppb		97
91)	1,2-DCB	11.89	146	10363	0.52329 ppb		92
92)	Hexachloroethane	12.15	117	3939	0.57830 ppb		98
93)	1,2-Dibromo-3-chloropropan	12.66	157	969	0.79481 ppb	#	81
94)	1,2,4-Trichlorobenzene	13.49	180	7075	0.52206 ppb		94
95)	Hexachlorobutadiene	13.68	225	4316	0.55199 ppb	#	59
96)	Naphthalene	13.72	128	6281	1.82131 ppb		99
97)	1,2,3-Trichlorobenzene	13.97	180	6471	0.49699 ppb		89

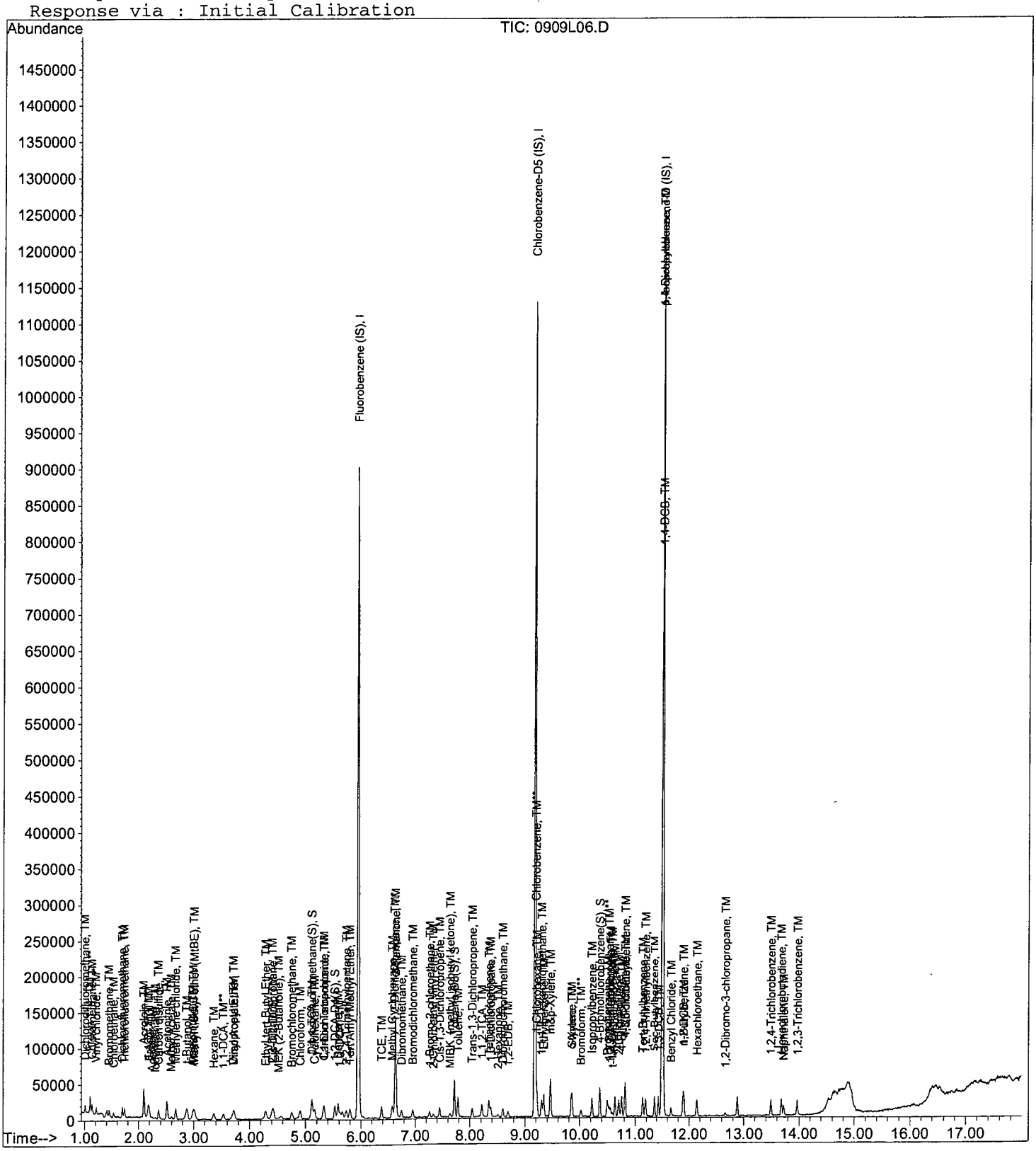
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0909L06.D Vial: 5
Acq On : 9 Sep 14 10:23 Operator: DG,SV,RS
Sample : 0.5ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L07.D Vial: 6
Acq On : 9 Sep 14 10:51 Operator: DG,SV,RS
Sample : 1.0ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	446208	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	410688	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	235200	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.12	111	22564	2.08686 ppb		0.00
Spiked Amount 25.423			Recovery =	8.209%		
38) 1,2-DCA-D4(S)	5.52	65	24418	2.14488 ppb		0.00
Spiked Amount 24.764			Recovery =	8.662%		
58) Toluene-D8(S)	7.71	98	63909	1.91968 ppb		0.00
Spiked Amount 25.636			Recovery =	7.489%		
66) 4-Bromofluorobenzene(S)	10.36	95	22097	1.77745 ppb		0.00
Spiked Amount 23.806			Recovery =	7.464%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	9287	1.07628 ppb	#	77
3) Freon 114	1.10	85	8107	1.07227 ppb		92
4) Chloromethane	1.14	50	12405	1.40219 ppb		98
5) Vinyl chloride	1.21	62	10474	1.07986 ppb		94
6) Bromomethane	1.45	94	6609	1.51790 ppb		80
7) Chloroethane	1.53	64	5452	1.08038 ppb		99
8) Dichlorofluoromethane	1.70	67	17863	1.00470 ppb		95
9) Trichlorofluoromethane	1.74	101	15412	1.11203 ppb		99
10) Acrolein	2.10	56	56322	50.36405 ppb	#	100
11) Acetone	2.25	43	4174	1.04599 ppb		86
12) Freon-113	2.19	101	8596	1.01249 ppb		87
13) 1,1-DCE	2.18	61	12861	1.05813 ppb		92
14) t-Butanol	2.87	59	13675	46.51744 ppb		95
15) Acetonitrile	2.52	41	47057	48.93339 ppb		90
16) Methyl Acetate	2.60	43	7309	1.54615 ppb		93
17) Iodomethane	2.31	142	1685	2.08678 ppb	#	89
18) Acrylonitrile	2.97	52	2831	1.19904 ppb		80
19) Methylene chloride	2.68	84	10749	1.03861 ppb		96
20) Carbon disulfide	2.36	76	26076	1.15030 ppb		96
21) Methyl t-butyl ether (MtBE	3.02	73	23500	0.98124 ppb		95
22) Trans-1,2-DCE	2.98	96	10217	1.11806 ppb		95
23) Diisopropyl Ether	3.72	45	24090	0.95151 ppb	#	88
24) 1,1-DCA	3.53	63	16399	1.00943 ppb		94
25) Hexane	3.36	57	7396	0.98812 ppb		93
26) Vinyl Acetate	3.69	43	5576	1.02693 ppb	#	90
27) Ethyl tert Butyl Ether	4.29	59	22659	0.96621 ppb		90
28) MEK (2-Butanone)	4.51	43	3094	1.17521 ppb	#	82
29) Cis-1,2-DCE	4.43	96	11645	1.08819 ppb		81
30) 2,2-Dichloropropane	4.41	77	5284	1.09133 ppb		93
31) Chloroform	4.90	83	17518	1.01126 ppb		90
32) Bromochloromethane	4.76	128	6630	1.21944 ppb		78
34) 1,1,1-TCA	5.10	97	15629	1.05124 ppb		98
35) Cyclohexane	5.16	41	6664	1.04401 ppb		85
36) 1,1-Dichloropropene	5.33	75	11357	1.00351 ppb		92
37) 2,2,4-Trimethylpentane	5.73	57	21384	0.99540 ppb	#	76
39) Carbon Tetrachloride	5.32	117	13206	1.06836 ppb		99
40) Tert Amyl Methyl Ether	5.80	73	21988	0.97708 ppb		98
41) 1,2-DCA	5.62	62	13062	1.06010 ppb		97
42) Benzene	5.58	78	38168	1.01728 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L07.D Vial: 6
Acq On : 9 Sep 14 10:51 Operator: DG,SV,RS
Sample : 1.0ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	TCE	6.38	95	9639	1.03295 ppb		91
44)	2-Pentanone	6.64	43	270219	45.71290 ppb		97
45)	1,2-Dichloropropane	6.62	63	9828	1.01269 ppb	#	93
46)	Bromodichloromethane	6.95	83	13835	1.03291 ppb		98
47)	Methyl Cyclohexane	6.58	83	11695	0.98815 ppb		91
48)	Dibromomethane	6.75	93	6802	1.10625 ppb		89
49)	2-Chloroethyl vinyl ether	7.33	106	848	2.99223 ppb		76
50)	MIBK (methyl isobutyl ket	7.63	43	7158	1.05421 ppb	#	86
51)	1-Bromo-2-chloroethane	7.26	63	8022	1.08124 ppb		88
52)	Cis-1,3-Dichloropropene	7.44	75	14389	1.00536 ppb		97
53)	Toluene	7.78	91	34978	0.90059 ppb		98
54)	Trans-1,3-Dichloropropene	8.04	75	10803	0.86839 ppb	#	77
55)	1,1,2-TCA	8.22	83	7431	1.03394 ppb		98
56)	2-Hexanone	8.51	43	4506	1.03089 ppb	#	87
59)	1,2-EDB	8.69	107	8689	1.00310 ppb		99
60)	Tetrachloroethene	8.34	166	12669	1.02159 ppb		97
61)	1-Chlorohexane	9.22	91	9675	0.94147 ppb		97
62)	1,1,1,2-Tetrachloroethane	9.30	131	10841	0.97148 ppb		91
63)	m&p-Xylene	9.46	106	27041	1.68854 ppb		96
64)	o-Xylene	9.85	106	13499	0.89103 ppb		90
65)	Styrene	9.86	104	21775	0.84321 ppb	#	97
67)	1,3-Dichloropropane	8.38	76	13388	0.95861 ppb		94
68)	Dibromochloromethane	8.60	129	10450	0.96676 ppb		99
69)	Chlorobenzene	9.20	112	29604	1.06154 ppb		96
70)	Ethylbenzene	9.34	91	38050	0.93405 ppb		93
71)	Bromoform	10.03	173	7327	0.94003 ppb		98
73)	Isopropylbenzene	10.23	105	31842	0.92574 ppb		98
74)	1,1,2,2-Tetrachloroethane	10.52	83	10694	1.04436 ppb		99
75)	1,2,3-Trichloropropane	10.55	110	3404	1.05772 ppb		78
76)	t-1,4-Dichloro-2-Butene	10.59	53	1997	1.03349 ppb		96
77)	Bromobenzene	10.49	156	12356	1.05328 ppb		88
78)	n-Propylbenzene	10.63	91	36884	0.91011 ppb		95
79)	4-Ethyltoluene	10.75	105	30401	0.84174 ppb		99
80)	2-Chlorotoluene	10.70	91	25487	0.96491 ppb		95
81)	1,3,5-Trimethylbenzene	10.82	105	26379	0.86168 ppb		99
82)	4-Chlorotoluene	10.81	91	27145	0.89505 ppb		99
83)	Tert-Butylbenzene	11.13	119	23819	0.92009 ppb		96
84)	1,2,4-Trimethylbenzene	11.18	105	25098	0.81964 ppb		96
85)	Sec-Butylbenzene	11.35	105	32211	0.86926 ppb		99
86)	p-Isopropyltoluene	11.51	119	28526	0.88318 ppb		96
87)	Benzyl Chloride	11.67	91	15456	1.05066 ppb		96
88)	1,3-DCB	11.44	146	21361	0.96834 ppb		88
89)	1,4-DCB	11.53	146	22614	0.97813 ppb		99
90)	n-Butylbenzene	11.91	91	24061	0.84440 ppb		97
91)	1,2-DCB	11.89	146	20674	0.97833 ppb		96
92)	Hexachloroethane	12.15	117	7768	1.06877 ppb		90
93)	1,2-Dibromo-3-chloropropan	12.66	157	1335	0.99957 ppb		91
94)	1,2,4-Trichlorobenzene	13.49	180	13587	0.93955 ppb		93
95)	Hexachlorobutadiene	13.68	225	9046	1.08420 ppb		98
96)	Naphthalene	13.72	128	13782	2.14486 ppb		92
97)	1,2,3-Trichlorobenzene	13.97	180	12552	0.90342 ppb		95

(#) = qualifier out of range (m) = manual integration

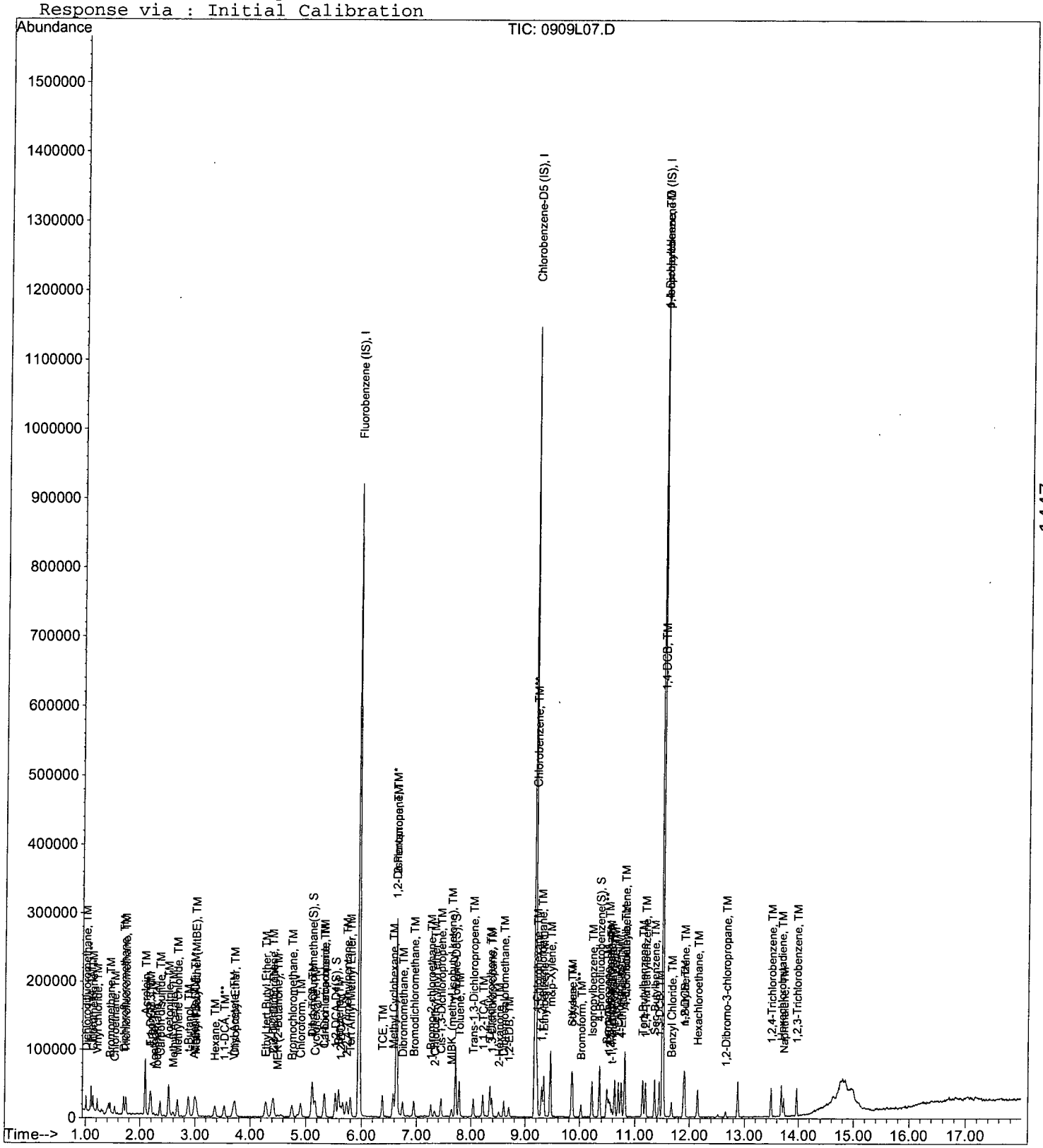
Quantitation Report

Data File : M:\LOKI\DATA\140909\0909L07.D
Acq On : 9 Sep 14 10:51
Sample : 1.0ug/L Vol Std 09-09-14
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 6
Operator: DG,SV,RS
Inst : Loki
Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



1447

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L08.D Vial: 7
Acq On : 9 Sep 14 11:19 Operator: DG,SV,RS
Sample : 5.0ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	457984	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	415232	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	251904	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.11	111	106989	9.64060 ppb		0.00
Spiked Amount 25.423			Recovery	= 37.923%		
38) 1,2-DCA-D4(S)	5.52	65	113413	9.70608 ppb		0.00
Spiked Amount 24.764			Recovery	= 39.194%		
58) Toluene-D8(S)	7.71	98	319084	9.47969 ppb		0.00
Spiked Amount 25.636			Recovery	= 36.979%		
66) 4-Bromofluorobenzene(S)	10.36	95	122336	9.73281 ppb		0.00
Spiked Amount 23.806			Recovery	= 40.884%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	39128	4.41799 ppb		96
3) Freon 114	1.10	85	36505	4.70418 ppb		98
4) Chloromethane	1.14	50	48532	5.38157 ppb		99
5) Vinyl chloride	1.21	62	47364	4.75760 ppb		95
6) Bromomethane	1.45	94	26881	5.69540 ppb		100
7) Chloroethane	1.53	64	24880	4.80349 ppb		99
8) Dichlorofluoromethane	1.70	67	88278	4.83751 ppb		99
9) Trichlorofluoromethane	1.74	101	64942	4.56529 ppb		97
10) Acrolein	2.09	56	111245	103.02492 ppb	#	97
11) Acetone	2.25	43	11375	4.44566 ppb		84
12) Freon-113	2.20	101	42025	4.82270 ppb		97
13) 1,1-DCE	2.18	61	58493	4.68875 ppb		99
14) t-Butanol	2.88	59	29208	98.07042 ppb		96
15) Acetonitrile	2.51	41	95359	99.32793 ppb		91
16) Methyl Acetate	2.59	43	32808	5.68785 ppb		99
17) Iodomethane	2.31	142	12303	4.70927 ppb		96
18) Acrylonitrile	2.96	52	11309	4.66666 ppb		97
19) Methylene chloride	2.67	84	50310	5.21634 ppb		93
20) Carbon disulfide	2.36	76	109526	4.70735 ppb		98
21) Methyl t-butyl ether (MtBE	3.02	73	113485	4.61671 ppb		97
22) Trans-1,2-DCE	2.99	96	45614	4.86326 ppb		96
23) Diisopropyl Ether	3.71	45	124297	4.78329 ppb		97
24) 1,1-DCA	3.53	63	83276	4.99419 ppb		99
25) Hexane	3.36	57	35451	4.61455 ppb		99
26) Vinyl Acetate	3.71	43	26488	4.75286 ppb		100
27) Ethyl tert Butyl Ether	4.29	59	112324	4.66649 ppb		91
28) MEK (2-Butanone)	4.50	43	15189	4.95368 ppb		88
29) Cis-1,2-DCE	4.43	96	49062	4.46682 ppb		90
30) 2,2-Dichloropropane	4.40	77	23848	4.79882 ppb		99
31) Chloroform	4.90	83	86231	4.84984 ppb		99
32) Bromochloromethane	4.75	128	26964	4.83192 ppb		97
34) 1,1,1-TCA	5.10	97	76291	4.99953 ppb		99
35) Cyclohexane	5.16	41	30665	4.68057 ppb		99
36) 1,1-Dichloropropene	5.33	75	53954	4.64482 ppb		96
37) 2,2,4-Trimethylpentane	5.73	57	108296	4.91146 ppb	#	86
39) Carbon Tetrachloride	5.32	117	64272	5.06587 ppb		96
40) Tert Amyl Methyl Ether	5.80	73	110035	4.76390 ppb		96
41) 1,2-DCA	5.62	62	63829	5.04709 ppb		98
42) Benzene	5.58	78	176120	4.57338 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L08.D Vial: 7
Acq On : 9 Sep 14 11:19 Operator: DG,SV,RS
Sample : 5.0ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43) TCE	6.38	95	47658	4.97589 ppb		95
44) 2-Pentanone	6.64	43	589387	97.14278 ppb		98
45) 1,2-Dichloropropane	6.62	63	51114	5.13143 ppb	#	95
46) Bromodichloromethane	6.95	83	67437	4.90532 ppb		99
47) Methyl Cyclohexane	6.58	83	55955	4.60625 ppb		93
48) Dibromomethane	6.75	93	31364	4.96976 ppb		90
49) 2-Chloroethyl vinyl ether	7.33	106	5813	6.20067 ppb		95
50) MIBK (methyl isobutyl ket	7.64	43	31573	4.53044 ppb		94
51) 1-Bromo-2-chloroethane	7.26	63	36584	4.80415 ppb		96
52) Cis-1,3-Dichloropropene	7.44	75	70954	4.83010 ppb		97
53) Toluene	7.78	91	189543	4.75475 ppb		99
54) Trans-1,3-Dichloropropene	8.04	75	61553	4.82067 ppb		97
55) 1,1,2-TCA	8.22	83	36799	4.98850 ppb		94
56) 2-Hexanone	8.51	43	20820	4.64077 ppb		89
59) 1,2-EDB	8.69	107	43366	4.95160 ppb		99
60) Tetrachloroethene	8.34	166	60505	4.82557 ppb		97
61) 1-Chlorohexane	9.22	91	49657	4.77923 ppb		93
62) 1,1,1,2-Tetrachloroethane	9.30	131	55697	4.93650 ppb		97
63) m&p-Xylene	9.46	106	153240	9.46414 ppb		100
64) o-Xylene	9.85	106	71784	4.68642 ppb		91
65) Styrene	9.87	104	123290	4.72203 ppb		99
67) 1,3-Dichloropropane	8.38	76	72240	5.11596 ppb		95
68) Dibromochloromethane	8.60	129	52881	4.83866 ppb		96
69) Chlorobenzene	9.21	112	139718	4.95519 ppb		97
70) Ethylbenzene	9.34	91	197441	4.79375 ppb		97
71) Bromoform	10.02	173	41264	5.23607 ppb		92
73) Isopropylbenzene	10.23	105	175852	4.77352 ppb		97
74) 1,1,2,2-Tetrachloroethane	10.52	83	56580	5.15912 ppb		96
75) 1,2,3-Trichloropropane	10.55	110	16255	4.71598 ppb		99
76) t-1,4-Dichloro-2-Butene	10.59	53	10424	5.03693 ppb		86
77) Bromobenzene	10.50	156	64797	5.15731 ppb		93
78) n-Propylbenzene	10.63	91	209875	4.83523 ppb		99
79) 4-Ethyltoluene	10.75	105	193083	4.99154 ppb		96
80) 2-Chlorotoluene	10.70	91	140963	4.98280 ppb		95
81) 1,3,5-Trimethylbenzene	10.82	105	174358	5.31781 ppb		98
82) 4-Chlorotoluene	10.81	91	167485	5.15626 ppb		100
83) Tert-Butylbenzene	11.13	119	137386	4.95507 ppb		100
84) 1,2,4-Trimethylbenzene	11.18	105	160535	4.89504 ppb		98
85) Sec-Butylbenzene	11.35	105	197979	4.98847 ppb		98
86) p-Isopropyltoluene	11.51	119	171645	4.96181 ppb		98
87) Benzyl Chloride	11.67	91	72967	4.63118 ppb		96
88) 1,3-DCB	11.44	146	120534	5.10175 ppb		96
89) 1,4-DCB	11.53	146	123525	4.98858 ppb		97
90) n-Butylbenzene	11.91	91	144436	4.73276 ppb		97
91) 1,2-DCB	11.89	146	113034	4.99426 ppb		98
92) Hexachloroethane	12.15	117	37770	4.85204 ppb		98
93) 1,2-Dibromo-3-chloropropan	12.66	157	8130	5.25514 ppb		96
94) 1,2,4-Trichlorobenzene	13.49	180	73324	4.73419 ppb		99
95) Hexachlorobutadiene	13.68	225	45865	5.13258 ppb		96
96) Naphthalene	13.72	128	75488	4.73607 ppb		98
97) 1,2,3-Trichlorobenzene	13.97	180	70776	4.75626 ppb		97

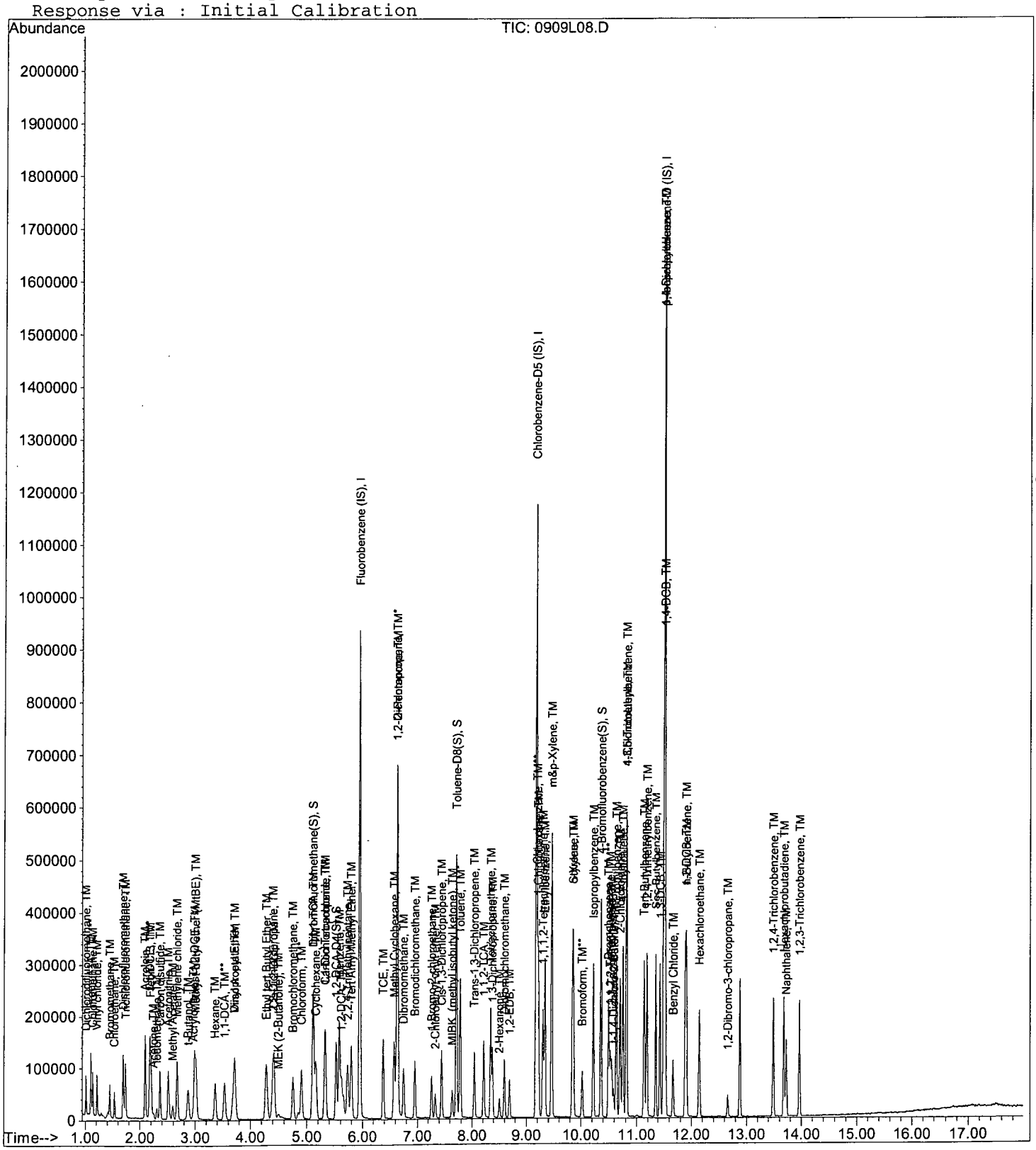
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0909L08.D Vial: 7
Acq On : 9 Sep 14 11:19 Operator: DG,SV,RS
Sample : 5.0ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



1450

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L09.D Vial: 8
Acq On : 9 Sep 14 11:46 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	464576	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	428160	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	261568	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	269222	23.91493 ppb	0.00
Spiked Amount 25.423			Recovery = 94.069%		
38) 1,2-DCA-D4(S)	5.52	65	273736	23.09438 ppb	0.00
Spiked Amount 24.764			Recovery = 93.256%		
58) Toluene-D8(S)	7.71	98	854765	24.62750 ppb	0.00
Spiked Amount 25.636			Recovery = 96.068%		
66) 4-Bromofluorobenzene(S)	10.36	95	322282	24.86594 ppb	0.00
Spiked Amount 23.806			Recovery = 104.451%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.01	85	78952	8.78808 ppb	100
3) Freon 114	1.10	85	67339	8.55444 ppb	100
4) Chloromethane	1.14	50	90528	9.90694 ppb	100
5) Vinyl chloride	1.21	62	95410	9.44773 ppb	100
6) Bromomethane	1.44	94	51579	10.67702 ppb	100
7) Chloroethane	1.53	64	45936	8.74286 ppb	100
8) Dichlorofluoromethane	1.70	67	172341	9.31003 ppb	100
9) Trichlorofluoromethane	1.74	101	133745	9.26859 ppb	100
10) Acrolein	2.10	56	135048	124.59396 ppb	100
11) Acetone	2.25	43	24176	10.41858 ppb	100
12) Freon-113	2.20	101	78523	8.88326 ppb	100
13) 1,1-DCE	2.18	61	117964	9.32172 ppb	100
14) t-Butanol	2.88	59	37192	123.40594 ppb	100
15) Acetonitrile	2.52	41	120715	124.64631 ppb	100
16) Methyl Acetate	2.59	43	58902	9.82171 ppb	100
17) Iodomethane	2.31	142	29584	8.89126 ppb	100
18) Acrylonitrile	2.96	52	23708	9.64429 ppb	100
19) Methylene chloride	2.67	84	95813	9.91166 ppb	100
20) Carbon disulfide	2.36	76	215977	9.15082 ppb	100
21) Methyl t-butyl ether (MtBE	3.02	73	230400	9.23996 ppb	100
22) Trans-1,2-DCE	2.99	96	89479	9.40468 ppb	100
23) Diisopropyl Ether	3.72	45	254377	9.65022 ppb	100
24) 1,1-DCA	3.53	63	161668	9.55790 ppb	100
25) Hexane	3.36	57	67019	8.59988 ppb	100
26) Vinyl Acetate	3.71	43	53392	9.44442 ppb	100
27) Ethyl tert Butyl Ether	4.29	59	234234	9.59315 ppb	100
28) MEK (2-Butanone)	4.50	43	30832	9.73616 ppb	100
29) Cis-1,2-DCE	4.43	96	105853	9.50058 ppb	100
30) 2,2-Dichloropropane	4.40	77	46680	9.25990 ppb	100
31) Chloroform	4.90	83	170718	9.46535 ppb	100
32) Bromochloromethane	4.76	128	53175	9.39370 ppb	100
34) 1,1,1-TCA	5.11	97	143859	9.29366 ppb	100
35) Cyclohexane	5.16	41	58721	8.83574 ppb	100
36) 1,1-Dichloropropene	5.33	75	110335	9.36381 ppb	100
37) 2,2,4-Trimethylpentane	5.73	57	201689	9.01724 ppb	100
39) Carbon Tetrachloride	5.32	117	125884	9.78129 ppb	100
40) Tert Amyl Methyl Ether	5.80	73	236769	10.10533 ppb	100
41) 1,2-DCA	5.62	62	123424	9.62092 ppb	100
42) Benzene	5.58	78	355263	9.09435 ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\140909\0909L09.D Vial: 8
Acq On : 9 Sep 14 11:46 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

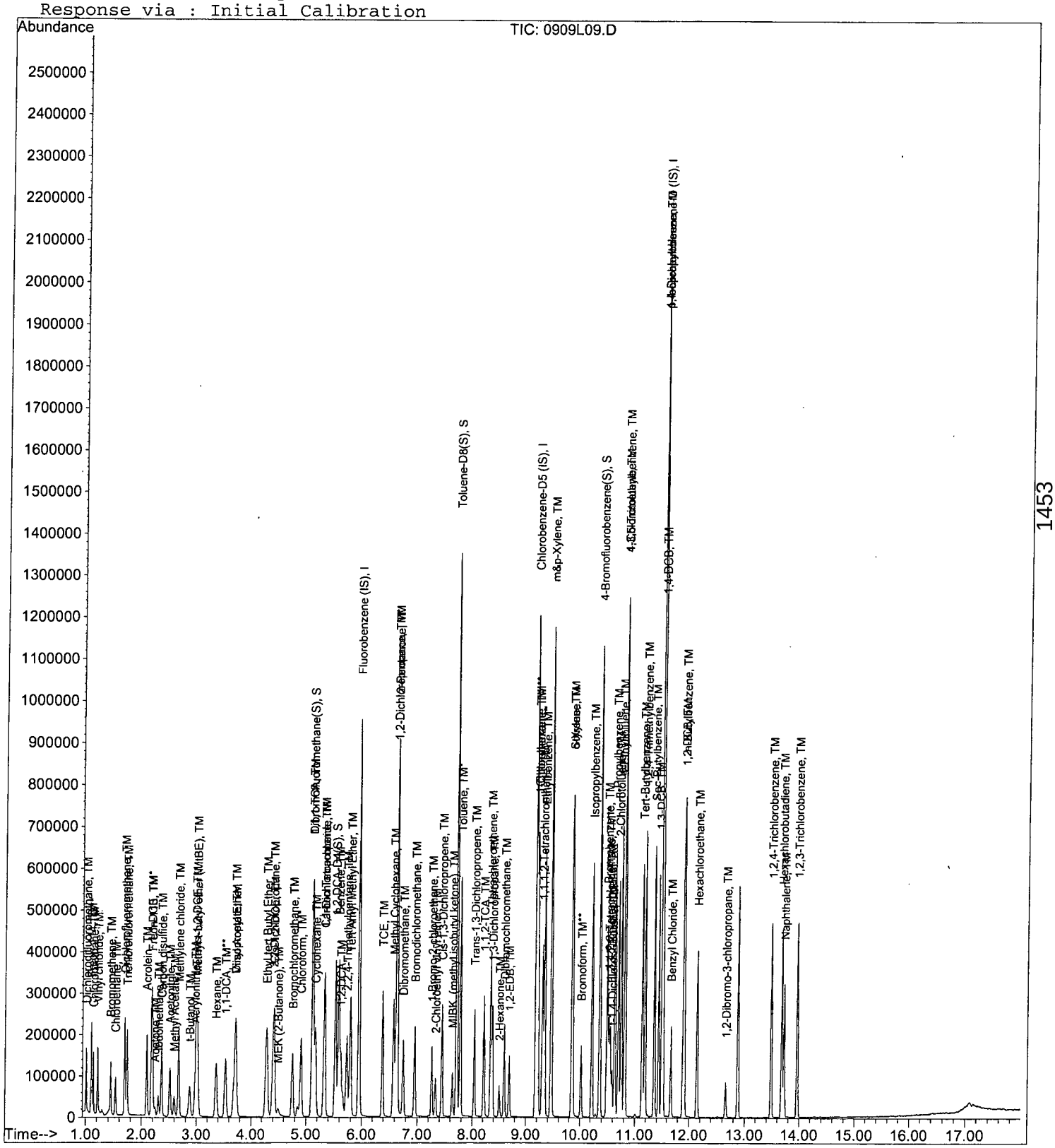
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
43)	TCE	6.38	95	94532	9.72987	ppb	100
44)	2-Pentanone	6.64	43	754405	122.57674	ppb	100
45)	1,2-Dichloropropane	6.62	63	100879	9.98373	ppb	100
46)	Bromodichloromethane	6.95	83	132664	9.51296	ppb	100
47)	Methyl Cyclohexane	6.58	83	106273	8.62432	ppb	100
48)	Dibromomethane	6.75	93	61942	9.67571	ppb	100
49)	2-Chloroethyl vinyl ether	7.33	106	11586	9.84144	ppb	100
50)	MIBK (methyl isobutyl ket	7.64	43	61549	8.70641	ppb	100
51)	1-Bromo-2-chloroethane	7.26	63	76528	9.90692	ppb	100
52)	Cis-1,3-Dichloropropene	7.44	75	143911	9.65754	ppb	100
53)	Toluene	7.78	91	395544	9.78156	ppb	100
54)	Trans-1,3-Dichloropropene	8.04	75	129159	9.97186	ppb	100
55)	1,1,2-TCA	8.21	83	70317	9.39697	ppb	100
56)	2-Hexanone	8.51	43	45948	10.09648	ppb	100
59)	1,2-EDB	8.69	107	87258	9.66243	ppb	100
60)	Tetrachloroethene	8.34	166	118199	9.14230	ppb	100
61)	1-Chlorohexane	9.22	91	101360	9.46082	ppb	100
62)	1,1,1,2-Tetrachloroethane	9.30	131	113196	9.72978	ppb	100
63)	m&p-Xylene	9.46	106	326998	19.58570	ppb	100
64)	o-Xylene	9.85	106	154824	9.80249	ppb	100
65)	Styrene	9.87	104	270400	10.04368	ppb	100
67)	1,3-Dichloropropane	8.38	76	142865	9.81205	ppb	100
68)	Dibromochloromethane	8.60	129	109953	9.75703	ppb	100
69)	Chlorobenzene	9.21	112	272352	9.36749	ppb	100
70)	Ethylbenzene	9.34	91	410504	9.66586	ppb	100
71)	Bromoform	10.02	173	76689	9.43740	ppb	100
73)	Isopropylbenzene	10.23	105	383853	10.03476	ppb	100
74)	1,1,2,2-Tetrachloroethane	10.52	83	107961	9.48048	ppb	100
75)	1,2,3-Trichloropropane	10.55	110	33953	9.48667	ppb	100
76)	t-1,4-Dichloro-2-Butene	10.58	53	22301	10.37783	ppb	100
77)	Bromobenzene	10.50	156	127845	9.79946	ppb	100
78)	n-Propylbenzene	10.63	91	460087	10.20815	ppb	100
79)	4-Ethyltoluene	10.75	105	423487	10.54341	ppb	100
80)	2-Chlorotoluene	10.70	91	297377	10.12339	ppb	100
81)	1,3,5-Trimethylbenzene	10.82	105	376959	11.07224	ppb	100
82)	4-Chlorotoluene	10.81	91	362284	10.74134	ppb	100
83)	Tert-Butylbenzene	11.13	119	286909	9.96557	ppb	100
84)	1,2,4-Trimethylbenzene	11.18	105	361666	10.62048	ppb	100
85)	Sec-Butylbenzene	11.35	105	428427	10.39623	ppb	100
86)	p-Isopropyltoluene	11.51	119	367811	10.23963	ppb	100
87)	Benzyl Chloride	11.67	91	151229	9.24381	ppb	100
88)	1,3-DCB	11.44	146	241041	9.82542	ppb	100
89)	1,4-DCB	11.53	146	249277	9.69516	ppb	100
90)	n-Butylbenzene	11.91	91	325202	10.26225	ppb	100
91)	1,2-DCB	11.89	146	229518	9.76629	ppb	100
92)	Hexachloroethane	12.15	117	74995	9.27812	ppb	100
93)	1,2-Dibromo-3-chloropropan	12.66	157	16005	9.88132	ppb	100
94)	1,2,4-Trichlorobenzene	13.49	180	151129	9.39718	ppb	100
95)	Hexachlorobutadiene	13.68	225	90110	9.71130	ppb	100
96)	Naphthalene	13.72	128	166464	8.35556	ppb	100
97)	1,2,3-Trichlorobenzene	13.97	180	149455	9.67255	ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\140909\0909L09.D Vial: 8
Acq On : 9 Sep 14 11:46 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



1453

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L10.D Vial: 9
Acq On : 9 Sep 14 12:14 Operator: DG,SV,RS
Sample : 20ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	495360	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	437632	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	272384	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.11	111	460893	38.39675 ppb		0.00
Spiked Amount 25.423			Recovery = 151.034%			
38) 1,2-DCA-D4(S)	5.52	65	468365	37.05908 ppb		0.00
Spiked Amount 24.764			Recovery = 149.649%			
58) Toluene-D8(S)	7.71	98	1523559	42.94672 ppb		0.00
Spiked Amount 25.636			Recovery = 167.526%			
66) 4-Bromofluorobenzene(S)	10.36	95	582236	43.95061 ppb		0.00
Spiked Amount 23.806			Recovery = 184.619%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	181832	18.98178 ppb		98
3) Freon 114	1.10	85	150319	17.90913 ppb		98
4) Chloromethane	1.14	50	189488	19.46059 ppb		99
5) Vinyl chloride	1.21	62	197470	18.33878 ppb		96
6) Bromomethane	1.44	94	99032	19.13959 ppb		96
7) Chloroethane	1.53	64	96536	17.23159 ppb		98
8) Dichlorofluoromethane	1.70	67	357225	18.09841 ppb		95
9) Trichlorofluoromethane	1.73	101	282495	18.36043 ppb		97
10) Acrolein	2.10	56	172625	150.67802 ppb		100
11) Acetone	2.25	43	47677	20.12578 ppb		97
12) Freon-113	2.20	101	170021	18.03907 ppb		97
13) 1,1-DCE	2.18	61	244499	18.12006 ppb		97
14) t-Butanol	2.88	59	49296	153.68866 ppb		95
15) Acetonitrile	2.52	41	151252	146.96032 ppb		97
16) Methyl Acetate	2.59	43	122109	18.79531 ppb		100
17) Iodomethane	2.31	142	72664	18.32040 ppb		99
18) Acrylonitrile	2.97	52	50573	19.29434 ppb		92
19) Methylene chloride	2.67	84	202806	19.80896 ppb		100
20) Carbon disulfide	2.36	76	453955	18.03852 ppb		100
21) Methyl t-butyl ether (MtBE	3.02	73	496423	18.67134 ppb		99
22) Trans-1,2-DCE	2.99	96	186737	18.40726 ppb		98
23) Diisopropyl Ether	3.72	45	558041	19.85461 ppb		95
24) 1,1-DCA	3.53	63	342770	19.00541 ppb		96
25) Hexane	3.36	57	159519	19.19742 ppb		98
26) Vinyl Acetate	3.71	43	108232	17.95521 ppb		100
27) Ethyl tert Butyl Ether	4.29	59	515567	19.80306 ppb		96
28) MEK (2-Butanone)	4.50	43	67563	19.82312 ppb		97
29) Cis-1,2-DCE	4.43	96	225704	18.99861 ppb		90
30) 2,2-Dichloropropane	4.40	77	100736	18.74115 ppb		96
31) Chloroform	4.90	83	356086	18.51604 ppb		98
32) Bromochloromethane	4.75	128	108994	18.05791 ppb		98
34) 1,1,1-TCA	5.10	97	311894	18.89699 ppb		99
35) Cyclohexane	5.16	41	130358	18.39599 ppb		88
36) 1,1-Dichloropropene	5.33	75	242542	19.30465 ppb		98
37) 2,2,4-Trimethylpentane	5.73	57	475727	19.94734 ppb	#	90
39) Carbon Tetrachloride	5.32	117	273077	19.89971 ppb		100
40) Tert Amyl Methyl Ether	5.80	73	519851	20.80847 ppb		99
41) 1,2-DCA	5.62	62	259095	18.94138 ppb		98
42) Benzene	5.58	78	758677	18.21439 ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\140909\0909L10.D
Acq On : 9 Sep 14 12:14
Sample : 20ug/L Vol Std 09-09-14
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 9
Operator: DG,SV,RS
Inst : Loki
Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) TCE	6.38	95	204034	19.69548 ppb	97
44) 2-Pentanone	6.64	43	968967	147.65505 ppb	98
45) 1,2-Dichloropropane	6.62	63	209482	19.44350 ppb	99
46) Bromodichloromethane	6.95	83	277329	18.65064 ppb	99
47) Methyl Cyclohexane	6.58	83	251841	19.16744 ppb	96
48) Dibromomethane	6.75	93	125596	18.39963 ppb	94
49) 2-Chloroethyl vinyl ether	7.33	106	26697	18.44971 ppb	94
50) MIBK (methyl isobutyl ket	7.64	43	139006	18.44112 ppb	99
51) 1-Bromo-2-chloroethane	7.26	63	156928	19.05262 ppb	100
52) Cis-1,3-Dichloropropene	7.44	75	316686	19.93138 ppb	100
53) Toluene	7.78	91	841249	19.51075 ppb	97
54) Trans-1,3-Dichloropropene	8.04	75	274684	19.88935 ppb	98
55) 1,1,2-TCA	8.21	83	147137	18.44103 ppb	98
56) 2-Hexanone	8.51	43	94864	19.54972 ppb	98
59) 1,2-EDB	8.69	107	181447	19.65749 ppb	100
60) Tetrachloroethene	8.34	166	249047	18.84604 ppb	98
61) 1-Chlorohexane	9.22	91	238195	21.75163 ppb	98
62) 1,1,1,2-Tetrachloroethane	9.30	131	235338	19.79070 ppb	99
63) m&p-Xylene	9.46	106	741210	43.43424 ppb	98
64) o-Xylene	9.85	106	347475	21.52379 ppb	97
65) Styrene	9.86	104	619516	22.51311 ppb	99
67) 1,3-Dichloropropane	8.38	76	298209	20.03787 ppb	97
68) Dibromochloromethane	8.60	129	227149	19.72052 ppb	99
69) Chlorobenzene	9.21	112	592463	19.93659 ppb	99
70) Ethylbenzene	9.34	91	929003	21.40115 ppb	98
71) Bromoform	10.02	173	162649	19.58248 ppb	100
73) Isopropylbenzene	10.23	105	862335	21.64817 ppb	98
74) 1,1,2,2-Tetrachloroethane	10.53	83	217014	18.30013 ppb	96
75) 1,2,3-Trichloropropane	10.55	110	71032	19.05867 ppb	97
76) t-1,4-Dichloro-2-Butene	10.59	53	45641	20.39577 ppb	96
77) Bromobenzene	10.50	156	274222	20.18477 ppb	99
78) n-Propylbenzene	10.63	91	1037219	22.09940 ppb	98
79) 4-Ethyltoluene	10.75	105	957668	22.89596 ppb	98
80) 2-Chlorotoluene	10.70	91	653977	21.37884 ppb	100
81) 1,3,5-Trimethylbenzene	10.82	105	816678	23.03538 ppb	100
82) 4-Chlorotoluene	10.81	91	767901	21.86339 ppb	99
83) Tert-Butylbenzene	11.13	119	655653	21.86931 ppb	98
84) 1,2,4-Trimethylbenzene	11.18	105	821923	23.17772 ppb	99
85) Sec-Butylbenzene	11.35	105	960302	22.37742 ppb	99
86) p-Isopropyltoluene	11.51	119	837783	22.39721 ppb	98
87) Benzyl Chloride	11.67	91	327390	19.21695 ppb	98
88) 1,3-DCB	11.44	146	508896	19.92014 ppb	99
89) 1,4-DCB	11.53	146	526536	19.66545 ppb	97
90) n-Butylbenzene	11.91	91	739905	22.42169 ppb	97
91) 1,2-DCB	11.89	146	482075	19.69838 ppb	98
92) Hexachloroethane	12.15	117	161320	19.16544 ppb	97
93) 1,2-Dibromo-3-chloropropan	12.66	157	32512	19.18858 ppb	96
94) 1,2,4-Trichlorobenzene	13.49	180	336496	20.09243 ppb	100
95) Hexachlorobutadiene	13.68	225	190341	19.69880 ppb	97
96) Naphthalene	13.72	128	400896	17.33496 ppb	99
97) 1,2,3-Trichlorobenzene	13.97	180	338016	21.00732 ppb	96

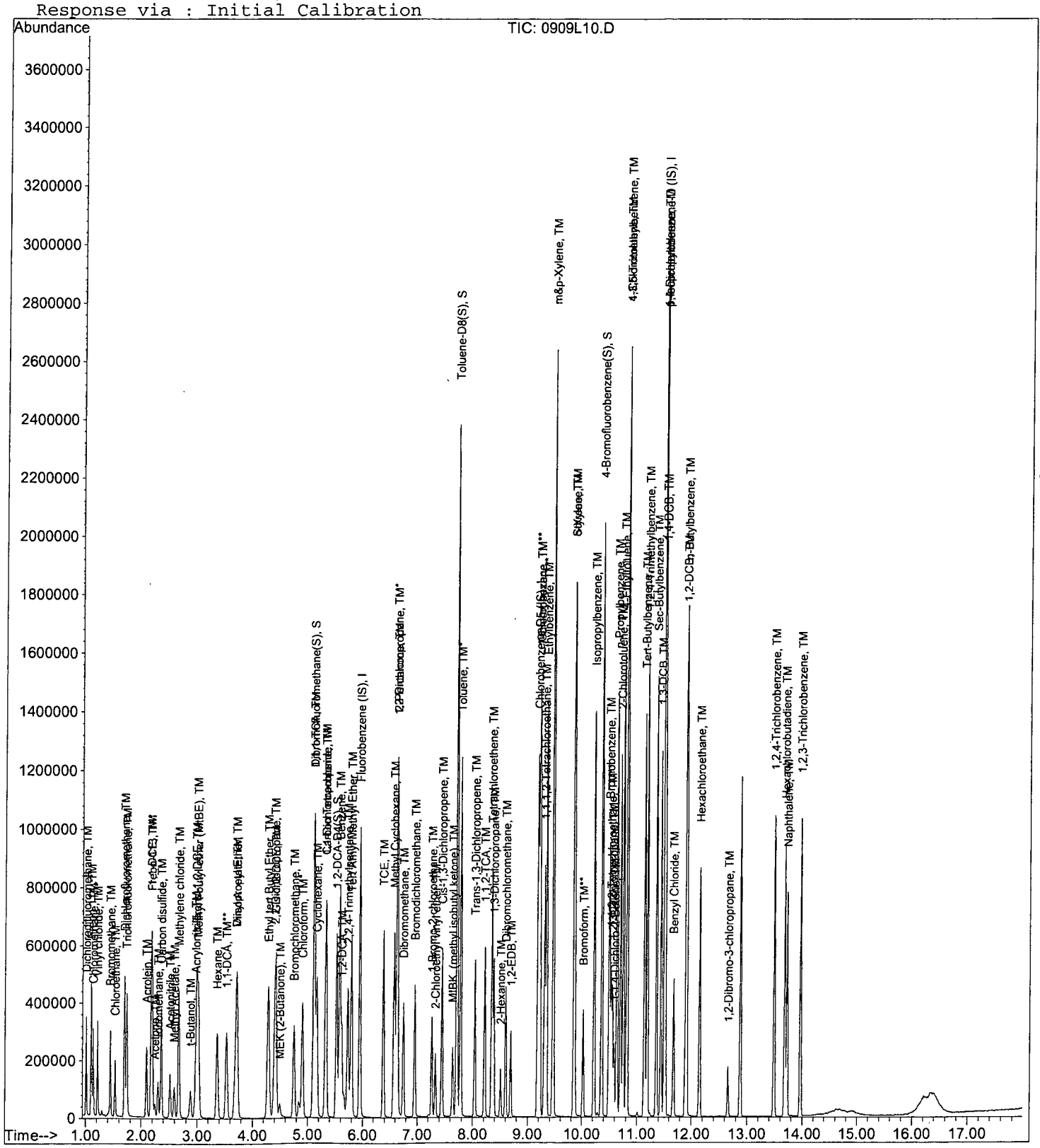
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0909L10.D Vial: 9
Acq On : 9 Sep 14 12:14 Operator: DG,SV,RS
Sample : 20ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



1456

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L11.D Vial: 10
Acq On : 9 Sep 14 12:42 Operator: DG,SV,RS
Sample : 40ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	502848	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	470528	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	285888	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.11	111	916504	75.21647 ppb		0.00
Spiked Amount 25.423			Recovery = 295.862%			
38) 1,2-DCA-D4(S)	5.53	65	923958	72.01892 ppb		0.00
Spiked Amount 24.764			Recovery = 290.821%			
58) Toluene-D8(S)	7.71	98	3111179	81.56790 ppb		0.00
Spiked Amount 25.636			Recovery = 318.178%			
66) 4-Bromofluorobenzene(S)	10.36	95	1176172	82.57722 ppb		0.00
Spiked Amount 23.806			Recovery = 346.870%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	384150	39.50496 ppb		99
3) Freon 114	1.10	85	311825	36.59787 ppb		98
4) Chloromethane	1.14	50	387171	39.18397 ppb		99
5) Vinyl chloride	1.21	62	408527	37.37441 ppb		98
6) Bromomethane	1.44	94	197726	37.54050 ppb		100
7) Chloroethane	1.52	64	194861	34.26457 ppb		98
8) Dichlorofluoromethane	1.69	67	732067	36.53706 ppb		97
9) Trichlorofluoromethane	1.73	101	598745	38.33524 ppb		97
10) Acrolein	2.10	56	205109	177.49218 ppb		99
11) Acetone	2.25	43	93462	39.80399 ppb		89
12) Freon-113	2.19	101	351202	36.70733 ppb		96
13) 1,1-DCE	2.18	61	515072	37.60406 ppb		100
14) t-Butanol	2.89	59	54696	168.09406 ppb		99
15) Acetonitrile	2.52	41	179529	172.30933 ppb		95
16) Methyl Acetate	2.60	43	254216	38.21229 ppb		99
17) Iodomethane	2.30	142	159936	37.78660 ppb		100
18) Acrylonitrile	2.96	52	98779	37.12446 ppb		99
19) Methylene chloride	2.67	84	412600	39.83580 ppb		97
20) Carbon disulfide	2.36	76	918991	35.97358 ppb		98
21) Methyl t-butyl ether (MtBE	3.02	73	1039373	38.51051 ppb		98
22) Trans-1,2-DCE	2.99	96	386330	37.51469 ppb		97
23) Diisopropyl Ether	3.72	45	1173678	41.13659 ppb		94
24) 1,1-DCA	3.53	63	686892	37.51864 ppb		99
25) Hexane	3.36	57	343285	40.69766 ppb		96
26) Vinyl Acetate	3.68	43	227042	37.10439 ppb	#	78
27) Ethyl tert Butyl Ether	4.29	59	1110420	42.01638 ppb		93
28) MEK (2-Butanone)	4.50	43	137820	39.65645 ppb		94
29) Cis-1,2-DCE	4.43	96	452257	37.50180 ppb		93
30) 2,2-Dichloropropane	4.40	77	196992	36.10308 ppb		97
31) Chloroform	4.90	83	714394	36.59446 ppb		98
32) Bromochloromethane	4.75	128	218863	35.72083 ppb		99
34) 1,1,1-TCA	5.11	97	624392	37.26724 ppb		98
35) Cyclohexane	5.16	41	279388	38.83983 ppb		85
36) 1,1-Dichloropropene	5.33	75	512485	40.18282 ppb		97
37) 2,2,4-Trimethylpentane	5.73	57	1028626	42.48825 ppb		98
39) Carbon Tetrachloride	5.32	117	559647	40.17538 ppb		98
40) Tert Amyl Methyl Ether	5.80	73	1086839	42.85591 ppb		97
41) 1,2-DCA	5.62	62	526486	37.91610 ppb		100
42) Benzene	5.58	78	1559762	36.88928 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L11.D Vial: 10
Acq On : 9 Sep 14 12:42 Operator: DG,SV,RS
Sample : 40ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	TCE	6.38	95	406531	38.65822	ppb	98
44)	2-Pentanone	6.64	43	1153445	173.14918	ppb	98
45)	1,2-Dichloropropane	6.62	63	418532	38.26843	ppb	99
46)	Bromodichloromethane	6.95	83	556992	36.90045	ppb	99
47)	Methyl Cyclohexane	6.58	83	550298	41.25910	ppb	96
48)	Dibromomethane	6.75	93	252514	36.44207	ppb	91
49)	2-Chloroethyl vinyl ether	7.33	106	58674	37.11666	ppb	93
50)	MIBK (methyl isobutyl ket	7.64	43	294447	38.48089	ppb	98
51)	1-Bromo-2-chloroethane	7.26	63	319107	38.16584	ppb	97
52)	Cis-1,3-Dichloropropene	7.44	75	666956	41.35136	ppb	99
53)	Toluene	7.78	91	1723512	39.37747	ppb	97
54)	Trans-1,3-Dichloropropene	8.04	75	581933	41.50920	ppb	99
55)	1,1,2-TCA	8.21	83	305611	37.73257	ppb	96
56)	2-Hexanone	8.51	43	200966	40.79866	ppb	97
59)	1,2-EDB	8.69	107	369444	37.22635	ppb	98
60)	Tetrachloroethene	8.34	166	505070	35.54791	ppb	98
61)	1-Chlorohexane	9.22	91	516240	43.84646	ppb	95
62)	1,1,1,2-Tetrachloroethane	9.30	131	473171	37.00929	ppb	98
63)	m&p-Xylene	9.46	106	1541135	83.99535	ppb	99
64)	o-Xylene	9.85	106	743724	42.84800	ppb	100
65)	Styrene	9.86	104	1296915	43.83471	ppb	99
67)	1,3-Dichloropropane	8.38	76	611947	38.24443	ppb	99
68)	Dibromochloromethane	8.60	129	464472	37.50513	ppb	98
69)	Chlorobenzene	9.21	112	1199464	37.54053	ppb	100
70)	Ethylbenzene	9.34	91	1923801	41.21960	ppb	99
71)	Bromoform	10.02	173	331874	37.16319	ppb	100
73)	Isopropylbenzene	10.23	105	1847829	44.19699	ppb	98
74)	1,1,2,2-Tetrachloroethane	10.52	83	439522	35.31285	ppb	97
75)	1,2,3-Trichloropropane	10.55	110	145087	37.08966	ppb	99
76)	t-1,4-Dichloro-2-Butene	10.58	53	94311	40.15439	ppb	95
77)	Bromobenzene	10.50	156	553848	38.84166	ppb	99
78)	n-Propylbenzene	10.63	91	2186795	44.39191	ppb	99
79)	4-Ethyltoluene	10.75	105	2008919	45.76063	ppb	98
80)	2-Chlorotoluene	10.70	91	1334588	41.56756	ppb	100
81)	1,3,5-Trimethylbenzene	10.82	105	1678776	45.11521	ppb	100
82)	4-Chlorotoluene	10.81	91	1563506	42.41285	ppb	100
83)	Tert-Butylbenzene	11.13	119	1398823	44.45385	ppb	99
84)	1,2,4-Trimethylbenzene	11.18	105	1699435	45.65936	ppb	99
85)	Sec-Butylbenzene	11.35	105	2004093	44.49443	ppb	99
86)	p-Isopropyltoluene	11.51	119	1765561	44.97082	ppb	99
87)	Benzyl Chloride	11.67	91	673439	37.66196	ppb	97
88)	1,3-DCB	11.44	146	1022507	38.13425	ppb	98
89)	1,4-DCB	11.53	146	1046442	37.23717	ppb	97
90)	n-Butylbenzene	11.91	91	1571898	45.38396	ppb	97
91)	1,2-DCB	11.89	146	979292	38.12535	ppb	100
92)	Hexachloroethane	12.15	117	333214	37.71721	ppb	98
93)	1,2-Dibromo-3-chloropropan	12.66	157	71968	40.36776	ppb	99
94)	1,2,4-Trichlorobenzene	13.49	180	767081	43.63947	ppb	100
95)	Hexachlorobutadiene	13.68	225	401442	39.58366	ppb	97
96)	Naphthalene	13.72	128	1025216	40.06058	ppb	99
97)	1,2,3-Trichlorobenzene	13.97	180	765073	45.30248	ppb	97

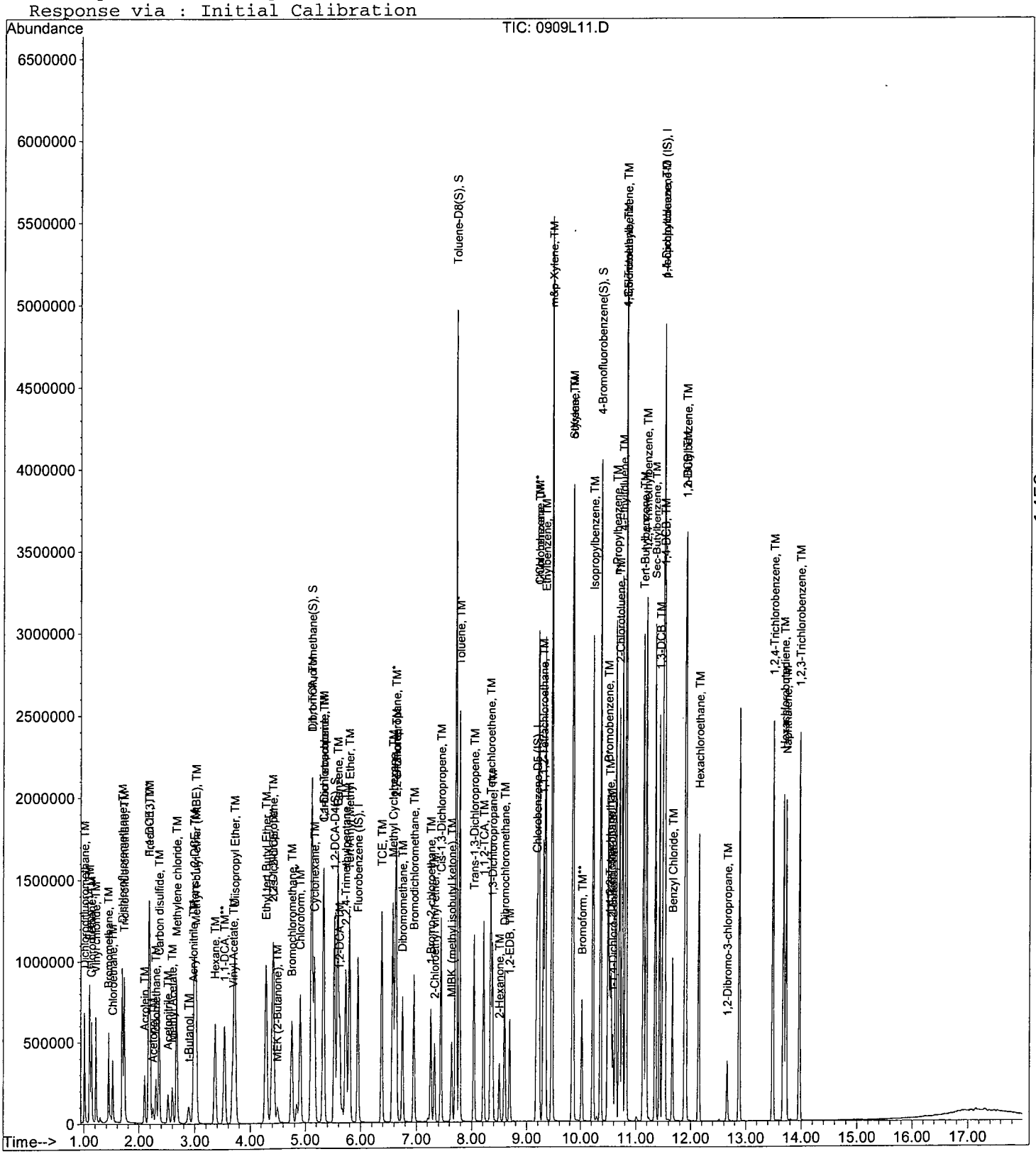
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0909L11.D Vial: 10
Acq On : 9 Sep 14 12:42 Operator: DG,SV,RS
Sample : 40ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



1459

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L12.D Vial: 11
Acq On : 9 Sep 14 13:10 Operator: DG,SV,RS
Sample : 100ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	479808	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	451904	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	305280	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.11	111	1096241	94.28745 ppb		0.00
Spiked Amount 25.423			Recovery = 370.877%			
38) 1,2-DCA-D4(S)	5.52	65	1100920	89.93306 ppb		0.00
Spiked Amount 24.764			Recovery = 363.160%			
58) Toluene-D8(S)	7.71	98	3757044	102.56044 ppb		0.00
Spiked Amount 25.636			Recovery = 400.062%			
66) 4-Bromofluorobenzene(S)	10.36	95	1496066	109.36527 ppb		0.00
Spiked Amount 23.806			Recovery = 459.395%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	870707	93.84088 ppb		98
3) Freon 114	1.10	85	787750	96.89526 ppb		96
4) Chloromethane	1.13	50	946572	100.41927 ppb		100
5) Vinyl chloride	1.21	62	1033159	99.05809 ppb		97
6) Bromomethane	1.44	94	508746	101.04632 ppb		99
7) Chloroethane	1.51	64	406269	74.86922 ppb		100
8) Dichlorofluoromethane	1.69	67	1769421	92.55143 ppb		98
9) Trichlorofluoromethane	1.72	101	1375335	92.28563 ppb		97
10) Acrolein	2.10	56	215696	196.29115 ppb	#	98
11) Acetone	2.26	43	220799	100.03804 ppb		94
12) Freon-113	2.19	101	814563	89.22564 ppb		99
13) 1,1-DCE	2.17	61	1189873	91.04093 ppb		98
14) t-Butanol	2.92	59	53047	170.87397 ppb		98
15) Acetonitrile	2.53	41	203677	205.40017 ppb		99
16) Methyl Acetate	2.60	43	644039	100.92999 ppb		98
17) Iodomethane	2.30	142	420992	101.32451 ppb		99
18) Acrylonitrile	2.97	52	238710	94.02327 ppb		94
19) Methylene chloride	2.67	84	987285	100.10120 ppb		97
20) Carbon disulfide	2.35	76	2245722	92.12927 ppb		98
21) Methyl t-butyl ether (MtBE	3.02	73	2620008	101.73718 ppb		97
22) Trans-1,2-DCE	2.98	96	950497	96.73039 ppb		97
23) Diisopropyl Ether	3.72	45	2921056	107.29722 ppb		92
24) 1,1-DCA	3.53	63	1652606	94.60133 ppb		99
25) Hexane	3.35	57	863898	107.33622 ppb		96
26) Vinyl Acetate	3.72	43	516329	88.43311 ppb	#	99
27) Ethyl tert Butyl Ether	4.29	59	2801994	111.11375 ppb		94
28) MEK (2-Butanone)	4.50	43	333163	100.19746 ppb		97
29) Cis-1,2-DCE	4.42	96	1111058	96.55457 ppb		91
30) 2,2-Dichloropropane	4.40	77	470636	90.39617 ppb		98
31) Chloroform	4.90	83	1713271	91.97564 ppb		100
32) Bromochloromethane	4.75	128	523027	89.46282 ppb		97
34) 1,1,1-TCA	5.10	97	1511237	94.53044 ppb		96
35) Cyclohexane	5.16	41	681028	99.22105 ppb		85
36) 1,1-Dichloropropene	5.33	75	1243859	102.21146 ppb		99
37) 2,2,4-Trimethylpentane	5.73	57	2519090	109.04966 ppb		99
39) Carbon Tetrachloride	5.32	117	1363876	102.61006 ppb		99
40) Tert Amyl Methyl Ether	5.80	73	2687933	111.07932 ppb		95
41) 1,2-DCA	5.62	62	1260170	95.11199 ppb		99
42) Benzene	5.58	78	3720635	92.22065 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L12.D Vial: 11
Acq On : 9 Sep 14 13:10 Operator: DG,SV,RS
Sample : 100ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	TCE	6.38	95	1015887	101.24250	ppb	98
44)	2-Pentanone	6.64	43	1298666	204.31029	ppb	99
45)	1,2-Dichloropropane	6.62	63	1003586	96.16916	ppb	99
46)	Bromodichloromethane	6.95	83	1342569	93.21559	ppb	98
47)	Methyl Cyclohexane	6.58	83	1410224	110.81004	ppb	93
48)	Dibromomethane	6.75	93	607622	91.90101	ppb	92
49)	2-Chloroethyl vinyl ether	7.33	106	159732	101.39930	ppb	91
50)	MIBK (methyl isobutyl ket	7.64	43	774376	106.06183	ppb	98
51)	1-Bromo-2-chloroethane	7.26	63	773568	96.96304	ppb	98
52)	Cis-1,3-Dichloropropene	7.44	75	1647787	107.06880	ppb	98
53)	Toluene	7.78	91	4171068	99.87344	ppb	97
54)	Trans-1,3-Dichloropropene	8.04	75	1438116	107.50645	ppb	99
55)	1,1,2-TCA	8.22	83	723000	93.55240	ppb	98
56)	2-Hexanone	8.51	43	552433	117.53634	ppb	96
59)	1,2-EDB	8.69	107	903803	94.82326	ppb	99
60)	Tetrachloroethene	8.34	166	1204974	88.30380	ppb	98
61)	1-Chlorohexane	9.22	91	1294700	114.49625	ppb	95
62)	1,1,1,2-Tetrachloroethane	9.30	131	1141651	92.97480	ppb	99
63)	m&p-Xylene	9.46	106	3767518	213.80074	ppb	96
64)	o-Xylene	9.85	106	1855221	111.28938	ppb	98
65)	Styrene	9.87	104	3245752	114.22502	ppb	99
67)	1,3-Dichloropropane	8.38	76	1471387	95.74598	ppb	97
68)	Dibromochloromethane	8.60	129	1153062	96.94447	ppb	99
69)	Chlorobenzene	9.21	112	2940250	95.81572	ppb	98
70)	Ethylbenzene	9.34	91	4750353	105.97630	ppb	99
71)	Bromoform	10.02	173	875961	102.13247	ppb	99
73)	Isopropylbenzene	10.23	105	4675262	104.72115	ppb	98
74)	1,1,2,2-Tetrachloroethane	10.53	83	1113967	83.81506	ppb	98
75)	1,2,3-Trichloropropane	10.55	110	369121	88.36711	ppb	99
76)	t-1,4-Dichloro-2-Butene	10.59	53	253436	101.05006	ppb	99
77)	Bromobenzene	10.50	156	1414547	92.90138	ppb	97
78)	n-Propylbenzene	10.63	91	5419897	103.03491	ppb	99
79)	4-Ethyltoluene	10.75	105	5002694	106.71638	ppb	99
80)	2-Chlorotoluene	10.70	91	3299602	96.24240	ppb	99
81)	1,3,5-Trimethylbenzene	10.82	105	4197434	105.63594	ppb	100
82)	4-Chlorotoluene	10.81	91	3949736	100.33755	ppb	99
83)	Tert-Butylbenzene	11.13	119	3634595	108.16835	ppb	99
84)	1,2,4-Trimethylbenzene	11.18	105	4389445	110.44153	ppb	99
85)	Sec-Butylbenzene	11.35	105	5196983	108.05295	ppb	100
86)	p-Isopropyltoluene	11.51	119	4655485	111.04795	ppb	99
87)	Benzyl Chloride	11.67	91	1865973	97.72543	ppb	99
88)	1,3-DCB	11.44	146	2721013	95.03360	ppb	99
89)	1,4-DCB	11.53	146	2783344	92.75257	ppb	98
90)	n-Butylbenzene	11.91	91	4262598	115.25241	ppb	96
91)	1,2-DCB	11.89	146	2649513	96.59735	ppb	98
92)	Hexachloroethane	12.15	117	891598	94.51114	ppb	99
93)	1,2-Dibromo-3-chloropropan	12.66	157	190656	100.01282	ppb	98
94)	1,2,4-Trichlorobenzene	13.49	180	2098932	111.82378	ppb	99
95)	Hexachlorobutadiene	13.68	225	1074330	99.20382	ppb	96
96)	Naphthalene	13.72	128	2816000	100.66421	ppb	99
97)	1,2,3-Trichlorobenzene	13.97	180	1974425	109.48568	ppb	98

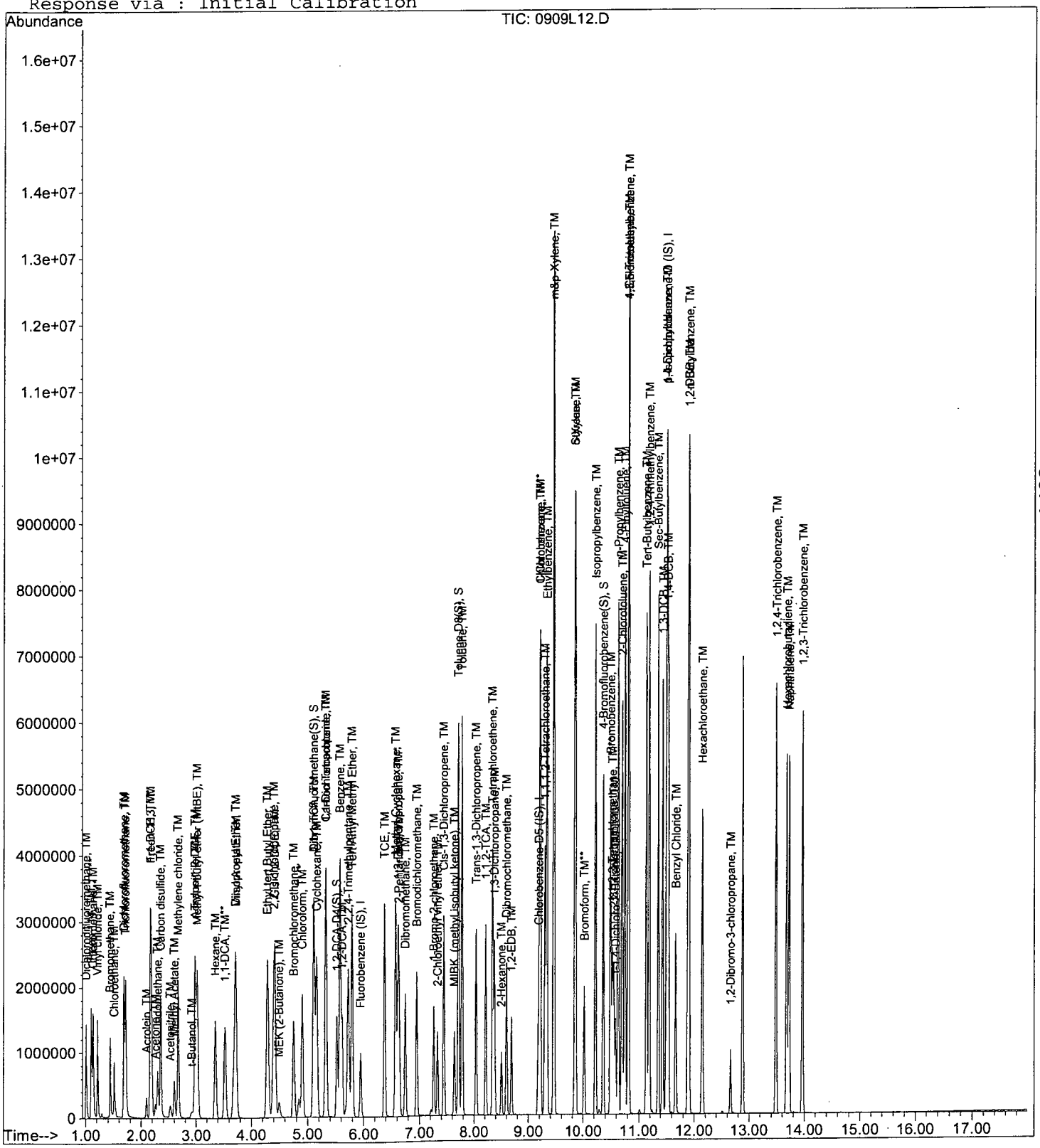
(#) = qualifier out of range (m) = manual integration

Quantitation Report

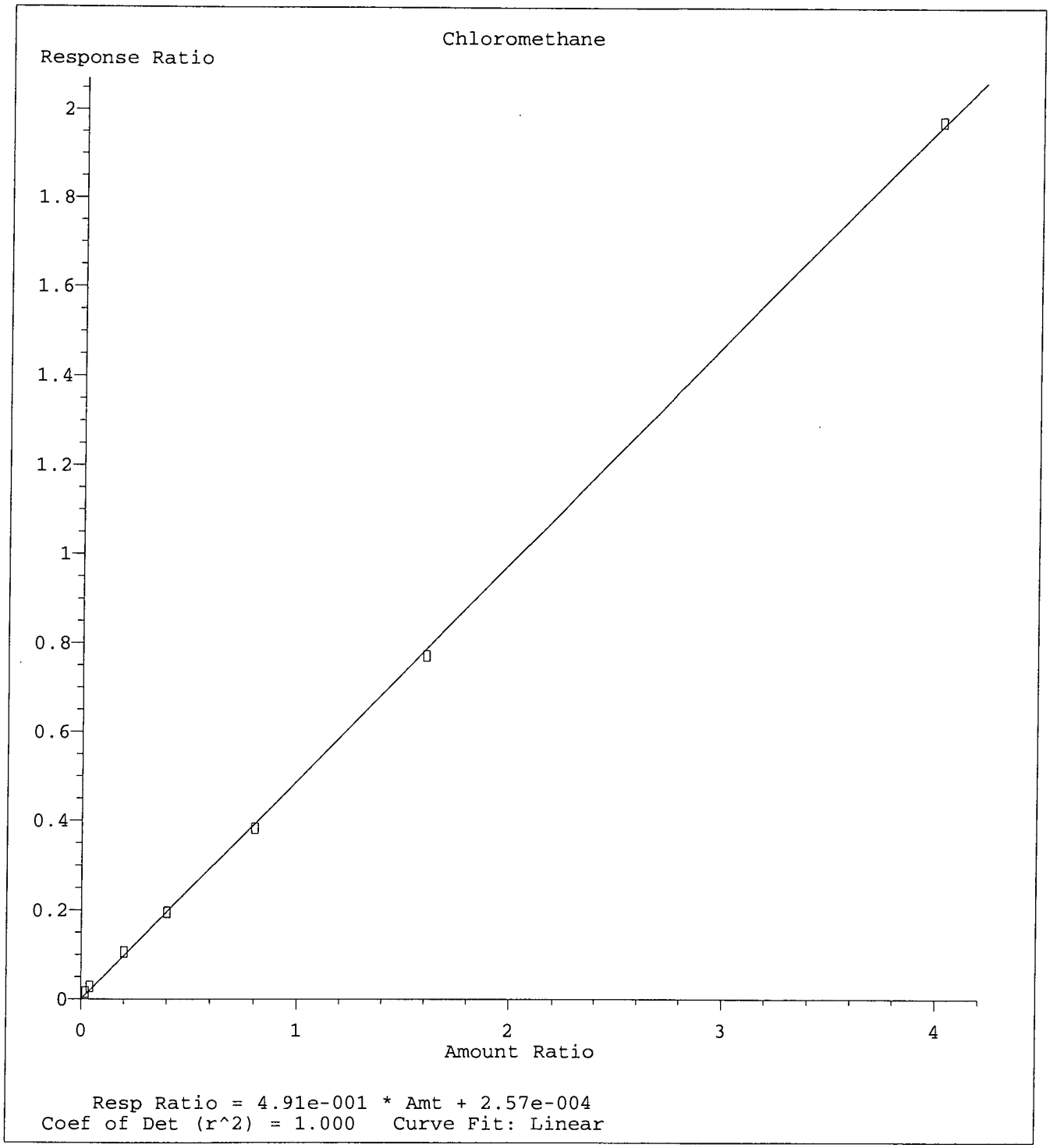
Data File : M:\LOKI\DATA\140909\0909L12.D Vial: 11
Acq On : 9 Sep 14 13:10 Operator: DG,SV,RS
Sample : 100ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

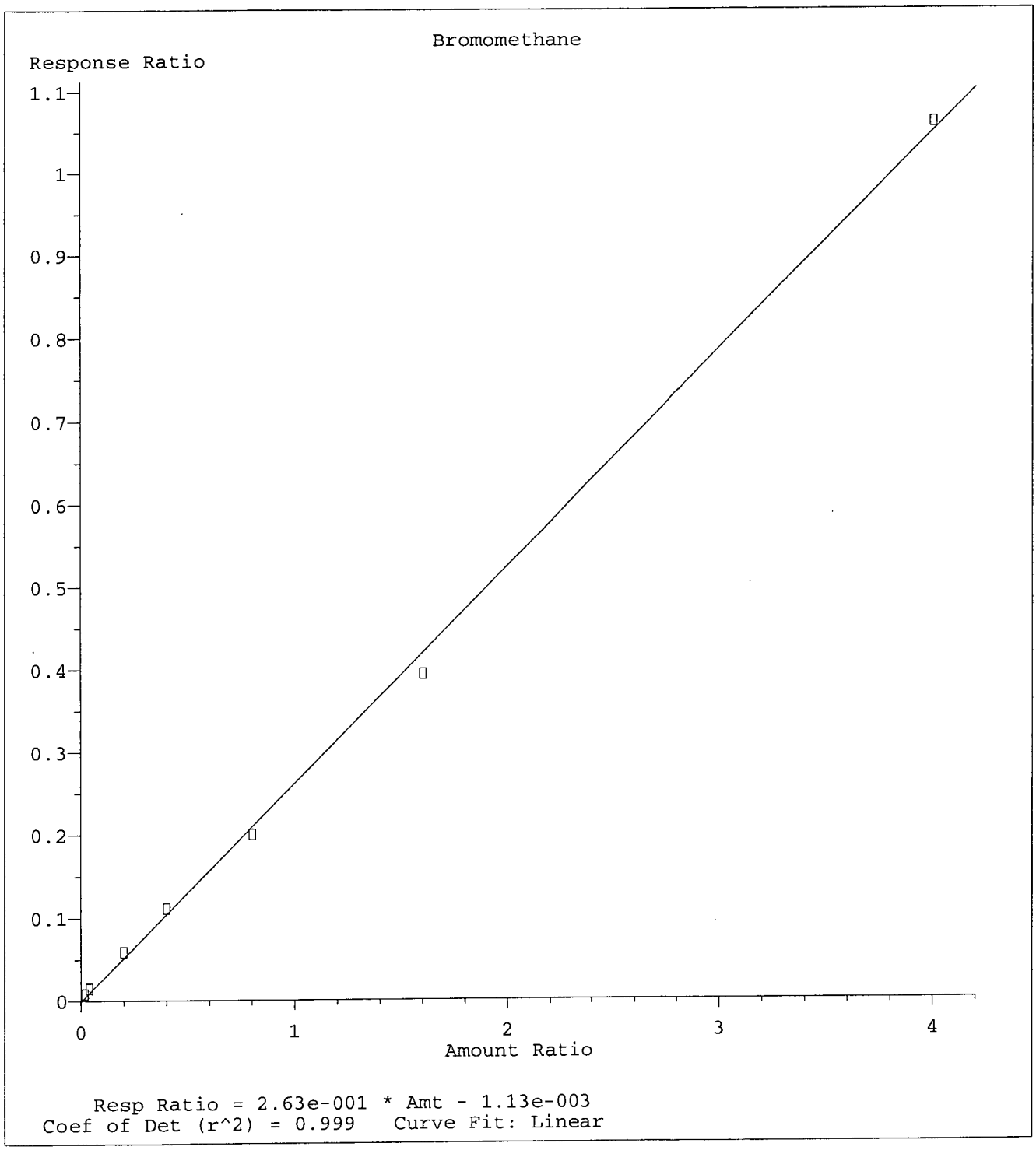
Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



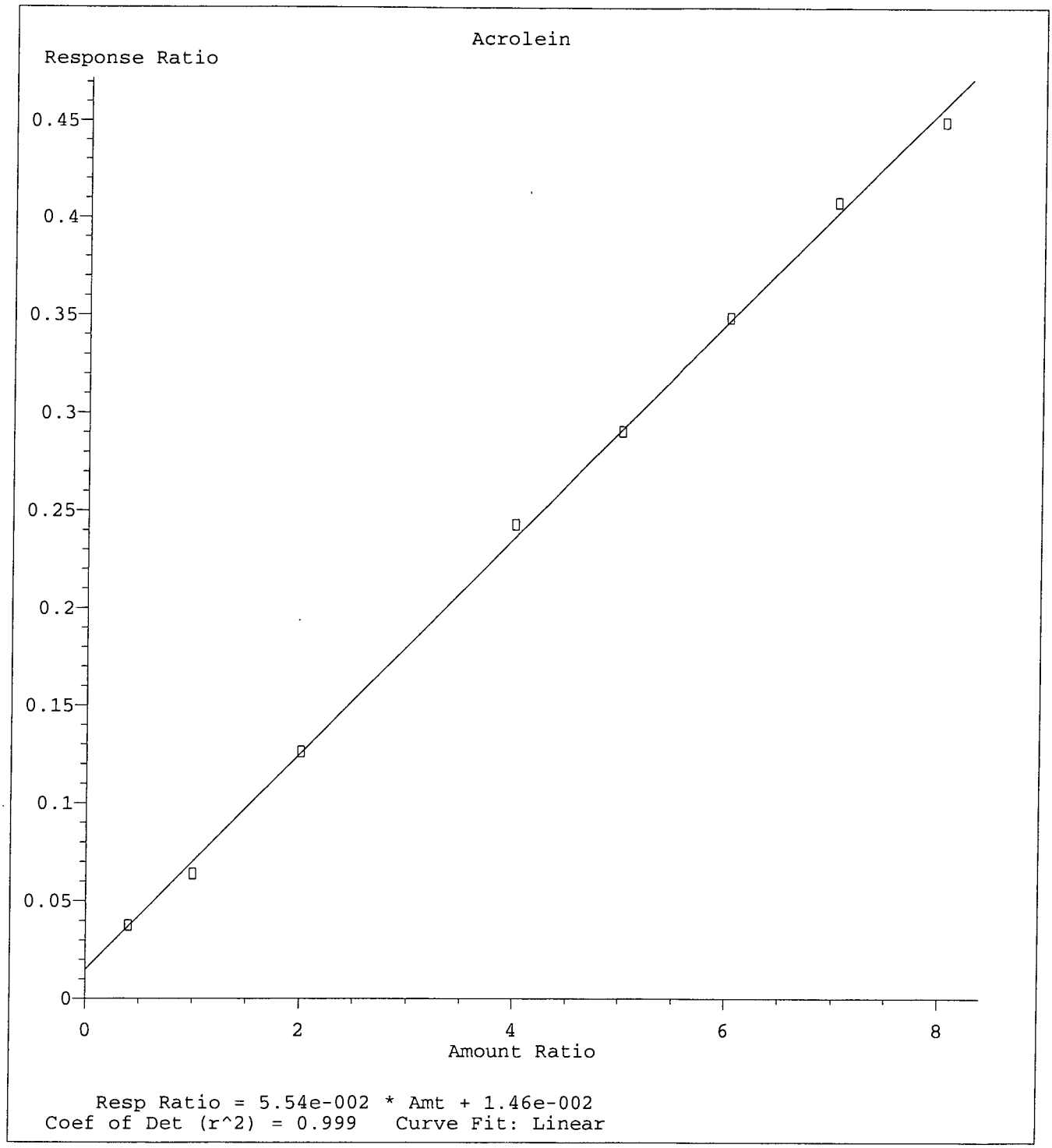
1462



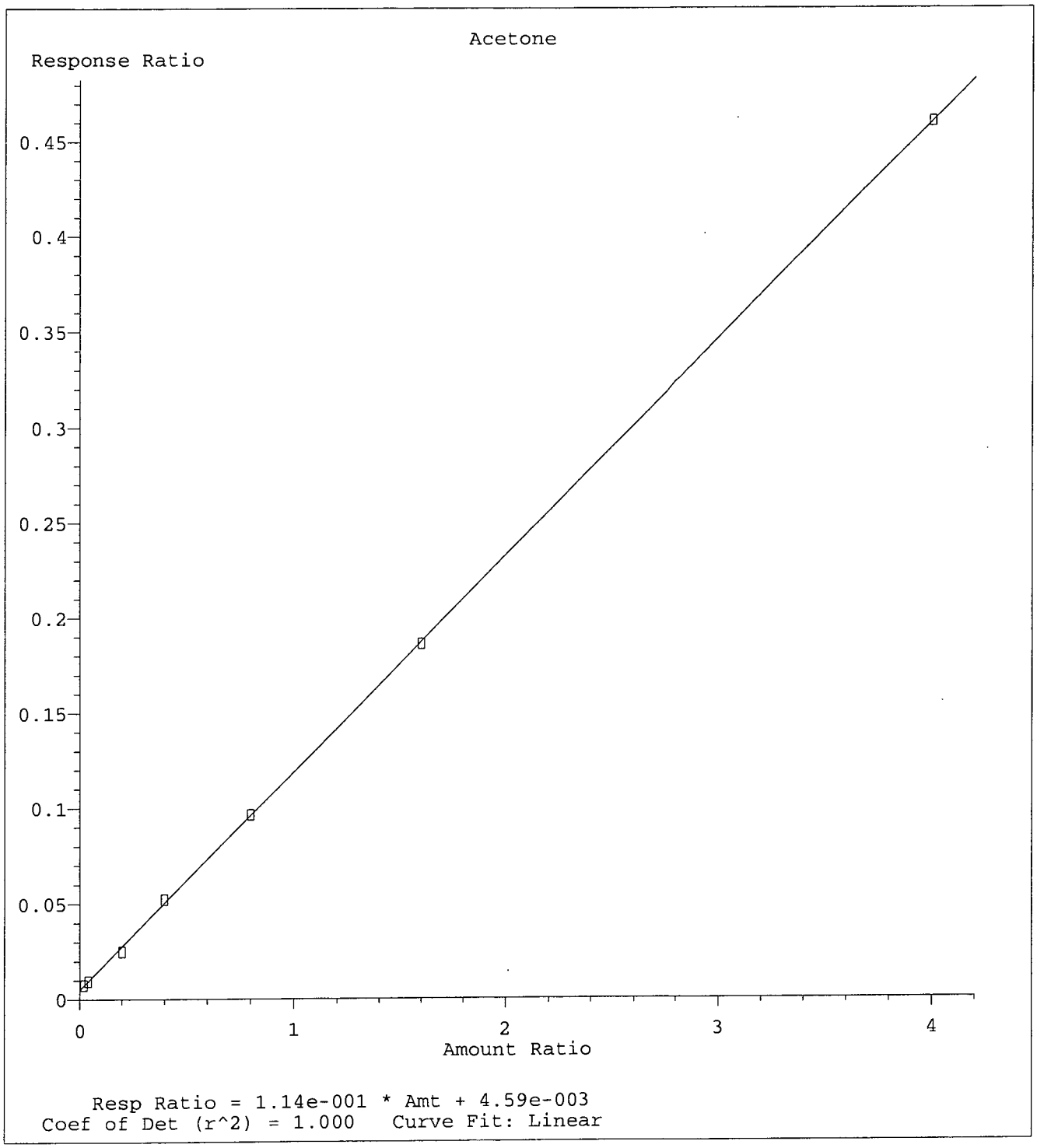
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Calibration Table Last Updated: Wed Sep 10 09:02:44 2014



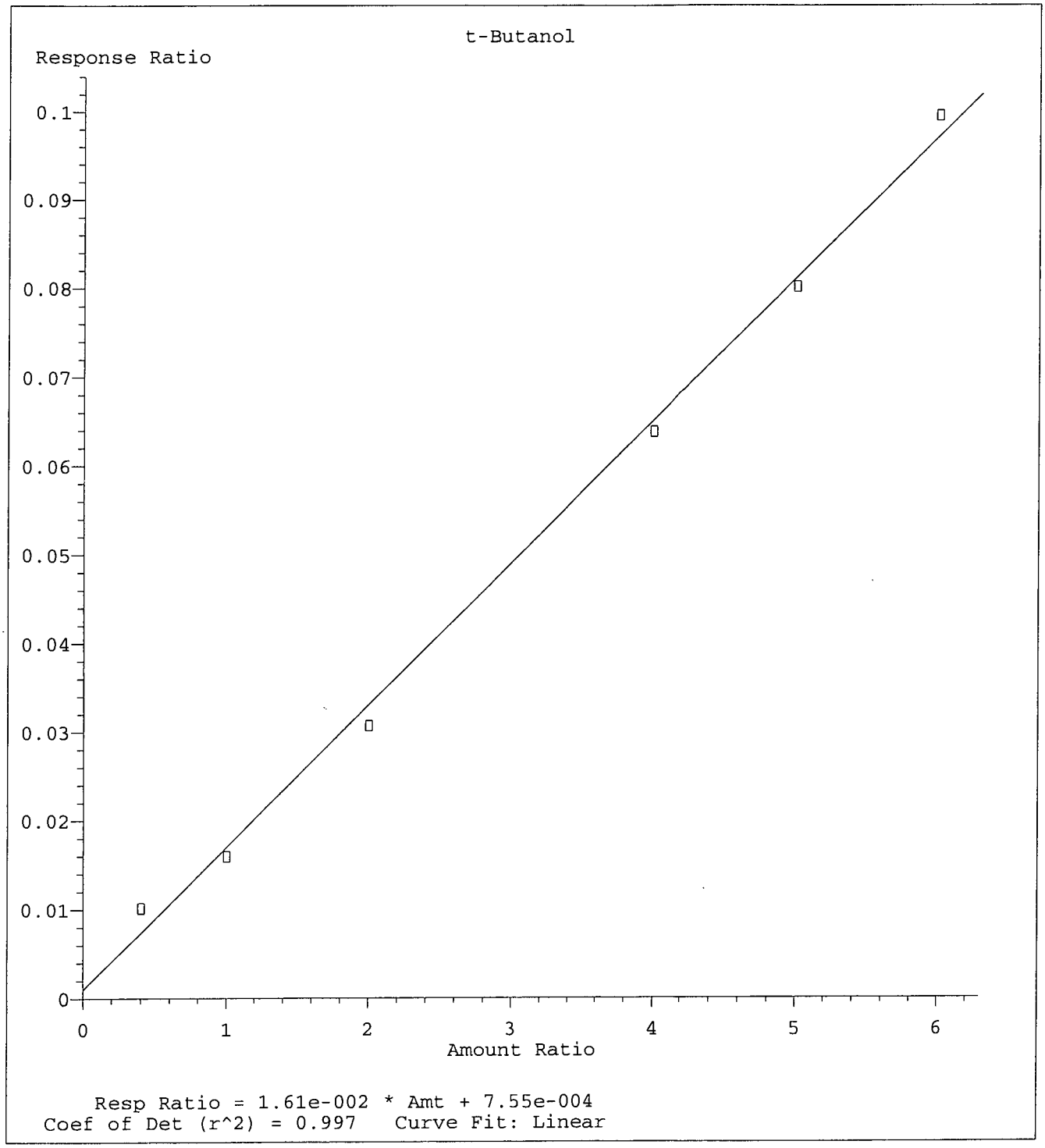
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Calibration Table Last Updated: Wed Sep 10 09:02:44 2014



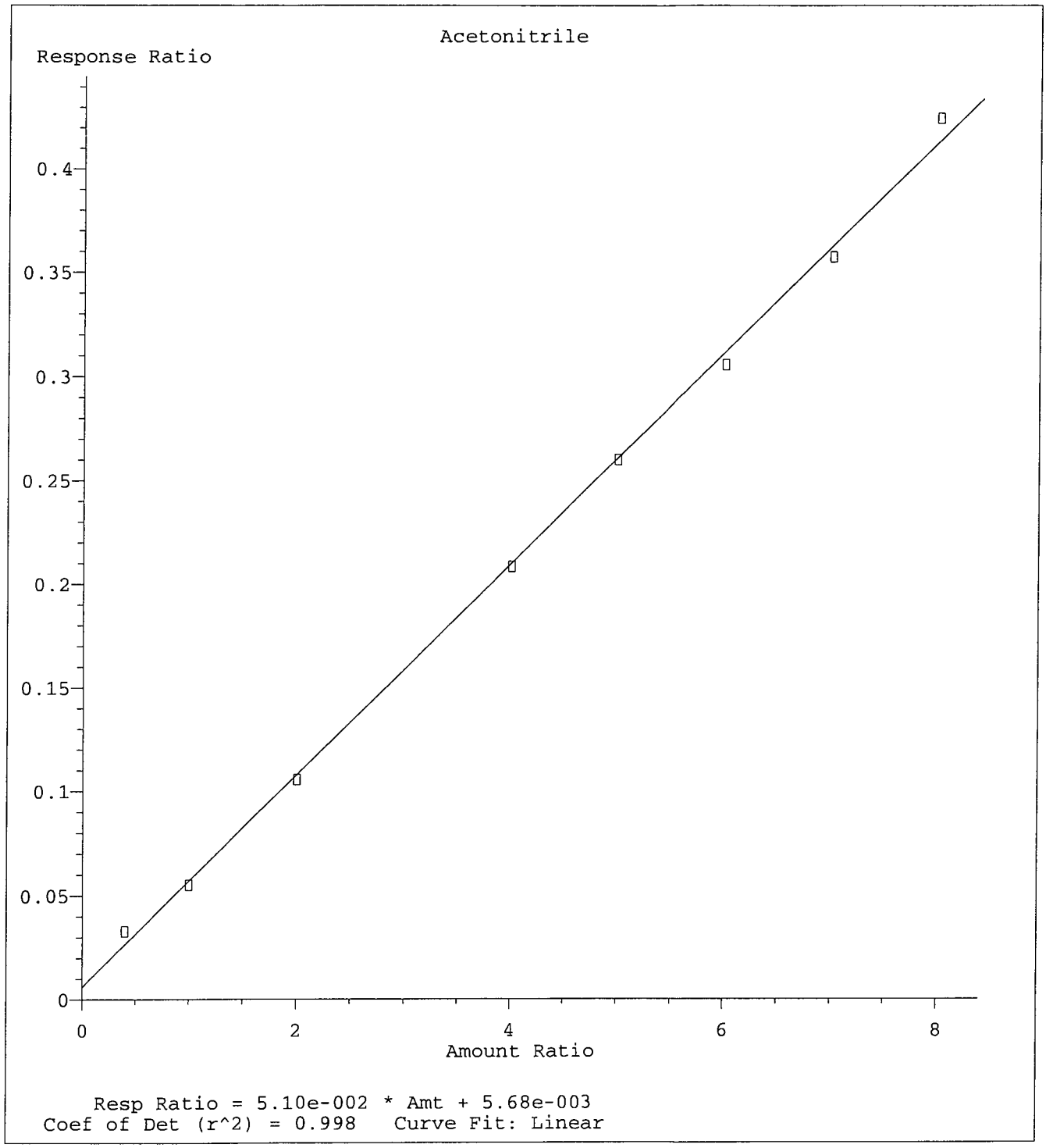
Method Name: M:\LOKI\DATA\140909\LALLW.M
Calibration Table Last Updated: Wed Sep 10 09:02:44 2014



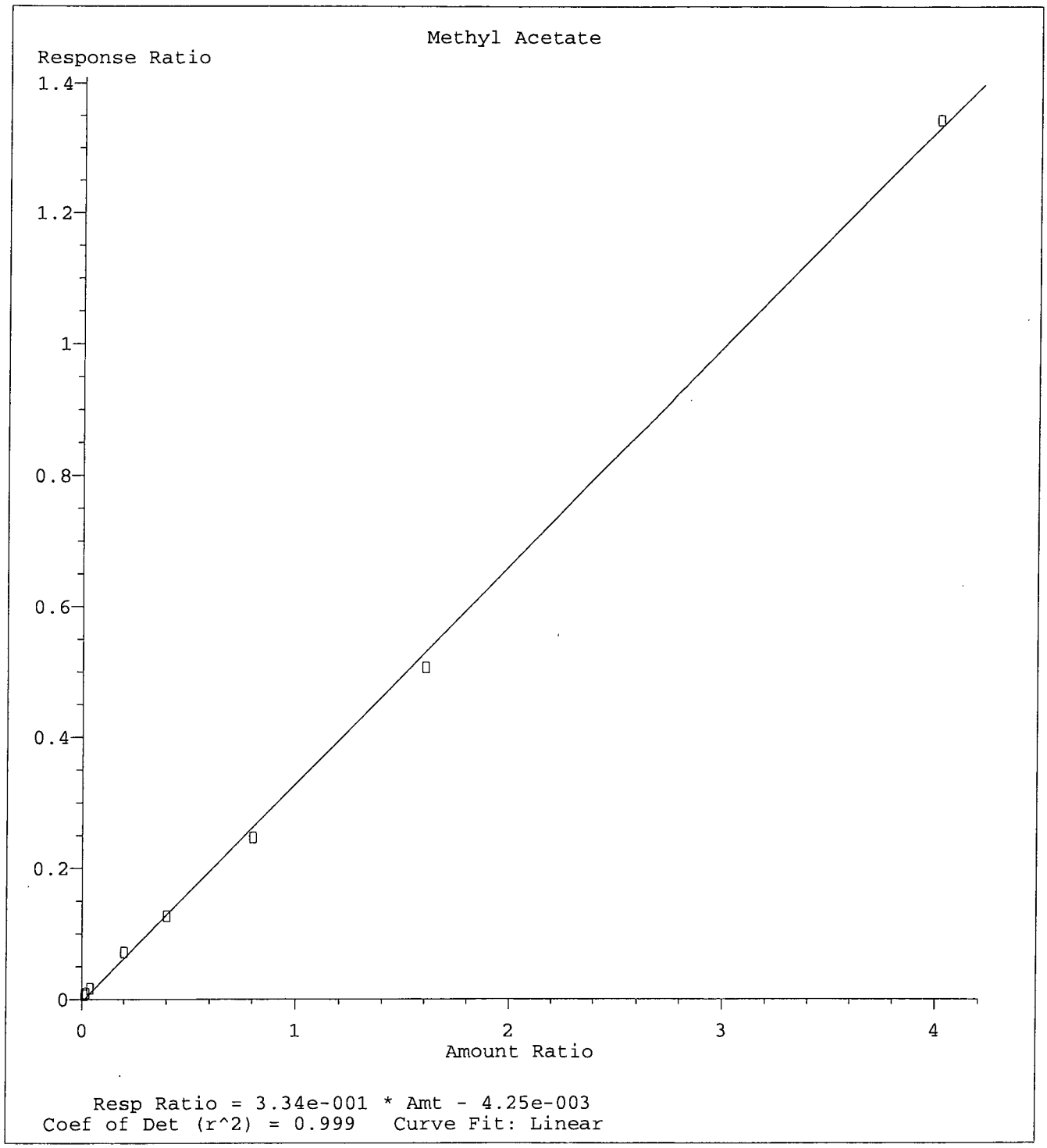
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Calibration Table Last Updated: Wed Sep 10 09:02:44 2014



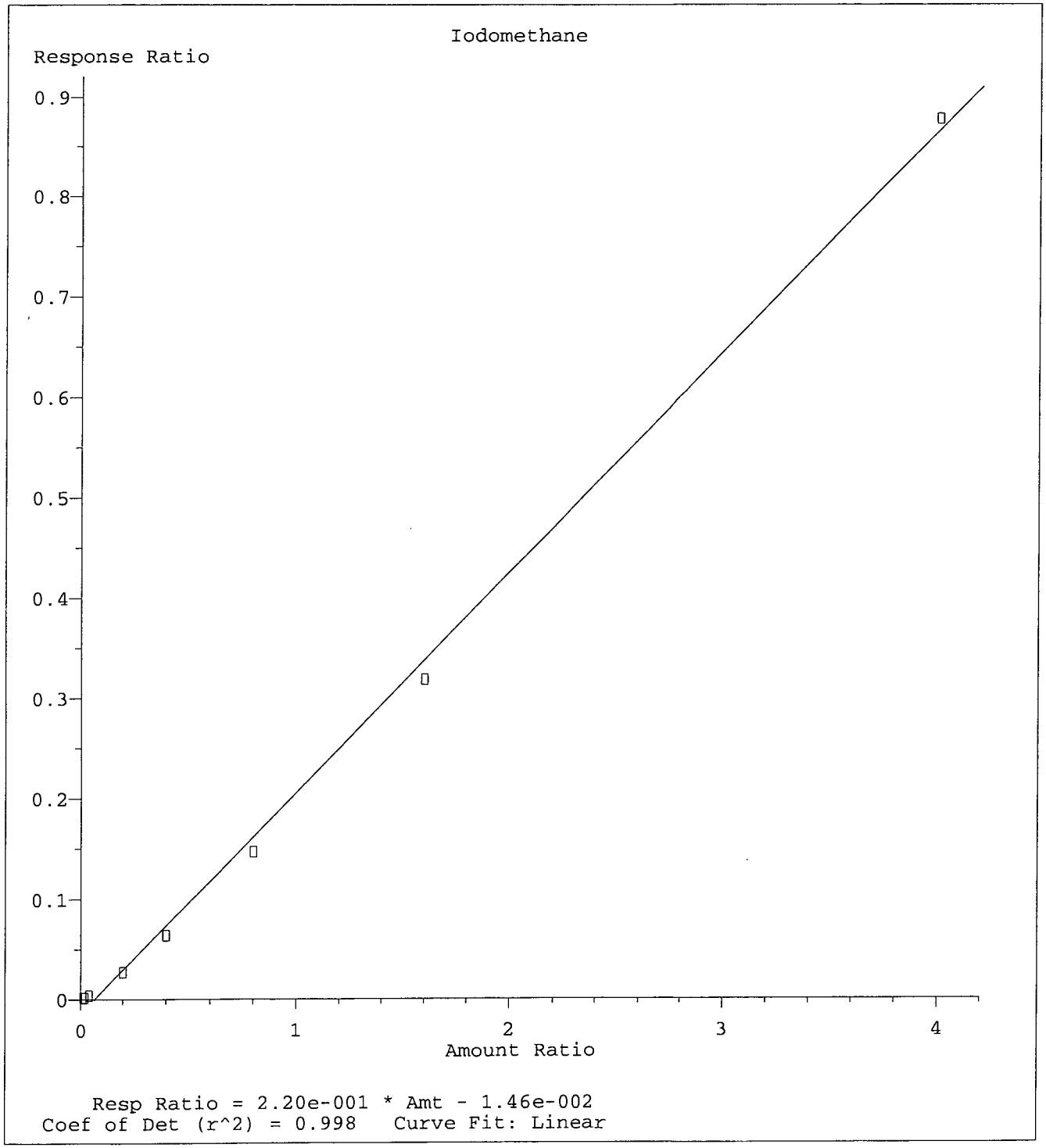
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Calibration Table Last Updated: Wed Sep 10 09:02:44 2014



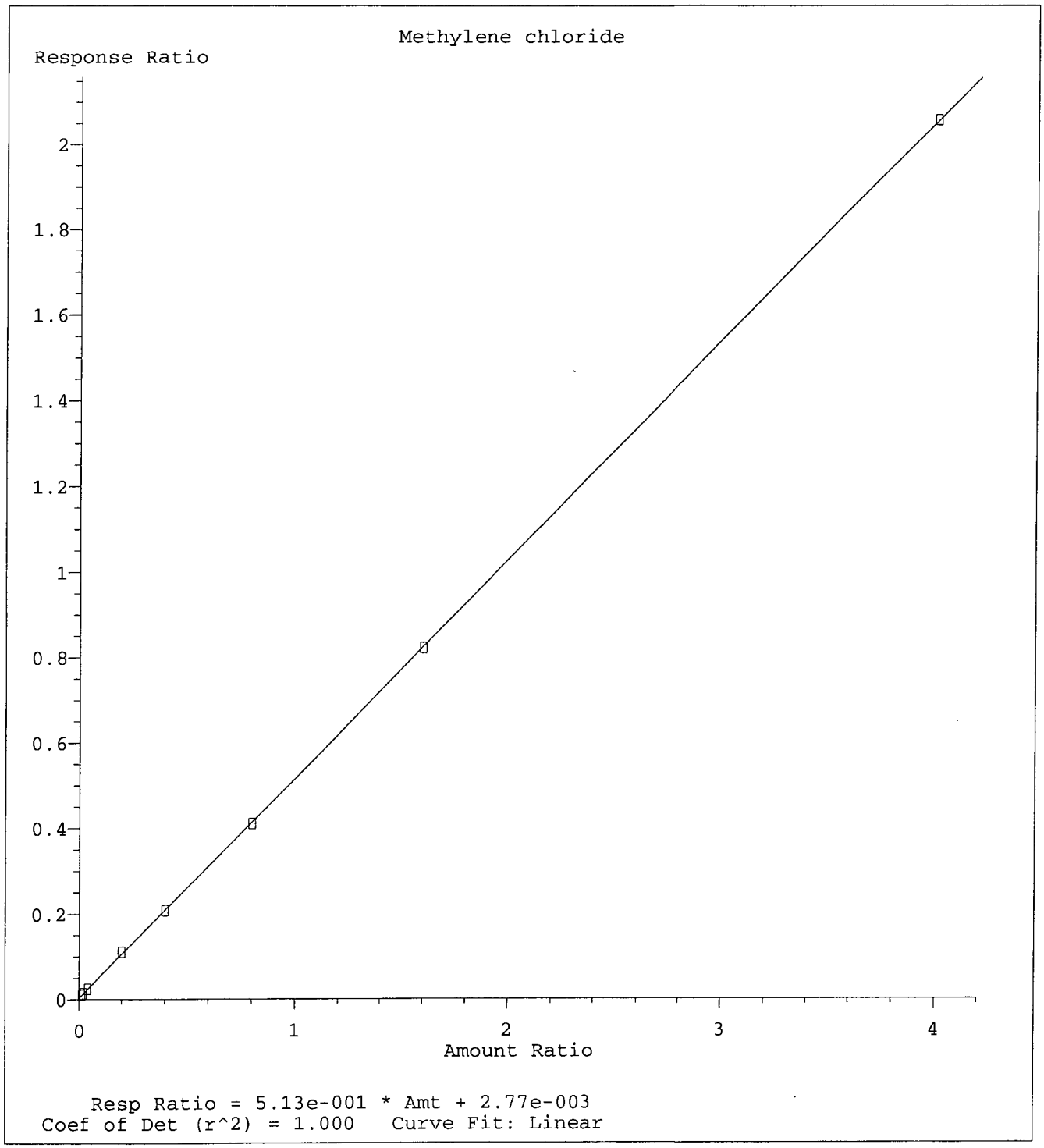
Method Name: M:\LOKI\DATA\140909\LALLW.M
Calibration Table Last Updated: Wed Sep 10 09:02:44 2014



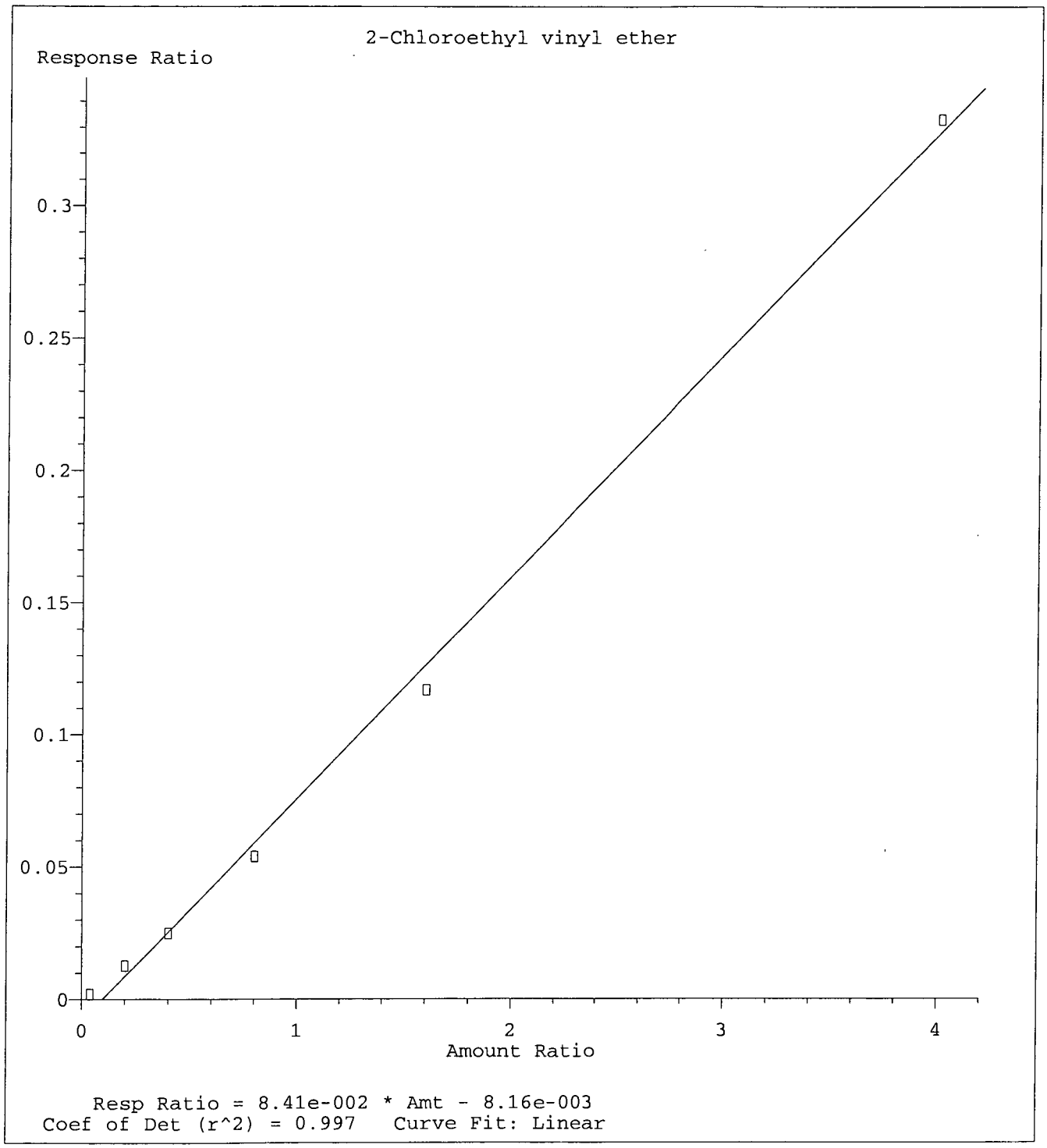
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Calibration Table Last Updated: Wed Sep 10 09:02:44 2014



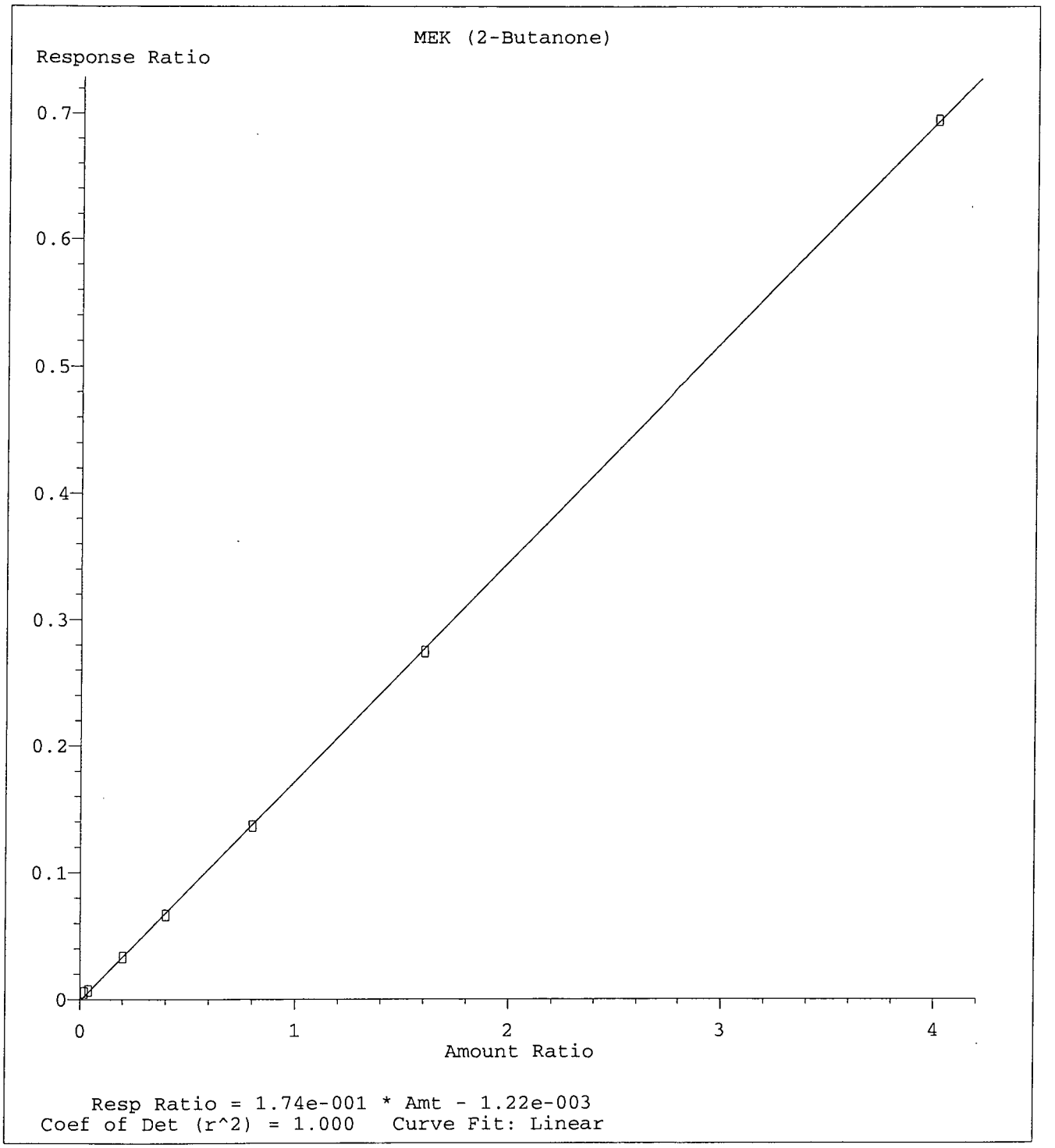
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Calibration Table Last Updated: Wed Sep 10 09:02:44 2014



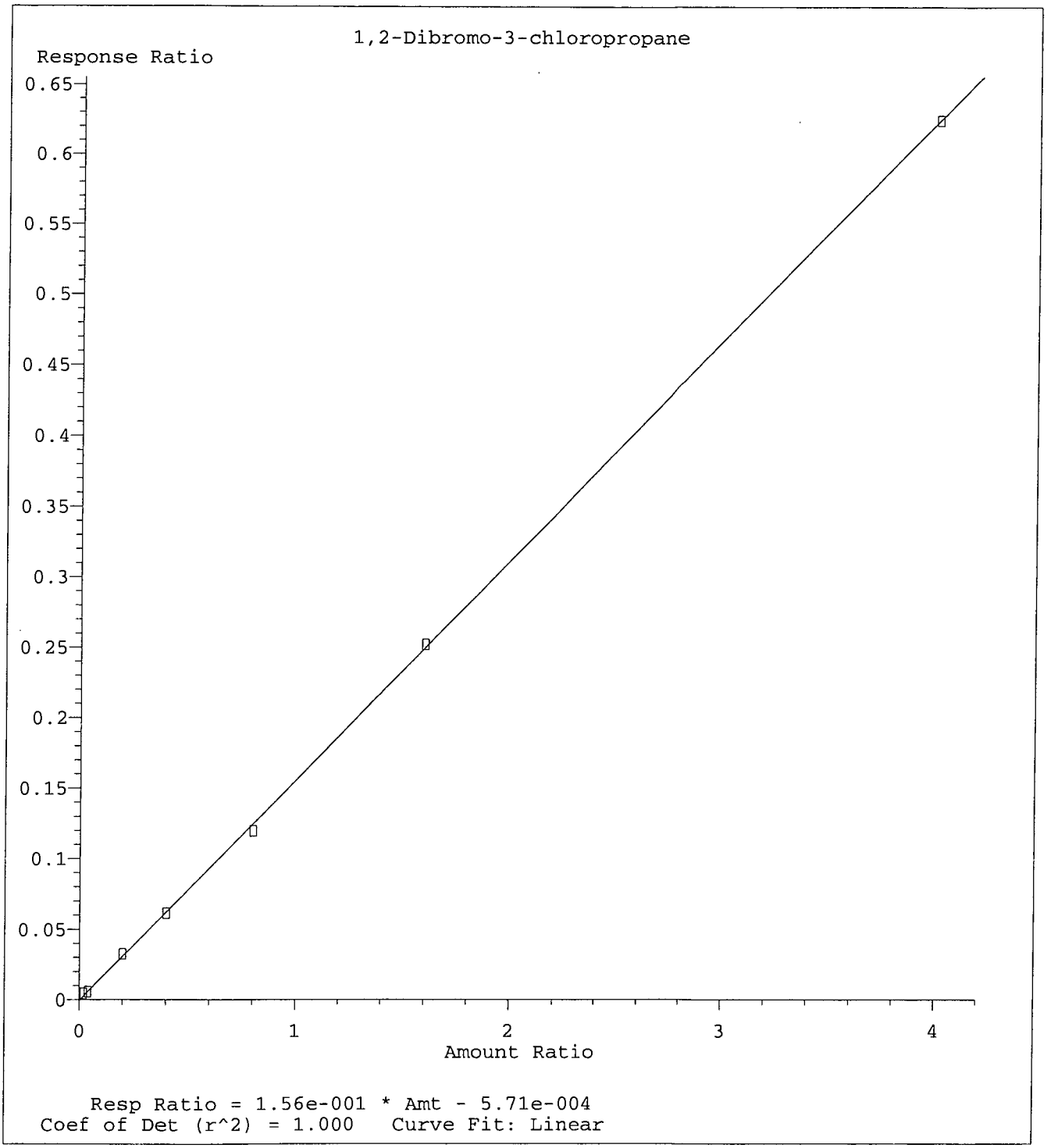
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Calibration Table Last Updated: Wed Sep 10 09:02:44 2014



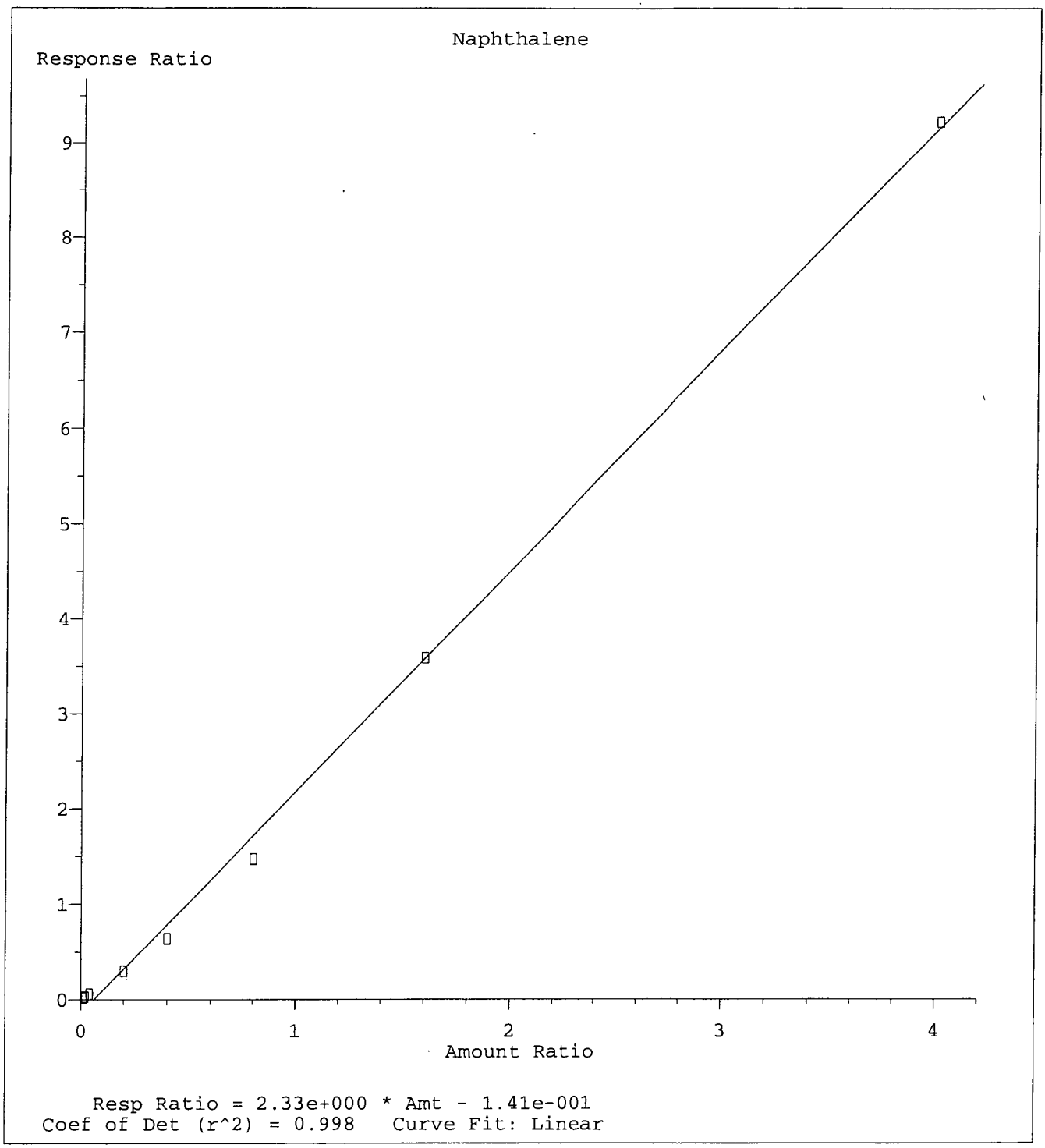
Method Name: M:\LOKI\DATA\140909\LALLW.M
Calibration Table Last Updated: Wed Sep 10 09:02:44 2014



Method Name: M:\LOKI\DATA\140909\LALLW.M
Calibration Table Last Updated: Wed Sep 10 09:02:44 2014



Method Name: M:\LOKI\DATA\140909\LALLW.M
Calibration Table Last Updated: Wed Sep 10 09:02:44 2014



Method Name: M:\LOKI\DATA\140909\LALLW.M
Calibration Table Last Updated: Wed Sep 10 09:02:44 2014

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9 Sep 14 15:29
Instrument: Loki
Initial Cal. Date: 9/9/2014
Data File: 0909L17.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.4835	0.4278	12	TM	
3	TM	Freon 114	0.4236	0.4032	4.8	TM	
4	TM**L	Chloromethane	0.5585	0.4608	17	TM**L	6.3
5	TM*	Vinyl chloride	0.5434	0.4686	14	TM*	
6	TML	Bromomethane	0.3013	0.2782	7.7	TML	7.0
7	TM	Chloroethane	0.2827	0.2365	16	TM	
8	TM	Dichlorofluoromethane	0.9961	0.9212	7.5	TM	
9	TM	Trichlorofluoromethane	0.7765	0.6754	13	TM	
10	TML	Acrolein	0.0640	0.0567	11	TML	2.9
11	TML	Acetone	0.1730	0.1293	25	TML	3.5
12	TM	Freon-113	0.4757	0.4525	4.9	TM	
13	TM*	1,1-DCE	0.6810	0.6620	2.8	TM*	
14	TML	t-Butanol	0.0175	0.0172	1.9	TML	6.2
15	TML	Acetonitrile	0.0561	0.0507	9.6	TML	2.8
16	TML	Methyl Acetate	0.3807	0.3253	15	TML	0.72
17	TML	Iodomethane	0.1506	0.1335	11	TML	23 *
18	TM	Acrylonitrile	0.1323	0.1232	6.9	TM	
19	TML	Methylene chloride	0.5915	0.5108	14	TML	1.8
20	TM	Carbon disulfide	1.270	1.179	7.2	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.342	1.213	9.6	TM	
22	TM	Trans-1,2-DCE	0.5120	0.4830	5.7	TM	
23	TM	Diisopropyl Ether	1.418	1.344	5.2	TM	
24	TM**	1,1-DCA	0.9102	0.8663	4.8	TM**	
25	TM	Hexane	0.4194	0.3865	7.8	TM	
26	TM	Vinyl Acetate	0.3042	0.2583	15	TM	
27	TM	Ethyl tert Butyl Ether	1.314	1.245	5.2	TM	
28	TML	MEK (2-Butanone)	0.1845	0.1663	9.9	TML	2.4
29	TM	Cis-1,2-DCE	0.5996	0.5531	7.8	TM	
30	TM	2,2-Dichloropropane	0.2713	0.2378	12	TM	
31	TM*	Chloroform	0.9706	0.8866	8.6	TM*	
32	TM	Bromochloromethane	0.3046	0.2770	9.1	TM	
33	S	Dibromofluoromethane(S)	0.6058	0.5681	6.2	S	
34	TM	1,1,1-TCA	0.8330	0.7892	5.3	TM	
35	TM	Cyclohexane	0.3576	0.3345	6.5	TM	
36	TM	1,1-Dichloropropene	0.6341	0.6083	4.1	TM	
37	TM	2,2,4-Trimethylpentane	1.204	1.136	5.6	TM	
38	S	1,2-DCA-D4(S)	0.6378	0.5885	7.7	S	
39	TM	Carbon Tetrachloride	0.6926	0.6942	0.23	TM	
40	TM	Tert Amyl Methyl Ether	1.261	1.240	1.6	TM	
		Average			8.7		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9 Sep 14 15:29
Instrument: Loki
Cal. Date: 9/9/2014
Data File: 0909L17.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	1,2-DCA	0.6903	0.6563	4.9	TM	
42	TM	Benzene	2.102	1.924	8.5	TM	
43	TM	TCE	0.5228	0.5356	2.4	TM	
44	TM	2-Pentanone	0.3312	0.3242	2.1	TM	
45	TM*	1,2-Dichloropropane	0.5437	0.5248	3.5	TM*	
46	TM	Bromodichloromethane	0.7504	0.6770	9.8	TM	
47	TM	Methyl Cyclohexane	0.6631	0.6237	5.9	TM	
48	TM	Dibromomethane	0.3445	0.3258	5.4	TM	
49	TML	2-Chloroethyl vinyl ether	0.0661	0.0639	3.4	TML	0.24
50	TM	MIBK (methyl isobutyl ketone)	0.3804	0.3732	1.9	TM	
51	TM	1-Bromo-2-chloroethane	0.4157	0.3855	7.3	TM	
52	TM	Cis-1,3-Dichloropropene	0.8019	0.7635	4.8	TM	
53	TM*	Toluene	2.176	2.109	3.1	TM*	
54	TM	Trans-1,3-Dichloropropene	0.6970	0.6742	3.3	TM	
55	TM	1,1,2-TCA	0.4027	0.3768	6.4	TM	
56	TM	2-Hexanone	0.2449	0.2543	3.9	TM	
57	I	Chlorobenzene-D5 (IS)	ISTD			I	
58	S	Toluene-D8(S)	2.027	2.147	6.0	S	
59	TM	1,2-EDB	0.5273	0.4978	5.6	TM	
60	TM	Tetrachloroethene	0.7549	0.6985	7.5	TM	
61	TM	1-Chlorohexane	0.6256	0.6225	0.49	TM	
62	TM	1,1,1,2-Tetrachloroethane	0.6793	0.6521	4.0	TM	
63	TM	m&p-Xylene	0.9749	0.9864	1.2	TM	
64	TM	o-Xylene	0.9222	0.9178	0.48	TM	
65	TM	Styrene	1.572	1.589	1.1	TM	
66	S	4-Bromofluorobenzene(S)	0.7568	0.8076	6.7	S	
67	TM	1,3-Dichloropropane	0.8502	0.8083	4.9	TM	
68	TM	Dibromochloromethane	0.6580	0.6312	4.1	TM	
69	TM**	Chlorobenzene	1.698	1.626	4.2	TM**	
70	TM*	Ethylbenzene	2.480	2.491	0.44	TM*	
71	TM**	Bromoform	0.4745	0.4551	4.1	TM**	
72	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
73	TM	Isopropylbenzene	3.656	3.545	3.0	TM	
74	TM**	1,1,2,2-Tetrachloroethane	1.088	0.9387	14	TM**	
75	TM	1,2,3-Trichloropropane	0.3421	0.3137	8.3	TM	
76	TM	t-1,4-Dichloro-2-Butene	0.2054	0.1956	4.8	TM	
77	TM	Bromobenzene	1.247	1.187	4.8	TM	
78	TM	n-Propylbenzene	4.308	4.281	0.63	TM	
79	TM	4-Ethyltoluene	3.839	3.997	4.1	TM	
80	TM	2-Chlorotoluene	2.808	2.759	1.7	TM	
		Average			4.4		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9 Sep 14 15:29
Instrument: Loki
Cal. Date: 9/9/2014
Data File: 0909L17.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	1,3,5-Trimethylbenzene	3.254	3.480	6.9	TM	
82	TM	4-Chlorotoluene	3.224	3.341	3.6	TM	
83	TM	Tert-Butylbenzene	2.752	2.745	0.25	TM	
84	TM	1,2,4-Trimethylbenzene	3.255	3.384	4.0	TM	
85	TM	Sec-Butylbenzene	3.939	4.043	2.7	TM	
86	TM	p-Isopropyltoluene	3.433	3.485	1.5	TM	
87	TM	Benzyl Chloride	1.564	1.192	24	TM	*
88	TM	1,3-DCB	2.345	2.200	6.2	TM	
89	TM	1,4-DCB	2.457	2.295	6.6	TM	
90	TM	n-Butylbenzene	3.029	3.007	0.73	TM	
91	TM	1,2-DCB	2.246	2.070	7.9	TM	
92	TM	Hexachloroethane	0.7726	0.6789	12	TM	
93	TML	1,2-Dibromo-3-chloropropane	0.1627	0.1451	11	TML	6.2
94	TM	1,2,4-Trichlorobenzene	1.537	1.433	6.8	TM	
95	TM	Hexachlorobutadiene	0.8869	0.8409	5.2	TM	
96	TML	Naphthalene	1.708	1.681	1.6	TML	13
97	TM	1,2,3-Trichlorobenzene	1.477	1.405	4.9	TM	
98							
99							
100							
101							
102							
103							
104							
105							
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113							
114							
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117							
118							
119							
120							
		Average			6.2		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L17.D Vial: 16
Acq On : 9 Sep 14 15:29 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	493056	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	445312	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	282176	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.11	111	280114	23.44520 ppb		0.00
Spiked Amount 25.423			Recovery = 92.221%			
38) 1,2-DCA-D4(S)	5.52	65	290184	23.06791 ppb		0.00
Spiked Amount 24.764			Recovery = 93.151%			
58) Toluene-D8(S)	7.71	98	956231	26.48977 ppb		0.00
Spiked Amount 25.636			Recovery = 103.331%			
66) 4-Bromofluorobenzene(S)	10.36	95	359627	26.67858 ppb		0.00
Spiked Amount 23.806			Recovery = 112.067%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	84380	8.84975 ppb		99
3) Freon 114	1.10	85	79523	9.51871 ppb		99
4) Chloromethane	1.14	50	90889	9.37121 ppb		98
5) Vinyl chloride	1.21	62	92415	8.62257 ppb		93
6) Bromomethane	1.44	94	54872	10.70232 ppb		97
7) Chloroethane	1.53	64	46648	8.36554 ppb		99
8) Dichlorofluoromethane	1.70	67	181686	9.24793 ppb		96
9) Trichlorofluoromethane	1.74	101	133207	8.69809 ppb		94
10) Acrolein	2.10	56	139771	121.33896 ppb		99
11) Acetone	2.25	43	25496	10.34640 ppb		89
12) Freon-113	2.20	101	89241	9.51263 ppb		95
13) 1,1-DCE	2.18	61	130554	9.72070 ppb		99
14) t-Butanol	2.88	59	42432	132.74828 ppb		96
15) Acetonitrile	2.52	41	124961	121.50886 ppb		94
16) Methyl Acetate	2.59	43	64158	10.07181 ppb		95
17) Iodomethane	2.31	142	26336	7.72516 ppb		100
18) Acrylonitrile	2.97	52	24294	9.31183 ppb		95
19) Methylene chloride	2.67	84	100745	9.81863 ppb		93
20) Carbon disulfide	2.36	76	232575	9.28487 ppb		97
21) Methyl t-butyl ether (MtBE	3.02	73	239278	9.04172 ppb		98
22) Trans-1,2-DCE	2.99	96	95254	9.43337 ppb		96
23) Diisopropyl Ether	3.71	45	265078	9.47531 ppb		96
24) 1,1-DCA	3.53	63	170849	9.51725 ppb		99
25) Hexane	3.36	57	76230	9.21682 ppb		97
26) Vinyl Acetate	3.71	43	50952	8.49221 ppb		100
27) Ethyl tert Butyl Ether	4.29	59	245532	9.47502 ppb		96
28) MEK (2-Butanone)	4.50	43	32789	9.75570 ppb		98
29) Cis-1,2-DCE	4.43	96	109075	9.22428 ppb		88
30) 2,2-Dichloropropane	4.40	77	46896	8.76540 ppb		96
31) Chloroform	4.90	83	174861	9.13505 ppb		100
32) Bromochloromethane	4.76	128	54629	9.09312 ppb		95
34) 1,1,1-TCA	5.11	97	155649	9.47451 ppb		100
35) Cyclohexane	5.16	41	65962	9.35199 ppb		95
36) 1,1-Dichloropropene	5.33	75	119971	9.59348 ppb		99
37) 2,2,4-Trimethylpentane	5.73	57	224009	9.43664 ppb	#	88
39) Carbon Tetrachloride	5.32	117	136907	10.02333 ppb		96
40) Tert Amyl Methyl Ether	5.80	73	244633	9.83787 ppb		98
41) 1,2-DCA	5.62	62	129432	9.50646 ppb		99
42) Benzene	5.58	78	379486	9.15331 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L17.D Vial: 16
Acq On : 9 Sep 14 15:29 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

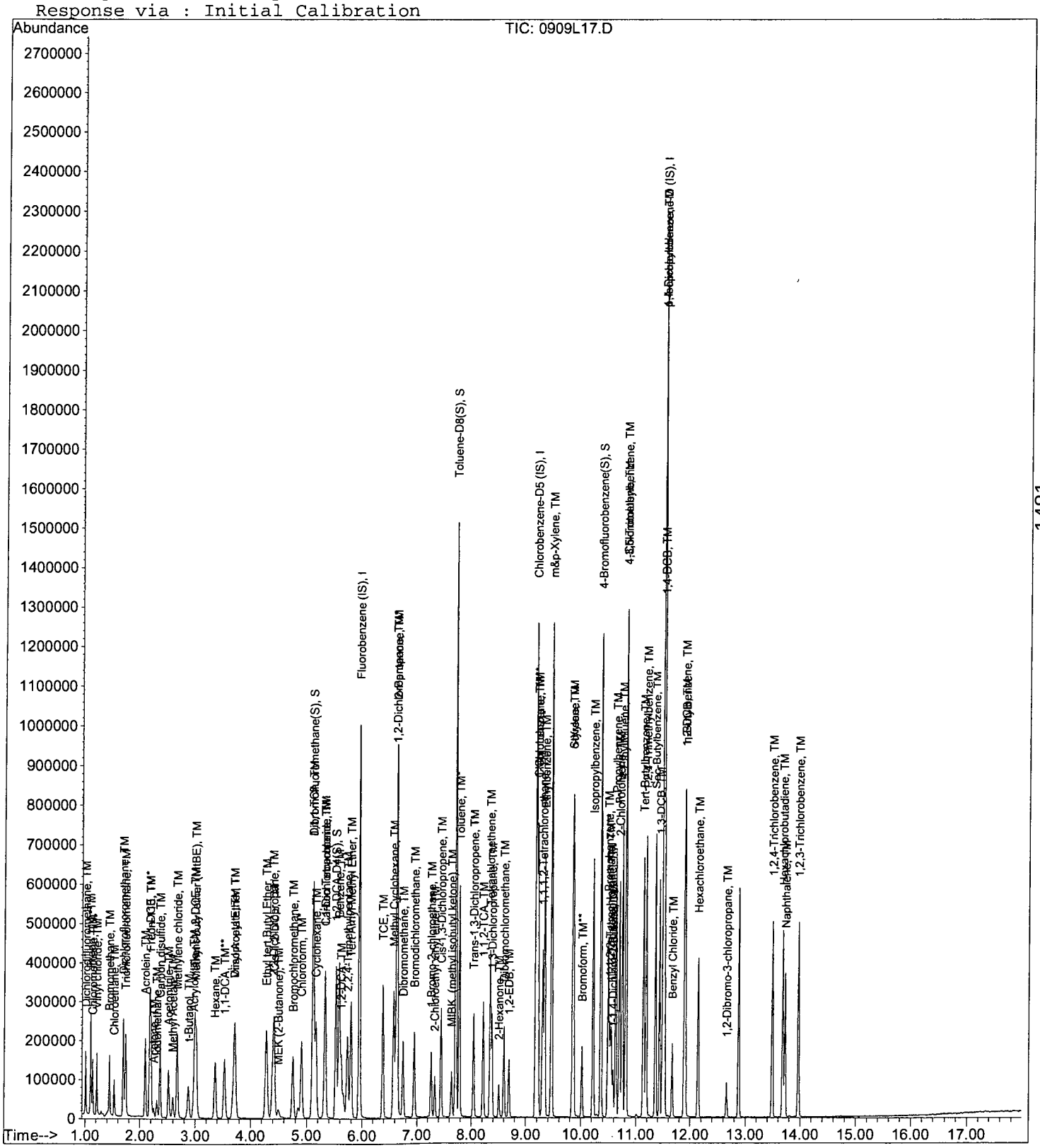
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	TCE	6.38	95	105628	10.24396	ppb	97
44)	2-Pentanone	6.64	43	799303	122.37014	ppb	99
45)	1,2-Dichloropropane	6.62	63	103510	9.65239	ppb	100
46)	Bromodichloromethane	6.95	83	133526	9.02171	ppb	94
47)	Methyl Cyclohexane	6.58	83	123009	9.40587	ppb	98
48)	Dibromomethane	6.75	93	64262	9.45828	ppb	97
49)	2-Chloroethyl vinyl ether	7.33	106	12599	10.02398	ppb	87
50)	MIBK (methyl isobutyl ket	7.64	43	73613	9.81145	ppb	95
51)	1-Bromo-2-chloroethane	7.26	63	76024	9.27320	ppb	99
52)	Cis-1,3-Dichloropropene	7.44	75	150586	9.52177	ppb	99
53)	Toluene	7.78	91	415951	9.69206	ppb	100
54)	Trans-1,3-Dichloropropene	8.04	75	132973	9.67331	ppb	96
55)	1,1,2-TCA	8.21	83	74310	9.35697	ppb	95
56)	2-Hexanone	8.51	43	50161	10.38556	ppb	94
59)	1,2-EDB	8.69	107	88673	9.44092	ppb	99
60)	Tetrachloroethene	8.34	166	124420	9.25281	ppb	98
61)	1-Chlorohexane	9.22	91	110878	9.95060	ppb	99
62)	1,1,1,2-Tetrachloroethane	9.30	131	116163	9.60023	ppb	95
63)	m&p-Xylene	9.46	106	351412	20.23728	ppb	99
64)	o-Xylene	9.85	106	163480	9.95187	ppb	99
65)	Styrene	9.86	104	283122	10.11117	ppb	99
67)	1,3-Dichloropropane	8.38	76	143974	9.50735	ppb	96
68)	Dibromochloromethane	8.60	129	112424	9.59204	ppb	100
69)	Chlorobenzene	9.21	112	289679	9.57969	ppb	99
70)	Ethylbenzene	9.34	91	443670	10.04442	ppb	98
71)	Bromoform	10.02	173	81059	9.59096	ppb	97
73)	Isopropylbenzene	10.23	105	400169	9.69729	ppb	94
74)	1,1,2,2-Tetrachloroethane	10.52	83	105947	8.62416	ppb	97
75)	1,2,3-Trichloropropane	10.55	110	35407	9.17042	ppb	100
76)	t-1,4-Dichloro-2-Butene	10.58	53	22079	9.52414	ppb	97
77)	Bromobenzene	10.50	156	134000	9.52112	ppb	97
78)	n-Propylbenzene	10.63	91	483169	9.93735	ppb	99
79)	4-Ethyltoluene	10.75	105	451188	10.41269	ppb	100
80)	2-Chlorotoluene	10.70	91	311361	9.82533	ppb	100
81)	1,3,5-Trimethylbenzene	10.82	105	392787	10.69457	ppb	99
82)	4-Chlorotoluene	10.81	91	377081	10.36355	ppb	99
83)	Tert-Butylbenzene	11.13	119	309792	9.97453	ppb	97
84)	1,2,4-Trimethylbenzene	11.18	105	381991	10.39811	ppb	99
85)	Sec-Butylbenzene	11.35	105	456352	10.26511	ppb	99
86)	p-Isopropyltoluene	11.51	119	393365	10.15125	ppb	99
87)	Benzyl Chloride	11.67	91	134549	7.62362	ppb	99
88)	1,3-DCB	11.44	146	248270	9.38100	ppb	98
89)	1,4-DCB	11.53	146	259049	9.33941	ppb	97
90)	n-Butylbenzene	11.91	91	339351	9.92666	ppb	98
91)	1,2-DCB	11.89	146	233591	9.21369	ppb	98
92)	Hexachloroethane	12.15	117	76624	8.78733	ppb	100
93)	1,2-Dibromo-3-chloropropan	12.66	157	16380	9.37896	ppb	95
94)	1,2,4-Trichlorobenzene	13.49	180	161707	9.32058	ppb	97
95)	Hexachlorobutadiene	13.68	225	94917	9.48228	ppb	97
96)	Naphthalene	13.72	128	189696	8.74093	ppb	100
97)	1,2,3-Trichlorobenzene	13.97	180	158584	9.51381	ppb	95

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\140909\0909L17.D Vial: 16
Acq On : 9 Sep 14 15:29 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-09-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



1481

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9 Sep 14 15:57
Instrument: Loki
Initial Cal. Date: 9/9/2014
Data File: 0909L18.D

		Compound	MEAN	CCRF	%D	%Drift		
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.4835	0.4328	10	TM		
3	TM	Freon 114	0.4236	0.3820	9.8	TM		
4	TM**L	Chloromethane	0.5585	0.4811	14	TM**L	2.2	
5	TM*	Vinyl chloride	0.5434	0.5006	7.9	TM*		
6	TML	Bromomethane	0.3013	0.3037	0.80	TML	17	
7	TM	Chloroethane	0.2827	0.2348	17	TM		
8	TM	Dichlorofluoromethane	0.9961	0.9333	6.3	TM		
9	TM	Trichlorofluoromethane	0.7765	0.7150	7.9	TM		
10	TML	Acrolein	0.0640	0.0562	12	TML	3.8	
11	TML	Acetone	0.1730	0.1274	26	TML	1.8	
12	TM	Freon-113	0.4757	0.4367	8.2	TM		
13	TM*	1,1-DCE	0.6810	0.6339	6.9	TM*		
14	TML	t-Butanol	0.0175	0.0176	0.18	TML	8.5	
15	TML	Acetonitrile	0.0561	0.0522	7.0	TML	0.10	
16	TML	Methyl Acetate	0.3807	0.3402	11	TML	5.2	
17	TML	Iodomethane	0.1506	0.1370	9.0	TML	21	*
18	TM	Acrylonitrile	0.1323	0.1283	3.0	TM		
19	TML	Methylene chloride	0.5915	0.5323	10	TML	2.4	
20	TM	Carbon disulfide	1.270	1.169	7.9	TM		
21	TM	Methyl t-butyl ether (MtBE)	1.342	1.271	5.3	TM		
22	TM	Trans-1,2-DCE	0.5120	0.4932	3.7	TM		
23	TM	Diisopropyl Ether	1.418	1.384	2.4	TM		
24	TM**	1,1-DCA	0.9102	0.8759	3.8	TM**		
25	TM	Hexane	0.4194	0.3706	12	TM		
26	TM	Vinyl Acetate	0.3042	0.2639	13	TM		
27	TM	Ethyl tert Butyl Ether	1.314	1.285	2.2	TM		
28	TML	MEK (2-Butanone)	0.1845	0.1707	7.5	TML	0.12	
29	TM	Cis-1,2-DCE	0.5996	0.5613	6.4	TM		
30	TM	2,2-Dichloropropane	0.2713	0.2187	19	TM		
31	TM*	Chloroform	0.9706	0.8881	8.5	TM*		
32	TM	Bromochloromethane	0.3046	0.2939	3.5	TM		
33	S	Dibromofluoromethane(S)	0.6058	0.5728	5.5	S		
34	TM	1,1,1-TCA	0.8330	0.7890	5.3	TM		
35	TM	Cyclohexane	0.3576	0.3200	11	TM		
36	TM	1,1-Dichloropropene	0.6341	0.5943	6.3	TM		
37	TM	2,2,4-Trimethylpentane	1.204	1.106	8.1	TM		
38	S	1,2-DCA-D4(S)	0.6378	0.5770	9.5	S		
39	TM	Carbon Tetrachloride	0.6926	0.6863	0.90	TM		
40	TM	Tert Amyl Methyl Ether	1.261	1.296	2.8	TM		
		Average			8.0			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9 Sep 14 15:57
Instrument: Loki
Cal. Date: 9/9/2014
Data File: 0909L18.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	1,2-DCA	0.6903	0.6807	1.4	TM	
42	TM	Benzene	2.102	1.928	8.3	TM	
43	TM	TCE	0.5228	0.5428	3.8	TM	
44	TM	2-Pentanone	0.3312	0.3366	1.6	TM	
45	TM*	1,2-Dichloropropane	0.5437	0.5200	4.4	TM*	
46	TM	Bromodichloromethane	0.7504	0.7123	5.1	TM	
47	TM	Methyl Cyclohexane	0.6631	0.6017	9.3	TM	
48	TM	Dibromomethane	0.3445	0.3249	5.7	TM	
49	TML	2-Chloroethyl vinyl ether	0.0661	0.0622	6.0	TML	1.8
50	TM	MIBK (methyl isobutyl ketone)	0.3804	0.3772	0.83	TM	
51	TM	1-Bromo-2-chloroethane	0.4157	0.4155	0.06	TM	
52	TM	Cis-1,3-Dichloropropene	0.8019	0.7762	3.2	TM	
53	TM*	Toluene	2.176	2.129	2.2	TM*	
54	TM	Trans-1,3-Dichloropropene	0.6970	0.6807	2.3	TM	
55	TM	1,1,2-TCA	0.4027	0.3924	2.6	TM	
56	TM	2-Hexanone	0.2449	0.2419	1.2	TM	
57	I	Chlorobenzene-D5 (IS)	ISTD			I	
58	S	Toluene-D8(S)	2.027	2.112	4.2	S	
59	TM	1,2-EDB	0.5273	0.5128	2.8	TM	
60	TM	Tetrachloroethene	0.7549	0.6855	9.2	TM	
61	TM	1-Chlorohexane	0.6256	0.6261	0.08	TM	
62	TM	1,1,1,2-Tetrachloroethane	0.6793	0.6365	6.3	TM	
63	TM	m&p-Xylene	0.9749	0.9752	0.04	TM	
64	TM	o-Xylene	0.9222	0.9266	0.47	TM	
65	TM	Styrene	1.572	1.622	3.2	TM	
66	S	4-Bromofluorobenzene(S)	0.7568	0.7844	3.7	S	
67	TM	1,3-Dichloropropane	0.8502	0.8253	2.9	TM	
68	TM	Dibromochloromethane	0.6580	0.6505	1.1	TM	
69	TM**	Chlorobenzene	1.698	1.630	4.0	TM**	
70	TM*	Ethylbenzene	2.480	2.439	1.7	TM*	
71	TM**	Bromoform	0.4745	0.4535	4.4	TM**	
72	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
73	TM	Isopropylbenzene	3.656	3.769	3.1	TM	
74	TM**	1,1,2,2-Tetrachloroethane	1.088	0.9822	9.8	TM**	
75	TM	1,2,3-Trichloropropane	0.3421	0.3316	3.1	TM	
76	TM	t-1,4-Dichloro-2-Butene	0.2054	0.2171	5.7	TM	
77	TM	Bromobenzene	1.247	1.249	0.16	TM	
78	TM	n-Propylbenzene	4.308	4.495	4.4	TM	
79	TM	4-Ethyltoluene	3.839	4.137	7.8	TM	
80	TM	2-Chlorotoluene	2.808	2.913	3.7	TM	
		Average			3.7		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9 Sep 14 15:57
Instrument: Loki
Cal. Date: 9/9/2014
Data File: 0909L18.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	1,3,5-Trimethylbenzene	3.254	3.602	11	TM	
82	TM	4-Chlorotoluene	3.224	3.390	5.2	TM	
83	TM	Tert-Butylbenzene	2.752	2.828	2.8	TM	
84	TM	1,2,4-Trimethylbenzene	3.255	3.464	6.4	TM	
85	TM	Sec-Butylbenzene	3.939	4.075	3.5	TM	
86	TM	p-Isopropyltoluene	3.433	3.644	6.2	TM	
87	TM	Benzyl Chloride	1.564	1.224	22	TM	*
88	TM	1,3-DCB	2.345	2.305	1.7	TM	
89	TM	1,4-DCB	2.457	2.397	2.5	TM	
90	TM	n-Butylbenzene	3.029	3.114	2.8	TM	
91	TM	1,2-DCB	2.246	2.195	2.3	TM	
92	TM	Hexachloroethane	0.7726	0.6808	12	TM	
93	TML	1,2-Dibromo-3-chloropropane	0.1627	0.1559	4.2	TML	0.66
94	TM	1,2,4-Trichlorobenzene	1.537	1.506	2.0	TM	
95	TM	Hexachlorobutadiene	0.8869	0.8493	4.2	TM	
96	TML	Naphthalene	1.708	1.777	4.0	TML	8.5
97	TM	1,2,3-Trichlorobenzene	1.477	1.471	0.38	TM	
98							
99							
100							
101							
102							
103							
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111							
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113							
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116							
117							
118							
119							
120							
		Average			5.5		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L18.D Vial: 17
Acq On : 9 Sep 14 15:57 Operator: DG,SV,RS
Sample : 140909A LCS-1WL (SS) Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	499456	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	458688	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	278208	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.12	111	286071	23.63698 ppb		0.00
Spiked Amount 25.423			Recovery = 92.976%			
38) 1,2-DCA-D4(S)	5.53	65	288186	22.61553 ppb		0.00
Spiked Amount 24.764			Recovery = 91.326%			
58) Toluene-D8(S)	7.71	98	968624	26.05059 ppb		0.00
Spiked Amount 25.636			Recovery = 101.619%			
66) 4-Bromofluorobenzene(S)	10.36	95	359817	25.91428 ppb		0.00
Spiked Amount 23.806			Recovery = 108.854%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	86473	8.95305 ppb		99
3) Freon 114	1.10	85	76317	9.01790 ppb		98
4) Chloromethane	1.14	50	96122	9.78434 ppb		98
5) Vinyl chloride	1.21	62	100001	9.21080 ppb		94
6) Bromomethane	1.44	94	60681	11.67377 ppb		98
7) Chloroethane	1.53	64	46904	8.30366 ppb		98
8) Dichlorofluoromethane	1.70	67	186461	9.36937 ppb		96
9) Trichlorofluoromethane	1.74	101	142841	9.20765 ppb		100
10) Acrolein	2.09	56	140416	120.28235 ppb	#	98
11) Acetone	2.25	43	25451	10.18112 ppb		93
12) Freon-113	2.20	101	87249	9.18112 ppb		93
13) 1,1-DCE	2.18	61	126643	9.30867 ppb		99
14) t-Butanol	2.88	59	43888	135.56871 ppb		96
15) Acetonitrile	2.52	41	130263	125.12237 ppb		98
16) Methyl Acetate	2.60	43	67957	10.51696 ppb		96
17) Iodomethane	2.31	142	27376	7.88394 ppb		97
18) Acrylonitrile	2.97	52	25626	9.69652 ppb		95
19) Methylene chloride	2.67	84	106342	10.23698 ppb		97
20) Carbon disulfide	2.36	76	233635	9.20767 ppb		98
21) Methyl t-butyl ether (MtBE	3.02	73	253857	9.46971 ppb		98
22) Trans-1,2-DCE	2.99	96	98542	9.63394 ppb		98
23) Diisopropyl Ether	3.71	45	276530	9.75801 ppb		95
24) 1,1-DCA	3.53	63	174998	9.62346 ppb		96
25) Hexane	3.36	57	74043	8.83768 ppb		98
26) Vinyl Acetate	3.71	43	52728	8.67561 ppb	#	97
27) Ethyl tert Butyl Ether	4.28	59	256689	9.77863 ppb		96
28) MEK (2-Butanone)	4.50	43	34103	10.01192 ppb		91
29) Cis-1,2-DCE	4.43	96	112133	9.36138 ppb		91
30) 2,2-Dichloropropane	4.40	77	43696	8.06263 ppb		96
31) Chloroform	4.91	83	177424	9.15017 ppb		96
32) Bromochloromethane	4.75	128	58720	9.64883 ppb		95
34) 1,1,1-TCA	5.10	97	157634	9.47238 ppb		97
35) Cyclohexane	5.16	41	63921	8.94649 ppb		94
36) 1,1-Dichloropropene	5.33	75	118733	9.37282 ppb		97
37) 2,2,4-Trimethylpentane	5.73	57	220924	9.18742 ppb		100
39) Carbon Tetrachloride	5.32	117	137114	9.90985 ppb		93
40) Tert Amyl Methyl Ether	5.80	73	258941	10.27983 ppb		98
41) 1,2-DCA	5.62	62	135993	9.86036 ppb		98
42) Benzene	5.58	78	385235	9.17291 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0909L18.D Vial: 17
Acq On : 9 Sep 14 15:57 Operator: DG,SV,RS
Sample : 140909A LCS-1WL (SS) Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	TCE	6.38	95	108449	10.38277	ppb	99
44)	2-Pentanone	6.64	43	840606	127.04440	ppb	99
45)	1,2-Dichloropropane	6.62	63	103888	9.56350	ppb	99
46)	Bromodichloromethane	6.95	83	142302	9.49146	ppb	99
47)	Methyl Cyclohexane	6.58	83	120201	9.07339	ppb	98
48)	Dibromomethane	6.75	93	64910	9.43124	ppb	91
49)	2-Chloroethyl vinyl ether	7.33	106	12425	9.82307	ppb	87
50)	MIBK (methyl isobutyl ket	7.64	43	75367	9.91651	ppb	98
51)	1-Bromo-2-chloroethane	7.26	63	83000	9.99439	ppb	99
52)	Cis-1,3-Dichloropropene	7.44	75	155066	9.67941	ppb	96
53)	Toluene	7.78	91	425292	9.78273	ppb	97
54)	Trans-1,3-Dichloropropene	8.04	75	135987	9.76581	ppb	95
55)	1,1,2-TCA	8.21	83	78395	9.74485	ppb	95
56)	2-Hexanone	8.51	43	48329	9.87804	ppb	99
59)	1,2-EDB	8.69	107	94083	9.72481	ppb	99
60)	Tetrachloroethene	8.35	166	125778	9.08103	ppb	99
61)	1-Chlorohexane	9.22	91	114865	10.00780	ppb	97
62)	1,1,1,2-Tetrachloroethane	9.30	131	116781	9.36986	ppb	97
63)	m&p-Xylene	9.46	106	357854	20.00730	ppb	97
64)	o-Xylene	9.85	106	170001	10.04705	ppb	95
65)	Styrene	9.86	104	297610	10.31863	ppb	100
67)	1,3-Dichloropropane	8.38	76	151419	9.70740	ppb	96
68)	Dibromochloromethane	8.60	129	119348	9.88586	ppb	93
69)	Chlorobenzene	9.21	112	299020	9.60023	ppb	98
70)	Ethylbenzene	9.34	91	447459	9.83479	ppb	99
71)	Bromoform	10.02	173	83211	9.55848	ppb	95
73)	Isopropylbenzene	10.23	105	419479	10.31021	ppb	98
74)	1,1,2,2-Tetrachloroethane	10.52	83	109307	9.02457	ppb	100
75)	1,2,3-Trichloropropane	10.55	110	36906	9.69500	ppb	98
76)	t-1,4-Dichloro-2-Butene	10.59	53	24165	10.57265	ppb	99
77)	Bromobenzene	10.50	156	138982	10.01595	ppb	99
78)	n-Propylbenzene	10.63	91	500268	10.43578	ppb	99
79)	4-Ethyltoluene	10.75	105	460402	10.77688	ppb	99
80)	2-Chlorotoluene	10.70	91	324152	10.37486	ppb	99
81)	1,3,5-Trimethylbenzene	10.82	105	400842	11.06955	ppb	98
82)	4-Chlorotoluene	10.81	91	377240	10.51579	ppb	97
83)	Tert-Butylbenzene	11.13	119	314729	10.27803	ppb	99
84)	1,2,4-Trimethylbenzene	11.18	105	385443	10.64172	ppb	98
85)	Sec-Butylbenzene	11.35	105	453526	10.34704	ppb	98
86)	p-Isopropyltoluene	11.51	119	405561	10.61526	ppb	99
87)	Benzyl Chloride	11.67	91	136198	7.82712	ppb	98
88)	1,3-DCB	11.44	146	256472	9.82913	ppb	98
89)	1,4-DCB	11.53	146	266706	9.75260	ppb	97
90)	n-Butylbenzene	11.91	91	346499	10.28031	ppb	99
91)	1,2-DCB	11.89	146	244219	9.77029	ppb	100
92)	Hexachloroethane	12.15	117	75763	8.81251	ppb	92
93)	1,2-Dibromo-3-chloropropan	12.66	157	17344	10.06582	ppb	96
94)	1,2,4-Trichlorobenzene	13.49	180	167606	9.79838	ppb	98
95)	Hexachlorobutadiene	13.68	225	94510	9.57629	ppb	93
96)	Naphthalene	13.72	128	197696	9.15308	ppb	99
97)	1,2,3-Trichlorobenzene	13.97	180	163712	9.96153	ppb	98

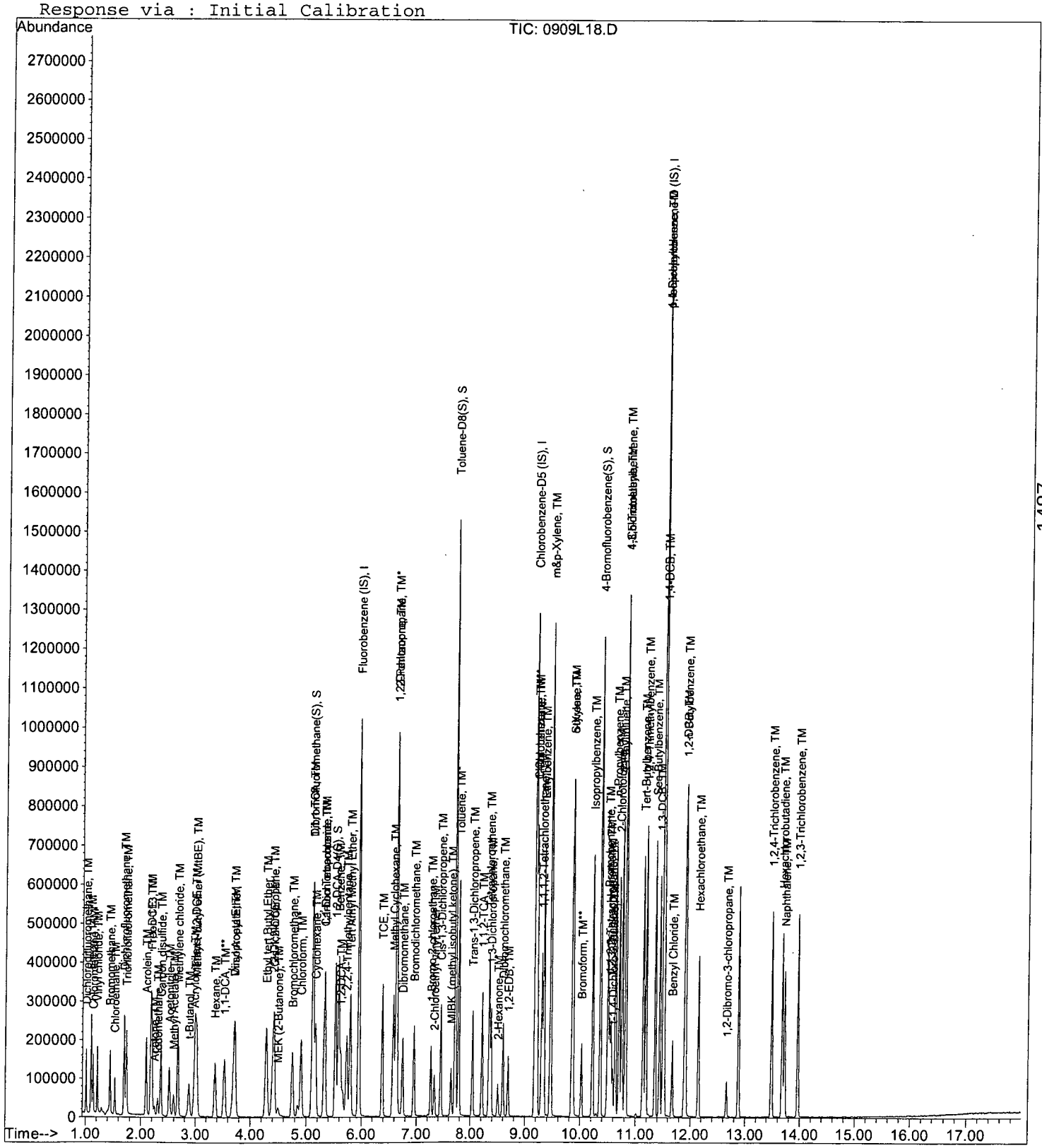
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0909L18.D Vial: 17
Acq On : 9 Sep 14 15:57 Operator: DG,SV,RS
Sample : 140909A LCS-1WL (SS) Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 10 9:03 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9/10/2014
Instrument: Loki
Initial Cal. Date: 9/9/2014
Data File: 0910L03.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.4835	0.5046	4.4	TM	
3	TM	Freon 114	0.4236	0.4378	3.3	TM	
4	TM**L	Chloromethane	0.5585	0.5104	8.6	TM**L	3.8
5	TM*	Vinyl chloride	0.5434	0.5300	2.5	TM*	
6	TML	Bromomethane	0.3013	0.2796	7.2	TML	7.5
7	TM	Chloroethane	0.2827	0.2562	9.4	TM	
8	TM	Dichlorofluoromethane	0.9961	0.9818	1.4	TM	
9	TM	Trichlorofluoromethane	0.7765	0.7484	3.6	TM	
10	TML	Acrolein	0.0640	0.0621	3.0	TML	6.8
11	TML	Acetone	0.1730	0.1186	31	TML	5.9
12	TM	Freon-113	0.4757	0.4714	0.89	TM	
13	TM*	1,1-DCE	0.6810	0.6746	0.94	TM*	
14	TML	t-Butanol	0.0175	0.0159	9.2	TML	1.7
15	TML	Acetonitrile	0.0561	0.0515	8.2	TML	1.2
16	TML	Methyl Acetate	0.3807	0.3138	18	TML	2.7
17	TML	Iodomethane	0.1506	0.1583	5.1	TML	12
18	TM	Acrylonitrile	0.1323	0.1221	7.7	TM	
19	TML	Methylene chloride	0.5915	0.5400	8.7	TML	3.9
20	TM	Carbon disulfide	1.270	1.238	2.5	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.342	1.223	8.9	TM	
22	TM	Trans-1,2-DCE	0.5120	0.4959	3.1	TM	
23	TM	Diisopropyl Ether	1.418	1.383	2.5	TM	
24	TM**	1,1-DCA	0.9102	0.9024	0.86	TM**	
25	TM	Hexane	0.4194	0.4256	1.5	TM	
26	TM	Vinyl Acetate	0.3042	0.3015	0.89	TM	
27	TM	Ethyl tert Butyl Ether	1.314	1.258	4.2	TM	
28	TML	MEK (2-Butanone)	0.1845	0.1631	12	TML	4.3
29	TM	Cis-1,2-DCE	0.5996	0.5716	4.7	TM	
30	TM	2,2-Dichloropropane	0.2713	0.2903	7.0	TM	
31	TM*	Chloroform	0.9706	0.9514	2.0	TM*	
32	TM	Bromochloromethane	0.3046	0.2979	2.2	TM	
33	S	Dibromofluoromethane(S)	0.6058	0.5942	1.9	S	
34	TM	1,1,1-TCA	0.8330	0.8206	1.5	TM	
35	TM	Cyclohexane	0.3576	0.3403	4.9	TM	
36	TM	1,1-Dichloropropene	0.6341	0.6192	2.3	TM	
37	TM	2,2,4-Trimethylpentane	1.204	1.283	6.6	TM	
38	S	1,2-DCA-D4(S)	0.6378	0.6070	4.8	S	
39	TM	Carbon Tetrachloride	0.6926	0.7051	1.8	TM	
40	TM	Tert Amyl Methyl Ether	1.261	1.241	1.6	TM	
		Average			5.4		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9/10/2014
Instrument: Loki
Cal. Date: 9/9/2014
Data File: 0910L03.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	1,2-DCA	0.6903	0.6904	0.01	TM	
42	TM	Benzene	2.102	1.991	5.3	TM	
43	TM	TCE	0.5228	0.5134	1.8	TM	
44	TM	2-Pentanone	0.3312	0.3097	6.5	TM	
45	TM*	1,2-Dichloropropane	0.5437	0.5458	0.38	TM*	
46	TM	Bromodichloromethane	0.7504	0.7194	4.1	TM	
47	TM	Methyl Cyclohexane	0.6631	0.6458	2.6	TM	
48	TM	Dibromomethane	0.3445	0.3260	5.4	TM	
49	TML	2-Chloroethyl vinyl ether	0.0661	0.0607	8.3	TML	3.6
50	TM	MIBK (methyl isobutyl ketone)	0.3804	0.3478	8.6	TM	
51	TM	1-Bromo-2-chloroethane	0.4157	0.4077	1.9	TM	
52	TM	Cis-1,3-Dichloropropene	0.8019	0.7892	1.6	TM	
53	TM*	Toluene	2.176	2.216	1.8	TM*	
54	TM	Trans-1,3-Dichloropropene	0.6970	0.6890	1.1	TM	
55	TM	1,1,2-TCA	0.4027	0.3881	3.6	TM	
56	TM	2-Hexanone	0.2449	0.2297	6.2	TM	
57	I	Chlorobenzene-D5 (IS)	ISTD			I	
58	S	Toluene-D8(S)	2.027	2.147	5.9	S	
59	TM	1,2-EDB	0.5273	0.5111	3.1	TM	
60	TM	Tetrachloroethene	0.7549	0.7075	6.3	TM	
61	TM	1-Chlorohexane	0.6256	0.6504	4.0	TM	
62	TM	1,1,1,2-Tetrachloroethane	0.6793	0.6702	1.3	TM	
63	TM	m&p-Xylene	0.9749	1.012	3.8	TM	
64	TM	o-Xylene	0.9222	0.9349	1.4	TM	
65	TM	Styrene	1.572	1.598	1.6	TM	
66	S	4-Bromofluorobenzene(S)	0.7568	0.8129	7.4	S	
67	TM	1,3-Dichloropropane	0.8502	0.8168	3.9	TM	
68	TM	Dibromochloromethane	0.6580	0.6258	4.9	TM	
69	TM**	Chlorobenzene	1.698	1.674	1.4	TM**	
70	TM*	Ethylbenzene	2.480	2.479	0.02	TM*	
71	TM**	Bromoform	0.4745	0.4509	5.0	TM**	
72	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
73	TM	Isopropylbenzene	3.656	3.690	0.92	TM	
74	TM**	1,1,2,2-Tetrachloroethane	1.088	1.080	0.77	TM**	
75	TM	1,2,3-Trichloropropane	0.3421	0.3221	5.8	TM	
76	TM	t-1,4-Dichloro-2-Butene	0.2054	0.2047	0.35	TM	
77	TM	Bromobenzene	1.247	1.247	0.03	TM	
78	TM	n-Propylbenzene	4.308	4.504	4.6	TM	
79	TM	4-Ethyltoluene	3.839	4.250	11	TM	
80	TM	2-Chlorotoluene	2.808	2.902	3.4	TM	
		Average			3.6		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9/10/2014
Instrument: Loki
Cal. Date: 9/9/2014
Data File: 0910L03.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	1,3,5-Trimethylbenzene	3.254	3.665	13	TM	
82	TM	4-Chlorotoluene	3.224	3.472	7.7	TM	
83	TM	Tert-Butylbenzene	2.752	2.846	3.4	TM	
84	TM	1,2,4-Trimethylbenzene	3.255	3.486	7.1	TM	
85	TM	Sec-Butylbenzene	3.939	4.137	5.0	TM	
86	TM	p-Isopropyltoluene	3.433	3.629	5.7	TM	
87	TM	Benzyl Chloride	1.564	1.606	2.7	TM	
88	TM	1,3-DCB	2.345	2.333	0.50	TM	
89	TM	1,4-DCB	2.457	2.425	1.3	TM	
90	TM	n-Butylbenzene	3.029	3.232	6.7	TM	
91	TM	1,2-DCB	2.246	2.183	2.8	TM	
92	TM	Hexachloroethane	0.7726	0.7329	5.1	TM	
93	TML	1,2-Dibromo-3-chloropropane	0.1627	0.1482	8.9	TML	4.3
94	TM	1,2,4-Trichlorobenzene	1.537	1.476	4.0	TM	
95	TM	Hexachlorobutadiene	0.8869	0.8779	1.0	TM	
96	TML	Naphthalene	1.708	1.575	7.8	TML	17
97	TM	1,2,3-Trichlorobenzene	1.477	1.419	3.9	TM	
98							
99							
100							
101							
102							
103							
104							
105							
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113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.1		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0910L03.D Vial: 2
Acq On : 10 Sep 14 10:02 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-10-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 11 7:50 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	460224	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	422208	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	262336	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.12	111	273457	24.52083 ppb		0.00
Spiked Amount 25.423			Recovery = 96.453%			
38) 1,2-DCA-D4(S)	5.53	65	279343	23.79028 ppb		0.00
Spiked Amount 24.764			Recovery = 96.067%			
58) Toluene-D8(S)	7.71	98	906484	26.48582 ppb		0.00
Spiked Amount 25.636			Recovery = 103.316%			
66) 4-Bromofluorobenzene(S)	10.36	95	343229	26.85545 ppb		0.00
Spiked Amount 23.806			Recovery = 112.806%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	92886	10.43683 ppb		98
3) Freon 114	1.10	85	80592	10.33485 ppb		96
4) Chloromethane	1.14	50	93951	10.37938 ppb		97
5) Vinyl chloride	1.21	62	97566	9.75258 ppb		96
6) Bromomethane	1.44	94	51466	10.75359 ppb		99
7) Chloroethane	1.53	64	47160	9.06070 ppb		96
8) Dichlorofluoromethane	1.70	67	180733	9.85570 ppb		97
9) Trichlorofluoromethane	1.74	101	137767	9.63760 ppb		97
10) Acrolein	2.09	56	142837	133.47318 ppb		99
11) Acetone	2.25	43	21842	9.41305 ppb		98
12) Freon-113	2.20	101	86787	9.91101 ppb		99
13) 1,1-DCE	2.18	61	124178	9.90556 ppb		98
14) t-Butanol	2.88	59	36672	122.82571 ppb		100
15) Acetonitrile	2.51	41	118477	123.46645 ppb		96
16) Methyl Acetate	2.59	43	57763	9.72607 ppb		97
17) Iodomethane	2.31	142	29136	8.84908 ppb		97
18) Acrylonitrile	2.96	52	22484	9.23287 ppb		87
19) Methylene chloride	2.67	84	99406	10.38698 ppb		93
20) Carbon disulfide	2.36	76	227916	9.74798 ppb		100
21) Methyl t-butyl ether (MtBE	3.02	73	225099	9.11274 ppb		98
22) Trans-1,2-DCE	2.99	96	91297	9.68650 ppb		97
23) Diisopropyl Ether	3.71	45	254510	9.74657 ppb		98
24) 1,1-DCA	3.53	63	166124	9.91422 ppb		98
25) Hexane	3.36	57	78353	10.14934 ppb		98
26) Vinyl Acetate	3.68	43	55504	9.91085 ppb	#	75
27) Ethyl tert Butyl Ether	4.29	59	231675	9.57807 ppb		95
28) MEK (2-Butanone)	4.50	43	30017	9.57147 ppb		91
29) Cis-1,2-DCE	4.42	96	105228	9.53379 ppb		90
30) 2,2-Dichloropropane	4.40	77	53432	10.69953 ppb		95
31) Chloroform	4.90	83	175134	9.80202 ppb		100
32) Bromochloromethane	4.75	128	54831	9.77784 ppb		99
34) 1,1,1-TCA	5.10	97	151067	9.85160 ppb		95
35) Cyclohexane	5.16	41	62637	9.51411 ppb		99
36) 1,1-Dichloropropene	5.33	75	113992	9.76565 ppb		98
37) 2,2,4-Trimethylpentane	5.73	57	236205	10.66026 ppb		98
39) Carbon Tetrachloride	5.32	117	129795	10.18055 ppb		98
40) Tert Amyl Methyl Ether	5.80	73	228468	9.84325 ppb		98
41) 1,2-DCA	5.62	62	127097	10.00091 ppb		99
42) Benzene	5.58	78	366455	9.46956 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0910L03.D Vial: 2
Acq On : 10 Sep 14 10:02 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-10-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 11 7:50 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	TCE	6.38	95	94508	9.81938	ppb	99
44)	2-Pentanone	6.63	43	712694	116.89451	ppb	97
45)	1,2-Dichloropropane	6.62	63	100479	10.03817	ppb	99
46)	Bromodichloromethane	6.95	83	132425	9.58562	ppb	100
47)	Methyl Cyclohexane	6.58	83	118882	9.73880	ppb	100
48)	Dibromomethane	6.75	93	60016	9.46351	ppb	92
49)	2-Chloroethyl vinyl ether	7.33	106	11170	9.64282	ppb	90
50)	MIBK (methyl isobutyl ket	7.64	43	64019	9.14143	ppb	95
51)	1-Bromo-2-chloroethane	7.26	63	75048	9.80720	ppb	98
52)	Cis-1,3-Dichloropropene	7.44	75	145289	9.84221	ppb	98
53)	Toluene	7.78	91	407869	10.18173	ppb	99
54)	Trans-1,3-Dichloropropene	8.04	75	126837	9.88518	ppb	96
55)	1,1,2-TCA	8.21	83	71442	9.63759	ppb	98
56)	2-Hexanone	8.51	43	42284	9.37922	ppb	97
59)	1,2-EDB	8.69	107	86314	9.69264	ppb	98
60)	Tetrachloroethene	8.34	166	119478	9.37151	ppb	99
61)	1-Chlorohexane	9.22	91	109834	10.39630	ppb	97
62)	1,1,1,2-Tetrachloroethane	9.30	131	113191	9.86651	ppb	96
63)	m&p-Xylene	9.46	106	341750	20.75784	ppb	99
64)	o-Xylene	9.85	106	157894	10.13779	ppb	96
65)	Styrene	9.86	104	269832	10.16387	ppb	99
67)	1,3-Dichloropropane	8.38	76	137945	9.60770	ppb	99
68)	Dibromochloromethane	8.60	129	105683	9.51032	ppb	97
69)	Chlorobenzene	9.21	112	282660	9.85908	ppb	99
70)	Ethylbenzene	9.34	91	418708	9.99802	ppb	99
71)	Bromoform	10.02	173	76149	9.50305	ppb	98
73)	Isopropylbenzene	10.22	105	387180	10.09211	ppb	99
74)	1,1,2,2-Tetrachloroethane	10.52	83	113335	9.92326	ppb	96
75)	1,2,3-Trichloropropane	10.55	110	33796	9.41516	ppb	91
76)	t-1,4-Dichloro-2-Butene	10.58	53	21476	9.96465	ppb	99
77)	Bromobenzene	10.50	156	130811	9.99746	ppb	96
78)	n-Propylbenzene	10.63	91	472663	10.45648	ppb	100
79)	4-Ethyltoluene	10.75	105	445982	11.07095	ppb	98
80)	2-Chlorotoluene	10.70	91	304520	10.33621	ppb	98
81)	1,3,5-Trimethylbenzene	10.82	105	384545	11.26200	ppb	99
82)	4-Chlorotoluene	10.81	91	364318	10.77002	ppb	99
83)	Tert-Butylbenzene	11.13	119	298654	10.34315	ppb	99
84)	1,2,4-Trimethylbenzene	11.18	105	365765	10.70941	ppb	99
85)	Sec-Butylbenzene	11.35	105	434162	10.50455	ppb	99
86)	p-Isopropyltoluene	11.51	119	380818	10.57070	ppb	100
87)	Benzyl Chloride	11.67	91	168492	10.26885	ppb	99
88)	1,3-DCB	11.44	146	244807	9.94972	ppb	97
89)	1,4-DCB	11.53	146	254417	9.86610	ppb	98
90)	n-Butylbenzene	11.91	91	339183	10.67211	ppb	99
91)	1,2-DCB	11.89	146	229020	9.71657	ppb	100
92)	Hexachloroethane	12.15	117	76903	9.48632	ppb	98
93)	1,2-Dibromo-3-chloropropan	12.66	157	15548	9.57394	ppb	94
94)	1,2,4-Trichlorobenzene	13.49	180	154844	9.59999	ppb	97
95)	Hexachlorobutadiene	13.68	225	92120	9.89886	ppb	92
96)	Naphthalene	13.72	128	165312	8.28833	ppb	100
97)	1,2,3-Trichlorobenzene	13.97	180	148890	9.60777	ppb	96

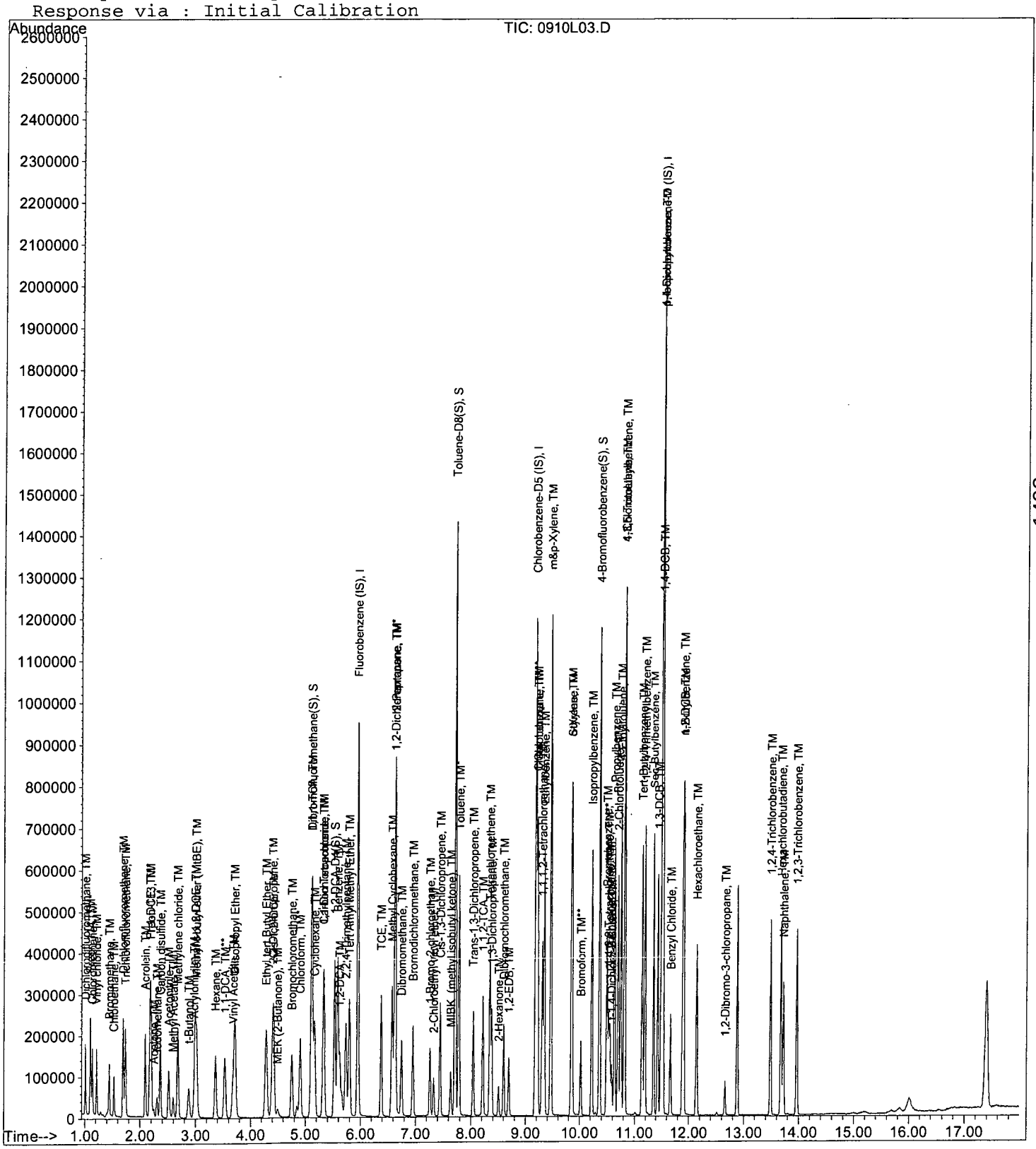
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0910L03.D Vial: 2
Acq On : 10 Sep 14 10:02 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-10-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 11 7:50 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



1493

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9/11/2014
Instrument: Loki
Initial Cal. Date: 9/9/2014
Data File: 0911L05.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.4835	0.4617	4.5	TM	
3	TM	Freon 114	0.4236	0.4330	2.2	TM	
4	TM**L	Chloromethane	0.5585	0.4927	12	TM**L	0.21
5	TM*	Vinyl chloride	0.5434	0.5147	5.3	TM*	
6	TML	Bromomethane	0.3013	0.2956	1.9	TML	14
7	TM	Chloroethane	0.2827	0.2445	14	TM	
8	TM	Dichlorofluoromethane	0.9961	0.9699	2.6	TM	
9	TM	Trichlorofluoromethane	0.7765	0.7138	8.1	TM	
10	TML	Acrolein	0.0640	0.0634	1.0	TML	9.1
11	TML	Acetone	0.1730	0.1330	23	TML	6.7
12	TM	Freon-113	0.4757	0.4591	3.5	TM	
13	TM*	1,1-DCE	0.6810	0.6593	3.2	TM*	
14	TML	t-Butanol	0.0175	0.0171	2.5	TML	5.5
15	TML	Acetonitrile	0.0561	0.0518	7.6	TML	0.64
16	TML	Methyl Acetate	0.3807	0.3214	16	TML	0.46
17	TML	Iodomethane	0.1506	0.1596	6.0	TML	11
18	TM	Acrylonitrile	0.1323	0.1266	4.3	TM	
19	TML	Methylene chloride	0.5915	0.5635	4.7	TML	8.4
20	TM	Carbon disulfide	1.270	1.161	8.6	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.342	1.218	9.2	TM	
22	TM	Trans-1,2-DCE	0.5120	0.4861	5.1	TM	
23	TM	Diisopropyl Ether	1.418	1.396	1.6	TM	
24	TM**	1,1-DCA	0.9102	0.8932	1.9	TM**	
25	TM	Hexane	0.4194	0.4152	0.99	TM	
26	TM	Vinyl Acetate	0.3042	0.3036	0.20	TM	
27	TM	Ethyl tert Butyl Ether	1.314	1.297	1.3	TM	
28	TML	MEK (2-Butanone)	0.1845	0.1617	12	TML	5.1
29	TM	Cis-1,2-DCE	0.5996	0.5609	6.5	TM	
30	TM	2,2-Dichloropropane	0.2713	0.2874	5.9	TM	
31	TM*	Chloroform	0.9706	0.9272	4.5	TM*	
32	TM	Bromochloromethane	0.3046	0.2814	7.6	TM	
33	S	Dibromofluoromethane(S)	0.6058	0.5828	3.8	S	
34	TM	1,1,1-TCA	0.8330	0.8355	0.30	TM	
35	TM	Cyclohexane	0.3576	0.3306	7.6	TM	
36	TM	1,1-Dichloropropene	0.6341	0.6116	3.5	TM	
37	TM	2,2,4-Trimethylpentane	1.204	1.248	3.7	TM	
38	S	1,2-DCA-D4(S)	0.6378	0.6091	4.5	S	
39	TM	Carbon Tetrachloride	0.6926	0.7096	2.5	TM	
40	TM	Tert Amyl Methyl Ether	1.261	1.242	1.5	TM	
		Average			5.5		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9/11/2014
Instrument: Loki
Cal. Date: 9/9/2014
Data File: 0911L05.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	1,2-DCA	0.6903	0.6715	2.7	TM	
42	TM	Benzene	2.102	1.950	7.2	TM	
43	TM	TCE	0.5228	0.5108	2.3	TM	
44	TM	2-Pentanone	0.3312	0.3228	2.5	TM	
45	TM*	1,2-Dichloropropane	0.5437	0.5410	0.51	TM*	
46	TM	Bromodichloromethane	0.7504	0.7280	3.0	TM	
47	TM	Methyl Cyclohexane	0.6631	0.6299	5.0	TM	
48	TM	Dibromomethane	0.3445	0.3315	3.8	TM	
49	TML	2-Chloroethyl vinyl ether	0.0661	0.0554	16	TML	9.8
50	TM	MIBK (methyl isobutyl ketone)	0.3804	0.3603	5.3	TM	
51	TM	1-Bromo-2-chloroethane	0.4157	0.3987	4.1	TM	
52	TM	Cis-1,3-Dichloropropene	0.8019	0.8054	0.43	TM	
53	TM*	Toluene	2.176	2.166	0.47	TM*	
54	TM	Trans-1,3-Dichloropropene	0.6970	0.7073	1.5	TM	
55	TM	1,1,2-TCA	0.4027	0.3833	4.8	TM	
56	TM	2-Hexanone	0.2449	0.2375	3.0	TM	
57	I	Chlorobenzene-D5 (IS)	ISTD			I	
58	S	Toluene-D8(S)	2.027	2.168	7.0	S	
59	TM	1,2-EDB	0.5273	0.4928	6.5	TM	
60	TM	Tetrachloroethene	0.7549	0.7043	6.7	TM	
61	TM	1-Chlorohexane	0.6256	0.6416	2.6	TM	
62	TM	1,1,1,2-Tetrachloroethane	0.6793	0.6466	4.8	TM	
63	TM	m&p-Xylene	0.9749	1.008	3.4	TM	
64	TM	o-Xylene	0.9222	0.9234	0.13	TM	
65	TM	Styrene	1.572	1.622	3.2	TM	
66	S	4-Bromofluorobenzene(S)	0.7568	0.8136	7.5	S	
67	TM	1,3-Dichloropropane	0.8502	0.8471	0.36	TM	
68	TM	Dibromochloromethane	0.6580	0.6263	4.8	TM	
69	TM**	Chlorobenzene	1.698	1.654	2.6	TM**	
70	TM*	Ethylbenzene	2.480	2.493	0.54	TM*	
71	TM**	Bromoform	0.4745	0.4541	4.3	TM**	
72	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
73	TM	Isopropylbenzene	3.656	3.644	0.32	TM	
74	TM**	1,1,2,2-Tetrachloroethane	1.088	1.041	4.4	TM**	
75	TM	1,2,3-Trichloropropane	0.3421	0.3410	0.32	TM	
76	TM	t-1,4-Dichloro-2-Butene	0.2054	0.2028	1.3	TM	
77	TM	Bromobenzene	1.247	1.238	0.75	TM	
78	TM	n-Propylbenzene	4.308	4.386	1.8	TM	
79	TM	4-Ethyltoluene	3.839	4.155	8.2	TM	
80	TM	2-Chlorotoluene	2.808	2.832	0.85	TM	
		Average			3.6		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9/11/2014
Instrument: Loki
Cal. Date: 9/9/2014
Data File: 0911L05.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	1,3,5-Trimethylbenzene	3.254	3.595	10	TM	
82	TM	4-Chlorotoluene	3.224	3.419	6.1	TM	
83	TM	Tert-Butylbenzene	2.752	2.782	1.1	TM	
84	TM	1,2,4-Trimethylbenzene	3.255	3.448	5.9	TM	
85	TM	Sec-Butylbenzene	3.939	4.068	3.3	TM	
86	TM	p-Isopropyltoluene	3.433	3.570	4.0	TM	
87	TM	Benzyl Chloride	1.564	1.591	1.7	TM	
88	TM	1,3-DCB	2.345	2.285	2.6	TM	
89	TM	1,4-DCB	2.457	2.339	4.8	TM	
90	TM	n-Butylbenzene	3.029	3.176	4.8	TM	
91	TM	1,2-DCB	2.246	2.141	4.7	TM	
92	TM	Hexachloroethane	0.7726	0.7240	6.3	TM	
93	TML	1,2-Dibromo-3-chloropropane	0.1627	0.1568	3.6	TML	1.3
94	TM	1,2,4-Trichlorobenzene	1.537	1.422	7.5	TM	
95	TM	Hexachlorobutadiene	0.8869	0.8753	1.3	TM	
96	TML	Naphthalene	1.708	1.619	5.2	TML	15
97	TM	1,2,3-Trichlorobenzene	1.477	1.387	6.1	TM	
98							
99							
100							
101							
102							
103							
104							
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115							
116							
117							
118							
119							
120							
		Average			4.6		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0911L05.D Vial: 2
Acq On : 11 Sep 14 12:18 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-11-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 12 10:35 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	470912	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	429248	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	271808	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.11	111	274459	24.05210 ppb		0.00
Spiked Amount 25.423			Recovery = 94.608%			
38) 1,2-DCA-D4(S)	5.52	65	286843	23.87457 ppb		0.00
Spiked Amount 24.764			Recovery = 96.410%			
58) Toluene-D8(S)	7.71	98	930423	26.73942 ppb		0.00
Spiked Amount 25.636			Recovery = 104.303%			
66) 4-Bromofluorobenzene(S)	10.36	95	349234	26.87714 ppb		0.00
Spiked Amount 23.806			Recovery = 112.899%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	86969	9.55019 ppb		98
3) Freon 114	1.10	85	81566	10.22236 ppb		99
4) Chloromethane	1.14	50	92815	10.02071 ppb		99
5) Vinyl chloride	1.21	62	96954	9.47145 ppb		92
6) Bromomethane	1.44	94	55689	11.36567 ppb		99
7) Chloroethane	1.53	64	46061	8.64870 ppb		98
8) Dichlorofluoromethane	1.70	67	182695	9.73658 ppb		94
9) Trichlorofluoromethane	1.74	101	134455	9.19243 ppb		99
10) Acrolein	2.09	56	149178	136.37130 ppb	#	96
11) Acetone	2.25	43	25053	10.67377 ppb		94
12) Freon-113	2.20	101	86473	9.65102 ppb		98
13) 1,1-DCE	2.18	61	124180	9.68089 ppb		97
14) t-Butanol	2.88	59	40280	131.93434 ppb		96
15) Acetonitrile	2.51	41	121930	124.19709 ppb		96
16) Methyl Acetate	2.59	43	60539	9.95441 ppb		96
17) Iodomethane	2.31	142	30064	8.90971 ppb		96
18) Acrylonitrile	2.97	52	23846	9.56991 ppb		94
19) Methylene chloride	2.67	84	106136	10.84435 ppb		93
20) Carbon disulfide	2.36	76	218758	9.14394 ppb		100
21) Methyl t-butyl ether (MtBE	3.02	73	229480	9.07924 ppb		97
22) Trans-1,2-DCE	2.99	96	91563	9.49423 ppb		97
23) Diisopropyl Ether	3.71	45	263000	9.84310 ppb		97
24) 1,1-DCA	3.53	63	168240	9.81262 ppb		98
25) Hexane	3.36	57	78212	9.90113 ppb		98
26) Vinyl Acetate	3.68	43	57192	9.98048 ppb	#	78
27) Ethyl tert Butyl Ether	4.29	59	244379	9.87398 ppb		94
28) MEK (2-Butanone)	4.50	43	30464	9.49497 ppb		95
29) Cis-1,2-DCE	4.43	96	105652	9.35495 ppb		97
30) 2,2-Dichloropropane	4.40	77	54128	10.59289 ppb		97
31) Chloroform	4.90	83	174654	9.55329 ppb		96
32) Bromochloromethane	4.75	128	52997	9.23629 ppb		99
34) 1,1,1-TCA	5.10	97	157373	10.02991 ppb		97
35) Cyclohexane	5.16	41	62265	9.24295 ppb		94
36) 1,1-Dichloropropene	5.33	75	115212	9.64615 ppb		97
37) 2,2,4-Trimethylpentane	5.73	57	235055	10.36759 ppb		98
39) Carbon Tetrachloride	5.32	117	133658	10.24561 ppb		98
40) Tert Amyl Methyl Ether	5.80	73	234013	9.85332 ppb		96
41) 1,2-DCA	5.62	62	126493	9.72748 ppb		99
42) Benzene	5.58	78	367280	9.27547 ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\140909\0911L05.D Vial: 2
Acq On : 11 Sep 14 12:18 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-11-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 12 10:35 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

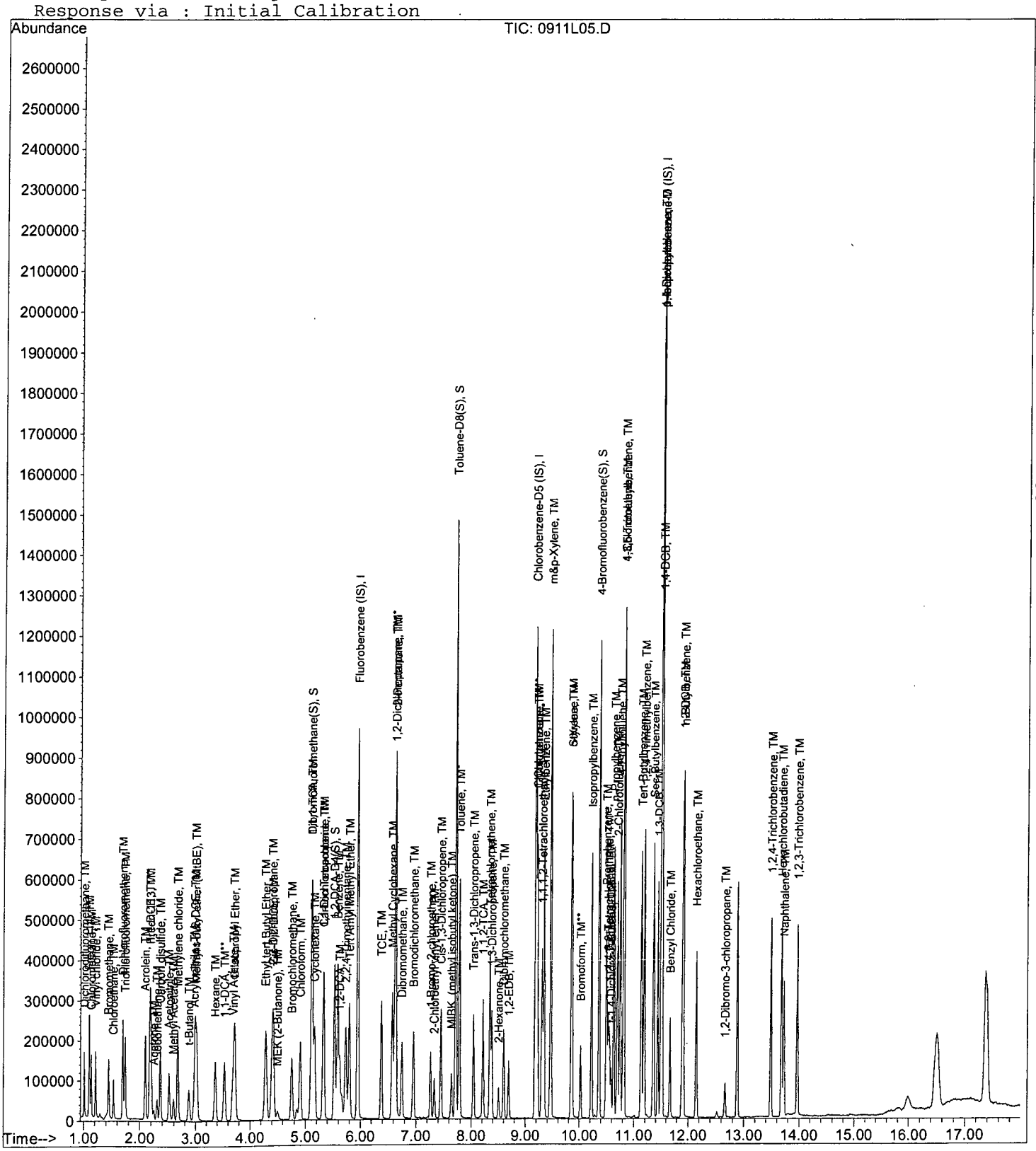
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	TCE	6.38	95	96212	9.76955	ppb		97
44)	2-Pentanone	6.63	43	760039	121.83060	ppb		98
45)	1,2-Dichloropropane	6.62	63	101899	9.94899	ppb		99
46)	Bromodichloromethane	6.95	83	137124	9.70048	ppb		98
47)	Methyl Cyclohexane	6.58	83	118644	9.49871	ppb		98
48)	Dibromomethane	6.75	93	62451	9.62396	ppb		93
49)	2-Chloroethyl vinyl ether	7.33	106	10438	9.01693	ppb	#	75
50)	MIBK (methyl isobutyl ket	7.64	43	67861	9.47011	ppb		96
51)	1-Bromo-2-chloroethane	7.26	63	75096	9.59074	ppb		99
52)	Cis-1,3-Dichloropropene	7.44	75	151700	10.04327	ppb		99
53)	Toluene	7.78	91	407982	9.95340	ppb		99
54)	Trans-1,3-Dichloropropene	8.04	75	133229	10.14769	ppb		96
55)	1,1,2-TCA	8.21	83	72203	9.51918	ppb		96
56)	2-Hexanone	8.50	43	44733	9.69724	ppb		97
59)	1,2-EDB	8.69	107	84621	9.34668	ppb		98
60)	Tetrachloroethene	8.34	166	120928	9.32967	ppb		97
61)	1-Chlorohexane	9.22	91	110170	10.25707	ppb		98
62)	1,1,1,2-Tetrachloroethane	9.30	131	111027	9.51916	ppb		98
63)	m&p-Xylene	9.46	106	346110	20.67788	ppb		98
64)	o-Xylene	9.85	106	158547	10.01276	ppb		98
65)	Styrene	9.86	104	278481	10.31762	ppb		99
67)	1,3-Dichloropropane	8.38	76	145442	9.96372	ppb		97
68)	Dibromochloromethane	8.60	129	107529	9.51774	ppb		99
69)	Chlorobenzene	9.21	112	284041	9.74477	ppb		99
70)	Ethylbenzene	9.34	91	428065	10.05381	ppb		98
71)	Bromoform	10.02	173	77972	9.57096	ppb		96
73)	Isopropylbenzene	10.22	105	396232	9.96814	ppb		100
74)	1,1,2,2-Tetrachloroethane	10.52	83	113156	9.56232	ppb		95
75)	1,2,3-Trichloropropane	10.55	110	37072	9.96791	ppb		97
76)	t-1,4-Dichloro-2-Butene	10.58	53	22046	9.87266	ppb		97
77)	Bromobenzene	10.50	156	134557	9.92538	ppb		95
78)	n-Propylbenzene	10.63	91	476814	10.18072	ppb		100
79)	4-Ethyltoluene	10.75	105	451750	10.82334	ppb		97
80)	2-Chlorotoluene	10.70	91	307861	10.08546	ppb		98
81)	1,3,5-Trimethylbenzene	10.82	105	390900	11.04917	ppb		96
82)	4-Chlorotoluene	10.81	91	371718	10.60584	ppb		99
83)	Tert-Butylbenzene	11.13	119	302507	10.11150	ppb		99
84)	1,2,4-Trimethylbenzene	11.18	105	374849	10.59291	ppb		99
85)	Sec-Butylbenzene	11.35	105	442257	10.32752	ppb		100
86)	p-Isopropyltoluene	11.51	119	388180	10.39956	ppb		99
87)	Benzyl Chloride	11.67	91	172962	10.17394	ppb		99
88)	1,3-DCB	11.44	146	248403	9.74405	ppb		98
89)	1,4-DCB	11.53	146	254344	9.51956	ppb		99
90)	n-Butylbenzene	11.91	91	345260	10.48475	ppb		98
91)	1,2-DCB	11.89	146	232799	9.53271	ppb		98
92)	Hexachloroethane	12.15	117	78721	9.37218	ppb		99
93)	1,2-Dibromo-3-chloropropan	12.66	157	17048	10.12644	ppb		96
94)	1,2,4-Trichlorobenzene	13.49	180	154586	9.25001	ppb		99
95)	Hexachlorobutadiene	13.68	225	95169	9.87012	ppb		96
96)	Naphthalene	13.72	128	176000	8.47495	ppb		98
97)	1,2,3-Trichlorobenzene	13.97	180	150792	9.39142	ppb		97

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\140909\0911L05.D Vial: 2
Acq On : 11 Sep 14 12:18 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-11-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 12 10:35 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



1499

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9/12/2014
Instrument: Loki
Initial Cal. Date: 9/9/2014
Data File: 0911L34.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.4835	0.4735	2.1	TM	
3	TM	Freon 114	0.4236	0.3946	6.9	TM	
4	TM**L	Chloromethane	0.5585	0.4809	14	TM**L	2.2
5	TM*	Vinyl chloride	0.5434	0.4842	11	TM*	
6	TML	Bromomethane	0.3013	0.2973	1.3	TML	14
7	TM	Chloroethane	0.2827	0.2512	11	TM	
8	TM	Dichlorofluoromethane	0.9961	0.9369	5.9	TM	
9	TM	Trichlorofluoromethane	0.7765	0.7419	4.5	TM	
10	TML	Acrolein	0.0640	0.0479	25	TML	19
11	TML	Acetone	0.1730	0.1407	19	TML	14
12	TM	Freon-113	0.4757	0.4412	7.2	TM	
13	TM*	1,1-DCE	0.6810	0.6155	9.6	TM*	
14	TML	t-Butanol	0.0175	0.0163	7.3	TML	0.26
15	TML	Acetonitrile	0.0561	0.0515	8.1	TML	1.2
16	TML	Methyl Acetate	0.3807	0.3157	17	TML	2.2
17	TML	Iodomethane	0.1506	0.1746	16	TML	4.1
18	TM	Acrylonitrile	0.1323	0.1236	6.6	TM	
19	TML	Methylene chloride	0.5915	0.5541	6.3	TML	6.6
20	TM	Carbon disulfide	1.270	1.104	13	TM	
21	TM	Methyl t-butyl ether (MtBE)	1.342	1.188	11	TM	
22	TM	Trans-1,2-DCE	0.5120	0.4693	8.3	TM	
23	TM	Diisopropyl Ether	1.418	1.303	8.2	TM	
24	TM**	1,1-DCA	0.9102	0.8598	5.5	TM**	
25	TM	Hexane	0.4194	0.3284	22	TM	*
26	TM	Vinyl Acetate	0.3042	0.2710	11	TM	
27	TM	Ethyl tert Butyl Ether	1.314	1.201	8.6	TM	
28	TML	MEK (2-Butanone)	0.1845	0.1613	13	TML	5.3
29	TM	Cis-1,2-DCE	0.5996	0.5528	7.8	TM	
30	TM	2,2-Dichloropropane	0.2713	0.1736	36	TM	*
31	TM*	Chloroform	0.9706	0.9434	2.8	TM*	
32	TM	Bromochloromethane	0.3046	0.2812	7.7	TM	
33	S	Dibromofluoromethane(S)	0.6058	0.5985	1.2	S	
34	TM	1,1,1-TCA	0.8330	0.8011	3.8	TM	
35	TM	Cyclohexane	0.3576	0.3096	13	TM	
36	TM	1,1-Dichloropropene	0.6341	0.5775	8.9	TM	
37	TM	2,2,4-Trimethylpentane	1.204	0.9895	18	TM	
38	S	1,2-DCA-D4(S)	0.6378	0.6409	0.47	S	
39	TM	Carbon Tetrachloride	0.6926	0.6744	2.6	TM	
40	TM	Tert Amyl Methyl Ether	1.261	1.239	1.7	TM	
		Average			9.8		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9/12/2014
Instrument: Loki
Cal. Date: 9/9/2014
Data File: 0911L34.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	1,2-DCA	0.6903	0.6937	0.49	TM	
42	TM	Benzene	2.102	1.874	11	TM	
43	TM	TCE	0.5228	0.5422	3.7	TM	
44	TM	2-Pentanone	0.3312	0.3065	7.5	TM	
45	TM*	1,2-Dichloropropane	0.5437	0.5236	3.7	TM*	
46	TM	Bromodichloromethane	0.7504	0.7102	5.4	TM	
47	TM	Methyl Cyclohexane	0.6631	0.5563	16	TM	
48	TM	Dibromomethane	0.3445	0.3339	3.1	TM	
49	TML	2-Chloroethyl vinyl ether	0.0661	0.0554	16	TML	9.8
50	TM	MIBK (methyl isobutyl ketone)	0.3804	0.3324	13	TM	
51	TM	1-Bromo-2-chloroethane	0.4157	0.3947	5.1	TM	
52	TM	Cis-1,3-Dichloropropene	0.8019	0.7354	8.3	TM	
53	TM*	Toluene	2.176	2.115	2.8	TM*	
54	TM	Trans-1,3-Dichloropropene	0.6970	0.6512	6.6	TM	
55	TM	1,1,2-TCA	0.4027	0.3885	3.5	TM	
56	TM	2-Hexanone	0.2449	0.2335	4.7	TM	
57	I	Chlorobenzene-D5 (IS)	ISTD			I	
58	S	Toluene-D8(S)	2.027	2.196	8.4	S	
59	TM	1,2-EDB	0.5273	0.5106	3.2	TM	
60	TM	Tetrachloroethene	0.7549	0.7044	6.7	TM	
61	TM	1-Chlorohexane	0.6256	0.5954	4.8	TM	
62	TM	1,1,1,2-Tetrachloroethane	0.6793	0.6726	0.99	TM	
63	TM	m&p-Xylene	0.9749	0.9696	0.54	TM	
64	TM	o-Xylene	0.9222	0.8876	3.8	TM	
65	TM	Styrene	1.572	1.611	2.5	TM	
66	S	4-Bromofluorobenzene(S)	0.7568	0.8214	8.5	S	
67	TM	1,3-Dichloropropane	0.8502	0.8362	1.6	TM	
68	TM	Dibromochloromethane	0.6580	0.6547	0.50	TM	
69	TM**	Chlorobenzene	1.698	1.626	4.2	TM**	
70	TM*	Ethylbenzene	2.480	2.441	1.6	TM*	
71	TM**	Bromoform	0.4745	0.4658	1.8	TM**	
72	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
73	TM	Isopropylbenzene	3.656	3.444	5.8	TM	
74	TM**	1,1,2,2-Tetrachloroethane	1.088	0.8804	19	TM**	
75	TM	1,2,3-Trichloropropane	0.3421	0.3302	3.5	TM	
76	TM	t-1,4-Dichloro-2-Butene	0.2054	0.1821	11	TM	
77	TM	Bromobenzene	1.247	1.170	6.2	TM	
78	TM	n-Propylbenzene	4.308	4.106	4.7	TM	
79	TM	4-Ethyltoluene	3.839	3.858	0.50	TM	
80	TM	2-Chlorotoluene	2.808	2.695	4.0	TM	
		Average			5.7		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9/12/2014
Instrument: Loki
Cal. Date: 9/9/2014
Data File: 0911L34.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TM	1,3,5-Trimethylbenzene	3.254	3.424	5.2	TM		
82	TM	4-Chlorotoluene	3.224	3.271	1.5	TM		
83	TM	Tert-Butylbenzene	2.752	2.635	4.2	TM		
84	TM	1,2,4-Trimethylbenzene	3.255	3.174	2.5	TM		
85	TM	Sec-Butylbenzene	3.939	3.781	4.0	TM		
86	TM	p-Isopropyltoluene	3.433	3.343	2.6	TM		
87	TM	Benzyl Chloride	1.564	0.8232	47	TM		*
88	TM	1,3-DCB	2.345	2.212	5.7	TM		
89	TM	1,4-DCB	2.457	2.313	5.9	TM		
90	TM	n-Butylbenzene	3.029	2.787	8.0	TM		
91	TM	1,2-DCB	2.246	2.066	8.0	TM		
92	TM	Hexachloroethane	0.7726	0.7053	8.7	TM		
93	TML	1,2-Dibromo-3-chloropropane	0.1627	0.1469	9.7	TML	5.1	
94	TM	1,2,4-Trichlorobenzene	1.537	1.326	14	TM		
95	TM	Hexachlorobutadiene	0.8869	0.7899	11	TM		
96	TML	Naphthalene	1.708	1.584	7.3	TML	17	
97	TM	1,2,3-Trichlorobenzene	1.477	1.334	9.7	TM		
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			9.1			

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0911L34.D Vial: 31
Acq On : 12 Sep 14 1:48 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-11-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 12 10:37 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	440704	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	399168	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	259904	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.11	111	263771	24.69991 ppb		0.00
Spiked Amount 25.423			Recovery = 97.157%			
38) 1,2-DCA-D4(S)	5.52	65	282425	25.11813 ppb		0.00
Spiked Amount 24.764			Recovery = 101.429%			
58) Toluene-D8(S)	7.71	98	876745	27.09551 ppb		0.00
Spiked Amount 25.636			Recovery = 105.695%			
66) 4-Bromofluorobenzene(S)	10.36	95	327870	27.13444 ppb		0.00
Spiked Amount 23.806			Recovery = 113.978%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	83462	9.79331 ppb		100
3) Freon 114	1.10	85	69557	9.31484 ppb		97
4) Chloromethane	1.14	50	84780	9.78030 ppb		98
5) Vinyl chloride	1.21	62	85357	8.91010 ppb		99
6) Bromomethane	1.44	94	52405	11.42795 ppb		100
7) Chloroethane	1.53	64	44280	8.88419 ppb		92
8) Dichlorofluoromethane	1.70	67	165164	9.40563 ppb		94
9) Trichlorofluoromethane	1.74	101	130788	9.55463 ppb		96
10) Acrolein	2.09	56	105655	101.59866 ppb	#	100
11) Acetone	2.25	43	24808	11.35242 ppb		97
12) Freon-113	2.19	101	77779	9.27572 ppb		90
13) 1,1-DCE	2.18	61	108500	9.03829 ppb		99
14) t-Butanol	2.88	59	35824	125.32366 ppb		99
15) Acetonitrile	2.51	41	113531	123.55448 ppb		93
16) Methyl Acetate	2.59	43	55649	9.78321 ppb		96
17) Iodomethane	2.31	142	30776	9.59031 ppb		96
18) Acrylonitrile	2.96	52	21786	9.34249 ppb		98
19) Methylene chloride	2.67	84	97672	10.66135 ppb		96
20) Carbon disulfide	2.36	76	194699	8.69613 ppb		100
21) Methyl t-butyl ether (MtBE	3.01	73	209465	8.85542 ppb		98
22) Trans-1,2-DCE	2.99	96	82731	9.16645 ppb		93
23) Diisopropyl Ether	3.71	45	229631	9.18332 ppb		97
24) 1,1-DCA	3.53	63	151559	9.44561 ppb		98
25) Hexane	3.36	57	57896	7.83164 ppb		97
26) Vinyl Acetate	3.71	43	47768	8.90730 ppb	#	99
27) Ethyl tert Butyl Ether	4.29	59	211734	9.14138 ppb		97
28) MEK (2-Butanone)	4.49	43	28428	9.46823 ppb		95
29) Cis-1,2-DCE	4.43	96	97457	9.22082 ppb		94
30) 2,2-Dichloropropane	4.40	77	30608	6.40059 ppb		95
31) Chloroform	4.90	83	166308	9.72032 ppb		96
32) Bromochloromethane	4.75	128	49574	9.23194 ppb		99
34) 1,1,1-TCA	5.11	97	141222	9.61749 ppb		98
35) Cyclohexane	5.16	41	54571	8.65608 ppb		96
36) 1,1-Dichloropropene	5.33	75	101804	9.10781 ppb		97
37) 2,2,4-Trimethylpentane	5.73	57	174437	8.22129 ppb		96
39) Carbon Tetrachloride	5.32	117	118890	9.73825 ppb		98
40) Tert Amyl Methyl Ether	5.80	73	218402	9.82634 ppb		96
41) 1,2-DCA	5.62	62	122291	10.04896 ppb		97
42) Benzene	5.58	78	330431	8.91687 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0911L34.D Vial: 31
Acq On : 12 Sep 14 1:48 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-11-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 12 10:37 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) TCE	6.38	95	95578	10.37041 ppb	95
44) 2-Pentanone	6.64	43	675318	115.67023 ppb	100
45) 1,2-Dichloropropane	6.62	63	92304	9.62991 ppb	97
46) Bromodichloromethane	6.95	83	125201	9.46412 ppb	99
47) Methyl Cyclohexane	6.58	83	98065	8.38930 ppb	99
48) Dibromomethane	6.75	93	58858	9.69199 ppb	93
49) 2-Chloroethyl vinyl ether	7.33	106	9774	9.02069 ppb	93
50) MIBK (methyl isobutyl ket	7.64	43	58599	8.73812 ppb	93
51) 1-Bromo-2-chloroethane	7.26	63	69576	9.49484 ppb	97
52) Cis-1,3-Dichloropropene	7.44	75	129634	9.17067 ppb	97
53) Toluene	7.78	91	372866	9.72022 ppb	96
54) Trans-1,3-Dichloropropene	8.04	75	114792	9.34271 ppb	99
55) 1,1,2-TCA	8.22	83	68487	9.64818 ppb	96
56) 2-Hexanone	8.50	43	41159	9.53406 ppb	99
59) 1,2-EDB	8.69	107	81528	9.68363 ppb	99
60) Tetrachloroethene	8.34	166	112476	9.33151 ppb	99
61) 1-Chlorohexane	9.22	91	95058	9.51703 ppb	97
62) 1,1,1,2-Tetrachloroethane	9.30	131	107386	9.90079 ppb	98
63) m&p-Xylene	9.46	106	309637	19.89286 ppb	99
64) o-Xylene	9.85	106	141720	9.62453 ppb	94
65) Styrene	9.87	104	257246	10.24908 ppb	98
67) 1,3-Dichloropropane	8.38	76	133516	9.83597 ppb	96
68) Dibromochloromethane	8.60	129	104534	9.94989 ppb	99
69) Chlorobenzene	9.21	112	259599	9.57736 ppb	98
70) Ethylbenzene	9.34	91	389672	9.84175 ppb	97
71) Bromoform	10.02	173	74370	9.81674 ppb	99
73) Isopropylbenzene	10.23	105	358047	9.42006 ppb	98
74) 1,1,2,2-Tetrachloroethane	10.53	83	91524	8.08854 ppb	98
75) 1,2,3-Trichloropropane	10.55	110	34324	9.65173 ppb	95
76) t-1,4-Dichloro-2-Butene	10.58	53	18931	8.86599 ppb	100
77) Bromobenzene	10.49	156	121653	9.38454 ppb	98
78) n-Propylbenzene	10.63	91	426834	9.53098 ppb	98
79) 4-Ethyltoluene	10.75	105	401095	10.04986 ppb	99
80) 2-Chlorotoluene	10.70	91	280183	9.59913 ppb	97
81) 1,3,5-Trimethylbenzene	10.82	105	355952	10.52215 ppb	99
82) 4-Chlorotoluene	10.81	91	340074	10.14739 ppb	97
83) Tert-Butylbenzene	11.13	119	273984	9.57756 ppb	98
84) 1,2,4-Trimethylbenzene	11.18	105	330007	9.75285 ppb	96
85) Sec-Butylbenzene	11.35	105	393120	9.60054 ppb	99
86) p-Isopropyltoluene	11.50	119	347587	9.73856 ppb	99
87) Benzyl Chloride	11.67	91	85585	5.26484 ppb	97
88) 1,3-DCB	11.44	146	229971	9.43420 ppb	99
89) 1,4-DCB	11.53	146	240449	9.41169 ppb	98
90) n-Butylbenzene	11.91	91	289743	9.20183 ppb	99
91) 1,2-DCB	11.89	146	214742	9.19605 ppb	97
92) Hexachloroethane	12.14	117	73327	9.12984 ppb	98
93) 1,2-Dibromo-3-chloropropan	12.66	157	15273	9.49338 ppb	95
94) 1,2,4-Trichlorobenzene	13.49	180	137821	8.62455 ppb	97
95) Hexachlorobutadiene	13.68	225	82116	8.90643 ppb	93
96) Naphthalene	13.72	128	164672	8.32525 ppb	96
97) 1,2,3-Trichlorobenzene	13.97	180	138675	9.03234 ppb	96

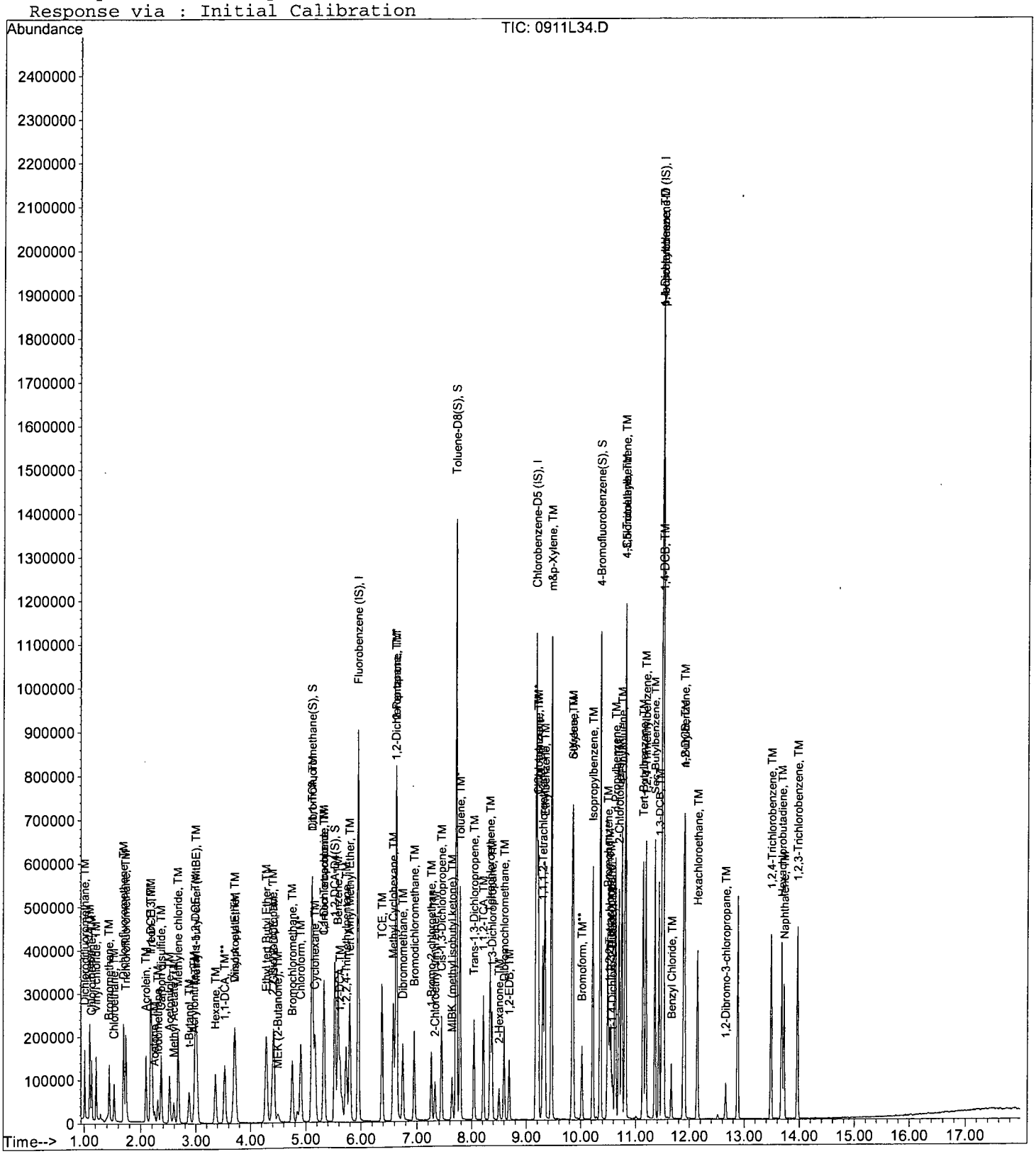
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L34.D Vial: 31
Acq On : 12 Sep 14 1:48 Operator: DG,SV,RS
Sample : 10ug/L Vol Std 09-11-14 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 12 10:37 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



1505

EPA METHOD 8260B
Volatile Organic Compounds
Raw Data

APPL, INC.

Method Blank
EPA 8260B SOIL MEOH

Blank Name/QCG: **140911S-02100 - 189818**
Batch ID: #86BHC-140911AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,1,1-TRICHLOROETHANE	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/11/14	09/11/14
BLANK	1,1,2,2-TETRACHLOROETHANE	0.7500 U	2.500	0.7500	0.6750	mg/kg	09/11/14	09/11/14
BLANK	1,1,2-TRICHLOROETHANE	1.2500 U	2.500	1.2500	0.5000	mg/kg	09/11/14	09/11/14
BLANK	1,1-DICHLOROETHANE	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/11/14	09/11/14
BLANK	1,1-DICHLOROETHENE	1.2500 U	2.500	1.2500	0.7500	mg/kg	09/11/14	09/11/14
BLANK	1,2,3-TRICHLOROPROPANE	2.5000 U	5.000	2.5000	0.9750	mg/kg	09/11/14	09/11/14
BLANK	1,2-DIBROMOETHANE	0.7500 U	2.500	0.7500	0.5000	mg/kg	09/11/14	09/11/14
BLANK	1,2-DICHLOROETHANE	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/11/14	09/11/14
BLANK	1,2-DICHLOROPROPANE	0.7500 U	2.500	0.7500	0.4250	mg/kg	09/11/14	09/11/14
BLANK	2-BUTANONE	5.0000 U	25.000	5.0000	1.5000	mg/kg	09/11/14	09/11/14
BLANK	4-METHYL-2-PENTANONE	12.5000 U	25.000	12.5000	4.7500	mg/kg	09/11/14	09/11/14
BLANK	ACETONE	12.5000 U	25.000	12.5000	7.0000	mg/kg	09/11/14	09/11/14
BLANK	BENZENE	0.7500 U	2.500	0.7500	0.4000	mg/kg	09/11/14	09/11/14
BLANK	BROMODICHLOROMETHANE	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/11/14	09/11/14
BLANK	BROMOFORM	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/11/14	09/11/14
BLANK	BROMOMETHANE	1.2500 U	5.000	1.2500	0.6000	mg/kg	09/11/14	09/11/14
BLANK	CARBON TETRACHLORIDE	0.7500 U	2.500	0.7500	0.2500	mg/kg	09/11/14	09/11/14
BLANK	CHLOROBENZENE	1.2500 U	2.500	1.2500	0.5250	mg/kg	09/11/14	09/11/14
BLANK	CHLOROETHANE	1.2500 U	2.500	1.2500	0.5250	mg/kg	09/11/14	09/11/14
BLANK	CHLOROFORM	0.6250 U	2.500	0.6250	0.4000	mg/kg	09/11/14	09/11/14
BLANK	CHLOROMETHANE	1.2500 U	2.500	1.2500	0.7750	mg/kg	09/11/14	09/11/14
BLANK	CIS-1,2-DICHLOROETHENE	0.7500 U	2.500	0.7500	0.4000	mg/kg	09/11/14	09/11/14
BLANK	CIS-1,3-DICHLOROPROPENE	0.7500 U	2.500	0.7500	0.3750	mg/kg	09/11/14	09/11/14
BLANK	DIBROMOCHLOROMETHANE	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/11/14	09/11/14
BLANK	ETHYLBENZENE	1.2500 U	2.500	1.2500	0.5750	mg/kg	09/11/14	09/11/14
BLANK	METHYLENE CHLORIDE	2.5000 U	12.500	2.5000	0.8750	mg/kg	09/11/14	09/11/14
BLANK	NAPHTHALENE	1.2500 U	2.500	1.2500	0.9000	mg/kg	09/11/14	09/11/14
BLANK	STYRENE	1.2500 U	2.500	1.2500	0.6250	mg/kg	09/11/14	09/11/14
BLANK	TETRACHLOROETHENE	0.7500 U	2.500	0.7500	0.3750	mg/kg	09/11/14	09/11/14
BLANK	TOLUENE	0.7500 U	2.500	0.7500	0.4250	mg/kg	09/11/14	09/11/14
BLANK	TRANS-1,2-DICHLOROETHENE	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/11/14	09/11/14
BLANK	TRANS-1,3-DICHLOROPROPEN	0.7500 U	2.500	0.7500	0.4500	mg/kg	09/11/14	09/11/14
BLANK	TRICHLOROETHENE	0.7500 U	2.500	0.7500	0.4000	mg/kg	09/11/14	09/11/14
BLANK	VINYL CHLORIDE	0.7500 U	2.500	0.7500	0.5750	mg/kg	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L12
Instrument: Loki
Sequence: 140909
Initials: SV

GC SC-Blank-REG MDLs
Printed: 09/17/14 7:36:10 AM

Method Blank
EPA 8260B SOIL MEOH

Blank Name/QCG: **140911S-02100 - 189818**
Batch ID: #86BHC-140911AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	XYLENES (TOTAL)	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/11/14	09/11/14
BLANK	SURROGATE: 1,2-DICHLOROET	102	54-154			%	09/11/14	09/11/14
BLANK	SURROGATE: 4-BROMOFLUOR	99.9	85-120			%	09/11/14	09/11/14
BLANK	SURROGATE: TOLUENE-D8 (S)	100	85-115			%	09/11/14	09/11/14

Quant Method: LALLW.M
Run #: 0911L12
Instrument: Loki
Sequence: 140909
Initials: SV

GC SC-Blank-REG MDLs
Printed: 09/17/14 7:36:10 AM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L12.D
Acq On : 11 Sep 14 15:33
Sample : 140911A BLK-1WL MeOH
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 9
Operator: DG,SV,RS
Inst : Loki
Multiplr: 50.00

Quant Time: Sep 16 14:10 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	430016	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	400768	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	214784	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	267785	25.69904 ppb	0.00
Spiked Amount 25.423			Recovery = 101.087%		
38) 1,2-DCA-D4(S)	5.52	65	275772	25.13603 ppb	0.00
Spiked Amount 24.764			Recovery = 101.502%		
58) Toluene-D8(S)	7.71	98	833988	25.67122 ppb	0.00
Spiked Amount 25.636			Recovery = 100.137%		
66) 4-Bromofluorobenzene(S)	10.36	95	288408	23.77328 ppb	0.00
Spiked Amount 23.806			Recovery = 99.860%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

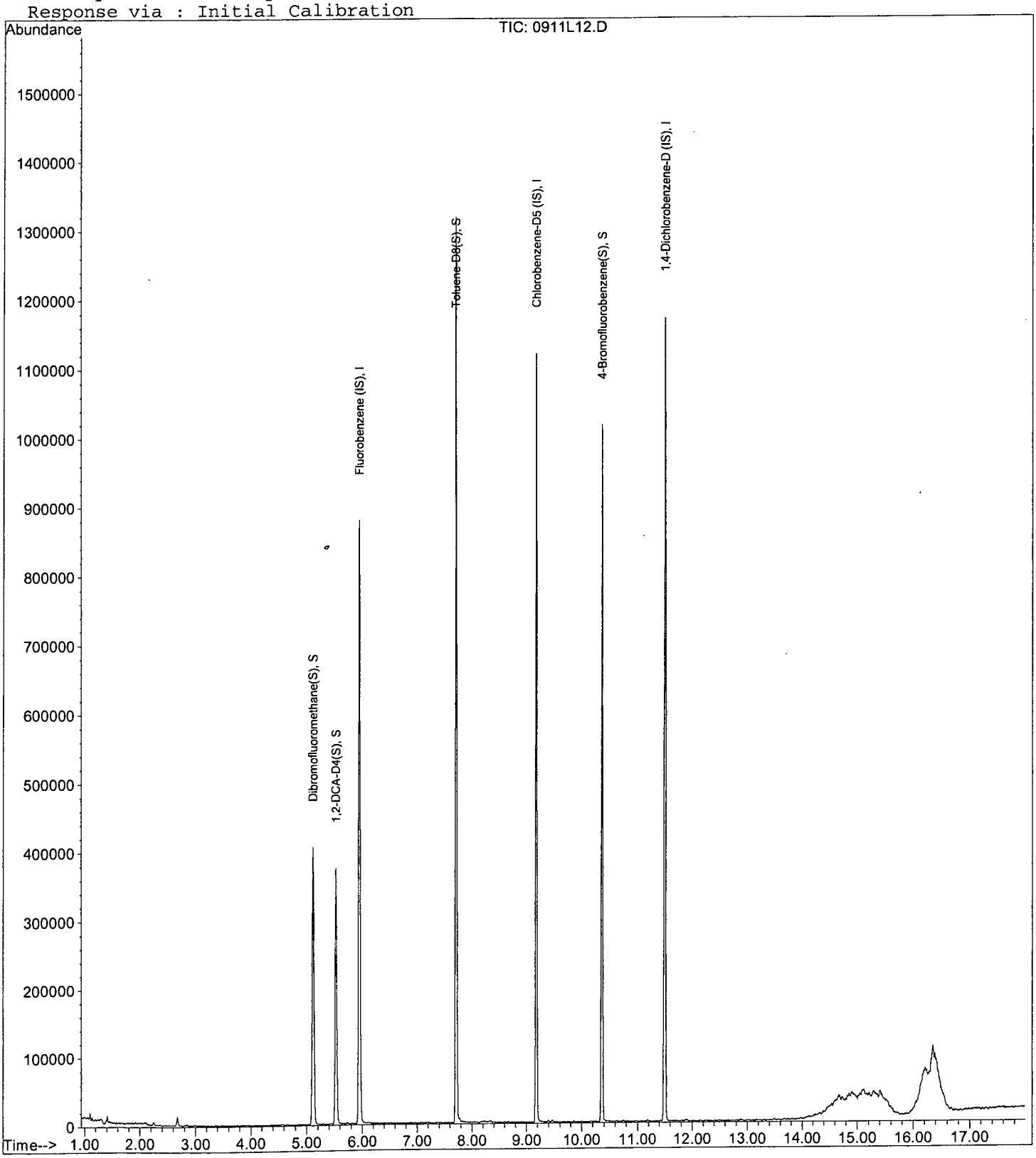
Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L12.D
Acq On : 11 Sep 14 15:33
Sample : 140911A BLK-1WL MeOH
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 9
Operator: DG,SV,RS
Inst : Loki
Multiplr: 50.00

Quant Time: Sep 16 14:10 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



Method Blank

EPA 8260B SOIL MEOH

Blank Name/QCG: **140911S-02114 - 189823**
Batch ID: #86BHC-140911BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,1,1-TRICHLOROETHANE	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/12/14	09/12/14
BLANK	1,1,2,2-TETRACHLOROETHANE	0.7500 U	2.500	0.7500	0.6750	mg/kg	09/12/14	09/12/14
BLANK	1,1,2-TRICHLOROETHANE	1.2500 U	2.500	1.2500	0.5000	mg/kg	09/12/14	09/12/14
BLANK	1,1-DICHLOROETHANE	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/12/14	09/12/14
BLANK	1,1-DICHLOROETHENE	1.2500 U	2.500	1.2500	0.7500	mg/kg	09/12/14	09/12/14
BLANK	1,2,3-TRICHLOROPROPANE	2.5000 U	5.000	2.5000	0.9750	mg/kg	09/12/14	09/12/14
BLANK	1,2-DIBROMOETHANE	0.7500 U	2.500	0.7500	0.5000	mg/kg	09/12/14	09/12/14
BLANK	1,2-DICHLOROETHANE	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/12/14	09/12/14
BLANK	1,2-DICHLOROPROPANE	0.7500 U	2.500	0.7500	0.4250	mg/kg	09/12/14	09/12/14
BLANK	2-BUTANONE	5.0000 U	25.000	5.0000	1.5000	mg/kg	09/12/14	09/12/14
BLANK	4-METHYL-2-PENTANONE	12.5000 U	25.000	12.5000	4.7500	mg/kg	09/12/14	09/12/14
BLANK	ACETONE	12.5000 U	25.000	12.5000	7.0000	mg/kg	09/12/14	09/12/14
BLANK	BENZENE	0.7500 U	2.500	0.7500	0.4000	mg/kg	09/12/14	09/12/14
BLANK	BROMODICHLOROMETHANE	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/12/14	09/12/14
BLANK	BROMOFORM	0.7500 U	2.500	0.7500	0.3500	mg/kg	09/12/14	09/12/14
BLANK	BROMOMETHANE	1.2500 U	5.000	1.2500	0.6000	mg/kg	09/12/14	09/12/14
BLANK	CARBON TETRACHLORIDE	0.7500 U	2.500	0.7500	0.2500	mg/kg	09/12/14	09/12/14
BLANK	CHLOROBENZENE	1.2500 U	2.500	1.2500	0.5250	mg/kg	09/12/14	09/12/14
BLANK	CHLOROETHANE	1.2500 U	2.500	1.2500	0.5250	mg/kg	09/12/14	09/12/14
BLANK	CHLOROFORM	0.6250 U	2.500	0.6250	0.4000	mg/kg	09/12/14	09/12/14
BLANK	CHLOROMETHANE	1.2500 U	2.500	1.2500	0.7750	mg/kg	09/12/14	09/12/14
BLANK	CIS-1,2-DICHLOROETHENE	0.7500 U	2.500	0.7500	0.4000	mg/kg	09/12/14	09/12/14
BLANK	CIS-1,3-DICHLOROPROPENE	0.7500 U	2.500	0.7500	0.3750	mg/kg	09/12/14	09/12/14
BLANK	DIBROMOCHLOROMETHANE	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/12/14	09/12/14
BLANK	ETHYLBENZENE	1.2500 U	2.500	1.2500	0.5750	mg/kg	09/12/14	09/12/14
BLANK	METHYLENE CHLORIDE	2.5000 U	12.500	2.5000	0.8750	mg/kg	09/12/14	09/12/14
BLANK	NAPHTHALENE	1.2500 U	2.500	1.2500	0.9000	mg/kg	09/12/14	09/12/14
BLANK	STYRENE	1.2500 U	2.500	1.2500	0.6250	mg/kg	09/12/14	09/12/14
BLANK	TETRACHLOROETHENE	0.7500 U	2.500	0.7500	0.3750	mg/kg	09/12/14	09/12/14
BLANK	TOLUENE	0.7500 U	2.500	0.7500	0.4250	mg/kg	09/12/14	09/12/14
BLANK	TRANS-1,2-DICHLOROETHENE	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/12/14	09/12/14
BLANK	TRANS-1,3-DICHLOROPROPEN	0.7500 U	2.500	0.7500	0.4500	mg/kg	09/12/14	09/12/14
BLANK	TRICHLOROETHENE	0.7500 U	2.500	0.7500	0.4000	mg/kg	09/12/14	09/12/14
BLANK	VINYL CHLORIDE	0.7500 U	2.500	0.7500	0.5750	mg/kg	09/12/14	09/12/14

Quant Method: LALLW.M
Run #: 0911L41
Instrument: Loki
Sequence: 140909
Initials: SV

GC SC-Blank-REG MDLs
Printed: 09/17/14 7:36:10 AM

Method Blank
EPA 8260B SOIL MEOH

Blank Name/QCG: **140911S-02114 - 189823**
Batch ID: #86BHC-140911BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	XYLENES (TOTAL)	0.7500 U	2.500	0.7500	0.4750	mg/kg	09/12/14	09/12/14
BLANK	SURROGATE: 1,2-DICHLOROET	104	54-154			%	09/12/14	09/12/14
BLANK	SURROGATE: 4-BROMOFLUOR	97.6	85-120			%	09/12/14	09/12/14
BLANK	SURROGATE: TOLUENE-D8 (S)	98.6	85-115			%	09/12/14	09/12/14

Quant Method: LALLW.M
Run #: 0911L41
Instrument: Loki
Sequence: 140909
Initials: SV

GC SC-Blank-REG MDLs
Printed: 09/17/14 7:36:10 AM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0911L41.D Vial: 38
Acq On : 12 Sep 14 5:02 Operator: DG,SV,RS
Sample : 140911B BLK-1WL(MeOH) Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 50.00

Quant Time: Sep 16 14:39 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	392320	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	377152	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	205696	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.11	111	246594	25.93925 ppb	0.00
Spiked Amount 25.423			Recovery = 102.031%		
38) 1,2-DCA-D4(S)	5.53	65	257574	25.73313 ppb	0.00
Spiked Amount 24.764			Recovery = 103.913%		
58) Toluene-D8(S)	7.71	98	773106	25.28730 ppb	0.00
Spiked Amount 25.636			Recovery = 98.639%		
66) 4-Bromofluorobenzene(S)	10.36	95	265163	23.22584 ppb	0.00
Spiked Amount 23.806			Recovery = 97.562%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

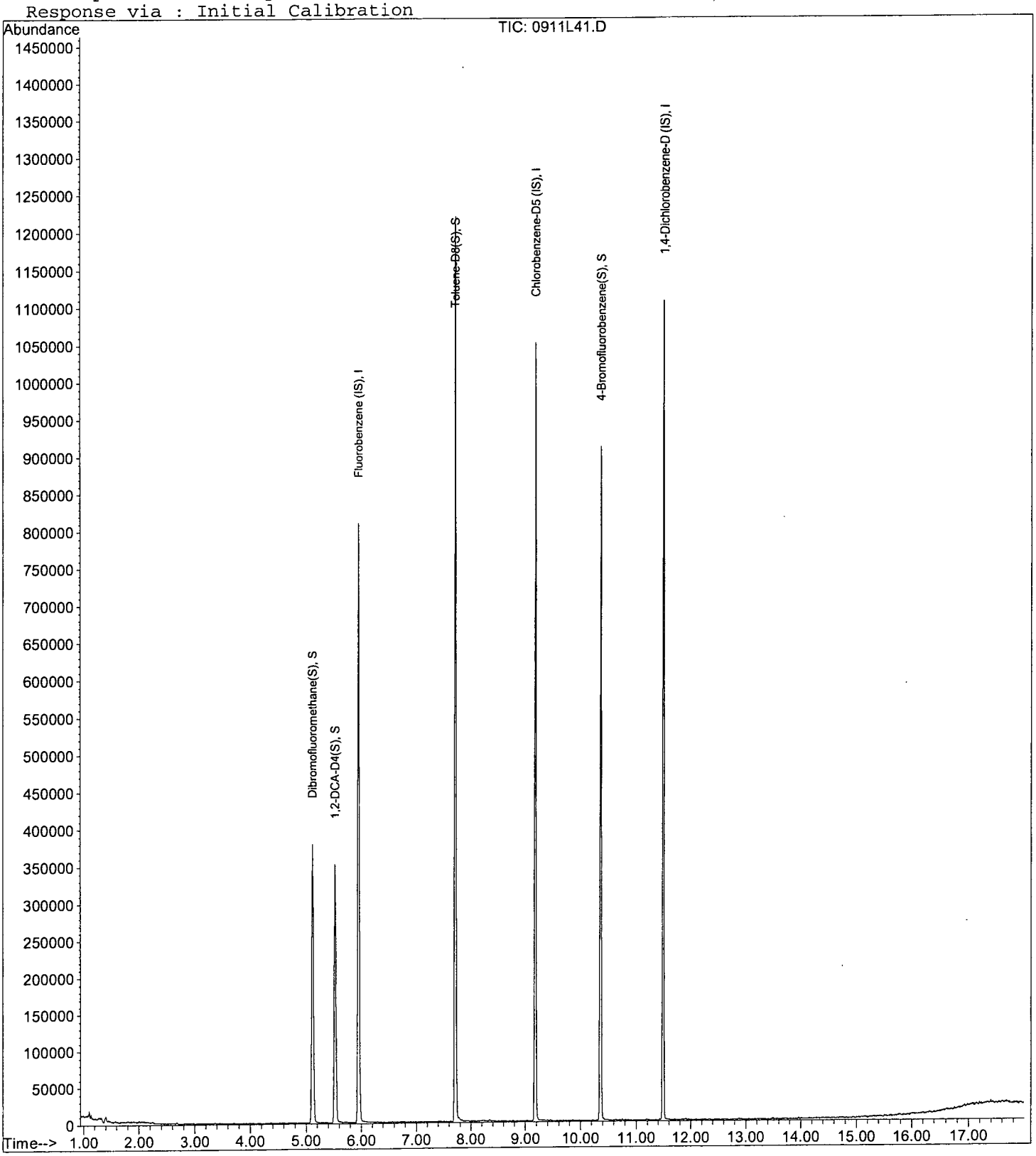
Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L41.D
Acq On : 12 Sep 14 5:02
Sample : 140911B BLK-1WL(MeOH)
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 38
Operator: DG,SV,RS
Inst : Loki
Multiplr: 50.00

Quant Time: Sep 16 14:39 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



Method Blank
EPA 8260B WATER

Blank Name/QCG: **140910W-02108 - 189834**
Batch ID: #86BHC-140910AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
BLANK	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	09/10/14	09/10/14
BLANK	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	09/10/14	09/10/14
BLANK	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
BLANK	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.30	ug/L	09/10/14	09/10/14
BLANK	1,2,3-TRICHLOROPROPANE	1.00 U	2.0	1.00	0.39	ug/L	09/10/14	09/10/14
BLANK	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	09/10/14	09/10/14
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
BLANK	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.17	ug/L	09/10/14	09/10/14
BLANK	2-BUTANONE	2.00 U	10.0	2.00	0.60	ug/L	09/10/14	09/10/14
BLANK	4-METHYL-2-PENTANONE	5.00 U	10.0	5.00	1.90	ug/L	09/10/14	09/10/14
BLANK	ACETONE	2.00 U	10.0	2.00	0.95	ug/L	09/10/14	09/10/14
BLANK	BENZENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
BLANK	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
BLANK	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	09/10/14	09/10/14
BLANK	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	09/10/14	09/10/14
BLANK	CARBON TETRACHLORIDE	0.30 U	1.0	0.30	0.10	ug/L	09/10/14	09/10/14
BLANK	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	09/10/14	09/10/14
BLANK	CHLOROETHANE	0.50 U	1.0	0.50	0.21	ug/L	09/10/14	09/10/14
BLANK	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	09/10/14	09/10/14
BLANK	CHLOROMETHANE	0.50 U	1.0	0.50	0.42	ug/L	09/10/14	09/10/14
BLANK	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
BLANK	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	09/10/14	09/10/14
BLANK	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	09/10/14	09/10/14
BLANK	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	09/10/14	09/10/14
BLANK	NAPHTHALENE	0.50 U	1.0	0.50	0.36	ug/L	09/10/14	09/10/14
BLANK	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	09/10/14	09/10/14
BLANK	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.24	ug/L	09/10/14	09/10/14
BLANK	TOLUENE	0.30 U	1.0	0.30	0.17	ug/L	09/10/14	09/10/14
BLANK	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
BLANK	TRANS-1,3-DICHLOROPROPEN	0.30 U	1.0	0.30	0.18	ug/L	09/10/14	09/10/14
BLANK	TRICHLOROETHENE	0.30 U	1.0	0.30	0.16	ug/L	09/10/14	09/10/14
BLANK	VINYL CHLORIDE	0.30 U	1.0	0.30	0.23	ug/L	09/10/14	09/10/14

Quant Method: LALLW.M
Run #: 0910L11
Instrument: Loki
Sequence: 140909
Initials: SV

GC SC-Blank-REG MDLs
Printed: 09/17/14 7:36:10 AM

Method Blank
EPA 8260B WATER

Blank Name/QCG: **140910W-02108 - 189834**
Batch ID: #86BHC-140910AL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	XYLENES (TOTAL)	0.30 U	1.0	0.30	0.19	ug/L	09/10/14	09/10/14
BLANK	SURROGATE: 1,2-DICHLOROET	101	70-120			%	09/10/14	09/10/14
BLANK	SURROGATE: 4-BROMOFLUOR	99.2	75-120			%	09/10/14	09/10/14
BLANK	SURROGATE: DIBROMOFLUOR	101	85-115			%	09/10/14	09/10/14
BLANK	SURROGATE: TOLUENE-D8 (S)	100	85-120			%	09/10/14	09/10/14

Quant Method: LALLW.M
Run #: 0910L11
Instrument: Loki
Sequence: 140909
Initials: SV

GC SC-Blank-REG MDLs
Printed: 09/17/14 7:36:10 AM

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\140909\0910L11.D Vial: 10
Acq On : 10 Sep 14 13:45 Operator: DG,SV,RS
Sample : 140910A BLK-1WL Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 11 12:42 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.95	96	429696	25.00000 ppb	0.00
57) Chlorobenzene-D5 (IS)	9.18	117	404224	25.00000 ppb	0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	214528	25.00000 ppb	0.00
System Monitoring Compounds					
33) Dibromofluoromethane(S)	5.12	111	267608	25.70118 ppb	0.00
Spiked Amount 25.423			Recovery = 101.095%		
38) 1,2-DCA-D4(S)	5.52	65	274764	25.06280 ppb	0.00
Spiked Amount 24.764			Recovery = 101.207%		
58) Toluene-D8(S)	7.71	98	841366	25.67690 ppb	0.00
Spiked Amount 25.636			Recovery = 100.160%		
66) 4-Bromofluorobenzene(S)	10.36	95	288871	23.60787 ppb	0.00
Spiked Amount 23.806			Recovery = 99.167%		

Target Compounds Qvalue

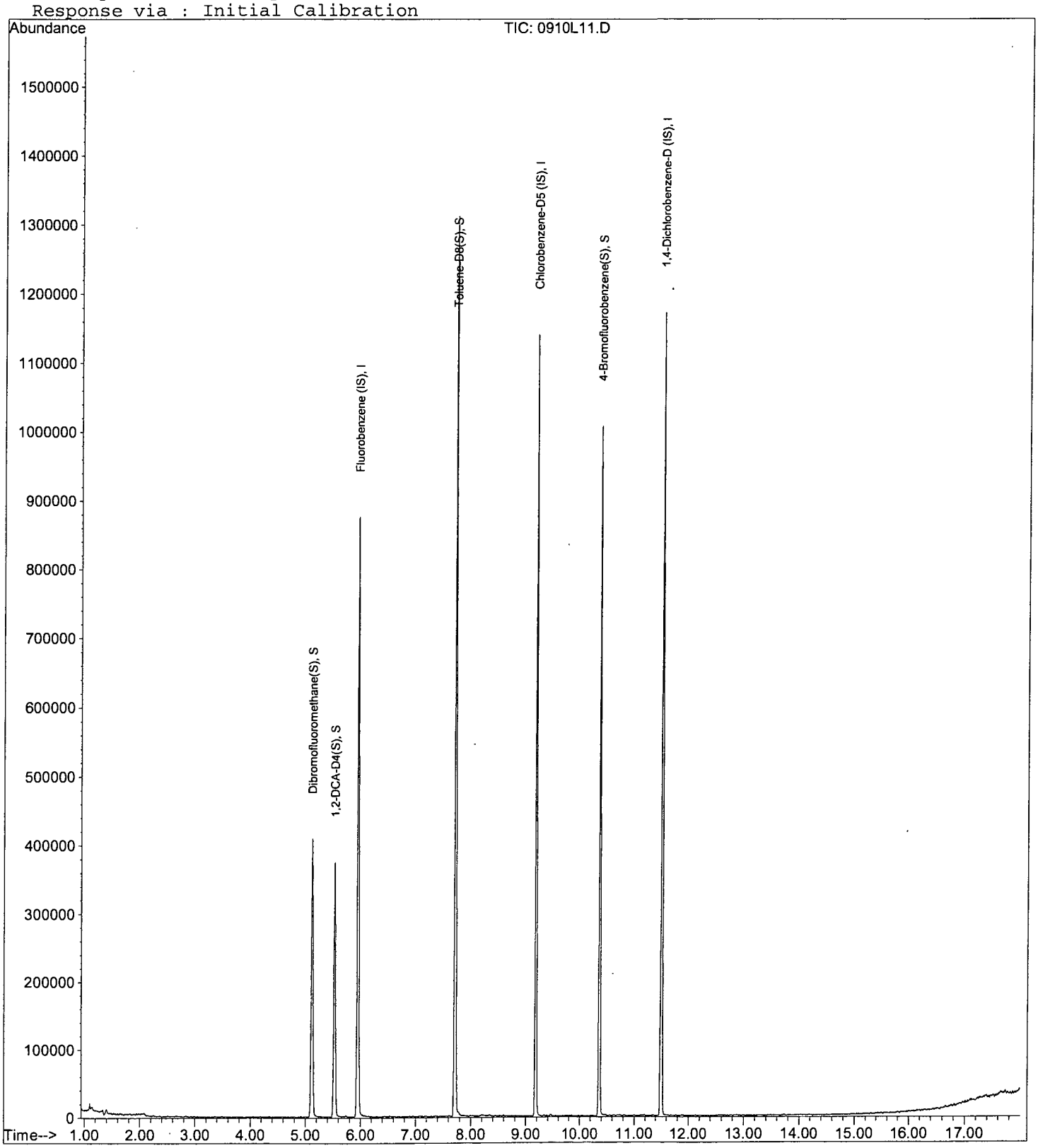
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0910L11.D Vial: 10
Acq On : 10 Sep 14 13:45 Operator: DG,SV,RS
Sample : 140910A BLK-1WL Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 11 12:42 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8260B SOIL MEOH

APPL ID: **140911S-02100 LCS - 189818**
Batch ID: #86BHC-140911AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
1,1,1-TRICHLOROETHANE	0.500	0.482	96.4	70-135
1,1,2,2-TETRACHLOROETHANE	0.500	0.467	93.4	55-130
1,1,2-TRICHLOROETHANE	0.500	0.477	95.4	60-125
1,1-DICHLOROETHANE	0.500	0.473	94.6	75-125
1,1-DICHLOROETHENE	0.500	0.453	90.6	65-135
1,2,3-TRICHLOROPROPANE	0.500	0.476	95.2	65-130
1,2-DIBROMOETHANE	0.500	0.466	93.2	70-125
1,2-DICHLOROETHANE	0.500	0.487	97.4	70-135
1,2-DICHLOROPROPANE	0.500	0.468	93.6	70-120
2-BUTANONE	0.500	0.543	109	30-160
4-METHYL-2-PENTANONE	0.500	0.484	96.8	45-145
ACETONE	0.500	0.555	111	20-160
BENZENE	0.500	0.453	90.6	75-125
BROMODICHLOROMETHANE	0.500	0.476	95.2	70-130
BROMOFORM	0.500	0.499	99.8	55-135
BROMOMETHANE	0.500	0.549	110	30-160
CARBON TETRACHLORIDE	0.500	0.491	98.2	65-135
CHLOROBENZENE	0.500	0.477	95.4	75-125
CHLOROETHANE	0.500	0.424	84.8	40-155
CHLOROFORM	0.500	0.470	94.0	70-125
CHLOROMETHANE	0.500	0.477	95.4	50-130
CIS-1,2-DICHLOROETHENE	0.500	0.465	93.0	65-125
CIS-1,3-DICHLOROPROPENE	0.500	0.488	97.6	70-125
DIBROMOCHLOROMETHANE	0.500	0.485	97.0	65-130
ETHYLBENZENE	0.500	0.493	98.6	75-125
METHYLENE CHLORIDE	0.500	0.552	110	55-140
NAPHTHALENE	0.500	0.441	88.2	40-125
STYRENE	0.500	0.506	101	75-125
TETRACHLOROETHENE	0.500	0.463	92.6	65-140
TOLUENE	0.500	0.481	96.2	70-125
TRANS-1,2-DICHLOROETHENE	0.500	0.459	91.8	65-135

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	09/11/14
Analysis Date :	09/11/14
Instrument :	Loki
Run :	0911L08
Initials :	SV

Comments: _____

Printed: 09/17/14 7:36:15 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B SOIL MEOH

APPL ID: **140911S-02100 LCS - 189818**
Batch ID: #86BHC-140911AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
TRANS-1,3-DICHLOROPROPENE	0.500	0.502	100	65-125
TRICHLOROETHENE	0.500	0.478	95.6	75-125
VINYL CHLORIDE	0.500	0.441	88.2	60-125
XYLENES (TOTAL)	1.50	1.49	99.3	75-125
SURROGATE: 1,2-DICHLOROETHANE-	0.0248	0.0237	95.7	54-154
SURROGATE: 4-BROMOFLUOROBENZ	0.0238	0.0264	111	85-120
SURROGATE: TOLUENE-D8 (S)	0.0256	0.0264	103	85-115

Comments:

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	09/11/14
Analysis Date :	09/11/14
Instrument :	Loki
Run :	0911L08
Initials :	SV

Printed: 09/17/14 7:36:15 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0911L08.D Vial: 5
Acq On : 11 Sep 14 13:42 Operator: DG,SV,RS
Sample : 140911A LCS-1WL MeOH Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 50.00

Quant Time: Sep 12 10:35 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	479872	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	441408	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	279360	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.11	111	278731	23.97039 ppb		0.00
Spiked Amount 25.423			Recovery = 94.286%			
38) 1,2-DCA-D4(S)	5.52	65	290102	23.69498 ppb		0.00
Spiked Amount 24.764			Recovery = 95.683%			
58) Toluene-D8(S)	7.71	98	944615	26.39942 ppb		0.00
Spiked Amount 25.636			Recovery = 102.976%			
66) 4-Bromofluorobenzene(S)	10.36	95	352317	26.36746 ppb		0.00
Spiked Amount 23.806			Recovery = 110.756%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	76335	411.29726 ppb		97
3) Freon 114	1.10	85	75989	467.27971 ppb		99
4) Chloromethane	1.14	50	90104	477.28777 ppb		99
5) Vinyl chloride	1.21	62	92004	441.00304 ppb		99
6) Bromomethane	1.44	94	54776	548.71733 ppb		99
7) Chloroethane	1.53	64	46023	424.01049 ppb		99
8) Dichlorofluoromethane	1.70	67	174946	457.47572 ppb		97
9) Trichlorofluoromethane	1.74	101	131547	441.28442 ppb		94
10) Acrolein	2.10	56	147616	6611.62922 ppb	#	99
11) Acetone	2.25	43	26469	555.17883 ppb		96
12) Freon-113	2.20	101	84868	464.75178 ppb		92
13) 1,1-DCE	2.18	61	118553	453.48268 ppb		98
14) t-Butanol	2.88	59	44448	7148.26809 ppb		100
15) Acetonitrile	2.52	41	128637	6434.03498 ppb		99
16) Methyl Acetate	2.60	43	61435	495.72220 ppb		98
17) Iodomethane	2.31	142	32128	463.14407 ppb		98
18) Acrylonitrile	2.96	52	24349	479.46614 ppb		92
19) Methylene chloride	2.67	84	110181	552.49866 ppb		97
20) Carbon disulfide	2.36	76	211189	433.13671 ppb		99
21) Methyl t-butyl ether (MtBE	3.02	73	245257	476.11359 ppb		98
22) Trans-1,2-DCE	2.99	96	90164	458.73031 ppb		98
23) Diisopropyl Ether	3.71	45	259409	476.37144 ppb		95
24) 1,1-DCA	3.53	63	165246	472.90176 ppb		99
25) Hexane	3.36	57	72415	449.80519 ppb		97
26) Vinyl Acetate	3.68	43	52800	452.09985 ppb	#	78
27) Ethyl tert Butyl Ether	4.29	59	245799	487.29593 ppb		96
28) MEK (2-Butanone)	4.50	43	35590	542.98400 ppb		95
29) Cis-1,2-DCE	4.43	96	107127	465.42223 ppb		98
30) 2,2-Dichloropropane	4.40	77	48776	468.36362 ppb		98
31) Chloroform	4.90	83	175250	470.34537 ppb		99
32) Bromochloromethane	4.75	128	54176	463.27351 ppb		100
34) 1,1,1-TCA	5.11	97	154268	482.42193 ppb		96
35) Cyclohexane	5.16	41	60308	439.26426 ppb		84
36) 1,1-Dichloropropene	5.33	75	115396	474.05779 ppb		99
37) 2,2,4-Trimethylpentane	5.73	57	224851	486.61727 ppb	#	89
39) Carbon Tetrachloride	5.32	117	130580	491.13832 ppb		99
40) Tert Amyl Methyl Ether	5.80	73	244197	504.50699 ppb		99
41) 1,2-DCA	5.62	62	129173	487.40496 ppb		97
42) Benzene	5.58	78	365205	452.54304 ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\140909\0911L08.D Vial: 5
Acq On : 11 Sep 14 13:42 Operator: DG,SV,RS
Sample : 140911A LCS-1WL MeOH Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 50.00

Quant Time: Sep 12 10:35 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) TCE	6.38	95	95938	477.99151 ppb	98
44) 2-Pentanone	6.64	43	805750	6337.31323 ppb	99
45) 1,2-Dichloropropane	6.62	63	97764	468.35188 ppb	98
46) Bromodichloromethane	6.95	83	137120	475.95381 ppb	97
47) Methyl Cyclohexane	6.58	83	114731	450.69618 ppb	100
48) Dibromomethane	6.75	93	63441	479.69908 ppb	97
49) 2-Chloroethyl vinyl ether	7.33	106	12497	508.47511 ppb	90
50) MIBK (methyl isobutyl ket	7.64	43	70679	483.96027 ppb	99
51) 1-Bromo-2-chloroethane	7.26	63	77840	487.77850 ppb	98
52) Cis-1,3-Dichloropropene	7.44	75	150202	487.92116 ppb	97
53) Toluene	7.78	91	401442	480.54895 ppb	97
54) Trans-1,3-Dichloropropene	8.04	75	134348	502.09269 ppb	99
55) 1,1,2-TCA	8.21	83	73730	476.95013 ppb	97
56) 2-Hexanone	8.50	43	48769	518.73852 ppb	96
59) 1,2-EDB	8.69	107	86752	465.90416 ppb	97
60) Tetrachloroethene	8.34	166	123295	462.51219 ppb	97
61) 1-Chlorohexane	9.22	91	106669	482.87681 ppb	99
62) 1,1,1,2-Tetrachloroethane	9.30	131	111797	466.05594 ppb	97
63) m&p-Xylene	9.46	106	343071	996.58391 ppb	100
64) o-Xylene	9.85	106	160858	493.94289 ppb	99
65) Styrene	9.86	104	280907	506.03955 ppb	99
67) 1,3-Dichloropropane	8.38	76	146227	487.07651 ppb	96
68) Dibromochloromethane	8.60	129	112802	485.47087 ppb	96
69) Chlorobenzene	9.21	112	285749	476.66494 ppb	99
70) Ethylbenzene	9.34	91	431520	492.78763 ppb	99
71) Bromoform	10.02	173	83642	499.20562 ppb	99
73) Isopropylbenzene	10.22	105	394270	482.53222 ppb	98
74) 1,1,2,2-Tetrachloroethane	10.53	83	113551	466.81501 ppb	97
75) 1,2,3-Trichloropropane	10.55	110	36355	475.54341 ppb	98
76) t-1,4-Dichloro-2-Butene	10.58	53	22436	488.78497 ppb	99
77) Bromobenzene	10.49	156	131735	472.72665 ppb	99
78) n-Propylbenzene	10.63	91	474641	493.01795 ppb	99
79) 4-Ethyltoluene	10.75	105	446643	520.58522 ppb	97
80) 2-Chlorotoluene	10.70	91	306013	487.69565 ppb	99
81) 1,3,5-Trimethylbenzene	10.82	105	383432	527.25452 ppb	100
82) 4-Chlorotoluene	10.81	91	368617	511.65231 ppb	99
83) Tert-Butylbenzene	11.13	119	298189	484.88631 ppb	99
84) 1,2,4-Trimethylbenzene	11.18	105	372886	512.62884 ppb	100
85) Sec-Butylbenzene	11.35	105	439336	499.09850 ppb	99
86) p-Isopropyltoluene	11.50	119	386064	503.16342 ppb	99
87) Benzyl Chloride	11.67	91	163985	469.25674 ppb	97
88) 1,3-DCB	11.44	146	248212	473.66736 ppb	97
89) 1,4-DCB	11.53	146	258938	471.47536 ppb	97
90) n-Butylbenzene	11.91	91	331143	489.21002 ppb	98
91) 1,2-DCB	11.89	146	235848	469.82434 ppb	98
92) Hexachloroethane	12.14	117	76589	443.59277 ppb	96
93) 1,2-Dibromo-3-chloropropan	12.66	157	17208	497.33976 ppb	97
94) 1,2,4-Trichlorobenzene	13.49	180	158397	461.09127 ppb	96
95) Hexachlorobutadiene	13.68	225	92850	468.46457 ppb	96
96) Naphthalene	13.72	128	190080	441.42742 ppb	99
97) 1,2,3-Trichlorobenzene	13.97	180	158160	479.20074 ppb	98

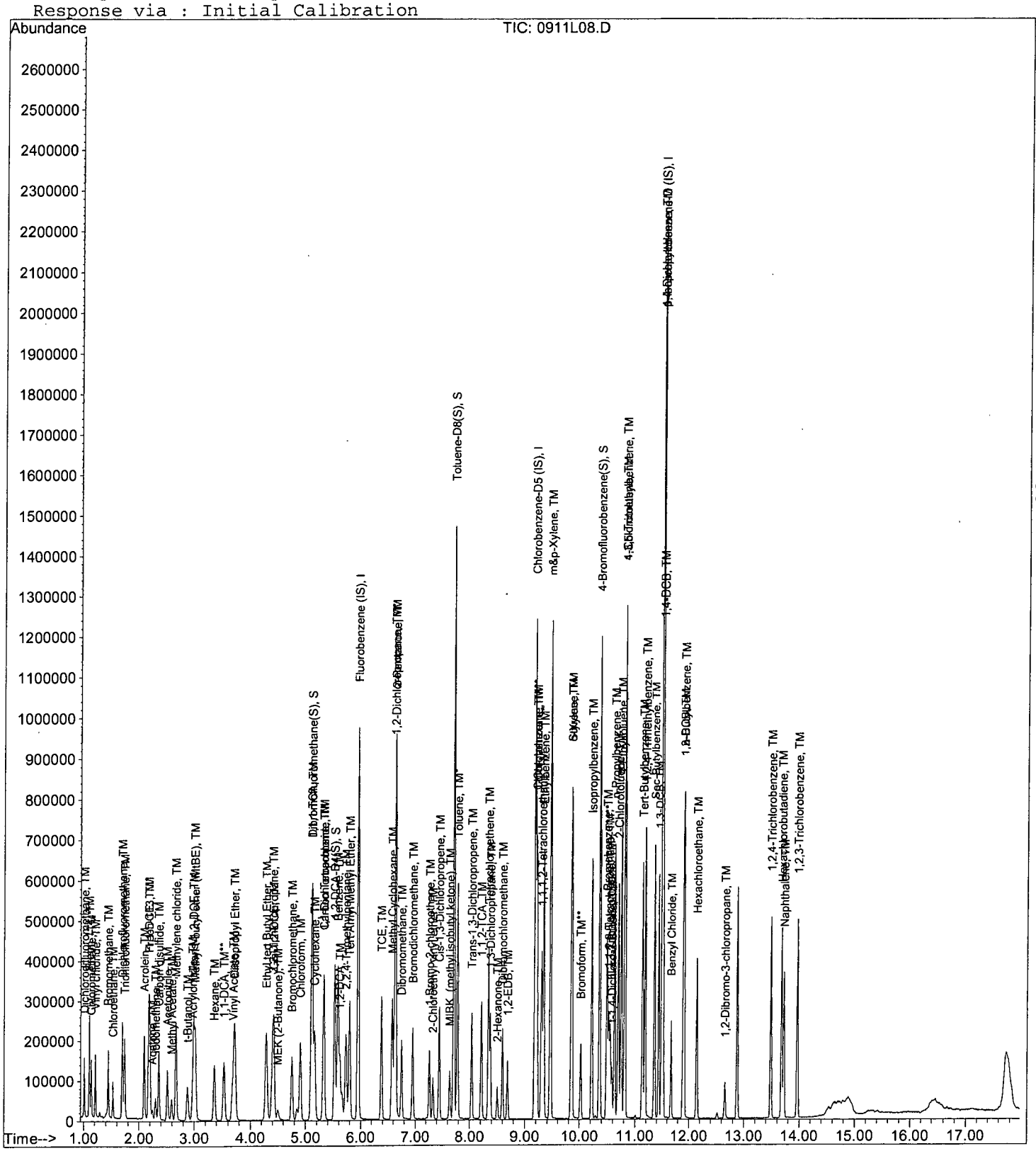
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L08.D Vial: 5
Acq On : 11 Sep 14 13:42 Operator: DG,SV,RS
Sample : 140911A LCS-1WL MeOH Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 50.00

Quant Time: Sep 12 10:35 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



1523

Laboratory Control Spike Recovery
EPA 8260B SOIL MEOH

APPL ID: **140912S-02114 LCS - 189823**
Batch ID: #86BHC-140911BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
1,1,1-TRICHLOROETHANE	0.500	0.491	98.2	70-135
1,1,2,2-TETRACHLOROETHANE	0.500	0.360	72.0	55-130
1,1,2-TRICHLOROETHANE	0.500	0.468	93.6	60-125
1,1-DICHLOROETHANE	0.500	0.475	95.0	75-125
1,1-DICHLOROETHENE	0.500	0.461	92.2	65-135
1,2,3-TRICHLOROPROPANE	0.500	0.488	97.6	65-130
1,2-DIBROMOETHANE	0.500	0.480	96.0	70-125
1,2-DICHLOROETHANE	0.500	0.477	95.4	70-135
1,2-DICHLOROPROPANE	0.500	0.482	96.4	70-120
2-BUTANONE	0.500	0.454	90.8	30-160
4-METHYL-2-PENTANONE	0.500	0.456	91.2	45-145
ACETONE	0.500	0.581	116	20-160
BENZENE	0.500	0.458	91.6	75-125
BROMODICHLOROMETHANE	0.500	0.479	95.8	70-130
BROMOFORM	0.500	0.484	96.8	55-135
BROMOMETHANE	0.500	0.593	119	30-160
CARBON TETRACHLORIDE	0.500	0.507	101	65-135
CHLOROBENZENE	0.500	0.484	96.8	75-125
CHLOROETHANE	0.500	0.427	85.4	40-155
CHLOROFORM	0.500	0.476	95.2	70-125
CHLOROMETHANE	0.500	0.508	102	50-130
CIS-1,2-DICHLOROETHENE	0.500	0.450	90.0	65-125
CIS-1,3-DICHLOROPROPENE	0.500	0.458	91.6	70-125
DIBROMOCHLOROMETHANE	0.500	0.498	99.6	65-130
ETHYLBENZENE	0.500	0.496	99.2	75-125
METHYLENE CHLORIDE	0.500	0.517	103	55-140
NAPHTHALENE	0.500	0.401	80.2	40-125
STYRENE	0.500	0.520	104	75-125
TETRACHLOROETHENE	0.500	0.480	96.0	65-140
TOLUENE	0.500	0.495	99.0	70-125
TRANS-1,2-DICHLOROETHENE	0.500	0.476	95.2	65-135

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	09/12/14
Analysis Date :	09/12/14
Instrument :	Loki
Run :	0911L35
Initials :	SV

Comments: _____

Printed: 09/17/14 7:36:15 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B SOIL MEOH

APPL ID: **140912S-02114 LCS - 189823**
Batch ID: #86BHC-140911BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
TRANS-1,3-DICHLOROPROPENE	0.500	0.457	91.4	65-125
TRICHLOROETHENE	0.500	0.584	117	75-125
VINYL CHLORIDE	0.500	0.476	95.2	60-125
XYLENES (TOTAL)	1.50	1.52	101	75-125
SURROGATE: 1,2-DICHLOROETHANE-	0.0248	0.0235	94.9	54-154
SURROGATE: 4-BROMOFLUOROBENZ	0.0238	0.0268	113	85-120
SURROGATE: TOLUENE-D8 (S)	0.0256	0.0266	104	85-115

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	09/12/14
Analysis Date :	09/12/14
Instrument :	Loki
Run :	0911L35
Initials :	SV

Printed: 09/17/14 7:36:15 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0911L35.D Vial: 32
Acq On : 12 Sep 14 2:16 Operator: DG,SV,RS
Sample : 140911B LCS-1WL(MeOH) Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 50.00

Quant Time: Sep 12 10:37 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	447808	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	401280	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	254080	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.11	111	263084	24.24476 ppb		0.00
Spiked Amount 25.423			Recovery = 95.368%			
38) 1,2-DCA-D4(S)	5.52	65	268303	23.48361 ppb		0.00
Spiked Amount 24.764			Recovery = 94.831%			
58) Toluene-D8(S)	7.71	98	866221	26.62937 ppb		0.00
Spiked Amount 25.636			Recovery = 103.873%			
66) 4-Bromofluorobenzene(S)	10.36	95	325451	26.79248 ppb		0.00
Spiked Amount 23.806			Recovery = 112.542%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	88397	510.39122 ppb		97
3) Freon 114	1.10	85	70124	462.08986 ppb		99
4) Chloromethane	1.14	50	89523	508.20702 ppb		100
5) Vinyl chloride	1.21	62	92678	476.04181 ppb		95
6) Bromomethane	1.44	94	55249	592.64801 ppb		97
7) Chloroethane	1.53	64	43272	427.21078 ppb		99
8) Dichlorofluoromethane	1.70	67	174371	488.62069 ppb		96
9) Trichlorofluoromethane	1.74	101	136636	491.17510 ppb		96
10) Acrolein	2.09	56	99542	4686.04814 ppb	#	98
11) Acetone	2.25	43	25762	581.20613 ppb		96
12) Freon-113	2.20	101	76503	448.94085 ppb		98
13) 1,1-DCE	2.18	61	112502	461.14973 ppb		97
14) t-Butanol	2.88	59	35664	6138.04405 ppb		96
15) Acetonitrile	2.51	41	112075	5997.77974 ppb		94
16) Methyl Acetate	2.59	43	53900	467.01559 ppb		97
17) Iodomethane	2.31	142	32192	491.18265 ppb		98
18) Acrylonitrile	2.96	52	21307	449.60660 ppb		95
19) Methylene chloride	2.67	84	96354	517.33516 ppb		99
20) Carbon disulfide	2.36	76	202448	444.93929 ppb		99
21) Methyl t-butyl ether (MtBE	3.01	73	217499	452.45980 ppb		98
22) Trans-1,2-DCE	2.99	96	87349	476.22892 ppb		94
23) Diisopropyl Ether	3.71	45	229509	451.64162 ppb		96
24) 1,1-DCA	3.53	63	154890	475.00362 ppb		97
25) Hexane	3.36	57	59542	396.32631 ppb		99
26) Vinyl Acetate	3.71	43	44088	404.53341 ppb		100
27) Ethyl tert Butyl Ether	4.28	59	217747	462.59232 ppb		100
28) MEK (2-Butanone)	4.50	43	27685	454.09129 ppb		96
29) Cis-1,2-DCE	4.43	96	96658	450.00729 ppb		93
30) 2,2-Dichloropropane	4.40	77	29032	298.73595 ppb		99
31) Chloroform	4.90	83	165355	475.56484 ppb		100
32) Bromochloromethane	4.75	128	50237	460.34962 ppb		98
34) 1,1,1-TCA	5.10	97	146619	491.33196 ppb		96
35) Cyclohexane	5.16	41	56746	442.91435 ppb		94
36) 1,1-Dichloropropene	5.33	75	105576	464.77129 ppb		98
37) 2,2,4-Trimethylpentane	5.73	57	177982	412.76450 ppb	#	84
39) Carbon Tetrachloride	5.32	117	125814	507.09542 ppb		98
40) Tert Amyl Methyl Ether	5.80	73	220066	487.20684 ppb		98
41) 1,2-DCA	5.62	62	118038	477.28040 ppb		99
42) Benzene	5.58	78	345098	458.24652 ppb		100

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\140909\0911L35.D Vial: 32
Acq On : 12 Sep 14 2:16 Operator: DG,SV,RS
Sample : 140911B LCS-1WL(MeOH) Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 50.00

Quant Time: Sep 12 10:37 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) TCE	6.38	95	109459	584.40586 ppb	97
44) 2-Pentanone	6.63	43	699709	5897.33612 ppb	96
45) 1,2-Dichloropropane	6.62	63	93890	481.99908 ppb	96
46) Bromodichloromethane	6.95	83	128807	479.11198 ppb	99
47) Methyl Cyclohexane	6.58	83	103410	435.31056 ppb	97
48) Dibromomethane	6.75	93	57692	467.46384 ppb	92
49) 2-Chloroethyl vinyl ether	7.33	106	11060	488.49275 ppb	95
50) MIBK (methyl isobutyl ket	7.64	43	62121	455.81784 ppb	94
51) 1-Bromo-2-chloroethane	7.26	63	73056	490.57937 ppb	93
52) Cis-1,3-Dichloropropene	7.44	75	131635	458.22511 ppb	100
53) Toluene	7.78	91	385594	494.62795 ppb	98
54) Trans-1,3-Dichloropropene	8.04	75	114105	456.97341 ppb	99
55) 1,1,2-TCA	8.21	83	67559	468.32302 ppb	98
56) 2-Hexanone	8.51	43	42398	483.26304 ppb	95
59) 1,2-EDB	8.69	107	81335	480.49321 ppb	98
60) Tetrachloroethene	8.34	166	116297	479.88692 ppb	98
61) 1-Chlorohexane	9.22	91	98032	488.15604 ppb	95
62) 1,1,1,2-Tetrachloroethane	9.30	131	109480	502.03659 ppb	98
63) m&p-Xylene	9.46	106	320066	1022.73258 ppb	99
64) o-Xylene	9.85	106	146048	493.31279 ppb	95
65) Styrene	9.86	104	262547	520.26145 ppb	97
67) 1,3-Dichloropropane	8.38	76	133818	490.31687 ppb	98
68) Dibromochloromethane	8.60	129	105269	498.35585 ppb	99
69) Chlorobenzene	9.21	112	263630	483.74446 ppb	99
70) Ethylbenzene	9.34	91	394759	495.88799 ppb	98
71) Bromoform	10.02	173	73747	484.16356 ppb	99
73) Isopropylbenzene	10.23	105	369780	497.58783 ppb	97
74) 1,1,2,2-Tetrachloroethane	10.53	83	79653	360.03915 ppb	96
75) 1,2,3-Trichloropropane	10.55	110	33939	488.11124 ppb	100
76) t-1,4-Dichloro-2-Butene	10.58	53	18111	433.81901 ppb	93
77) Bromobenzene	10.50	156	125090	493.54328 ppb	94
78) n-Propylbenzene	10.63	91	441725	504.47913 ppb	98
79) 4-Ethyltoluene	10.75	105	409006	524.14895 ppb	98
80) 2-Chlorotoluene	10.70	91	289168	506.70242 ppb	99
81) 1,3,5-Trimethylbenzene	10.82	105	362112	547.48045 ppb	99
82) 4-Chlorotoluene	10.81	91	350154	534.38272 ppb	98
83) Tert-Butylbenzene	11.13	119	275745	493.00315 ppb	98
84) 1,2,4-Trimethylbenzene	11.18	105	346971	524.46181 ppb	98
85) Sec-Butylbenzene	11.35	105	404411	505.13351 ppb	99
86) p-Isopropyltoluene	11.50	119	357995	513.00366 ppb	99
87) Benzyl Chloride	11.67	91	82802	260.51993 ppb	96
88) 1,3-DCB	11.44	146	231240	485.18502 ppb	97
89) 1,4-DCB	11.53	146	239802	480.07574 ppb	99
90) n-Butylbenzene	11.91	91	302281	491.00324 ppb	99
91) 1,2-DCB	11.89	146	219687	481.17318 ppb	97
92) Hexachloroethane	12.15	117	76659	488.17434 ppb	98
93) 1,2-Dibromo-3-chloropropan	12.66	157	14139	449.74037 ppb	93
94) 1,2,4-Trichlorobenzene	13.49	180	143228	458.41795 ppb	97
95) Hexachlorobutadiene	13.68	225	83286	462.01980 ppb	92
96) Naphthalene	13.72	128	153728	400.91857 ppb	98
97) 1,2,3-Trichlorobenzene	13.97	180	142371	474.28141 ppb	98

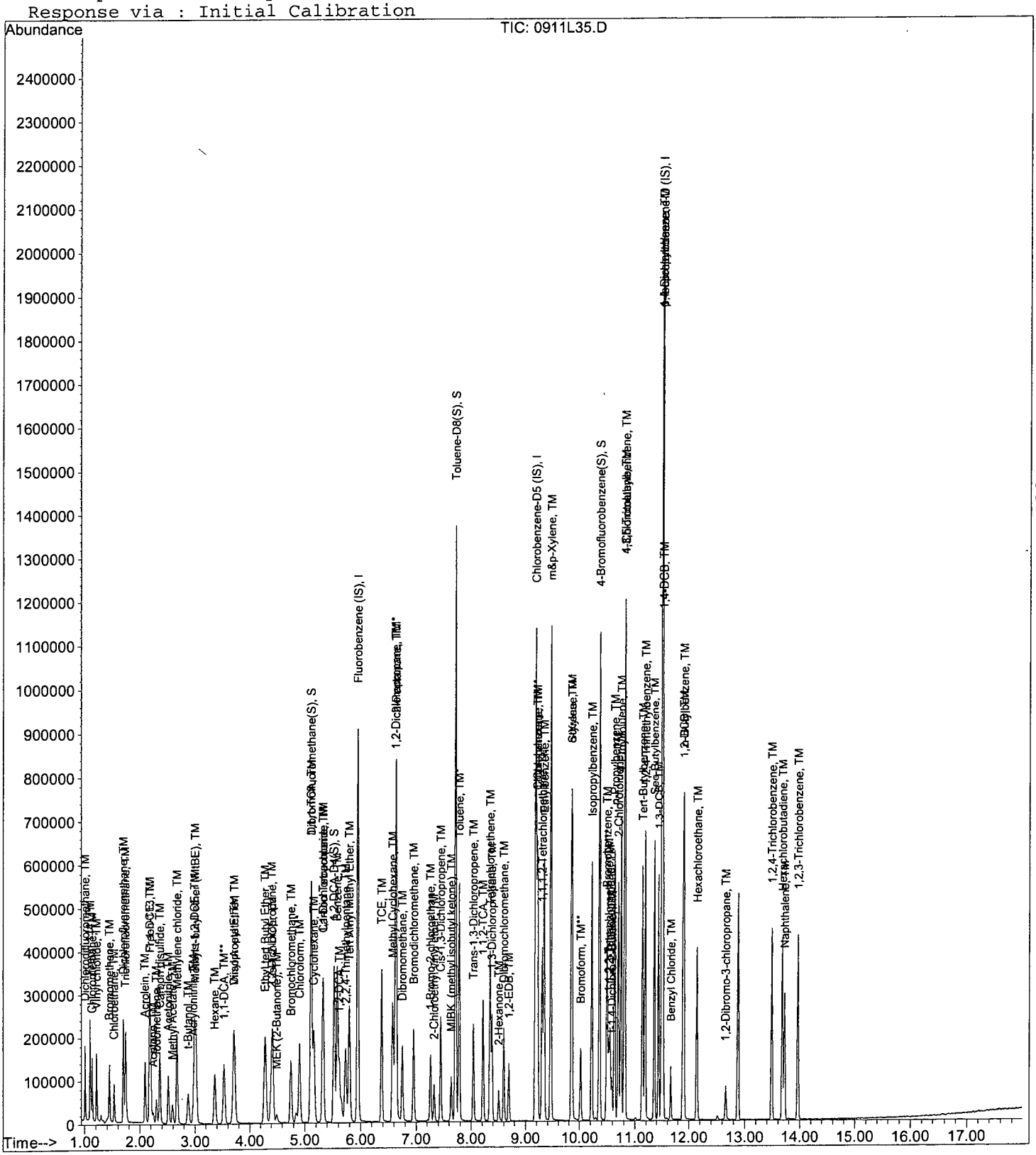
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L35.D Vial: 32
Acq On : 12 Sep 14 2:16 Operator: DG,SV,RS
Sample : 140911B LCS-1WL(MeOH) Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 50.00

Quant Time: Sep 12 10:37 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



1528

Laboratory Control Spike Recovery

EPA 8260B WATER

APPL ID: **140910W-02108 LCS - 189834**
Batch ID: #86BHC-140910AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,1,1-TRICHLOROETHANE	10.00	9.61	96.1	65-130
1,1,2,2-TETRACHLOROETHANE	10.00	9.76	97.6	65-130
1,1,2-TRICHLOROETHANE	10.00	9.29	92.9	75-125
1,1-DICHLOROETHANE	10.00	9.47	94.7	70-135
1,1-DICHLOROETHENE	10.00	9.35	93.5	70-130
1,2,3-TRICHLOROPROPANE	10.00	9.49	94.9	75-125
1,2-DIBROMOETHANE	10.00	9.24	92.4	70-130
1,2-DICHLOROETHANE	10.00	9.78	97.8	70-130
1,2-DICHLOROPROPANE	10.00	9.66	96.6	75-125
2-BUTANONE	10.00	9.86	98.6	30-150
4-METHYL-2-PENTANONE	10.00	9.05	90.5	60-135
ACETONE	10.00	9.04	90.4	40-140
BENZENE	10.00	9.03	90.3	80-120
BROMODICHLOROMETHANE	10.00	9.37	93.7	75-120
BROMOFORM	10.00	9.68	96.8	70-130
BROMOMETHANE	10.00	10.9	109	30-145
CARBON TETRACHLORIDE	10.00	9.82	98.2	65-140
CHLOROBENZENE	10.00	9.60	96.0	80-120
CHLOROETHANE	10.00	8.52	85.2	60-135
CHLOROFORM	10.00	9.41	94.1	65-135
CHLOROMETHANE	10.00	10.1	101	40-125
CIS-1,2-DICHLOROETHENE	10.00	9.47	94.7	70-125
CIS-1,3-DICHLOROPROPENE	10.00	9.85	98.5	70-130
DIBROMOCHLOROMETHANE	10.00	9.69	96.9	60-135
ETHYLBENZENE	10.00	10.0	100	75-125
METHYLENE CHLORIDE	10.00	9.88	98.8	55-140
NAPHTHALENE	10.00	8.81	88.1	55-140
STYRENE	10.00	10.2	102	65-135
TETRACHLOROETHENE	10.00	9.11	91.1	45-150
TOLUENE	10.00	9.68	96.8	75-120
TRANS-1,2-DICHLOROETHENE	10.00	9.38	93.8	60-140

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	09/10/14
Analysis Date :	09/10/14
Instrument :	Loki
Run :	0910L04
Initials :	SV

Comments: _____

Printed: 09/17/14 7:36:15 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B WATER

APPL ID: **140910W-02108 LCS - 189834**
Batch ID: #86BHC-140910AL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
TRANS-1,3-DICHLOROPROPENE	10.00	10.0	100	55-140
TRICHLOROETHENE	10.00	9.56	95.6	70-125
VINYL CHLORIDE	10.00	9.37	93.7	50-145
XYLENES (TOTAL)	30.0	30.2	101	80-120
SURROGATE: 1,2-DICHLOROETHANE-	24.8	23.0	92.9	70-120
SURROGATE: 4-BROMOFLUOROBENZ	23.8	26.9	113	75-120
SURROGATE: DIBROMOFLUOROMETH	25.4	24.3	95.6	85-115
SURROGATE: TOLUENE-D8 (S)	25.6	26.6	104	85-120

Comments: _____

Primary	SPK
Quant Method :	LALLW.M
Extraction Date :	09/10/14
Analysis Date :	09/10/14
Instrument :	Loki
Run :	0910L04
Initials :	SV

Printed: 09/17/14 7:36:15 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0910L04.D Vial: 3
Acq On : 10 Sep 14 10:30 Operator: DG,SV,RS
Sample : 140910A LCS-1WL Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 11 7:50 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	478784	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	436160	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	266752	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.11	111	282058	24.31163 ppb		0.00
Spiked Amount 25.423			Recovery = 95.631%			
38) 1,2-DCA-D4(S)	5.52	65	281122	23.01369 ppb		0.00
Spiked Amount 24.764			Recovery = 92.933%			
58) Toluene-D8(S)	7.71	98	940437	26.59890 ppb		0.00
Spiked Amount 25.636			Recovery = 103.756%			
66) 4-Bromofluorobenzene(S)	10.36	95	354549	26.85377 ppb		0.00
Spiked Amount 23.806			Recovery = 112.802%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	87837	9.48692 ppb		98
3) Freon 114	1.10	85	78884	9.72369 ppb		100
4) Chloromethane	1.14	50	95160	10.10507 ppb		97
5) Vinyl chloride	1.21	62	97552	9.37318 ppb		94
6) Bromomethane	1.44	94	54371	10.91851 ppb		97
7) Chloroethane	1.53	64	46120	8.51739 ppb		95
8) Dichlorofluoromethane	1.70	67	177754	9.31750 ppb		98
9) Trichlorofluoromethane	1.74	101	139588	9.38645 ppb		98
10) Acrolein	2.10	56	145198	130.26871 ppb	#	97
11) Acetone	2.25	43	21907	9.03889 ppb		90
12) Freon-113	2.20	101	88033	9.66359 ppb		93
13) 1,1-DCE	2.18	61	121989	9.35373 ppb		99
14) t-Butanol	2.88	59	37944	122.15318 ppb		94
15) Acetonitrile	2.52	41	117783	117.86134 ppb		95
16) Methyl Acetate	2.59	43	56705	9.19575 ppb		93
17) Iodomethane	2.31	142	31344	9.09416 ppb		96
18) Acrylonitrile	2.96	52	23590	9.31152 ppb		86
19) Methylene chloride	2.67	84	98424	9.87918 ppb		97
20) Carbon disulfide	2.36	76	222579	9.15069 ppb		98
21) Methyl t-butyl ether (MtBE	3.02	73	234405	9.12162 ppb		99
22) Trans-1,2-DCE	2.99	96	91983	9.38097 ppb		96
23) Diisopropyl Ether	3.71	45	263326	9.69327 ppb		96
24) 1,1-DCA	3.53	63	165110	9.47173 ppb		96
25) Hexane	3.36	57	77894	9.69875 ppb		98
26) Vinyl Acetate	3.68	43	58968	10.12121 ppb	#	78
27) Ethyl tert Butyl Ether	4.28	59	241519	9.59798 ppb		99
28) MEK (2-Butanone)	4.50	43	32191	9.86134 ppb		95
29) Cis-1,2-DCE	4.43	96	108765	9.47225 ppb		95
30) 2,2-Dichloropropane	4.40	77	51488	9.91057 ppb		98
31) Chloroform	4.90	83	175003	9.41500 ppb		98
32) Bromochloromethane	4.75	128	55541	9.52051 ppb		96
34) 1,1,1-TCA	5.10	97	153280	9.60843 ppb		95
35) Cyclohexane	5.16	41	61901	9.03783 ppb		93
36) 1,1-Dichloropropene	5.33	75	112988	9.30441 ppb		98
37) 2,2,4-Trimethylpentane	5.73	57	237649	10.30966 ppb	#	89
39) Carbon Tetrachloride	5.32	117	130257	9.82074 ppb		99
40) Tert Amyl Methyl Ether	5.80	73	241177	9.98800 ppb		98
41) 1,2-DCA	5.62	62	129343	9.78311 ppb		100
42) Benzene	5.58	78	363474	9.02843 ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\140909\0910L04.D
Acq On : 10 Sep 14 10:30
Sample : 140910A LCS-1WL
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 3
Operator: DG,SV,RS
Inst : Loki
Multiplr: 1.00

Quant Time: Sep 11 7:50 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

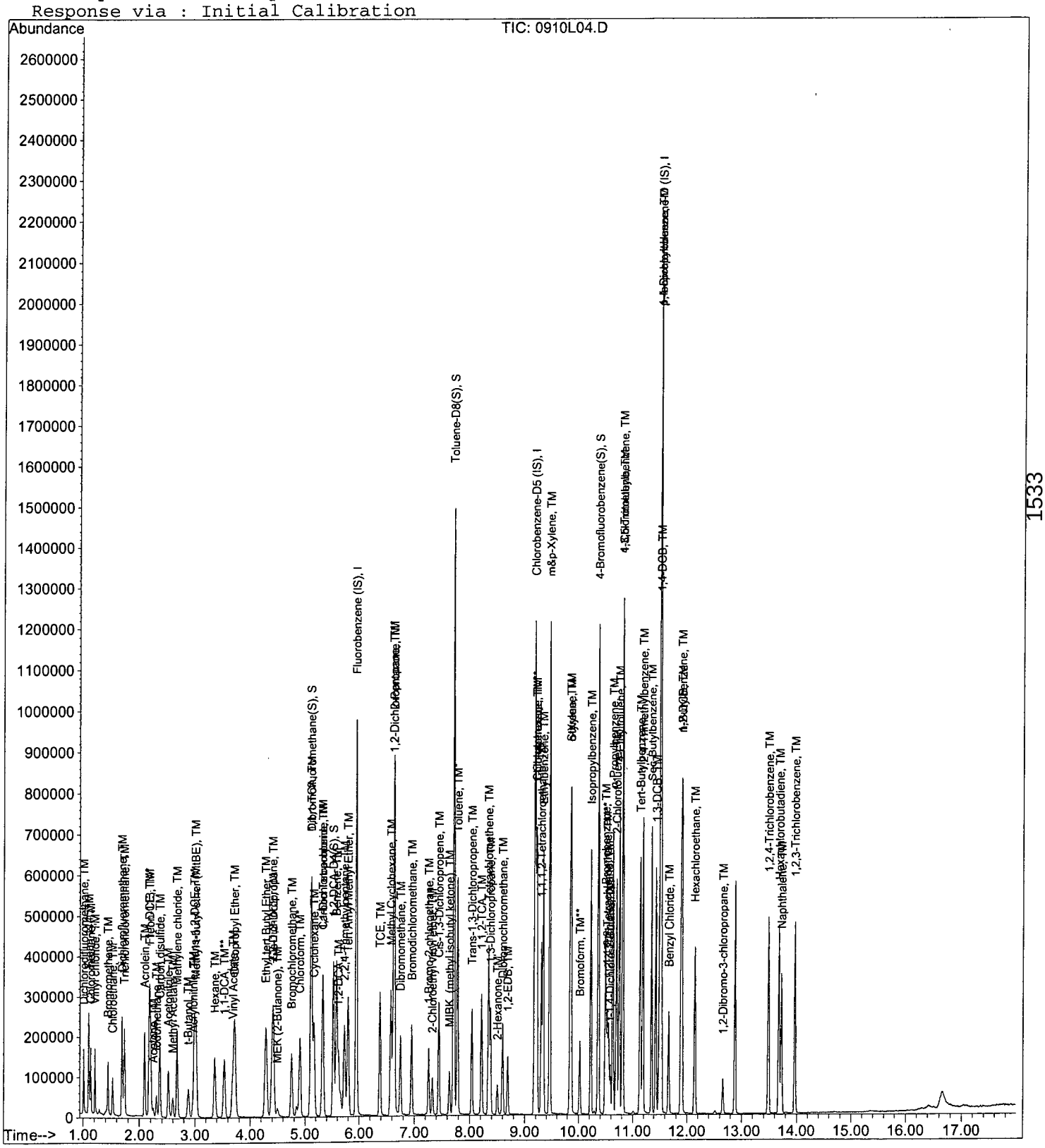
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	TCE	6.38	95	95709	9.55868	ppb		100
44)	2-Pentanone	6.64	43	752287	118.60533	ppb		98
45)	1,2-Dichloropropane	6.62	63	100601	9.66076	ppb		100
46)	Bromodichloromethane	6.95	83	134667	9.37003	ppb		97
47)	Methyl Cyclohexane	6.58	83	118329	9.31773	ppb		99
48)	Dibromomethane	6.75	93	62253	9.43572	ppb		93
49)	2-Chloroethyl vinyl ether	7.33	106	10840	9.15820	ppb	#	78
50)	MIBK (methyl isobutyl ket	7.64	43	65905	9.04593	ppb		94
51)	1-Bromo-2-chloroethane	7.26	63	74192	9.31950	ppb		97
52)	Cis-1,3-Dichloropropene	7.44	75	151268	9.85001	ppb		99
53)	Toluene	7.78	91	403459	9.68122	ppb		98
54)	Trans-1,3-Dichloropropene	8.04	75	133821	10.02519	ppb		97
55)	1,1,2-TCA	8.21	83	71606	9.28526	ppb		97
56)	2-Hexanone	8.51	43	43501	9.27512	ppb		98
59)	1,2-EDB	8.69	107	85035	9.24356	ppb		94
60)	Tetrachloroethene	8.34	166	119936	9.10650	ppb		96
61)	1-Chlorohexane	9.22	91	108302	9.92336	ppb		99
62)	1,1,1,2-Tetrachloroethane	9.30	131	115088	9.71096	ppb		97
63)	m&p-Xylene	9.46	106	342990	20.16674	ppb		97
64)	o-Xylene	9.85	106	161727	10.05173	ppb		99
65)	Styrene	9.86	104	278965	10.17176	ppb		98
67)	1,3-Dichloropropane	8.38	76	142132	9.58265	ppb		94
68)	Dibromochloromethane	8.60	129	111268	9.69262	ppb		100
69)	Chlorobenzene	9.21	112	284312	9.59949	ppb		99
70)	Ethylbenzene	9.34	91	434439	10.04181	ppb		96
71)	Bromoform	10.02	173	80154	9.68288	ppb		97
73)	Isopropylbenzene	10.23	105	393567	10.08876	ppb		96
74)	1,1,2,2-Tetrachloroethane	10.52	83	113400	9.76458	ppb		99
75)	1,2,3-Trichloropropane	10.55	110	34631	9.48806	ppb		96
76)	t-1,4-Dichloro-2-Butene	10.58	53	23250	10.60918	ppb		93
77)	Bromobenzene	10.49	156	129739	9.75138	ppb		100
78)	n-Propylbenzene	10.63	91	482591	10.49937	ppb		100
79)	4-Ethyltoluene	10.75	105	441932	10.78880	ppb		100
80)	2-Chlorotoluene	10.70	91	304724	10.17190	ppb		100
81)	1,3,5-Trimethylbenzene	10.82	105	384258	11.06729	ppb		100
82)	4-Chlorotoluene	10.81	91	370610	10.77465	ppb		99
83)	Tert-Butylbenzene	11.13	119	296613	10.10241	ppb		99
84)	1,2,4-Trimethylbenzene	11.18	105	379558	10.92928	ppb		98
85)	Sec-Butylbenzene	11.35	105	451429	10.74151	ppb		98
86)	p-Isopropyltoluene	11.51	119	388498	10.60535	ppb		99
87)	Benzyl Chloride	11.67	91	174121	10.43624	ppb		97
88)	1,3-DCB	11.44	146	247328	9.88577	ppb		99
89)	1,4-DCB	11.53	146	254400	9.70212	ppb		96
90)	n-Butylbenzene	11.91	91	338515	10.47476	ppb		99
91)	1,2-DCB	11.89	146	234192	9.77151	ppb		98
92)	Hexachloroethane	12.14	117	75135	9.11479	ppb		99
93)	1,2-Dibromo-3-chloropropan	12.66	157	16098	9.74684	ppb		98
94)	1,2,4-Trichlorobenzene	13.49	180	156695	9.55392	ppb		97
95)	Hexachlorobutadiene	13.68	225	93812	9.91379	ppb		97
96)	Naphthalene	13.72	128	180928	8.80544	ppb		99
97)	1,2,3-Trichlorobenzene	13.97	180	152475	9.67623	ppb		95

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\140909\0910L04.D Vial: 3
Acq On : 10 Sep 14 10:30 Operator: DG,SV,RS
Sample : 140910A LCS-1WL Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 1.00

Quant Time: Sep 11 7:50 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



1533

Matrix Spike Recoveries

EPA 8260B SOIL MEOH

APPL ID: **140912S-02100 MS - 189818**
Batch ID: #86BHC-140911AL
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,1,1-TRICHLOROETHANE	0.500	ND	0.465	0.475	93.0	95.0	70-135	2.1	30
1,1,2,2-TETRACHLOROETHANE	0.500	ND	0.345	0.373	69.0	74.6	55-130	7.8	30
1,1,2-TRICHLOROETHANE	0.500	ND	0.484	0.489	96.8	97.8	60-125	1.0	30
1,1-DICHLOROETHANE	0.500	ND	0.473	0.485	94.6	97.0	75-125	2.5	30
1,1-DICHLOROETHENE	0.500	ND	0.455	0.446	91.0	89.2	65-135	2.0	30
1,2,3-TRICHLOROPROPANE	0.500	ND	0.438	0.421	87.6	84.2	65-130	4.0	30
1,2-DIBROMOETHANE	0.500	ND	0.448	0.460	89.6	92.0	70-125	2.6	30
1,2-DICHLOROETHANE	0.500	ND	0.479	0.485	95.8	97.0	70-135	1.2	30
1,2-DICHLOROPROPANE	0.500	ND	0.484	0.481	96.8	96.2	70-120	0.62	30
2-BUTANONE	0.500	ND	0.531	0.553	106	111	30-160	4.1	30
4-METHYL-2-PENTANONE	0.500	ND	0.457	0.492	91.4	98.4	45-145	7.4	30
ACETONE	0.500	ND	0.647	0.686	129	137	20-160	5.9	30
BENZENE	0.500	ND	0.457	0.454	91.4	90.8	75-125	0.66	30
BROMODICHLOROMETHANE	0.500	ND	0.464	0.468	92.8	93.6	70-130	0.86	30
BROMOFORM	0.500	ND	0.474	0.466	94.8	93.2	55-135	1.7	30
BROMOMETHANE	0.500	ND	0.534	0.511	107	102	30-160	4.4	30
CARBON TETRACHLORIDE	0.500	ND	0.480	0.484	96.0	96.8	65-135	0.83	30
CHLOROBENZENE	0.500	ND	0.473	0.469	94.6	93.8	75-125	0.85	30
CHLOROETHANE	0.500	ND	0.362	0.329	72.4	65.8	40-155	9.6	30
CHLOROFORM	0.500	ND	0.467	0.477	93.4	95.4	70-125	2.1	30
CHLOROMETHANE	0.500	ND	0.523	0.587	105	117	50-130	11.5	30
CIS-1,2-DICHLOROETHENE	0.500	ND	0.462	0.463	92.4	92.6	65-125	0.22	30
CIS-1,3-DICHLOROPROPENE	0.500	ND	0.442	0.457	88.4	91.4	70-125	3.3	30
DIBROMOCHLOROMETHANE	0.500	ND	0.477	0.468	95.4	93.6	65-130	1.9	30
ETHYLBENZENE	0.500	ND	0.476	0.476	95.2	95.2	75-125	0.0	30
METHYLENE CHLORIDE	0.500	ND	0.540	0.531	108	106	55-140	1.7	30
NAPHTHALENE	0.500	ND	0.394	0.392	78.8	78.4	40-125	0.51	30
STYRENE	0.500	ND	0.518	0.498	104	99.6	75-125	3.9	30
TETRACHLOROETHENE	0.500	ND	0.448	0.422	89.6	84.4	65-140	6.0	30
TOLUENE	0.500	ND	0.486	0.491	97.2	98.2	70-125	1.0	30

Primary	SPK	DUP
Quant Method :	LALLW.M	LALLW.M
Extraction Date :	09/12/14	09/12/14
Analysis Date :	09/12/14	09/12/14
Instrument :	Loki	Loki
Run :	0911L37	0911L38
Initials :	SV	

Comments: _____

Printed: 09/17/14 7:36:19 AM
APPL MSD SCII

Matrix Spike Recoveries

EPA 8260B SOIL MEOH

APPL ID: **140912S-02100 MS - 189818**
Batch ID: #86BHC-140911AL
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
TRANS-1,2-DICHLOROETHENE	0.500	ND	0.455	0.460	91.0	92.0	65-135	1.1	30
TRANS-1,3-DICHLOROPROPENE	0.500	ND	0.454	0.477	90.8	95.4	65-125	4.9	30
TRICHLOROETHENE	0.500	ND	0.528	0.547	106	109	75-125	3.5	30
VINYL CHLORIDE	0.500	ND	0.471	0.490	94.2	98.0	60-125	4.0	30
XYLENES (TOTAL)	1.50	ND	1.46	1.49	97.3	99.3	75-125	2.0	30
SURROGATE: 1,2-DICHLOROETHANE-D	0.0248	NA	0.0237	0.0245	95.7	98.9	54-154		
SURROGATE: 4-BROMOFLUOROBENZ	0.0238	NA	0.0278	0.0282	117	118	85-120		
SURROGATE: TOLUENE-D8 (S)	0.0256	NA	0.0265	0.0267	103	104	85-115		

Comments:

Primary	SPK	DUP
Quant Method :	LALLW.M	LALLW.M
Extraction Date :	09/12/14	09/12/14
Analysis Date :	09/12/14	09/12/14
Instrument :	Loki	Loki
Run :	0911L37	0911L38
Initials :	SV	

Printed: 09/17/14 7:36:19 AM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0911L37.D Vial: 34
Acq On : 12 Sep 14 3:11 Operator: DG,SV,RS
Sample : AZ02100S01 MS-1WL DF50 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 50.00

Quant Time: Sep 12 10:37 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	424256	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	395200	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	267328	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.12	111	247641	24.08851 ppb		0.00
Spiked Amount 25.423			Recovery = 94.754%			
38) 1,2-DCA-D4(S)	5.53	65	256123	23.66201 ppb		0.00
Spiked Amount 24.764			Recovery = 95.550%			
58) Toluene-D8(S)	7.71	98	849552	26.51873 ppb		0.00
Spiked Amount 25.636			Recovery = 103.444%			
66) 4-Bromofluorobenzene(S)	10.36	95	332146	27.76432 ppb		0.00
Spiked Amount 23.806			Recovery = 116.625%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	80795	492.39543 ppb		100
3) Freon 114	1.10	85	62720	436.24419 ppb		95
4) Chloromethane	1.13	50	87333	523.31648 ppb		99
5) Vinyl chloride	1.22	62	86900	471.14227 ppb		93
6) Bromomethane	1.44	94	47118	534.02463 ppb		98
7) Chloroethane	1.51	64	34712	361.72517 ppb		99
8) Dichlorofluoromethane	1.68	67	152591	451.32602 ppb		95
9) Trichlorofluoromethane	1.71	101	124500	472.39404 ppb		91
10) Acrolein	2.11	56	94858	4715.37304 ppb		99
11) Acetone	2.27	43	26962	647.32268 ppb		98
12) Freon-113	2.18	101	71177	440.87370 ppb		98
13) 1,1-DCE	2.17	61	105187	455.10084 ppb		98
14) t-Butanol	2.86	59	434	20.85203 ppb	#	70
15) Acetonitrile	2.54	41	123407	6993.45852 ppb		97
16) Methyl Acetate	2.60	43	73850	668.29114 ppb		97
17) Iodomethane	2.29	142	23960	403.64599 ppb		100
18) Acrylonitrile	2.98	52	19800	441.00084 ppb		100
19) Methylene chloride	2.67	84	95311	540.44080 ppb		96
20) Carbon disulfide	2.35	76	182771	423.99273 ppb		97
21) Methyl t-butyl ether (MtBE	3.02	73	202474	444.58607 ppb		98
22) Trans-1,2-DCE	2.98	96	79003	454.63751 ppb		95
23) Diisopropyl Ether	3.72	45	215085	446.75376 ppb		96
24) 1,1-DCA	3.53	63	146136	473.03645 ppb		98
25) Hexane	3.35	57	54970	386.20605 ppb		99
26) Vinyl Acetate	3.72	43	41456	401.49973 ppb	#	99
27) Ethyl tert Butyl Ether	4.29	59	208705	467.99686 ppb		93
28) MEK (2-Butanone)	4.51	43	30731	530.51988 ppb		94
29) Cis-1,2-DCE	4.43	96	94107	462.45292 ppb		97
30) 2,2-Dichloropropane	4.40	77	26440	287.16787 ppb		97
31) Chloroform	4.90	83	153847	467.03055 ppb		98
32) Bromochloromethane	4.76	128	45292	438.07598 ppb		97
34) 1,1,1-TCA	5.10	97	131434	464.89657 ppb		97
35) Cyclohexane	5.15	41	53319	439.26879 ppb		95
36) 1,1-Dichloropropene	5.33	75	98239	456.48013 ppb		96
37) 2,2,4-Trimethylpentane	5.72	57	182223	446.06003 ppb	#	88
39) Carbon Tetrachloride	5.32	117	112756	479.69394 ppb		99
40) Tert Amyl Methyl Ether	5.80	73	207021	483.76972 ppb		98
41) 1,2-DCA	5.62	62	112289	479.23975 ppb		99
42) Benzene	5.58	78	326028	456.95716 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0911L37.D Vial: 34
Acq On : 12 Sep 14 3:11 Operator: DG,SV,RS
Sample : AZ02100S01 MS-1WL DF50 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 50.00

Quant Time: Sep 12 10:37 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) TCE	6.38	95	93650	527.75787 ppb	99
44) 2-Pentanone	6.65	43	760923	6769.28794 ppb	97
45) 1,2-Dichloropropane	6.62	63	89358	484.19930 ppb	99
46) Bromodichloromethane	6.95	83	118190	464.02583 ppb	98
47) Methyl Cyclohexane	6.57	83	95254	423.23711 ppb	98
48) Dibromomethane	6.75	93	52499	449.00101 ppb	88
49) 2-Chloroethyl vinyl ether	7.33	106	10601	492.79145 ppb	93
50) MIBK (methyl isobutyl ket	7.64	43	59021	457.11271 ppb	94
51) 1-Bromo-2-chloroethane	7.26	63	64072	454.13558 ppb	100
52) Cis-1,3-Dichloropropene	7.44	75	120316	442.07377 ppb	99
53) Toluene	7.78	91	358886	485.92446 ppb	100
54) Trans-1,3-Dichloropropene	8.04	75	107343	453.75752 ppb	97
55) 1,1,2-TCA	8.22	83	66087	483.55089 ppb	97
56) 2-Hexanone	8.51	43	40744	490.19144 ppb	99
59) 1,2-EDB	8.70	107	74703	448.10357 ppb	98
60) Tetrachloroethene	8.34	166	106972	448.19922 ppb	98
61) 1-Chlorohexane	9.22	91	93151	470.98699 ppb	99
62) 1,1,1,2-Tetrachloroethane	9.30	131	106317	495.03269 ppb	100
63) m&p-Xylene	9.46	106	302956	982.95284 ppb	95
64) o-Xylene	9.85	106	140528	481.97022 ppb	92
65) Styrene	9.86	104	257479	518.06825 ppb	99
67) 1,3-Dichloropropane	8.38	76	125165	465.66735 ppb	100
68) Dibromochloromethane	8.60	129	99173	476.71969 ppb	99
69) Chlorobenzene	9.21	112	254133	473.49219 ppb	98
70) Ethylbenzene	9.34	91	373152	475.95720 ppb	98
71) Bromoform	10.03	173	71064	473.72682 ppb	98
73) Isopropylbenzene	10.22	105	352857	451.28521 ppb	95
74) 1,1,2,2-Tetrachloroethane	10.53	83	80237	344.70557 ppb	97
75) 1,2,3-Trichloropropane	10.55	110	32078	438.48332 ppb	99
76) t-1,4-Dichloro-2-Butene	10.59	53	18937	431.12516 ppb	88
77) Bromobenzene	10.50	156	121625	456.09103 ppb	96
78) n-Propylbenzene	10.63	91	424902	461.21777 ppb	99
79) 4-Ethyltoluene	10.75	105	401789	489.38326 ppb	99
80) 2-Chlorotoluene	10.70	91	278825	464.36608 ppb	98
81) 1,3,5-Trimethylbenzene	10.82	105	348999	501.50575 ppb	98
82) 4-Chlorotoluene	10.81	91	343095	497.66115 ppb	99
83) Tert-Butylbenzene	11.13	119	271599	461.52608 ppb	100
84) 1,2,4-Trimethylbenzene	11.18	105	340665	489.41158 ppb	99
85) Sec-Butylbenzene	11.35	105	395116	469.06590 ppb	99
86) p-Isopropyltoluene	11.51	119	353275	481.15215 ppb	98
87) Benzyl Chloride	11.67	91	77105	230.57314 ppb	98
88) 1,3-DCB	11.44	146	233565	465.77719 ppb	99
89) 1,4-DCB	11.53	146	246369	468.77997 ppb	97
90) n-Butylbenzene	11.91	91	292357	451.34957 ppb	97
91) 1,2-DCB	11.89	146	218206	454.24460 ppb	97
92) Hexachloroethane	12.15	117	75661	457.94140 ppb	97
93) 1,2-Dibromo-3-chloropropan	12.66	157	13734	415.55954 ppb	93
94) 1,2,4-Trichlorobenzene	13.49	180	145216	441.74759 ppb	97
95) Hexachlorobutadiene	13.68	225	91918	484.63546 ppb	97
96) Naphthalene	13.72	128	158080	393.55342 ppb	99
97) 1,2,3-Trichlorobenzene	13.97	180	143230	453.49718 ppb	98

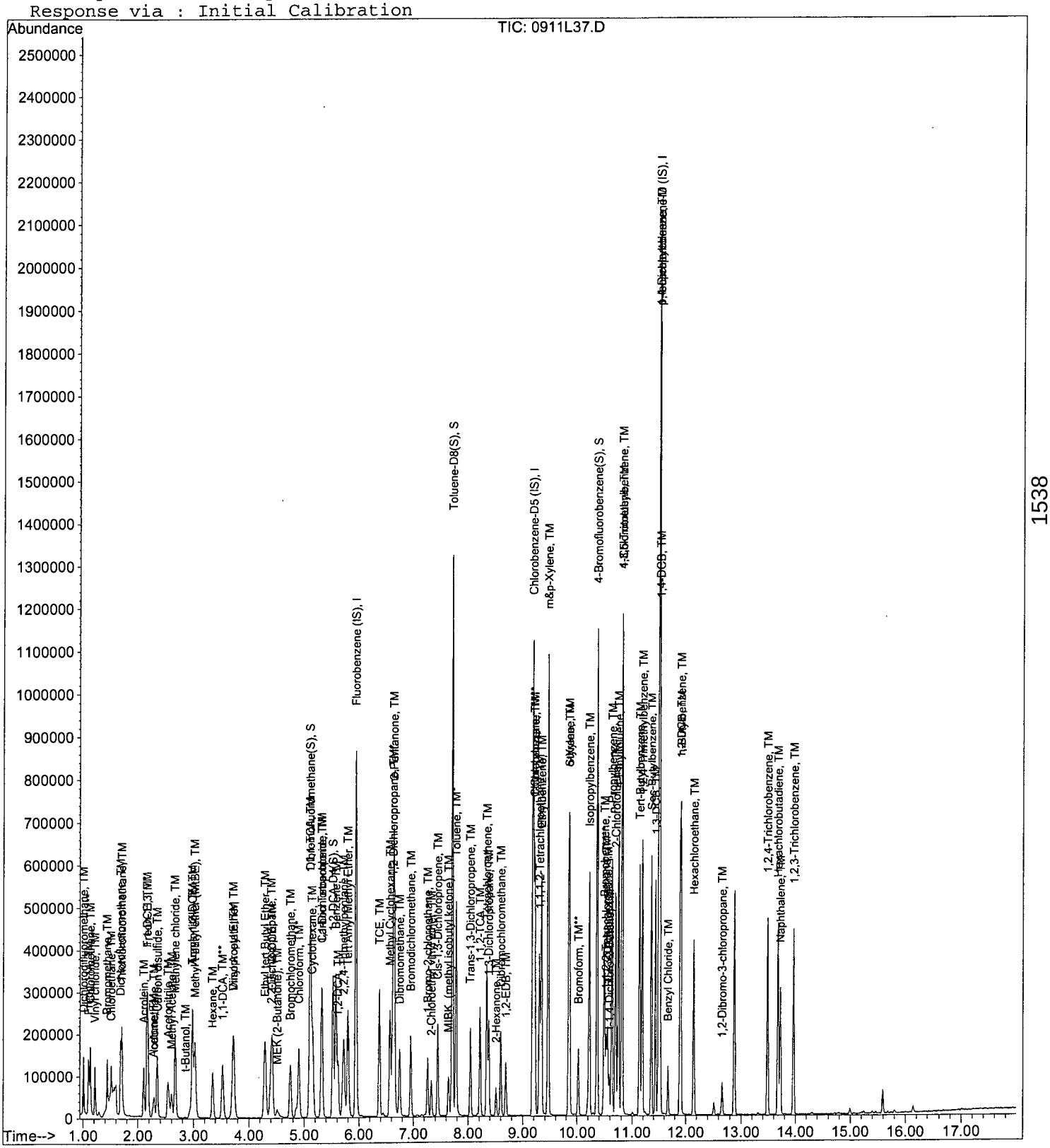
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L37.D Vial: 34
Acq On : 12 Sep 14 3:11 Operator: DG,SV,RS
Sample : AZ02100S01 MS-1WL DF50 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 50.00

Quant Time: Sep 12 10:37 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



1538

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0911L38.D Vial: 35
Acq On : 12 Sep 14 3:39 Operator: DG,SV,RS
Sample : AZ02100S01 MSD-1WL DF50 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 50.00

Quant Time: Sep 12 10:37 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.95	96	420544	25.00000 ppb		0.00
57) Chlorobenzene-D5 (IS)	9.18	117	399680	25.00000 ppb		0.00
72) 1,4-Dichlorobenzene-D (IS)	11.51	152	266112	25.00000 ppb		0.00
System Monitoring Compounds						
33) Dibromofluoromethane(S)	5.12	111	255252	25.04800 ppb		0.00
Spiked Amount 25.423			Recovery = 98.526%			
38) 1,2-DCA-D4(S)	5.53	65	263377	24.54695 ppb		0.00
Spiked Amount 24.764			Recovery = 99.124%			
58) Toluene-D8(S)	7.71	98	863809	26.66153 ppb		0.00
Spiked Amount 25.636			Recovery = 104.002%			
66) 4-Bromofluorobenzene(S)	10.36	95	341390	28.21716 ppb		0.00
Spiked Amount 23.806			Recovery = 118.527%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.01	85	81441	500.71336 ppb		100
3) Freon 114	1.11	85	62277	436.98632 ppb		99
4) Chloromethane	1.13	50	97029	586.62798 ppb		99
5) Vinyl chloride	1.22	62	89619	490.17250 ppb		93
6) Bromomethane	1.44	94	44638	510.62126 ppb		97
7) Chloroethane	1.51	64	31304	329.09060 ppb		97
8) Dichlorofluoromethane	1.68	67	155539	464.10613 ppb		99
9) Trichlorofluoromethane	1.71	101	124806	477.73502 ppb		94
10) Acrolein	2.11	56	97336	4892.88089 ppb	#	94
11) Acetone	2.27	43	28224	686.42764 ppb		97
12) Freon-113	2.18	101	68728	429.46202 ppb		93
13) 1,1-DCE	2.17	61	102178	445.98425 ppb		97
14) t-Butanol	2.85	59	513	36.17111 ppb	#	70
15) Acetonitrile	2.54	41	135848	7781.84659 ppb		97
16) Methyl Acetate	2.60	43	75756	691.03518 ppb		100
17) Iodomethane	2.30	142	25248	423.87192 ppb		98
18) Acrylonitrile	2.98	52	20099	451.61175 ppb		90
19) Methylene chloride	2.67	84	92823	530.86081 ppb		100
20) Carbon disulfide	2.35	76	179122	419.19549 ppb		99
21) Methyl t-butyl ether (MtBE	3.03	73	206641	457.74081 ppb		99
22) Trans-1,2-DCE	2.98	96	79221	459.91604 ppb		96
23) Diisopropyl Ether	3.72	45	222698	466.64967 ppb		94
24) 1,1-DCA	3.53	63	148514	484.97722 ppb		97
25) Hexane	3.35	57	53659	380.32289 ppb		94
26) Vinyl Acetate	3.72	43	41904	409.42079 ppb	#	98
27) Ethyl tert Butyl Ether	4.29	59	215534	487.57612 ppb		94
28) MEK (2-Butanone)	4.52	43	31787	553.21001 ppb		88
29) Cis-1,2-DCE	4.42	96	93331	462.68782 ppb		95
30) 2,2-Dichloropropane	4.40	77	26424	289.52729 ppb		97
31) Chloroform	4.91	83	155671	476.73883 ppb		100
32) Bromochloromethane	4.76	128	45912	447.99247 ppb		96
34) 1,1,1-TCA	5.10	97	132986	474.53810 ppb		95
35) Cyclohexane	5.16	41	51046	424.25466 ppb		84
36) 1,1-Dichloropropene	5.33	75	98158	460.12963 ppb		97
37) 2,2,4-Trimethylpentane	5.72	57	175092	432.38734 ppb	#	86
39) Carbon Tetrachloride	5.32	117	112808	484.15121 ppb		94
40) Tert Amyl Methyl Ether	5.80	73	207301	488.69987 ppb		97
41) 1,2-DCA	5.62	62	112627	484.92512 ppb		99
42) Benzene	5.58	78	321066	453.97450 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\140909\0911L38.D Vial: 35
Acq On : 12 Sep 14 3:39 Operator: DG,SV,RS
Sample : AZ02100S01 MSD-1WL DF50 Inst : Loki
Misc : 10mL w/5uL IS&S:06-29-14 Multiplr: 50.00

Quant Time: Sep 12 10:37 2014 Quant Results File: LALLW.RES

Quant Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
43) TCE	6.38	95	96161	546.69168 ppb	98
44) 2-Pentanone	6.65	43	769628	6907.16273 ppb	97
45) 1,2-Dichloropropane	6.62	63	87946	480.75451 ppb	98
46) Bromodichloromethane	6.95	83	118081	467.68990 ppb	99
47) Methyl Cyclohexane	6.58	83	97129	435.37751 ppb	99
48) Dibromomethane	6.75	93	54912	473.78368 ppb	93
49) 2-Chloroethyl vinyl ether	7.33	106	10969	509.07746 ppb	87
50) MIBK (methyl isobutyl ket	7.64	43	62997	492.21308 ppb	96
51) 1-Bromo-2-chloroethane	7.26	63	64488	461.11867 ppb	98
52) Cis-1,3-Dichloropropene	7.44	75	123333	457.15893 ppb	99
53) Toluene	7.78	91	359362	490.86373 ppb	100
54) Trans-1,3-Dichloropropene	8.04	75	111967	477.48167 ppb	98
55) 1,1,2-TCA	8.22	83	66227	488.85244 ppb	98
56) 2-Hexanone	8.51	43	40916	496.60580 ppb	94
59) 1,2-EDB	8.69	107	77479	459.54589 ppb	98
60) Tetrachloroethene	8.34	166	101829	421.86839 ppb	98
61) 1-Chlorohexane	9.22	91	92572	462.81300 ppb	98
62) 1,1,1,2-Tetrachloroethane	9.30	131	102877	473.64611 ppb	99
63) m&p-Xylene	9.46	106	306970	984.81256 ppb	96
64) o-Xylene	9.85	106	148494	503.58266 ppb	94
65) Styrene	9.87	104	250164	497.70786 ppb	98
67) 1,3-Dichloropropane	8.38	76	127294	468.27970 ppb	97
68) Dibromochloromethane	8.60	129	98558	468.45302 ppb	99
69) Chlorobenzene	9.21	112	254438	468.74673 ppb	97
70) Ethylbenzene	9.34	91	377099	475.60020 ppb	98
71) Bromoform	10.03	173	70759	466.40643 ppb	99
73) Isopropylbenzene	10.23	105	361442	464.37729 ppb	98
74) 1,1,2,2-Tetrachloroethane	10.53	83	86397	372.86556 ppb	97
75) 1,2,3-Trichloropropane	10.55	110	30636	420.68579 ppb	99
76) t-1,4-Dichloro-2-Butene	10.59	53	17116	391.44834 ppb	94
77) Bromobenzene	10.50	156	121251	456.76624 ppb	99
78) n-Propylbenzene	10.63	91	420594	458.62774 ppb	98
79) 4-Ethyltoluene	10.75	105	397690	486.60406 ppb	99
80) 2-Chlorotoluene	10.70	91	284182	475.45053 ppb	98
81) 1,3,5-Trimethylbenzene	10.82	105	350953	506.61808 ppb	99
82) 4-Chlorotoluene	10.81	91	340099	495.56964 ppb	98
83) Tert-Butylbenzene	11.13	119	273174	466.32364 ppb	98
84) 1,2,4-Trimethylbenzene	11.18	105	337092	486.49139 ppb	99
85) Sec-Butylbenzene	11.35	105	397324	473.84253 ppb	98
86) p-Isopropyltoluene	11.51	119	346003	473.40123 ppb	100
87) Benzyl Chloride	11.67	91	79923	240.09213 ppb	97
88) 1,3-DCB	11.44	146	233309	467.39271 ppb	99
89) 1,4-DCB	11.53	146	245392	469.05458 ppb	98
90) n-Butylbenzene	11.91	91	290237	450.12414 ppb	98
91) 1,2-DCB	11.89	146	222311	464.90480 ppb	100
92) Hexachloroethane	12.15	117	75775	460.72711 ppb	99
93) 1,2-Dibromo-3-chloropropan	12.66	157	13691	416.14490 ppb	93
94) 1,2,4-Trichlorobenzene	13.49	180	145700	445.24522 ppb	98
95) Hexachlorobutadiene	13.68	225	89774	475.49416 ppb	95
96) Naphthalene	13.72	128	156352	391.51579 ppb	99
97) 1,2,3-Trichlorobenzene	13.97	180	142473	453.16166 ppb	99

(#) = qualifier out of range (m) = manual integration

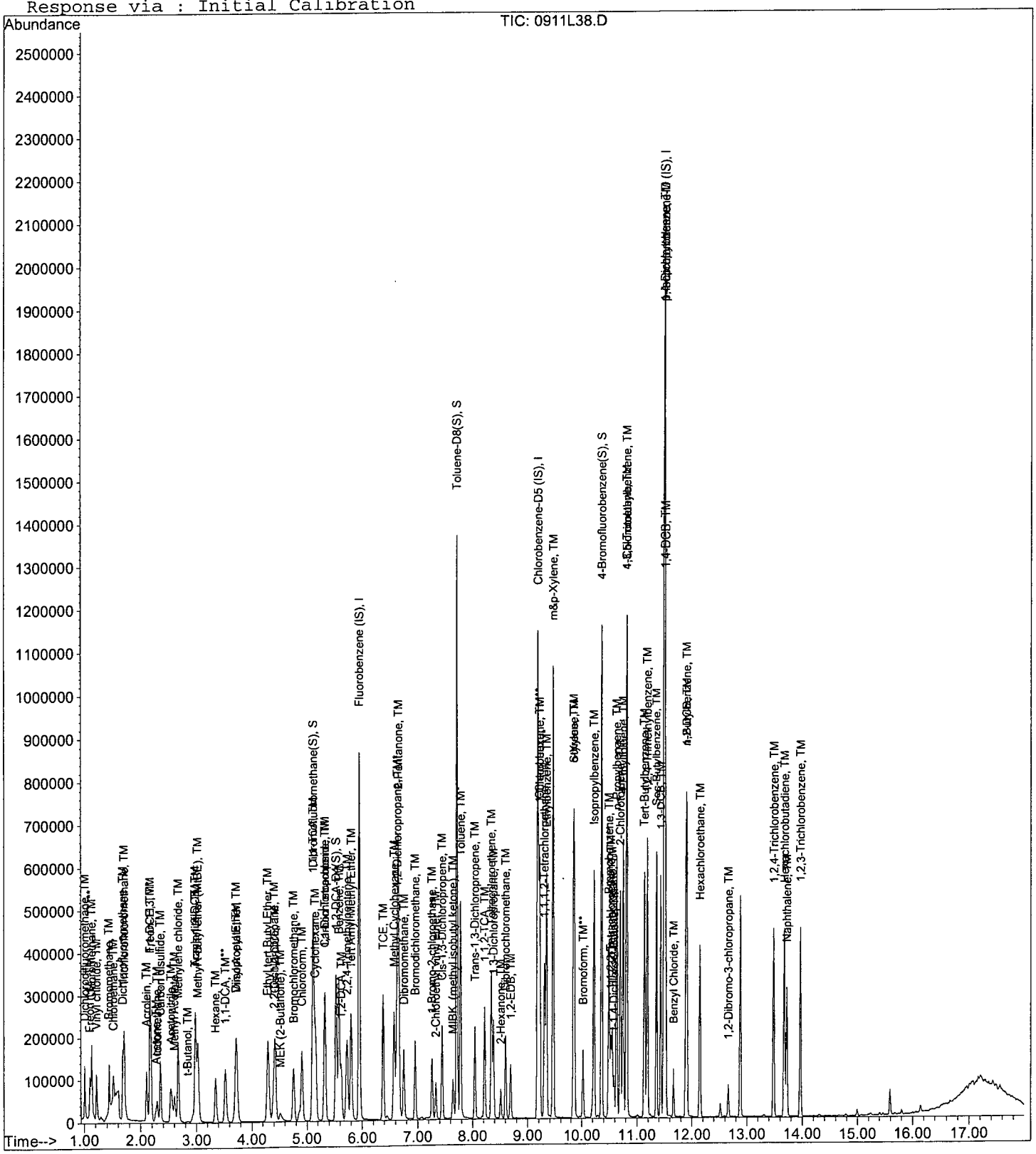
Quantitation Report

Data File : M:\LOKI\DATA\140909\0911L38.D
Acq On : 12 Sep 14 3:39
Sample : AZ02100S01 MSD-1WL DF50
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 35
Operator: DG,SV,RS
Inst : Loki
Multiplr: 50.00

Quant Time: Sep 12 10:37 2014 Quant Results File: LALLW.RES

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Sep 10 09:02:44 2014
Response via : Initial Calibration



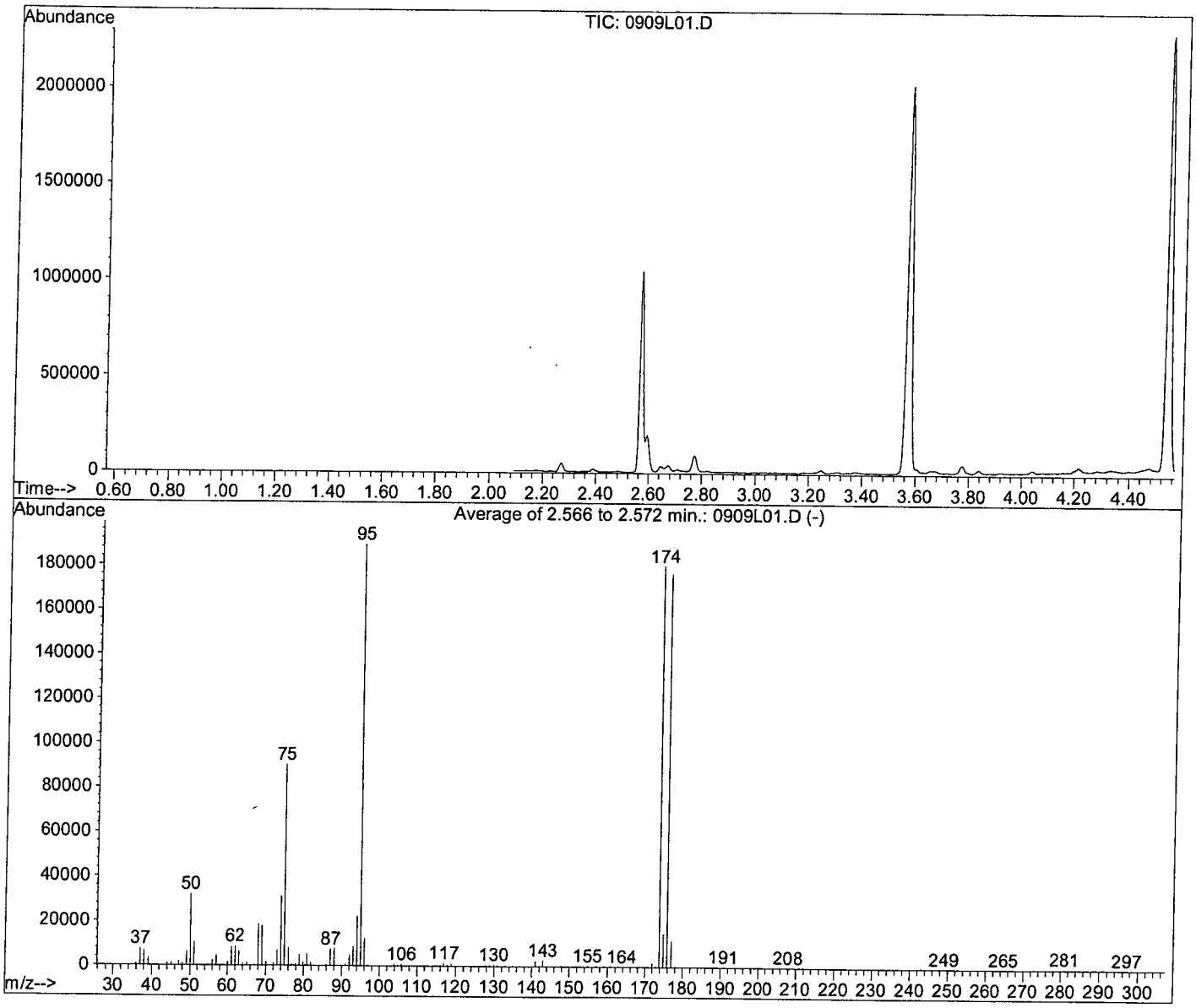
1541

BFB

Data File : M:\LOKI\DATA\140909\0909L01.D
Acq On : 9 Sep 14 8:10
Sample : 25ug/mL BFB Std 08-21-14
Misc : 2uL

Vial: 1
Operator: DG,SV,RS
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 148, 149, 150; Background Corrected with Scan 138

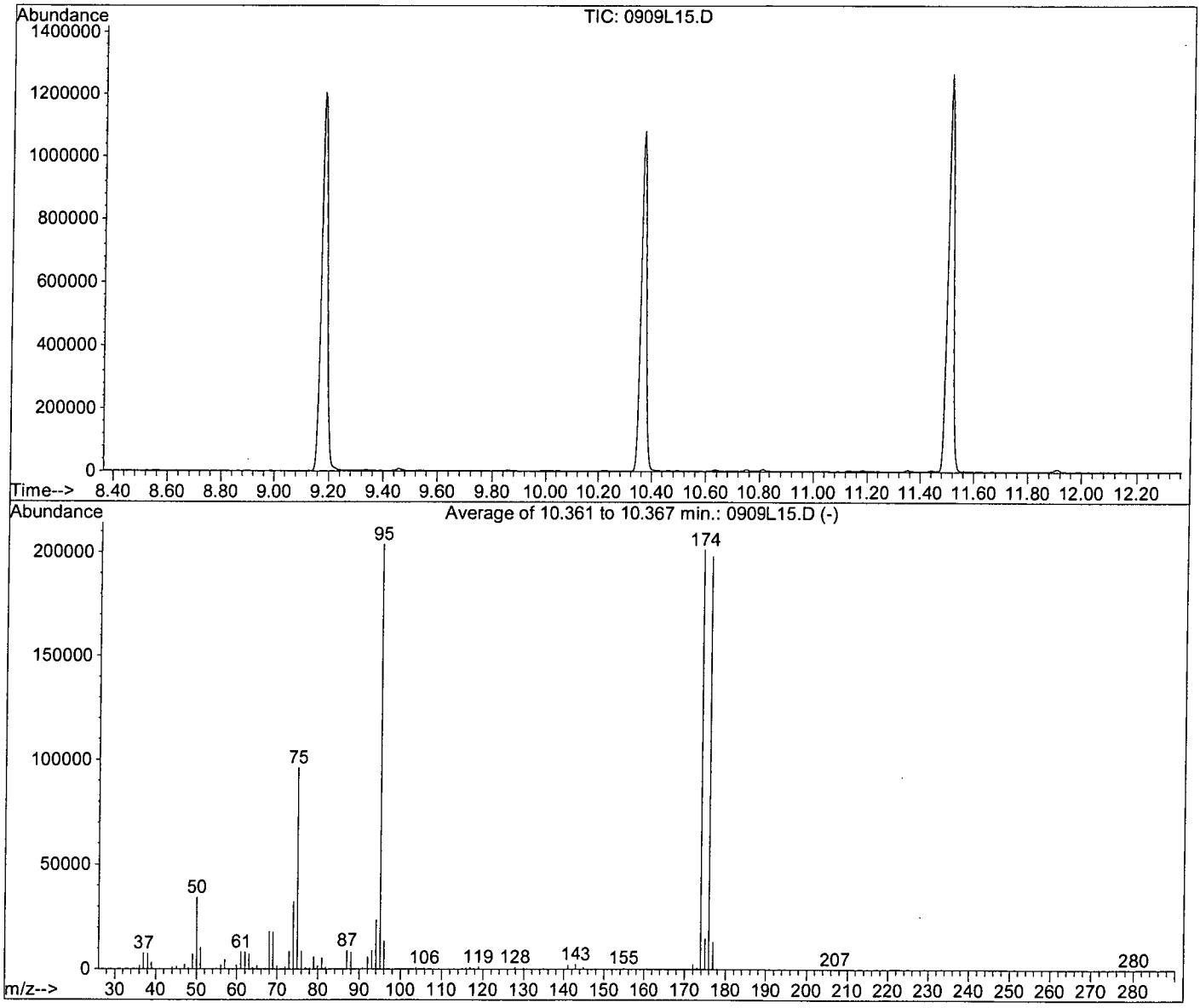
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	32008	PASS
75	95	30	60	47.7	90342	PASS
95	95	100	100	100.0	189547	PASS
96	95	5	9	6.5	12408	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	95.1	180245	PASS
175	174	5	9	8.3	14954	PASS
176	174	95	101	98.0	176704	PASS
177	176	5	9	6.6	11646	PASS

0909L01.D LALLW.M Wed Sep 10 15:26:00 2014

Data File : M:\LOKI\DATA\140909\0909L15.D
Acq On : 9 Sep 14 14:33
Sample : 25ug/mL BFB Std 08-21-14
Misc : 10mL w/5uL IS&S:06-29-14

Vial: 14
Operator: DG,SV,RS
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 2930, 2931, 2932; Background Corrected with Scan 2916

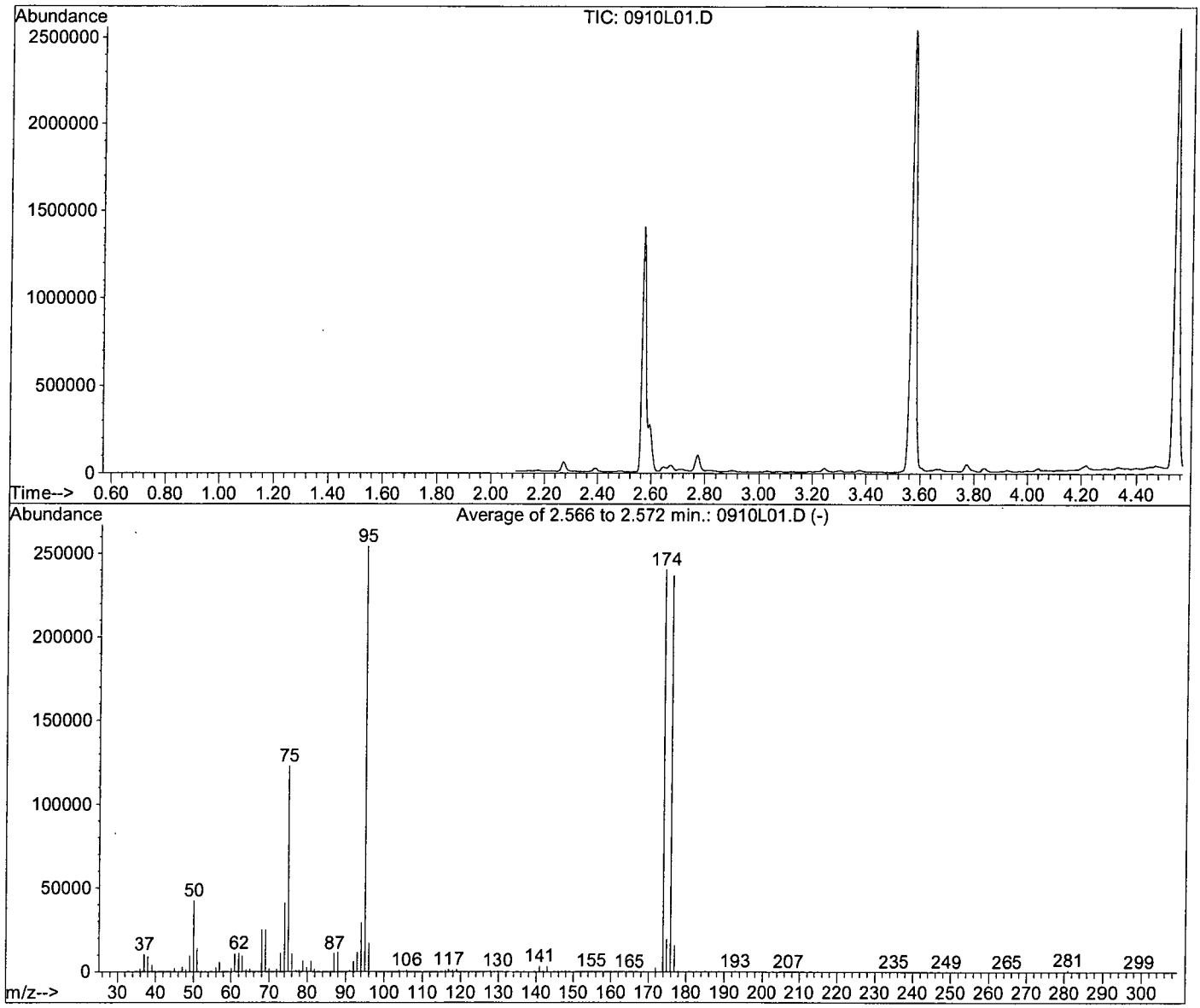
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	34389	PASS
75	95	30	60	47.3	96395	PASS
95	95	100	100	100.0	203840	PASS
96	95	5	9	6.6	13555	PASS
173	174	0.00	2	0.4	898	PASS
174	95	50	100	98.8	201387	PASS
175	174	5	9	7.3	14773	PASS
176	174	95	101	98.3	198037	PASS
177	176	5	9	6.6	13101	PASS

0909L15.D LALLW.M Wed Sep 10 15:27:19 2014

Data File : M:\LOKI\DATA\140909\0910L01.D
Acq On : 10 Sep 14 9:11
Sample : 25ug/mL BFB Std 08-21-14
Misc : 2uL

Vial: 1
Operator: DG,SV,RS
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 148, 149, 150; Background Corrected with Scan 139

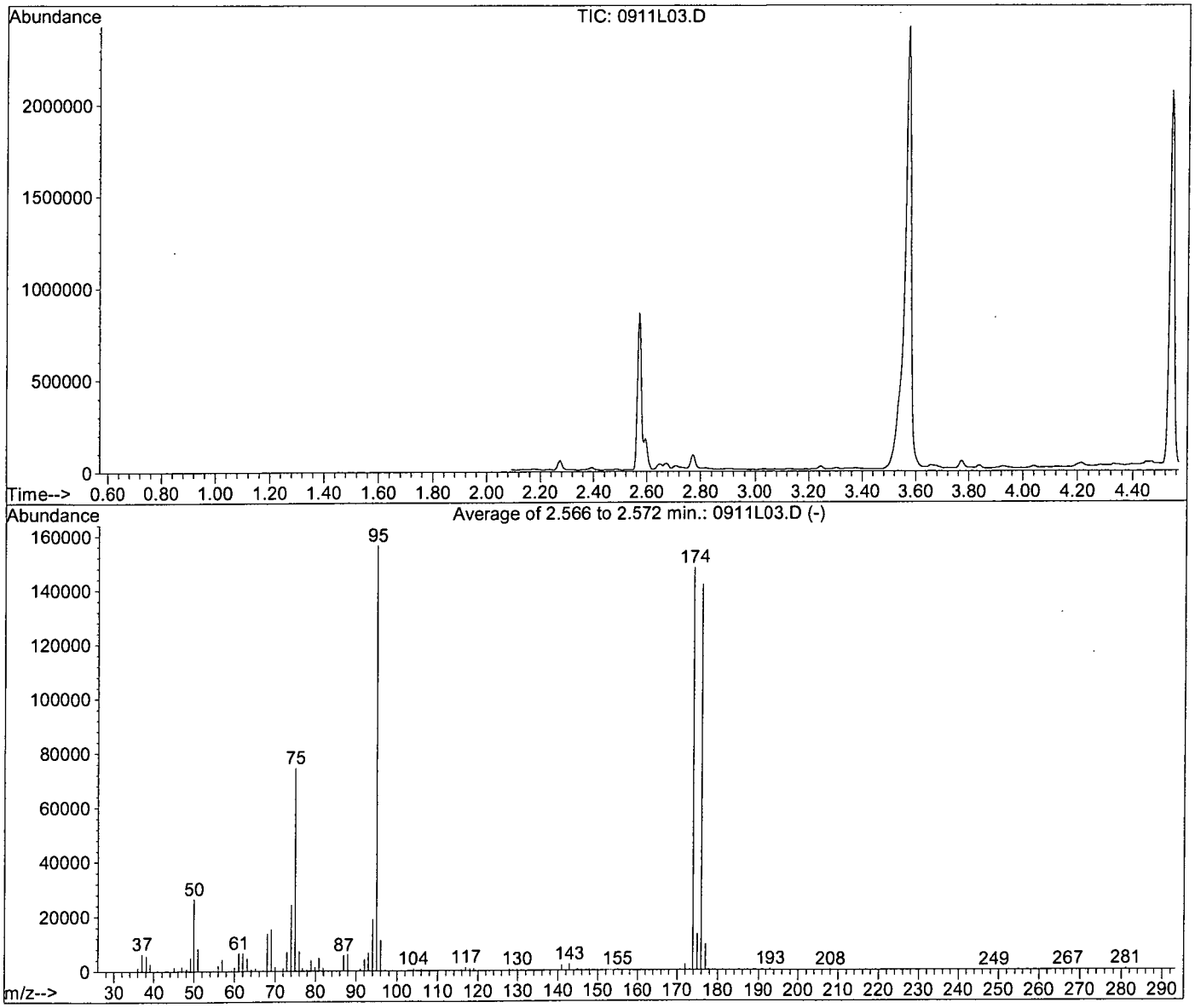
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.7	42440	PASS
75	95	30	60	48.3	122867	PASS
95	95	100	100	100.0	254400	PASS
96	95	5	9	6.7	17054	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	94.5	240512	PASS
175	174	5	9	8.2	19643	PASS
176	174	95	101	98.5	237013	PASS
177	176	5	9	6.7	15917	PASS

0910L01.D LALLW.M Thu Sep 11 08:20:45 2014

Data File : M:\LOKI\DATA\140909\0911L03.D
Acq On : 11 Sep 14 11:28
Sample : 25ug/mL BFB Std 08-21-14
Misc : 2uL

Vial: 1
Operator: DG,SV,RS
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 148, 149, 150; Background Corrected with Scan 136

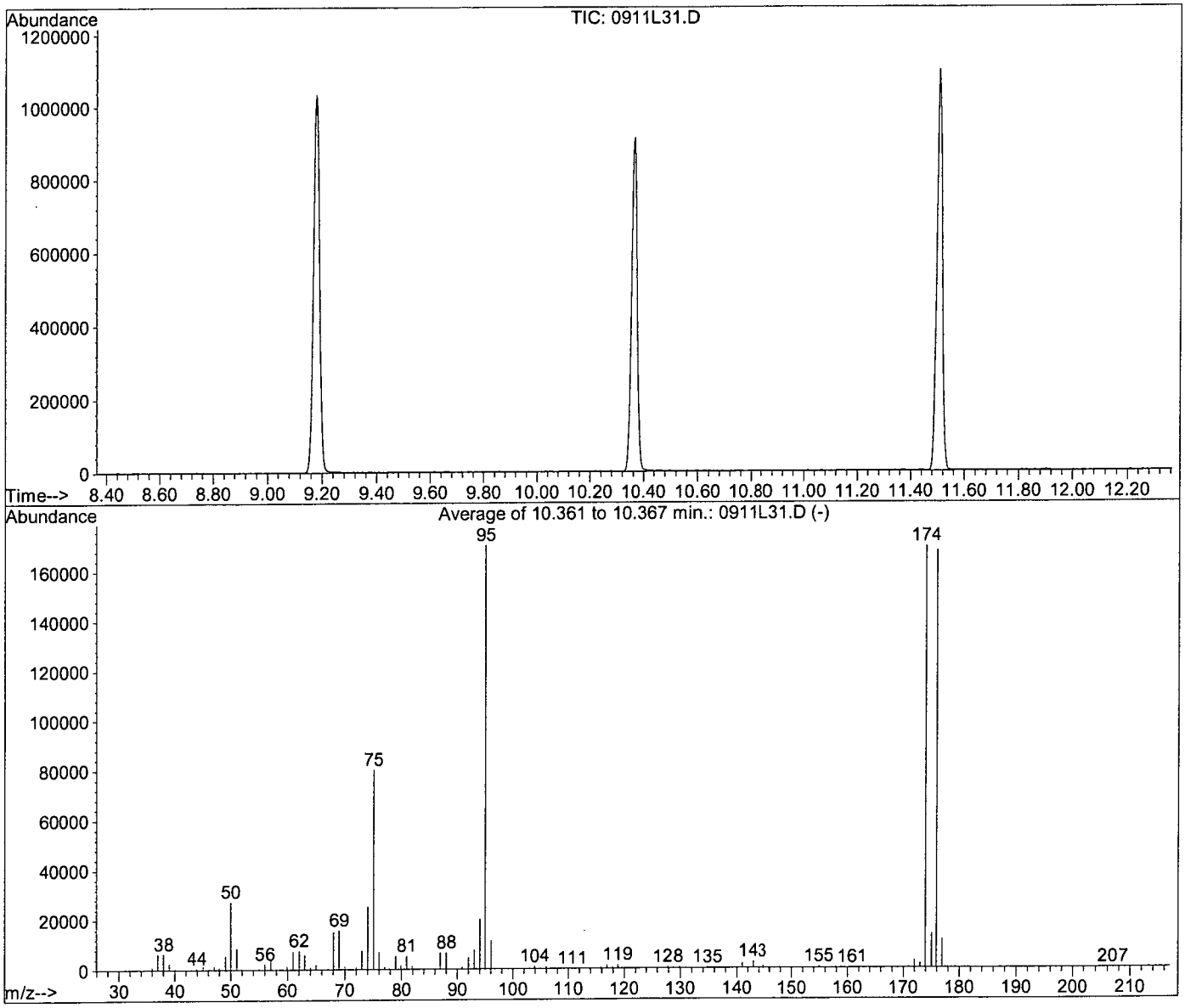
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	26387	PASS
75	95	30	60	47.6	74397	PASS
95	95	100	100	100.0	156352	PASS
96	95	5	9	7.2	11189	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	94.6	147931	PASS
175	174	5	9	9.0	13296	PASS
176	174	95	101	95.7	141600	PASS
177	176	5	9	6.7	9503	PASS

0911L03.D LALLW.M Tue Sep 16 13:31:36 2014

Data File : M:\LOKI\DATA\140909\0911L31.D
Acq On : 12 Sep 14 00:24
Sample : 25ug/mL BFB Std 08-21-14
Misc : 2ul

Vial: 28
Operator: DG,SV,RS
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\140909\LALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 2930, 2931, 2932; Background Corrected with Scan 2917

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.9	27165	PASS
75	95	30	60	47.0	80187	PASS
95	95	100	100	100.0	170517	PASS
96	95	5	9	6.6	11243	PASS
173	174	0.00	2	1.1	1817	PASS
174	95	50	100	99.5	169749	PASS
175	174	5	9	8.0	13607	PASS
176	174	95	101	99.0	167979	PASS
177	176	5	9	6.8	11501	PASS

Sample		wt before soils	wt after soils	wt of soil	initial	time	Balance
AZ02099	S01	37.627	52.138	14.511	RS	8:52	V-BALANCE
	S02	36.889	51.416	14.527	RS	8:54	V-BALANCE
	S03	37.043	50.010	12.967	RS	8:56	V-BALANCE
	S04	37.616	53.636	16.020	RS	8:58	V-BALANCE
	S05	36.975	52.214	15.239	RS	9:00	V-BALANCE
	S06	37.863	53.739	15.876	RS	9:02	V-BALANCE
	S07	36.802	52.843	16.041	RS	9:04	V-BALANCE
	S08	37.755	50.779	13.024	RS	9:06	V-BALANCE
	S09	36.741	52.859	16.118	RS	9:08	V-BALANCE
	S10	37.228	53.923	16.695	RS	9:10	V-BALANCE
				151.018g.			
AZ02100	S01	37.732	53.906	16.174	RS	9:12	V-BALANCE
	S02	37.072	52.318	15.246	RS	9:14	V-BALANCE
	S03	37.859	52.475	14.616	RS	9:16	V-BALANCE
	S04	37.837	53.413	15.576	RS	9:18	V-BALANCE
	S05	37.499	54.011	16.512	RS	9:20	V-BALANCE
	S06	37.911	52.120	14.209	RS	9:22	V-BALANCE
	S07	37.920	52.650	14.730	RS	9:24	V-BALANCE
	S08	37.629	50.921	13.292	RS	9:26	V-BALANCE
	S09	37.350	54.321	16.971	RS	9:28	V-BALANCE
	S10	37.549	54.945	17.396	RS	9:30	V-BALANCE
				154.722g.			
AZ02101	S01	37.589	54.219	16.630	RS	9:32	V-BALANCE
	S02	37.824	52.248	14.424	RS	9:34	V-BALANCE
	S03	37.739	52.853	15.114	RS	9:36	V-BALANCE
	S04	37.583	51.687	14.104	RS	9:38	V-BALANCE
	S05	37.751	53.237	15.486	RS	9:40	V-BALANCE
	S06	36.569	51.381	14.812	RS	9:42	V-BALANCE
	S07	37.340	53.302	15.962	RS	9:44	V-BALANCE
	S08	37.536	51.357	13.821	RS	9:46	V-BALANCE
	S09	37.495	54.155	16.660	RS	9:48	V-BALANCE
	S10	37.256	54.125	16.869	RS	9:50	V-BALANCE
				153.887g.			
AZ02102	S01	37.719	53.386	15.667	RS	9:52	V-BALANCE
	S02	36.909	52.109	15.200	RS	9:54	V-BALANCE
	S03	37.657	54.237	16.580	RS	9:56	V-BALANCE
	S04	37.255	53.163	15.908	RS	9:58	V-BALANCE
	S05	37.602	52.037	14.435	RS	10:00	V-BALANCE
	S06	37.810	56.964	19.154	RS	10:02	V-BALANCE
	S07	37.417	55.467	18.050	RS	10:04	V-BALANCE
	S08	36.708	53.378	16.670	RS	10:06	V-BALANCE
	S09	37.590	53.348	15.758	RS	10:08	V-BALANCE
	S10	37.754	53.149	15.395	RS	10:10	V-BALANCE
				162.817g.			
AZ02103	S01	37.809	54.406	16.597	RS	10:12	V-BALANCE
	S02	37.851	54.504	16.653	RS	10:14	V-BALANCE
	S03	37.568	53.222	15.654	RS	10:16	V-BALANCE
	S04	37.714	55.947	18.233	RS	10:18	V-BALANCE
	S05	37.189	53.139	15.950	RS	10:20	V-BALANCE
	S06	37.070	55.651	18.581	RS	10:22	V-BALANCE

GC/MS STANDARD PREPARATION BOOK # 63 PAGE # 081

8/04/14
RS

Volatile Standard Curve Preparation for 10mL Purge (524 water)-MAX								
Exp Date:	08/05/14	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #2	TAPD	Final Vol
	Conc.	07-29-14H	07-29-14J	07-29-14D	07-29-14F	07-29-14G	07-29-14M	w/P&T H2O
Date/code	µg/L	Exp:08-29-14	Exp:08-29-14	Exp:08-29-14	Exp:08-29-14	Exp:08-29-14	Exp:08-29-14	mL
08-04-14H	0.2	2	2	n/a	n/a	n/a	2	50
08-04-14I	0.5	5	5	n/a	n/a	n/a	5	50
08-04-14J	1	10	10	n/a	n/a	n/a	10	50
08-04-14K	5	n/a	n/a	5	5	5	20	50
08-04-14L	10	n/a	n/a	10	10	10	25	50
08-04-14M	20	n/a	n/a	20	20	20	30	50
08-04-14N	40	n/a	n/a	40	40	40	35	50
08-04-14O	100	n/a	n/a	100	100	100	40	50

RS

8/05/14
RS

A-

Method 8260 Gases, 2000 mg/L, 2 x 0.6 ml

120016-03

Lot# 224788 | Storage ≤-10 Degrees C | Expiry 30/Mar/2017

Solv: P/T Methanol

Method 8260 Gases
Lot #: 224788 - 33527
Rec: 4/15/14 MFR exp. 3/30/17

RS

8/05/14
RS

B-

Method 8260 Gases (Second Source), 2,000 mg/L, 2 X 0.6 ml

120016-03-SS

Lot# 226330 | Storage ≤-10 Degrees C | Expiry 15/Apr/2017

Solv: P/T Methanol

Method 8260 Gases (SS)
Lot #: 226330 - 33552
Rec: 4/15/14 MFR exp. 4/15/17

RS

RS

08/05/14C							
50ug/ml Vol Work Std #7							
Exp:09/05/14							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	224788-33527	08/05/14A	03/30/17	100
02SI	020049-02	HEXACHLOROETHANE	1000	189666-31706	07/15/14B	05/03/14	200
02SI	020228-02	Benzyl Chloride	1000	195504-31718	07/15/13C	09/10/14	200
J&T Brand		Purge & Trap MeOH		49909-00753	07/29/14	07/09/18	3500
08/05/14D							
50ug/ml Vol Work Std #1							
Exp:09/05/14							
					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	229586-33653	07/15/14H	06/03/17	50
J&T Brand		Purge & Trap MeOH		49909-00753	07/29/14	07/09/18	1950
08/05/14E							
50ug/ml Vol Work Std #8							
Exp:09/05/14							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	210086-32532	07/15/14D	06/06/15	100
02SI	120023-03	VOC'S-54 COMP	2000	216122-32919	07/15/14E	10/11/15	100
02SI	020232-02	Vinyl Acetate	2000	229682-33657	07/15/14F	08/28/14	100
02SI	020620-02	n-Hexane	1000	195505-33672	07/15/13G	09/09/17	200
J&T Brand		Purge & Trap MeOH		49909-00753	07/29/14	07/09/18	3500
08/05/14F							
50ug/ml Vol Work Std #2							
Exp:09/05/14							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	216124-32929	07/15/14I	10/10/14	100
J&T Brand		Purge & Trap MeOH		49909-00753	07/29/14	07/09/18	3900

8/05/14
RS

	S07	37.816	49.780	11.964	RS	10:24	V-BALANCE
	S08	37.752	54.926	17.174	RS	10:26	V-BALANCE
	S09	37.766	53.629	15.863	RS	10:28	V-BALANCE
	S10	37.311	52.738	15.427	RS	10:30	V-BALANCE
				162.096g.			
AZ02104	S01	37.811	52.799	14.988	RS	10:32	V-BALANCE
	S02	37.434	53.076	15.642	RS	10:34	V-BALANCE
	S03	36.903	52.654	15.751	RS	10:36	V-BALANCE
	S04	37.793	54.595	16.802	RS	10:38	V-BALANCE
	S05	37.414	52.098	14.684	RS	10:40	V-BALANCE
	S06	37.605	55.643	18.038	RS	10:42	V-BALANCE
	S07	36.899	54.846	17.947	RS	10:44	V-BALANCE
	S08	36.881	52.237	15.356	RS	10:46	V-BALANCE
	S09	37.702	52.583	14.881	RS	10:48	V-BALANCE
	S10	37.838	52.502	14.664	RS	10:50	V-BALANCE
				158.753g.			
AZ02105	S01	37.108	52.378	15.270	RS	10:52	V-BALANCE
	S02	37.196	54.192	16.996	RS	10:54	V-BALANCE
	S03	37.991	52.651	14.660	RS	10:56	V-BALANCE
	S04	36.567	51.929	15.362	RS	10:58	V-BALANCE
	S05	36.984	52.646	15.662	RS	11:00	V-BALANCE
	S06	36.773	54.800	18.027	RS	11:02	V-BALANCE
	S07	37.125	52.950	15.825	RS	11:04	V-BALANCE
	S08	36.853	51.238	14.385	RS	11:06	V-BALANCE
	S09	36.820	52.327	15.507	RS	11:08	V-BALANCE
	S10	36.710	52.459	15.749	RS	11:10	V-BALANCE
				157.443g.			
AZ02106	S01	37.440	52.605	15.165	RS	11:12	V-BALANCE
	S02	36.922	54.101	17.179	RS	11:14	V-BALANCE
	S03	36.609	52.586	15.977	RS	11:16	V-BALANCE
	S04	37.136	52.422	15.286	RS	11:18	V-BALANCE
	S05	36.589	52.904	16.315	RS	11:20	V-BALANCE
	S06	37.206	53.007	15.801	RS	11:22	V-BALANCE
	S07	36.915	54.121	17.206	RS	11:24	V-BALANCE
	S08	36.511	52.501	15.990	RS	11:26	V-BALANCE
	S09	36.835	51.072	14.237	RS	11:28	V-BALANCE
	S10	36.924	52.661	15.737	RS	11:30	V-BALANCE
				158.893g.			
AZ02107	S01	37.200	49.851	12.651	RS	11:32	V-BALANCE
	S02	36.358	53.063	16.705	RS	11:34	V-BALANCE
	S03	36.907	52.664	15.757	RS	11:36	V-BALANCE
	S04	37.249	52.245	14.996	RS	11:38	V-BALANCE
	S05	37.091	52.395	15.304	RS	11:40	V-BALANCE
	S06	37.310	52.790	15.480	RS	11:42	V-BALANCE
	S07	36.719	53.587	16.868	RS	11:44	V-BALANCE
	S08	36.935	52.159	15.224	RS	11:46	V-BALANCE
	S09	37.219	52.975	15.756	RS	11:48	V-BALANCE
	S10	36.800	52.584	15.784	RS	11:50	V-BALANCE
				154.525g.			
AZ02110	S01	36.908	50.711	13.803	RS	11:52	V-BALANCE
	S02	37.728	55.831	18.103	RS	11:54	V-BALANCE
	S03	37.000	52.649	15.649	RS	11:56	V-BALANCE

	S04	37.114	52.603	15.489	RS	11:58	V-BALANCE
	S05	36.531	52.611	16.080	RS	12:00	V-BALANCE
	S06	36.865	53.202	16.337	RS	12:02	V-BALANCE
	S07	36.862	55.087	18.225	RS	12:04	V-BALANCE
	S08	36.931	54.005	17.074	RS	12:06	V-BALANCE
	S09	37.404	54.518	17.114	RS	12:08	V-BALANCE
	S10	37.784	56.725	18.941	RS	12:10	V-BALANCE
				166.815g.			
AZ02111	S01	36.758	54.736	17.978	RS	12:12	V-BALANCE
	S02	36.816	53.125	16.309	RS	12:14	V-BALANCE
	S03	36.821	53.671	16.850	RS	12:16	V-BALANCE
	S04	37.070	53.055	15.985	RS	12:18	V-BALANCE
	S05	37.033	53.760	16.727	RS	12:20	V-BALANCE
	S06	37.128	55.539	18.411	RS	12:22	V-BALANCE
	S07	36.895	54.231	17.336	RS	12:24	V-BALANCE
	S08	37.557	55.333	17.776	RS	12:26	V-BALANCE
	S09	37.181	54.430	17.249	RS	12:28	V-BALANCE
	S10	36.778	55.017	18.239	RS	12:30	V-BALANCE
				172.860g.			
AZ02112	S01	37.047	54.123	17.076	RS	12:32	V-BALANCE
	S02	37.438	55.406	17.968	RS	12:34	V-BALANCE
	S03	37.609	53.637	16.028	RS	12:36	V-BALANCE
	S04	37.223	53.919	16.696	RS	12:38	V-BALANCE
	S05	36.945	54.019	17.074	RS	12:40	V-BALANCE
	S06	37.402	53.840	16.438	RS	12:42	V-BALANCE
	S07	37.462	56.871	19.409	RS	12:44	V-BALANCE
	S08	37.546	53.241	15.695	RS	12:46	V-BALANCE
	S09	37.707	55.871	18.164	RS	12:48	V-BALANCE
	S10	36.540	53.063	16.523	RS	12:50	V-BALANCE
				171.071g.			
AZ02113	S01	36.743	52.664	15.921	RS	12:52	V-BALANCE
	S02	37.026	52.145	15.119	RS	12:54	V-BALANCE
	S03	37.201	52.370	15.169	RS	12:56	V-BALANCE
	S04	37.066	52.472	15.406	RS	12:58	V-BALANCE
	S05	37.525	53.914	16.389	RS	13:00	V-BALANCE
	S06	37.028	54.427	17.399	RS	13:02	V-BALANCE
	S07	36.761	54.637	17.876	RS	13:04	V-BALANCE
	S08	36.015	54.887	18.872	RS	13:06	V-BALANCE
	S09	36.950	52.343	15.393	RS	13:08	V-BALANCE
	S10	36.834	52.316	15.482	RS	13:10	V-BALANCE
				163.026g.			
AZ02114	S01	37.027	54.492	17.465	RS	13:12	V-BALANCE
	S02	37.981	54.326	16.345	RS	13:14	V-BALANCE
	S03	37.048	52.752	15.704	RS	13:16	V-BALANCE
	S04	37.273	53.934	16.661	RS	13:18	V-BALANCE
	S05	37.173	53.567	16.394	RS	13:20	V-BALANCE
	S06	36.800	54.737	17.937	RS	13:22	V-BALANCE
	S07	36.591	56.243	19.652	RS	13:24	V-BALANCE
	S08	37.175	55.045	17.870	RS	13:26	V-BALANCE
	S09	36.849	53.443	16.594	RS	13:28	V-BALANCE
	S10	37.014	55.039	18.025	RS	13:30	V-BALANCE
				172.644g.			

AZ02115	S01	36.790	53.009	16.219	RS	13:32	V-BALANCE
	S02	36.887	52.412	15.525	RS	13:34	V-BALANCE
	S03	37.340	53.808	16.468	RS	13:36	V-BALANCE
	S04	37.044	53.941	16.897	RS	13:38	V-BALANCE
	S05	37.756	54.230	16.474	RS	13:40	V-BALANCE
	S06	37.486	54.265	16.779	RS	13:42	V-BALANCE
	S07	37.030	53.120	16.090	RS	13:44	V-BALANCE
	S08	37.303	53.427	16.124	RS	13:46	V-BALANCE
	S09	36.963	54.832	17.869	RS	13:48	V-BALANCE
	S10	37.054	51.944	14.890	RS	13:50	V-BALANCE

163.3359

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		08/05/14G					
		5ug/ml Vol Work Std #9					
		SOURCES	Lot	APPL Code	APPL Exp Date	ul	
		50ug/ml Vol Work Std #7		08/05/14C	09/05/14	200	
		50ug/ml Vol Work Std #8		08/05/14E	09/05/14	200	
		J&T Brand		07.29/14	07/09/18	1600	
		08/05/14H					
		5ug/ml Vol Work Std #10					
		SOURCES	Lot	APPL Code	APPL Exp Date	ul	
		50ug/ml Vol Work Std #1		08/05/14D	09.05/14	200	
		J&T Brand		07.29/14	07.09/18	1800	
		08/05/14I					
		5ug/ml Vol Work Std #12					
		SOURCES	Lot	APPL Code	APPL Exp Date	ul	
		50ug/ml Vol Work Std #2		08/05/14F	09/05/14	200	
		J&T Brand		07.29/14	07/09/18	1800	
08/05/14J							
50ug/ml 8260 Surrogate			Conc.		Date	Exp.	
Exp:09/05/14			ug/ml	Lot #	Code	Date	uL
Supplier	120002-01	8260B Surr Solution	2000	18F7K1-31771	07/15/14L	02/19/15	100
J&T Brand		Purge & Trap MeOH		499[illegible]-00753	07.29/14	07/09/18	3900
08/05/14K							
5.0ug/ml 8260 Surrogate			Lot	APPL Code	APPL Exp Date	ul	
		50ug/ml 8260 Surrogate		08/05/14J	09.05/14	200	
J&T Brand		Purge & Trap MeOH		07.29/14	07/09/18	1800	
08/05/14L							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:09/05/14			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	120166-01	Volatile Mix 4-3	2000	239FH7-33668	07/29/14B	05/29/16	500
O2SI	020229-09	Acrolein	10000	231[illegible]E-33791	07/15/14K	08/25/14	100
J&T Brand		Purge & Trap MeOH		499[illegible]-00753	07.29/14	07/09/18	3400

08/05/14M							
50ug/ml VOC Std#5							
Exp:09/05/14			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
O2SI	120016-03-SS	8260 Gases;SSI	200	2[illegible]-33653	08/05/14B	04/15/17	50
O2SI	020145-02-02-[illegible]	2-CEVE	2000	215[illegible]-33211	07/15/14P	12/15/15	50
J&T Brand		Purge & Trap MeOH		499[illegible]-00753	07/29/14	07/09/18	1900
08/05/14N							
50ug/ml VOC Std#6							
Exp:09/05/14							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
O2SI	120023-03-SS	VOC'S 54 COMP.	2000	238329-32740	07.15/14N	05/02/15	50
O2SI	120256-01-SS	Custom 8260 Solution	2000	212[illegible]59-32959	07 15/14O	01/23/15	50
O2SI	020232-02-SS	Vinyl Acetate(SS)	2000	2262[illegible]-33554	07/15/14R	07/10/14	50
O2SI	020520-02-SS	n-Hexane	1000	205233-33677	07/15/14T	03/12/15	100
O2SI	020049-02-SS	HEXACHLOROETHANE	1000	226[illegible]A-33531	07/15/14S	04/07/15	100
J&T Brand		Purge & Trap MeOH		499[illegible]-00753	07.29/14	07/09/18	1650
08/05/14O							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:09/05/14			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	199[illegible]-33404	07.15/14U	05/18/15	250
O2SI	020229-09-SS	Acrolein SOLUTION SS	10000	2[illegible]-33783	07/15/14M	08/25/14	50
J&T Brand		Purge & Trap MeOH		499[illegible]-00753	07.29/14	07/09/18	1700

8/05/14 RS

8/05/14 RS

RS 8/05/14

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Volatile Standard Curve Preparation for 10mL Purge (8260 water)-MAX

Exp: Date:	~~08/06/14~~ 8/06/14 RS	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-05-14G	08-05-14H	08-05-14I	08-05-14K	08-05-14C	08-05-14E	08-05-14D	08-05-14F	08-05-14J	08-05-14L	w/P&T H2O
Date/code	µg/L	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	mL
08-05-14P	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	50
08-05-14Q	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50
08-05-14R	1	10	10	10	20	n/a	n/a	n/a	n/a	n/a	10	50
08-05-14S	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50
08-05-14T	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50
08-05-14U	20	n/a	n/a	n/a	n/a	20	20	20	20	40	30	50
08-05-14V	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50
08-05-14W	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50
08-05-14X	200	n/a	n/a	n/a	n/a	200	200	200	200	150	45	50

8/05/14 RS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI

Exp: Date:	08/06/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-05-14G	08-05-14H	08-05-14I	08-05-14K	08-05-14C	08-05-14E	08-05-14D	08-05-14F	08-05-14J	08-05-14L	w/P&T H2O
Date/code	µg/L	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	mL
08-05-14Y	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	50
08-05-14Z	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50
08-05-14AA	1	10	10	10	20	n/a	n/a	n/a	n/a	n/a	10	50
08-05-14AB	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50
08-05-14AC	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50
08-05-14AD	20	n/a	n/a	n/a	n/a	20	20	20	20	40	30	50
08-05-14AE	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50
08-05-14AF	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50

8/05/14 RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-THOR

Exp: Date:	08/07/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-05-14G	08-05-14H	08-05-14I	08-05-14K	08-05-14C	08-05-14E	08-05-14D	08-05-14F	08-05-14J	08-05-14L	w/P&T H2O
Date/code	µg/L	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	mL
08-06-14A	2	2	2	2	2	n/a	n/a	n/a	n/a	n/a	1	5
08-06-14B	5	5	5	5	5	n/a	n/a	n/a	n/a	n/a	2	5
08-06-14C	10	10	10	10	10	n/a	n/a	n/a	n/a	n/a	3	5
08-06-14D	20	20	20	20	20	n/a	n/a	n/a	n/a	n/a	4	5
08-06-14E	50	n/a	n/a	n/a	n/a	5	5	5	5	5	5	5
08-06-14F	100	n/a	n/a	n/a	n/a	10	10	10	10	10	6	5
08-06-14G	150	n/a	n/a	n/a	n/a	15	15	15	15	15	7	5
08-06-14H	200	n/a	n/a	n/a	n/a	20	20	20	20	20	8	5

8/06/14 RS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-THOR

Exp: Date:	08/08/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-05-14G	08-05-14H	08-05-14I	08-05-14K	08-05-14C	08-05-14E	08-05-14D	08-05-14F	08-05-14J	08-05-14L	w/P&T H2O
Date/code	µg/L	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	mL
08-07-14A	0.1	1	1	1	2	n/a	n/a	n/a	n/a	n/a	1	50
08-07-14B	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	50
08-07-14C	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50
08-07-14D	1	10	10	10	20	n/a	n/a	n/a	n/a	n/a	10	50
08-07-14E	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50
08-07-14F	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50
08-07-14G	20	n/a	n/a	n/a	n/a	20	20	20	20	40	30	50
08-07-14H	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50
08-07-14I	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50

8/07/14 RS

Gasoline Curve Preparation for 100mL Purge (water)-LOKI

Exp Date:	08/08/14	2000ug/ml	
		Gasoline	Final Vol
	Conc	05-31-14C	w/P&T H2O
Date/code	µg/L	Exp.05-31-15	mL
08-07-14J	20	1	100
08-07-14K	50	2.5	100
08-07-14L	100	5	100
08-07-14M	300	15	100
08-07-14N	600	30	100
08-07-14O	800	40	100
08-07-14P	1000	50	100

8/07/14 RS

GC/MS STANDARD PREPARATION BOOK # 63 PAGE # ~~~

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI

Exp: Date:	08/09/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-05-14G	08-05-14H	08-05-14I	08-05-14K	08-05-14C	08-05-14E	08-05-14D	08-05-14F	08-05-14J	08-05-14L	w/P&T H2O
Date/code	µg/L	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	mL
08-08-14A	0.1	1	1	1	2	n/a	n/a	n/a	n/a	n/a	1	50
08-08-14B	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	50
08-08-14C	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50
08-08-14D	1	10	10	10	20	n/a	n/a	n/a	n/a	n/a	10	50
08-08-14E	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50
08-08-14F	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50
08-08-14G	20	n/a	n/a	n/a	n/a	20	20	20	20	40	30	50
08-08-14H	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50
08-08-14I	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50

8/08/14 RS

Gasoline Curve Preparation for 100mL Purge (water)-THOR

Exp Date:	08/12/14	2000ug/ml	
		Gasoline	Final Vol
	Conc.	05-31-14C	w/P&T H2O
Date/code	µg/L	Exp.05-31-15	mL
08-11-14A	20	1	100
08-11-14B	50	2.5	100
08-11-14C	100	5	100
08-11-14D	300	15	100
08-11-14E	600	30	100
08-11-14F	800	40	100
08-11-14G	1000	50	100

8/11/14 RS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-MAX

Exp: Date:	08/12/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-05-14G	08-05-14H	08-05-14I	08-05-14K	08-05-14C	08-05-14E	08-05-14D	08-05-14F	08-05-14J	08-05-14L	w/P&T H2O
Date/code	µg/L	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	Exp:09-05-14	mL
08-11-14H	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	50
08-11-14I	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50
08-11-14J	1	10	10	10	20	n/a	n/a	n/a	n/a	n/a	10	50
08-11-14K	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50
08-11-14L	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50
08-11-14M	20	n/a	n/a	n/a	n/a	20	20	20	20	40	30	50
08-11-14N	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50
08-11-14O	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50
08-11-14P	200	n/a	n/a	n/a	n/a	200	200	200	200	150	45	50

8/11/14 RS

8/12/14 RS A-

Method 8260 Gases, 2000 mg/L, 2 x 0.5 ml

120016-03

Lot #	Storage	Expiry
224788	≤ -10 Degrees C	30/Mar/2017

Solv: P/T Methanol

R&D only, not human consump. Made in the USA

Method 8260 Gases
Lot #: 224788 - 33528
Rec: 4/15/14 MFR exp. 3/30/17

RS

8/12/14 RS B-

Hexachloroethane Solution, 1000 mg/L, 1 ml

020049-02

Lot #	Storage	Expiry
189666	≤ -10 Degrees C	5/3/14

Solv: P/T Methanol

R&D only, not human consump. Made in the USA

Hexachloroethane
Lot #: 189666 - 31707
Rec: 12/17/12 MFR exp. 5/3/14

RS

8/12/14 C-
RS

Benzyl Chloride Solution, 1000 mg/L, 1 ml
020223-02
Lot # 200704 | Storage ≤-10 Degrees C | Expiry 12/10/14
Solv: P/T Methanol
R&D only, not human consump. Made in the USA

Benzyl Chloride
Lot #: 200704 - 33537
Rec: 4/15/14 MFR exp. 12/10/14
RS

8/12/14 D-
RS

2-Chloroethyl Vinyl Ether Solution, 2,000 mg/L, 2 x 0.5 mL
020143-02-02
Lot # 229586 | Storage ≤-10 Degrees | Expiry 3/[illegible]/2017
Solv: P/T Methanol
R&D only, not human consump. Made in the USA

2-Chloroethyl vinyl ether
Lot #: 229586 - 33654
Rec: 6/3/14 MFR exp. 6/3/17
RS

8/12/14 E-
RS

Ketones Solution, 2,000 mg/L, 1 ml
121810-05
Lot # 216124 | Storage ≤-10 Degrees C | Expiry 10/10/14
Solv: P/T MeOH:Water 9:1
R&D only, not human consump. Made in the USA

Ketones
Lot #: 216124 - 32930
Rec: 10/15/13 MFR exp. 10/10/14
RS

8/12/14 F-
RS

Volatile Mix, 20-29, 2,000 mg/L, 1 ml
122839-02
Lot # 210086 | Storage ≤-10 Degrees C | Expiry 6/6/15
Solv: P/T Methanol
R&D only, not human consump. Made in the USA

Volatile Mix, 20-29
Lot #: 210086 - 32533
Rec: 6/18/13 MFR exp. 6/6/15
RS

8/12/14 G-
RS

Method 8260 VOC Liquids, 54 Compounds, 2,000 mg/L, 1 ml
120423-03
Lot # 216122 | Storage ≤-10 Degrees C | Expiry 10/11/15
Solv: P/T Methanol
R&D only, not human consump. Made in the USA

8260 VOC Liquids, 54 Comp.
Lot #: 216122 - 32920
Rec: 10/15/13 MFR exp. 10/11/15
RS

8/12/14 H-
RS

Vinyl Acetate Solution, 2000 mg/L, 1 mL
020132-03
Lot # 219682 | Storage ≤-10 Degrees | Expiry 28/Aug/2014
Solv: P/T Methanol
R&D only, not human consump. Made in the USA

Vinyl Acetate
Lot #: 229682 - 33658
Rec: 6/3/14 MFR exp. 8/28/14
RS

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8/12/14 I.
RS

n-Hexane Solution, 1,000 mg/L, 1 ml

020620-02

Lot #	Storage	Expiry
195505	≤ -10 Degrees C	9/9/17

Solv: P/T Methanol

n-Hexane, 1000mg/L
Lot #: 195505 - 33673
Rec: 6/3/14 MFR exp. 9/9/17

RS

08/12/14J							
50ug/ml Vol Work Std #7							
Exp:09/12/14							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	224788-33528	08/12/14A	03/30/17	100
02SI	020049-02	HEXACHLOROETHANE	1000	189666-31707	08/12/14B	05/03/14	200
02SI	020228-02	Benzyl Chloride	1000	200704-33537	08/12/13C	12/10/14	200
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	3500
08/12/14K							
50ug/ml Vol Work Std #1							
Exp:09/12/14					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	229586-33654	08/12/14D	06/03/17	50
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	1950
08/12/14L							
50ug/ml Vol Work Std #8							
Exp:09/12/14							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 30-29	2000	210086-32533	08/12/14F	06/06/15	100
02SI	120023-03	VOC'S-54 COMP	2000	216122-32920	08/12/14G	10/11/15	100
02SI	020232-02	Vinyl Acetate	2000	229682-33658	08/12/14H	08/28/14	100
02SI	020620-02	n-Hexane	1000	195505-33673	08/12/13I	09/09/17	200
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	3500
08/12/14M							
50ug/ml Vol Work Std #2							
Exp:09/12/14							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	216124-32930	08/12/14E	10/10/14	100
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	3900
		08/12/14N					
		5ug/ml Vol Work Std #9					
		SOURCES	Lot	APPL Code	APPL Exp Date	ul	
		50ug/ml Vol Work Std #7		08/12/14J	09/12/14	200	
		50ug/ml Vol Work Std #8		08/12/14L	09/12/14	200	
		J&T Brand		07/29/14	07/09/18	1600	
		08/12/14O					
		5ug/ml Vol Work Std #10					
		SOURCES	Lot	APPL Code	APPL Exp Date	ul	
		50ug/ml Vol Work Std #1		08/12/14K	09/12/14	200	
		J&T Brand		07/29/14	07/09/18	1800	
		08/12/14P					
		5ug/ml Vol Work Std #12					
		SOURCES	Lot	APPL Code	APPL Exp Date	ul	
		50ug/ml Vol Work Std #2		08/12/14M	09/12/14	200	
		J&T Brand		07/29/14	07/09/18	1800	
08/12/14Q							
50ug/ml 8260 Surrogate			Conc.		Date	Exp.	
Exp:09/12/14			ug/ml	Lot #	Code	Date	uL
02SI	120002-01	8260B Surr Solution	2000	185763-31771	07/15/14L	03/19/15	100
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	3900
08/12/14R							
5.0ug/ml 8260 Surrogate			Lot	APPL Code	APPL Exp Date	ul	
		50ug/ml 8260 Surrogate		08/12/14Q	09/12/14	200	
J&T Brand		Purge & Trap MeOH		07/29/14	07/09/18	1800	
08/12/14S							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:09/12/14			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	229537 31663	07/29/14B	05/29/16	500
02SI	020229-09	Acrolein	10000	231955 31791	07/15/14K	08/25/14	100
J&T Brand		Purge & Trap MeOH		49909 00754	08/07/14	07/09/18	3400

8/12/14
RS

08/12/14T							
50ug/ml VOC Std#5							
Exp:09.12/14							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
O2SI	120016-03-SS	8260 Gases(SS)	2000	226330-33552	08/05/14B	04/15/17	50
O2SI	020145-02-02-S	2-CEVE	2000	219465-33211	07/15/14P	12/16/15	50
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	1900
08/12/14U							
50ug/ml VOC Std#6							
Exp:09/12/14							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
O2SI	120023-03-SS	VOC'S 54 COMP.	2000	208329-32740	07/15/14N	05/02/15	50
O2SI	120296-01-SS	Custom 8260 Solution	2000	212199-32959	07/15/14O	01/23/15	50
O2SI	020232-02-SS	Vinyl Acetate(SS)	2000	236292-33554	07/15/14R	07/10/14	50
O2SI	020620-02-SS	n-Hexane	1000	205203-33677	07/15/14T	03/12/15	100
O2SI	020049-02-SS	HEXACHLOROETHANE	1000	226063-33531	07/15/14S	04/07/16	100
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	1650
08/12/14V							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:09/12/14			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	189667-33304	07/15/14U	05/18/15	250
O2SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	234996-33793	07/15/14M	08/25/14	50
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	1700

8/12/14 RS

08-12-14W					
2000ug/ml Gasoline					
Supplier	ID #		ug/ml	Lot #	uL
Supelco	47516-U	Gasoline	20,000	LC01901-33489	200
J&T Brand		Purge & Trap MeOH		49909-00754	1800

RS

8/12/14 RS

Gasoline Curve Preparation for 100mL Purge (water)-MAX

Exp Date:	08/13/14	2000ug/ml Gasoline	
	Conc.	08-12-14W	Final Vol w/P&T H2O
Date code	µg/L	Exp 08-31-15	mL
08-12-14X	20	1	100
08-12-14Y	50	2.5	100
08-12-14Z	100	5	100
08-12-14AA	300	15	100
08-12-14AB	600	30	100
08-12-14AC	800	40	100
08-12-14AD	1000	50	100

8/12/14 RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-THOR

Exp. Date:	08/13/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc	08-12-14N	08-12-14O	08-12-14P	08-12-14R	08-12-14J	08-12-14L	08-12-14K	08-12-14M	08-12-14Q	08-12-14S	w/P&T H2O
Date code	µg/L	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	mL
08-12-14AE	2	2	2	2	2	n/a	n/a	n/a	n/a	n/a	1	5
08-12-14AF	5	5	5	5	5	n/a	n/a	n/a	n/a	n/a	2	5
08-12-14AG	10	10	10	10	10	n/a	n/a	n/a	n/a	n/a	3	5
08-12-14AH	20	20	20	20	20	n/a	n/a	n/a	n/a	n/a	4	5
08-12-14AI	50	n/a	n/a	n/a	n/a	5	5	5	5	5	5	5
08-12-14AJ	100	n/a	n/a	n/a	n/a	10	10	10	10	10	6	5
08-12-14AK	150	n/a	n/a	n/a	n/a	15	15	15	15	15	7	5
08-12-14AL	200	n/a	n/a	n/a	n/a	20	20	20	20	20	8	5

8/12/14 RS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI

Exp. Date:	08/13/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc	08-12-14N	08-12-14O	08-12-14P	08-12-14R	08-12-14J	08-12-14L	08-12-14K	08-12-14M	08-12-14Q	08-12-14S	w/P&T H2O
Date code	µg/L	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	Exp 09-12-14	mL
08-12-14AM	0.1	1	1	1	2	n/a	n/a	n/a	n/a	n/a	1	50
08-12-14AN	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	50
08-12-14AO	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50
08-12-14AP	1	10	10	10	20	n/a	n/a	n/a	n/a	n/a	10	50
08-12-14AQ	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50
08-12-14AR	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50
08-12-14AS	20	n/a	n/a	n/a	n/a	20	20	20	20	40	30	50
08-12-14AT	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50
08-12-14AU	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50

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Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI

Exp: Date:	08/14/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-12-14N	08-12-14O	08-12-14P	08-12-14R	08-12-14J	08-12-14L	08-12-14K	08-12-14M	08-12-14Q	08-12-14S	w/P&T H2O
Date/code	µg/L	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	mL
08-13-14A	0.1	1	1	1	2	n/a	n/a	n/a	n/a	n/a	1	50
08-13-14B	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	50
08-13-14C	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50
08-13-14D	1	10	10	10	20	n/a	n/a	n/a	n/a	n/a	10	50
08-13-14E	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50
08-13-14F	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50
08-13-14G	20	n/a	n/a	n/a	n/a	20	20	20	20	40	30	50
08-13-14H	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50
08-13-14I	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50

8/13/14
RS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-THOR

Exp: Date:	08/14/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-12-14N	08-12-14O	08-12-14P	08-12-14R	08-12-14J	08-12-14L	08-12-14K	08-12-14M	08-12-14Q	08-12-14S	w/P&T H2O
Date/code	µg/L	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	mL
08-13-14J	0.1	1	1	1	2	n/a	n/a	n/a	n/a	n/a	1	50
08-13-14K	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	50
08-13-14L	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50
08-13-14M	1	10	10	10	20	n/a	n/a	n/a	n/a	n/a	10	50
08-13-14N	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50
08-13-14O	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50
08-13-14P	20	n/a	n/a	n/a	n/a	20	20	20	20	40	30	50
08-13-14Q	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50
08-13-14R	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50

8/13/14
RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-LOKI

Exp: Date:	08/16/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-12-14N	08-12-14O	08-12-14P	08-12-14R	08-12-14J	08-12-14L	08-12-14K	08-12-14M	08-12-14Q	08-12-14S	w/P&T H2O
Date/code	µg/L	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	mL
08-15-14A	2	2	2	2	2	n/a	n/a	n/a	n/a	n/a	1	5
08-15-14B	5	5	5	5	5	n/a	n/a	n/a	n/a	n/a	2	5
08-15-14C	10	10	10	10	10	n/a	n/a	n/a	n/a	n/a	3	5
08-15-14D	20	20	20	20	20	n/a	n/a	n/a	n/a	n/a	4	5
08-15-14E	50	n/a	n/a	n/a	n/a	5	5	5	5	5	5	5
08-15-14F	100	n/a	n/a	n/a	n/a	10	10	10	10	10	6	5
08-15-14G	150	n/a	n/a	n/a	n/a	15	15	15	15	15	7	5
08-15-14H	200	n/a	n/a	n/a	n/a	20	20	20	20	20	8	5

8/15/14
RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-LOKI

Exp: Date:	08/20/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-12-14N	08-12-14O	08-12-14P	08-12-14R	08-12-14J	08-12-14L	08-12-14K	08-12-14M	08-12-14Q	08-12-14S	w/P&T H2O
Date/code	µg/L	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	mL
08-19-14A	2	2	2	2	2	n/a	n/a	n/a	n/a	n/a	1	5
08-19-14B	5	5	5	5	5	n/a	n/a	n/a	n/a	n/a	2	5
08-19-14C	10	10	10	10	10	n/a	n/a	n/a	n/a	n/a	3	5
08-19-14D	20	20	20	20	20	n/a	n/a	n/a	n/a	n/a	4	5
08-19-14E	50	n/a	n/a	n/a	n/a	5	5	5	5	5	5	5
08-19-14F	100	n/a	n/a	n/a	n/a	10	10	10	10	10	6	5
08-19-14G	150	n/a	n/a	n/a	n/a	15	15	15	15	15	7	5
08-19-14H	200	n/a	n/a	n/a	n/a	20	20	20	20	20	8	5

8/19/14
RS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-MAX

Exp: Date:	08/20/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-12-14N	08-12-14O	08-12-14P	08-12-14R	08-12-14J	08-12-14L	08-12-14K	08-12-14M	08-12-14Q	08-12-14S	w/P&T H2O
Date/code	µg/L	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	Exp:09-12-14	mL
08-19-14I	0.1	1	1	1	2	n/a	n/a	n/a	n/a	n/a	1	50
08-19-14J	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	50
08-19-14K	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50
08-19-14L	1	10	10	10	20	n/a	n/a	n/a	n/a	n/a	10	50
08-19-14M	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50
08-19-14N	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50
08-19-14O	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50
08-19-14P	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50
08-19-14Q	200	n/a	n/a	n/a	n/a	200	200	200	200	150	45	50

8/19/14
RS

8/21/14 RS

A-

Method 8260 Gases, 2000 mg/L, 2 x 0.5 ml
120016-03
Lot # 231710 | Storage ≤ -10°C | Expiry 6/Jul/2017
Solv: P/T Methanol

Method 8260 Gases
Lot #: 231710 - 33810
Rec: 7/15/14 MFR exp. 7/6/17 RS

8/21/14 RS

B-

2-Chloroethyl Vinyl Ether Solution, 2,000 mg/L, 2 x 0.5 mL
020145-02-02
Lot # 229586 | Storage ≤-10 Degrees | Expiry 3/Jan/2017
Solv: P/T Methanol

2-Chloroethyl vinyl ether
Lot #: 229586 - 33655
Rec: 6/3/14 MFR exp. 6/3/17 RS

8/21/14 RS

C-

VOC Mix 4-3, 2,000 mg/L, 1 mL
120165-01
Lot # 229587 | Storage ≤6 Degrees C | Expiry 29/May/2016
Solv: P/T Methanol

VOC Mix 4-3, 2000mg/L
Lot #: 229587 - 33669
Rec: 6/3/14 MFR exp. 5/29/16 RS

8/21/14 RS

D-

Acrolein Solution, 10,000 mg/L, 2 x 0.6 mL
020219-03-02
Lot # 234094 | Storage ≤6 °C | Expiry 22/Sep/2014
Solv: Water, HPLC Grade

Acrolein
Lot #: 234094 - 33908
Rec: 8/13/14 MFR exp. 9/22/14 RS

8/21/14 RS

08/21/14E							
50ug/ml Vol Work Std #7							
Exp:09/21/14							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	231710-33810	08/21/14A	03/30/17	100
02SI	020049-02	HEXACHLOROETHANE	1000	189666-31707	08/12/14B	05/03/14	200
02SI	020228-02	Benzyl Chloride	1000	200704-33537	08/12/13C	12/10/14	200
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	3500
08/21/14F							
50ug/ml Vol Work Std #1							
Exp:09/21/14					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	229586-33655	08/21/14B	06/03/17	50
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	1950

8/21/14
RS

08/21/14G							
50ug/ml Vol Work Std #8							
Exp:09/21/14							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	
O2SI	122039-02	Volatile Mix, 20-29	2000	210086-32533	08/12/14F	06/06/15	100
O2SI	120023-03	VOC'S-54 COMP	2000	216122-32920	08/12/14G	10/11/15	100
O2SI	020232-02	Vinyl Acetate	2000	229682-33658	08/12/14H	08/28/14	100
O2SI	020620-02	n-Hexane	1000	195505-33673	08/12/13I	09/09/17	200
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	3500
08/21/14H							
50ug/ml Vol Work Std #2							
Exp:09/21/14							
Supplier	ID #	ID	ug/ml				
O2SI	121020-05	HSL'S-Ketone Solution	2000	216124-32930	08/12/14E	10/10/14	400
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	3900
		08/21/14I					
		5ug/ml Vol Work Std #9					
		SOURCES	Lot	APPL Code	APPL Exp Date	ul	
		50ug/ml Vol Work Std #7		08/21/14E	09/21/14	200	
		50ug/ml Vol Work Std #8		08/21/14G	09/21/14	200	
		J&T Brand		07/29/14	07/09/18	1600	
		08/21/14J					
		5ug/ml Vol Work Std #10					
		SOURCES	Lot	APPL Code	APPL Exp Date	ul	
		50ug/ml Vol Work Std #1		08/21/14F	09/21/14	200	
		J&T Brand		07/29/14	07/09/18	1800	
		08/21/14K					
		5ug/ml Vol Work Std #12					
		SOURCES	Lot	APPL Code	APPL Exp Date	ul	
		50ug/ml Vol Work Std #2		08/21/14H	09/21/14	200	
		J&T Brand		07/29/14	07/09/18	1800	
08/21/14L							
50ug/ml 8260 Surrogate			Conc.		Date	Exp.	
Exp:09/21/14			ug/ml	Lot #	Code	Date	uL
O2SI	120002-01	8260B Surr Solution	2000	185761-31771	07/15/14L	02/19/15	100
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	3900
08/21/14M							
5.0ug/ml 8260 Surrogate			Lot	APPL Code	APPL Exp Date	ul	
		50ug/ml 8260 Surrogate		08/21/14L	09/21/14	200	
J&T Brand		Purge & Trap MeOH		07/29/14	07/09/18	1800	
08/21/14N							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:09/21/14			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	120166-01	Volatile Mix 4-3	2000	229587-33669	08/21/14C	05/29/16	500
O2SI	020229-09	Acrolein	10000	234094-33908	08/21/14D	09/22/14	100
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	3400

8/21/14
RS

08/21/14O							
50ug/ml VOC Std#5							
Exp:09/21/14							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
O2SI	120016-03-SS	8260 Gases(SS)	2000	226330-33552	08/05/14B	04/15/17	50
O2SI	020145-02-02-S	2-CEVE	2000	219465-33211	07/15/14P	12/16/15	50
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	1900
08/21/14P							
50ug/ml VOC Std#6							
Exp:09/21/14							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
O2SI	120023-03-SS	VOC'S 54 COMP.	2000	208329-32740	07/15/14N	05/02/15	50
O2SI	120296-01-SS	Custom 8260 Solution	2000	212199-32959	07/15/14O	01/23/15	50
O2SI	020232-02-SS	Vinyl Acetate(SS)	2000	226292-33554	07/15/14R	07/10/14	50
O2SI	020620-02-SS	n-Hexane	1000	205203-33677	07/15/14T	03/12/15	100
O2SI	020049-02-SS	HEXACHLOROETHANE	1000	226063-33531	07/15/14S	04/07/16	100
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	1650
08/21/14Q							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:09/21/14			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	189667-33304	07/15/14U	05/18/15	250
O2SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	234996-33793	07/15/14M	08/25/14	50
J&T Brand		Purge & Trap MeOH		49909-00754	08/07/14	07/09/18	1700

8/21/14
RS

08/21/14R							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:09/21/14			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	195506-31423	04-28-14A	09/15/15	20
J&T Baker		Purge & Trap MeOH		49909-00754	05/07/14	07/09/18	1980

8/22/14
RS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI												
Exp: Date:	08/23/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-21-14I	08-21-14J	08-21-14K	08-21-14M	08-21-14E	08-21-14G	08-21-14F	08-21-14H	08-21-14L	08-21-14N	w/P&T H2O
Date/code	µg/L	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	mL
08-22-14A	0.1	1	1	1	2	n/a	n/a	n/a	n/a	n/a	1	50
08-22-14B	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	50
08-22-14C	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50
08-22-14D	1	10	10	10	20	n/a	n/a	n/a	n/a	n/a	10	50
08-22-14E	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50
08-22-14F	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50
08-22-14G	20	n/a	n/a	n/a	n/a	20	20	20	20	40	30	50
08-22-14H	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50
08-22-14I	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50

8/22/14
RS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-THOR												
Exp: Date:	08/23/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-21-14I	08-21-14J	08-21-14K	08-21-14M	08-21-14E	08-21-14G	08-21-14F	08-21-14H	08-21-14L	08-21-14N	w/P&T H2O
Date/code	µg/L	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	mL
08-22-14J	0.1	1	1	1	2	n/a	n/a	n/a	n/a	n/a	1	50
08-22-14K	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	50
08-22-14L	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50
08-22-14M	1	10	10	10	20	n/a	n/a	n/a	n/a	n/a	10	50
08-22-14N	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50
08-22-14O	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50
08-22-14P	20	n/a	n/a	n/a	n/a	20	20	20	20	40	30	50
08-22-14Q	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50
08-22-14R	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50

8/26/14
RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-LOKI												
Exp: Date:	08/27/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-21-14I	08-21-14J	08-21-14K	08-21-14M	08-21-14E	08-21-14G	08-21-14F	08-21-14H	08-21-14L	08-21-14N	w/P&T H2O
Date/code	µg/L	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	mL
08-26-14A	2	2	2	2	2	n/a	n/a	n/a	n/a	n/a	1	5
08-26-14B	5	5	5	5	5	n/a	n/a	n/a	n/a	n/a	2	5
08-26-14C	10	10	10	10	10	n/a	n/a	n/a	n/a	n/a	3	5
08-26-14D	20	20	20	20	20	n/a	n/a	n/a	n/a	n/a	4	5
08-26-14E	50	n/a	n/a	n/a	n/a	5	5	5	5	5	5	5
08-26-14F	100	n/a	n/a	n/a	n/a	10	10	10	10	10	6	5
08-26-14G	150	n/a	n/a	n/a	n/a	15	15	15	15	15	7	5
08-26-14H	200	n/a	n/a	n/a	n/a	20	20	20	20	20	8	5

8/27/14
RS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-MAX												
Exp: Date:	08/28/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	08-21-14I	08-21-14J	08-21-14K	08-21-14M	08-21-14E	08-21-14G	08-21-14F	08-21-14H	08-21-14L	08-21-14N	w/P&T H2O
Date/code	µg/L	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	mL
08-27-14A	0.1	1	1	1	2	n/a	n/a	n/a	n/a	n/a	1	50
08-27-14B	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	50
08-27-14C	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50
08-27-14D	1	10	10	10	20	n/a	n/a	n/a	n/a	n/a	10	50
08-27-14E	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50
08-27-14F	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50
08-27-14G	20	n/a	n/a	n/a	n/a	20	20	20	20	40	30	50
08-27-14H	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50
08-27-14I	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50

8/28/14
RS

Volatile Standard Curve Preparation for 10mL Purge (524 water)-LOKI								
Exp Date:	08/29/14	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #12	Vol Std #7	Vol Std #8	Vol Std #2	TAPD	Final Vol
	Conc.	08-21-14I	08-21-14K	08-21-14E	08-21-14G	08-21-14H	08-21-14N	w/P&T H2O
Date/code	µg/L	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	Exp:09-21-14	mL
08-28-14A	0.2	2	2	n/a	n/a	n/a	2	50
08-28-14B	0.5	5	5	n/a	n/a	n/a	5	50
08-28-14C	1	10	10	n/a	n/a	n/a	10	50
08-28-14D	2	20	20	n/a	n/a	n/a	15	50
08-28-14E	5	n/a	n/a	5	5	5	20	50
08-28-14F	10	n/a	n/a	10	10	10	25	50
08-28-14G	40	n/a	n/a	40	40	40	35	50
08-28-14H	100	n/a	n/a	100	100	100	40	50

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Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-THOR												
Exp. Date:	08/29/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc	08-21-14I	08-21-14J	08-21-14K	08-21-14M	08-21-14E	08-21-14G	08-21-14F	08-21-14H	08-21-14L	08-21-14N	w/P&T H2O
Date/code	µg/L	Exp 08-21-14	Exp 08-21-14	Exp 08-21-14	Exp 08-21-14	Exp 08-21-14	Exp.08-21-14	Exp.08-21-14	Exp 08-21-14	Exp:08-21-14	Exp:08-21-14	mL
08-28-14I	2	2	2	2	2	n/a	n/a	n/a	n/a	n/a	1	5
08-28-14J	5	5	5	5	5	n/a	n/a	n/a	n/a	n/a	2	5
08-28-14K	10	10	10	10	10	n/a	n/a	n/a	n/a	n/a	3	5
08-28-14L	20	20	20	20	20	n/a	n/a	n/a	n/a	n/a	4	5
08-28-14M	50	n/a	n/a	n/a	n/a	5	5	5	5	5	5	5
08-28-14N	100	n/a	n/a	n/a	n/a	10	10	10	10	10	6	5
08-28-14O	150	n/a	n/a	n/a	n/a	15	15	15	15	15	7	5
08-28-14P	200	n/a	n/a	n/a	n/a	20	20	20	20	20	8	5

8/28/14
RS

9/03/14 A
RS

Method 8260 Gases, 2000 mg/L, 2 x 0.6 ml
120016-03
Lot # 231710 Storage ≤ -10 °C Expiry 6/Jul/2017
Solv: P/T Methanol
RAD only, not human consump. Made in the USA

Method 8260 Gases
Lot #: 231710 - 33811
Rec: 7/15/14 MFR exp. 7/6/17
RS

9/03/14 B
RS

Hexachloroethane Solution, 1000 mg/L, 1 mL
020049-02
Lot # 234821 Storage ≤ -10 Degrees Expiry 24/Aug/2016
Solv: P/T Methanol
RAD only, not human consump. Made in the USA

Hexachloroethane
Lot #: 234821 - 33990
Rec: 8/27/14 MFR exp. 8/24/16
RS

9/03/14 C
RS

2-Chloroethyl Vinyl Ether Solution, 2,000 mg/L, 2 x 0.6 mL
020145-02-02
Lot # 229586 Storage ≤ -10 Degrees Expiry 3/Jun/2017
Solv: P/T Methanol
RAD only, not human consump. Made in the USA

2-Chloroethyl vinyl ether
Lot #: 229586 - 33687
Rec: 6/3/14 MFR exp. 6/3/17
RS

9/03/14 D
RS

Ketones Solution, 2,000 mg/L, 1 ml
121020-05
Lot # 216124 Storage ≤ -10 Degrees C Expiry 10/10/14
Solv: P/T MeOH:Water 9:1
RAD only, not human consump. Made in the USA

Ketones
Lot #: 216124 - 32931
Rec: 10/15/13 MFR exp. 10/10/14
RS

9/03/14 E
RS

Vinyl Acetate Solution, 2000 mg/L, 1 mL
020131-02
Lot # 229682 Storage ≤ -10 Degrees Expiry 28/Aug/2014
Solv: P/T Methanol
RAD only, not human consump. Made in the USA

Vinyl Acetate
Lot #: 229682 - 33659
Rec: 6/3/14 MFR exp. 8/28/14
RS

9/03/14 RS

F-

Method 8260B Surrogate Solution, 2,000 mg/L, 1 ml

120002-01

Lot #	Storage	Expiry
229269	≤ -10 Degrees	26/May/2017

Solv: P/T Methanol

Method 8260B Surrogate
Lot #: 229269 - 33845
Rec: 7/15/14 MFR exp. 5/26/17

RS

9/03/14 RS

G-

Acrolein Solution, 10,000 mg/L, 2 x 0.6 mL

024219-09-02

Lot #	Storage	Expiry
234094	≤ 6 °C	22/Sep/2014

Solv: Water, HPLC Grade

Acrolein
Lot #: 234094 - 33909
Rec: 8/13/14 MFR exp. 9/22/14

RS

9/03/14 RS

H-

Method 8260 Gases (Second Source), 2,000 mg/L, 2 X 0.6 ml

120016-83-SS

Lot #	Storage	Expiry
220940	≤ -10 Degrees C	1/24/17

Solv: P/T Methanol

Method 8260 Gases (SS)
Lot #: 220940 - 33547
Rec: 4/15/14 MFR exp. 1/24/17

RS

9/03/14 RS

I-

2-Chloroethyl Vinyl Ether Solution (Second Source), 2,000 mg/L, 2 X 0.6 ml

020145-02-02-SS

Lot #	Storage	Expiry
219465	≤ -10 Degrees C	12/16/15

Solv: P/T Methanol

2-Chloroethyl vinyl ether (SS)
Lot #: 219465 - 33221
Rec: 12/19/13 MFR exp. 12/16/15

RS

9/03/14 RS

J-

Vinyl Acetate Solution (Second Source), 2,000 mg/L, 1ml

020132-02-SS

Lot #	Storage	Expiry
232116	≤ -10 °C	8/Oct/2014

Solv: P/T Methanol

Vinyl Acetate (SS)
Lot #: 232116 - 33843
Rec: 7/15/14 MFR exp. 10/8/14

RS

9/03/14 RS

K-

VOC Mix 4-3 (second source), 2,000 mg/L, 1 ml

120166-01-SS

Lot #	Storage	Expiry
189667	</= 6 Degrees	5/8/15

Solv: P/T Methanol

VOC Mix 4-3 (SS)
Lot #: 189667 - 33305
Rec: 2/20/14 MFR exp. 5/18/15

RS

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9/03/14
RS

Acrolein Solution (Second Source), 10,000 mg/L, 2 x 0.6 mL
020229-09-02-SS
Lot # 234095 | Storage ≤ 6 Degrees C | Expiry 22/Sep/2014
Solv: Water, HPLC Grade

Acrolein Solution SS
Lot #: 234095 - 33910
Rec: 8/13/14 MFR exp. 9/22/14

RS

09/03/14M							
50ug/ml Vol Work Std #7							
Exp:10/03/14							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	231710-33811	09/03/14A	03/30/17	100
02SI	020049-02	HEXACHLOROETHANE	1000	234821-33990	09/03/14B	08/26/16	200
02SI	020228-02	Benzyl Chloride	1000	200704-33537	08/12/13C	12/10/14	200
J&T Brand		Purge & Trap MeOH		49909-00760	08/25/14	07/09/18	3500
09/03/14N							
50ug/ml Vol Work Std #1							
Exp:10/03/14					Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	229586-33687	09/03/14C	06/03/17	50
J&T Brand		Purge & Trap MeOH		49909-00760	08/25/14	07/09/18	1950
09/03/14O							
50ug/ml Vol Work Std #8							
Exp:10/03/14							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	210086-32533	08/12/14F	06/06/15	100
02SI	120023-03	VOC'S-54 COMP	2000	216122-32920	08/12/14G	10/11/15	100
02SI	020232-02	Vinyl Acetate	2000	229682-33659	09/03/14E	08/28/14	100
02SI	020620-02	n-Hexane	1000	195505-33673	08/12/13I	09/09/17	200
J&T Brand		Purge & Trap MeOH		49909-00760	08/25/14	07/09/18	3500
09/03/14P							
50ug/ml Vol Work Std #2							
Exp:10/03/14							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	216124-32931	09/03/14D	10/10/14	100
J&T Brand		Purge & Trap MeOH		49909-00760	08/25/14	07/09/18	3900
		09/03/14Q					
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #7		09/03/14M	10/03/14	200	
		50ug/ml Vol Work Std #8		09/03/14O	10/03/14	200	
		J&T Brand		07/29/14	07/09/18	1600	
		09/03/14R					
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #1		09/03/14N	10/03/14	200	
		J&T Brand		07/29/14	07/09/18	1800	
		09/03/14S					
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml Vol Work Std #2		09/03/14P	10/03/14	200	
		J&T Brand		07/29/14	07/09/18	1800	
09/03/14T							
50ug/ml 8260 Surrogate			Conc.		Date	Exp.	
Exp:10/03/14			ug/ml	Lot #	Code	Date	ul
02SI	120002-01	8260B Surr Solution	2000	229269-33845	09/03/14F	02/19/15	100
J&T Brand		Purge & Trap MeOH		49909-00760	08/25/14	07/09/18	3900
09/03/14U							
50ug/ml 8260 Surrogate			**Lot**	**APPL Code**	**APPL Exp Date**	ul	
		50ug/ml 8260 Surrogate		08/21/14L	10/03/14	200	
J&T Brand		Purge & Trap MeOH		07/29/14	07/09/18	1800	
09/03/14V							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:10/03/14			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	ul
02SI	120166-01	Volatile Mix 4-3	2000	229587-33669	08/21/14C	05/29/16	500
					09/03/14G	09/22/14	100

09/03/14W							
50ug/ml VOC Std#5							
Exp:10/03/14					Date	Exp.	
			Conc.		Code	Date	ul
Supplier	ID #	ID	ug/ml	Lot #			
O2SI	120016-03-SS	8260 Gases(SS)	2000	220940-33547	09/03/14H	04/15/17	50
O2SI	020145-02-02-S	2-CEVE	2000	219465-33221	09/03/14I	12/16/15	50
J&T Brand		Purge & Trap MeOH		49909-00760	08/25/14	07/09/18	1900
09/03/14X							
50ug/ml VOC Std#6							
Exp:10/03/14							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
O2SI	120023-03-SS	VOC'S 54 COMP.	2000	208329-32740	07/15/14N	05/02/15	50
O2SI	120296-01-SS	Custom 8260 Solution	2000	212199-32959	07/15/14O	01/23/15	50
O2SI	020232-02-SS	Vinyl Acetate(SS)	2000	232116-33843	09/03/14J	10/08/14	50
O2SI	020620-02-SS	n-Hexane	1000	205203-33677	07/15/14T	03/12/15	100
O2SI	020049-02-SS	HEXACHLOROETHANE	1000	226063-33531	07/15/14S	04/07/16	100
J&T Brand		Purge & Trap MeOH		49909-00760	08/25/14	07/09/18	1650
09/03/14Y							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:10/03/14					Date	Exp.	
			Conc.		Code	Date	uL
Supplier	ID #		ug/ml	Lot #			
O2SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	189667-33305	09/03/14K	05/18/15	250
O2SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	234095-33910	09/03/14L	08/25/14	50
J&T Brand		Purge & Trap MeOH		49909-00760	08/25/14	07/09/18	1700

9/03/14 RS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI													
Exp: Date:	09/04/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL		
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol	
	Conc	09-03-14Q	09-03-14R	09-03-14S	09-03-14U	09-03-14M	09-03-14O	09-03-14N	09-03-14P	09-03-14T	09-03-14V	w/P&T H2O	
Date/code	µg/L	Exp 10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp.10-03-14	Exp 10-03-14	Exp:10-03-14	Exp:10-03-14	mL	
09-03-14Z	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	50	
09-03-14AA	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50	
09-03-14AB	1	10	10	10	20	n/a	n/a	n/a	n/a	n/a	10	50	
09-03-14AC	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50	
09-03-14AD	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50	
09-03-14AE	20	n/a	n/a	n/a	n/a	20	20	20	20	40	30	50	
09-03-14AF	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50	
09-03-14AG	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50	

9/03/14 RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-THOR													
Exp: Date:	09/04/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL		
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol	
	Conc.	09-03-14Q	09-03-14R	09-03-14S	09-03-14U	09-03-14M	09-03-14O	09-03-14N	09-03-14P	09-03-14T	09-03-14V	w/P&T H2O	
Date/code	µg/L	Exp 10-03-14	Exp.10-03-14	Exp.10-03-14	Exp:10-03-14	Exp.10-03-14	Exp:10-03-14	Exp.10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	mL	
09-04-14A	2	2	2	2	2	n/a	n/a	n/a	n/a	n/a	1	5	
09-04-14B	5	5	5	5	5	n/a	n/a	n/a	n/a	n/a	2	5	
09-04-14C	10	10	10	10	10	n/a	n/a	n/a	n/a	n/a	3	5	
09-04-14D	20	20	20	20	20	n/a	n/a	n/a	n/a	n/a	4	5	
09-04-14E	50	n/a	n/a	n/a	n/a	5	5	5	5	5	5	5	
09-04-14F	100	n/a	n/a	n/a	n/a	10	10	10	10	10	6	5	
09-04-14G	150	n/a	n/a	n/a	n/a	15	15	15	15	15	7	5	
09-04-14H	200	n/a	n/a	n/a	n/a	20	20	20	20	20	8	5	

9/04/14 RS

9-3-14



74171
AZ01779 S01
26 VOA_Frig

BTEX in Soil 22082

YC

09-04-14I					
2000ug/ml Unleaded Gasoline					
			Conc		
Supplier	ID #		ug/ml	Lot #	uL
Restek	30205	Unleaded Gasoline	50,000	A092370-32656	80
J&T Brand		Purge & Trap MeOH		49909-00762	1920

9/04/14 RS

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09-04-14J					
2000ug/ml Gasoline					
Supplier	ID #		ug/ml	Lot #	uL
Supelco	47516-U	Gasoline	20,000	LC01901-33489	200
J&T Brand		Purge & Trap MeOH		49909-00762	1800

9/04/14 RS

Gasoline Curve Preparation for 100mL Purge (water)-LOKI

Exp Date:	09/05/14	2000ug/ml Gasoline	
	Conc.	08-12-14W	Final Vol
Date/code	µg/L	Exp.08-31-15	mL
09-04-14K	20	1	100
09-04-14L	50	2.5	100
09-04-14M	100	5	100
09-04-14N	300	15	100
09-04-14O	600	30	100
09-04-14P	800	40	100
09-04-14Q	1000	50	100

9/04/14 RS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI

Exp: Date:	09/10/14	6µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	09-03-14Q	09-03-14R	09-03-14S	09-03-14U	09-03-14M	09-03-14O	09-03-14N	09-03-14P	09-03-14T	09-03-14V	w/P&T H2O
Date/code	µg/L	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	mL
09-09-14A	0.1	1	1	1	2	n/a	n/a	n/a	n/a	n/a	1	50
09-09-14B	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	50
09-09-14C	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50
09-09-14D	1	10	10	10	20	n/a	n/a	n/e	n/a	n/a	10	50
09-09-14E	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50
09-09-14F	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50
09-09-14G	20	n/a	n/a	n/a	n/a	20	20	20	20	40	30	50
09-09-14H	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50
09-09-14I	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50

9/09/14 RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-THOR

Exp: Date:	09/10/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	09-03-14Q	09-03-14R	09-03-14S	09-03-14U	09-03-14M	09-03-14O	09-03-14N	09-03-14P	09-03-14T	09-03-14V	w/P&T H2O
Date/code	µg/L	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	mL
09-09-14J	2	2	2	2	2	n/a	n/a	n/a	n/a	n/a	1	5
09-09-14K	5	5	5	5	5	n/a	n/a	n/a	n/a	n/a	2	5
09-09-14L	10	10	10	10	10	n/a	n/a	n/a	n/a	n/a	3	5
09-09-14M	20	20	20	20	20	n/a	n/a	n/a	n/a	n/a	4	5
09-09-14N	50	n/a	n/a	n/a	n/a	5	5	5	5	5	5	5
09-09-14O	100	n/a	n/a	n/a	n/a	10	10	10	10	10	6	5
09-09-14P	150	n/a	n/a	n/a	n/a	15	15	15	15	15	7	5
09-09-14Q	200	n/a	n/a	n/a	n/a	20	20	20	20	20	8	5

9/09/14 RS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-LOKI

Exp: Date:	09/11/14	5µg/mL	5µg/mL	5µg/mL	5µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	50µg/mL	250µg/mL	
		Vol Std #9	Vol Std #10	Vol Std #12	Surrogate	Vol Std #7	Vol Std #8	Vol Std #1	Vol Std #2	Surrogate	TBA	Final Vol
	Conc.	09-03-14Q	09-03-14R	09-03-14S	09-03-14U	09-03-14M	09-03-14O	09-03-14N	09-03-14P	09-03-14T	09-03-14V	w/P&T H2O
Date/code	µg/L	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	Exp:10-03-14	mL
09-10-14A	0.3	3	3	3	6	n/a	n/a	n/a	n/a	n/a	2	60
09-10-14B	0.5	5	5	5	10	n/a	n/a	n/a	n/a	n/a	5	50
09-10-14C	1	10	10	10	20	n/a	n/a	n/a	n/a	n/a	10	50
09-10-14D	5	n/a	n/a	n/a	n/a	5	5	5	5	10	20	50
09-10-14E	10	n/a	n/a	n/a	n/a	10	10	10	10	25	25	50
09-10-14F	20	n/a	n/a	n/a	n/a	20	20	20	20	40	30	50
09-10-14G	40	n/a	n/a	n/a	n/a	40	40	40	40	80	35	50
09-10-14H	100	n/a	n/a	n/a	n/a	100	100	100	100	100	40	50

9/10/14 RS

A-

9/15/14 RS

Method 8260 Gases, 2000 mg/L, 2 x 0.6 ml

120016-03

Lot #	Storage	Expiry
231710	≤ -10 °C	6/Jul/2017

Solv: P/T Methanol

Method 8260 Gases

Lot #: 231710 - 33812

Rec: 7/15/14 MFR exp. 7/6/17

RS

Injection Log

Directory: M:\LOKI\DATA\140909\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0909L01.D	1	25ug/mL BFB Std 08-21-14	2uL	9 Sep 14 8:10
2	3	0909L04.D	1	0.1ug/L Vol Std 09-09-14	10mL w/5uL IS&S:06-29-14	9 Sep 14 9:28
3	4	0909L05.D	1	0.3ug/L Vol Std 09-09-14	10mL w/5uL IS&S:06-29-14	9 Sep 14 9:55
4	5	0909L06.D	1	0.5ug/L Vol Std 09-09-14	10mL w/5uL IS&S:06-29-14	9 Sep 14 10:23
5	6	0909L07.D	1	1.0ug/L Vol Std 09-09-14	10mL w/5uL IS&S:06-29-14	9 Sep 14 10:51
6	7	0909L08.D	1	5.0ug/L Vol Std 09-09-14	10mL w/5uL IS&S:06-29-14	9 Sep 14 11:19
7	8	0909L09.D	1	10ug/L Vol Std 09-09-14	10mL w/5uL IS&S:06-29-14	9 Sep 14 11:46
8	9	0909L10.D	1	20ug/L Vol Std 09-09-14	10mL w/5uL IS&S:06-29-14	9 Sep 14 12:14
9	10	0909L11.D	1	40ug/L Vol Std 09-09-14	10mL w/5uL IS&S:06-29-14	9 Sep 14 12:42
10	11	0909L12.D	1	100ug/L Vol Std 09-09-14	10mL w/5uL IS&S:06-29-14	9 Sep 14 13:10
11	14	0909L15.D	1	25ug/mL BFB Std 08-21-14	10mL w/5uL IS&S:06-29-14	9 Sep 14 14:33
12	16	0909L17.D	1	10ug/L Vol Std 09-09-14	10mL w/5uL IS&S:06-29-14	9 Sep 14 15:29
13	17	0909L18.D	1	140909A LCS-1WL (SS)	10mL w/5uL IS&S:06-29-14	9 Sep 14 15:57
14	1	0910L01.D	1	25ug/mL BFB Std 08-21-14	2uL	10 Sep 14 9:11
15	2	0910L03.D	1	10ug/L Vol Std 09-10-14	10mL w/5uL IS&S:06-29-14	10 Sep 14 10:02
16	3	0910L04.D	1	140910A LCS-1WL	10mL w/5uL IS&S:06-29-14	10 Sep 14 10:30
17	10	0910L11.D	1	140910A BLK-1WL	10mL w/5uL IS&S:06-29-14	10 Sep 14 13:45
18	14	0910L15.D	1	AZ02109W01	10mL w/5uL IS&S:06-29-14	10 Sep 14 15:36
19	15	0910L16.D	1	AZ02116W01	10mL w/5uL IS&S:06-29-14	10 Sep 14 16:04
20	16	0910L17.D	1	AZ02235W01	10mL w/5uL IS&S:06-29-14	10 Sep 14 16:32
21	1	0911L03.D	1	25ug/mL BFB Std 08-21-14	2uL	11 Sep 14 11:28
22	2	0911L05.D	1	10ug/L Vol Std 09-11-14	10mL w/5uL IS&S:06-29-14	11 Sep 14 12:18
23	5	0911L08.D	50	140911A LCS-1WL MeOH	10mL w/5uL IS&S:06-29-14	11 Sep 14 13:42
24	9	0911L12.D	50	140911A BLK-1WL MeOH	10mL w/5uL IS&S:06-29-14	11 Sep 14 15:33
25	13	0911L16.D	49.66	AZ02099S01 151.018g	10mL w/5uL IS&S:06-29-14	11 Sep 14 17:26
26	14	0911L17.D	48.47	AZ02100S01 154.72g	10mL w/5uL IS&S:06-29-14	11 Sep 14 17:54
27	15	0911L18.D	48.74	AZ02101S01 153.88	10mL w/5uL IS&S:06-29-14	11 Sep 14 18:22
28	16	0911L19.D	46.06	AZ02102S01 162.82	10mL w/5uL IS&S:06-29-14	11 Sep 14 18:50
29	17	0911L20.D	46.28	AZ02103S01 162.10	10mL w/5uL IS&S:06-29-14	11 Sep 14 19:18
30	18	0911L21.D	47.24	AZ02104S01 158.75	10mL w/5uL IS&S:06-29-14	11 Sep 14 19:46
31	19	0911L22.D	47.64	AZ02105S01 157.44	10mL w/5uL IS&S:06-29-14	11 Sep 14 20:13
32	20	0911L23.D	47.2	AZ02106S01 158.89	10mL w/5uL IS&S:06-29-14	11 Sep 14 20:41
33	21	0911L24.D	48.53	AZ02107S01 154.53	10mL w/5uL IS&S:06-29-14	11 Sep 14 21:09
34	22	0911L25.D	44.96	AZ02110S01 166.82g	10mL w/5uL IS&S:06-29-14	11 Sep 14 21:37
35	23	0911L26.D	43.39	AZ02111S01 172.86g	10mL w/5uL IS&S:06-29-14	11 Sep 14 22:05
36	24	0911L27.D	43.84	AZ02112S01 171.07g	10mL w/5uL IS&S:06-29-14	11 Sep 14 22:33
37	25	0911L28.D	46	AZ02113S01 163.03g	10mL w/5uL IS&S:06-29-14	11 Sep 14 23:01
38	28	0911L31.D	1	25ug/mL BFB Std 08-21-14	2ul	12 Sep 14 00:24
39	31	0911L34.D	1	10ug/L Vol Std 09-11-14	10mL w/5uL IS&S:06-29-14	12 Sep 14 1:48
40	32	0911L35.D	50	140911B LCS-1WL(MeOH)	10mL w/5uL IS&S:06-29-14	12 Sep 14 2:16
41	34	0911L37.D	50	AZ02100S01 MS-1WL DF50	10mL w/5uL IS&S:06-29-14	12 Sep 14 3:11
42	35	0911L38.D	50	AZ02100S01 MSD-1WL DF50	10mL w/5uL IS&S:06-29-14	12 Sep 14 3:39
43	38	0911L41.D	50	140911B BLK-1WL(MeOH)	10mL w/5uL IS&S:06-29-14	12 Sep 14 5:02
44	39	0911L42.D	43.44	AZ02114S01 172.644g DF50	10mL w/5uL IS&S:06-29-14	12 Sep 14 5:30
45	40	0911L43.D	45.92	AZ02115S01 DF50 163.34g	10mL w/5uL IS&S:06-29-14	12 Sep 14 5:58

Wetlab Results

ARF: 74218

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: AZ02099 -Client Sample ID: EN001			-Sample Collection Date: 09/02/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	12.2	2.0	%	09/08/14	09/09/14
APPL ID: AZ02100 -Client Sample ID: EN002			-Sample Collection Date: 09/02/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	11.3	2.0	%	09/08/14	09/09/14
APPL ID: AZ02101 -Client Sample ID: EN003			-Sample Collection Date: 09/02/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	11.5	2.0	%	09/08/14	09/09/14
APPL ID: AZ02102 -Client Sample ID: EN004			-Sample Collection Date: 09/02/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	11.0	2.0	%	09/08/14	09/09/14
APPL ID: AZ02103 -Client Sample ID: EN005			-Sample Collection Date: 09/02/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	15.8	2.0	%	09/08/14	09/09/14
APPL ID: AZ02104 -Client Sample ID: EN006			-Sample Collection Date: 09/02/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	14.2	2.0	%	09/08/14	09/09/14
APPL ID: AZ02105 -Client Sample ID: EN007			-Sample Collection Date: 09/02/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	24.0	2.0	%	09/08/14	09/09/14
APPL ID: AZ02106 -Client Sample ID: EN008			-Sample Collection Date: 09/02/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	29.8	2.0	%	09/08/14	09/09/14
APPL ID: AZ02107 -Client Sample ID: EN009			-Sample Collection Date: 09/02/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	23.4	2.0	%	09/08/14	09/09/14
APPL ID: AZ02110 -Client Sample ID: EN012			-Sample Collection Date: 09/03/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	14.1	2.0	%	09/08/14	09/09/14
APPL ID: AZ02111 -Client Sample ID: EN013			-Sample Collection Date: 09/03/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	16.1	2.0	%	09/08/14	09/09/14
APPL ID: AZ02112 -Client Sample ID: EN014			-Sample Collection Date: 09/03/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	23.2	2.0	%	09/08/14	09/09/14

Printed: 09/11/14 10:11:12 AM

Wetlab Results

ARF: 74218

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Attn: Roger Aoki

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: AZ02113 -Client Sample ID: EN015			-Sample Collection Date: 09/03/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	13.6	2.0	%	09/08/14	09/09/14
APPL ID: AZ02114 -Client Sample ID: EN016			-Sample Collection Date: 09/03/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	16.4	2.0	%	09/08/14	09/09/14
APPL ID: AZ02115 -Client Sample ID: EN017			-Sample Collection Date: 09/03/14		Project: 120033 CTO 0015 MCB	
CLP MOIST	MOISTURE	25.6	2.0	%	09/08/14	09/09/14

Printed: 09/11/14 10:11:12 AM

WETLAB

Sample/Sample Duplicate Results

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Method	Analyte	Sample ID	Sample Result	Sample Dup Result	RPD	RPD Max	PQL	Units	Sample Extract Date	Sample Analysis Date	Sample Dup Extract Date	Sample Dup Analysis Date
CLP MOIS	MOISTURE	AZ02100	11.3	10.9	3.6	20	2.0	%	09/08/14	09/09/14	09/08/14	09/09/14

WETLAB

Sample/Sample Duplicate Results

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Sample ID: AZ02115
Client ID: EN017

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Method	Analyte	Sample ID	Sample Result	Sample Dup Result	RPD	RPD Max	PQL	Units	Sample Extract Date	Sample Analysis Date	Sample Dup Extract Date	Sample Dup Analysis Date
CLP MOIS	MOISTURE	AZ02115	25.6	26.2	2.3	20	2.0	%	09/08/14	09/09/14	09/08/14	09/09/14

Printed: 09/11/14 10:11:07 AM

% Moisture

Batch: QCG 140908-M005405

Method: CLP 4.0

Date: 09/08/14 14:32

Sample	Container	Pan (g)	Pan+Wet (g)	Pan+Dry 1 (g)	Pan+Dry 2 (g)	Moisture (%)	Comments
AZ02110		0.8436 09/08/14 14:32	9.3215 09/08/14 14:34	8.1269 09/09/14 07:28	8.1270	14.090	AZ02110S11
AZ02107		0.8463 09/08/14 14:31	7.4277 09/08/14 14:31	5.8862 09/09/14 07:28	5.8863	23.421	AZ02107S11
AZ02106		0.8230 09/08/14 14:29	9.4061 09/08/14 14:30	6.8481	6.8484 09/09/14 07:27	29.799	AZ02106S11
AZ02105		0.8270 09/08/14 14:27	7.0703 09/08/14 14:28	5.5701 09/09/14 07:27	5.5701 09/09/14 07:27	24.029	AZ02105S11
AZ02104		0.8318 09/08/14 14:25	7.0119 09/08/14 14:26	6.1353 09/09/14 07:27	6.1352	14.186	AZ02104S11
AZ02103		0.8471 09/08/14 14:23	8.3194 09/08/14 14:24	7.1360 09/09/14 07:26	7.1362 09/09/14 07:26	15.834	AZ02103S11
AZ02102		0.8477 09/08/14 14:21	7.8454 09/08/14 14:22	7.0758 09/09/14 07:26	7.0758 09/09/14 07:26	10.998	AZ02102S11
AZ02101		0.8421 09/08/14 14:19	8.1099 09/08/14 14:21	7.2764 09/09/14 07:26	7.2764 09/09/14 07:26	11.468	AZ02101S11
AZ02100D		0.8504 09/08/14 14:18	8.6652 09/08/14 14:19	7.8098	7.8104 09/09/14 07:25	10.938	AZ02100S11
AZ02100		0.8391 09/08/14 14:16	8.9599 09/08/14 14:17	8.0397 09/09/14 07:25	8.0397 09/09/14 07:25	11.331	AZ02100S11
AZ02099		0.8362 09/08/14 14:14	7.0841 09/08/14 14:15	6.3213 09/09/14 07:24	6.3215	12.206	AZ02099S11

Date/Time InOven@104°C	Date/Time OutOven@104°C	Date/Time InOven@104°C	Date/Time OutOven@104°C
09/08/14 2:32:00 PM			09/09/14 7:27:00 AM

% Moisture

Batch: QCG 140908-M005406

Method: CLP 4.0

Date: 09/08/14 14:42

Sample	Container	Pan (g)	Pan+Wet (g)	Pan+Dry 1 (g)	Pan+Dry 2 (g)	Moisture (%)	Comments
AZ02115D		0.8488 09/08/14 14:42	9.6874 09/08/14 14:42	7.3680 09/09/14 07:31	7.3681 09/09/14 07:31	26.241	AZ02115S11
AZ02115		0.8345 09/08/14 14:41	7.1605 09/08/14 14:41	5.5382	5.5383 09/09/14 07:30	25.643	AZ02115S11
AZ02114		0.8285 09/08/14 14:39	6.4957 09/08/14 14:40	5.5683 09/09/14 07:30	5.5683 09/09/14 07:30	16.364	AZ02114S11
AZ02113		0.8244 09/08/14 14:38	7.7040 09/08/14 14:39	6.7710 09/09/14 07:29	6.7710	13.562	AZ02113S11
AZ02112		0.8416 09/08/14 14:36	8.4433 09/08/14 14:37	6.6779 09/09/14 07:29	6.6778 09/09/14 07:29	23.225	AZ02112S11
AZ02111		0.8411 09/08/14 14:34	6.4094 09/08/14 14:35	5.5153 09/09/14 07:29	5.5154	16.055	AZ02111S11

Date/Time InOven@104°C	Date/Time OutOven@104°C	Date/Time InOven@104°C	Date/Time OutOven@104°C
09/08/14 2:39:00 PM			09/09/14 7:30:00 AM

Date	Initials	Balance	Weight	Reading	Lower Limit	Upper Limit	Comments / Is the Bubble Centered?
9/3/14	BB	Mettler AT200	0.5g	0.5000 g	0.4995	0.5005	Yes
		Mettler AT200	1g	1.0000 g	0.9990	1.0010	
		Mettler AT200	20g	19.9999 g	19.9800	20.0200	
		Mettler AT200	50g	49.9996 g	49.9500	50.0500	
		Mettler AT200	100g	99.9998 g	99.9000	100.1000	
		Mettler AT200	150g	149.9995 g	149.8500	150.1500	
		OHAUS ARC120	0.1g	0.10 g	0.08	0.12	
		OHAUS ARC120	0.5g	0.50 g	0.48	0.52	
		OHAUS ARC120	1g	1.00 g	0.98	1.02	
		OHAUS ARC120	100g	100.00 g	98.00	102.00	
		OHAUS ARC120	1kg	1000.00 g	980.00	1020.00	
		OHAUS ARC120	2kg	2000.03 g	1960.00	2040.00	
9/4/14	BB						Yes
		Mettler AT200	0.5g	0.5000 g	0.4995	0.5005	
		Mettler AT200	1g	1.0000 g	0.9990	1.0010	
		Mettler AT200	20g	20.0000 g	19.9800	20.0200	
		Mettler AT200	50g	49.9995 g	49.9500	50.0500	
		Mettler AT200	100g	99.9997 g	99.9000	100.1000	
		Mettler AT200	150g	149.9993 g	149.8500	150.1500	
		OHAUS ARC120	0.1g	0.10 g	0.08	0.12	
		OHAUS ARC120	0.5g	0.50 g	0.48	0.52	
		OHAUS ARC120	1g	1.00 g	0.98	1.02	
		OHAUS ARC120	100g	100.00 g	98.00	102.00	
		OHAUS ARC120	1kg	1000.02 g	980.00	1020.00	
		OHAUS ARC120	2kg	2000.04 g	1960.00	2040.00	
9/5/14	DD	Mettler AT200	0.5g	0.5000 g	0.4995	0.5005	yes
		Mettler AT200	1g	1.0000 g	0.9990	1.0010	
		Mettler AT200	20g	20.0000 g	19.9800	20.0200	
		Mettler AT200	50g	49.9991 g	49.9500	50.0500	
		Mettler AT200	100g	99.9999 g	99.9000	100.1000	
		Mettler AT200	150g	149.9996 g	149.8500	150.1500	
		OHAUS ARC120	0.1g	0.10 g	0.08	0.12	
		OHAUS ARC120	0.5g	0.50 g	0.48	0.52	
		OHAUS ARC120	1g	1.00 g	0.98	1.02	
		OHAUS ARC120	100g	100.00 g	98.00	102.00	
		OHAUS ARC120	1kg	1000.01 g	980.00	1020.00	
		OHAUS ARC120	2kg	2000.03 g	1960.00	2040.00	
9/8/14	DD	Mettler AT200	0.5g	0.5000 g	0.4995	0.5005	yes
		Mettler AT200	1g	1.0000 g	0.9990	1.0010	
		Mettler AT200	20g	20.0000 g	19.9800	20.0200	
		Mettler AT200	50g	49.9999 g	49.9500	50.0500	
		Mettler AT200	100g	99.9996 g	99.9000	100.1000	
		Mettler AT200	150g	149.9995 g	149.8500	150.1500	
		OHAUS ARC120	0.1g	0.10 g	0.08	0.12	
		OHAUS ARC120	0.5g	0.50 g	0.48	0.52	
		OHAUS ARC120	1g	1.00 g	0.98	1.02	
		OHAUS ARC120	100g	100.00 g	98.00	102.00	
		OHAUS ARC120	1kg	1000.00 g	980.00	1020.00	
		OHAUS ARC120	2kg	2000.02 g	1960.00	2040.00	

Date	Initials	Balance	Weight	Reading	Lower Limit	Upper Limit	Comments / Is the Bubble Centered?
9.9.14	[illegible]	Mettler AT200	0.5g	0.5000 g	0.4995	0.5005	yes
		Mettler AT200	1g	1.0001 g	0.9990	1.0010	
		Mettler AT200	20g	20.0001 g	19.9800	20.0200	
		Mettler AT200	50g	50.0002 g	49.9500	50.0500	
		Mettler AT200	100g	99.9999 g	99.9000	100.1000	
		Mettler AT200	150g	149.9999 g	149.8500	150.1500	
		OHAUS ARC120	0.1g	0.10 g	0.08	0.12	
		OHAUS ARC120	0.5g	0.50 g	0.48	0.52	
		OHAUS ARC120	1g	1.00 g	0.98	1.02	
		OHAUS ARC120	100g	99.99 g	98.00	102.00	
		OHAUS ARC120	1kg	1000.01 g	980.00	1020.00	
		OHAUS ARC120	2kg	2000.04 g	1960.00	2040.00	
9.10.14	[illegible]						yes
		Mettler AT200	0.5g	0.4998 g	0.4995	0.5005	
		Mettler AT200	1g	1.0000 g	0.9990	1.0010	
		Mettler AT200	20g	20.0000 g	19.9800	20.0200	
		Mettler AT200	50g	50.0000 g	49.9500	50.0500	
		Mettler AT200	100g	100.0001 g	99.9000	100.1000	
		Mettler AT200	150g	150.0002 g	149.8500	150.1500	
		OHAUS ARC120	0.1g	0.10 g	0.08	0.12	
		OHAUS ARC120	0.5g	0.50 g	0.48	0.52	
		OHAUS ARC120	1g	1.00 g	0.98	1.02	
		OHAUS ARC120	100g	100.00 g	98.00	102.00	
		OHAUS ARC120	1kg	1000.01 g	980.00	1020.00	
		OHAUS ARC120	2kg	2000.01 g	1960.00	2040.00	
9.11.14	[illegible]	Mettler AT200	0.5g	0.4999 g	0.4995	0.5005	Yes
		Mettler AT200	1g	0.9998 g	0.9990	1.0010	
		Mettler AT200	20g	19.9999 g	19.9800	20.0200	
		Mettler AT200	50g	50.0000 g	49.9500	50.0500	
		Mettler AT200	100g	99.9999 g	99.9000	100.1000	
		Mettler AT200	150g	149.9999 g	149.8500	150.1500	
		OHAUS ARC120	0.1g	0.10 g	0.08	0.12	
		OHAUS ARC120	0.5g	0.50 g	0.48	0.52	
		OHAUS ARC120	1g	1.00 g	0.98	1.02	
		OHAUS ARC120	100g	100.00 g	98.00	102.00	
		OHAUS ARC120	1kg	1000.01 g	980.00	1020.00	
		OHAUS ARC120	2kg	2000.05 g	1960.00	2040.00	
		Mettler AT200	0.5g	g	0.4995	0.5005	
		Mettler AT200	1g	g	0.9990	1.0010	
		Mettler AT200	20g	g	19.9800	20.0200	
		Mettler AT200	50g	g	49.9500	50.0500	
		Mettler AT200	100g	g	99.9000	100.1000	
		Mettler AT200	150g	g	149.8500	150.1500	
		OHAUS ARC120	0.1g	g	0.08	0.12	
		OHAUS ARC120	0.5g	g	0.48	0.52	
		OHAUS ARC120	1g	g	0.98	1.02	
		OHAUS ARC120	100g	g	98.00	102.00	
		OHAUS ARC120	1kg	g	980.00	1020.00	
		OHAUS ARC120	2kg	g	1960.00	2040.00	

EPA METHOD 8015
Gasoline Range Organics (GRO)

APPL, INC.

EPA METHOD 8015
Gasoline Range Organics (GRO)

QC Summary

APPL, INC.

Method Blank
EPA METHOD 8015C

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **140912W-02108 - 189839**
Batch ID: #GASHC-140912B

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	9/12/2014	9/12/2014
BLANK	SURROGATE: BFB-FID (S)	74.5	70-130			%	9/12/2014	9/12/2014

Quant Method: HGAS.M
Run #: 0912H19
Instrument: Harpo
Sequence: 140617
Initials: RSA

GC SC-Blank-REG MDLs
Printed: 9/19/2014 11:24:10 AM

Method Blank
EPA METHOD 8015C

Blank Name/QCG: **140915S-02100 - 189950**
Batch ID: #GASHC-140915A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	0.80 U	2.0	0.80	0.34	mg/Kg	9/16/2014	9/16/2014
BLANK	SURROGATE: BFB-FID (S)	90.0	76-131			%	9/16/2014	9/16/2014

Quant Method: HGAS.M
Run #: 0915H20
Instrument: Harpo
Sequence: 140915
Initials: DA

GC SC-Blank-REG MDLs
Printed: 9/19/2014 11:24:10 AM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/10/14

Matrix: SOIL Instrument: Harpo

APPL ID.	Client Sample No.	SURROGATE: BFB-FID (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
AZ02100-MS	Matrix Spike	76-131	81.3				
AZ02100-MSD	Matrix SpikeD	76-131	87.3				
140915A-LCS	Lab Control Spike	76-131	87.0				
140915A-BLK	Blank	76-131	90.0				
AZ02099	EN001	76-131	84.1				
AZ02100	EN002	76-131	69.3	#			
AZ02101	EN003	76-131	89.7				
AZ02102	EN004	76-131	85.7				
AZ02103	EN005	76-131	104				
AZ02104	EN006	76-131	85.8				
AZ02105	EN007	76-131	87.4				
AZ02106	EN008	76-131	92.6				
AZ02107	EN009	76-131	74.2	#			
AZ02110	EN012	76-131	88.6				
AZ02111	EN013	76-131	99.4				
AZ02112	EN014	76-131	88.9				
AZ02113	EN015	76-131	76.0				
AZ02114	EN016	76-131	82.3				
AZ02115	EN017	76-131	48.9	#			

Comments: Batch: #GASHC-140915A

= Recovery outside of Control Limits on Sample.

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/12/2014

Matrix: WATER Instrument: Harpo

APPL ID.	Client Sample No.	SURROGATE: BFB-FID (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
140912B-LCS	Lab Control Spike	70-130	90.7				
140912B-BLK	Blank	70-130	74.5				
AZ02108	EN010	70-130	72.5				
AZ02109	EN011	70-130	74.7				
AZ02116	EN018	70-130	81.7				

Comments: Batch: #GASHC-140912B

Laboratory Control Spike Recovery
EPA METHOD 8015C

APPL ID: **140912W-02108 LCS - 189839**
Batch ID: #GASHC-140912B

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	252	84.0	70-130
SURROGATE: BFB-FID (S)	30.0	27.2	90.7	70-130

Comments: _____

Primary	SPK
Quant Method :	HGAS.M
Extraction Date :	9/12/2014
Analysis Date :	9/12/2014
Instrument :	Harpo
Run :	0912H16
Initials :	RSA

Printed: 9/19/2014 11:24:11 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA METHOD 8015C

APPL ID: **140916S-02100 LCS - 189950**
Batch ID: #GASHC-140915A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/Kg	SPK Result mg/Kg	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	15.0	13.0	86.7	60-140
SURROGATE: BFB-FID (S)	0.030	0.0261	87.0	76-131

Comments: _____

Primary	SPK
Quant Method :	HGAS.M
Extraction Date :	9/16/2014
Analysis Date :	9/16/2014
Instrument :	Harpo
Run :	0915H18
Initials :	DA

Printed: 9/19/2014 5:39:42 PM
APPL Standard LCS

Matrix Spike Recoveries
EPA METHOD 8015C

APPL ID: **140910S-02100 MS - 189950**
Batch ID: #GASHC-140915A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/Kg	Matrix Result mg/Kg	SPK Result mg/Kg	DUP Result mg/Kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	18.7	ND	13.4	14.0	71.7	74.9	60-140	4.4	30
SURROGATE: BFB-FID (S)	0.030	NA	0.0244	0.0262	81.3	87.3	76-131		

Comments: _____

Primary	SPK	DUP
Quant Method :	HGAS.M	HGAS.M
Extraction Date :	9/10/2014	9/10/2014
Analysis Date :	9/10/2014	9/10/2014
Instrument :	Harpo	Harpo
Run :	0909H33	0909H34
Initials :	DA	

Printed: 9/19/2014 5:39:39 PM
APPL MSD SCII

EPA 8015C

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/12/2014

Matrix: WATER Instrument: Harpo

Blank ID: 140912B-BLK Time Analyzed: 2003

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140912B-LCS	Lab Control Spike	0912H16	9/12/2014 1813
140912B-BLK	Blank	0912H19	9/12/2014 2003
AZ02108	EN010	0912H20	9/12/2014 2039
AZ02109	EN011	0912H21	9/12/2014 2116
AZ02116	EN018	0912H22	9/12/2014 2152

Comments: Batch: #GASHC-140912B

EPA 8015C

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 9/16/2014

Matrix: SOIL Instrument: Harpo

Blank ID: 140915A-BLK Time Analyzed: 0246

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140915A-MS	Matrix Spike	0909H33	9/10/2014 1533
140915A-MSD	Matrix SpikeD	0909H34	9/10/2014 1610
140915A-LCS	Lab Control Spike	0915H18	9/16/2014 0134
140915A-BLK	Blank	0915H20	9/16/2014 0246
AZ02099	EN001	0915H21	9/16/2014 0323
AZ02100	EN002	0915H22	9/16/2014 0359
AZ02101	EN003	0915H23	9/16/2014 0436
AZ02102	EN004	0915H24	9/16/2014 0512
AZ02103	EN005	0915H25	9/16/2014 0549
AZ02104	EN006	0915H26	9/16/2014 0625
AZ02105	EN007	0915H27	9/16/2014 0701
AZ02106	EN008	0915H28	9/16/2014 0738
AZ02107	EN009	0915H29	9/16/2014 0814
AZ02110	EN012	0915H30	9/16/2014 0850
AZ02111	EN013	0915H33	9/16/2014 1039
AZ02112	EN014	0915H34	9/16/2014 1116
AZ02113	EN015	0915H35	9/16/2014 1152
AZ02114	EN016	0915H36	9/16/2014 1229
AZ02115	EN017	0915H37	9/16/2014 1305

Comments: Batch: #GASHC-140915A

Printed: 9/19/2014 11:24:12 AM

Form 4, Blank Summary

EPA METHOD 8015
Gasoline Range Organics (GRO)

Sample Data

APPL, INC.

EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN001

APPL ID: AZ02099

Sample Collection Date: 9/2/2014

QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 12.2 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	46.00 U	110.0	46.00	19.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	84.1	76-131			%	9/16/2014	9/16/2014

Quant Method: HGAS.M
Run #: 0915H21
Instrument: Harpo
Sequence: 140915
Dilution Factor: 50
Initials: DA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H21.D\FID1B.CH Vial: 21
Signal #2 : V:\HARPO\DATA\140915\0915H21.D\FID2A.CH
Acq On : 16 Sep 2014 03:23 Operator: LF
Sample : AZ02099S01 151.018g DF50 Inst : Harpo
Misc : Water Multiplr: 49.66
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 9:48 2014 Quant Results File: HGAS.RES

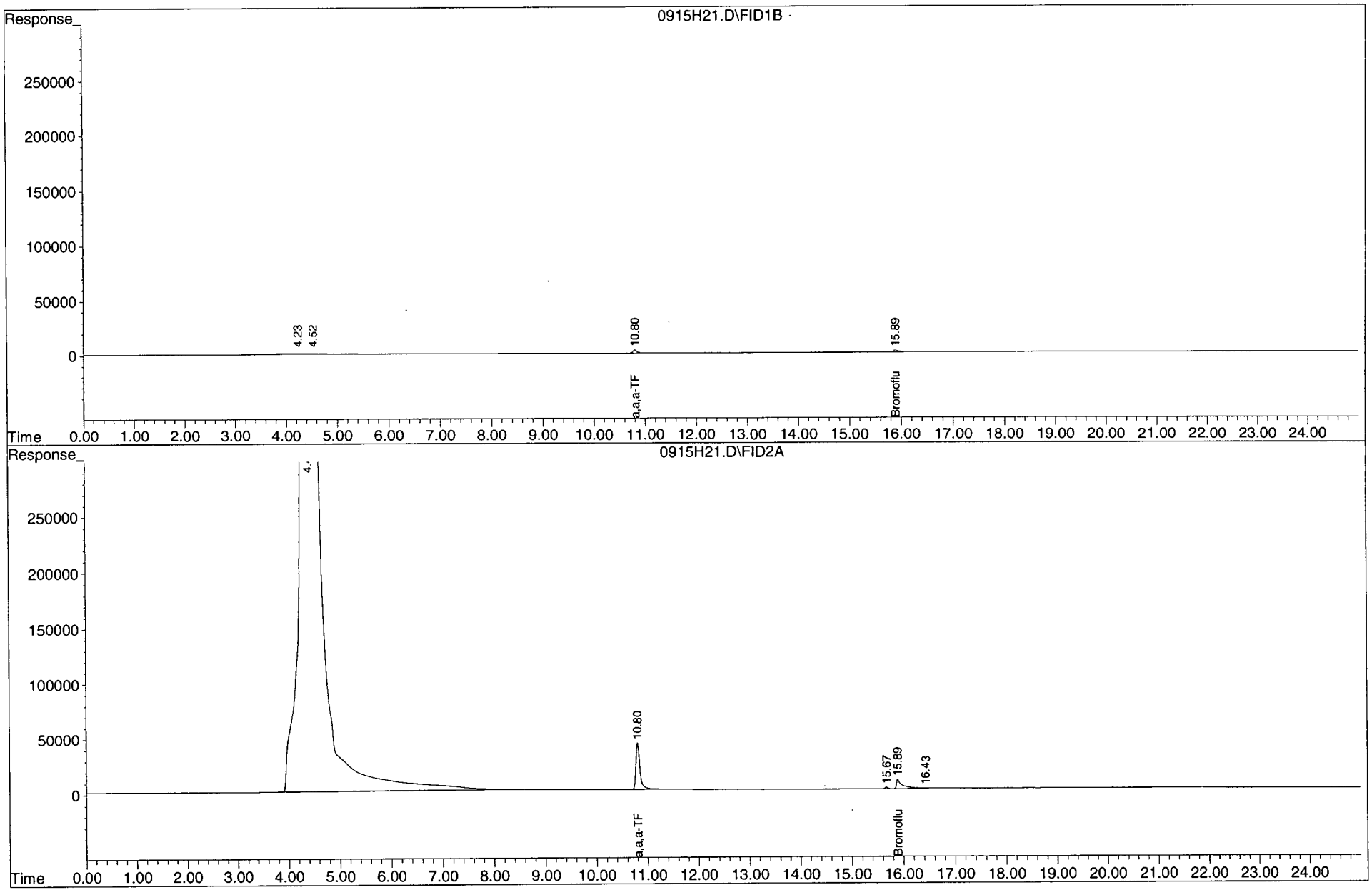
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	155985	27.118 ppb
Surrogate Spike 29.798 Range 75 - 130		Recovery =	91.01%
2) SAM Bromofluorobenzene	15.89	143688	26.546 ppb
Surrogate Spike 29.798 Range 75 - 130		Recovery =	89.09%
4) SAM a,a,a-TFT #2	10.80	2290027	26.687 ppb
Surrogate Spike 29.798 Range 75 - 130		Recovery =	89.56%
5) SAM Bromofluorobenzene #2	15.89	686799	25.067 ppb
Surrogate Spike 29.798 Range 75 - 130		Recovery =	84.12%
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H21.D\FID1B.CH Vial: 21
Signal #2 : V:\HARPO\DATA\140915\0915H21.D\FID2A.CH
Acq On : 16 Sep 2014 03:23 Operator: LF
Sample : AZ02099S01 151.018g DF50 Inst : Harpo
Misc : Water Multiplr: 49.66
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 9:48 2014 Quant Results File: HGAS.RES



EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN002

APPL ID: AZ02100

Sample Collection Date: 9/2/2014

QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 11.3 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	45.00 U	110.0	45.00	19.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	69.3 #	76-131			%	9/16/2014	9/16/2014

= Recovery (or RPD) is outside QC limits.

Quant Method:	HGAS.M
Run #:	0915H22
Instrument:	Harpo
Sequence:	140915
Dilution Factor:	50
Initials:	DA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H22.D\FID1B.CH Vial: 22
Signal #2 : V:\HARPO\DATA\140915\0915H22.D\FID2A.CH
Acq On : 16 Sep 2014 03:59 Operator: LF
Sample : AZ02100S01 154.722g DF50 Inst : Harpo
Misc : Water Multiplr: 48.47
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 9:58 2014 Quant Results File: HGAS.RES

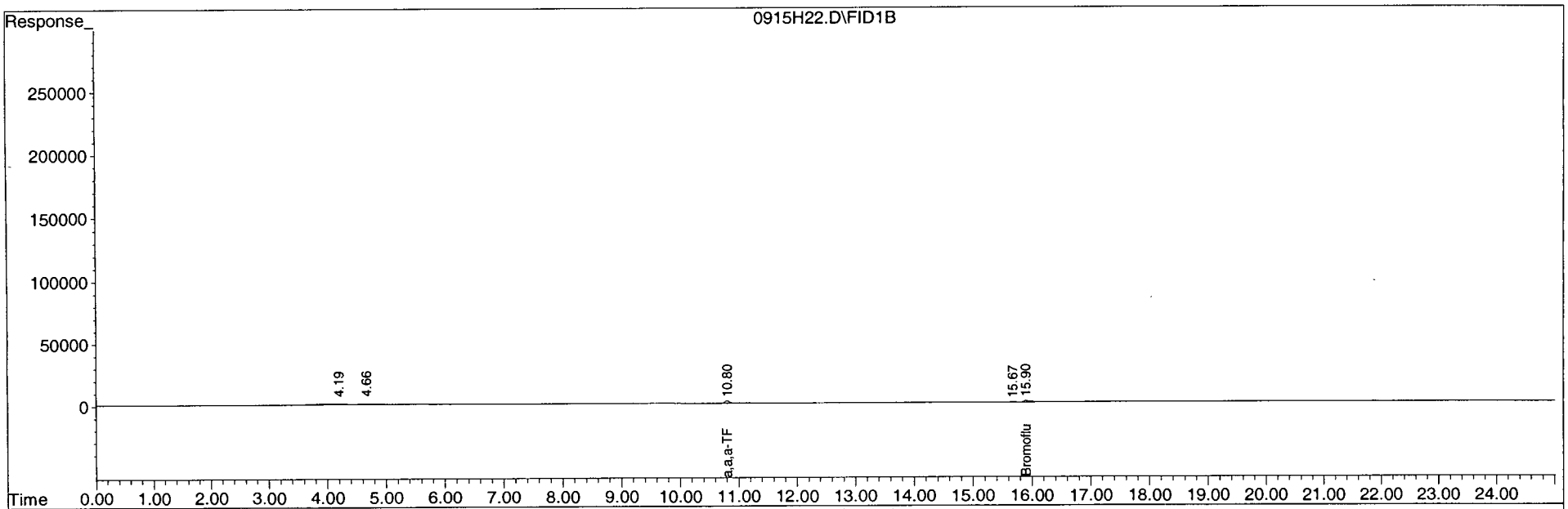
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

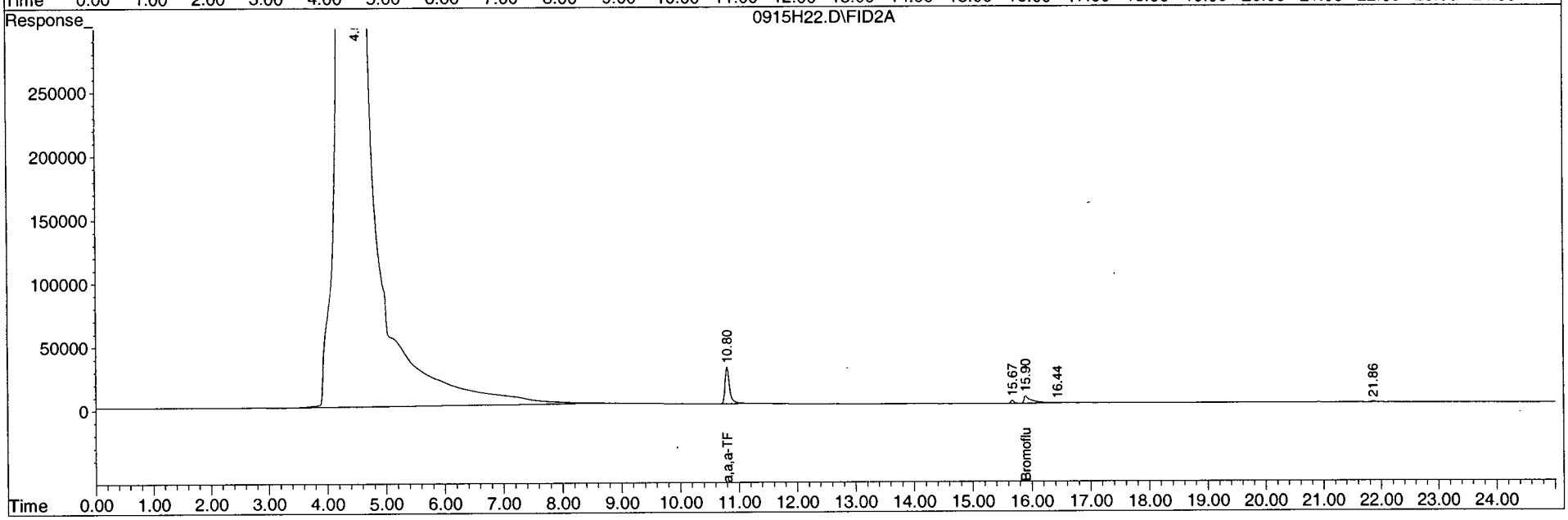
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	106534	18.521 ppb
Surrogate Spike 29.084 Range 75 - 130		Recovery =	63.68%#
2) SAM Bromofluorobenzene	15.90	112465	20.778 ppb
Surrogate Spike 29.084 Range 75 - 130		Recovery =	71.44%#
4) SAM a,a,a-TFT #2	10.80	1568219	18.275 ppb
Surrogate Spike 29.084 Range 75 - 130		Recovery =	62.83%#
5) SAM Bromofluorobenzene #2	15.90	551805	20.140 ppb
Surrogate Spike 29.084 Range 75 - 130		Recovery =	69.25%#
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H22.D\FID1B.CH Vial: 22
Signal #2 : V:\HARPO\DATA\140915\0915H22.D\FID2A.CH
Acq On : 16 Sep 2014 03:59 Operator: LF
Sample : AZ02100S01 154.722g DF50 Inst : Harpo
Misc : Water Multiplr: 48.47
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 9:58 2014 Quant Results File: HGAS.RES





EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN003

APPL ID: AZ02101

Sample Collection Date: 9/2/2014

QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 11.5 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	45.00 U	110.0	45.00	19.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	89.7	76-131			%	9/16/2014	9/16/2014

Quant Method:	HGAS.M
Run #:	0915H23
Instrument:	Harpo
Sequence:	140915
Dilution Factor:	50
Initials:	DA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H23.D\FID1B.CH Vial: 23
Signal #2 : V:\HARPO\DATA\140915\0915H23.D\FID2A.CH
Acq On : 16 Sep 2014 04:36 Operator: LF
Sample : AZ02101S01 153.882g DF50 Inst : Harpo
Misc : Water Multiplr: 48.74
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 9:59 2014 Quant Results File: HGAS.RES

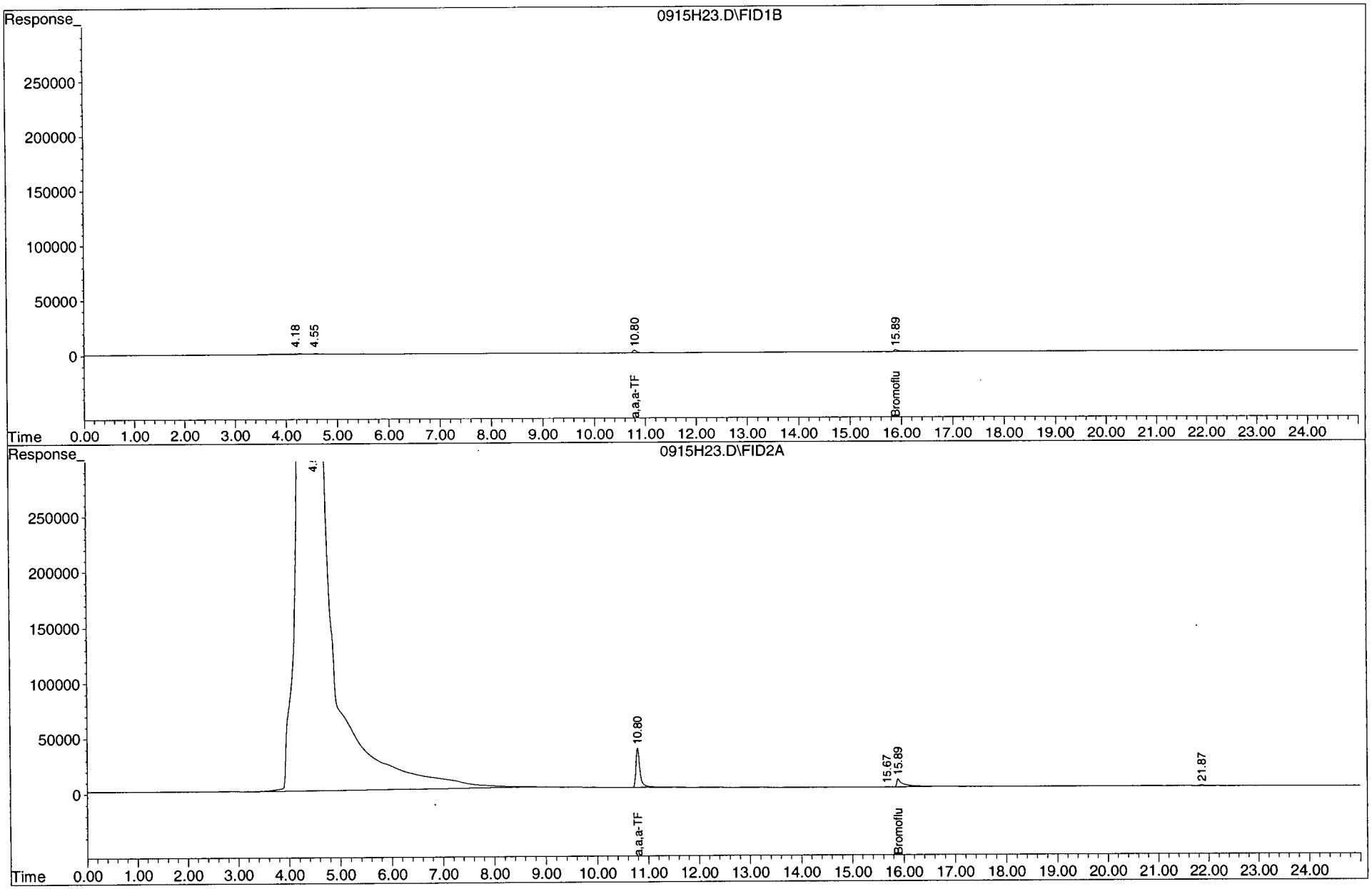
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	132282	22.997 ppb
Surrogate Spike 29.243 Range 75 - 130		Recovery =	78.64%
2) SAM Bromofluorobenzene	15.89	134120	24.778 ppb
Surrogate Spike 29.243 Range 75 - 130		Recovery =	84.73%
4) SAM a,a,a-TFT #2	10.80	1976508	23.033 ppb
Surrogate Spike 29.243 Range 75 - 130		Recovery =	78.76%
5) SAM Bromofluorobenzene #2	15.89	718281	26.217 ppb
Surrogate Spike 29.243 Range 75 - 130		Recovery =	89.65%
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H23.D\FID1B.CH Vial: 23
Signal #2 : V:\HARPO\DATA\140915\0915H23.D\FID2A.CH
Acq On : 16 Sep 2014 04:36 Operator: LF
Sample : AZ02101S01 153.882g DF50 Inst : Harpo
Misc : Water Multiplr: 48.74
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 9:59 2014 Quant Results File: HGAS.RES



EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN004

APPL ID: AZ02102

Sample Collection Date: 9/2/2014

QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 11.0 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	45.00 U	110.0	45.00	19.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	85.7	76-131			%	9/16/2014	9/16/2014

Quant Method:	HGAS.M
Run #:	0915H24
Instrument:	Harpo
Sequence:	140915
Dilution Factor:	50
Initials:	DA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H24.D\FID1B.CH Vial: 24
Signal #2 : V:\HARPO\DATA\140915\0915H24.D\FID2A.CH
Acq On : 16 Sep 2014 05:12 Operator: LF
Sample : AZ02102S01 162.817g DF50 Inst : Harpo
Misc : Water Multiplr: 46.06
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 9:59 2014 Quant Results File: HGAS.RES

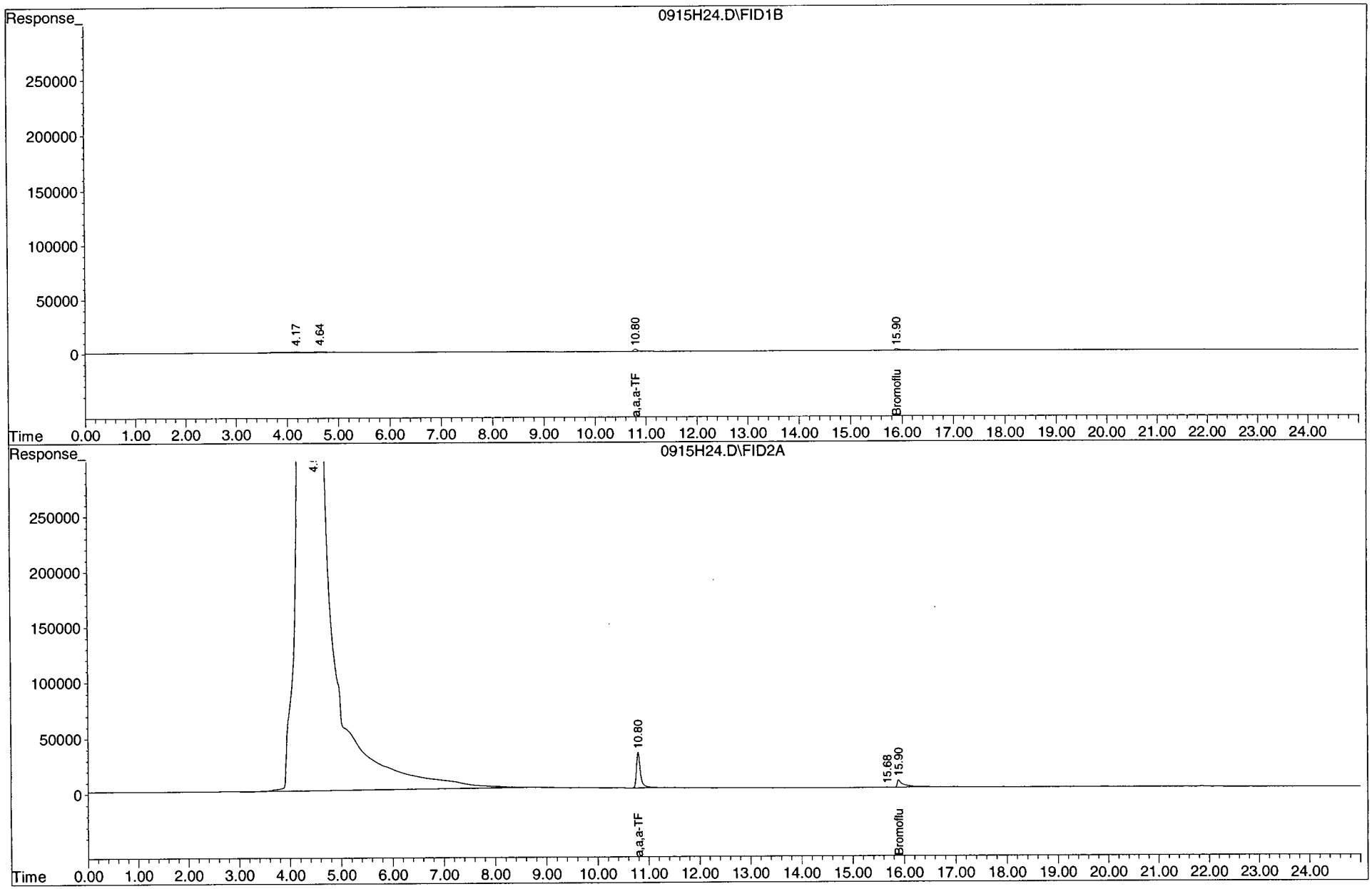
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	116457	20.246 ppb
Surrogate Spike 27.638 Range 75 - 130		Recovery =	73.25%#
2) SAM Bromofluorobenzene	15.90	122416	22.616 ppb
Surrogate Spike 27.638 Range 75 - 130		Recovery =	81.83%
4) SAM a,a,a-TFT #2	10.80	1739150	20.267 ppb
Surrogate Spike 27.638 Range 75 - 130		Recovery =	73.33%#
5) SAM Bromofluorobenzene #2	15.90	648550	23.671 ppb
Surrogate Spike 27.638 Range 75 - 130		Recovery =	85.65%
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H24.D\FID1B.CH Vial: 24
Signal #2 : V:\HARPO\DATA\140915\0915H24.D\FID2A.CH
Acq On : 16 Sep 2014 05:12 Operator: LF
Sample : AZ02102S01 162.817g DF50 Inst : Harpo
Misc : Water Multiplr: 46.06
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 9:59 2014 Quant Results File: HGAS.RES



EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN005
Sample Collection Date: 9/2/2014

ARF: 74218
APPL ID: AZ02103
QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 15.8 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	48.00 U	120.0	48.00	20.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	104	76-131			%	9/16/2014	9/16/2014

Quant Method:	HGAS.M
Run #:	0915H25
Instrument:	Harpo
Sequence:	140915
Dilution Factor:	50
Initials:	DA

Printed: 9/19/2014 11:25:59 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H25.D\FID1B.CH Vial: 25
Signal #2 : V:\HARPO\DATA\140915\0915H25.D\FID2A.CH
Acq On : 16 Sep 2014 05:49 Operator: LF
Sample : AZ02103S01 162.096g DF50 Inst : Harpo
Misc : Water Multiplr: 46.27
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 9:59 2014 Quant Results File: HGAS.RES

Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

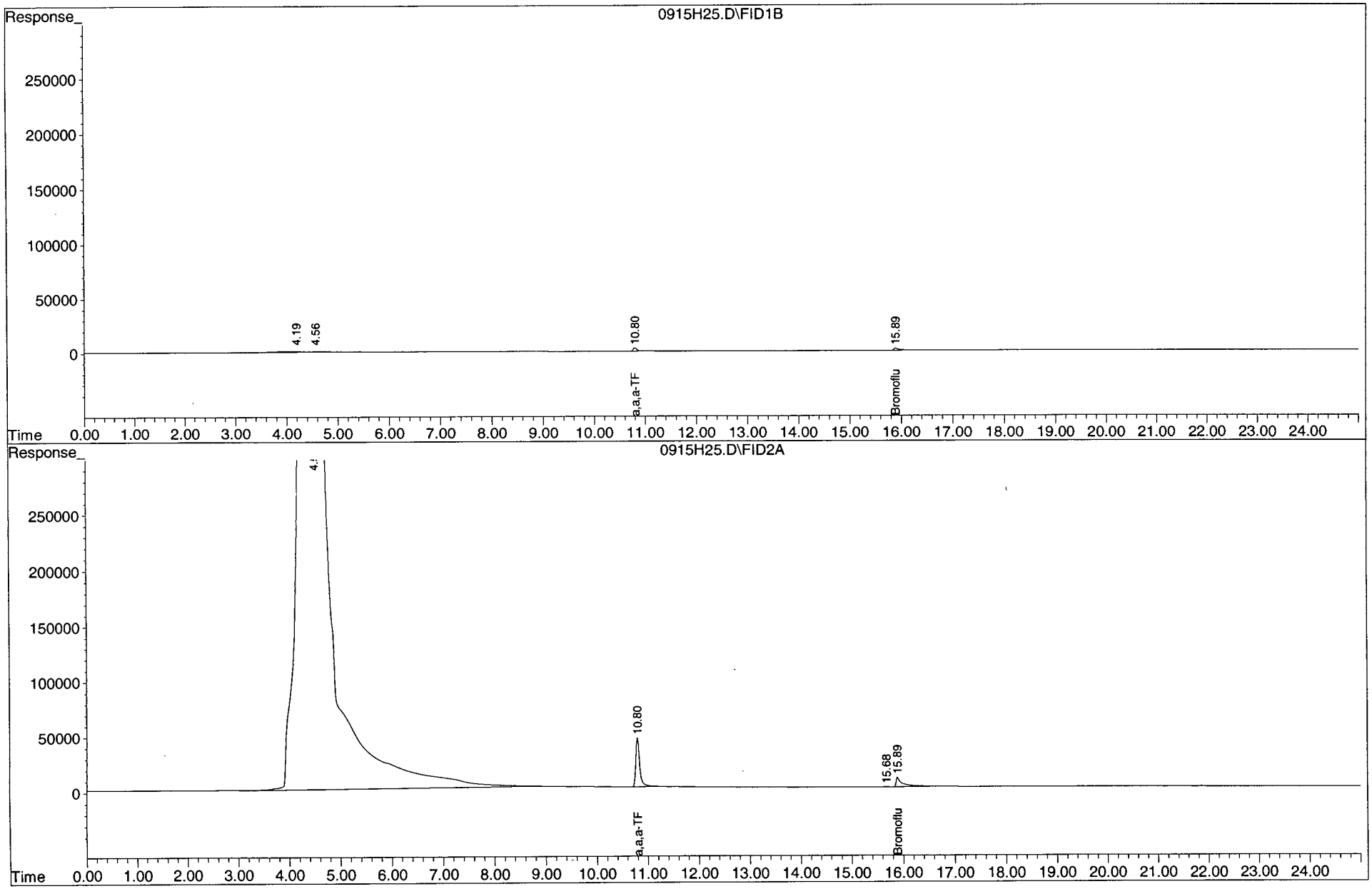
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	160306	27.869 ppb
Surrogate Spike 27.761 Range 75 - 130		Recovery = 100.39%	
2) SAM Bromofluorobenzene	15.89	152617	28.195 ppb
Surrogate Spike 27.761 Range 75 - 130		Recovery = 101.56%	
4) SAM a,a,a-TFT #2	10.80	2368603	27.603 ppb
Surrogate Spike 27.761 Range 75 - 130		Recovery = 99.43%	
5) SAM Bromofluorobenzene #2	15.89	788956	28.796 ppb
Surrogate Spike 27.761 Range 75 - 130		Recovery = 103.73%	
Target Compounds			

(f)=RT Delta > 1/2 Window

(m)=manual int.

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H25.D\FID1B.CH Vial: 25
Signal #2 : V:\HARPO\DATA\140915\0915H25.D\FID2A.CH
Acq On : 16 Sep 2014 05:49 Operator: LF
Sample : AZ02103S01 162.096g DF50 Inst : Harpo
Misc : Water Multiplr: 46.27
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 9:59 2014 Quant Results File: HGAS.RES



EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN006

APPL ID: AZ02104

Sample Collection Date: 9/2/2014

QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 14.2 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	47.00 U	120.0	47.00	20.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	85.8	76-131			%	9/16/2014	9/16/2014

Quant Method:	HGAS.M
Run #:	0915H26
Instrument:	Harpo
Sequence:	140915
Dilution Factor:	50
Initials:	DA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H26.D\FID1B.CH Vial: 26
Signal #2 : V:\HARPO\DATA\140915\0915H26.D\FID2A.CH
Acq On : 16 Sep 2014 06:25 Operator: LF
Sample : AZ02104S01 158.753g DF50 Inst : Harpo
Misc : Water Multiplr: 47.24
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:00 2014 Quant Results File: HGAS.RES

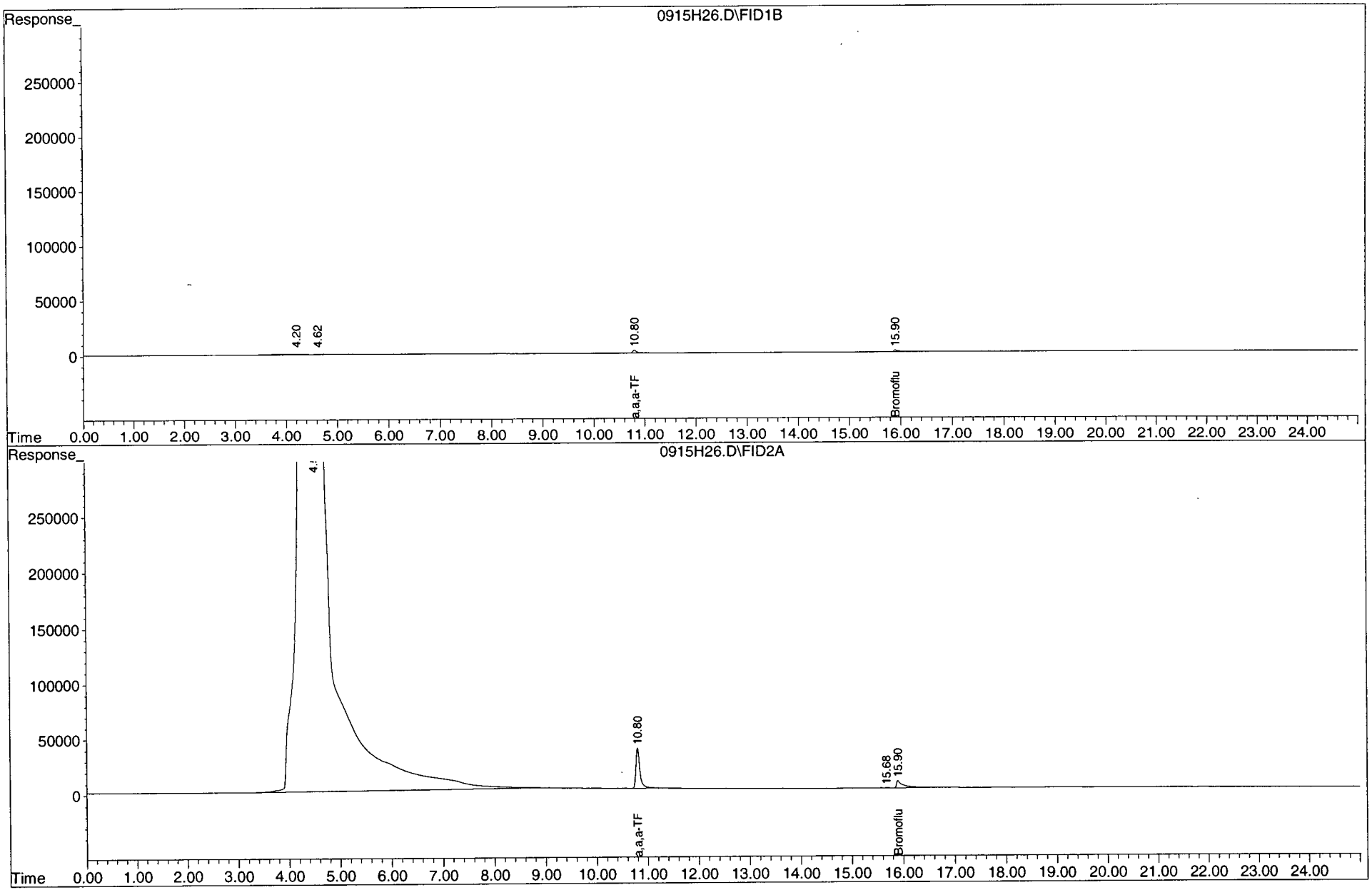
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	136954	23.809 ppb
Surrogate Spike 28.346 Range 75 - 130		Recovery =	83.99%
2) SAM Bromofluorobenzene	15.90	129686	23.959 ppb
Surrogate Spike 28.346 Range 75 - 130		Recovery =	84.52%
4) SAM a,a,a-TFT #2	10.80	1989605	23.186 ppb
Surrogate Spike 28.346 Range 75 - 130		Recovery =	81.80%
5) SAM Bromofluorobenzene #2	15.90	666479	24.326 ppb
Surrogate Spike 28.346 Range 75 - 130		Recovery =	85.82%
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H26.D\FID1B.CH Vial: 26
Signal #2 : V:\HARPO\DATA\140915\0915H26.D\FID2A.CH
Acq On : 16 Sep 2014 06:25 Operator: LF
Sample : AZ02104S01 158.753g DF50 Inst : Harpo
Misc : Water Multiplr: 47.24
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:00 2014 Quant Results File: HGAS.RES



EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN007

APPL ID: AZ02105

Sample Collection Date: 9/2/2014

QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 24.0 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	53.00 U	130.0	53.00	22.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	87.4	76-131			%	9/16/2014	9/16/2014

Quant Method:	HGAS.M
Run #:	0915H27
Instrument:	Harpo
Sequence:	140915
Dilution Factor:	50
Initials:	DA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H27.D\FID1B.CH Vial: 27
Signal #2 : V:\HARPO\DATA\140915\0915H27.D\FID2A.CH
Acq On : 16 Sep 2014 07:01 Operator: LF
Sample : AZ02105S01 157.443g DF50 Inst : Harpo
Misc : Water Multiplr: 47.64
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:00 2014 Quant Results File: HGAS.RES

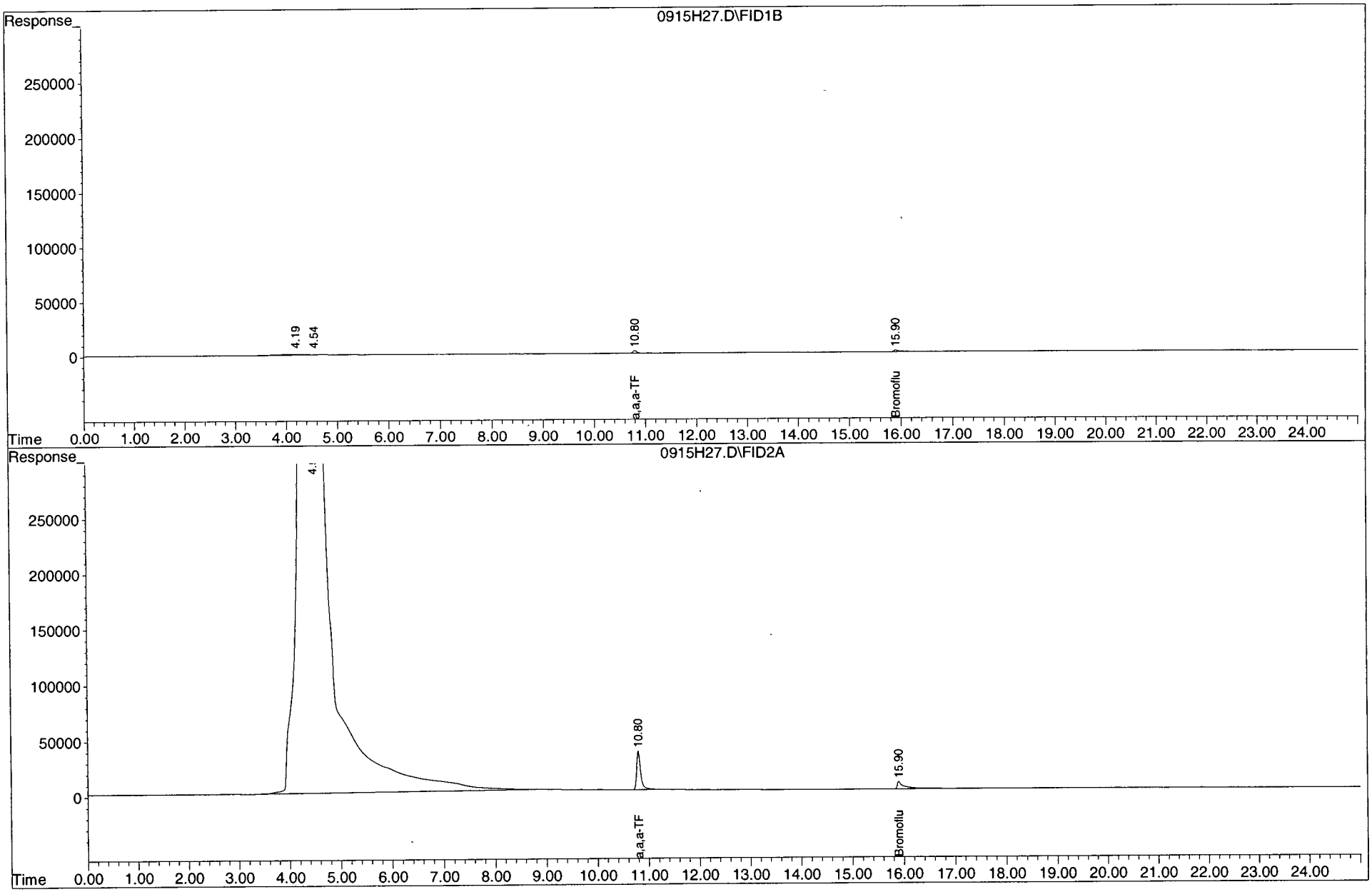
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	133208	23.158 ppb
Surrogate Spike 28.582 Range 75 - 130		Recovery =	81.02%
2) SAM Bromofluorobenzene	15.90	144690	26.731 ppb
Surrogate Spike 28.582 Range 75 - 130		Recovery =	93.52%
4) SAM a,a,a-TFT #2	10.80	1949242	22.716 ppb
Surrogate Spike 28.582 Range 75 - 130		Recovery =	79.48%
5) SAM Bromofluorobenzene #2	15.90	684552	24.985 ppb
Surrogate Spike 28.582 Range 75 - 130		Recovery =	87.42%
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H27.D\FID1B.CH Vial: 27
Signal #2 : V:\HARPO\DATA\140915\0915H27.D\FID2A.CH
Acq On : 16 Sep 2014 07:01 Operator: LF
Sample : AZ02105S01 157.443g DF50 Inst : Harpo
Misc : Water Multiplr: 47.64
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:00 2014 Quant Results File: HGAS.RES



EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN008

APPL ID: AZ02106

Sample Collection Date: 9/2/2014

QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 29.8 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	57.00 U	140.0	57.00	24.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	92.6	76-131			%	9/16/2014	9/16/2014

Quant Method:	HGAS.M
Run #:	0915H28
Instrument:	Harpo
Sequence:	140915
Dilution Factor:	50
Initials:	DA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H28.D\FID1B.CH Vial: 28
Signal #2 : V:\HARPO\DATA\140915\0915H28.D\FID2A.CH
Acq On : 16 Sep 2014 07:38 Operator: LF
Sample : AZ02106S01 158.893g DF50 Inst : Harpo
Misc : Water Multiplr: 47.20
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:00 2014 Quant Results File: HGAS.RES

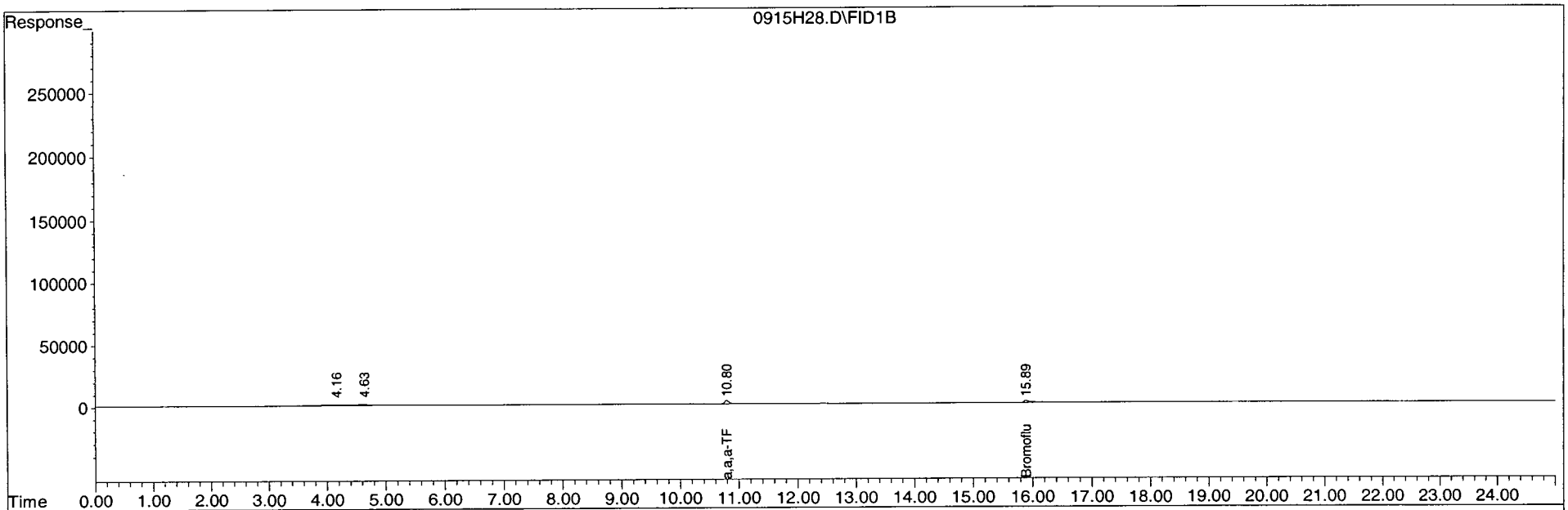
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

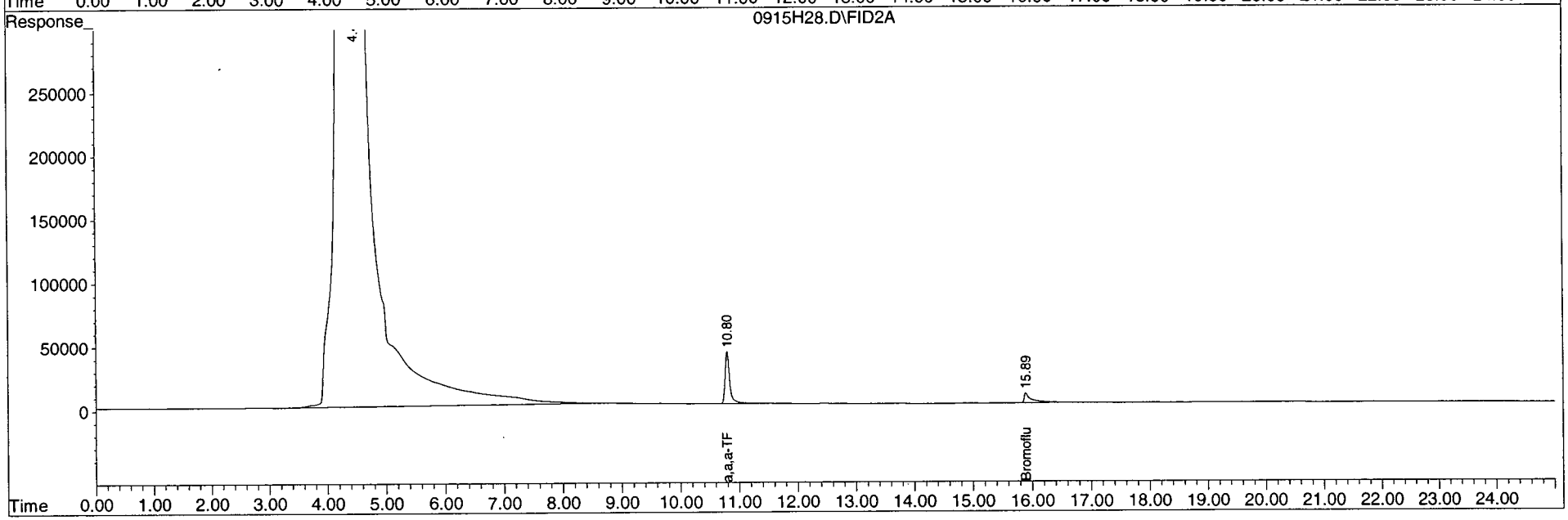
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	148407	25.800 ppb
Surrogate Spike 28.321 Range 75 - 130		Recovery =	91.10%
2) SAM Bromofluorobenzene	15.89	135177	24.973 ppb
Surrogate Spike 28.321 Range 75 - 130		Recovery =	88.18%
4) SAM a,a,a-TFT #2	10.80	2228093	25.965 ppb
Surrogate Spike 28.321 Range 75 - 130		Recovery =	91.68%
5) SAM Bromofluorobenzene #2	15.89	718830	26.237 ppb
Surrogate Spike 28.321 Range 75 - 130		Recovery =	92.64%
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H28.D\FID1B.CH Vial: 28
Signal #2 : V:\HARPO\DATA\140915\0915H28.D\FID2A.CH
Acq On : 16 Sep 2014 07:38 Operator: LF
Sample : AZ02106S01 158.893g DF50 Inst : Harpo
Misc : Water Multiplr: 47.20
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:00 2014 Quant Results File: HGAS.RES





EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN009

APPL ID: AZ02107

Sample Collection Date: 9/2/2014

QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 23.4 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	52.00 U	130.0	52.00	22.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	74.2 #	76-131			%	9/16/2014	9/16/2014

= Recovery (or RPD) is outside QC limits.

Quant Method:	HGAS.M
Run #:	0915H29
Instrument:	Harpo
Sequence:	140915
Dilution Factor:	50
Initials:	DA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H29.D\FID1B.CH Vial: 29
Signal #2 : V:\HARPO\DATA\140915\0915H29.D\FID2A.CH
Acq On : 16 Sep 2014 08:14 Operator: LF
Sample : AZ02107S01 154.525g DF50 Inst : Harpo
Misc : Water Multiplr: 48.54
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:01 2014 Quant Results File: HGAS.RES

Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

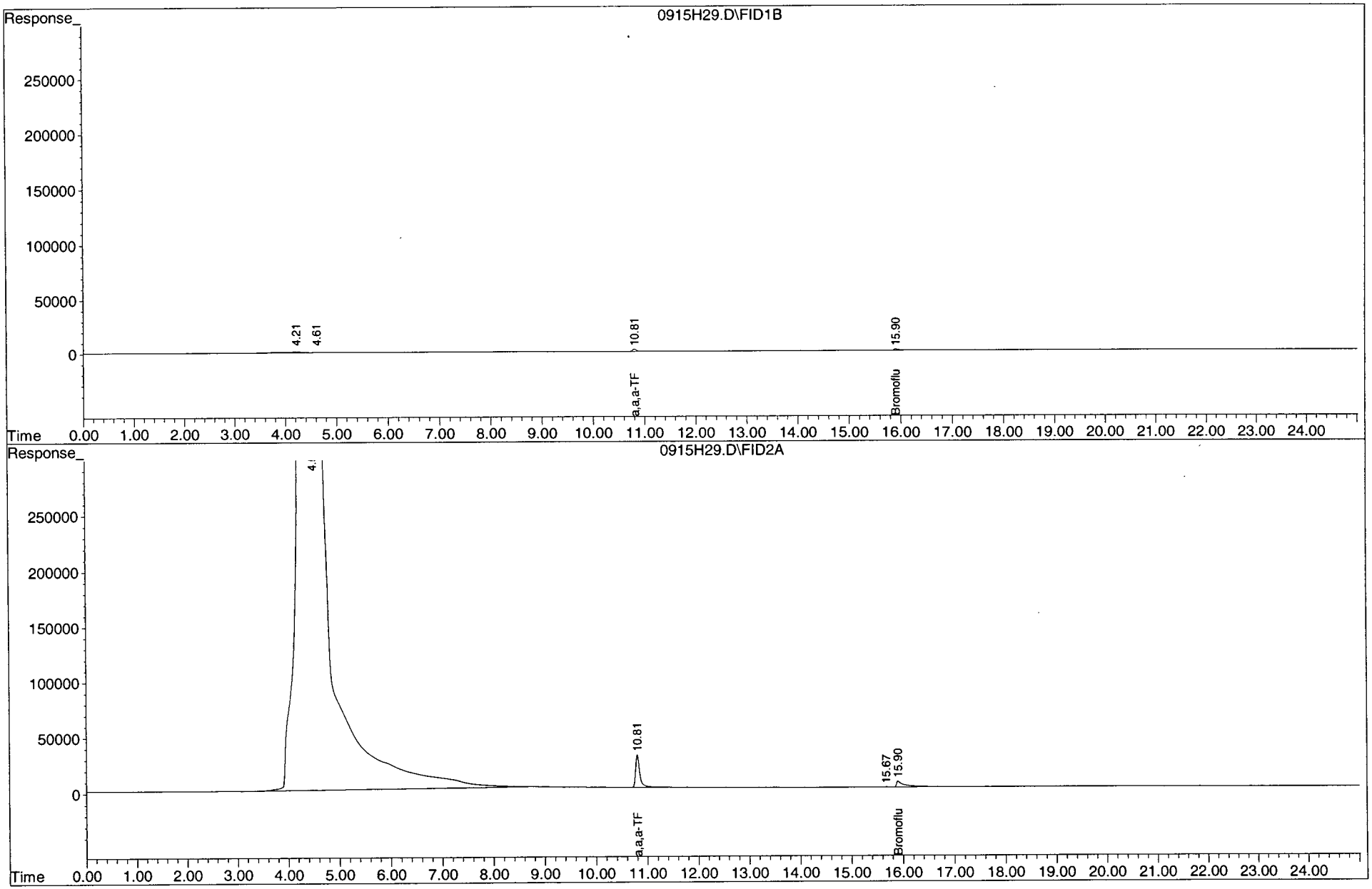
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.81	110887	19.277 ppb
Surrogate Spike 29.122 Range 75 - 130		Recovery =	66.20%#
2) SAM Bromofluorobenzene	15.90	117425	21.694 ppb
Surrogate Spike 29.122 Range 75 - 130		Recovery =	74.49%#
4) SAM a,a,a-TFT #2	10.81	1609881	18.761 ppb
Surrogate Spike 29.122 Range 75 - 130		Recovery =	64.42%#
5) SAM Bromofluorobenzene #2	15.90	591715	21.597 ppb
Surrogate Spike 29.122 Range 75 - 130		Recovery =	74.16%#
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H29.D\FID1B.CH Vial: 29
Signal #2 : V:\HARPO\DATA\140915\0915H29.D\FID2A.CH
Acq On : 16 Sep 2014 08:14 Operator: LF
Sample : AZ02107S01 154.525g DF50 Inst : Harpo
Misc : Water Multiplr: 48.54
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:01 2014 Quant Results File: HGAS.RES



EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN010

APPL ID: AZ02108

Sample Collection Date: 9/2/2014

QCG: #GASHC-140912B-189839

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015C	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	9/12/2014	9/12/2014
EPA 8015C	SURROGATE: BFB-FID (S)	72.5	70-130			%	9/12/2014	9/12/2014

Quant Method: HGAS.M
Run #: 0912H20
Instrument: Harpo
Sequence: 140617
Dilution Factor: 1
Initials: RSA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0912H20.D\FID1B.CH Vial: 20
Signal #2 : V:\HARPO\DATA\140617\0912H20.D\FID2A.CH
Acq On : 12 Sep 2014 20:39 Operator: LF
Sample : AZ02108W03 Inst : Harpo
Misc : Water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 11:22 2014 Quant Results File: HGAS.RES

Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

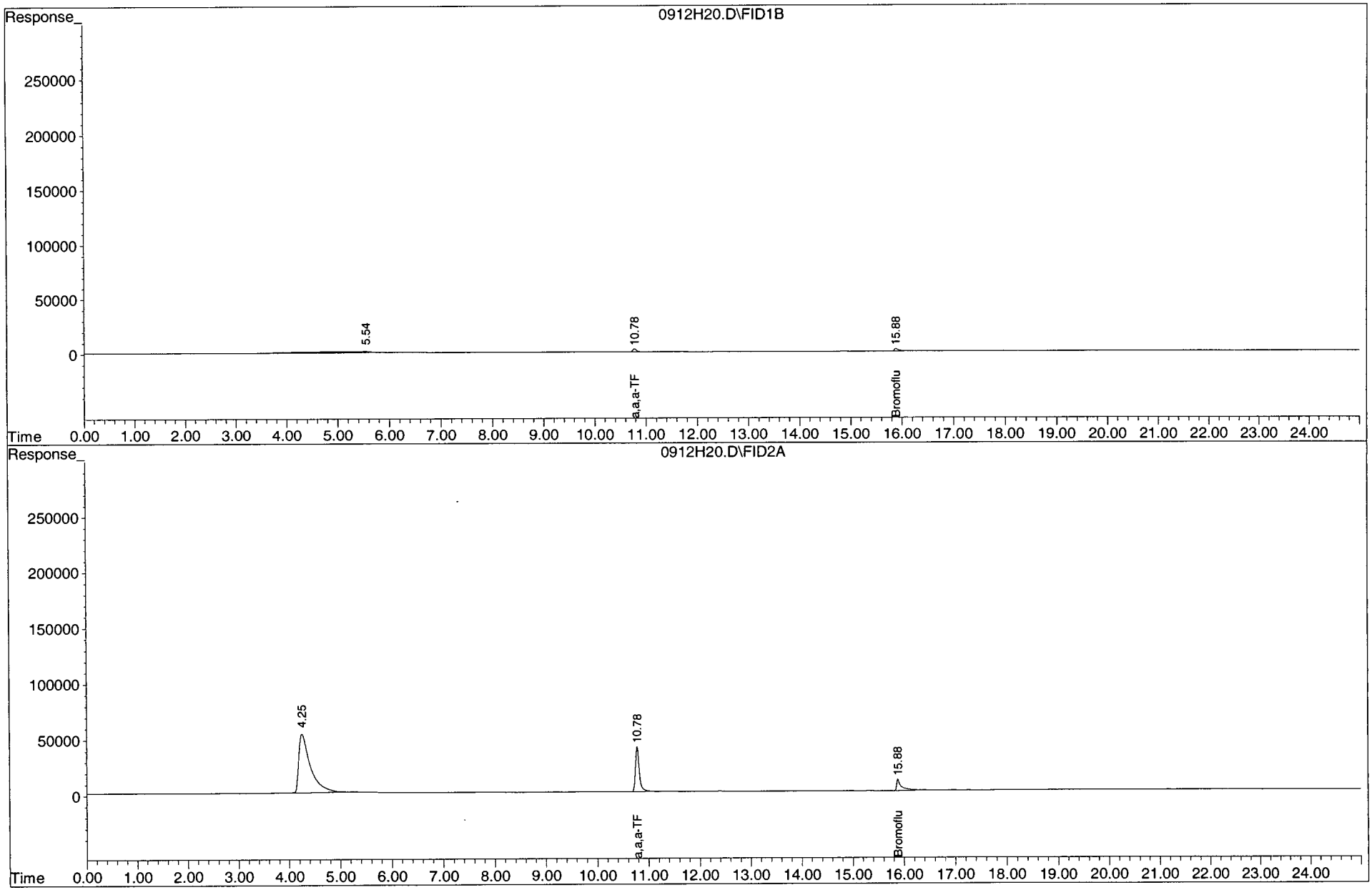
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.78	146280	21.020 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	70.07%#
2) SAM Bromofluorobenzene	15.88	152105	17.096 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	56.99%#
4) SAM a,a,a-TFT #2	10.78	2141233	22.763 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	75.88%
5) SAM Bromofluorobenzene #2	15.88	768264	21.742 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	72.47%#
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0912H20.D\FID1B.CH Vial: 20
Signal #2 : V:\HARPO\DATA\140617\0912H20.D\FID2A.CH
Acq On : 12 Sep 2014 20:39 Operator: LF
Sample : AZ02108W03 Inst : Harpo
Misc : Water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 11:22 2014 Quant Results File: HGAS.RES



EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN011

APPL ID: AZ02109

Sample Collection Date: 9/2/2014

QCG: #GASHC-140912B-189839

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015C	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	9/12/2014	9/12/2014
EPA 8015C	SURROGATE: BFB-FID (S)	74.7	70-130			%	9/12/2014	9/12/2014

Quant Method:	HGAS.M
Run #:	0912H21
Instrument:	Harpo
Sequence:	140617
Dilution Factor:	1
Initials:	RSA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0912H21.D\FID1B.CH Vial: 21
Signal #2 : V:\HARPO\DATA\140617\0912H21.D\FID2A.CH
Acq On : 12 Sep 2014 21:16 Operator: LF
Sample : AZ02109W02 Inst : Harpo
Misc : Water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 11:23 2014 Quant Results File: HGAS.RES

Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

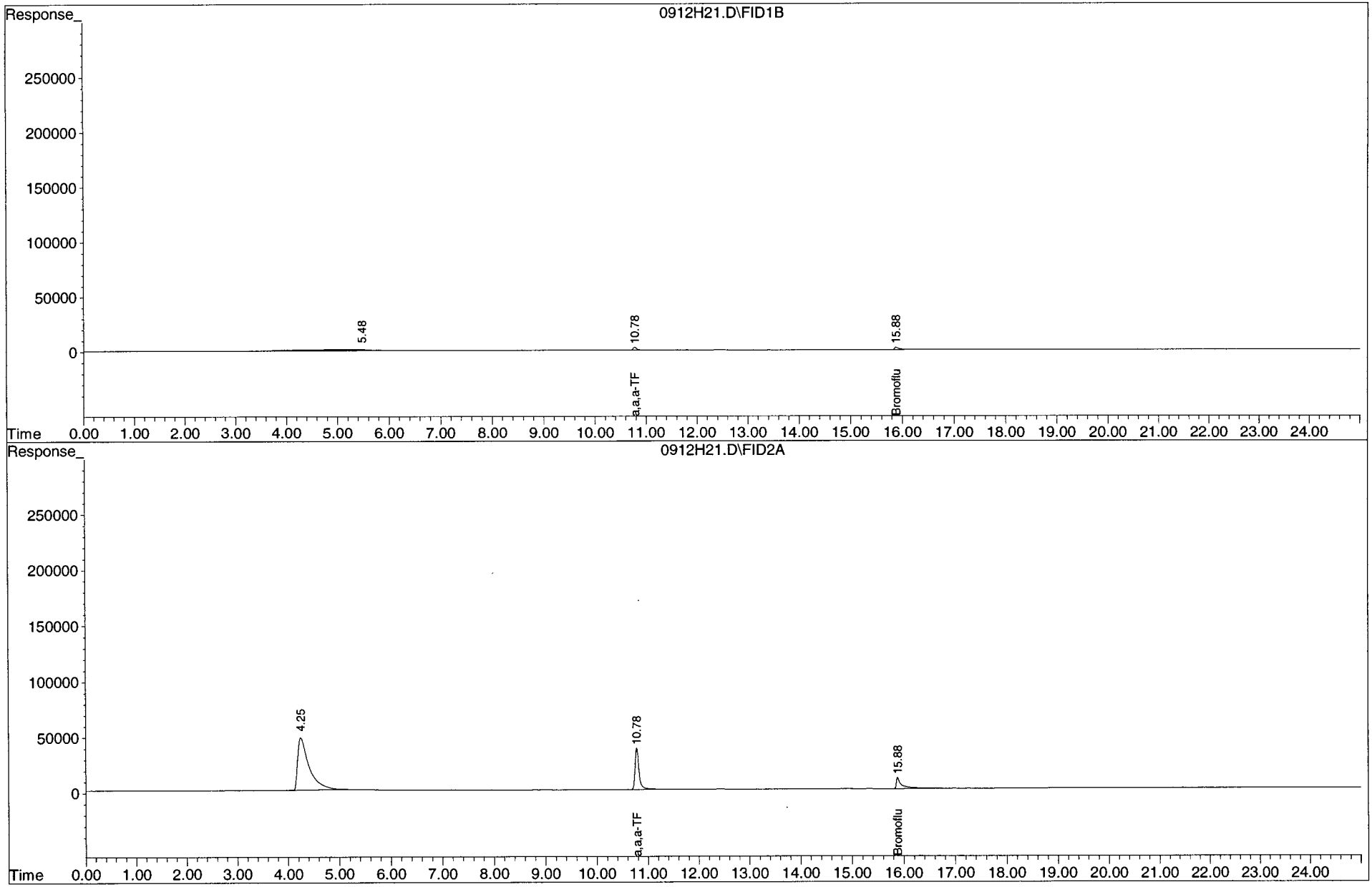
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.78	134874	19.381 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	64.60%#
2) SAM Bromofluorobenzene	15.88	152426	17.132 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	57.11%#
4) SAM a,a,a-TFT #2	10.78	1980804	21.057 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	70.19%#
5) SAM Bromofluorobenzene #2	15.88	791603	22.403 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	74.68%#
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0912H21.D\FID1B.CH Vial: 21
Signal #2 : V:\HARPO\DATA\140617\0912H21.D\FID2A.CH
Acq On : 12 Sep 2014 21:16 Operator: LF
Sample : AZ02109W02 Inst : Harpo
Misc : Water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 11:23 2014 Quant Results File: HGAS.RES



EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN012

APPL ID: AZ02110

Sample Collection Date: 9/3/2014

QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 14.1 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	47.00 U	120.0	47.00	20.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	88.6	76-131			%	9/16/2014	9/16/2014

Quant Method:	HGAS.M
Run #:	0915H30
Instrument:	Harpo
Sequence:	140915
Dilution Factor:	50
Initials:	DA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H30.D\FID1B.CH Vial: 30
Signal #2 : V:\HARPO\DATA\140915\0915H30.D\FID2A.CH
Acq On : 16 Sep 2014 08:50 Operator: LF
Sample : AZ02110S01 166.815g DF50 Inst : Harpo
Misc : Water Multiplr: 44.96
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:01 2014 Quant Results File: HGAS.RES

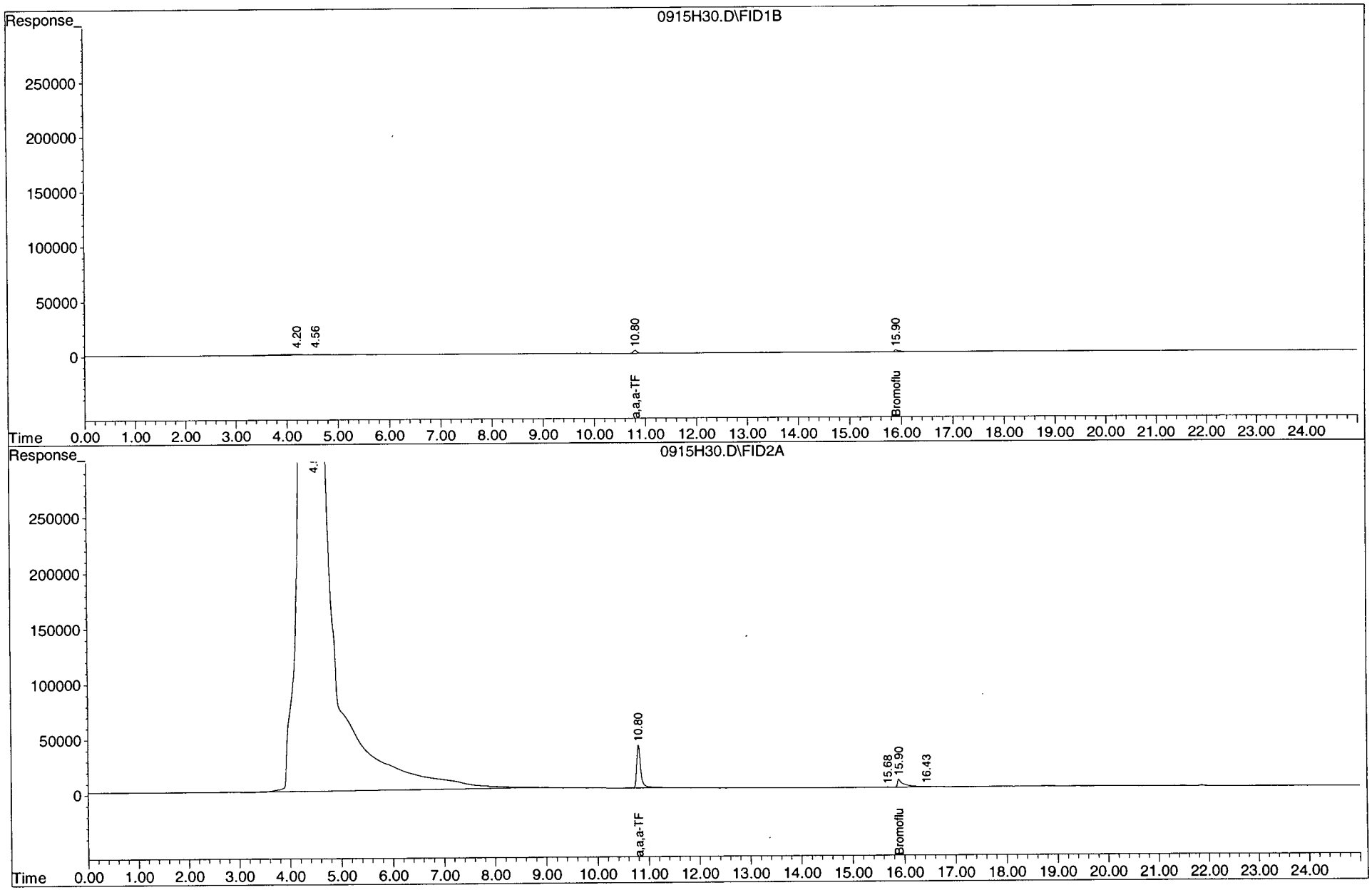
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	143586	24.962 ppb
Surrogate Spike 26.976 Range 75 - 130		Recovery =	92.53%
2) SAM Bromofluorobenzene	15.90	137214	25.350 ppb
Surrogate Spike 26.976 Range 75 - 130		Recovery =	93.97%
4) SAM a,a,a-TFT #2	10.80	2096969	24.437 ppb
Surrogate Spike 26.976 Range 75 - 130		Recovery =	90.59%
5) SAM Bromofluorobenzene #2	15.90	654508	23.889 ppb
Surrogate Spike 26.976 Range 75 - 130		Recovery =	88.56%
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H30.D\FID1B.CH Vial: 30
Signal #2 : V:\HARPO\DATA\140915\0915H30.D\FID2A.CH
Acq On : 16 Sep 2014 08:50 Operator: LF
Sample : AZ02110S01 166.815g DF50 Inst : Harpo -
Misc : Water Multiplr: 44.96
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:01 2014 Quant Results File: HGAS.RES



EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN013

APPL ID: AZ02111

Sample Collection Date: 9/3/2014

QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 16.1 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	48.00 U	120.0	48.00	20.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	99.4	76-131			%	9/16/2014	9/16/2014

Quant Method: HGAS.M
Run #: 0915H33
Instrument: Harpo
Sequence: 140915
Dilution Factor: 50
Initials: DA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H33.D\FID1B.CH Vial: 33
Signal #2 : V:\HARPO\DATA\140915\0915H33.D\FID2A.CH
Acq On : 16 Sep 2014 10:39 Operator: LF
Sample : AZ02111S01 172.860g DF50 Inst : Harpo
Misc : Water Multiplr: 43.39
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:03 2014 Quant Results File: HGAS.RES

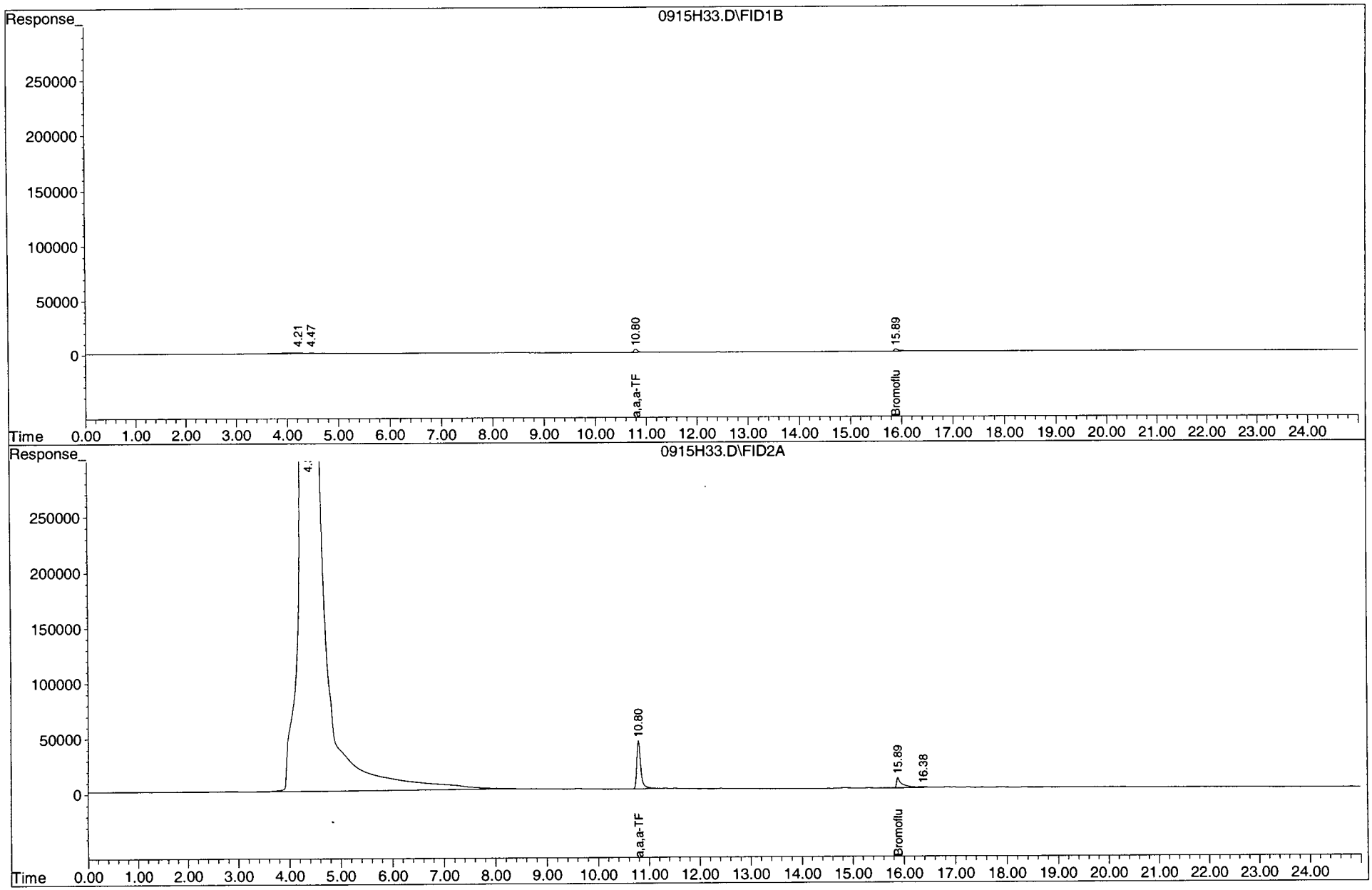
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	159615	27.748 ppb
Surrogate Spike 26.033 Range 75 - 130		Recovery = 106.59%	
2) SAM Bromofluorobenzene	15.89	144625	26.719 ppb
Surrogate Spike 26.033 Range 75 - 130		Recovery = 102.64%	
4) SAM a,a,a-TFT #2	10.80	2346553	27.346 ppb
Surrogate Spike 26.033 Range 75 - 130		Recovery = 105.05%	
5) SAM Bromofluorobenzene #2	15.89	708720	25.868 ppb
Surrogate Spike 26.033 Range 75 - 130		Recovery = 99.37%	
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H33.D\FID1B.CH Vial: 33
Signal #2 : V:\HARPO\DATA\140915\0915H33.D\FID2A.CH
Acq On : 16 Sep 2014 10:39 Operator: LF
Sample : AZ02111S01 172.860g DF50 Inst : Harpo
Misc : Water Multiplr: 43.39
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:03 2014 Quant Results File: HGAS.RES



EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN014

APPL ID: AZ02112

Sample Collection Date: 9/3/2014

QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 23.2 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	52.00 U	130.0	52.00	22.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	88.9	76-131			%	9/16/2014	9/16/2014

Quant Method:	HGAS.M
Run #:	0915H34
Instrument:	Harpo
Sequence:	140915
Dilution Factor:	50
Initials:	DA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H34.D\FID1B.CH Vial: 34
Signal #2 : V:\HARPO\DATA\140915\0915H34.D\FID2A.CH
Acq On : 16 Sep 2014 11:16 Operator: LF
Sample : AZ02112S01 171.071g DF50 Inst : Harpo
Misc : Water Multiplr: 43.84
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:03 2014 Quant Results File: HGAS.RES

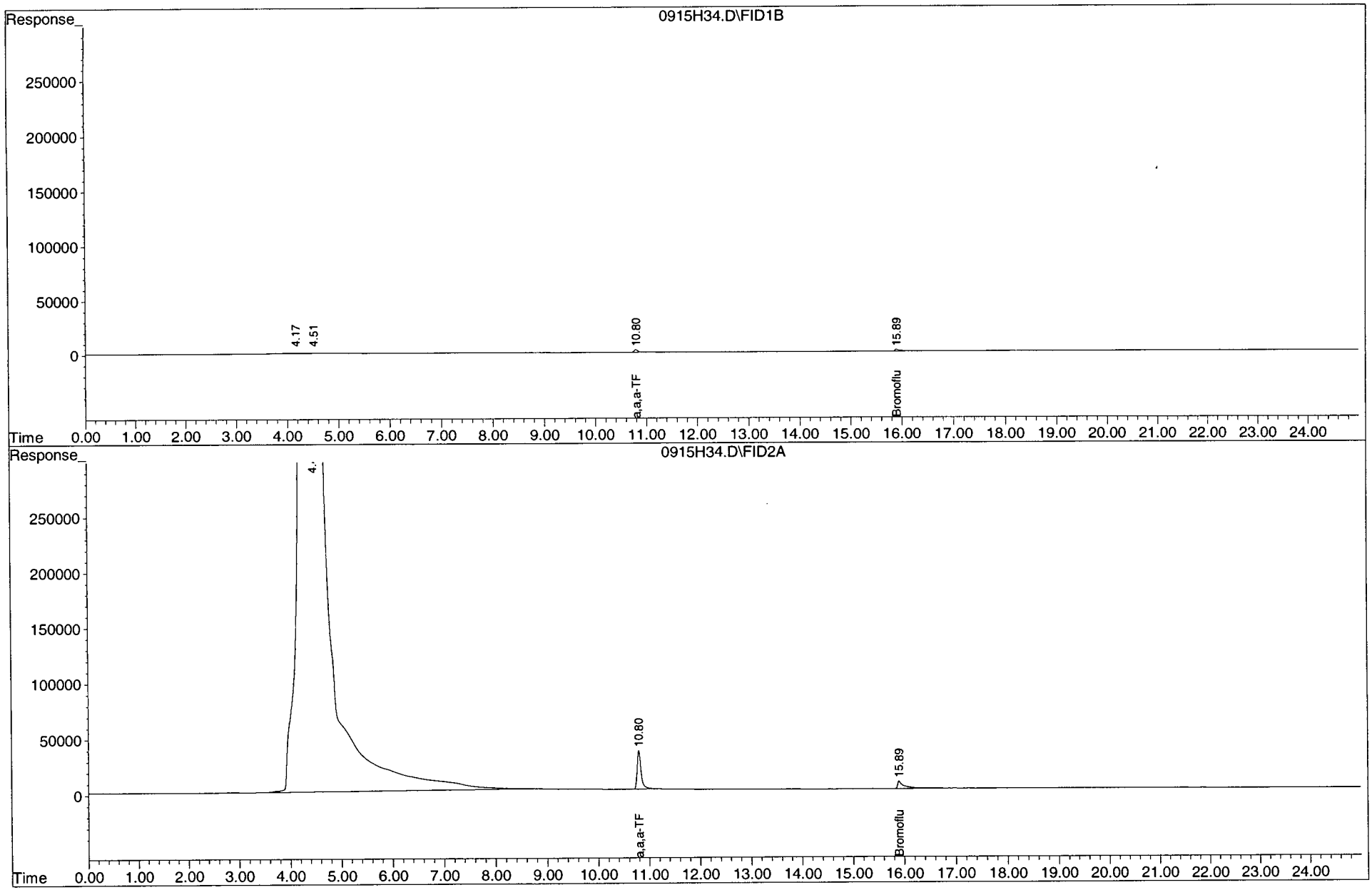
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	127067	22.090 ppb
Surrogate Spike 26.305 Range 75 - 130		Recovery =	83.98%
2) SAM Bromofluorobenzene	15.89	124788	23.054 ppb
Surrogate Spike 26.305 Range 75 - 130		Recovery =	87.64%
4) SAM a,a,a-TFT #2	10.80	1884877	21.966 ppb
Surrogate Spike 26.305 Range 75 - 130		Recovery =	83.51%
5) SAM Bromofluorobenzene #2	15.89	640558	23.380 ppb
Surrogate Spike 26.305 Range 75 - 130		Recovery =	88.88%
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H34.D\FID1B.CH Vial: 34
Signal #2 : V:\HARPO\DATA\140915\0915H34.D\FID2A.CH
Acq On : 16 Sep 2014 11:16 Operator: LF
Sample : AZ02112S01 171.071g DF50 Inst : Harpo
Misc : Water Multiplr: 43.84
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:03 2014 Quant Results File: HGAS.RES



EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN015
Sample Collection Date: 9/3/2014

ARF: 74218
APPL ID: AZ02113
QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 13.6 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	46.00 U	120.0	46.00	20.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	76.0	76-131			%	9/16/2014	9/16/2014

Quant Method: HGAS.M
Run #: 0915H35
Instrument: Harpo
Sequence: 140915
Dilution Factor: 50
Initials: DA

Printed: 9/19/2014 11:25:59 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H35.D\FID1B.CH Vial: 35
Signal #2 : V:\HARPO\DATA\140915\0915H35.D\FID2A.CH
Acq On : 16 Sep 2014 11:52 Operator: LF
Sample : AZ02113S01 163.026g DF50 Inst : Harpo
Misc : Water Multiplr: 46.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:03 2014 Quant Results File: HGAS.RES

Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

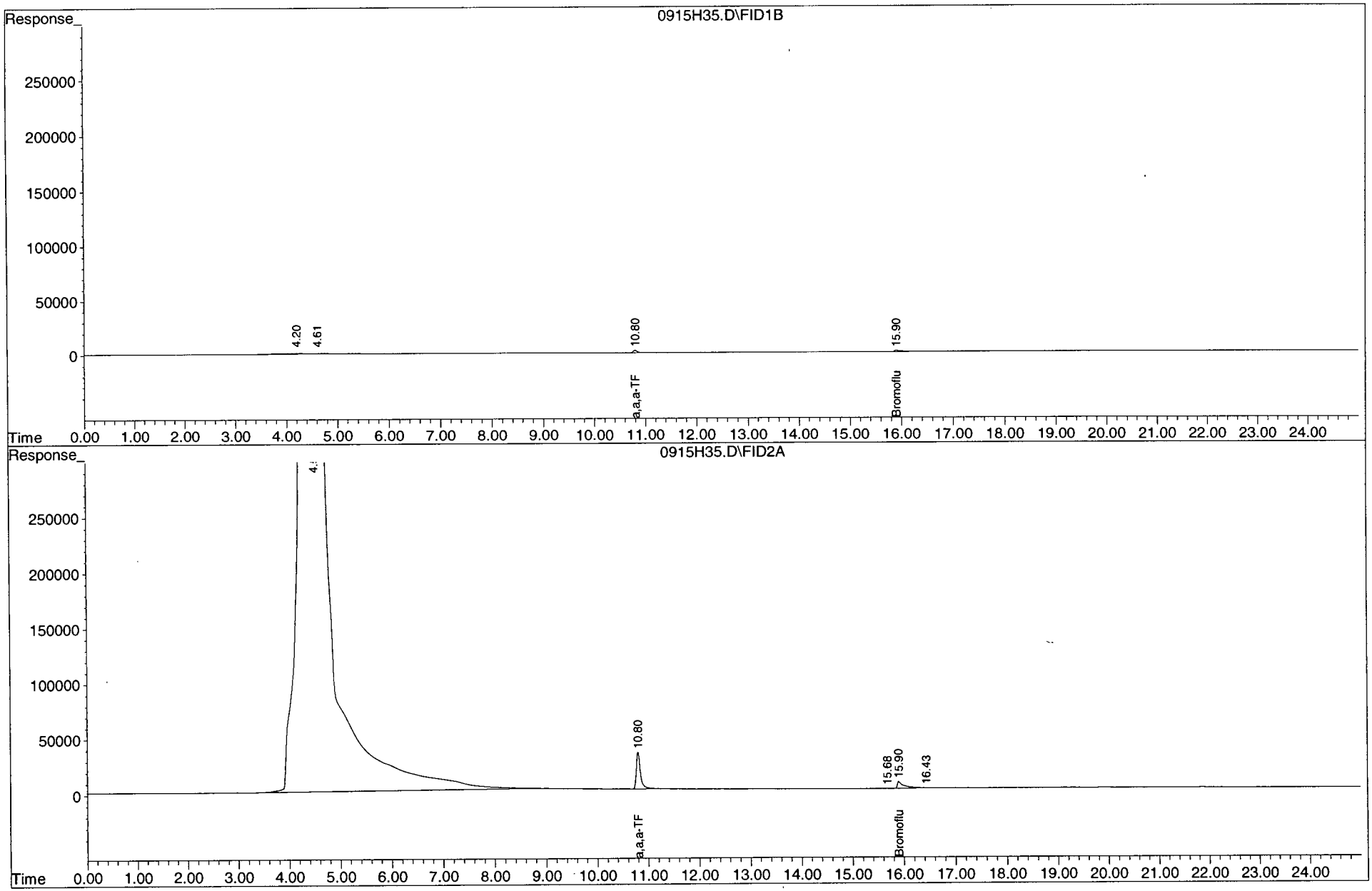
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	126276	21.953 ppb
Surrogate Spike 27.603 Range 75 - 130		Recovery =	79.53%
2) SAM Bromofluorobenzene	15.90	132183	24.420 ppb
Surrogate Spike 27.603 Range 75 - 130		Recovery =	88.47%
4) SAM a,a,a-TFT #2	10.80	1812443	21.121 ppb
Surrogate Spike 27.603 Range 75 - 130		Recovery =	76.52%
5) SAM Bromofluorobenzene #2	15.90	574998	20.987 ppb
Surrogate Spike 27.603 Range 75 - 130		Recovery =	76.03%
Target Compounds			

(f)=RT Delta > 1/2 Window
(m)=manual int.

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H35.D\FID1B.CH Vial: 35
Signal #2 : V:\HARPO\DATA\140915\0915H35.D\FID2A.CH
Acq On : 16 Sep 2014 11:52 Operator: LF
Sample : AZ02113S01 163.026g DF50 Inst : Harpo
Misc : Water Multiplr: 46.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:03 2014 Quant Results File: HGAS.RES



EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN016

APPL ID: AZ02114

Sample Collection Date: 9/3/2014

QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 16.4 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	48.00 U	120.0	48.00	20.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	82.3	76-131			%	9/16/2014	9/16/2014

Quant Method:	HGAS.M
Run #:	0915H36
Instrument:	Harpo
Sequence:	140915
Dilution Factor:	50
Initials:	DA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H36.D\FID1B.CH Vial: 36
Signal #2 : V:\HARPO\DATA\140915\0915H36.D\FID2A.CH
Acq On : 16 Sep 2014 12:29 Operator: LF
Sample : AZ02114S01 172.644g DF50 Inst : Harpo
Misc : Water Multiplr: 43.44
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:04 2014 Quant Results File: HGAS.RES

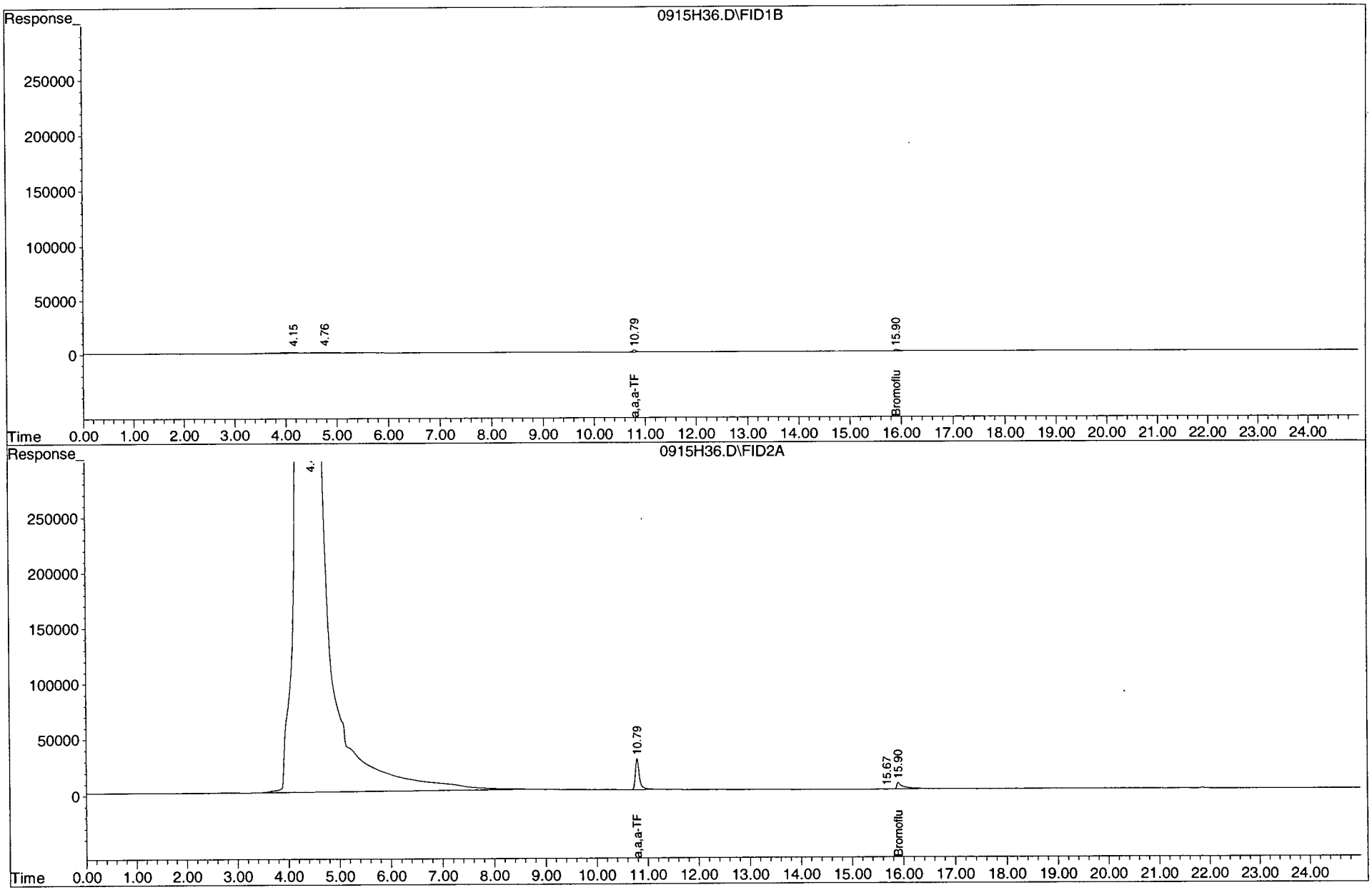
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.79	100732	17.512 ppb
Surrogate Spike 26.065 Range 75 - 130		Recovery =	67.19%#
2) SAM Bromofluorobenzene	15.90	104628	19.330 ppb
Surrogate Spike 26.065 Range 75 - 130		Recovery =	74.16%#
4) SAM a,a,a-TFT #2	10.79	1494402	17.415 ppb
Surrogate Spike 26.065 Range 75 - 130		Recovery =	66.81%#
5) SAM Bromofluorobenzene #2	15.90	587606	21.447 ppb
Surrogate Spike 26.065 Range 75 - 130		Recovery =	82.28%
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H36.D\FID1B.CH Vial: 36
Signal #2 : V:\HARPO\DATA\140915\0915H36.D\FID2A.CH
Acq On : 16 Sep 2014 12:29 Operator: LF
Sample : AZ02114S01 172.644g DF50 Inst : Harpo
Misc : Water Multiplr: 43.44
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:04 2014 Quant Results File: HGAS.RES



EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN017

APPL ID: AZ02115

Sample Collection Date: 9/3/2014

QCG: #GASHC-140915A-189950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 25.6 Percent Moisture.)								
EPA 8015C	GASOLINE RANGE ORGANICS	54.00 U	130.0	54.00	23.00	mg/Kg	9/16/2014	9/16/2014
EPA 8015C	SURROGATE: BFB-FID (S)	48.9 #	76-131			%	9/16/2014	9/16/2014

= Recovery (or RPD) is outside QC limits.

Quant Method:	HGAS.M
Run #:	0915H37
Instrument:	Harpo
Sequence:	140915
Dilution Factor:	50
Initials:	DA

Printed: 9/19/2014 11:25:59 AM

APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H37.D\FID1B.CH Vial: 37
Signal #2 : V:\HARPO\DATA\140915\0915H37.D\FID2A.CH
Acq On : 16 Sep 2014 13:05 Operator: LF
Sample : AZ02115S01 163.335g DF50 Inst : Harpo
Misc : Water Multiplr: 45.92
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:04 2014 Quant Results File: HGAS.RES

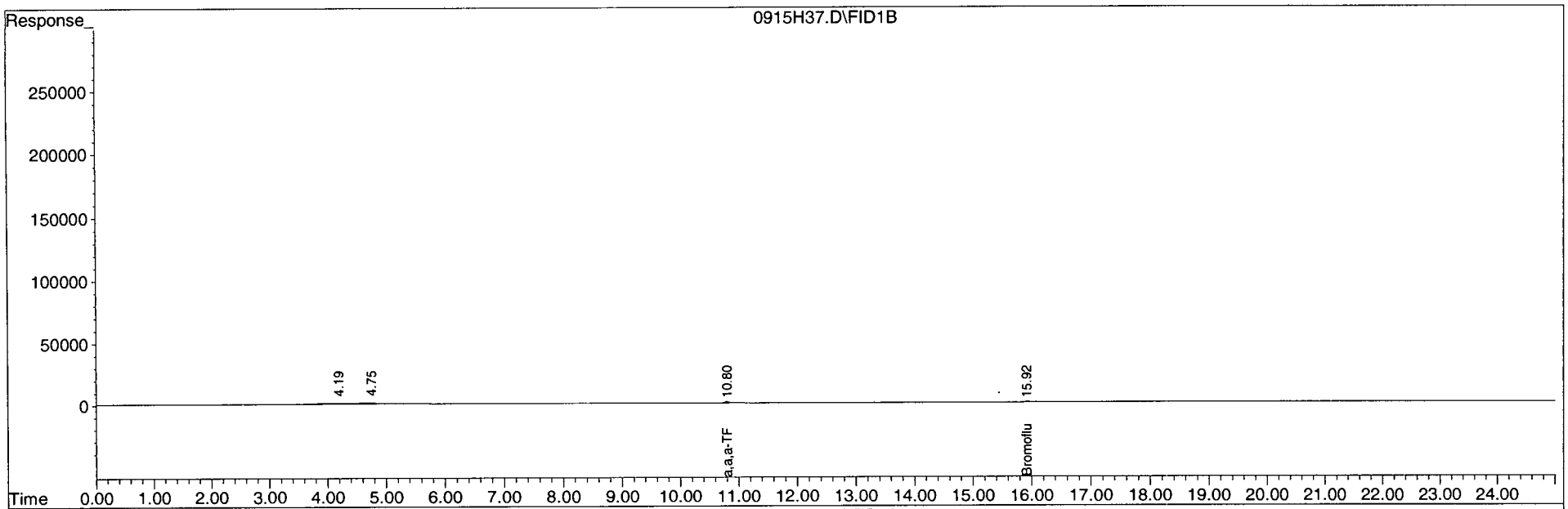
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

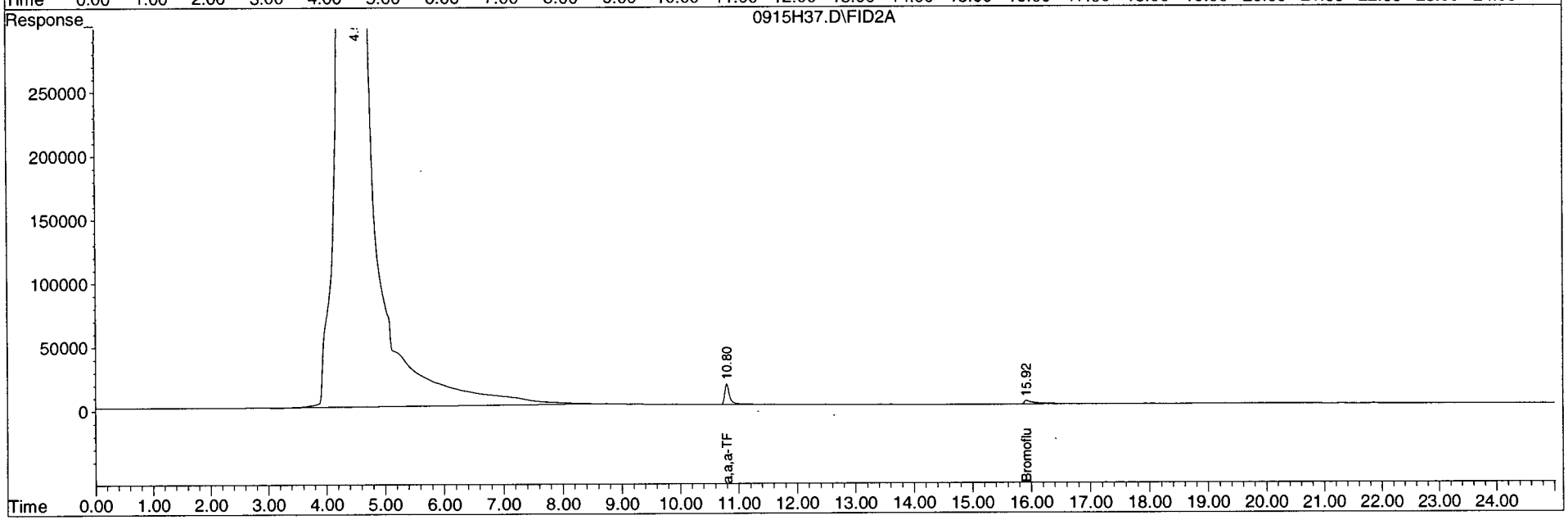
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	60344	10.491 ppb
Surrogate Spike 27.551 Range 75 - 130		Recovery =	38.08%#
2) SAM Bromofluorobenzene	15.92	54019	9.980 ppb
Surrogate Spike 27.551 Range 75 - 130		Recovery =	36.22%#
4) SAM a,a,a-TFT #2	10.80	903927	10.534 ppb
Surrogate Spike 27.551 Range 75 - 130		Recovery =	38.23%#
5) SAM Bromofluorobenzene #2	15.92	368794	13.461 ppb
Surrogate Spike 27.551 Range 75 - 130		Recovery =	48.86%#
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H37.D\FID1B.CH Vial: 37
Signal #2 : V:\HARPO\DATA\140915\0915H37.D\FID2A.CH
Acq On : 16 Sep 2014 13:05 Operator: LF
Sample : AZ02115S01 163.335g DF50 Inst : Harpo
Misc : Water Multiplr: 45.92
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:04 2014 Quant Results File: HGAS.RES





EPA METHOD 8015C

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN018

APPL ID: AZ02116

Sample Collection Date: 9/3/2014

QCG: #GASHC-140912B-189839

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015C	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	9/12/2014	9/12/2014
EPA 8015C	SURROGATE: BFB-FID (S)	81.7	70-130			%	9/12/2014	9/12/2014

Quant Method: HGAS.M
Run #: 0912H22
Instrument: Harpo
Sequence: 140617
Dilution Factor: 1
Initials: RSA

Printed: 9/19/2014 11:25:59 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0912H22.D\FID1B.CH Vial: 22
Signal #2 : V:\HARPO\DATA\140617\0912H22.D\FID2A.CH
Acq On : 12 Sep 2014 21:52 Operator: LF
Sample : AZ02116W02 Inst : Harpo
Misc : Water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 11:23 2014 Quant Results File: HGAS.RES

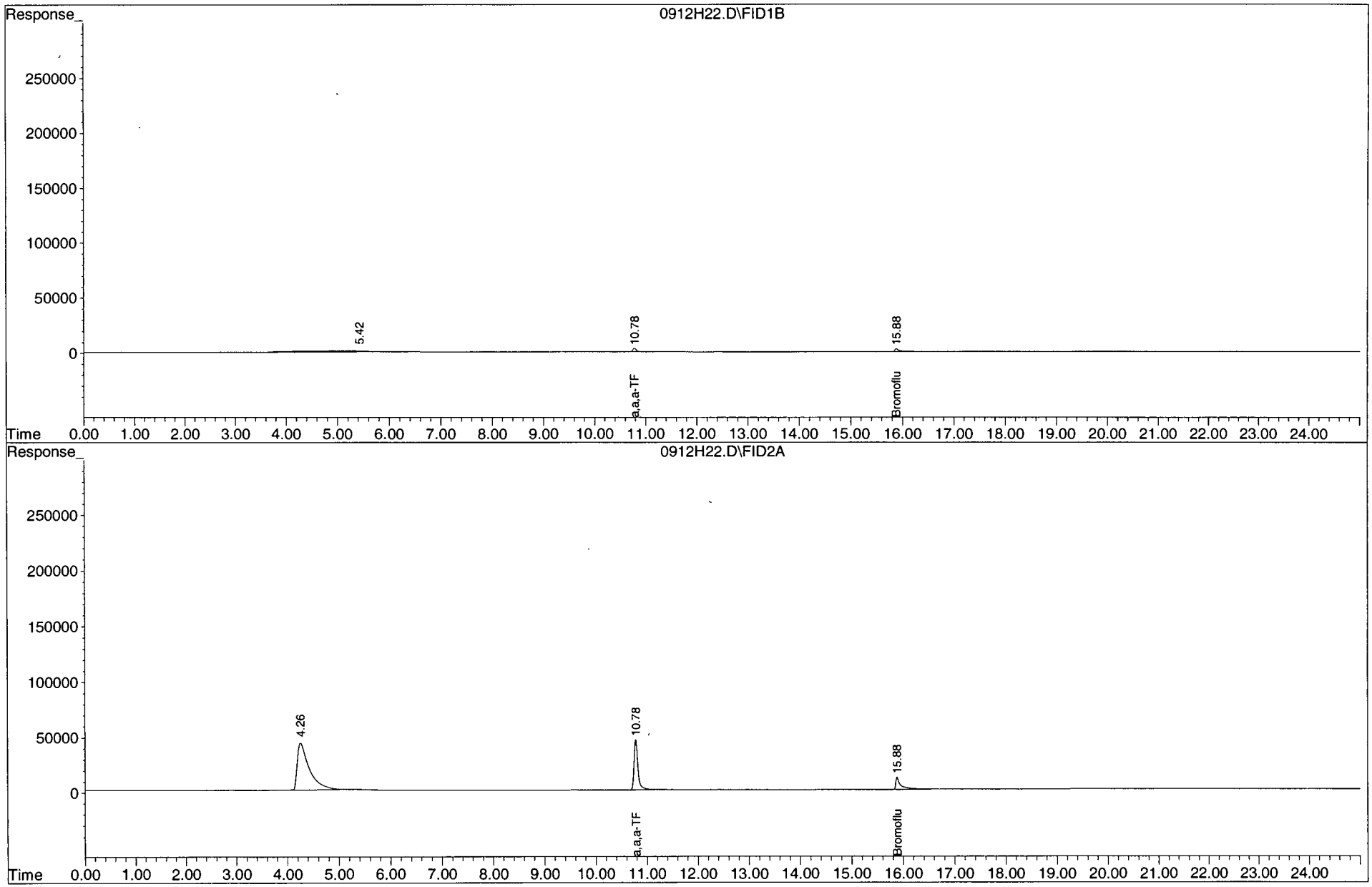
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.78	165093	23.723 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	79.08%
2) SAM Bromofluorobenzene	15.88	170957	19.214 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	64.05%#
4) SAM a,a,a-TFT #2	10.78	2417746	25.702 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	85.67%
5) SAM Bromofluorobenzene #2	15.88	866438	24.521 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	81.74%
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0912H22.D\FID1B.CH Vial: 22
Signal #2 : V:\HARPO\DATA\140617\0912H22.D\FID2A.CH
Acq On : 12 Sep 2014 21:52 Operator: LF
Sample : AZ02116W02 Inst : Harpo
Misc : Water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 11:23 2014 Quant Results File: HGAS.RES



EPA METHOD 8015
Gasoline Range Organics (GRO)

Calibration Data

APPL, INC.

Volatile Analysis by
Method BTEX/GAS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 74218
Case No: Initial Cal. Date: 6/17/2014
Matrix: Instrument: Harpo Initials:

			0617H10 D	0617H11.D	0617H12.D	0617H13.D	0617H14.D	0617H15.D	0617H16 D							
		Compound	0.5	1	3	5	10	20	40				Avg	%RSD		
1	SAM	a,a,a-TFT	1322	1389	1419	1398	1425	1399	1390				1392	2.4	SAM	
2	SAM	Bromofluorobenzene	1664	1790	1740	1766	1850	1848	1799				1779	3.6	SAM	
3		Signal #2											0	0		
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0.172931

Volatile Analysis by
Method BTEX/GAS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 74218
Case No: Initial Cal. Date: 6/17/2014
Matrix: Instrument: Harpo Initials:

			0617H10.D	0617H11.D	0617H12.D	0617H13.D	0617H14.D	0617H15.D	0617H16.D							
		Compound	0.5	1	3	5	10	20	40				Avg	%RSD		
36	SAM	a,a,a-TFT #2	19112	19161	18799	18537	18994	18661	18431				18814	1.5	SAM	
37	SAM	Bromofluorobenzene #2	6969	7071	6787	6982	7260	7242	7158				7067	2.4	SAM	
38	HMBT	Gasoline #2	15909	15446	15291	15760	16265	16344	16275				15898	2.7	HMBT	
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0.1874809

Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0617H03.D\FID1B.CH Vial: 3
Signal #2 : V:\HARPO\DATA\140617\0617H03.D\FID2A.CH
Acq On : 17 Jun 2014 12:15 Operator: LF
Sample : 5.0ug/L SURR 140617 Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 16:56 2014 Quant Results File: HGAS.RES

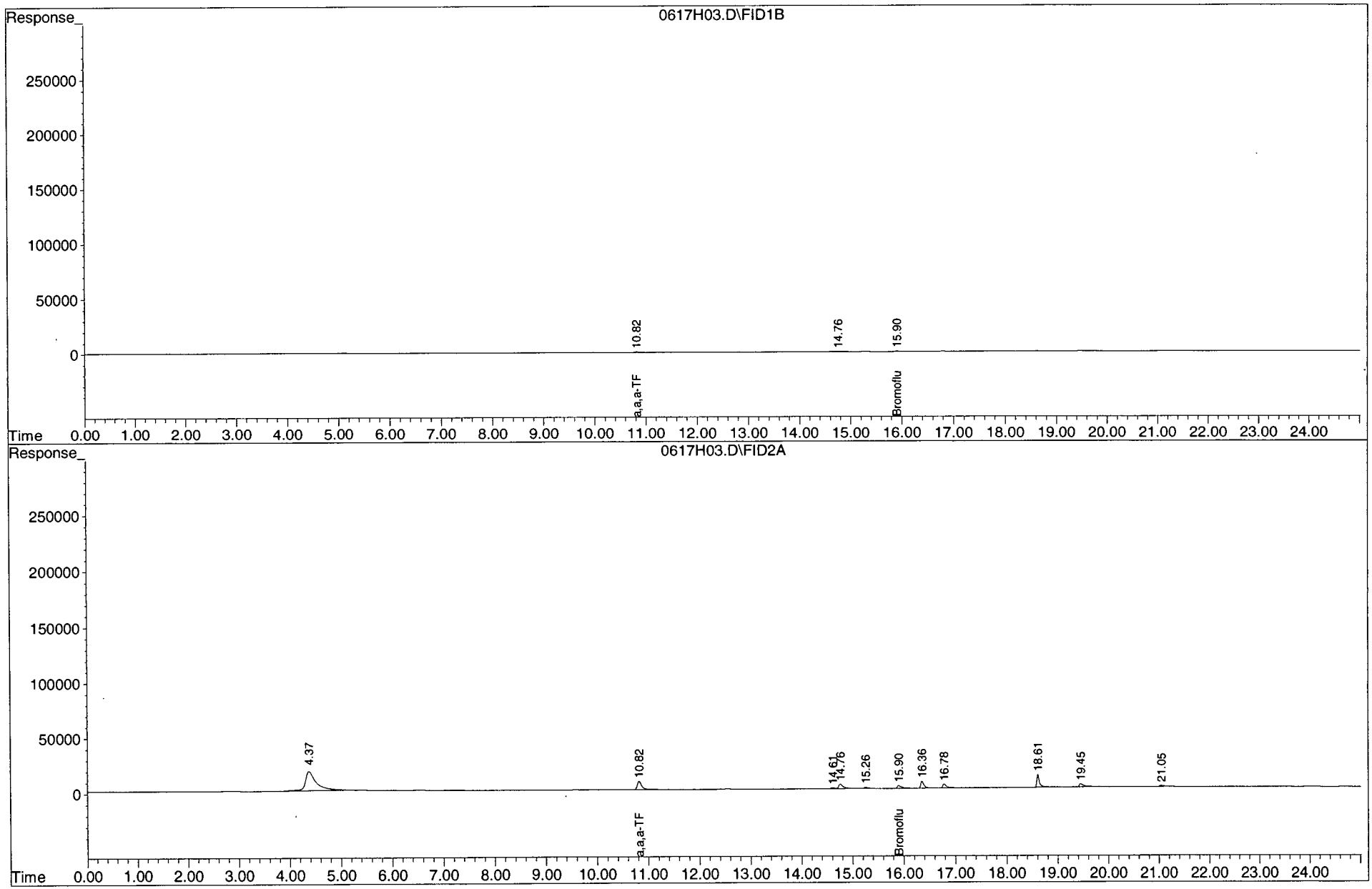
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.82	33061	4.498 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	14.99%#
2) SAM Bromofluorobenzene	15.90	41589	5.309 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	17.70%#
4) SAM a,a,a-TFT #2	10.82	477794	5.414 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	18.05%#
5) SAM Bromofluorobenzene #2	15.90	174228	6.688 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	22.29%#
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0617H03.D\FID1B.CH Vial: 3
Signal #2 : V:\HARPO\DATA\140617\0617H03.D\FID2A.CH
Acq On : 17 Jun 2014 12:15 Operator: LF
Sample : 5.0ug/L SURR 140617 Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 16:56 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0617H04.D\FID1B.CH Vial: 4
Signal #2 : V:\HARPO\DATA\140617\0617H04.D\FID2A.CH
Acq On : 17 Jun 2014 12:52 Operator: LF
Sample : 10ug/L SURR Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 16:56 2014 Quant Results File: HGAS.RES

Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

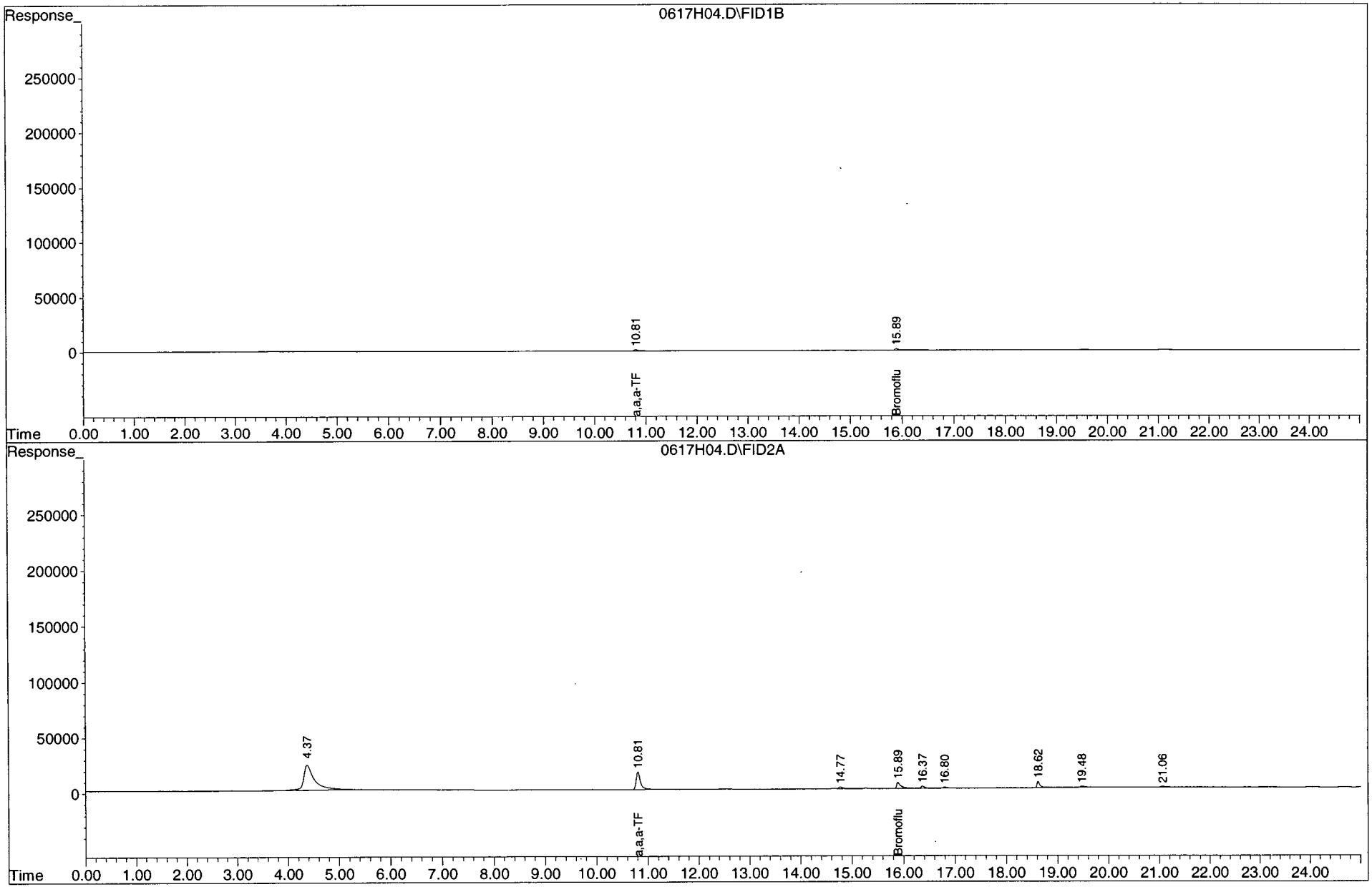
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.81	69440	9.447 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	31.49%#
2) SAM Bromofluorobenzene	15.89	89487	11.423 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	38.08%#
4) SAM a,a,a-TFT #2	10.81	958069	10.855 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	36.18%#
5) SAM Bromofluorobenzene #2	15.89	353532	13.571 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	45.24%#
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0617H04.D\FID1B.CH Vial: 4
Signal #2 : V:\HARPO\DATA\140617\0617H04.D\FID2A.CH
Acq On : 17 Jun 2014 12:52 Operator: LF
Sample : 10ug/L SURR Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 16:56 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0617H05.D\FID1B.CH Vial: 5
Signal #2 : V:\HARPO\DATA\140617\0617H05.D\FID2A.CH
Acq On : 17 Jun 2014 13:28 Operator: LF
Sample : 15ug/L SURR Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 16:56 2014 Quant Results File: HGAS.RES

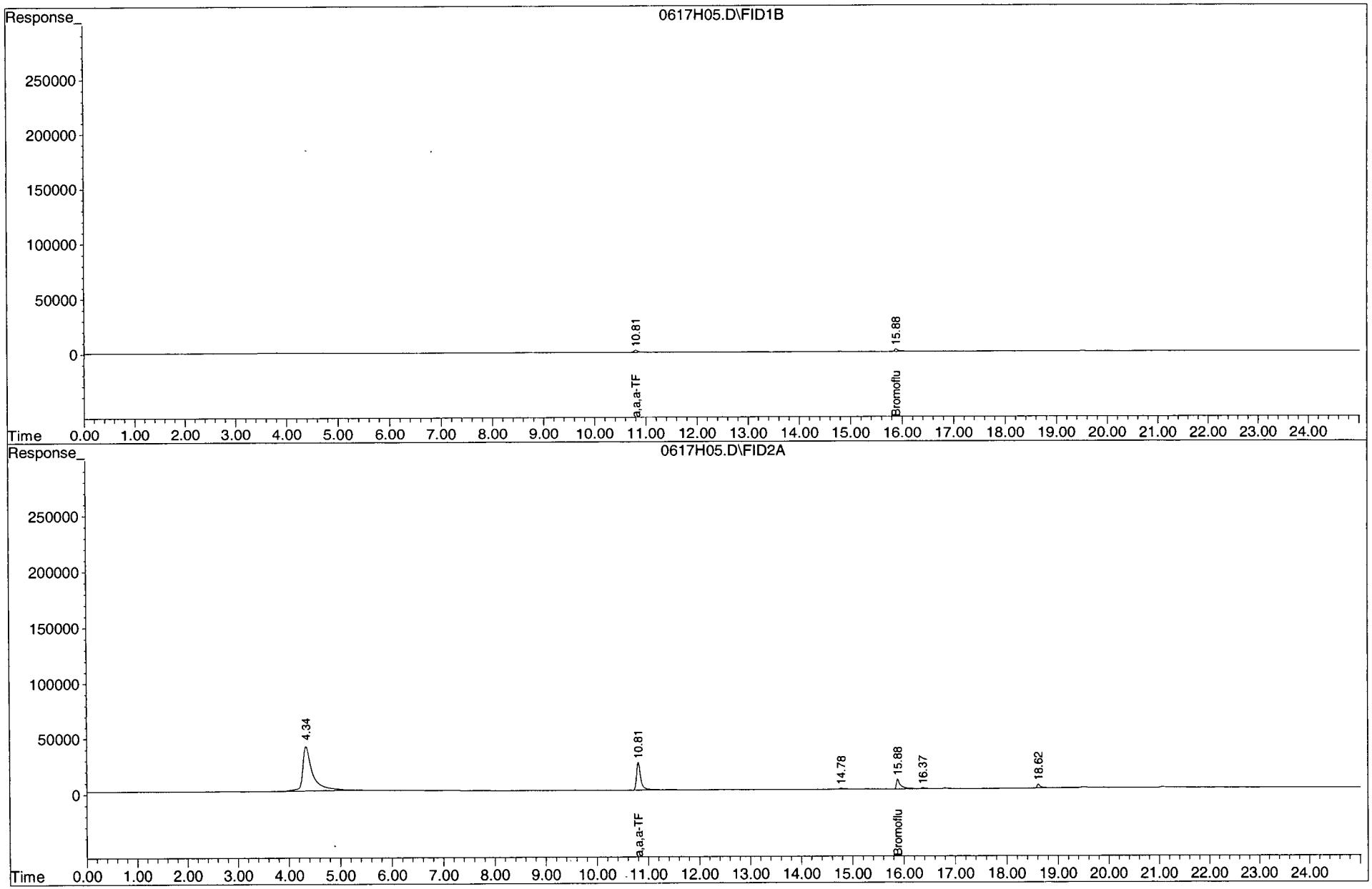
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.81	106416	14.478 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	48.26%#
2) SAM Bromofluorobenzene	15.88	130527	16.662 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	55.54%#
4) SAM a,a,a-TFT #2	10.81	1409924	15.975 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	53.25%#
5) SAM Bromofluorobenzene #2	15.88	509032	19.539 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	65.13%#
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0617H05.D\FID1B.CH Vial: 5
Signal #2 : V:\HARPO\DATA\140617\0617H05.D\FID2A.CH
Acq On : 17 Jun 2014 13:28 Operator: LF
Sample : 15ug/L SURR Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 16:56 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0617H06.D\FID1B.CH Vial: 6
Signal #2 : V:\HARPO\DATA\140617\0617H06.D\FID2A.CH
Acq On : 17 Jun 2014 14:05 Operator: LF
Sample : 20ug/L SURR Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 16:56 2014 Quant Results File: HGAS.RES

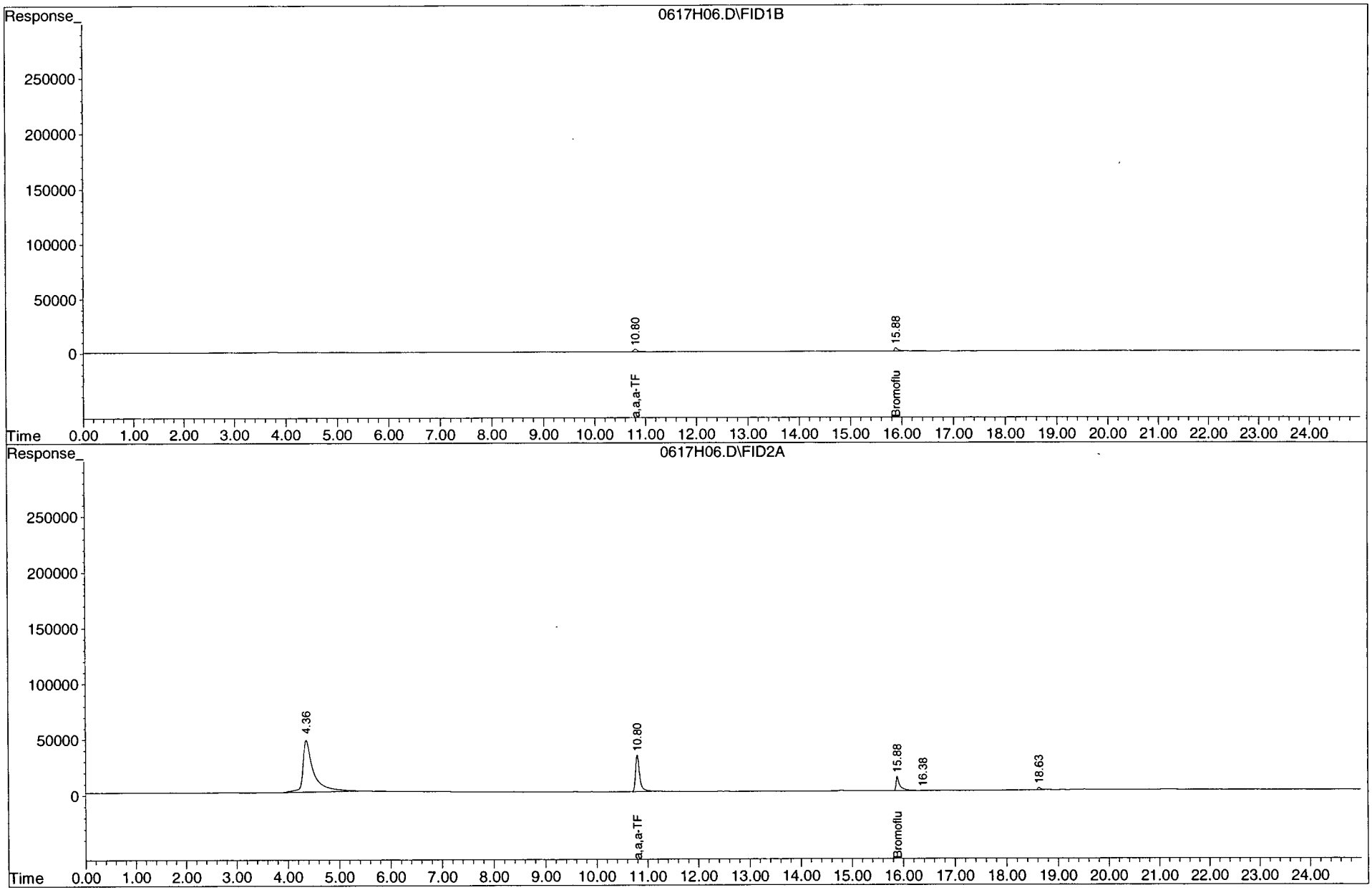
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	139843	19.025 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	63.42%#
2) SAM Bromofluorobenzene	15.88	176584	22.541 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	75.14%
4) SAM a,a,a-TFT #2	10.80	1853671	21.003 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	70.01%#
5) SAM Bromofluorobenzene #2	15.88	698162	26.799 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	89.33%
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0617H06.D\FID1B.CH Vial: 6
Signal #2 : V:\HARPO\DATA\140617\0617H06.D\FID2A.CH
Acq On : 17 Jun 2014 14:05 Operator: LF
Sample : 20ug/L SURR Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 16:56 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0617H07.D\FID1B.CH Vial: 7
Signal #2 : V:\HARPO\DATA\140617\0617H07.D\FID2A.CH
Acq On : 17 Jun 2014 14:42 Operator: LF
Sample : 25ug/L SURR Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 16:56 2014 Quant Results File: HGAS.RES

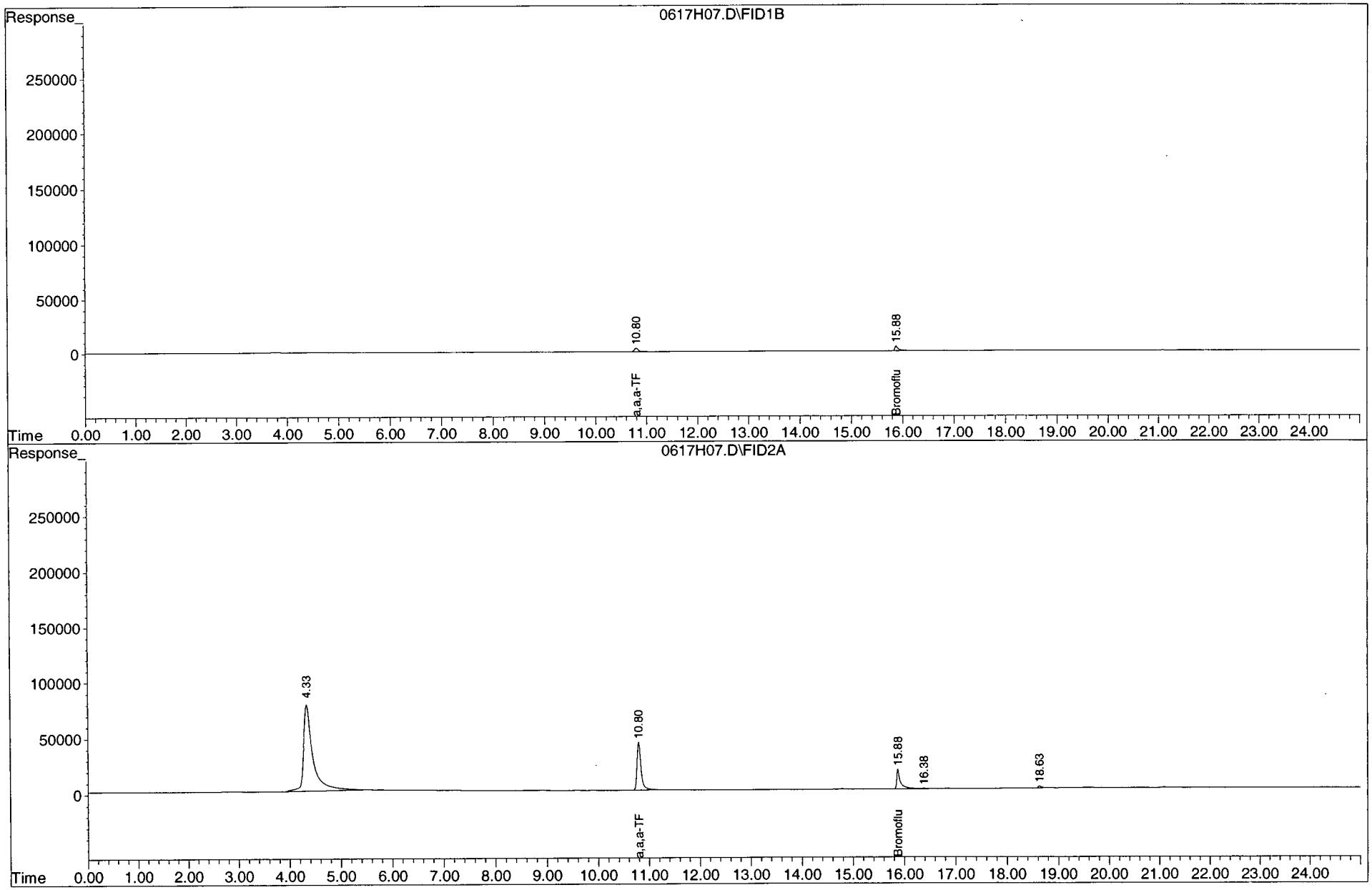
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	178065	24.225 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	80.75%
2) SAM Bromofluorobenzene	15.88	231228	29.517 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	98.39%
4) SAM a,a,a-TFT #2	10.80	2374231	26.901 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	89.67%
5) SAM Bromofluorobenzene #2	15.88	907527	34.836 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	116.12%
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0617H07.D\FID1B.CH Vial: 7
Signal #2 : V:\HARPO\DATA\140617\0617H07.D\FID2A.CH
Acq On : 17 Jun 2014 14:42 Operator: LF
Sample : 25ug/L SURR Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 16:56 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0617H08.D\FID1B.CH Vial: 8
Signal #2 : V:\HARPO\DATA\140617\0617H08.D\FID2A.CH
Acq On : 17 Jun 2014 15:18 Operator: LF
Sample : 30ug/L SURR Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 16:56 2014 Quant Results File: HGAS.RES

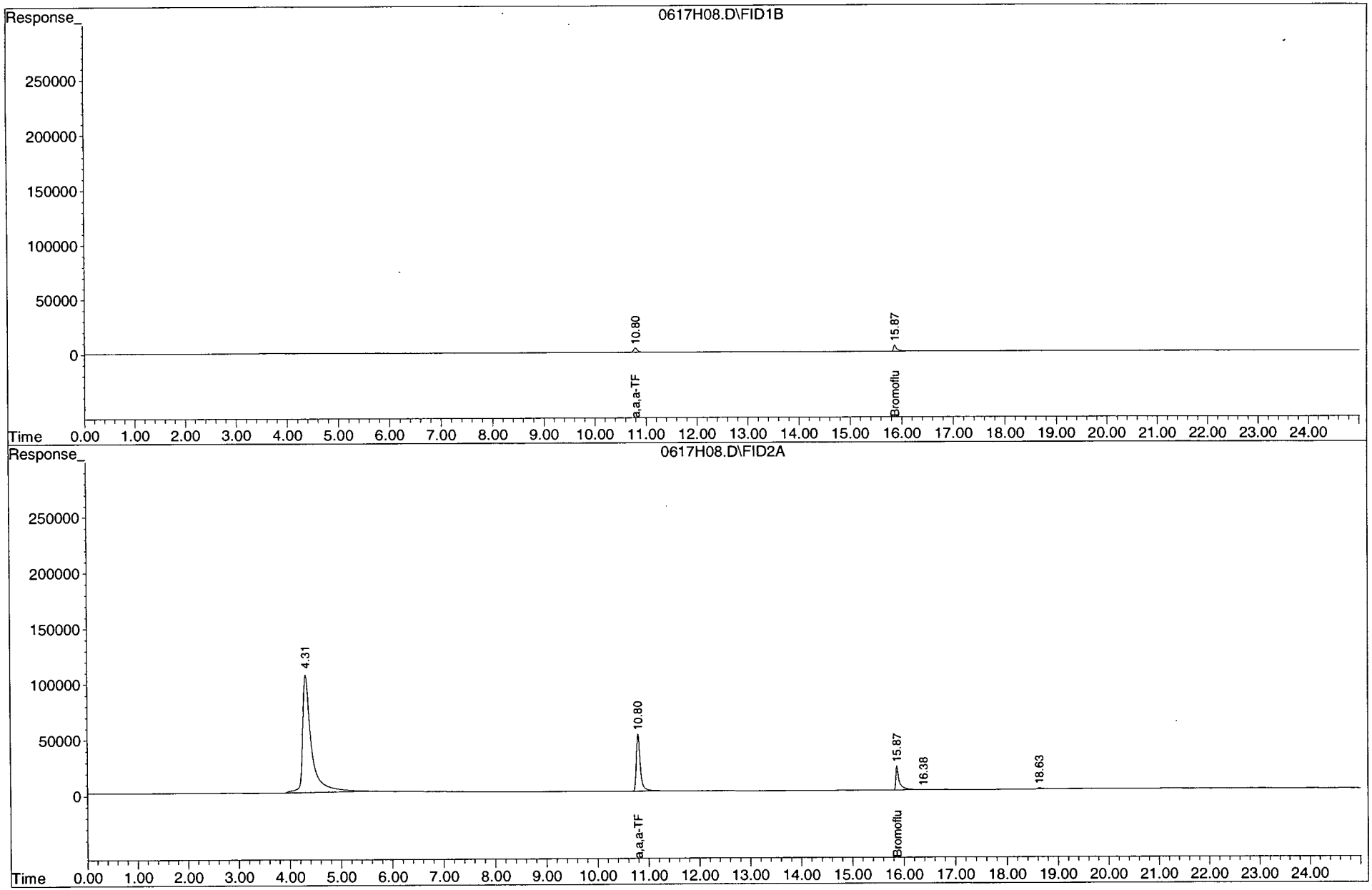
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	209897	28.556 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	95.19%
2) SAM Bromofluorobenzene	15.87	277180	35.383 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	117.94%
4) SAM a,a,a-TFT #2	10.80	2799114	31.715 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	105.72%
5) SAM Bromofluorobenzene #2	15.87	1086352	41.700 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	139.00%#
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0617H08.D\FID1B.CH Vial: 8
Signal #2 : V:\HARPO\DATA\140617\0617H08.D\FID2A.CH
Acq On : 17 Jun 2014 15:18 Operator: LF
Sample : 30ug/L SURR Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 16:56 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0617H09.D\FID1B.CH Vial: 9
Signal #2 : V:\HARPO\DATA\140617\0617H09.D\FID2A.CH
Acq On : 17 Jun 2014 15:55 Operator: LF
Sample : 40ug/L SURR Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 16:56 2014 Quant Results File: HGAS.RES

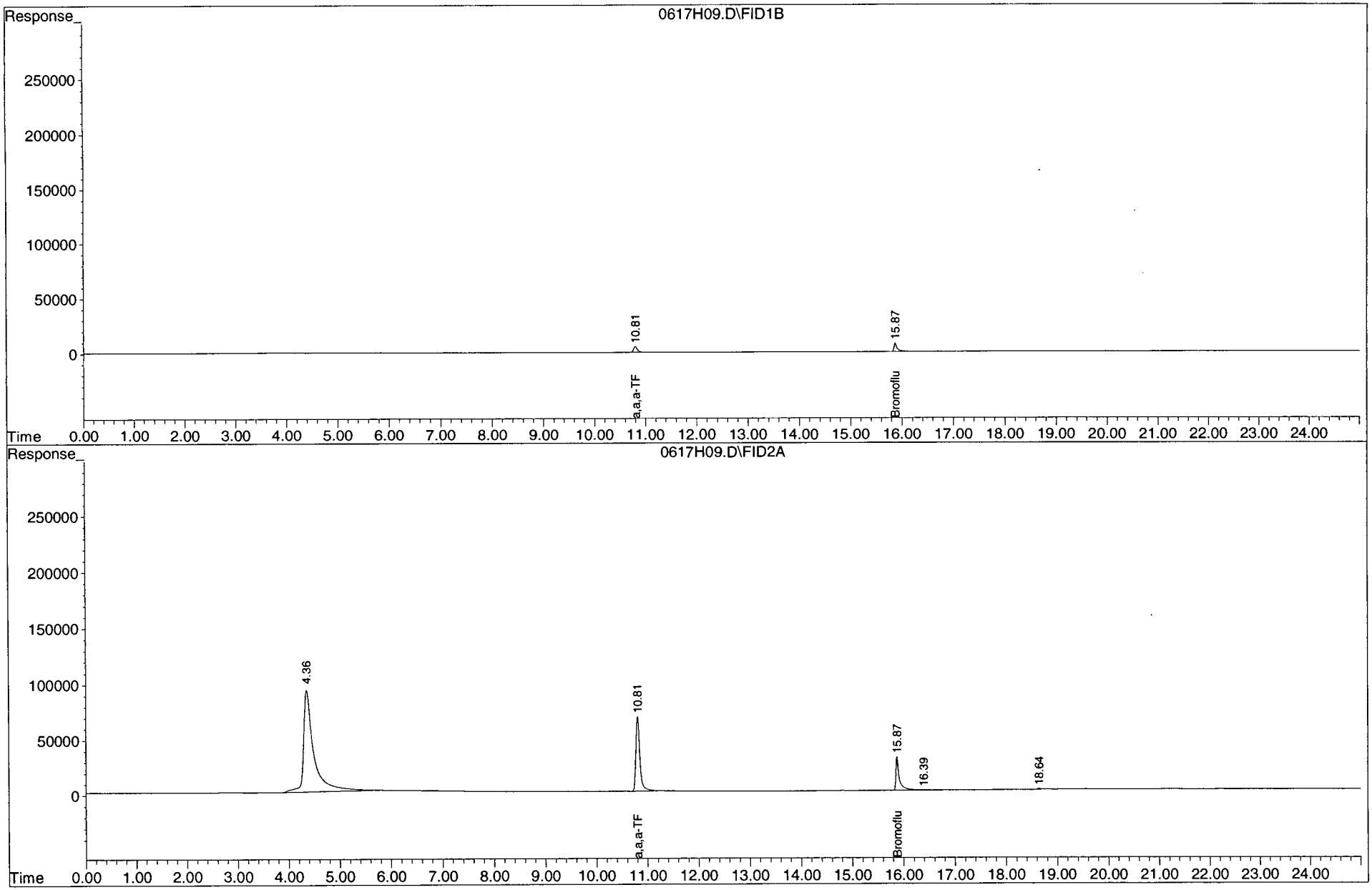
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.81	278072	37.831 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery = 126.10%	
2) SAM Bromofluorobenzene	15.87	359808	45.930 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery = 153.10%#	
4) SAM a,a,a-TFT #2	10.81	3686300	41.767 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery = 139.22%#	
5) SAM Bromofluorobenzene #2	15.87	1431640	54.954 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery = 183.18%#	
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0617H09.D\FID1B.CH Vial: 9
Signal #2 : V:\HARPO\DATA\140617\0617H09.D\FID2A.CH
Acq On : 17 Jun 2014 15:55 Operator: LF
Sample : 40ug/L SURR Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 16:56 2014 Quant Results File: HGAS.RES



Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0617H10.D\FID1B.CH Vial: 10
Signal #2 : V:\HARPO\DATA\140617\0617H10.D\FID2A.CH
Acq On : 17 Jun 2014 16:31 Operator: LF
Sample : 20ug/L GAS 140617 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 17:06 2014 Quant Results File: HGAS.RES

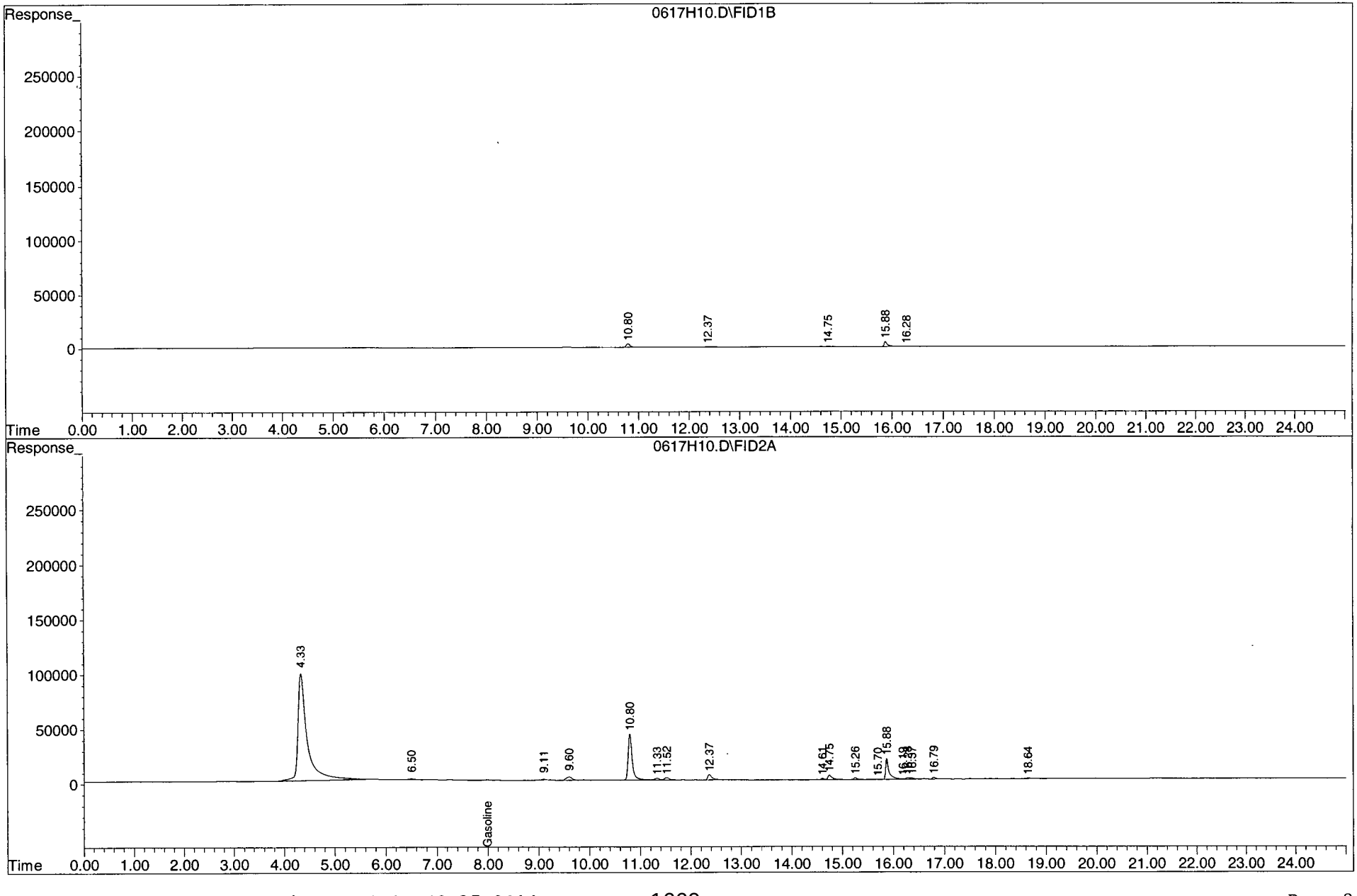
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
6) HMBT Gasoline #2	8.00	1590872	26.388 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0617H10.D\FID1B.CH Vial: 10
Signal #2 : V:\HARPO\DATA\140617\0617H10.D\FID2A.CH
Acq On : 17 Jun 2014 16:31 Operator: LF
Sample : 20ug/L GAS 140617 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 17 17:06 2014 Quant Results File: HGAS.RES



Quantitation Report (QT Reviewed)

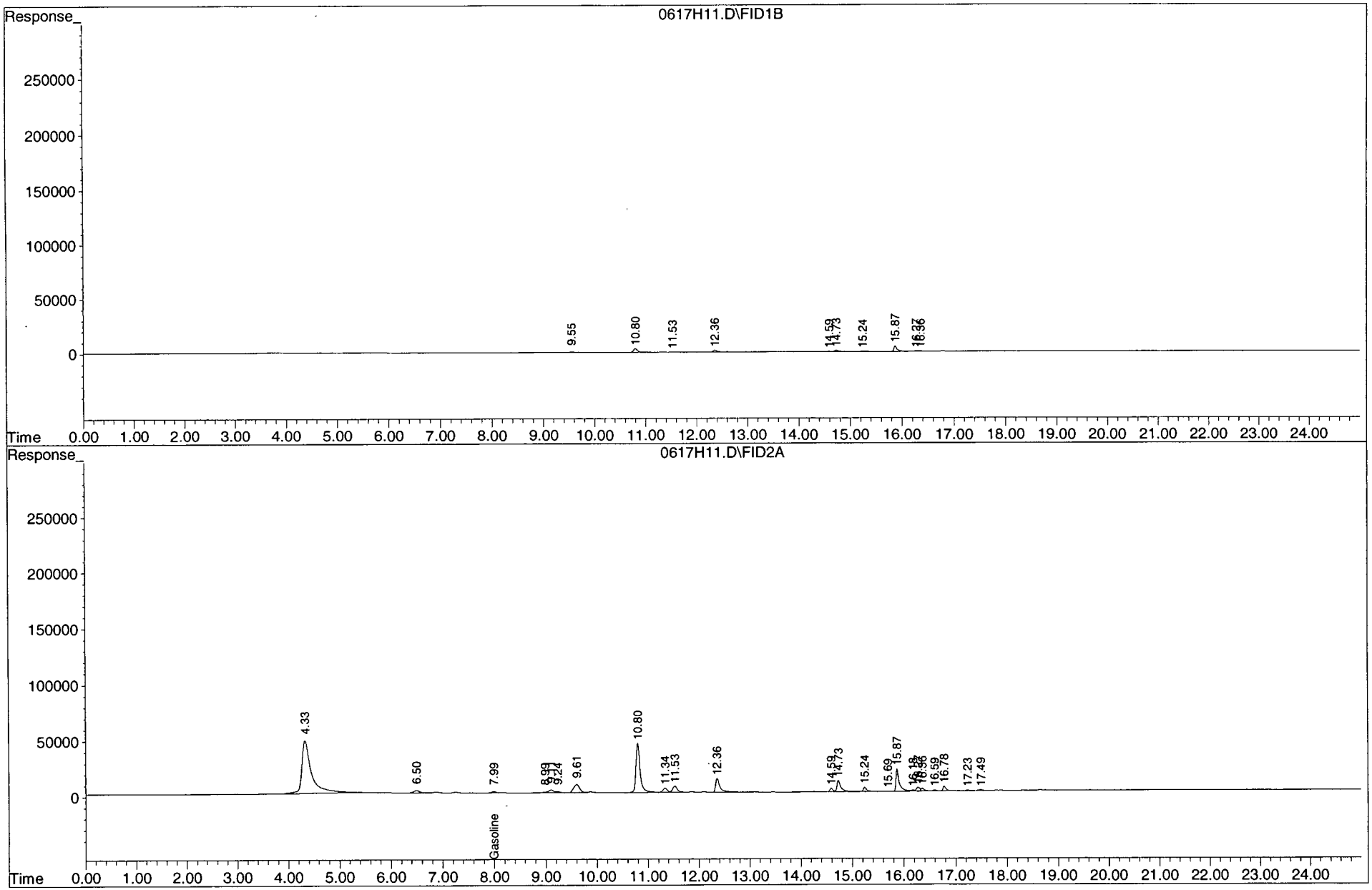
Signal #1 : V:\HARPO\DATA\140617\0617H11.D\FID1B.CH Vial: 11
Signal #2 : V:\HARPO\DATA\140617\0617H11.D\FID2A.CH
Acq On : 17 Jun 2014 17:08 Operator: LF
Sample : 50ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 18 7:16 2014 Quant Results File: HGAS.RES

Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
6) HMBT Gasoline #2	8.00	3861570	58.787 ppb

Signal #1 : V:\HARPO\DATA\140617\0617H11.D\FID1B.CH Vial: 11
Signal #2 : V:\HARPO\DATA\140617\0617H11.D\FID2A.CH
Acq On : 17 Jun 2014 17:08 Operator: LF
Sample : 50ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 18 7:16 2014 Quant Results File: HGAS.RES



Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0617H12.D\FID1B.CH Vial: 12
Signal #2 : V:\HARPO\DATA\140617\0617H12.D\FID2A.CH
Acq On : 17 Jun 2014 17:44 Operator: LF
Sample : 100ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 18 7:17 2014 Quant Results File: HGAS.RES

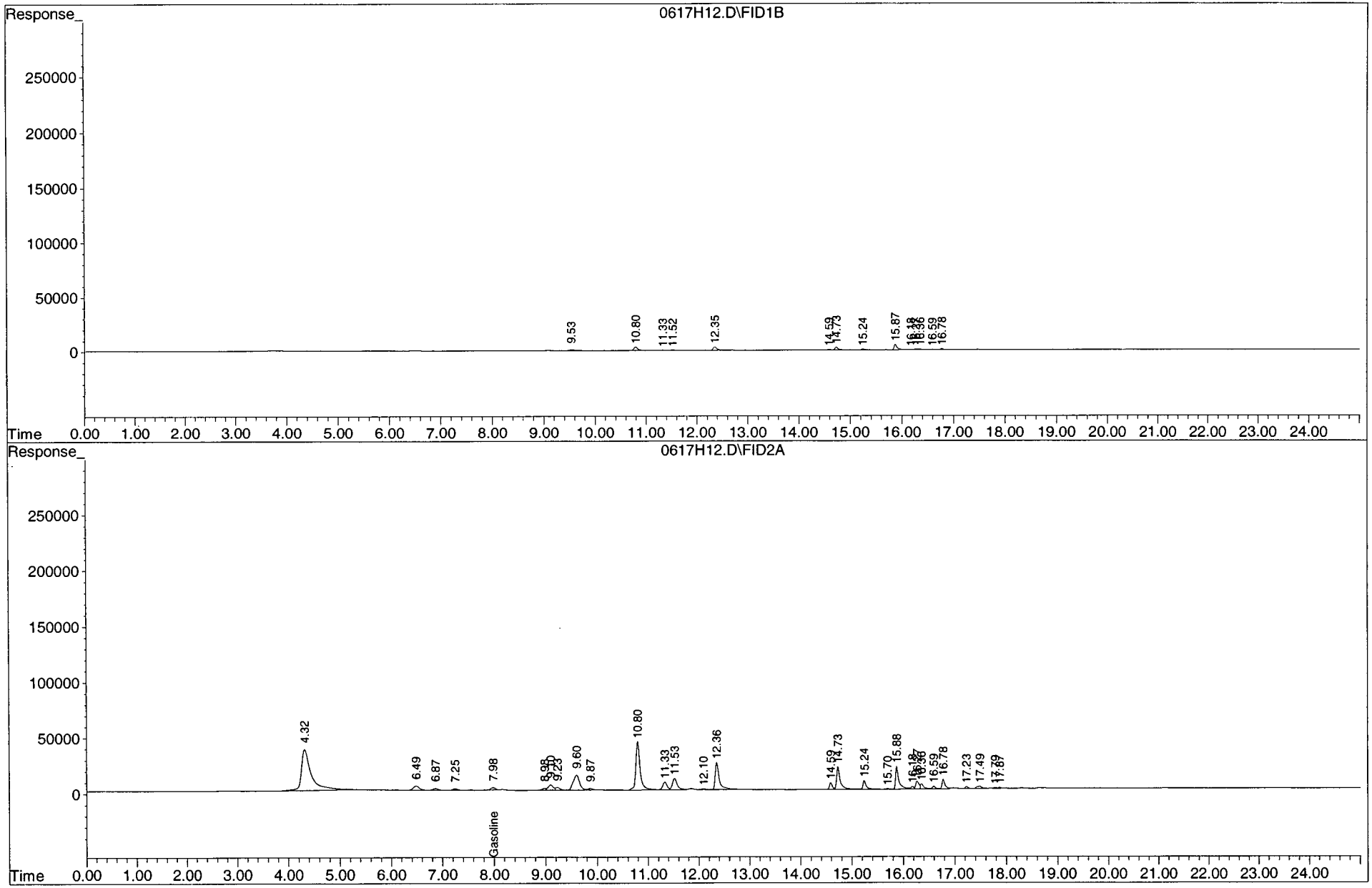
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
6) HMBT Gasoline #2	8.00	7645576	110.321 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0617H12.D\FID1B.CH Vial: 12
Signal #2 : V:\HARPO\DATA\140617\0617H12.D\FID2A.CH
Acq On : 17 Jun 2014 17:44 Operator: LF
Sample : 100ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 18 7:17 2014 Quant Results File: HGAS.RES



Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0617H13.D\FID1B.CH Vial: 13
Signal #2 : V:\HARPO\DATA\140617\0617H13.D\FID2A.CH
Acq On : 17 Jun 2014 18:21 Operator: LF
Sample : 300ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 18 7:17 2014 Quant Results File: HGAS.RES

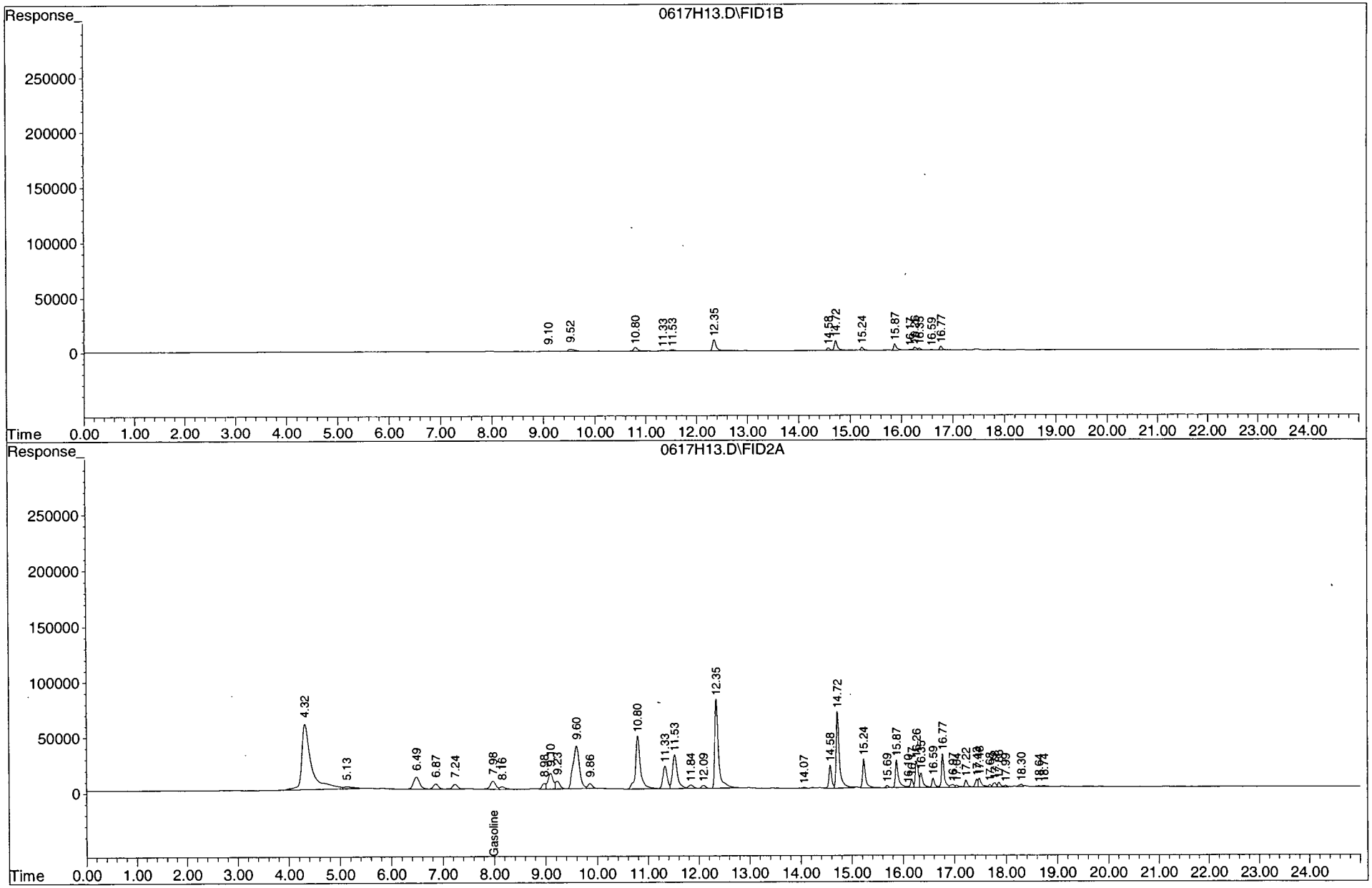
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
6) HMBT Gasoline #2	8.00	23640244	329.670 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0617H13.D\FID1B.CH Vial: 13
Signal #2 : V:\HARPO\DATA\140617\0617H13.D\FID2A.CH
Acq On : 17 Jun 2014 18:21 Operator: LF
Sample : 300ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 18 7:17 2014 Quant Results File: HGAS.RES



Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0617H14.D\FID1B.CH Vial: 14
Signal #2 : V:\HARPO\DATA\140617\0617H14.D\FID2A.CH
Acq On : 17 Jun 2014 18:57 Operator: LF
Sample : 600ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 18 7:17 2014 Quant Results File: HGAS.RES

Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

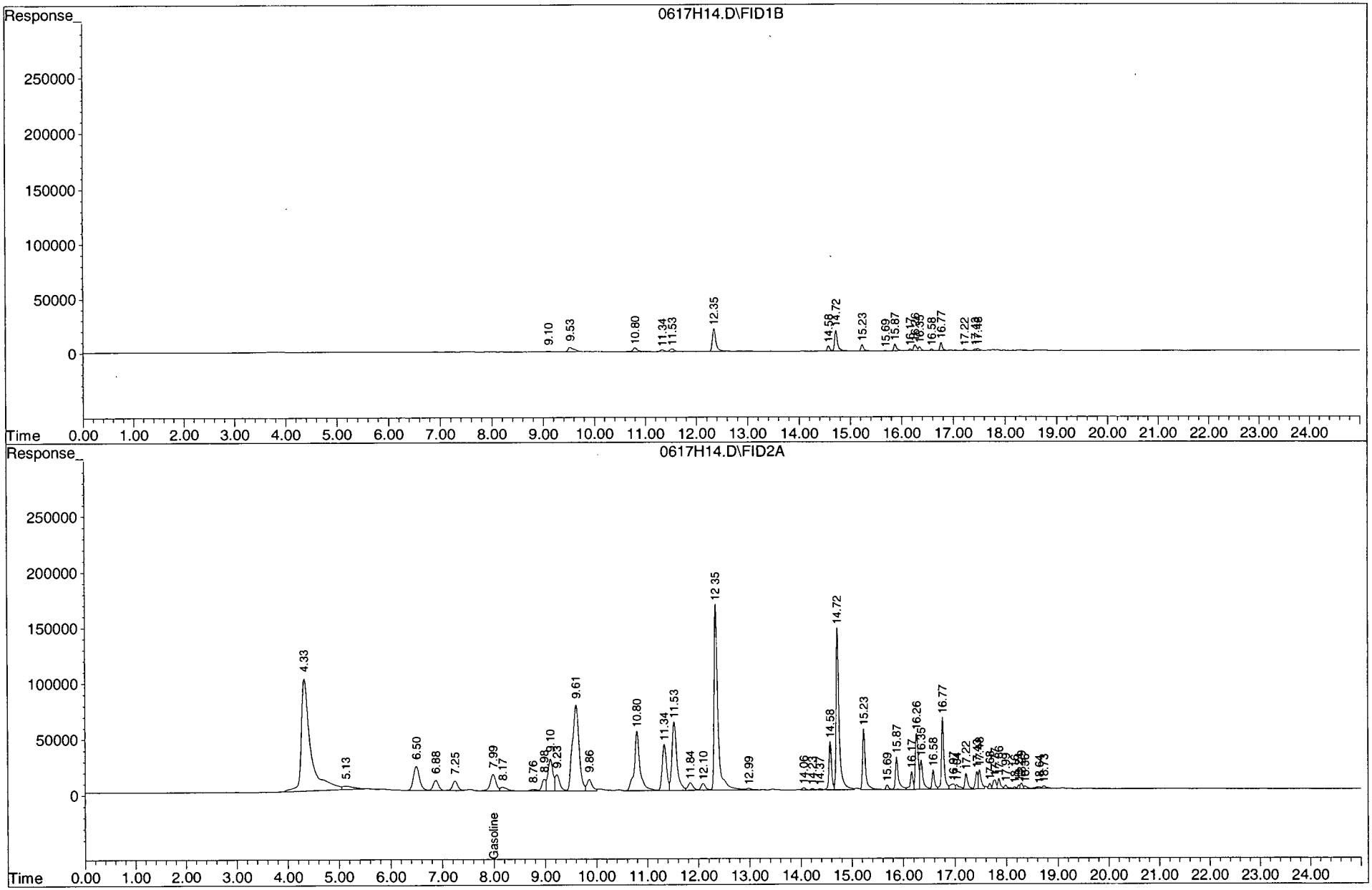
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
6) HMBT Gasoline #2	8.00	48793553	661.519 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0617H14.D\FID1B.CH Vial: 14
Signal #2 : V:\HARPO\DATA\140617\0617H14.D\FID2A.CH
Acq On : 17 Jun 2014 18:57 Operator: LF
Sample : 600ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 18 7:17 2014 Quant Results File: HGAS.RES



Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0617H15.D\FID1B.CH Vial: 15
Signal #2 : V:\HARPO\DATA\140617\0617H15.D\FID2A.CH
Acq On : 17 Jun 2014 19:33 Operator: LF
Sample : 800ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 18 7:17 2014 Quant Results File: HGAS.RES

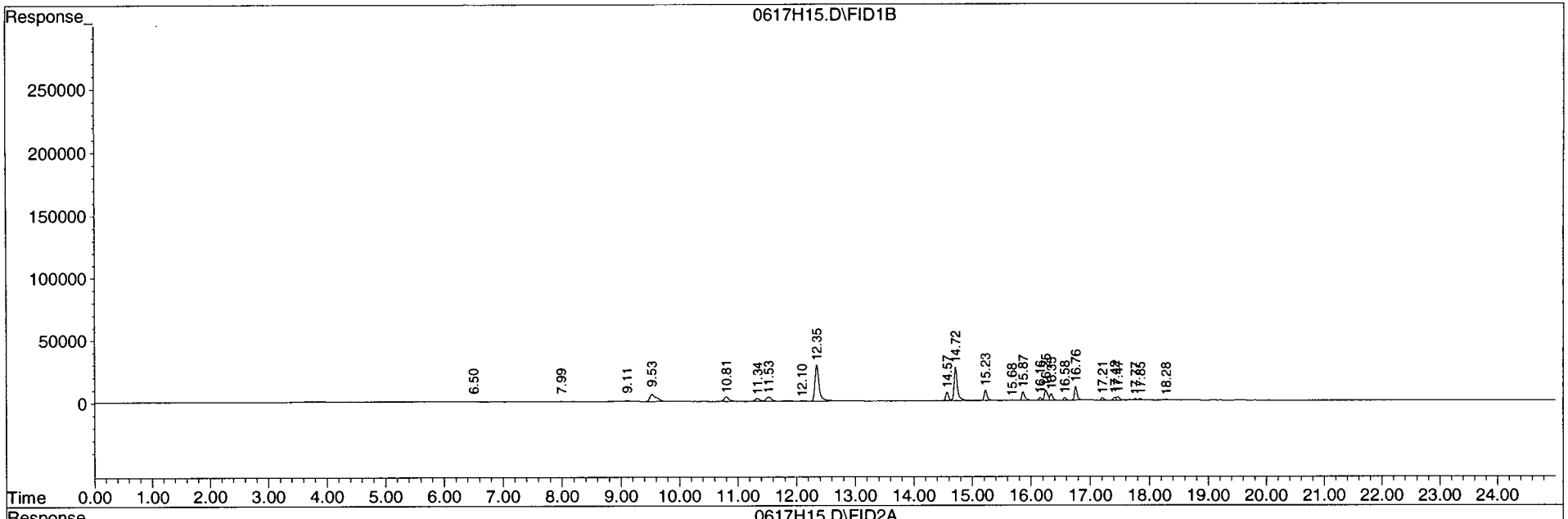
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

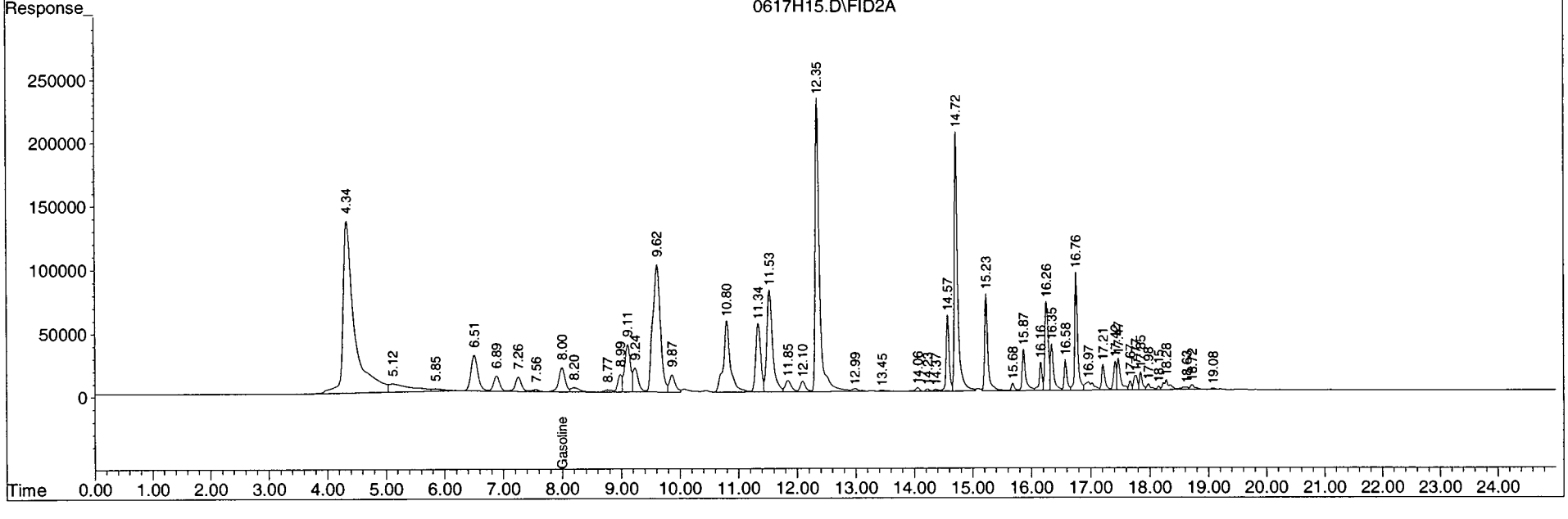
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
6) HMBT Gasoline #2	8.00	65374121	861.954 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0617H15.D\FID1B.CH Vial: 15
Signal #2 : V:\HARPO\DATA\140617\0617H15.D\FID2A.CH
Acq On : 17 Jun 2014 19:33 Operator: LF
Sample : 800ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 18 7:17 2014 Quant Results File: HGAS.RES





Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0617H16.D\FID1B.CH Vial: 16
Signal #2 : V:\HARPO\DATA\140617\0617H16.D\FID2A.CH
Acq On : 17 Jun 2014 20:10 Operator: LF
Sample : 1000ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 18 7:17 2014 Quant Results File: HGAS.RES

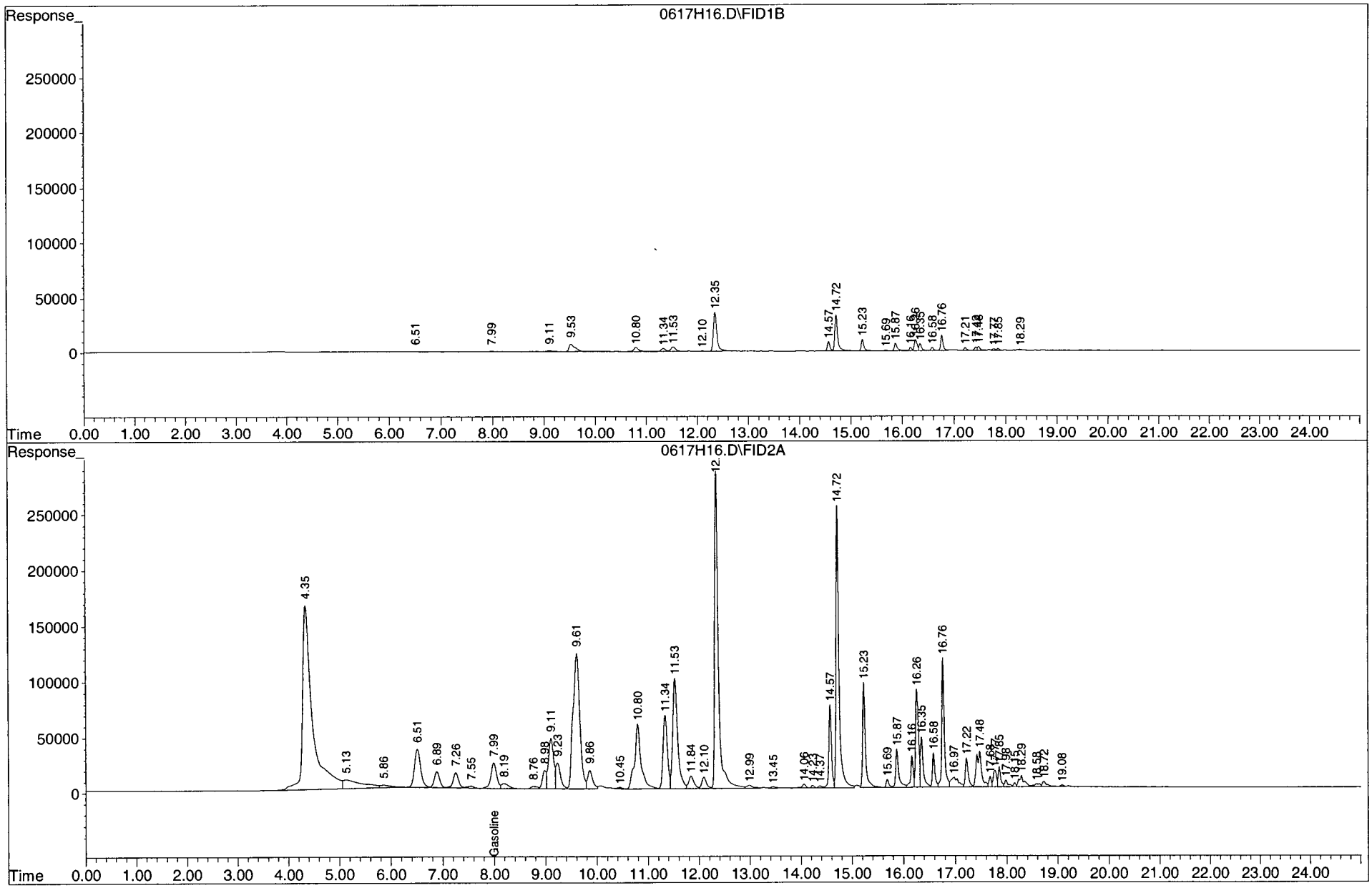
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
Target Compounds				
6) HMBT Gasoline #2	8.00	81375560	1047.620	ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0617H16.D\FID1B.CH Vial: 16
Signal #2 : V:\HARPO\DATA\140617\0617H16.D\FID2A.CH
Acq On : 17 Jun 2014 20:10 Operator: LF
Sample : 1000ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 18 7:17 2014 Quant Results File: HGAS.RES



Volatile Analysis by
Method BTEX/GAS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 6/17/2014
Instrument: Harpo
Initial Cal. Date: 6/17/2014
Data File: 0617H17.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HMBT	Gasoline #2	15899	15787	0.70	HMBT	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			0.7		

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0617H17.D\FID1B.CH Vial: 17
Signal #2 : V:\HARPO\DATA\140617\0617H17.D\FID2A.CH
Acq On : 17 Jun 2014 20:46 Operator: LF
Sample : 300ug/L GAS SS 140617 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 18 7:18 2014 Quant Results File: HGAS.RES

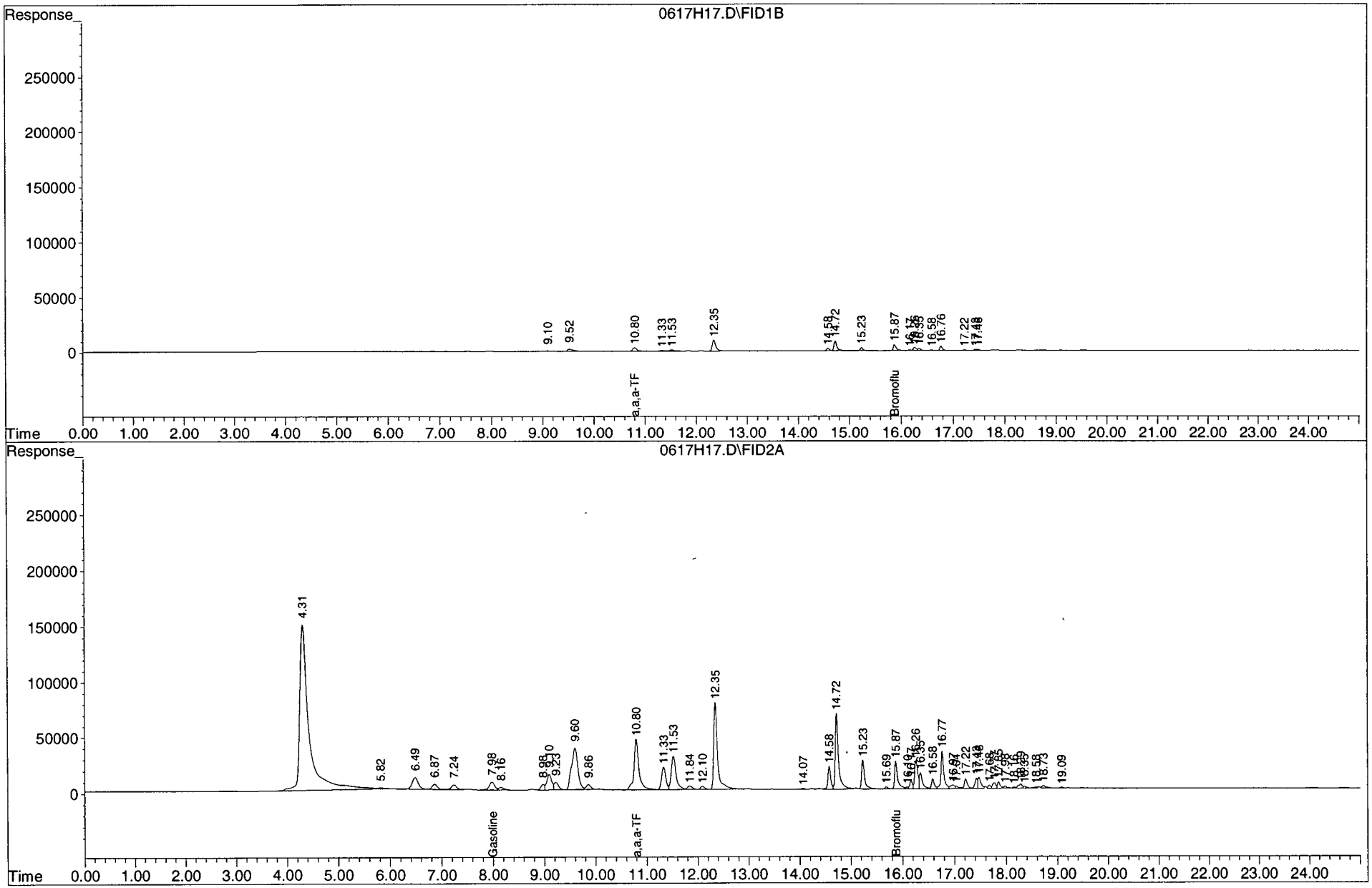
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	190519	27.377 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	91.26%
2) SAM Bromofluorobenzene	15.87	240510	27.032 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	90.11%
4) SAM a,a,a-TFT #2	10.80	3064137	32.574 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	108.58%
5) SAM Bromofluorobenzene #2	15.87	1047909	29.656 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	98.85%
Target Compounds			
6) HMBT Gasoline #2	8.00	23680235	297.893 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0617H17.D\FID1B.CH Vial: 17
Signal #2 : V:\HARPO\DATA\140617\0617H17.D\FID2A.CH
Acq On : 17 Jun 2014 20:46 Operator: LF
Sample : 300ug/L GAS SS 140617 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jun 18 7:18 2014 Quant Results File: HGAS.RES



Volatile Analysis by
Method BTEX/GAS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 9/12/2014
Instrument: Harpo
Initial Cal. Date: 6/17/2014
Data File: 0912H15.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HMBT	Gasoline #2	15899	13557	15	HMBT	
2							
3							
4							
5							
6							
7							
8							
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36							
37							
38							
39							
40							
		Average			15.0		

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0912H15.D\FID1B.CH Vial: 15
Signal #2 : V:\HARPO\DATA\140617\0912H15.D\FID2A.CH
Acq On : 12 Sep 2014 17:36 Operator: LF
Sample : 300ug/L GAS 140912 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 10:54 2014 Quant Results File: HGAS.RES

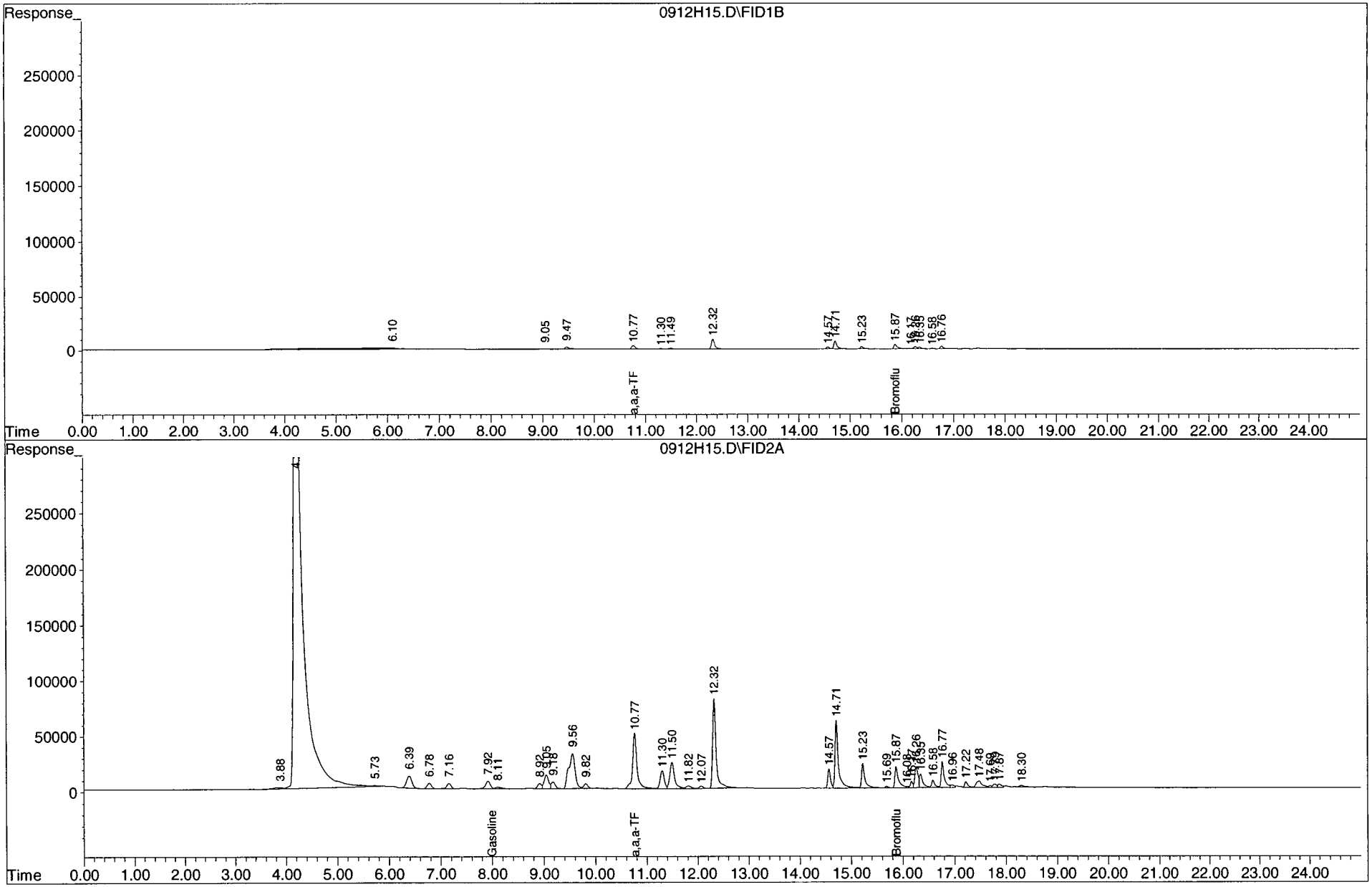
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.77	174639	25.095 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	83.65%
2) SAM Bromofluorobenzene	15.87	214573	24.117 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	80.39%
4) SAM a,a,a-TFT #2	10.77	3018867	32.092 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	106.97%
5) SAM Bromofluorobenzene #2	15.87	929877	26.316 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	87.72%
Target Compounds			
6) HMBT Gasoline #2	8.00	20335705	255.819 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0912H15.D\FID1B.CH Vial: 15
Signal #2 : V:\HARPO\DATA\140617\0912H15.D\FID2A.CH
Acq On : 12 Sep 2014 17:36 Operator: LF
Sample : 300ug/L GAS 140912 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 10:54 2014 Quant Results File: HGAS.RES



Volatile Analysis by
Method BTEX/GAS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218
Date Analyzed: 9/13/2014
Instrument: Harpo
Initial Cal. Date: 6/17/2014
Data File: 0912H30.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HMBT	Gasoline #2	15899	15499	2.5	HMBT	
2							
3							
4							
5							
6							
7							
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37							
38							
39							
40							
		Average			2.5		

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0912H30.D\FID1B.CH Vial: 30
Signal #2 : V:\HARPO\DATA\140617\0912H30.D\FID2A.CH
Acq On : 13 Sep 2014 02:44 Operator: LF
Sample : 300ug/L GAS 140912 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 22 9:15 2014 Quant Results File: HGAS.RES

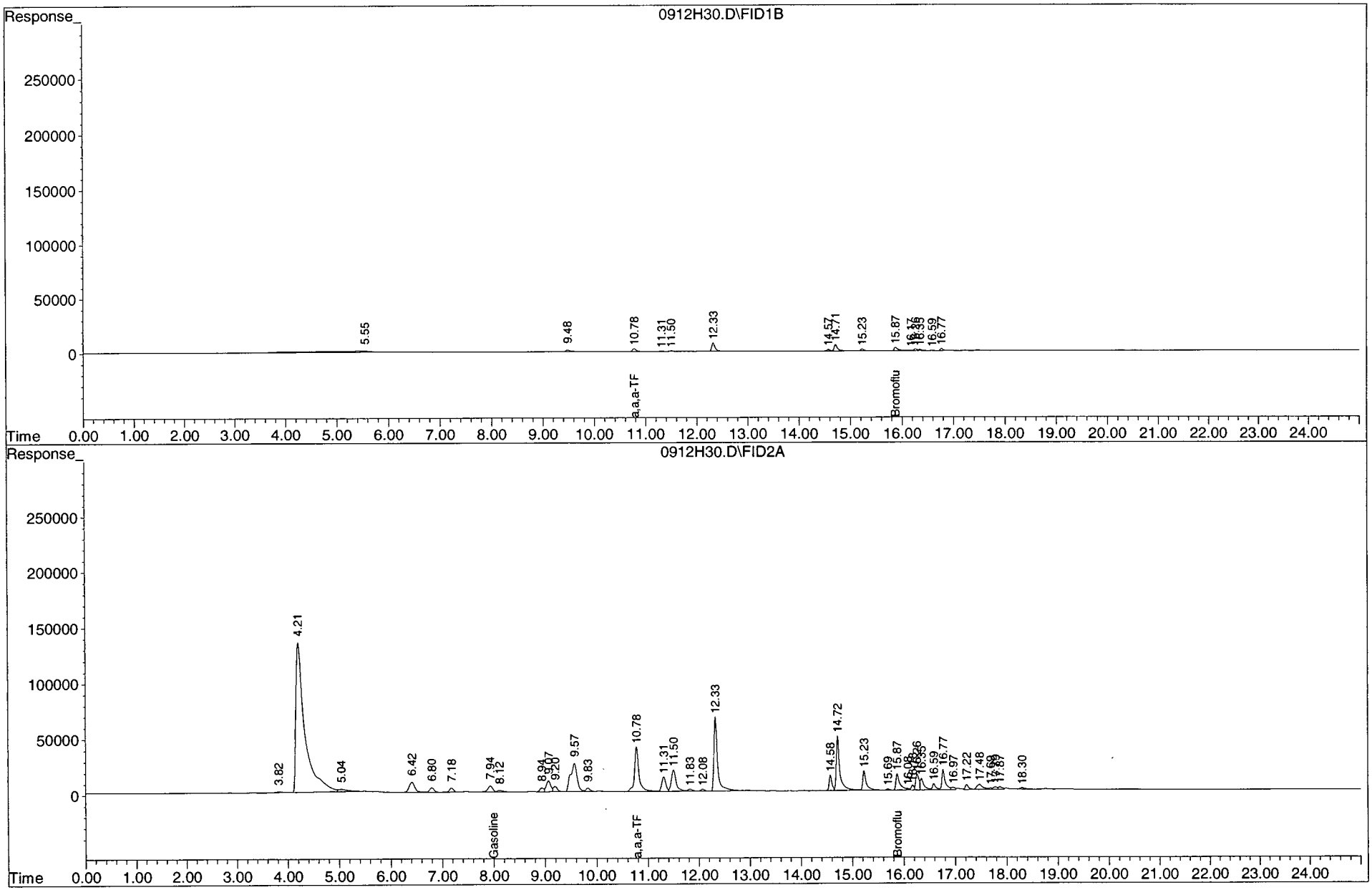
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.78	146101	20.994 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	69.98%#
2) SAM Bromofluorobenzene	15.87	179614	20.187 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	67.29%#
4) SAM a,a,a-TFT #2	10.78	2479946	26.363 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	87.88%
5) SAM Bromofluorobenzene #2	15.87	788111	22.304 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	74.35%#
Target Compounds			
6) HMBT Gasoline #2	8.00	23247784	292.453 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0912H30.D\FID1B.CH Vial: 30
Signal #2 : V:\HARPO\DATA\140617\0912H30.D\FID2A.CH
Acq On : 13 Sep 2014 02:44 Operator: LF
Sample : 300ug/L GAS 140912 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 22 9:15 2014 Quant Results File: HGAS.RES



Volatile Analysis by
Method BTEX/GAS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9/10/2014
Instrument: Harpo
Initial Cal. Date: 6/17/2014
Data File: 0909H29.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HMBT	Gasoline #2	15899	16402	3.2	HMBT	
2							
3							
4							
5							
6							
7							
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30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.2		

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0909H29.D\FID1B.CH Vial: 29
Signal #2 : V:\HARPO\DATA\140617\0909H29.D\FID2A.CH
Acq On : 10 Sep 2014 13:07 Operator: LF
Sample : 300ug/L GAS 140909 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 18 18:15 2014 Quant Results File: HGAS.RES

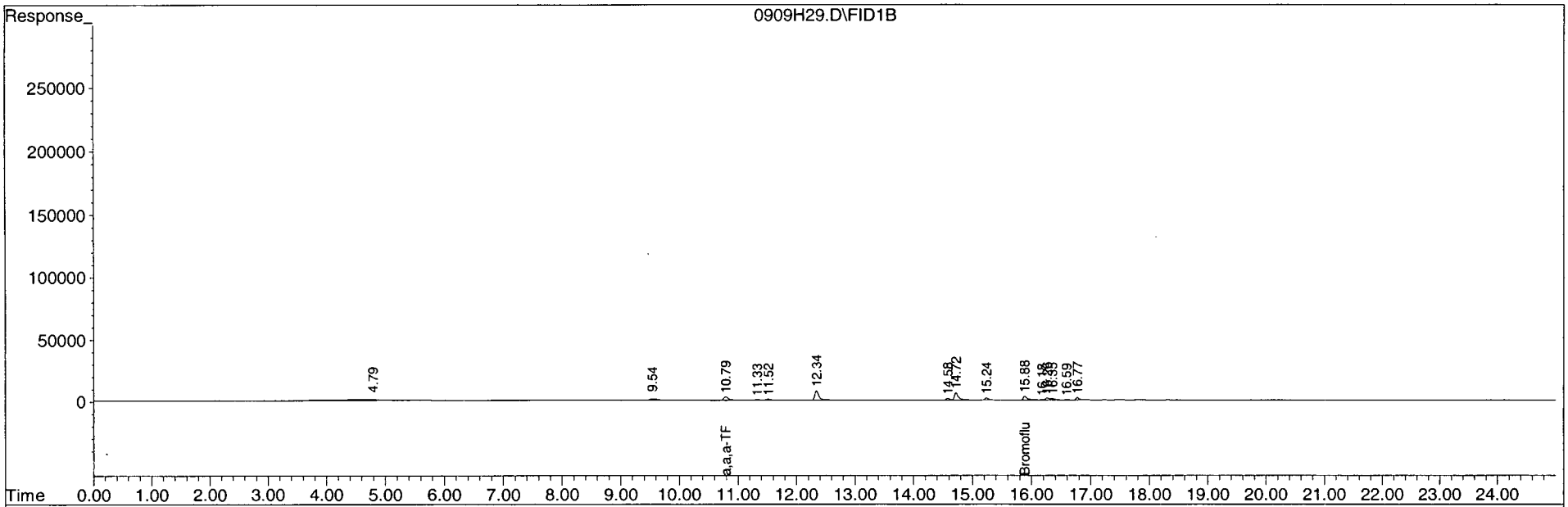
Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

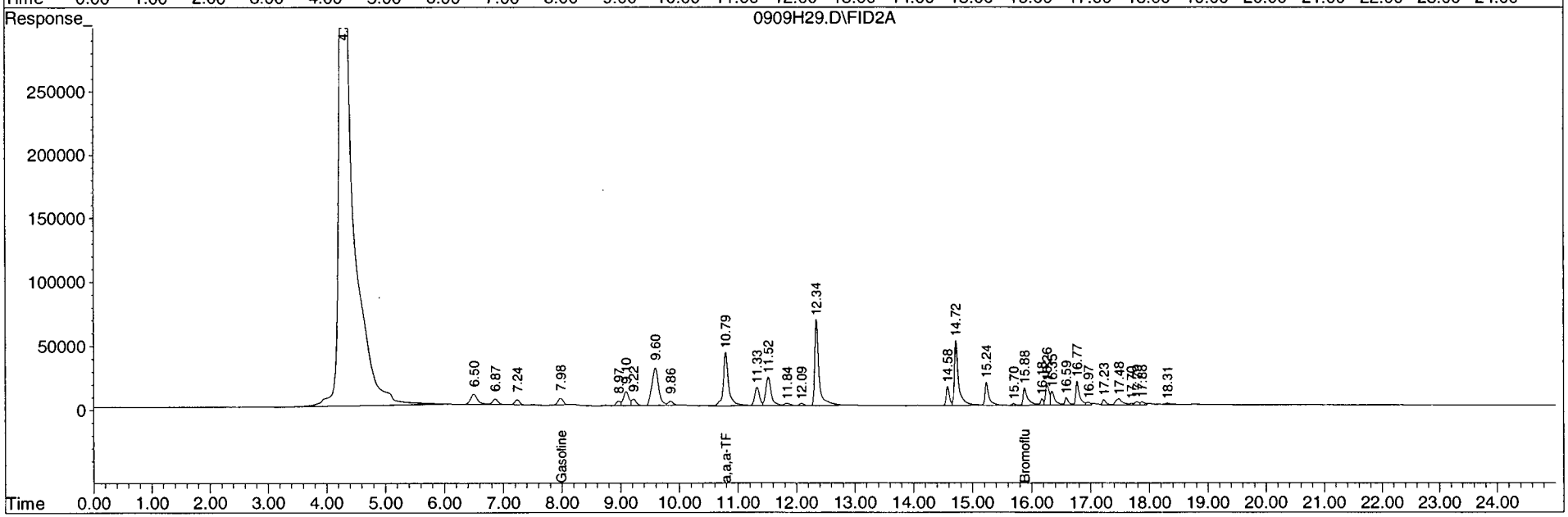
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.79	155612	22.361 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	74.54%#
2) SAM Bromofluorobenzene	15.88	170737	19.190 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	63.97%#
4) SAM a,a,a-TFT #2	10.79	2677961	28.468 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	94.89%
5) SAM Bromofluorobenzene #2	15.88	766628	21.696 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	72.32%#
Target Compounds			
6) HMBT Gasoline #2	8.00	24603621	309.509 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0909H29.D\FID1B.CH Vial: 29
Signal #2 : V:\HARPO\DATA\140617\0909H29.D\FID2A.CH
Acq On : 10 Sep 2014 13:07 Operator: LF
Sample : 300ug/L GAS 140909 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 18 18:15 2014 Quant Results File: HGAS.RES





Volatile Analysis by
Method BTEX/GAS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Soil

SDG No: 74218
Date Analyzed: 9/10/2014
Instrument: Harpo
Initial Cal. Date: 6/17/2014
Data File: 0909H36.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HMBT	Gasoline #2	15899	12668	20	HMBT	
2							
3							
4							
5							
6							
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35							
36							
37							
38							
39							
40							
		Average			20.0		

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0909H36.D\FID1B.CH Vial: 36
Signal #2 : V:\HARPO\DATA\140617\0909H36.D\FID2A.CH
Acq On : 10 Sep 2014 17:23 Operator: LF
Sample : 300ug/L GAS 140909 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 11 8:07 2014 Quant Results File: HGAS.RES

Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

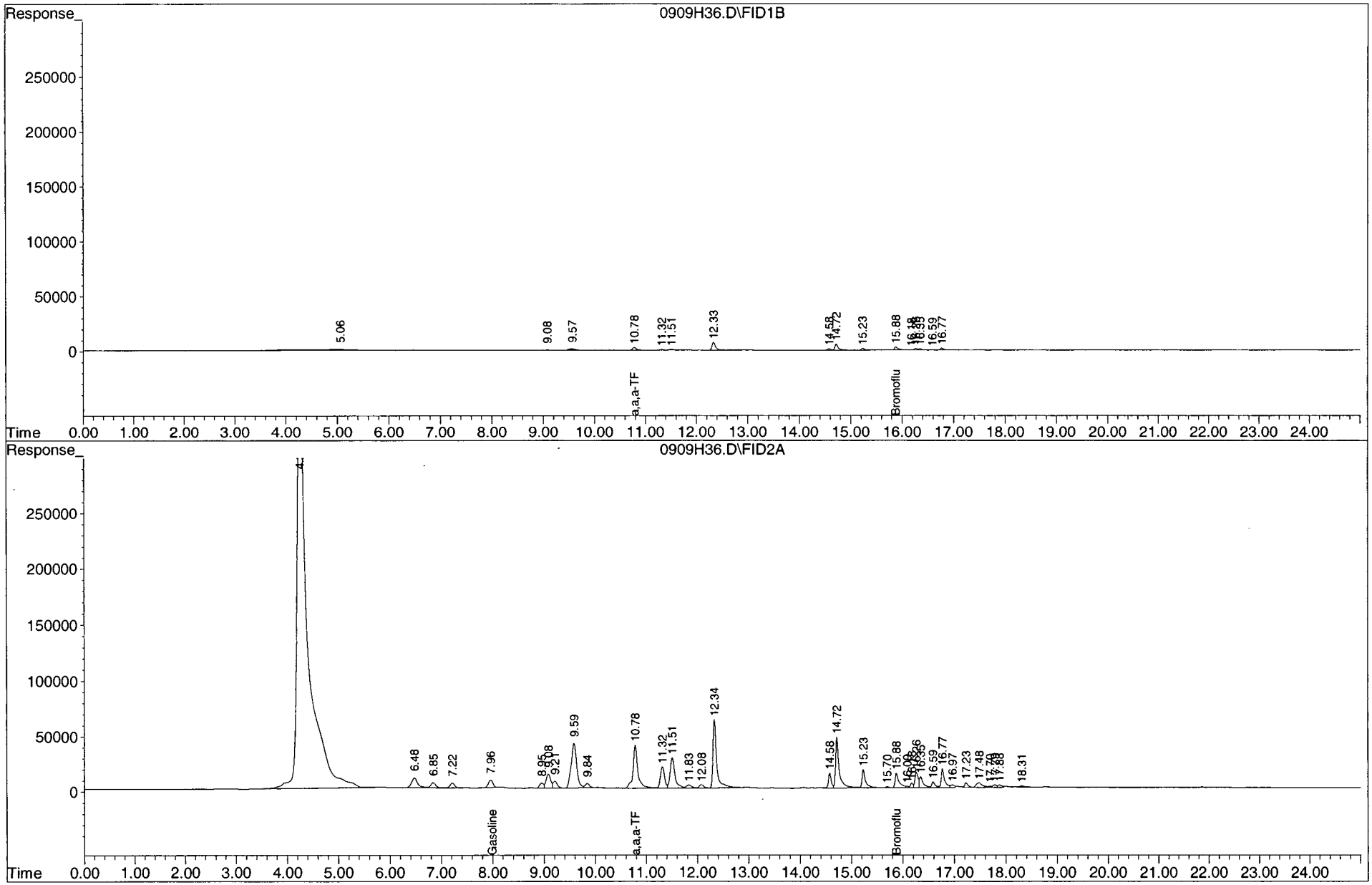
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.78	146272	21.019 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	70.06%#
2) SAM Bromofluorobenzene	15.88	162838	18.302 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	61.01%#
4) SAM a,a,a-TFT #2	10.78	2637833	28.042 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	93.47%
5) SAM Bromofluorobenzene #2	15.88	722241	20.440 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	68.13%#
Target Compounds			
6) HMBT Gasoline #2	8.00	19002285	239.045 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0909H36.D\FID1B.CH Vial: 36
Signal #2 : V:\HARPO\DATA\140617\0909H36.D\FID2A.CH
Acq On : 10 Sep 2014 17:23 Operator: LF
Sample : 300ug/L GAS 140909 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 11 8:07 2014 Quant Results File: HGAS.RES



Volatile Analysis by
Method BTEX/GAS

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218 DA 9/19/14
Initial Cal. Date: 9/15/14
Instrument: Harpo

Initials:

			0915H03.D	0915H04.D	0915H05.D	0915H06.D	0915H07.D	0915H08.D	0915H09.D							
		Compound	0.5	1	3	5	10	20	40				Avg	%RSD		
36	SAM	a,a,a-TFT #2	14948	16182	16622	18374	18358	17705	17946				17162	7.5	SAM	
37	SAM	Bromofluorobenzene #2	4141	4577	5110	5972	5746	6265	6546				5480	16	SAM	
38	HMBTL	Gasoline #2	8626	9360	12092	13858	14697	14562	15063				12608	21	HMBTL	1.000
39																
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1.2840367

Volatile Analysis by
Method BTEX/GAS

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74218 TA 9/19/14
Initial Cal. Date: 9/15/14
Instrument: Harpo

Initials:

			0915H03.D	0915H04.D	0915H05 D	0915H06.D	0915H07.D	0915H08.D	0915H09.D							
		Compound	0.5	1	3	5	10	20	40				Avg	%RSD		
1	SAM	a,a,a-TFT	976	1083	1116	1226	1241	1197	1214				1150	8.4	SAM	
2	SAM	Bromofluorobenzene	683	947	1078	1100	1345	1185	1240				1083	20	SAM	
3		Signal #2											0	0		
4																
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0.8126812

Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H03.D\FID1B.CH Vial: 3
Signal #2 : V:\HARPO\DATA\140915\0915H03.D\FID2A.CH
Acq On : 15 Sep 2014 16:25 Operator: LF
Sample : 5.0ug/L SURR 140915 Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:15 2014 Quant Results File: HGAS.RES

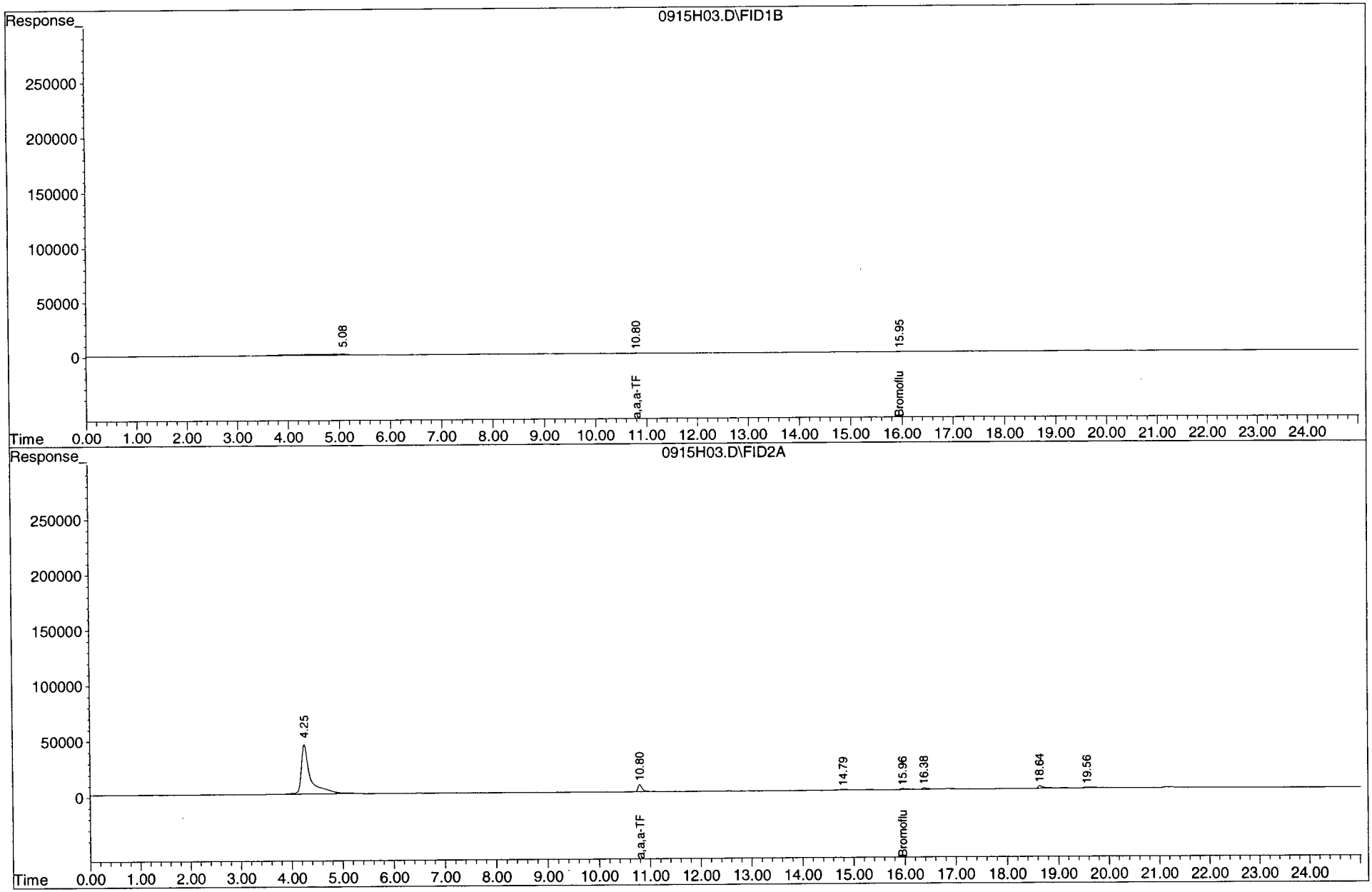
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	24401	3.506 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	11.69%#
2) SAM Bromofluorobenzene	15.95	17077	1.919 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	6.40%#
4) SAM a,a,a-TFT #2	10.80	373702	3.973 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	13.24%#
5) SAM Bromofluorobenzene #2	15.96	103523	2.930 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	9.77%#
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H03.D\FID1B.CH Vial: 3
Signal #2 : V:\HARPO\DATA\140915\0915H03.D\FID2A.CH
Acq On : 15 Sep 2014 16:25 Operator: LF
Sample : 5.0ug/L SURR 140915 Inst : Harpo
Misc : Mix(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:15 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H04.D\FID1B.CH Vial: 4
Signal #2 : V:\HARPO\DATA\140915\0915H04.D\FID2A.CH
Acq On : 15 Sep 2014 17:02 Operator: LF
Sample : 10ug/L SURR Inst : Harpo
Misc : MIX(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:16 2014 Quant Results File: HGAS.RES

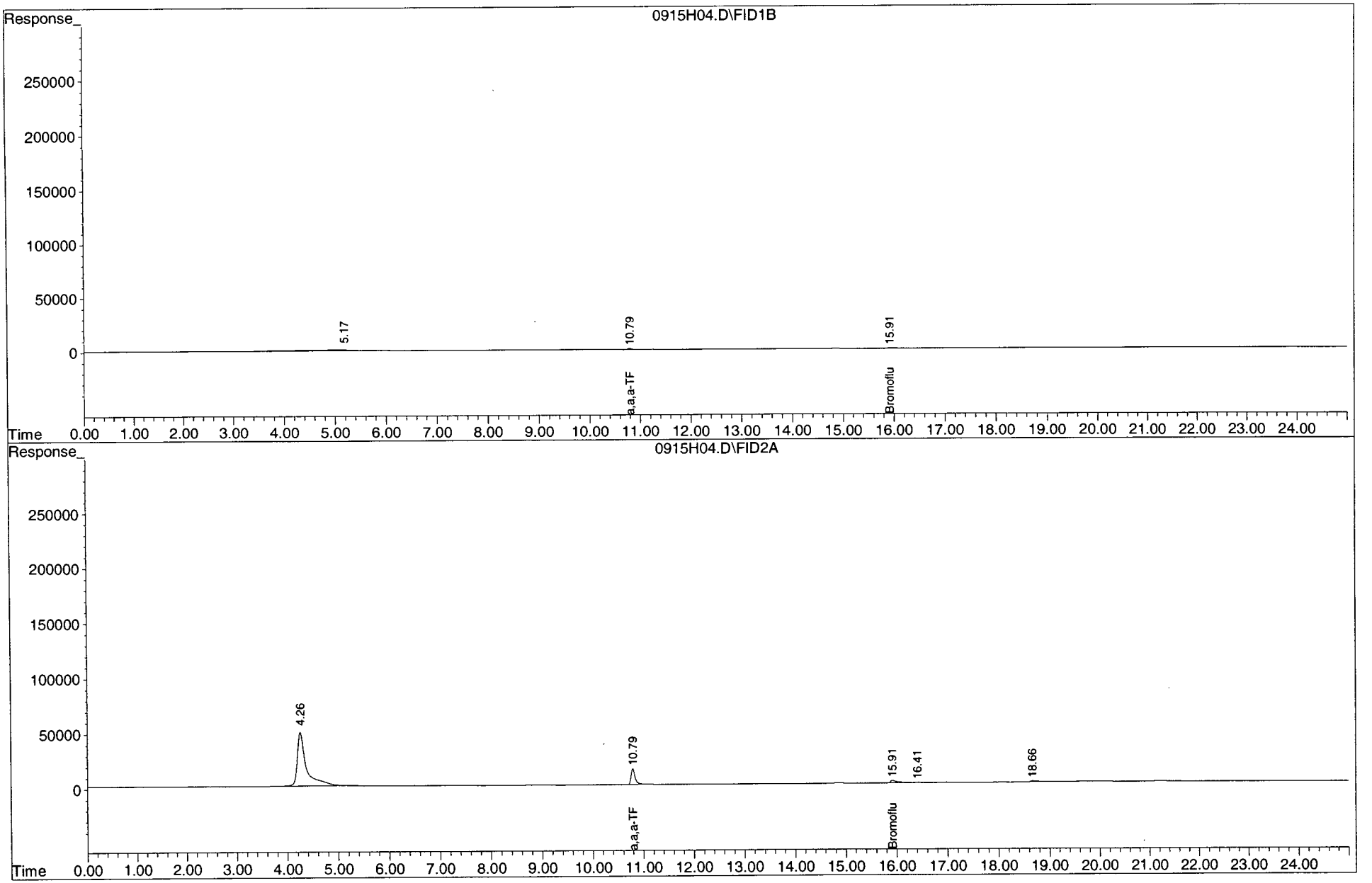
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.79	54170	7.784 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	25.95%#
2) SAM Bromofluorobenzene	15.91	47368	5.324 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	17.75%#
4) SAM a,a,a-TFT #2	10.79	809124	8.601 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	28.67%#
5) SAM Bromofluorobenzene #2	15.91	228862	6.477 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	21.59%#
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H04.D\FID1B.CH Vial: 4
Signal #2 : V:\HARPO\DATA\140915\0915H04.D\FID2A.CH
Acq On : 15 Sep 2014 17:02 Operator: LF
Sample : 10ug/L SURR Inst : Harpo
Misc : MIX(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:16 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H05.D\FID1B.CH Vial: 5
Signal #2 : V:\HARPO\DATA\140915\0915H05.D\FID2A.CH
Acq On : 15 Sep 2014 17:38 Operator: LF
Sample : 15ug/L SURR Inst : Harpo
Misc : MIX(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:16 2014 Quant Results File: HGAS.RES

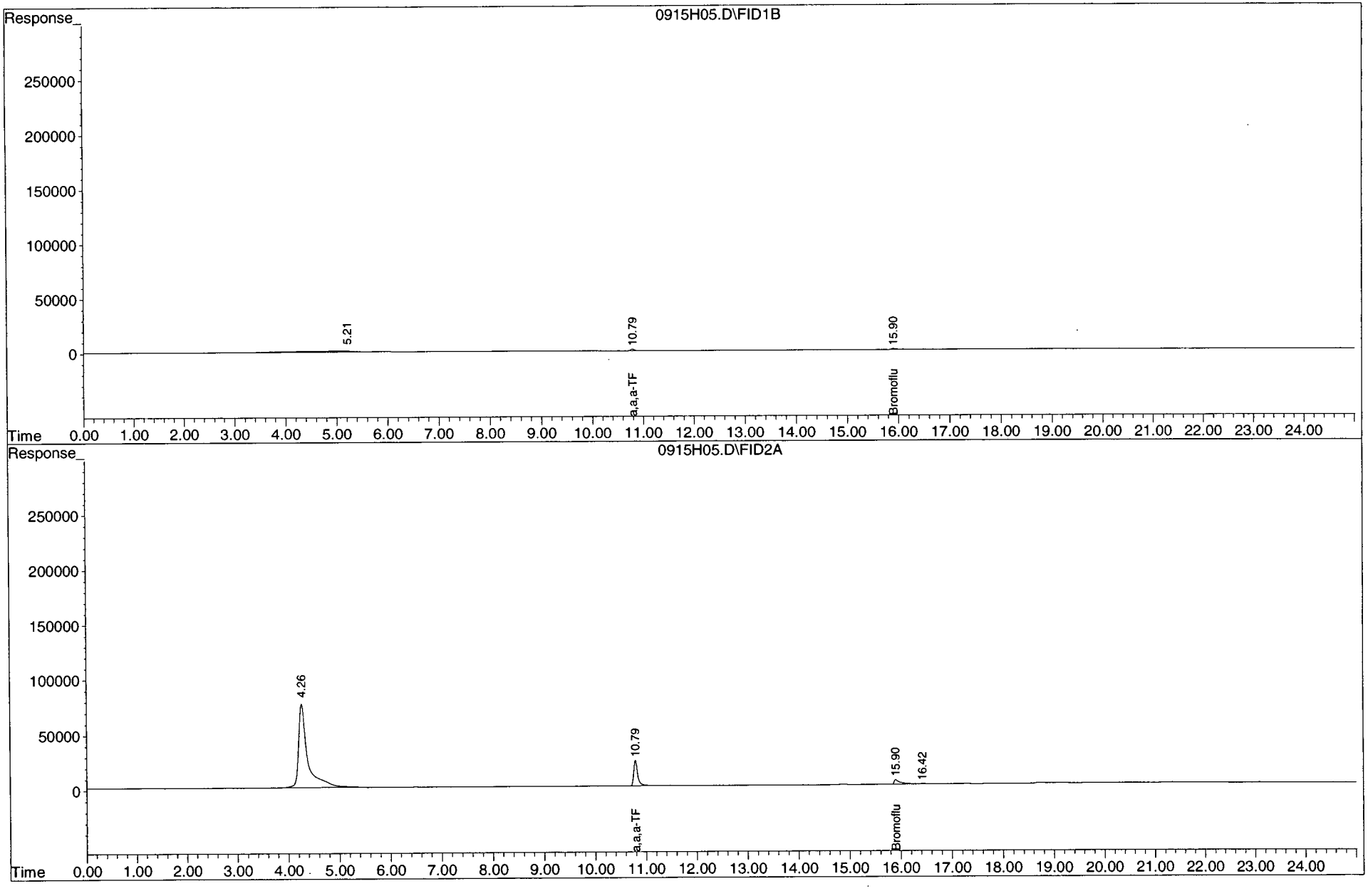
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.79	83705	12.028 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	40.09%#
2) SAM Bromofluorobenzene	15.90	80820	9.084 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	30.28%#
4) SAM a,a,a-TFT #2	10.79	1246615	13.252 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	44.17%#
5) SAM Bromofluorobenzene #2	15.90	383241	10.846 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	36.15%#
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H05.D\FID1B.CH Vial: 5
Signal #2 : V:\HARPO\DATA\140915\0915H05.D\FID2A.CH
Acq On : 15 Sep 2014 17:38 Operator: LF
Sample : 15ug/L SURR Inst : Harpo
Misc : MIX(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:16 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H06.D\FID1B.CH Vial: 6
Signal #2 : V:\HARPO\DATA\140915\0915H06.D\FID2A.CH
Acq On : 15 Sep 2014 18:15 Operator: LF
Sample : 20ug/L SURR Inst : Harpo
Misc : MIX(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:17 2014 Quant Results File: HGAS.RES

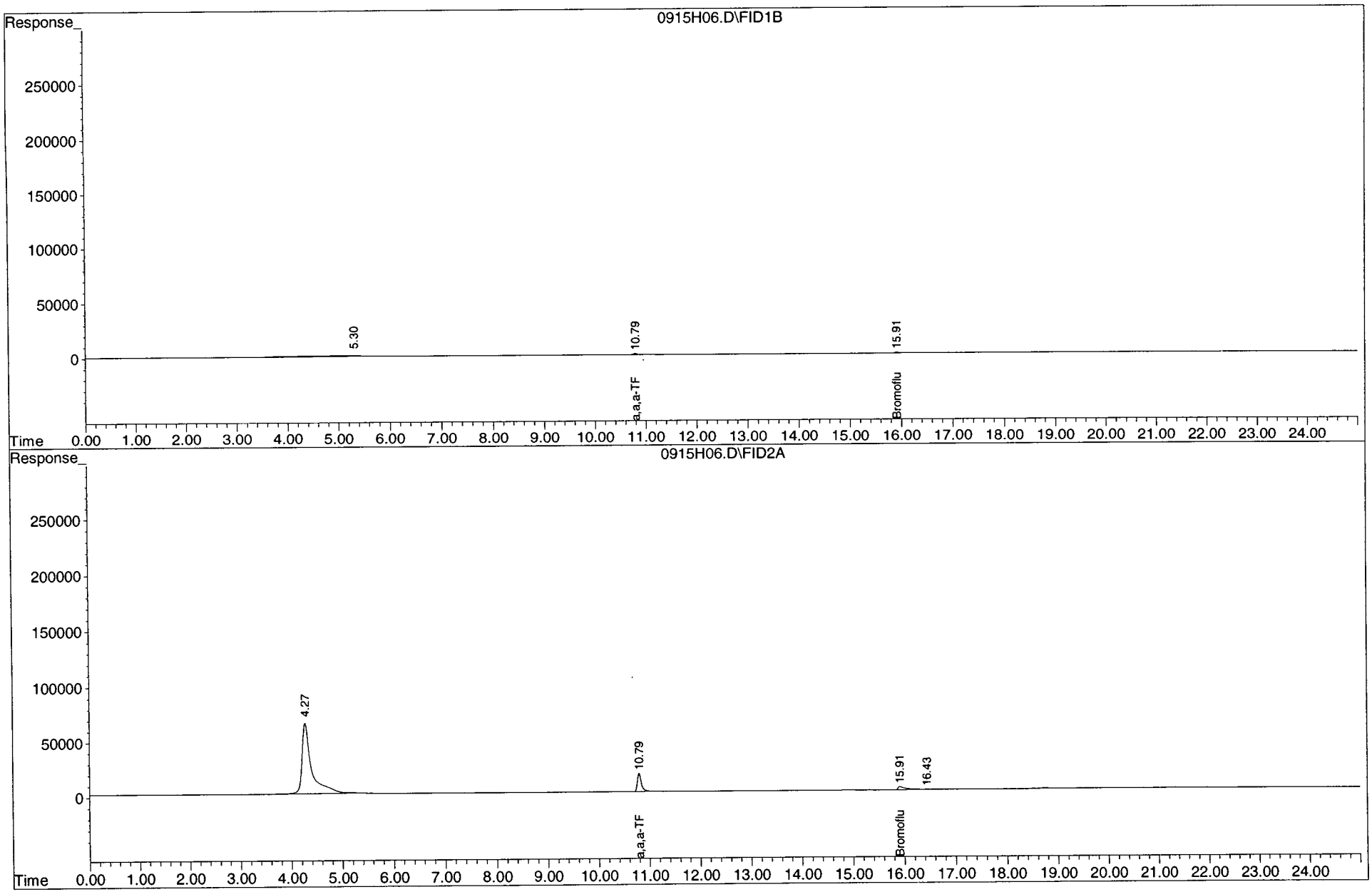
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.79	61278	8.805 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	29.35%#
2) SAM Bromofluorobenzene	15.91	55012	6.183 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	20.61%#
4) SAM a,a,a-TFT #2	10.79	918705	9.766 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	32.55%#
5) SAM Bromofluorobenzene #2	15.91	298612	8.451 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	28.17%#
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H06.D\FID1B.CH Vial: 6
Signal #2 : V:\HARPO\DATA\140915\0915H06.D\FID2A.CH
Acq On : 15 Sep 2014 18:15 Operator: LF
Sample : 20ug/L SURR Inst : Harpo
Misc : MIX(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:17 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H07.D\FID1B.CH Vial: 7
Signal #2 : V:\HARPO\DATA\140915\0915H07.D\FID2A.CH
Acq On : 15 Sep 2014 18:52 Operator: LF
Sample : 25ug/L SURR Inst : Harpo
Misc : MIX(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:17 2014 Quant Results File: HGAS.RES

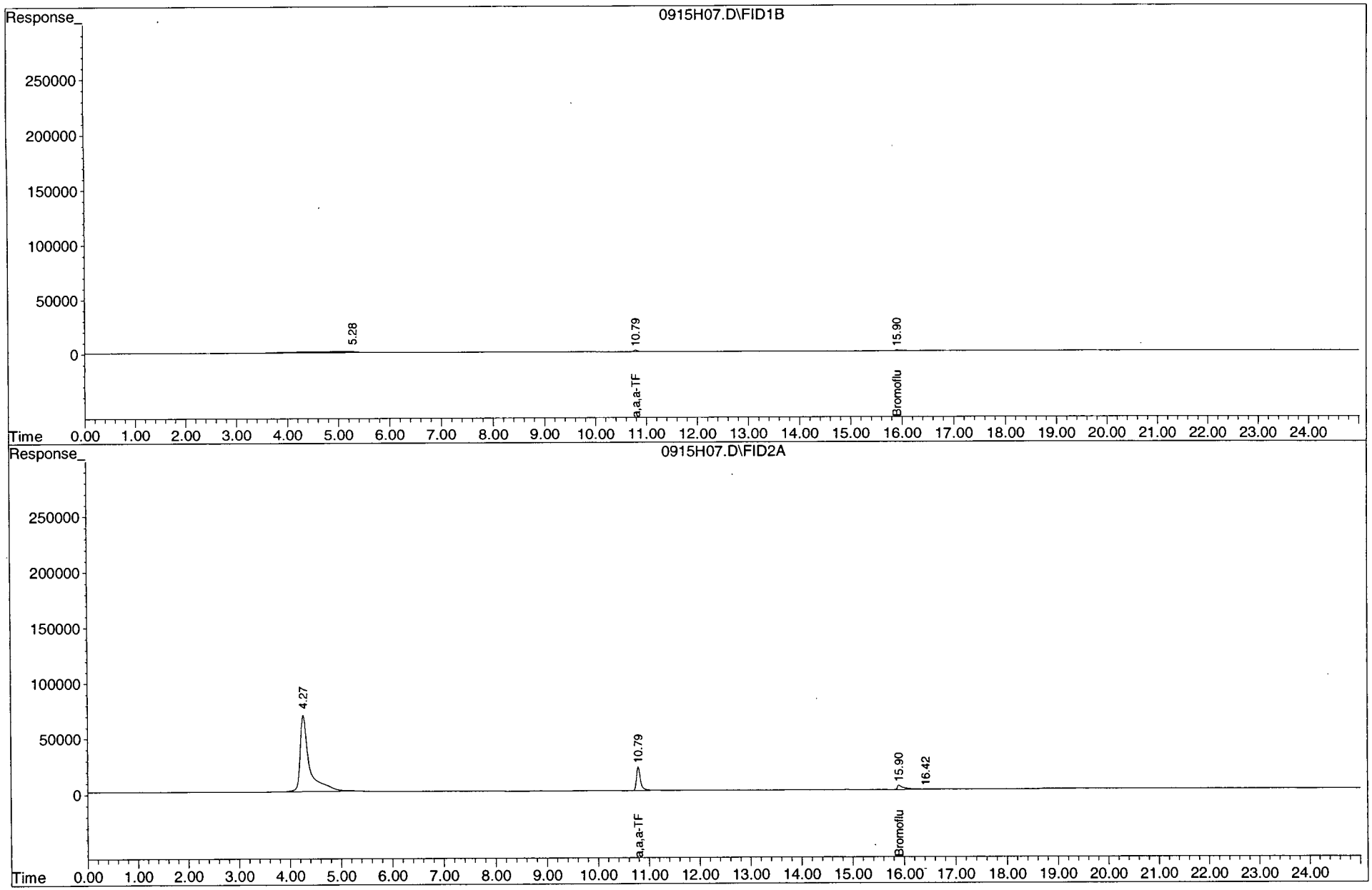
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.79	77574	11.147 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	37.16%#
2) SAM Bromofluorobenzene	15.90	84059	9.448 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	31.49%#
4) SAM a,a,a-TFT #2	10.79	1147384	12.197 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	40.66%#
5) SAM Bromofluorobenzene #2	15.90	359154	10.164 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	33.88%#
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H07.D\FID1B.CH Vial: 7
Signal #2 : V:\HARPO\DATA\140915\0915H07.D\FID2A.CH
Acq On : 15 Sep 2014 18:52 Operator: LF
Sample : 25ug/L SURR Inst : Harpo
Misc : MIX(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:17 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H08.D\FID1B.CH Vial: 8
Signal #2 : V:\HARPO\DATA\140915\0915H08.D\FID2A.CH
Acq On : 15 Sep 2014 19:29 Operator: LF
Sample : 30ug/L SURR Inst : Harpo
Misc : MIX(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 10:53 2014 Quant Results File: HGAS.RES

Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

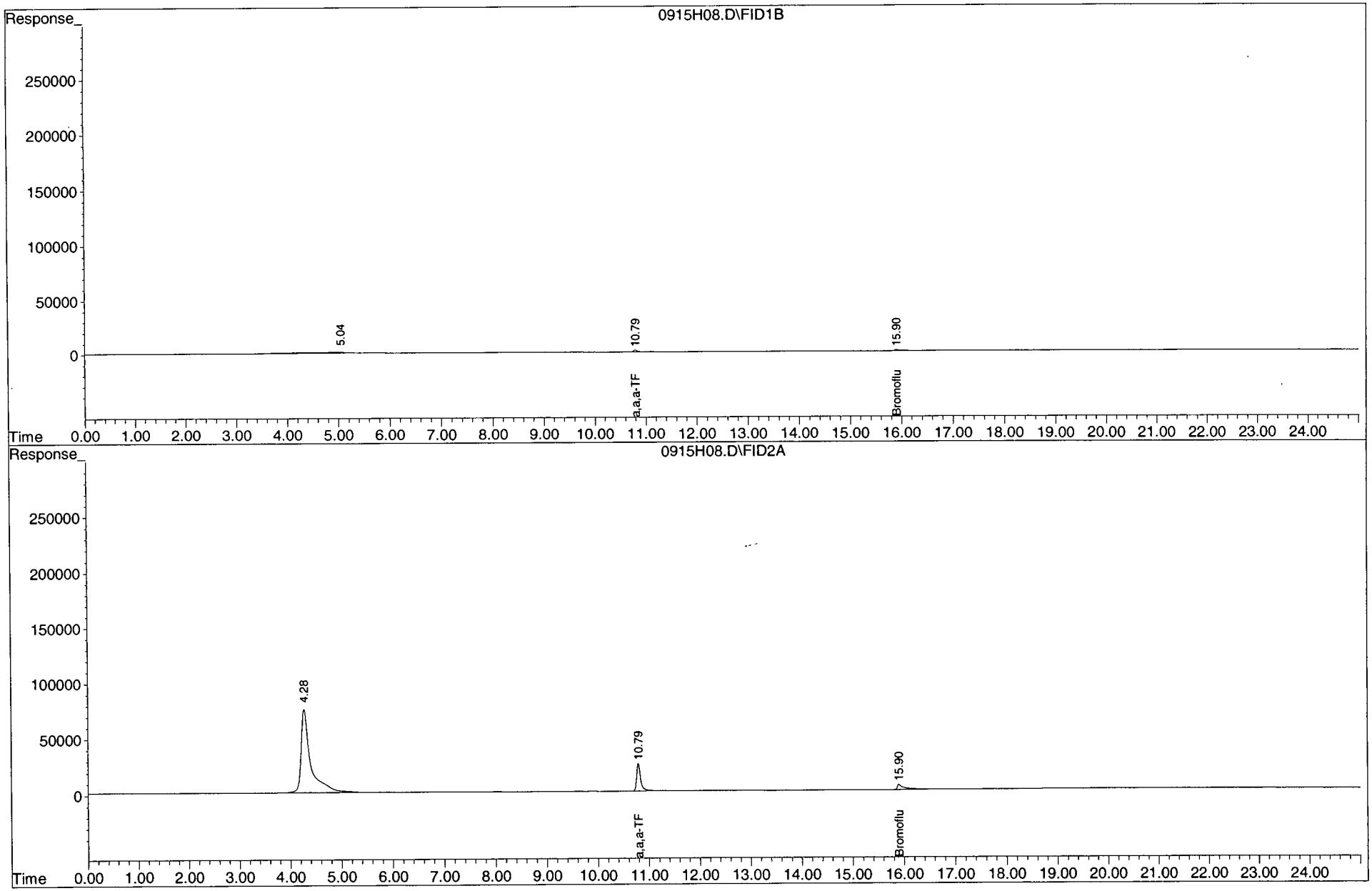
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.79	89782	12.901 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	43.00%#
2) SAM Bromofluorobenzene	15.90	88869	9.988 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	33.29%#
4) SAM a,a,a-TFT #2	10.79	1327849	14.116 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	47.05%#
5) SAM Bromofluorobenzene #2	15.90	469856	13.297 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	44.32%#
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H08.D\FID1B.CH Vial: 8
Signal #2 : V:\HARPO\DATA\140915\0915H08.D\FID2A.CH
Acq On : 15 Sep 2014 19:29 Operator: LF
Sample : 30ug/L SURR Inst : Harpo
Misc : MIX(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 10:53 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H09.D\FID1B.CH Vial: 9
Signal #2 : V:\HARPO\DATA\140915\0915H09.D\FID2A.CH
Acq On : 15 Sep 2014 20:05 Operator: LF
Sample : 40ug/L SURR Inst : Harpo
Misc : MIX(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 10:53 2014 Quant Results File: HGAS.RES

Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

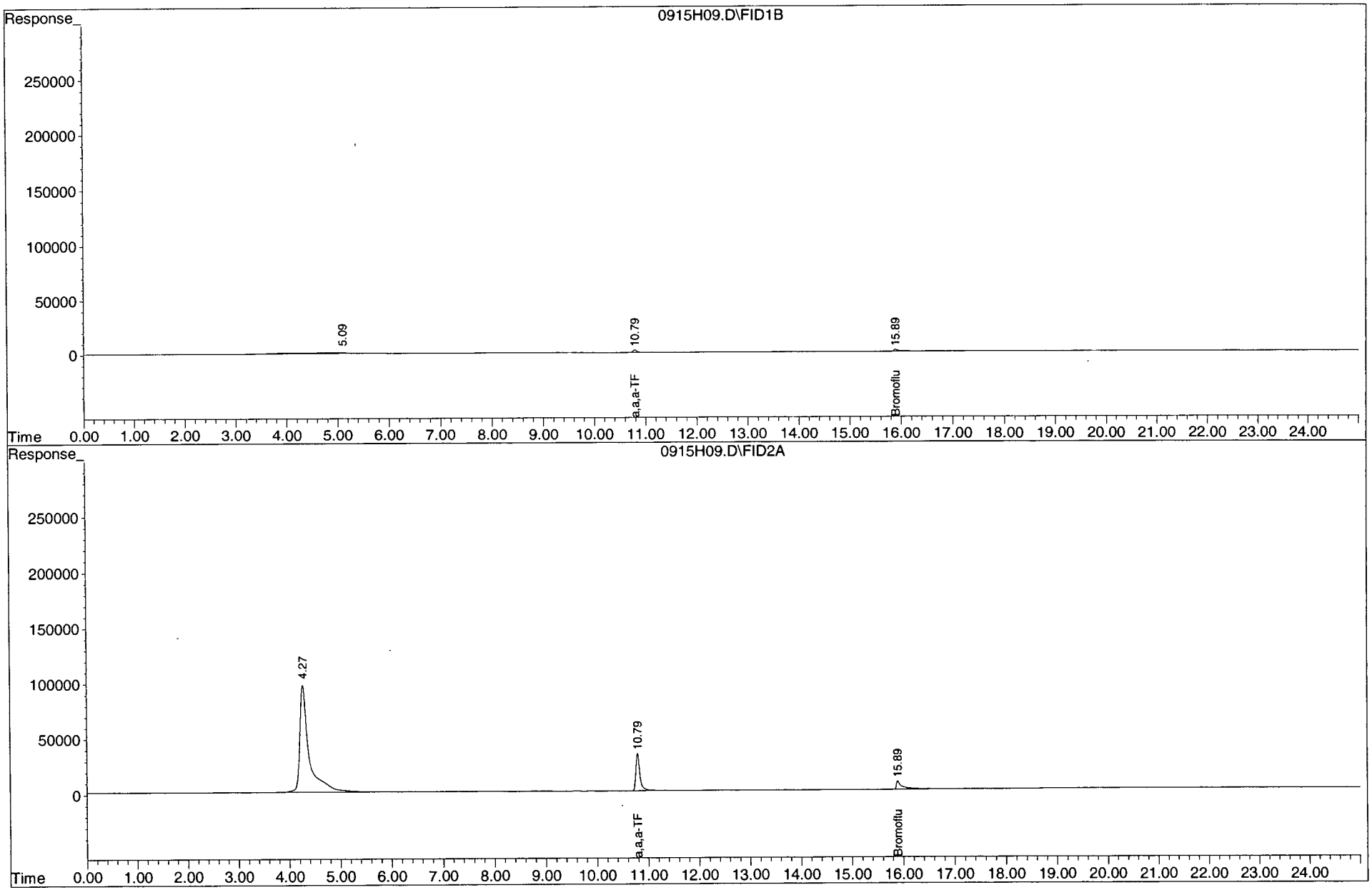
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.79	121374	17.441 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	58.14%#
2) SAM Bromofluorobenzene	15.89	123980	13.935 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	46.45%#
4) SAM a,a,a-TFT #2	10.79	1794612	19.078 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	63.59%#
5) SAM Bromofluorobenzene #2	15.89	654569	18.525 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	61.75%#
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H09.D\FID1B.CH Vial: 9
Signal #2 : V:\HARPO\DATA\140915\0915H09.D\FID2A.CH
Acq On : 15 Sep 2014 20:05 Operator: LF
Sample : 40ug/L SURR Inst : Harpo
Misc : MIX(A) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 10:53 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H10.D\FID1B.CH Vial: 10
Signal #2 : V:\HARPO\DATA\140915\0915H10.D\FID2A.CH
Acq On : 15 Sep 2014 20:42 Operator: LF
Sample : 20ug/L GAS 140915 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:04 2014 Quant Results File: HGAS.RES

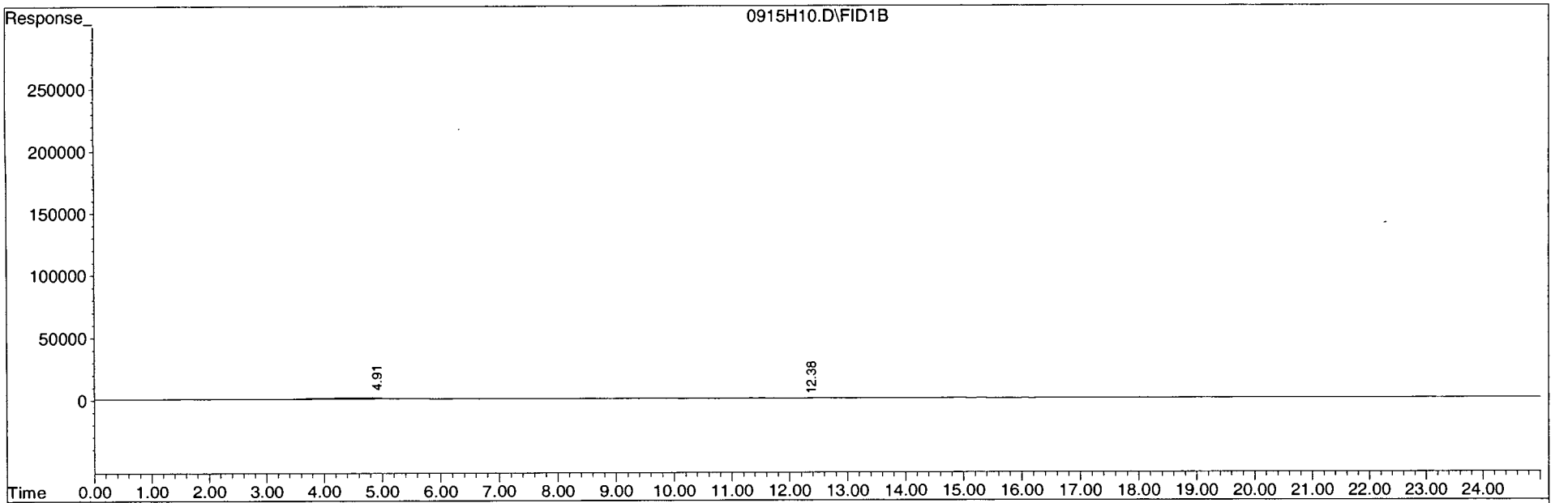
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

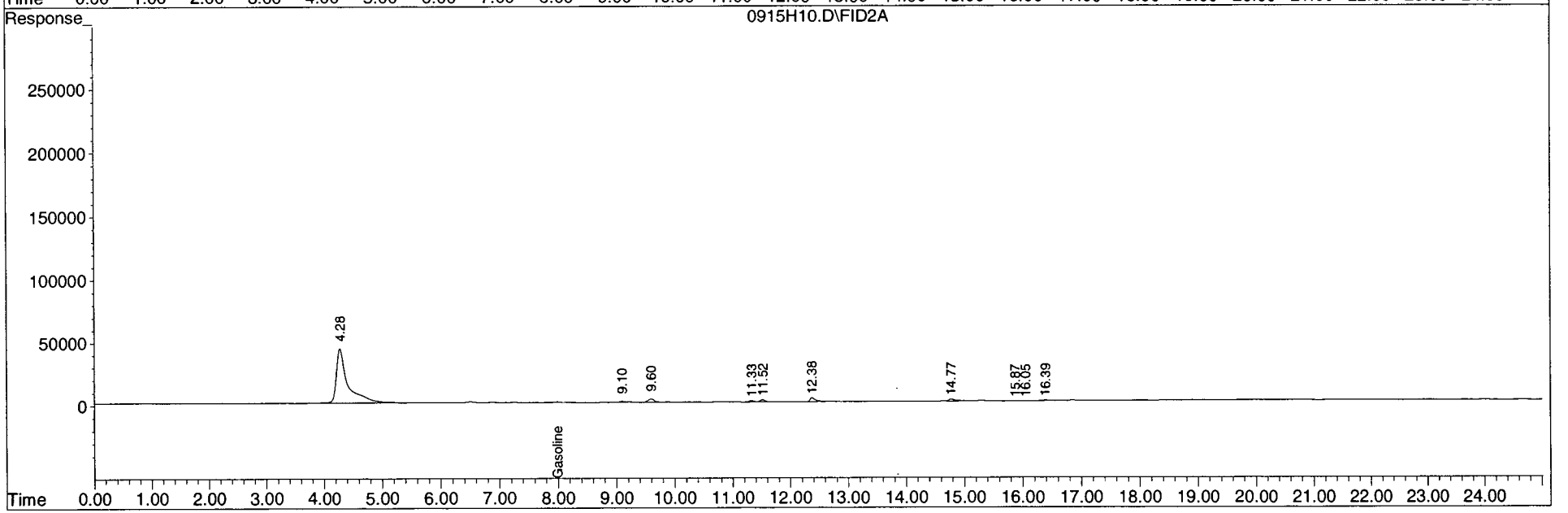
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
6) HMBT Gasoline #2	8.00	862607	10.851 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H10.D\FID1B.CH Vial: 10
Signal #2 : V:\HARPO\DATA\140915\0915H10.D\FID2A.CH
Acq On : 15 Sep 2014 20:42 Operator: LF
Sample : 20ug/L GAS 140915 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:04 2014 Quant Results File: HGAS.RES





Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H11.D\FID1B.CH Vial: 11
Signal #2 : V:\HARPO\DATA\140915\0915H11.D\FID2A.CH
Acq On : 15 Sep 2014 21:19 Operator: LF
Sample : 50ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:04 2014 Quant Results File: HGAS.RES

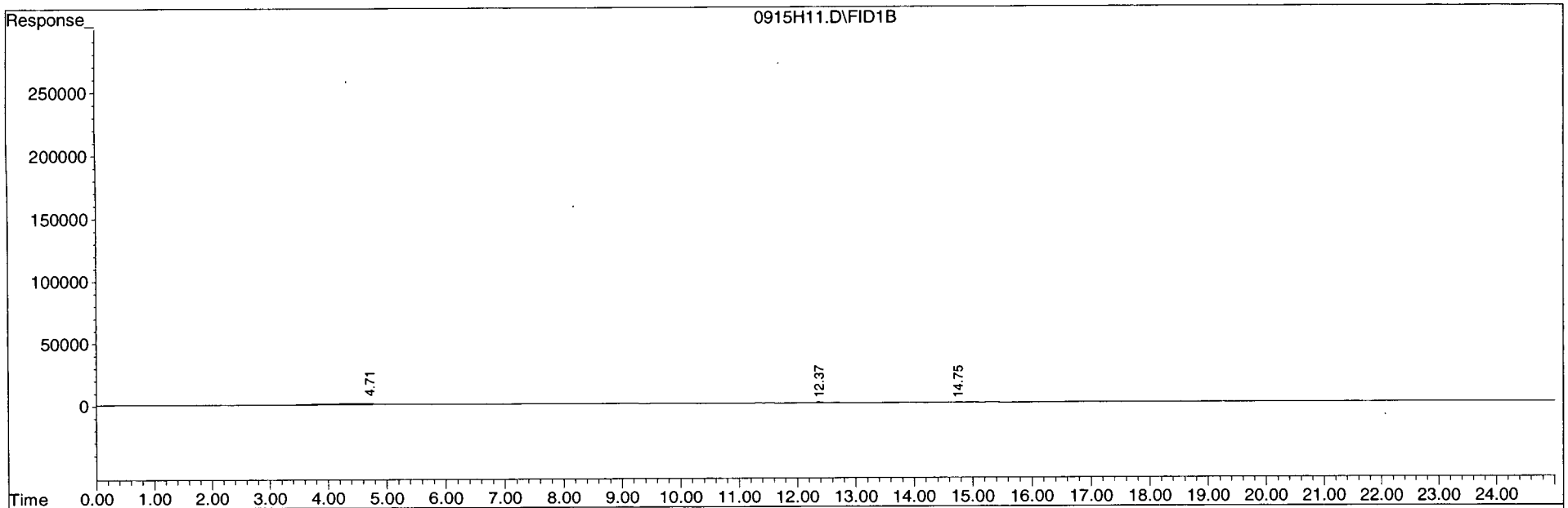
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

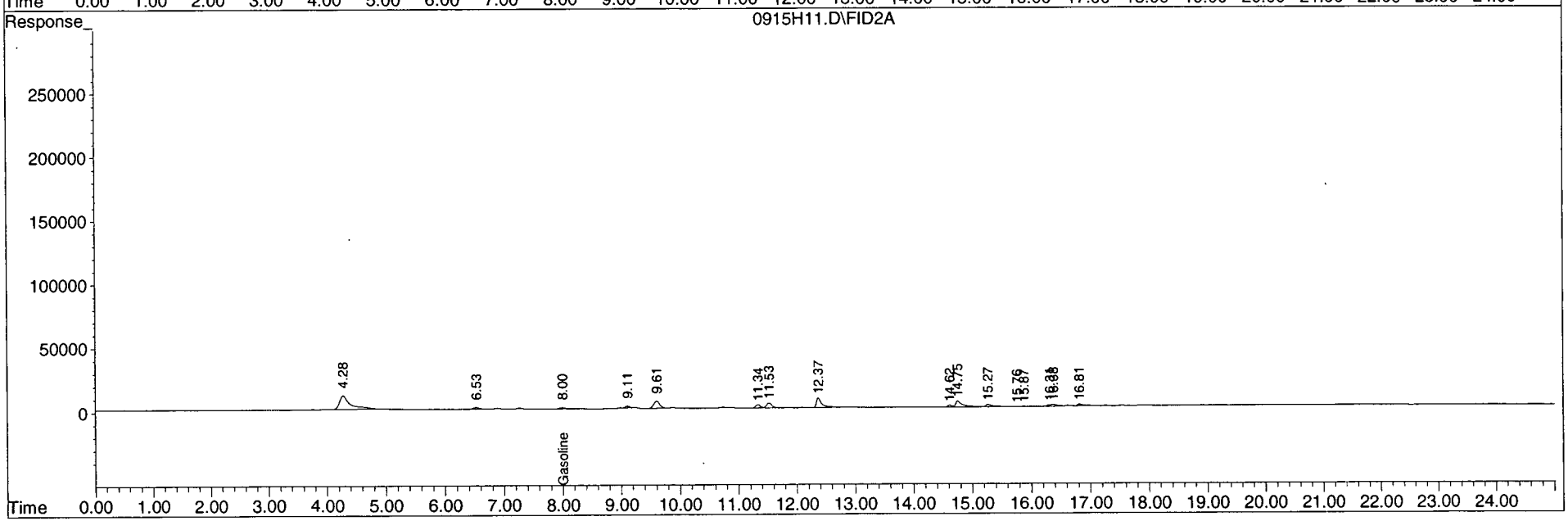
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
6) HMBT Gasoline #2	8.00	2340124	29.438 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H11.D\FID1B.CH Vial: 11
Signal #2 : V:\HARPO\DATA\140915\0915H11.D\FID2A.CH
Acq On : 15 Sep 2014 21:19 Operator: LF
Sample : 50ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:04 2014 Quant Results File: HGAS.RES





Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H12.D\FID1B.CH Vial: 12
Signal #2 : V:\HARPO\DATA\140915\0915H12.D\FID2A.CH
Acq On : 15 Sep 2014 21:55 Operator: LF
Sample : 100ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:04 2014 Quant Results File: HGAS.RES

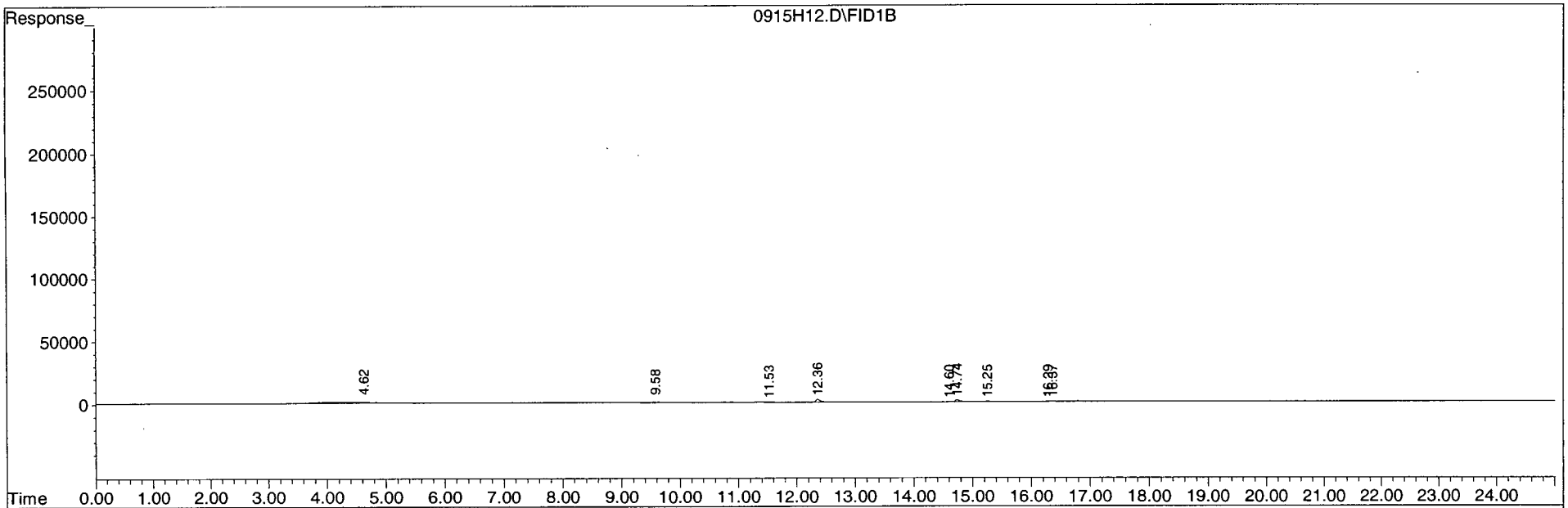
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

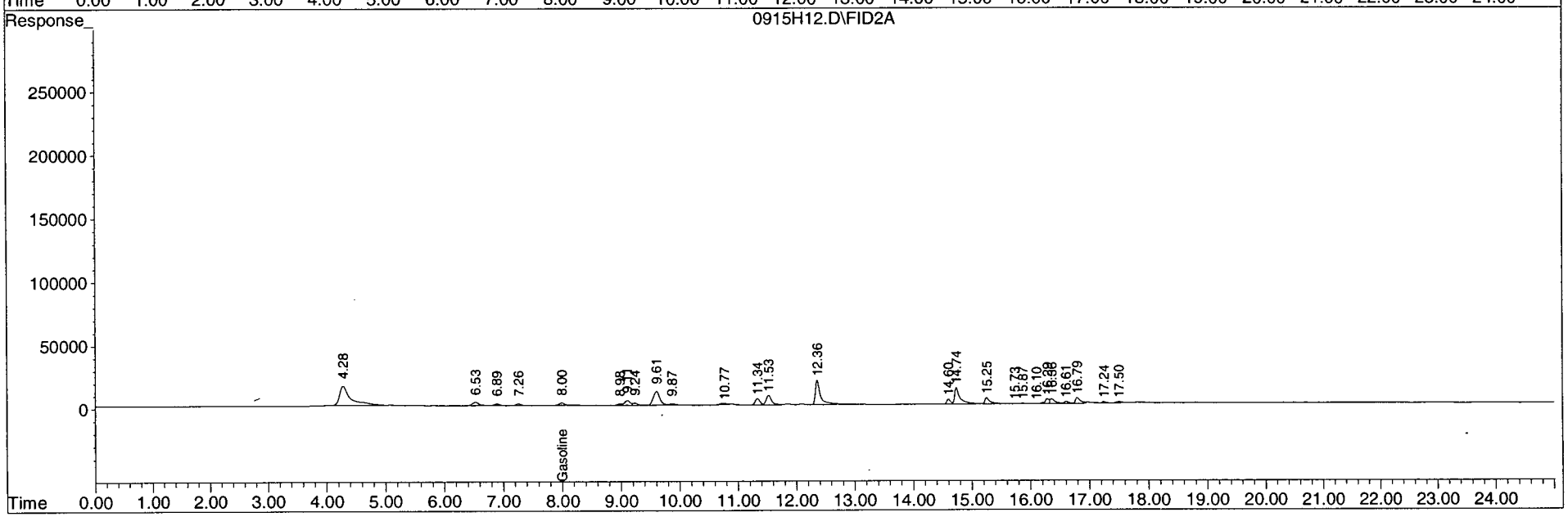
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
6) HMBT Gasoline #2	8.00	6046243	76.061 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H12.D\FID1B.CH Vial: 12
Signal #2 : V:\HARPO\DATA\140915\0915H12.D\FID2A.CH
Acq On : 15 Sep 2014 21:55 Operator: LF
Sample : 100ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:04 2014 Quant Results File: HGAS.RES





Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H13.D\FID1B.CH Vial: 13
Signal #2 : V:\HARPO\DATA\140915\0915H13.D\FID2A.CH
Acq On : 15 Sep 2014 22:32 Operator: LF
Sample : 300ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:04 2014 Quant Results File: HGAS.RES

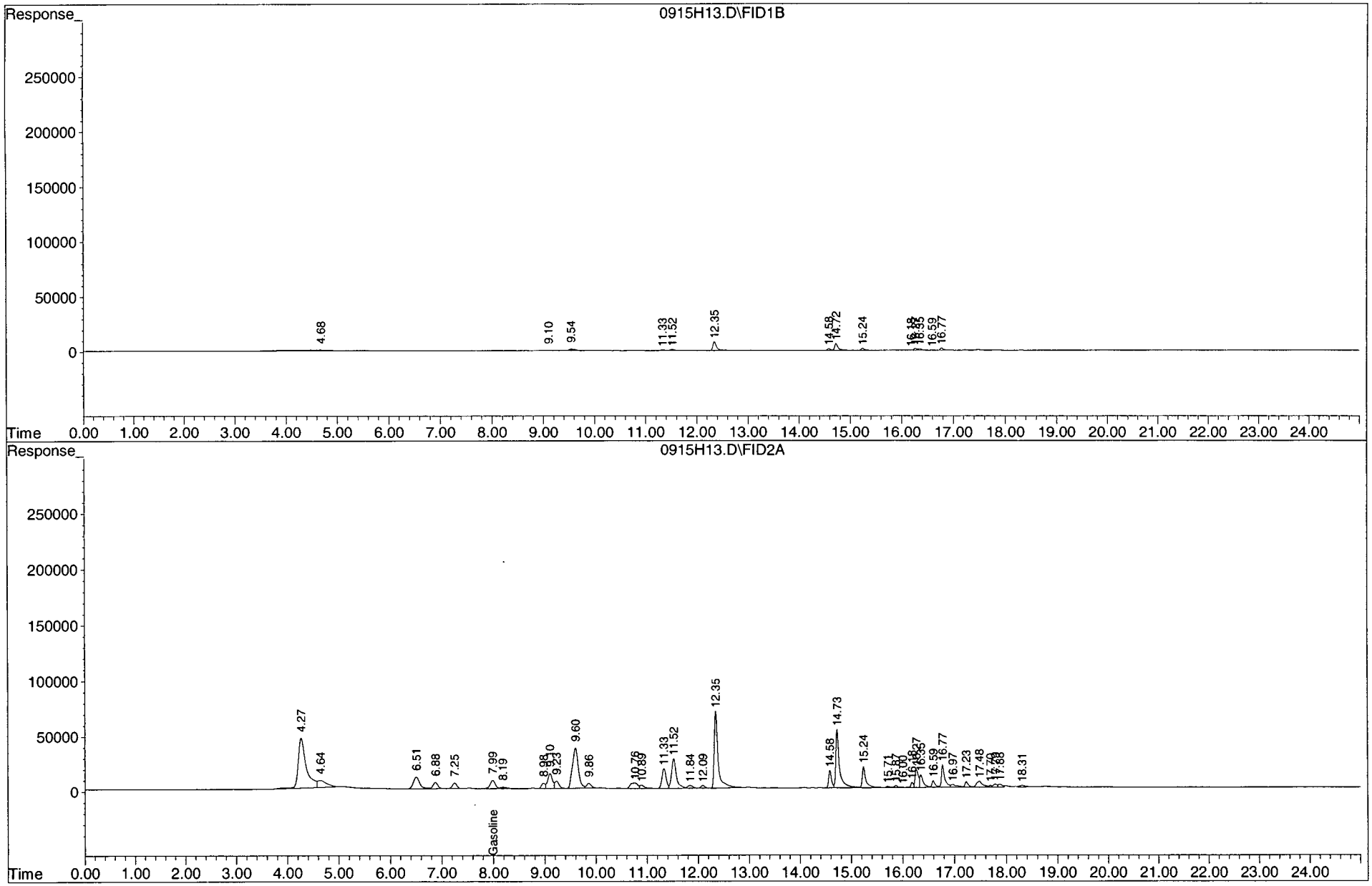
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
6) HMBT Gasoline #2	8.00	20787698	261.505 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H13.D\FID1B.CH Vial: 13
Signal #2 : V:\HARPO\DATA\140915\0915H13.D\FID2A.CH
Acq On : 15 Sep 2014 22:32 Operator: LF
Sample : 300ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:04 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H14.D\FID1B.CH Vial: 14
Signal #2 : V:\HARPO\DATA\140915\0915H14.D\FID2A.CH
Acq On : 15 Sep 2014 23:08 Operator: LF
Sample : 600ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:04 2014 Quant Results File: HGAS.RES

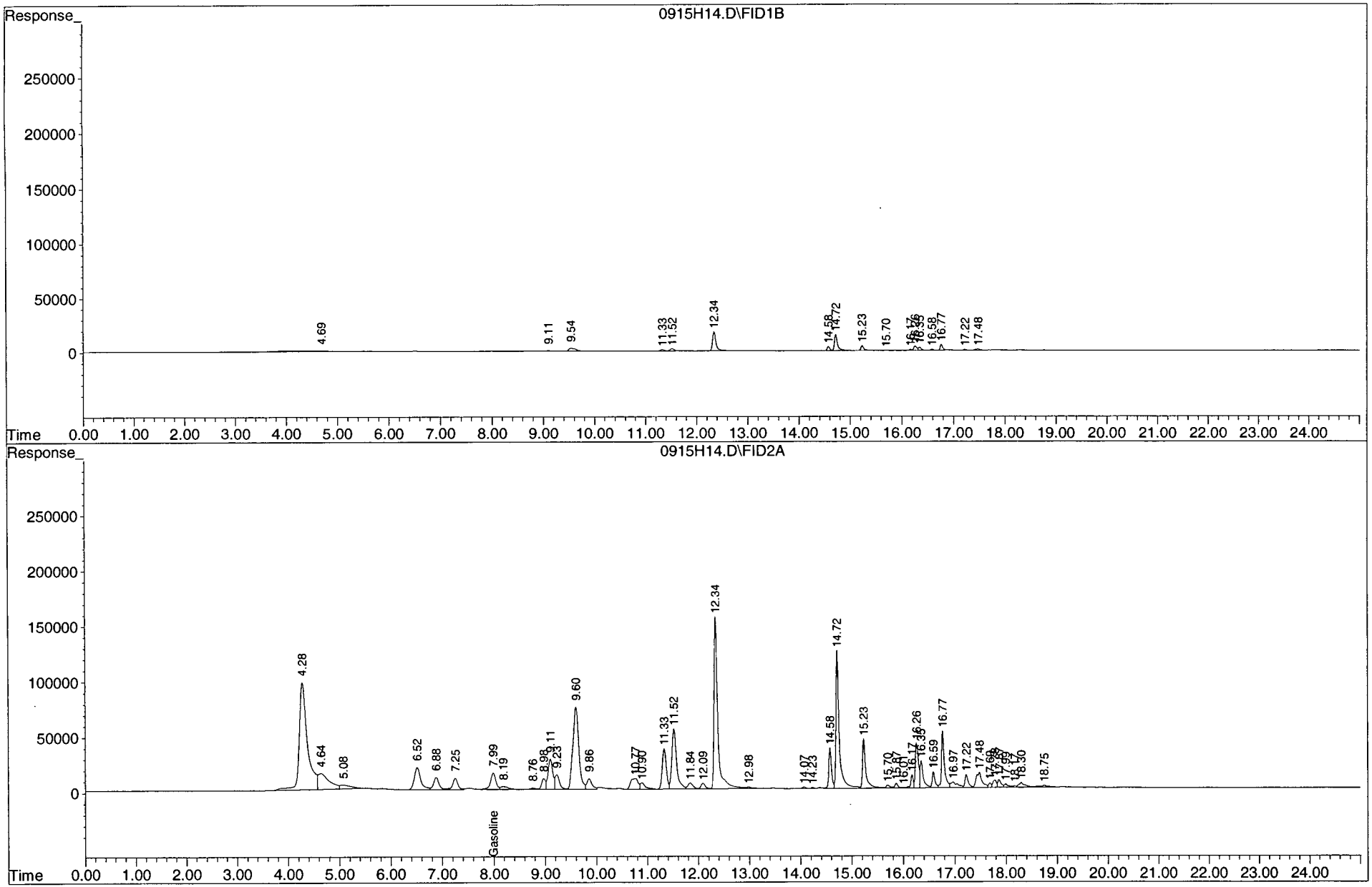
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
6) HMBT Gasoline #2	8.00	44090177	554.646 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H14.D\FID1B.CH Vial: 14
Signal #2 : V:\HARPO\DATA\140915\0915H14.D\FID2A.CH
Acq On : 15 Sep 2014 23:08 Operator: LF
Sample : 600ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:04 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H15.D\FID1B.CH Vial: 15
Signal #2 : V:\HARPO\DATA\140915\0915H15.D\FID2A.CH
Acq On : 15 Sep 2014 23:44 Operator: LF
Sample : 800ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:04 2014 Quant Results File: HGAS.RES

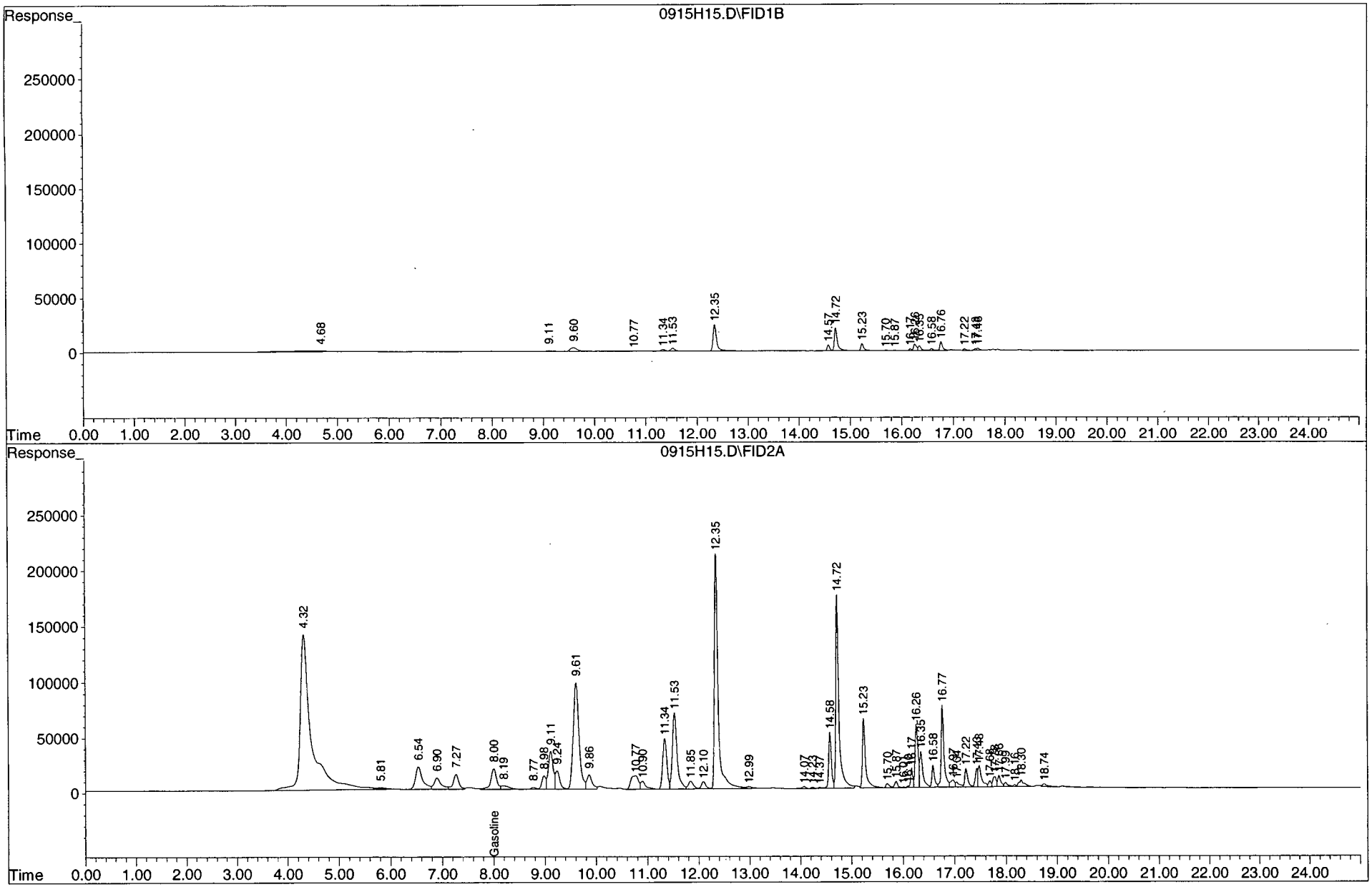
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
6) HMBT Gasoline #2	8.00	58248921	732.760 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H15.D\FID1B.CH Vial: 15
Signal #2 : V:\HARPO\DATA\140915\0915H15.D\FID2A.CH
Acq On : 15 Sep 2014 23:44 Operator: LF
Sample : 800ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:04 2014 Quant Results File: HGAS.RES



Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H16.D\FID1B.CH Vial: 16
Signal #2 : V:\HARPO\DATA\140915\0915H16.D\FID2A.CH
Acq On : 16 Sep 2014 00:21 Operator: LF
Sample : 1000ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:04 2014 Quant Results File: HGAS.RES

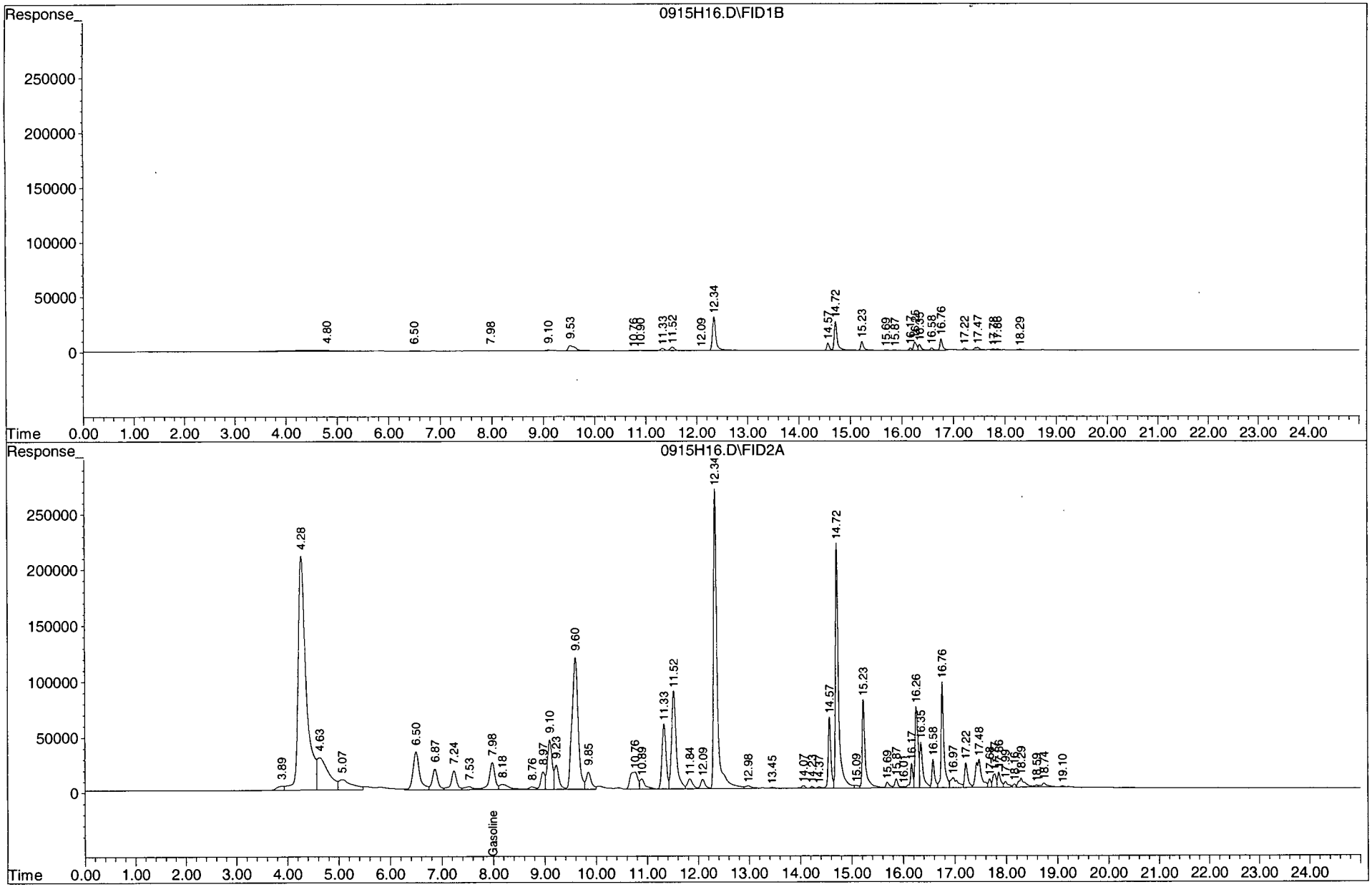
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
6) HMBT Gasoline #2	8.00	75314241	947.439 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H16.D\FID1B.CH Vial: 16
Signal #2 : V:\HARPO\DATA\140915\0915H16.D\FID2A.CH
Acq On : 16 Sep 2014 00:21 Operator: LF
Sample : 1000ug/L GAS Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:04 2014 Quant Results File: HGAS.RES



Volatile Analysis by
Method BTEX/GAS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 74218 RS 9/22/14
Date Analyzed: 9/16/2014
Instrument: Harpo
Initial Cal. Date: 9/15/2014
Data File: 0915H17.D

		Compound	MEAN	CCRF	%D		%Drift
1	HMBT	Gasoline #2	12609	14925	18	HMBTL	6.1
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
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21							
22							
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27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			18.0		

Volatile Analysis by
Method BTEX/GAS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No: 74218 RS 9/22/14
Date Analyzed: 9/16/2014
Instrument: Harpo
Cal. Date: 9/15/2014
Data File: 0915H17.D

		Compound	MEAN	CCRF	%D	%Drift	
41	SAM	a,a,a-TFT #2	17162	62374	260	SAM	*
42	SAM	Bromofluorobenzene #2	5480	18178	230	SAM	*
43	HMBT	Gasoline #2	12609	14925	18	HMBTL	6.1
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
58							
59							
60							
61							
62							
63							
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			169.3		

Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H17.D\FID1B.CH Vial: 17
Signal #2 : V:\HARPO\DATA\140915\0915H17.D\FID2A.CH
Acq On : 16 Sep 2014 00:57 Operator: LF
Sample : 300ug/L GAS SS 140915 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 18 18:07 2014 Quant Results File: HGAS.RES

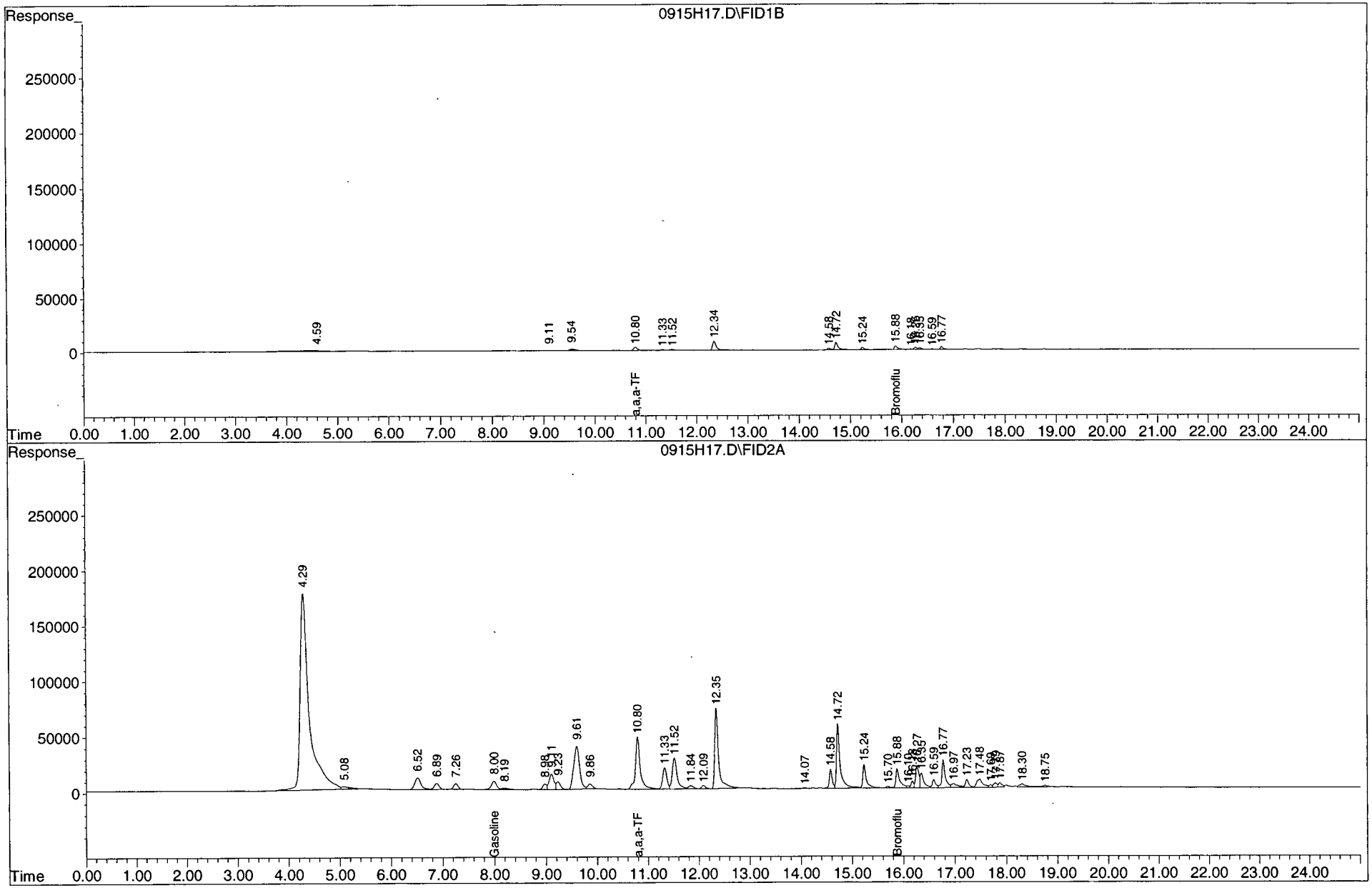
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	174995	25.146 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	83.82%
2) SAM Bromofluorobenzene	15.88	188228	21.156 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	70.52%#
4) SAM a,a,a-TFT #2	10.80	3118690	33.154 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	110.51%
5) SAM Bromofluorobenzene #2	15.88	908894	25.722 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	85.74%
Target Compounds			
6) HMBT Gasoline #2	8.00	22387158	281.626 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H17.D\FID1B.CH Vial: 17
Signal #2 : V:\HARPO\DATA\140915\0915H17.D\FID2A.CH
Acq On : 16 Sep 2014 00:57 Operator: LF
Sample : 300ug/L GAS SS 140915 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 18 18:07 2014 Quant Results File: HGAS.RES



Volatile Analysis by
Method BTEX/GAS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 74218 RS 9/22/14
Date Analyzed: 9/16/2014
Instrument: Harpo
Initial Cal. Date: 9/15/2014
Data File: 0915H32.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HMBT	Gasoline #2	12609	13196	4.7	HMBTL	9.9
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.7		

Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H32.D\FID1B.CH Vial: 32
Signal #2 : V:\HARPO\DATA\140915\0915H32.D\FID2A.CH
Acq On : 16 Sep 2014 10:03 Operator: LF
Sample : 500ug/L GAS 140915 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:22 2014 Quant Results File: HGAS.RES

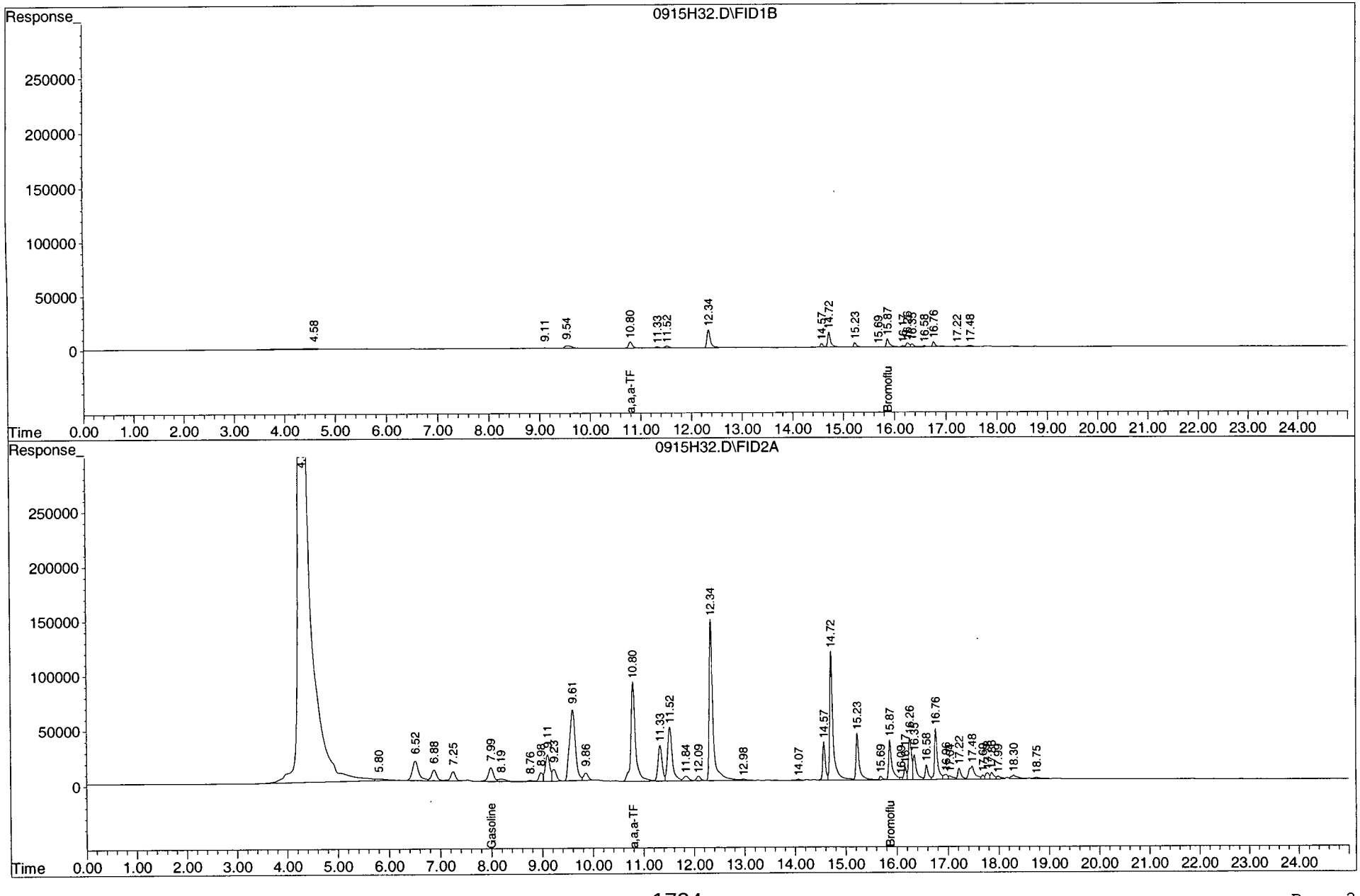
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	330740	57.498 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	191.66%#
2) SAM Bromofluorobenzene	15.87	357850	66.112 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	220.37%#
4) SAM a,a,a-TFT #2	10.80	5644670	65.780 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	219.27%#
5) SAM Bromofluorobenzene #2	15.87	1629949	59.492 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	198.31%#
Target Compounds			
6) HMBT Gasoline #2	8.00	39587410	540.867 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H32.D\FID1B.CH Vial: 32
Signal #2 : V:\HARPO\DATA\140915\0915H32.D\FID2A.CH
Acq On : 16 Sep 2014 10:03 Operator: LF
Sample : 500ug/L GAS 140915 Inst : Harpo
Misc : Mix(B) Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:22 2014 Quant Results File: HGAS.RES



Volatile Analysis by
Method BTEX/GAS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 74318 RS 9/22/14
Date Analyzed: 9/16/2014
Instrument: Harpo
Initial Cal. Date: 9/15/2014
Data File: 0915H38.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HMBT	Gasoline #2	12609	16035	27	HMBTL	12
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			27.0		

Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H38.D\FID1B.CH Vial: 38
Signal #2 : V:\HARPO\DATA\140915\0915H38.D\FID2A.CH
Acq On : 16 Sep 2014 13:41 Operator: LF
Sample : 300ug/L GAS 140915 Inst : Harpo
Misc : Water Multiplr: 48.47
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:02 2014 Quant Results File: HGAS.RES

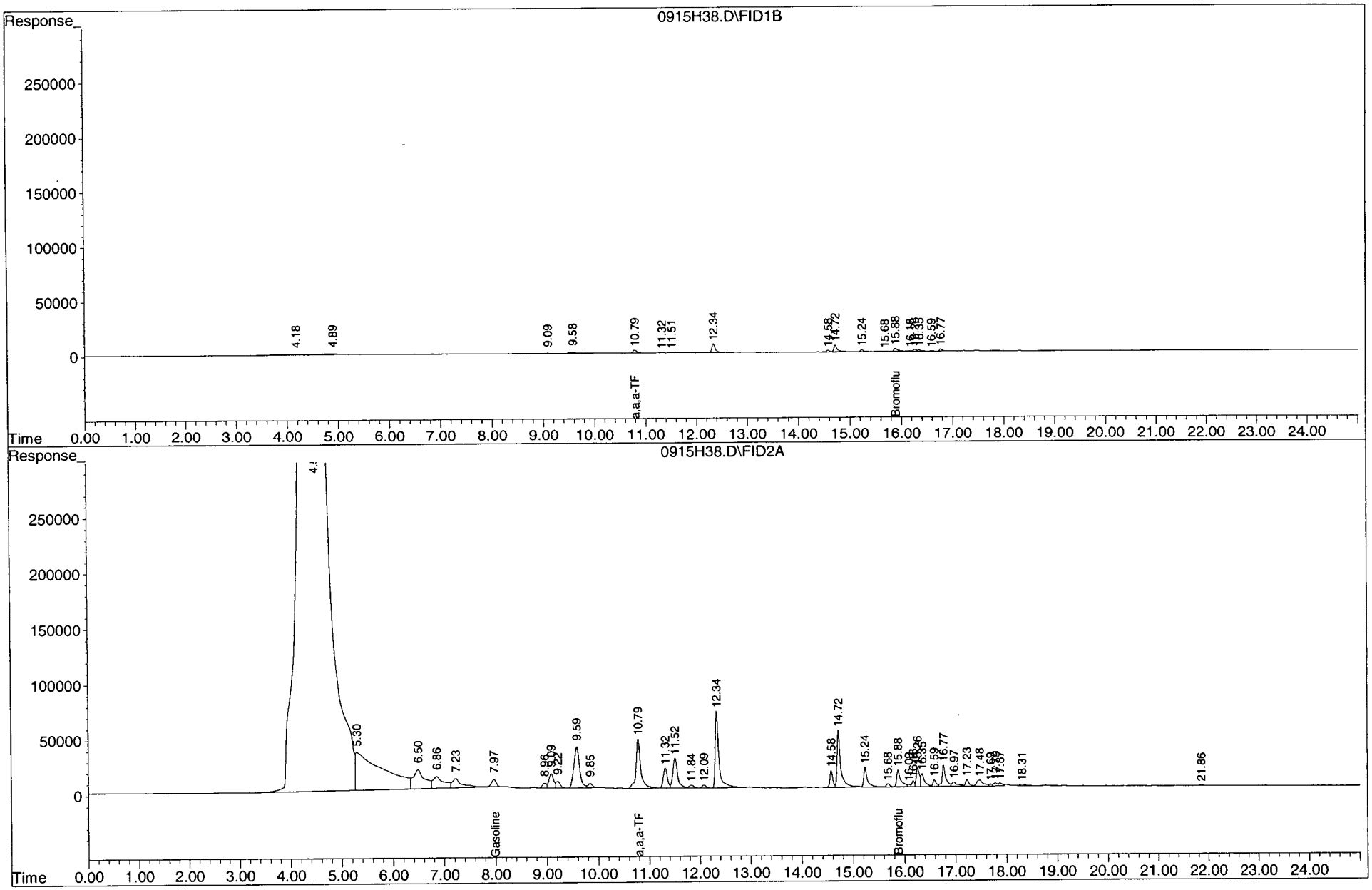
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.79	168513	29.295 ppb
Surrogate Spike 29.084 Range 75 - 130		Recovery = 100.72%	
2) SAM Bromofluorobenzene	15.88	172259	31.824 ppb
Surrogate Spike 29.084 Range 75 - 130		Recovery = 109.42%	
4) SAM a,a,a-TFT #2	10.79	2910545	33.918 ppb
Surrogate Spike 29.084 Range 75 - 130		Recovery = 116.62%	
5) SAM Bromofluorobenzene #2	15.88	860115	31.393 ppb
Surrogate Spike 29.084 Range 75 - 130		Recovery = 107.94%	
Target Compounds			
6) HMBT Gasoline #2	8.00	24052585	16281.181 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H38.D\FID1B.CH Vial: 38
Signal #2 : V:\HARPO\DATA\140915\0915H38.D\FID2A.CH
Acq On : 16 Sep 2014 13:41 Operator: LF
Sample : 300ug/L GAS 140915 Inst : Harpo
Misc : Water Multiplr: 48.47
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 10:02 2014 Quant Results File: HGAS.RES



EPA METHOD 8015
Gasoline Range Organics (GRO)

Raw Data

APPL, INC.

Method Blank
EPA METHOD 8015C

Blank Name/QCG: **140912W-02108 - 189839**
Batch ID: #GASHC-140912B

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	9/12/2014	9/12/2014
BLANK	SURROGATE: BFB-FID (S)	74.5	70-130			%	9/12/2014	9/12/2014

Quant Method: HGAS.M
Run #: 0912H19
Instrument: Harpo
Sequence: 140617
Initials: RSA

GC SC-Blank-REG MDLs
Printed: 9/19/2014 11:26:00 AM

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0912H19.D\FID1B.CH Vial: 19
Signal #2 : V:\HARPO\DATA\140617\0912H19.D\FID2A.CH
Acq On : 12 Sep 2014 20:03 Operator: LF
Sample : 140912B BLK-1 GAS Inst : Harpo
Misc : Water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 10:54 2014 Quant Results File: HGAS.RES

Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

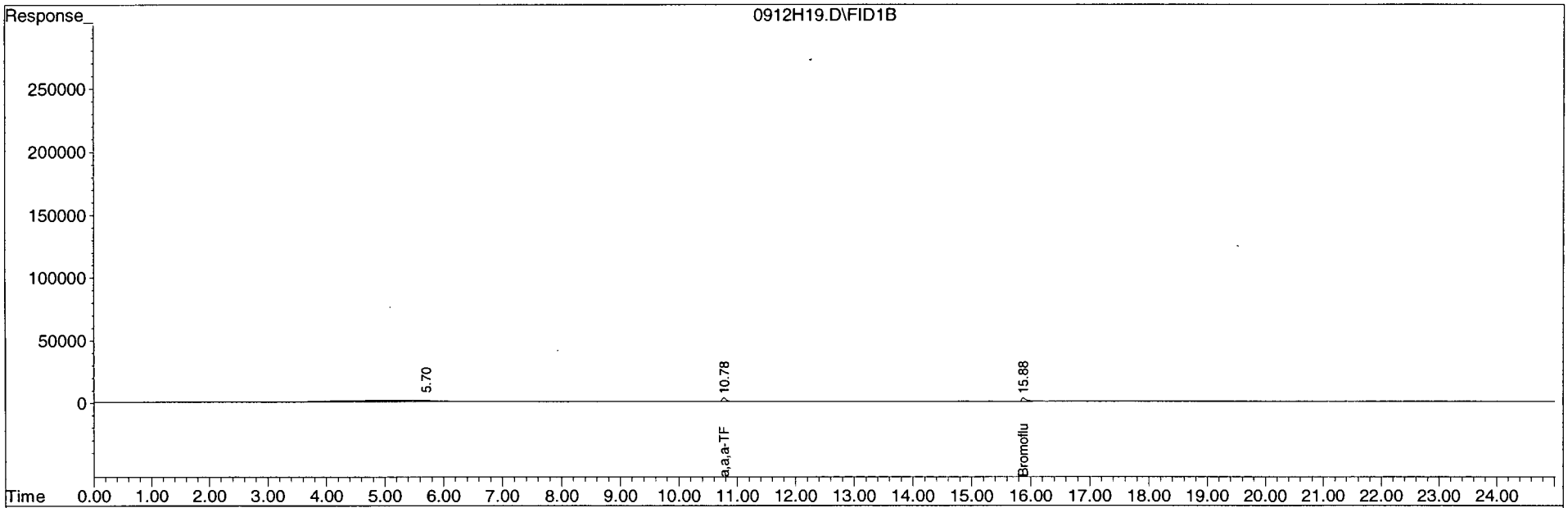
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

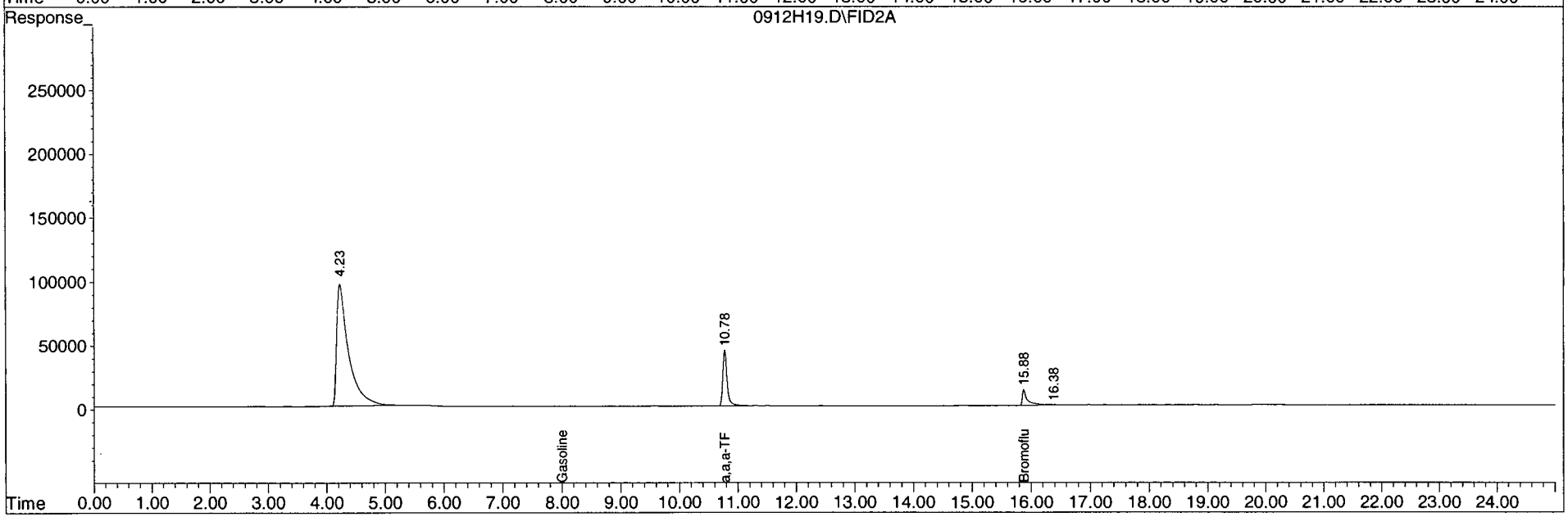
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.78	154999	22.273 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	74.24%#
2) SAM Bromofluorobenzene	15.88	172449	19.382 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	64.61%#
4) SAM a,a,a-TFT #2	10.78	2265480	24.083 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	80.28%
5) SAM Bromofluorobenzene #2	15.88	789516	22.344 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	74.48%#
Target Compounds			
6) HMBT Gasoline #2	8.00	50449	0.635 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0912H19.D\FID1B.CH Vial: 19
Signal #2 : V:\HARPO\DATA\140617\0912H19.D\FID2A.CH
Acq On : 12 Sep 2014 20:03 Operator: LF
Sample : 140912B BLK-1 GAS Inst : Harpo
Misc : Water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 10:54 2014 Quant Results File: HGAS.RES





Method Blank
EPA METHOD 8015C

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **140915S-02100 - 189950**
Batch ID: #GASHC-140915A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	0.80 U	2.0	0.80	0.34	mg/Kg	9/16/2014	9/16/2014
BLANK	SURROGATE: BFB-FID (S)	90.0	76-131			%	9/16/2014	9/16/2014

Quant Method: HGAS.M
Run #: 0915H20
Instrument: Harpo
Sequence: 140915
Initials: DA

GC SC-Blank-REG MDLs
Printed: 9/19/2014 11:26:00 AM

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H20.D\FID1B.CH Vial: 20
Signal #2 : V:\HARPO\DATA\140915\0915H20.D\FID2A.CH
Acq On : 16 Sep 2014 02:46 Operator: LF
Sample : 140915A BLKS-1 GAS Inst : Harpo
Misc : Water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 9:57 2014 Quant Results File: HGAS.RES

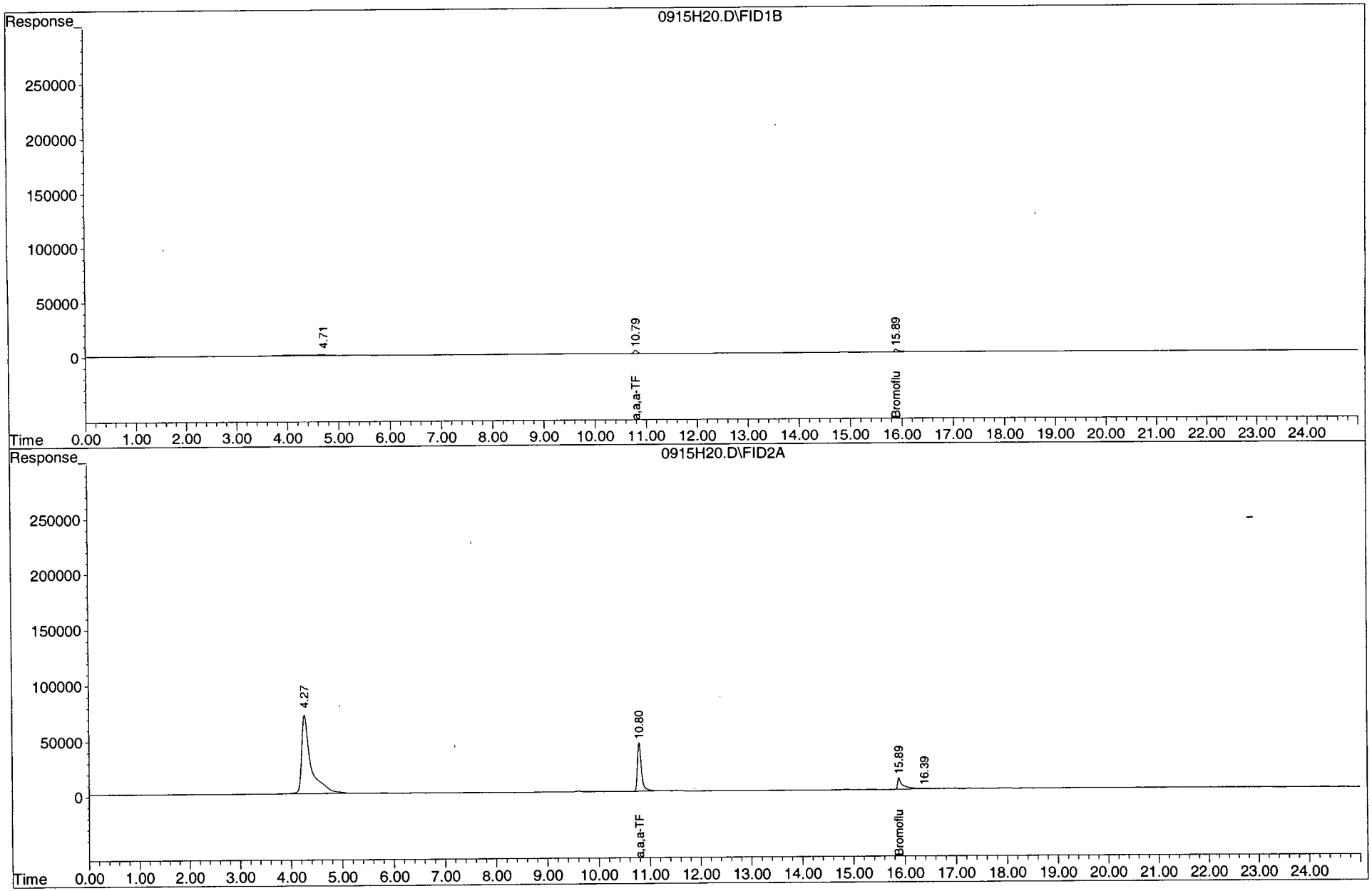
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.79	162098	28.180 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	93.93%
2) SAM Bromofluorobenzene	15.89	162435	30.009 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	100.03%
4) SAM a,a,a-TFT #2	10.80	2390984	27.863 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	92.88%
5) SAM Bromofluorobenzene #2	15.89	739823	27.003 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	90.01%
Target Compounds			

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H20.D\FID1B.CH Vial: 20
Signal #2 : V:\HARPO\DATA\140915\0915H20.D\FID2A.CH
Acq On : 16 Sep 2014 02:46 Operator: LF
Sample : 140915A BLKS-1 GAS Inst : Harpo
Misc : Water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 19 9:57 2014 Quant Results File: HGAS.RES



Laboratory Control Spike Recovery
EPA METHOD 8015C

APPL ID: **140912W-02108 LCS - 189839**
Batch ID: #GASHC-140912B

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	300	252	84.0	70-130
SURROGATE: BFB-FID (S)	30.0	27.2	90.7	70-130

Comments: _____

Primary	SPK
Quant Method :	HGAS.M
Extraction Date :	9/12/2014
Analysis Date :	9/12/2014
Instrument :	Harpo
Run :	0912H16
Initials :	RSA

Printed: 9/19/2014 11:26:00 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0912H16.D\FID1B.CH Vial: 16
Signal #2 : V:\HARPO\DATA\140617\0912H16.D\FID2A.CH
Acq On : 12 Sep 2014 18:13 Operator: LF
Sample : 140912B LCS-1 GAS Inst : Harpo
Misc : Water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 10:54 2014 Quant Results File: HGAS.RES

Method : V:\HARPO\DATA\140617\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Jun 17 16:55:26 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.77	168424	24.202 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	80.67%
2) SAM Bromofluorobenzene	15.87	219523	24.673 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	82.24%
4) SAM a,a,a-TFT #2	10.77	2924745	31.092 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	103.64%
5) SAM Bromofluorobenzene #2	15.87	962877	27.250 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	90.83%
Target Compounds			
6) HMBT Gasoline #2	8.00	20025759	251.920 ppb

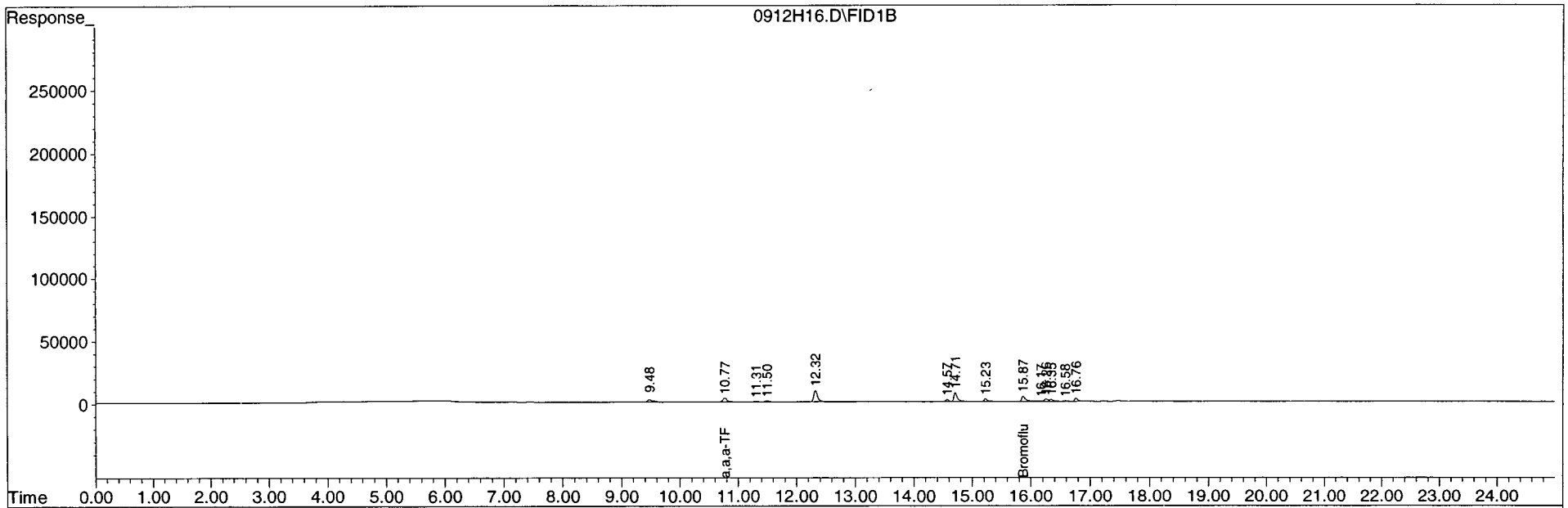
$$\frac{20025759}{5 \times 15899} = 251$$

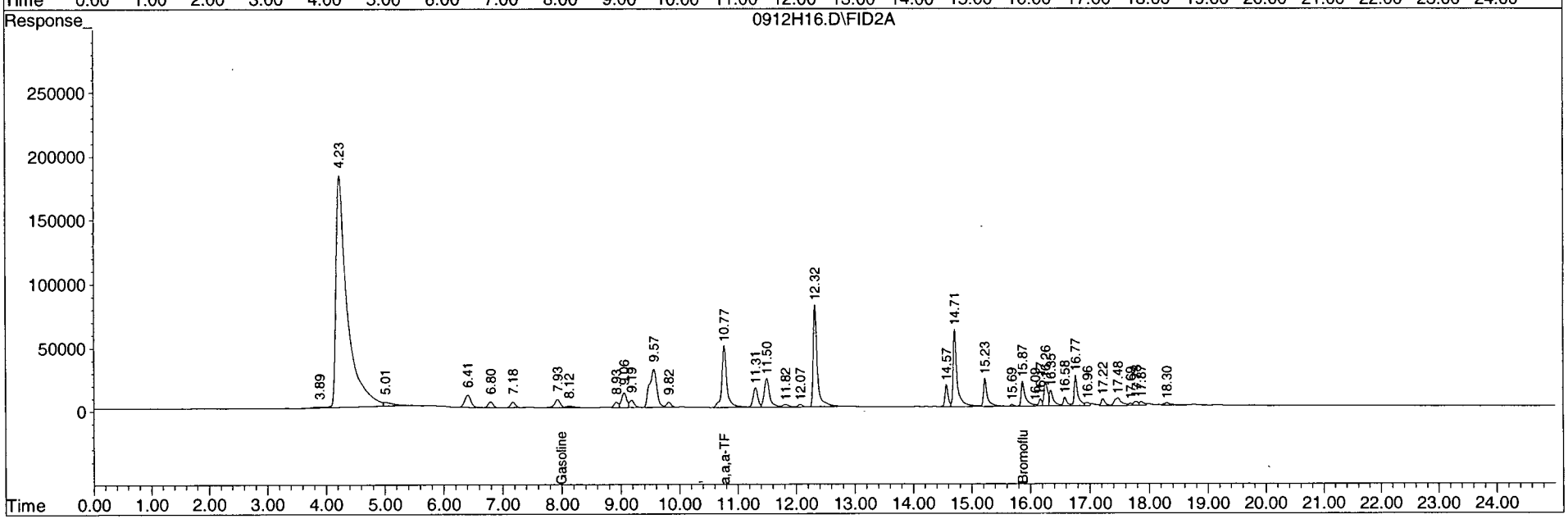
RS 9/22/14

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0912H16.D\FID1B.CH Vial: 16
Signal #2 : V:\HARPO\DATA\140617\0912H16.D\FID2A.CH
Acq On : 12 Sep 2014 18:13 Operator: LF
Sample : 140912B LCS-1 GAS Inst : Harpo
Misc : Water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 13 10:54 2014 Quant Results File: HGAS.RES





Laboratory Control Spike Recovery
EPA METHOD 8015C

APPL ID: **140916S-02100 LCS - 189950**
Batch ID: #GASHC-140915A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level mg/Kg	SPK Result mg/Kg	SPK % Recovery	Recovery Limits
GASOLINE RANGE ORGANICS	15.0	13.0	86.7	60-140
SURROGATE: BFB-FID (S)	0.030	0.0261	87.0	76-131

Comments: _____

Primary	SPK
Quant Method :	HGAS.M
Extraction Date :	9/16/2014
Analysis Date :	9/16/2014
Instrument :	Harpo
Run :	0915H18
Initials :	DA

Printed: 9/19/2014 5:39:42 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : V:\HARPO\DATA\140915\0915H18.D\FID1B.CH Vial: 18
Signal #2 : V:\HARPO\DATA\140915\0915H18.D\FID2A.CH
Acq On : 16 Sep 2014 01:34 Operator: LF
Sample : 140915A LCSS-1 GAS Inst : Harpo
Misc : Water Multiplr: 50.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:22 2014 Quant Results File: HGAS.RES

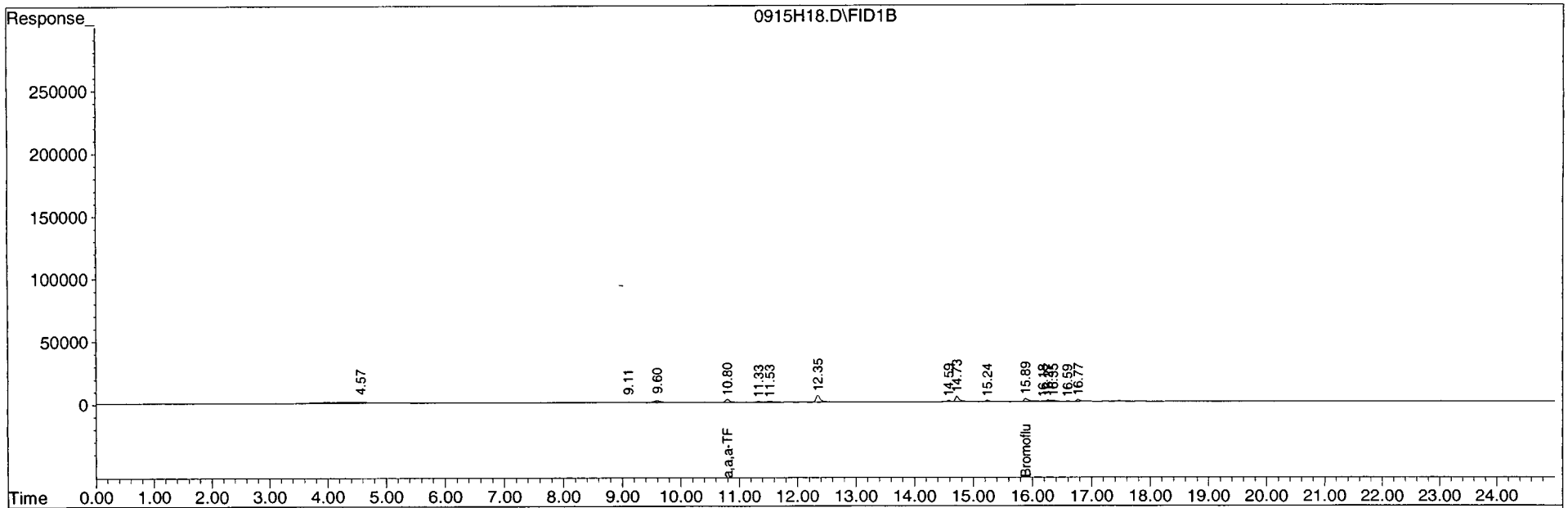
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

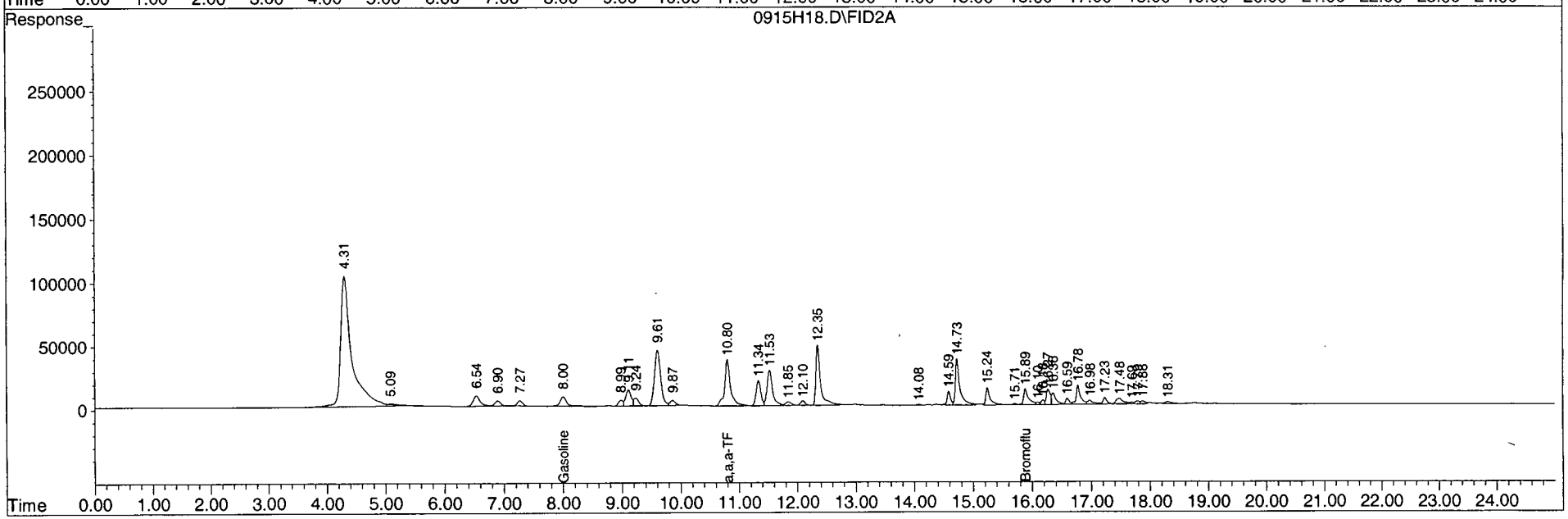
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.80	140252	24.382 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	81.27%
2) SAM Bromofluorobenzene	15.89	147375	27.227 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	90.76%
4) SAM a,a,a-TFT #2	10.80	2604532	30.352 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	101.17%
5) SAM Bromofluorobenzene #2	15.89	716401	26.148 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	87.16%
Target Compounds			
6) HMBT Gasoline #2	8.00	18315373	13008.412 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140915\0915H18.D\FID1B.CH Vial: 18
Signal #2 : V:\HARPO\DATA\140915\0915H18.D\FID2A.CH
Acq On : 16 Sep 2014 01:34 Operator: LF
Sample : 140915A LCSS-1 GAS Inst : Harpo
Misc : Water Multiplr: 50.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 16 11:22 2014 Quant Results File: HGAS.RES





Matrix Spike Recoveries
EPA METHOD 8015C

APPL ID: **140910S-02100 MS - 189950**
Batch ID: #GASHC-140915A
Sample ID: AZ02100
Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl mg/Kg	Matrix Result mg/Kg	SPK Result mg/Kg	DUP Result mg/Kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	18.7	ND	13.4	14.0	71.7	74.9	60-140	4.4	30
SURROGATE: BFB-FID (S)	0.030	NA	0.0244	0.0262	81.3	87.3	76-131		

Comments: _____

Primary	SPK	DUP
Quant Method :	HGAS.M	HGAS.M
Extraction Date :	9/10/2014	9/10/2014
Analysis Date :	9/10/2014	9/10/2014
Instrument :	Harpo	Harpo
Run :	0909H33	0909H34
Initials :	DA	

Printed: 9/19/2014 5:39:39 PM
APPL MSD SCII

Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0909H33.D\FID1B.CH Vial: 33
Signal #2 : V:\HARPO\DATA\140617\0909H33.D\FID2A.CH
Acq On : 10 Sep 2014 15:33 Operator: LF
Sample : AZ02100S01 MS-1 154.722g Inst : Harpo
Misc : Water Multiplr: 48.47
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 11 8:07 2014 Quant Results File: HGAS.RES

Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

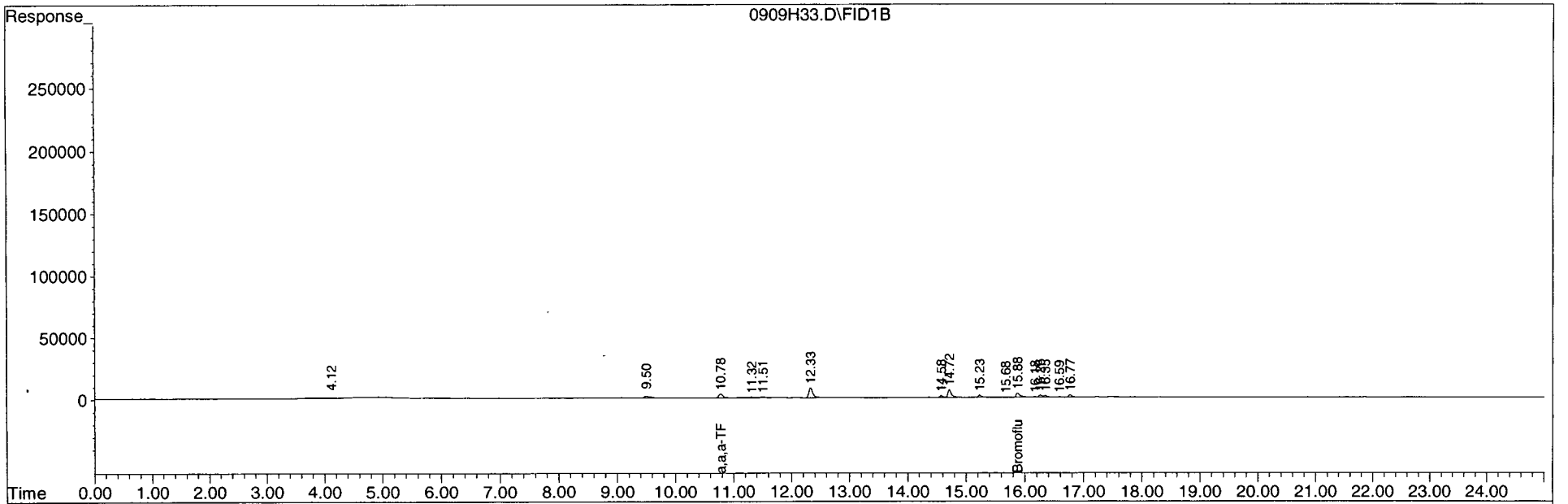
Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

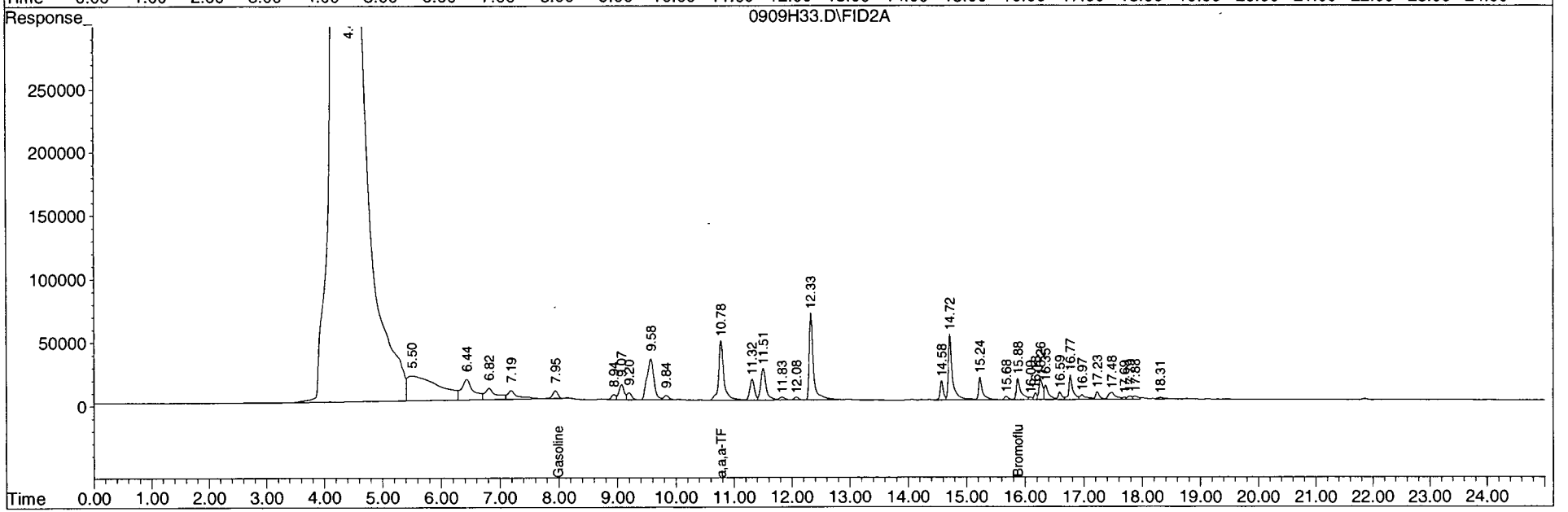
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.78	169880	24.411 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	81.37%
2) SAM Bromofluorobenzene	15.88	186597	20.972 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	69.91%#
4) SAM a,a,a-TFT #2	10.78	2935121	31.202 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	104.01%
5) SAM Bromofluorobenzene #2	15.88	896016	25.358 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	84.53%
Target Compounds			
6) HMBT Gasoline #2	8.00	22046481	13443.801 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0909H33.D\FID1B.CH Vial: 33
Signal #2 : V:\HARPO\DATA\140617\0909H33.D\FID2A.CH
Acq On : 10 Sep 2014 15:33 Operator: LF
Sample : AZ02100S01 MS-1 154.722g Inst : Harpo
Misc : Water Multiplr: 48.47
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 11 8:07 2014 Quant Results File: HGAS.RES





Quantitation Report (QT Reviewed)

Signal #1 : V:\HARPO\DATA\140617\0909H34.D\FID1B.CH Vial: 34
Signal #2 : V:\HARPO\DATA\140617\0909H34.D\FID2A.CH
Acq On : 10 Sep 2014 16:10 Operator: LF
Sample : AZ02100S01 MSD-1 154.722g Inst : Harpo
Misc : Water Multiplr: 48.47
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 11 8:07 2014 Quant Results File: HGAS.RES

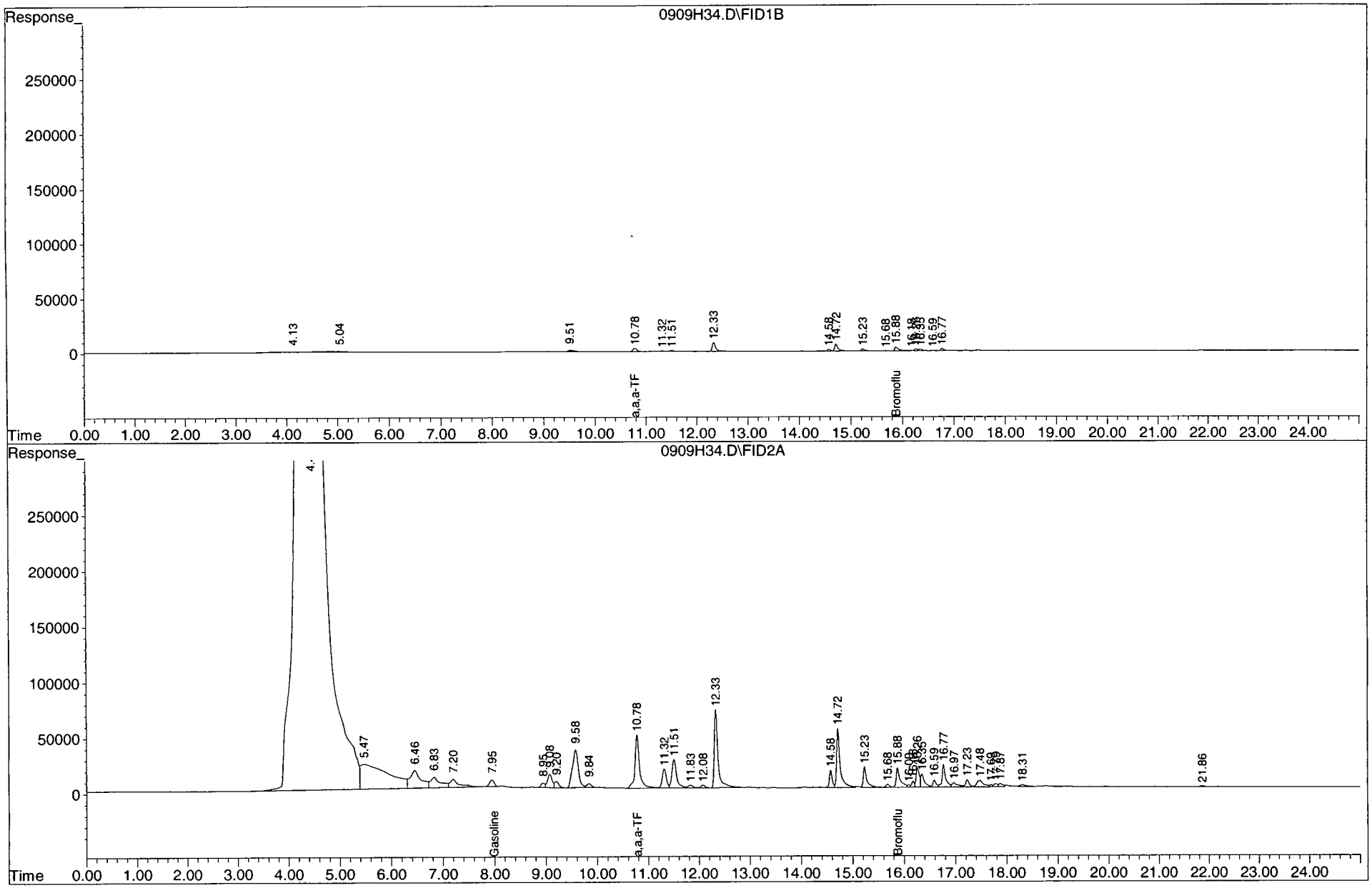
Method : V:\HARPO\DATA\140915\HGAS.M (Chemstation Integrator)
Title : EPA Method 8015
Last Update : Tue Sep 16 11:21:52 2014
Response via : Multiple Level Calibration

Volume Inj. : 5ml
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : db-624 Signal #2 Info : db-624

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SAM a,a,a-TFT	10.78	173466	24.926 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	83.09%
2) SAM Bromofluorobenzene	15.88	191842	21.562 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	71.87%#
4) SAM a,a,a-TFT #2	10.78	3011455	32.014 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	106.71%
5) SAM Bromofluorobenzene #2	15.88	930120	26.323 ppb
Surrogate Spike 30.000 Range 75 - 130		Recovery =	87.74%
Target Compounds			
6) HMBT Gasoline #2	8.00	22892825	13959.896 ppb

Quantitation Report

Signal #1 : V:\HARPO\DATA\140617\0909H34.D\FID1B.CH Vial: 34
Signal #2 : V:\HARPO\DATA\140617\0909H34.D\FID2A.CH
Acq On : 10 Sep 2014 16:10 Operator: LF
Sample : AZ02100S01 MSD-1 154.722g Inst : Harpo
Misc : Water Multiplr: 48.47
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Sep 11 8:07 2014 Quant Results File: HGAS.RES



072

VOA STANDARD

Preparation Book # 9

VF 3/28/14

VF 3/

Carbon Markers				
Markers@25ug/L				
Date: 02/28/14		Exp: 02/28/14		
Standard	**Conc.**	**Date Code**	**Exp. Date**	**Vol(ul)**
Custom VOC Mix 16-4	100mg/L	12/09/13	06/09/14	25uL
P&T Water			Spiked into	100ml

VF

Continuing Calibration Verification				
GAS@300ug/L				
Date: 02/28/14		Exp: 02/28/14		
Standard	**Conc.**	**Date Code**	**Exp. Date**	**Vol(ul)**
GAS STD	2000ug/ml	02/21/14	02/28/14	15ul
P&T Water			Spiked into	100ml

LCS				
GAS				
Date: 02/28/14		Exp: 02/28/14		
Standard	**Conc.**	**Date Code**	**Exp. Date**	**Vol(ul)**
GAS STD	2000ug/ml	02/21/14	02/28/14	15ul
P&T Water			Spiked into	100ml

LCS MEOH				
GAS				
Date:	02/28/14	Exp:	02/28/14	
Standard	**Conc.**	**Date Code**	**Exp. Date**	**Volume**
GAS STD	2000ug/ml	02/21/14	02/28/14	37.5ul
P&T MeOH (JT Baker)	0000038701	-	Spiked into	5ml
sonicated with 5g sand x 5min.		Lot#44028429		
EF 50:		1mL LCS diluted INTO 50mL P&T H20		

VF 3/7/14

RESTEK
Catalog # 3(

Unleaded gasoline composite
Lot #: A092370 - 32658
Rec: 7/18/13 MFR exp. 1/31/20

Unleaded Gasoline Composite
Standard
50000 ug/mL each in P&T Methanol
Lot# A092370 Exp Date: 01/2020 Store. 0°C or colder

VF Exp 9/7/14

VF 3/

VF 3/7/14

GAS STD@2000ug/mL(ppm)						
Date:	03/07/14					
Exp:	04/07/14	Conc.				
Mix used		ug/ml	Lot #	Date Code	Exp. Date	Vol(ul)
GAS STD	Restek	50,000	A092370-32658	03/07/14	09/07/14	80
P&T MeOH (JT Baker)			0000038701			1920
					Total Vol=	2000

VOA STANDARD
Preparation Book # 9

Carbon Markers				
Markers@25ug/L				
Date: 06/06/14		Exp: 06/13/14		
Standard	Conc.	Date Code	Exp. Date	Vol(ul)
Custom VOC Mix 16-4	100mg/L	05/21/14	05/21/15	25uL
P&T Water			Spiked into	100ml

Continuing Calibration Verification				
GAS@300ug/L				
Date: 06/06/14		Exp: 06/13/14		
Standard	Conc.	Date Code	Exp. Date	Vol(ul)
GAS STD	2000ug/ml	05/21/14	06/21/14	15ul
P&T Water			Spiked into	100ml

LCS MEOH				
GAS				
Date:	06/06/14	Exp:	06/13/14	
Standard	Conc.	Date Code	Exp. Date	Volume
GAS STD	2000ug/ml	05/21/14	06/21/14	37.5ul
P&T MeOH (JT Baker)	0000038701		Spiked into	5ml
sonicated with 5g sand x 5min.		Lot#44028429		
EF 50:		1mL LCS diluted INTO 50mL P&T H20		

Carbon Markers				
Markers@25ug/L				
Date: 06/17/14		Exp: 06/24/14		
Standard	Conc.	Date Code	Exp. Date	Vol(ul)
Custom VOC Mix 16-4	100mg/L	05/21/14	05/21/15	25uL
P&T Water			Spiked into	100ml

8015 Surrogate@100ug/mL					
Date:6/17/14					
Exp: 7/17/14	Conc	Lot #	Date code	Exp Date	Vol (ul)
O2SI	2500	176675-31420	05/21/14	08/02/14	40
O2SI	2500	173609-29049	06/17/14	12/17/14	40
P&T MeOH (JT Baker)		44028429			920
				Total Vol	1,000

TPHG Surrogate Calib Curve			
		GRO Surr	
		100ppm	
Date Code		06/17/14	Spiked into
	Level Conc(ug/L)	Exp: 7/17/14	P&T H2O
06/17/14	5ug/L	5ul	100ml
	10ug/L	10ul	100ml
	15ug/L	15ul	100ml
	20ug/L	10ul	50ml
	25ug/L	12.5ul	50ml
	30ug/L	15ul	50ml
	40ug/L	20ul	50ml

GAS STD@2000ug/mL(ppm)						
Date:	06/17/14					
Exp:	07/17/14	Conc.				
Mix used		ug/ml	Lot #	Date Code	Exp. Date	Vol(ul)
GAS STD	O2SI	20,000	LC01901-33488	05/21/14	05/21/15	200
P&T MeOH (JT Baker)			0000038701			1800
					Total Vol=	2000

Secondary GAS STD@2000ug/mL(ppm)					
Date: 6/17/14					
Exp: 7/17/14	Conc.				
STANDARD	ug/ml	Lot #	Date Code	Exp. Date	Vol(ul)
Restek	50,000	A092370-32658	03/07/14	09/07/14	80
P&T MeOH (JT Baker)		0000038701			1920
				Total Vol=	2000

Gasoline Curve Preparation			
		Gas Std	Supelco
	Level Conc	2000ppm	
Date Code	ug/L	06/17/14	Spiked into
		Exp: 7/17/14	P&T H2O
056/17/2014	20ul	1ul	100ml
	50ug/L	2.5ul	100ml
	100ug/L	5ul	100ml
	300ug/L	15ul	100ml
	600ug/L	30ul	100ml
	800ug/L	40ul	100ml
	1000ug/L	50ul	100ml

Gas Second Source@300ug/L				
06/17/14				
Standard	Conc	Date	Exp	Vol
Restek	2000	06/17/14	07/17/14	15ul
P&T H2O			Final Vol	100ml

Continuing Calibration Verification

GAS@300ug/L				
Date:	06/17/14	Exp:	06/24/14	
Standard	Conc.	Date Code	Exp. Date	Vol(ul)
GAS STD	2000ug/ml	06/17/14	07/17/14	15ul
P&T Water			Spiked into	100ml

LCS				
GAS				
Date:	06/17/14	Exp:	06/24/14	
Standard	Conc.	Date Code	Exp. Date	Vol(ul)
GAS STD	2000ug/ml	06/17/14	07/17/14	15ul
P&T Water			Spiked into	100ml

LCS MEOH				
GAS				
Date:	06/17/14	Exp:	06/24/14	
Standard	Conc.	Date Code	Exp. Date	Volume
GAS STD	2000ug/ml	06/17/14	07/17/14	37.5ul
P&T MeOH (JT Baker)	0000038701		Spiked into	5ml
sonicated with 5g sand x 5min.		Lot#44028429		
EF 50:		1mL LCS diluted INTO 50mL P&T H20		

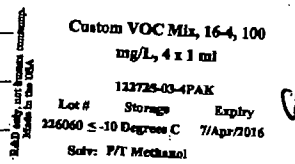
VF 5/19/14

Continuing Calibration Verification				
GAS@300ug/L				
Date: 05/19/14		Exp: 05/26/14		
Standard	Conc.	Date Code	Exp. Date	Vol(ul)
GAS STD	2000ug/ml	05/06/14	06/06/14	15ul
P&T Water			Spiked into	100ml

VF 5/19/14

LCS				
GAS				
Date: 05/19/14		Exp: 05/26/14		
Standard	Conc.	Date Code	Exp. Date	Vol(ul)
GAS STD	2000ug/ml	05/06/14	06/06/14	15ul
P&T Water			Spiked into	100ml

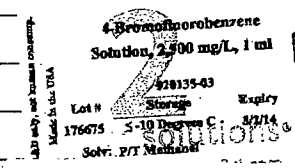
VF 5/21/14



VF exp VF P/T 5/21/16

Custom VOC Mix 16-4
Lot #: 226060 - 33504
Rec: 4/15/14 MFR exp. 4/7/16

VF 5/21/14



VF exp 8/2/14

4-Bromofluorobenzene
Lot #: 176675 - 31420
Rec: 9/20/12 MFR exp. 8/2/14

VF 5/21/14

NOTEBOOK INSERT LABEL

Gasoline **47516-U**
Lot: LC01901 EXP: JUL/2016 STORAGE: ROOM TEMP. 1 x 1ml

DATE RECEIVED:_____

SUPELCO
Solutions within.
595 North Harrison Road • Bellefonte, PA
16823-0048 USA • Phone 814-359-3441

VF exp 5/21/15

STANDARD TRANSFER LABEL

Date of Preparation:
Reference Number:
Description:_____
Gasoline
Lot #: LC01901 - 33488
Rec: 4/14/14 MFR exp. 7/31/16

Exp. Date: EXP: JUL/2016
Storage: ROOM TEMP.

VOA STANDARD
Preparation Book #9

VF 5/21/14

a,a,a-Trifluorotoluene
Solution, 2,500 mg/L, 1 ml
020133-05
S.D. only, not human conc. corp. Made in the USA

Lot #	Storage	Expiry
173609	5-10 Degrees C	5/29/14

Solv: P/T Methanol

a,a,a-Trifluorotoluene, 2500mg/L
Lot #: 173609 - 29049
Rec: 8/1/11 MFR exp. 05/29/14

VF 5/21/14

8015 Surrogate@100ug/mL					
Date:5/21/14					
Exp: 5/29/14	Conc	Lot #	Date code	Exp Date	Vol (ul)
O2SI	2500	176675-31420	05/21/14	08/02/14	40
O2SI	2500	173609-29049	05/21/14	05/29/14	40
P&T MeOH (JT Baker)		44028429			920
				Total Vol	1,000

VF 5/21/14

TPHG Surrogate Calib Curve			
		GRO Surr	
		100ppm	
Date Code		05/21/14	Spiked into
	Level Conc(ug/L)	Exp: 5/29/14	P&T H2O
05/21/14	5ug/L	5ul	100ml
	10ug/L	10ul	100ml
	15ug/L	15ul	100ml
	20ug/L	10ul	50ml
	25ug/L	12.5ul	50ml
	30ug/L	15ul	50ml
	40ug/L	20ul	50ml

VF 5/21/14

GAS STD@2000ug/mL(ppm)						
Date:	05/21/14					
Exp:	06/21/14	Conc.				
Mix used		ug/ml	Lot #	Date Code	Exp. Date	Vol(ul)
GAS STD	O2SI	20,000	LC01901-33488	05/21/14	05/21/15	200
P&T MeOH (JT Baker)			0000038701			1800
					Total Vol=	2000

VF 5/21/14

Secondary GAS STD@2000ug/mL(ppm)					
Date: 5/21/14					
Exp: 6/21/14	Conc.				
STANDARD	ug/ml	Lot #	Date Code	Exp. Date	Vol(ul)
Restek	50,000	A092370-32658	03/07/14	09/07/14	80
P&T MeOH (JT Baker)		0000038701			1920
				Total Vol=	2000

VF 5/21/14

Gasoline Curve Preparation			
		Gas Std	Supelco
	Level Conc	2000ppm	
Date Code	ug/L	05/21/14	Spiked into
		Exp: 6/21/14	P&T H2O
05/21/14	20ul	1ul	100ml
	50ug/L	2.5ul	100ml
	100ug/L	5ul	100ml
	300ug/L	15ul	100ml
	600ug/L	30ul	100ml
	800ug/L	40ul	100ml
	1000ug/L	50ul	100ml

VOA STANDARD
Preparation Book # 9

VF 2/28/14

Carbon Markers				
Markers@25ug/L				
Date: 02/28/14		Exp: 02/28/14		
Standard	**Conc.**	**Date Code**	**Exp. Date**	**Vol(ul)**
Custom VOC Mix 16-4	100mg/L	12/09/13	06/09/14	25uL
P&T Water			Spiked into	100ml

VF

Continuing Calibration Verification				
GAS@300ug/L				
Date: 02/28/14		Exp: 02/28/14		
Standard	**Conc.**	**Date Code**	**Exp. Date**	**Vol(ul)**
GAS STD	2000ug/ml	02/21/14	02/28/14	15ul
P&T Water			Spiked into	100ml

LCS				
GAS				
Date: 02/28/14		Exp: 02/28/14		
Standard	**Conc.**	**Date Code**	**Exp. Date**	**Vol(ul)**
GAS STD	2000ug/ml	02/21/14	02/28/14	15ul
P&T Water			Spiked into	100ml

LCS MEOH				
GAS				
Date:	02/28/14	Exp:	02/28/14	
Standard	**Conc.**	**Date Code**	**Exp. Date**	**Volume**
GAS STD	2000ug/ml	02/21/14	02/28/14	37.5ul
P&T MeOH (JT Baker)	0000038701	-	Spiked into	5ml
sonicated with 5g sand x 5min.		Lot#44028429		
EF 50:		1mL LCS diluted INTO 50mL P&T H20		

VF 3/7/14

RESTEK
Catalog # 3(
Unleaded gasoline composite
Lot #: A092370 - 32658
Rec: 7/18/13 MFR exp. 1/31/20
Unleaded Gasoline Composite
Standard
50000 ug/mL each in P&T Methanol
Lot# A092370 Exp Date: 01/2020 Store 0°C or colder

VF exp 9/7/14

VF 3/7/14

GAS STD@2000ug/mL(ppm)						
Date: 03/07/14						
Exp: 04/07/14		Conc.				
Mix used		ug/ml	Lot #	Date Code	Exp. Date	Vol(ul)
GAS STD	Restek	50,000	A092370-32658	03/07/14	09/07/14	80
P&T MeOH (JT Baker)			0000038701			1920
					Total Vol=	2000

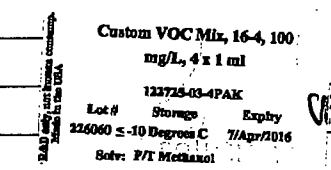
VF 5/19/14

Continuing Calibration Verification				
GAS@300ug/L				
Date: 05/19/14		Exp: 05/26/14		
Standard	Conc.	Date Code	Exp. Date	Vol(ul)
GAS STD	2000ug/ml	05/06/14	06/06/14	15ul
P&T Water			Spiked into	100ml

VF 5/19/14

LCS				
GAS				
Date: 05/19/14		Exp: 05/26/14		
Standard	Conc.	Date Code	Exp. Date	Vol(ul)
GAS STD	2000ug/ml	05/06/14	06/06/14	15ul
P&T Water			Spiked into	100ml

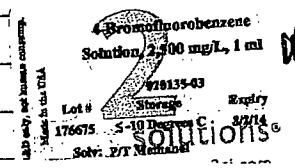
VF 5/21/14



Custom VOC Mix 16-4
Lot #: 226060 - 33504
Rec: 4/15/14 MFR exp. 4/7/16

VF opp P/T 5/21/14

VF 5/21/14



4-Bromofluorobenzene
Lot #: 176675 - 31420
Rec: 9/20/12 MFR exp. 8/2/14

VF opp 5/21/14

NOTEBOOK INSERT LABEL

Gasoline **47516-U**
Lot: LC01901 EXP: JUL/2016 STORAGE: ROOM TEMP. 1 x 1ml

DATE RECEIVED:_____

SUPELCO
Solutions within.
595 North Harrison Road • Bellefonte, PA
16823-0048 USA • Phone 814-359-3441

VF opp 5/21/15

STANDARD TRANSFER LABEL

Date of Preparation:
Reference Number:
Description:
Gasoline
Lot #: LC01901 - 33488
Rec: 4/14/14 MFR exp. 7/31/16

Exp. Date: EXP: JUL/2016
Storage: ROOM TEMP.

RS 9/11/14

4-Bromofluorobenzene
Solution, 2,500 mg/L, 1 ml

020135-03

Lot #	Storage	Expiry
195506	≤ -10 Degrees C	9/15/15

Solv: P/T Methanol

4-Bromofluorobenzene
Lot #: 195506 - 31424
Rec: 9/20/12 MFR exp. 9/15/15

RS 9/11/14 exp: 9/11/15

RS 9/11/14

a,a,a-Trifluorotoluene Solution,
2,500 mg/L, 1 ml

020133-05

Lot #	Storage	Expiry
230302	≤ -10 °C	14/Jun/2017

Solv: P/T Methanol

a,a,a-Trifluorotoluene, 2500mg/L
Lot #: 230302 - 33721
Rec: 6/18/14 MFR exp. 6/14/17

RS 9/11/14 exp: 6/14/15

RS 9/11/14

8015 Surrogate@250ug/mL					
Date: 09/11/14					
Exp: 8/24/13	Conc	Lot #	Date code	Exp Date	Vol (ul)
4-BFB	2500	195506-31424	09/11/14	09/15/15	400
aaa-TFT	2500	230302-33721	09/11/14	06/14/17	400
P&T MeOH	JT Baker	4409763			3,200
				Total Vol	4,000

RS 9/15/14

Custom VOC Mix, 16-4, 100
mg/L, 4 x 1 ml

122725-03-4PAK

Lot #	Storage	Expiry
226060	≤ -10 Degrees C	7/Apr/2016

Custom VOC Mix 16-4
Lot #: 226060 - 33513
Rec: 4/15/14 MFR exp. 4/7/16

RS 9/15/14 exp: 4/7/15

9/15/14 RS

Carbon Markers				
Markers@25ug/L				
Date:	09/15/14	Exp:	09/22/14	
Standard	Conc.	Date Code	Exp. Date	Vol(ul)
Custom VOC Mix 16-4	100mg/L	09/15/14	09/15/15	25uL
P&T Water			Spiked into	100ml

9/15/14 RS

GAS STD@2000ug/mL(ppm)						
Date: 9/15/14						
Exp: 9/15/15		Conc.				
Mix used		ug/ml	Lot #	Date Code	Exp. Date	Vol(ul)
GAS STD	Supelco	20,000	LC01901-33488	05/21/14	05/21/15	200
P&T MeOH (JT Baker)			9077-02			1800
					Total Vol=	2000

VOA STANDARD
Preparation Book #9

9/15/14 RS

Continuing Calibration Verification				
GAS@300ug/L				
Date:	09/15/14	Exp:	09/22/14	
Standard	Conc.	Date Code	Exp. Date	Vol(ul)
GAS STD	2000ug/ml	08/07/14	09/07/14	15ul
P&T Water			Spiked into	100ml

LCS				
GAS				
Date:	09/15/14	Exp:	09/22/14	
Standard	Conc.	Date Code	Exp. Date	Vol(ul)
GAS STD	2000ug/ml	08/07/14	09/07/14	15ul
P&T Water			Spiked into	100ml

LCS MEOH				
GAS				
Date:	09/15/14	Exp:	09/22/14	
Standard	Conc.	Date Code	Exp. Date	Volume
GAS STD	2000ug/ml	08/07/14	09/07/14	37.5ul
P&T MeOH (JT Baker)	0000038701		Spiked into	5ml
sonicated with 5g sand x 5min.		Lot#44028429		
EF 60:		1mL LCS diluted INTO 50mL P&T H20		

9/16/14 RS

TPHG Surrogate Calib Curve			
		GRO Surr	
		100ppm	
Date Code		09/15/14	Spiked into
	Level Conc(ug/L)	Exp: 10/15/14	P&T H2O
09/16/14	5ug/L	5ul	100ml
	10ug/L	10ul	100ml
	15ug/L	15ul	100ml
	20ug/L	10ul	50ml
	25ug/L	12.5ul	50ml
	30ug/L	15ul	50ml
	40ug/L	20ul	50ml

9/16/14 RS

Gasoline Curve Preparation			
		Gas Std	Supelco
	Level Conc	2000ppm	
Date Code	ug/L	09/15/14	Spiked into
		Exp: 10/15/14	P&T H2O
09/16/14	20ul	1ul	100ml
	50ug/L	2.5ul	100ml
	100ug/L	5ul	100ml
	300ug/L	15ul	100ml
	600ug/L	30ul	100ml
	800ug/L	40ul	100ml
	1000ug/L	50ul	100ml

9/15/14

Secondary GAS STD@2000ug/mL(ppm)					
Date: 9/15/14					
Exp: 10/15/14	Conc.				
STANDARD	ug/ml	Lot #	Date Code	Exp. Date	Vol(ul)
Restek	50,000	A092370-32658	09/15/14	10/15/14	80
P&T MeOH (JT Baker)		0000038701			1920
				Total Vol=	2000

Injection Log

Directory: V:\HARPO\DATA\140915\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	0915H03.D	1	5.0ug/L SURR 140915	Mix(A)	15 Sep 2014 16:25
2	4	0915H04.D	1	10ug/L SURR	MIX(A)	15 Sep 2014 17:02
3	5	0915H05.D	1	15ug/L SURR	MIX(A)	15 Sep 2014 17:38
4	6	0915H06.D	1	20ug/L SURR	MIX(A)	15 Sep 2014 18:15
5	7	0915H07.D	1	25ug/L SURR	MIX(A)	15 Sep 2014 18:52
6	8	0915H08.D	1	30ug/L SURR	MIX(A)	15 Sep 2014 19:29
7	9	0915H09.D	1	40ug/L SURR	MIX(A)	15 Sep 2014 20:05
8	10	0915H10.D	1	20ug/L GAS 140915	Mix(B)	15 Sep 2014 20:42
9	11	0915H11.D	1	50ug/L GAS	Mix(B)	15 Sep 2014 21:19
10	12	0915H12.D	1	100ug/L GAS	Mix(B)	15 Sep 2014 21:55
11	13	0915H13.D	1	300ug/L GAS	Mix(B)	15 Sep 2014 22:32
12	14	0915H14.D	1	600ug/L GAS	Mix(B)	15 Sep 2014 23:08
13	15	0915H15.D	1	800ug/L GAS	Mix(B)	15 Sep 2014 23:44
14	16	0915H16.D	1	1000ug/L GAS	Mix(B)	16 Sep 2014 00:21
15	17	0915H17.D	1	300ug/L GAS SS 140915	Mix(B)	16 Sep 2014 00:57
16	18	0915H18.D	1	140915A LCSS-1 GAS	Water	16 Sep 2014 01:34
17	20	0915H20.D	1	140915A BLKS-1 GAS	Water	16 Sep 2014 02:46
18	21	0915H21.D	49.663	AZ02099S01 151.018g DF50	Water	16 Sep 2014 03:23
19	22	0915H22.D	48.474	AZ02100S01 154.722g DF50	Water	16 Sep 2014 03:59
20	23	0915H23.D	48.7386	AZ02101S01 153.882g DF50	Water	16 Sep 2014 04:36
21	24	0915H24.D	46.064	AZ02102S01 162.817g DF50	Water	16 Sep 2014 05:12
22	25	0915H25.D	46.2689	AZ02103S01 162.096g DF50	Water	16 Sep 2014 05:49
23	26	0915H26.D	47.2432	AZ02104S01 158.753g DF50	Water	16 Sep 2014 06:25
24	27	0915H27.D	47.6363	AZ02105S01 157.443g DF50	Water	16 Sep 2014 07:01
25	28	0915H28.D	47.2016	AZ02106S01 158.893g DF50	Water	16 Sep 2014 07:38
26	29	0915H29.D	48.5358	AZ02107S01 154.525g DF50	Water	16 Sep 2014 08:14
27	30	0915H30.D	44.96	AZ02110S01 166.815g DF50	Water	16 Sep 2014 08:50
28	32	0915H32.D	1	500ug/L GAS 140915	Mix(B)	16 Sep 2014 10:03
29	33	0915H33.D	43.3877	AZ02111S01 172.860g DF50	Water	16 Sep 2014 10:39
30	34	0915H34.D	43.8414	AZ02112S01 171.071g DF50	Water	16 Sep 2014 11:16
31	35	0915H35.D	46.0049	AZ02113S01 163.026g DF50	Water	16 Sep 2014 11:52
32	36	0915H36.D	43.442	AZ02114S01 172.644g DF50	Water	16 Sep 2014 12:29
33	37	0915H37.D	45.9179	AZ02115S01 163.335g DF50	Water	16 Sep 2014 13:05
34	38	0915H38.D	1	300ug/L GAS 140915	Water	16 Sep 2014 13:41

Injection Log

Directory: V:\HARPO\DATA\140617\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	0617H03.D	1	5.0ug/L SURR 140617	Mix(A)	17 Jun 2014 12:15
2	4	0617H04.D	1	10ug/L SURR	Mix(A)	17 Jun 2014 12:52
3	5	0617H05.D	1	15ug/L SURR	Mix(A)	17 Jun 2014 13:28
4	6	0617H06.D	1	20ug/L SURR	Mix(A)	17 Jun 2014 14:05
5	7	0617H07.D	1	25ug/L SURR	Mix(A)	17 Jun 2014 14:42
6	8	0617H08.D	1	30ug/L SURR	Mix(A)	17 Jun 2014 15:18
7	9	0617H09.D	1	40ug/L SURR	Mix(A)	17 Jun 2014 15:55
8	10	0617H10.D	1	20ug/L GAS 140617	Mix(B)	17 Jun 2014 16:31
9	11	0617H11.D	1	50ug/L GAS	Mix(B)	17 Jun 2014 17:08
10	12	0617H12.D	1	100ug/L GAS	Mix(B)	17 Jun 2014 17:44
11	13	0617H13.D	1	300ug/L GAS	Mix(B)	17 Jun 2014 18:21
12	14	0617H14.D	1	600ug/L GAS	Mix(B)	17 Jun 2014 18:57
13	15	0617H15.D	1	800ug/L GAS	Mix(B)	17 Jun 2014 19:33
14	16	0617H16.D	1	1000ug/L GAS	Mix(B)	17 Jun 2014 20:10
15	17	0617H17.D	1	300ug/L GAS SS 140617	Mix(B)	17 Jun 2014 20:46
16	29	0909H29.D	1	300ug/L GAS 140909	Mix(B)	10 Sep 2014 13:07
17	33	0909H33.D	48.474	AZ02100S01 MS-1 154.722g	Water	10 Sep 2014 15:33
18	34	0909H34.D	48.474	AZ02100S01 MSD-1 154.722g	Water	10 Sep 2014 16:10
19	36	0909H36.D	1	300ug/L GAS 140909	Mix(B)	10 Sep 2014 17:23
20	15	0912H15.D	1	300ug/L GAS 140912	Mix(B)	12 Sep 2014 17:36
21	16	0912H16.D	1	140912B LCS-1 GAS	Water	12 Sep 2014 18:13
22	19	0912H19.D	1	140912B BLK-1 GAS	Water	12 Sep 2014 20:03
23	20	0912H20.D	1	AZ02108W03	Water	12 Sep 2014 20:39
24	21	0912H21.D	1	AZ02109W02	Water	12 Sep 2014 21:16
25	22	0912H22.D	1	AZ02116W02	Water	12 Sep 2014 21:52
26	30	0912H30.D	1	300ug/L GAS 140912	Mix(B)	13 Sep 2014 02:44

METALS

APPL, INC.

METALS

QC Summary

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6020A	ANTIMONY (SB)	0.20 U	0.2	0.20	0.10	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	ARSENIC (AS)	0.30 U	0.5	0.30	0.08	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	CADMIUM (CD)	0.08 U	0.1	0.08	0.03	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	CHROMIUM (CR)	0.20 U	0.5	0.20	0.04	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	COPPER (CU)	0.08 U	0.1	0.08	0.04	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	LEAD (PB)	0.05 U	0.1	0.05	0.02	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	NICKEL (NI)	0.20 U	0.2	0.20	0.14	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	SELENIUM (SE)	0.10 U	0.2	0.10	0.04	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	SILVER (AG)	0.05 U	0.1	0.05	0.02	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	THALLIUM (TL)	0.05 U	0.1	0.05	0.02	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	ZINC (ZN)	1.50 U	2.0	1.50	1.20	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	BERYLLIUM (BE)	0.30 U	1.0	0.30	0.07	mg/Kg	09/19/14	09/19/14	#6020A-140919A1-AZ02100
EPA 7471	MERCURY (HG)	0.04 U	0.1	0.04	0.01	mg/Kg	09/19/14	09/27/14	#HGDOD-140919A-AZ02100

Metals SC-Blank-REG MDLs
Printed: 09/29/14 5:55:11 PM

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6020A	ANTIMONY (SB)	0.50 U	1.0	0.50	0.14	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	ARSENIC (AS)	0.20 U	0.5	0.20	0.09	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	BERYLLIUM (BE)	0.10 U	0.2	0.10	0.04	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	CADMIUM (CD)	0.10 U	0.2	0.10	0.02	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	CHROMIUM (CR)	0.23 J	0.5	0.20	0.07	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	COPPER (CU)	0.40 U	0.5	0.40	0.13	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	LEAD (PB)	0.40 U	0.5	0.40	0.19	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	NICKEL (NI)	0.40 U	0.5	0.40	0.16	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	SELENIUM (SE)	0.40 U	1.0	0.40	0.10	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	SILVER (AG)	0.10 U	0.2	0.10	0.03	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	THALLIUM (TL)	0.20 U	0.2	0.20	0.10	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	ZINC (ZN)	15.0 U	20	15.0	12.7	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	09/18/14	09/20/14	#HGDOD-140918A-AZ02116

Metals SC-Blank-REG MDLs
Printed: 10/02/14 3:13:36 PM

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/Kg	SPK Result mg/Kg	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6020A	ANTIMONY (SB)	2.50	2.3	92.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	ARSENIC (AS)	2.50	2.2	88.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	BERYLLIUM (BE)	0.500	0.45	90.0	80-120	09/19/14	09/19/14	#6020A-140919A1-AZ02100
EPA 6020A	CADMIUM (CD)	0.500	0.45	90.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	CHROMIUM (CR)	2.50	2.3	92.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	COPPER (CU)	2.50	2.2	88.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	LEAD (PB)	2.50	2.1	84.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	NICKEL (NI)	2.50	2.2	88.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	SELENIUM (SE)	2.50	2.1	84.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	SILVER (AG)	1.0	0.90	90.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	THALLIUM (TL)	2.50	2.1	84.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	ZINC (ZN)	5.00	4.5	90.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 7471B	MERCURY (HG)	0.160	0.16	100	80-120	09/19/14	09/27/14	#HGDOD-140919A-AZ02100

Comments:

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6020A	ANTIMONY (SB)	50.0	46.8	93.6	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	ARSENIC (AS)	50.0	46.6	93.2	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	BERYLLIUM (BE)	10.00	9.3	93.0	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	CADMIUM (CD)	10.00	9.1	91.0	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	CHROMIUM (CR)	50.0	48.0	96.0	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	COPPER (CU)	50.0	45.4	90.8	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	LEAD (PB)	50.0	46.6	93.2	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	NICKEL (NI)	50.0	45.4	90.8	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	SELENIUM (SE)	50.0	45.5	91.0	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	SILVER (AG)	20.0	18.7	93.5	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	THALLIUM (TL)	50.0	47.5	95.0	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	ZINC (ZN)	100.0	92.7	92.7	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 7470A	MERCURY (HG)	4.00	3.3	82.5	80-120	09/18/14	09/20/14	#HGDOD-140918A-AZ02116

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **140919S-02100 MS - 190189**

Sample ID: AZ02100

Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/Kg	Matrix Res mg/Kg	SPK Res mg/Kg	DUP Res mg/Kg	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6020A	ANTIMONY (SB)	10.00	0.14	3.1	3.2	29.6 #	30.6 #	3.2	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	ARSENIC (AS)	10.00	5.1	11.7	11.2	66.0 #	61.0 #	4.4	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	BERYLLIUM (BE)	0.100	0.26	0.61	0.61	350 #	350 #	0.0	20	80-120	09/19/14	09/19/14	09/19/14	09/19/14	190302	AZ02100
EPA 6020A	CADMIUM (CD)	2.00	0.22	1.9	1.9	84.0	84.0	0.0	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	CHROMIUM (CR)	10.00	60.6	66.2	67.9	56.0 #	73.0 #	2.5	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	COPPER (CU)	10.00	26.4	31.0	31.0	46.0 #	46.0 #	0.0	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	LEAD (PB)	5.00	22.5	30.4	29.6	158 #	142 #	2.7	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	NICKEL (NI)	10.00	136	141	143	50.0 #	70.0 #	1.4	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	SELENIUM (SE)	10.00	0.12	5.6	5.5	54.8 #	53.8 #	1.8	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	SILVER (AG)	4.00	0.034	3.1	3.1	76.7 #	76.7 #	0.0	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	THALLIUM (TL)	10.00	0.021	7.0	7.1	69.8 #	70.8 #	1.4	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	ZINC (ZN)	20.0	106	122	121	80.0	75.0 #	0.8	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 7471B	MERCURY (HG)	0.159	0.061	0.19	0.18	81.1	74.8 #	5.4	20	80-120	09/19/14	09/27/14	09/19/14	09/27/14	190298	AZ02100

= Recovery is outside QC limits.

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **140918W-02116 MS - 190115**

Sample ID: AZ02116

Client ID: EN018

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6020A	ANTIMONY (SB)	50.0	ND	47.0	45.7	94.0	91.4	2.8	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	ARSENIC (AS)	50.0	ND	46.7	46.4	93.4	92.8	0.6	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	BERYLLIUM (BE)	10.00	ND	9.4	9.3	94.0	93.0	1.1	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	CADMIUM (CD)	10.00	ND	9.1	9.1	91.0	91.0	0.0	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	CHROMIUM (CR)	50.0	0.35	48.8	46.8	96.9	92.9	4.2	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	COPPER (CU)	50.0	0.45	45.5	44.8	90.1	88.7	1.6	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	LEAD (PB)	50.0	ND	47.5	46.4	95.0	92.8	2.3	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	NICKEL (NI)	50.0	0.31	47.5	46.1	94.4	91.6	3.0	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	SELENIUM (SE)	50.0	ND	45.7	44.5	91.4	89.0	2.7	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	SILVER (AG)	20.0	ND	18.6	18.4	93.0	92.0	1.1	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	THALLIUM (TL)	50.0	ND	49.4	48.1	98.8	96.2	2.7	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	ZINC (ZN)	100.0	0.32	94.1	92.9	93.8	92.6	1.3	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116

Comments: _____

METALS

Sample Data

APPL, INC.

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN001

APPL ID: AZ02099

Sample Collection Date: 09/02/14

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.18 J	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	5.2	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.25 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.26	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	60.7	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	26.7	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	23.7	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.065 J	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	143	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.14 J	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.048 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.049 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	114	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02099S01 1/10
Data File Name	086SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T18:57:17-07:00
Sample Type	Sample
Dilution	0.099601594
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	2.522	0.251	2.57	46641	2.42	10000	
B	11	45	NoGas	68.914	6.864	0.41	817476	0.51	10000	
Na	23	45	He	3284.840	327.175	0.93	13178759	1.32	1000000	
Mg	24	45	He	52505.331	5229.615	1.24	114537907	1.00	1000000	
Al	27	45	He	50335.492	5013.495	0.12	51871409	0.57	1000000	
K	39	45	He	8443.350	840.971	0.41	16470768	0.41	500000	
Ca	44	45	He	288550.746	28740.114	0.95	31841410	0.79	500000	
Ti	47	45	He	6434.440	640.881	2.06	4485949	1.54	10000	
V	51	45	He	173.814	17.312	1.61	3622607	1.36	10000	
Cr	52	45	He	226.867	22.596	1.20	5675316	1.38	10000	
Mn	55	45	He	2436.366	242.666	0.99	39317807	0.45	50000	
Fe	56	45	He	126154.477	12565.187	1.67	2879802623	1.39	1000000	
Co	59	45	He	105.061	10.464	1.67	4116088	1.12	10000	
Ni	60	45	He	525.879	52.378	0.44	5461501	0.21	10000	
Cu	63	45	He	98.397	9.800	0.19	2829786	0.75	10000	
Zn	66	115	He	1041.855	103.770	0.91	1166874	0.48	50000	
As	75	115	He	54.710	5.449	0.35	39993	0.84	2000	
Se	78	115	H2	1.307	0.130	5.46	255	4.52	10000	
Se	78	115	He	20.339	2.026	3.89	1108	3.20	10000	
Sr	88	115	NoGas	16227.577	1616.293	1.24	568462352	0.51	50000	
Mo	95	115	NoGas	5.245	0.522	3.21	38276	3.35	10000	
Ag	107	115	NoGas	0.336	0.033	3.98	6398	2.42	5000	
Cd	111	115	He	2.518	0.251	3.33	3959	2.86	10000	
Sn	118	115	He	11.258	1.121	0.42	40213	1.01	10000	
Sn	118	115	NoGas	10.690	1.065	2.19	126966	0.62	10000	
Sb	121	115	NoGas	2.831	0.282	2.16	52327	0.69	10000	
Ba	137	165	NoGas	2598.730	258.838	1.07	19008745	0.26	50000	
Tl	205	165	NoGas	0.479	0.048	1.16	24616	1.58	5000	
Pb	208	165	NoGas	212.850	21.200	1.57	15159824	0.66	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	625725	1.68	163616	382.44	70	120	ISTD Failed
Sc	45	He	272529	0.56	71079	383.42	70	120	ISTD Failed
Sc	45	NoGas	4008754	0.90	951149	421.46	70	120	ISTD Failed
In	115	H2	807567	0.88	1007583	80.15	70	120	
In	115	He	350724	0.60	439049	79.88	70	120	
In	115	NoGas	1451423	1.59	1619798	89.61	70	120	
Tb	159	H2	2345685	1.06	2111966	111.07	70	120	
Tb	159	He	1449191	5.19	1288440	112.48	70	120	
Tb	159	NoGas	2917800	1.66	2404338	121.36	70	120	ISTD Failed
Ho	165	H2	2175968	0.26	2032817	107.04	70	120	
Ho	165	He	1312984	0.29	1283106	102.33	70	120	
Ho	165	NoGas	2762274	1.17	2371226	116.49	70	120	

Sample Report

Sample Table

Sample Name	AZ02099S01 1/50
Data File Name	055SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T16:23:59-07:00
Sample Type	Sample
Dilution	0.498007968
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.337	0.666	1.30	11017	2.27	10000	
B	11	45	NoGas	6.954	3.463	12.85	112654	2.20	10000	
Na	23	45	He	1725.195	859.161	0.60	2943987	0.41	1000000	
Mg	24	45	He	28175.885	14031.815	0.62	25862158	0.77	1000000	
Al	27	45	He	26786.059	13339.671	1.19	11976020	1.66	1000000	
K	39	45	He	4424.486	2203.430	0.18	4090767	0.63	500000	
Ca	44	45	He	154113.735	76749.868	0.50	7358090	0.82	500000	
Ti	47	45	He	3429.482	1707.910	1.09	1037883	0.66	10000	
V	51	45	He	91.451	45.543	0.60	794031	0.48	10000	
Cr	52	45	He	121.917	60.716	0.51	1263645	0.25	10000	
Mn	55	45	He	1323.273	659.000	0.96	8857573	0.32	50000	
Fe	56	45	He	69584.061	34653.417	1.54	652404579	0.98	1000000	
Co	59	45	He	55.895	27.836	0.73	898264	0.06	10000	
Ni	60	45	He	288.022	143.437	1.01	1262327	0.46	10000	
Cu	63	45	He	53.534	26.661	0.40	642294	1.09	10000	
Zn	66	115	He	228.228	113.660	1.41	307153	1.14	50000	
As	75	115	He	10.491	5.225	1.84	10946	1.57	2000	
Se	78	115	H2	0.290	0.144	6.82	86	5.83	10000	
Se	78	115	He	3.536	1.761	12.53	337	8.99	10000	
Sr	88	115	NoGas	3246.975	1617.019	1.12	108882882	0.75	50000	
Mo	95	115	NoGas	0.943	0.470	10.05	7815	9.24	10000	
Ag	107	115	NoGas	0.096	0.048	6.22	1860	5.38	5000	
Cd	111	115	He	0.526	0.262	6.31	931	5.18	10000	
Sn	118	115	He	1.962	0.977	3.71	8793	3.70	10000	
Sn	118	115	NoGas	1.886	0.939	2.90	24635	1.76	10000	
Sb	121	115	NoGas	0.360	0.179	4.77	11885	1.39	10000	
Ba	137	165	NoGas	597.274	297.447	1.19	3596645	0.89	50000	
Tl	205	165	NoGas	0.099	0.049	9.83	6148	5.49	5000	
Pb	208	165	NoGas	47.644	23.727	0.75	2530464	0.48	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	272466	0.98	164751	165.38	70	120	ISTD Failed
Sc	45	He	127184	0.74	76221	166.86	70	120	ISTD Failed
Sc	45	NoGas	1561334	1.96	928342	168.19	70	120	ISTD Failed
In	115	H2	937901	0.80	997448	94.03	70	120	
In	115	He	422153	1.01	448471	94.13	70	120	
In	115	NoGas	1443554	0.95	1548791	93.21	70	120	
Tb	159	H2	2051836	1.27	2006856	102.24	70	120	
Tb	159	He	1226096	0.64	1205156	101.74	70	120	
Tb	159	NoGas	2327324	1.14	2266694	102.67	70	120	
Ho	165	H2	1967212	1.37	1916437	102.65	70	120	
Ho	165	He	1189884	0.92	1172479	101.48	70	120	
Ho	165	NoGas	2223541	0.68	2192200	101.43	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN002

APPL ID: AZ02100

Sample Collection Date: 09/02/14

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.14 J	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	5.1	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.26 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.22	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	60.6	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	26.4	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	22.5	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.061 J	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	136	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.12 J	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.034 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.021 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	106	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02100S01 1/10
Data File Name	087SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T19:03:21-07:00
Sample Type	Sample
Dilution	0.100200401
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	2.565	0.257	3.26	45465	2.44	10000	
B	11	45	NoGas	64.545	6.467	2.02	736258	0.39	10000	
Na	23	45	He	3502.843	350.986	1.11	13479418	1.13	1000000	
Mg	24	45	He	51575.169	5167.853	1.76	108084485	1.57	1000000	
Al	27	45	He	50331.208	5043.207	1.02	49826537	0.85	1000000	
K	39	45	He	8109.456	812.571	0.64	15203572	0.24	500000	
Ca	44	45	He	318677.678	31931.631	0.77	33782865	0.35	500000	
Ti	47	45	He	6401.659	641.449	0.30	4287975	0.88	10000	
V	51	45	He	172.265	17.261	0.65	3449281	0.32	10000	
Cr	52	45	He	222.946	22.339	0.61	5357868	0.41	10000	
Mn	55	45	He	2314.435	231.907	1.58	35880689	0.98	50000	
Fe	56	45	He	120012.574	12025.308	0.81	2631911220	0.43	1000000	
Co	59	45	He	99.126	9.932	2.09	3730856	1.52	10000	
Ni	60	45	He	495.709	49.670	1.02	4945708	0.53	10000	
Cu	63	45	He	96.309	9.650	0.58	2660929	1.07	10000	
Zn	66	115	He	961.211	96.314	0.85	1062647	1.09	50000	
As	75	115	He	51.965	5.207	1.02	37497	1.06	2000	
Se	78	115	H2	1.417	0.142	5.75	275	5.91	10000	
Se	78	115	He	19.263	1.930	3.50	1038	2.58	10000	
Sr	88	115	NoGas	15978.846	1601.087	0.45	558666098	0.67	50000	
Mo	95	115	NoGas	4.469	0.448	1.02	32564	0.62	10000	
Ag	107	115	NoGas	0.315	0.032	2.68	5995	2.80	5000	
Cd	111	115	He	2.224	0.223	2.11	3454	2.34	10000	
Sn	118	115	He	10.590	1.061	1.41	37398	1.91	10000	
Sn	118	115	NoGas	9.798	0.982	0.11	116421	0.56	10000	
Sb	121	115	NoGas	2.530	0.254	1.72	46821	1.73	10000	
Ba	137	165	NoGas	2597.402	260.261	0.24	18766931	0.66	50000	
Tl	205	165	NoGas	0.438	0.044	0.64	22253	1.38	5000	
Pb	208	165	NoGas	204.329	20.474	0.41	14376294	0.48	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	604063	0.13	163616	369.20	70	120	ISTD Failed
Sc	45	He	261813	0.59	71079	368.34	70	120	ISTD Failed
Sc	45	NoGas	3845138	1.54	951149	404.26	70	120	ISTD Failed
In	115	H2	804664	0.74	1007583	79.86	70	120	
In	115	He	346171	0.87	439049	78.85	70	120	
In	115	NoGas	1448436	0.59	1619798	89.42	70	120	
Tb	159	H2	2341184	0.81	2111966	110.85	70	120	
Tb	159	He	1404835	3.56	1288440	109.03	70	120	
Tb	159	NoGas	2901616	0.31	2404338	120.68	70	120	ISTD Failed
Ho	165	H2	2147938	0.93	2032817	105.66	70	120	
Ho	165	He	1295479	0.21	1283106	100.96	70	120	
Ho	165	NoGas	2728329	0.80	2371226	115.06	70	120	

Sample Report

Sample Table

Sample Name	AZ02100S01 1/50
Data File Name	056SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T16:30:01-07:00
Sample Type	Sample
Dilution	0.501002004
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.250	0.626	3.68	10206	4.28	10000	
B	11	45	NoGas	5.663	2.837	5.97	105231	0.52	10000	
Na	23	45	He	1880.381	942.075	1.42	3105086	0.54	1000000	
Mg	24	45	He	28111.408	14083.872	1.32	25066672	0.24	1000000	
Al	27	45	He	26912.217	13483.075	1.74	11688285	0.68	1000000	
K	39	45	He	4272.630	2140.596	2.24	3843000	0.98	500000	
Ca	44	45	He	171263.364	85803.288	1.94	7942994	0.75	500000	
Ti	47	45	He	3453.623	1730.272	1.83	1015357	0.73	10000	
V	51	45	He	91.521	45.852	1.38	771976	0.58	10000	
Cr	52	45	He	120.922	60.582	1.38	1217586	0.32	10000	
Mn	55	45	He	1265.236	633.886	1.78	8227514	0.76	50000	
Fe	56	45	He	67622.364	33878.940	1.72	615935282	0.53	1000000	
Co	59	45	He	53.265	26.686	1.45	831589	0.24	10000	
Ni	60	45	He	271.735	136.140	1.97	1156986	0.82	10000	
Cu	63	45	He	52.791	26.449	1.37	615306	0.18	10000	
Zn	66	115	He	212.280	106.353	1.68	282323	1.10	50000	
As	75	115	He	10.157	5.089	1.45	10479	1.14	2000	
Se	78	115	H2	0.240	0.120	15.20	74	11.06	10000	
Se	78	115	He	3.609	1.808	4.65	338	3.93	10000	
Sr	88	115	NoGas	3198.107	1602.258	2.01	108928642	0.79	50000	
Mo	95	115	NoGas	0.723	0.362	9.61	6391	6.10	10000	
Ag	107	115	NoGas	0.067	0.034	4.25	1340	2.69	5000	
Cd	111	115	He	0.444	0.222	5.08	781	5.50	10000	
Sn	118	115	He	1.869	0.936	0.86	8357	0.70	10000	
Sn	118	115	NoGas	1.693	0.848	1.91	22981	1.83	10000	
Sb	121	115	NoGas	0.277	0.139	3.10	10704	0.57	10000	
Ba	137	165	NoGas	583.585	292.377	2.65	3544765	1.80	50000	
Tl	205	165	NoGas	0.042	0.021	5.70	4021	2.93	5000	
Pb	208	165	NoGas	44.839	22.464	0.36	2402906	0.66	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	267460	1.29	164751	162.34	70	120	ISTD Failed
Sc	45	He	123566	1.22	76221	162.12	70	120	ISTD Failed
Sc	45	NoGas	1541354	1.06	928342	166.03	70	120	ISTD Failed
In	115	H2	937599	0.61	997448	94.00	70	120	
In	115	He	417124	0.71	448471	93.01	70	120	
In	115	NoGas	1466486	1.87	1548791	94.69	70	120	
Tb	159	H2	2065037	0.39	2006856	102.90	70	120	
Tb	159	He	1219839	0.94	1205156	101.22	70	120	
Tb	159	NoGas	2341438	1.65	2266694	103.30	70	120	
Ho	165	H2	1963085	0.38	1916437	102.43	70	120	
Ho	165	He	1181979	0.47	1172479	100.81	70	120	
Ho	165	NoGas	2243126	0.88	2192200	102.32	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
ARF: 74218
Sample ID: EN003
APPL ID: AZ02101
Sample Collection Date: 09/02/14

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.24	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	5.4	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.25 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.24	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	63.8	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	26.4	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	19.6	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.058 J	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	131	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.13 J	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.032 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.028 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	109	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02101S01 1/10
Data File Name	092SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T19:33:36-07:00
Sample Type	Sample
Dilution	0.100200401
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	2.465	0.247	1.07	39656	0.93	10000	
B	11	45	NoGas	58.115	5.823	0.64	603292	0.52	10000	
Na	23	45	He	3677.404	368.477	0.26	12626255	1.03	1000000	
Mg	24	45	He	50111.567	5021.199	1.05	93807270	1.39	1000000	
Al	27	45	He	52043.052	5214.735	0.53	46020008	0.67	1000000	
K	39	45	He	8355.597	837.234	0.70	13988966	1.60	500000	
Ca	44	45	He	338713.597	33939.238	0.63	32075175	1.59	500000	
Ti	47	45	He	6971.587	698.556	0.36	4171242	1.49	10000	
V	51	45	He	174.058	17.441	1.07	3113079	1.54	10000	
Cr	52	45	He	233.971	23.444	0.56	5022678	1.65	10000	
Mn	55	45	He	2251.815	225.633	0.73	31185555	1.58	50000	
Fe	56	45	He	119573.577	11981.320	0.96	2342247160	0.60	1000000	
Co	59	45	He	95.191	9.538	0.26	3200522	1.08	10000	
Ni	60	45	He	476.256	47.721	1.02	4244325	0.92	10000	
Cu	63	45	He	94.078	9.427	0.51	2321782	0.97	10000	
Zn	66	115	He	910.065	91.189	0.32	972888	0.92	50000	
As	75	115	He	51.653	5.176	0.46	36043	1.46	2000	
Se	78	115	H2	1.368	0.137	3.57	258	3.32	10000	
Se	78	115	He	17.422	1.746	2.71	913	3.61	10000	
Sr	88	115	NoGas	16954.698	1698.868	4.66	565847245	0.86	50000	
Mo	95	115	NoGas	5.404	0.541	5.06	37574	3.45	10000	
Ag	107	115	NoGas	0.303	0.030	6.64	5494	2.96	5000	
Cd	111	115	He	2.163	0.217	1.95	3249	2.93	10000	
Sn	118	115	He	9.993	1.001	1.16	34171	0.57	10000	
Sn	118	115	NoGas	9.624	0.964	4.92	109199	0.39	10000	
Sb	121	115	NoGas	2.953	0.296	6.32	51929	3.05	10000	
Ba	137	165	NoGas	2516.139	252.118	1.44	17613832	0.58	50000	
Tl	205	165	NoGas	0.490	0.049	1.56	24089	1.53	5000	
Pb	208	165	NoGas	171.742	17.209	0.44	11711637	0.55	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	547782	0.81	163616	334.80	70	120	ISTD Failed
Sc	45	He	233863	1.18	71079	329.02	70	120	ISTD Failed
Sc	45	NoGas	3482347	0.10	951149	366.12	70	120	ISTD Failed
In	115	H2	781666	0.60	1007583	77.58	70	120	
In	115	He	334738	1.22	439049	76.24	70	120	
In	115	NoGas	1384758	5.03	1619798	85.49	70	120	
Tb	159	H2	2215086	0.45	2111966	104.88	70	120	
Tb	159	He	1293060	0.76	1288440	100.36	70	120	
Tb	159	NoGas	2791760	0.13	2404338	116.11	70	120	
Ho	165	H2	2055357	0.51	2032817	101.11	70	120	
Ho	165	He	1241296	0.49	1283106	96.74	70	120	
Ho	165	NoGas	2643594	0.89	2371226	111.49	70	120	

Sample Report

Sample Table

Sample Name	AZ02101S01 1/50
Data File Name	061SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T17:00:10-07:00
Sample Type	Sample
Dilution	0.501002004
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.246	0.624	5.35	9880	4.63	10000	
B	11	45	NoGas	8.113	4.065	5.83	113284	1.47	10000	
Na	23	45	He	1996.378	1000.189	2.16	3219104	0.74	1000000	
Mg	24	45	He	27445.519	13750.260	0.95	23960858	0.41	1000000	
Al	27	45	He	27408.202	13731.564	1.89	11654327	1.18	1000000	
K	39	45	He	4384.852	2196.820	2.62	3857382	2.27	500000	
Ca	44	45	He	177596.706	88976.305	0.52	8065046	0.85	500000	
Ti	47	45	He	3714.751	1861.097	0.92	1069311	0.43	10000	
V	51	45	He	93.161	46.674	0.89	769301	0.46	10000	
Cr	52	45	He	127.423	63.839	1.59	1256065	0.78	10000	
Mn	55	45	He	1216.724	609.581	1.16	7746693	0.57	50000	
Fe	56	45	He	66833.254	33483.594	1.50	596000616	0.34	1000000	
Co	59	45	He	50.996	25.549	1.02	779526	0.43	10000	
Ni	60	45	He	261.467	130.995	1.54	1089995	0.20	10000	
Cu	63	45	He	52.660	26.383	1.89	600899	0.80	10000	
Zn	66	115	He	218.030	109.234	0.28	289228	0.19	50000	
As	75	115	He	10.782	5.402	1.26	11080	0.89	2000	
Se	78	115	H2	0.255	0.128	9.23	78	7.22	10000	
Se	78	115	He	3.227	1.617	9.32	311	6.33	10000	
Sr	88	115	NoGas	3525.926	1766.496	1.28	119178202	0.52	50000	
Mo	95	115	NoGas	1.065	0.533	4.65	8723	4.66	10000	
Ag	107	115	NoGas	0.063	0.032	12.58	1257	10.08	5000	
Cd	111	115	He	0.489	0.245	5.24	855	4.92	10000	
Sn	118	115	He	1.837	0.920	1.31	8222	0.98	10000	
Sn	118	115	NoGas	1.811	0.907	3.48	24032	0.98	10000	
Sb	121	115	NoGas	0.480	0.241	5.18	13936	1.72	10000	
Ba	137	165	NoGas	579.195	290.178	1.49	3571775	1.14	50000	
Tl	205	165	NoGas	0.055	0.028	11.95	4584	6.99	5000	
Pb	208	165	NoGas	39.068	19.573	0.83	2126341	0.86	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	261079	1.77	164751	158.47	70	120	ISTD Failed
Sc	45	He	120978	1.34	76221	158.72	70	120	ISTD Failed
Sc	45	NoGas	1496844	0.57	928342	161.24	70	120	ISTD Failed
In	115	H2	936685	0.10	997448	93.91	70	120	
In	115	He	416053	0.43	448471	92.77	70	120	
In	115	NoGas	1455191	1.79	1548791	93.96	70	120	
Tb	159	H2	2088059	0.44	2006856	104.05	70	120	
Tb	159	He	1220677	0.80	1205156	101.29	70	120	
Tb	159	NoGas	2368628	1.26	2266694	104.50	70	120	
Ho	165	H2	1959793	0.67	1916437	102.26	70	120	
Ho	165	He	1184882	0.58	1172479	101.06	70	120	
Ho	165	NoGas	2277266	1.59	2192200	103.88	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN004
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02102

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.20 U	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	4.6	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.26 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.22	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	58.3	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	23.7	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	20.4	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.068 J	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	143	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.098 J	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.026 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.022 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	102	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02102S01 1/10
Data File Name	093SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T19:39:39-07:00
Sample Type	Sample
Dilution	0.099800399
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	2.612	0.261	2.13	43888	1.04	10000	
B	11	45	NoGas	54.268	5.416	1.35	592107	1.24	10000	
Na	23	45	He	4748.951	473.947	0.57	16824505	1.19	1000000	
Mg	24	45	He	51214.412	5111.219	0.32	99424312	0.50	1000000	
Al	27	45	He	48895.893	4879.830	1.10	44839167	0.75	1000000	
K	39	45	He	7609.257	759.407	0.63	13224364	0.92	500000	
Ca	44	45	He	313114.628	31248.965	0.65	30747912	0.21	500000	
Ti	47	45	He	5705.869	569.448	1.02	3540168	0.25	10000	
V	51	45	He	162.786	16.246	0.11	3019945	0.92	10000	
Cr	52	45	He	210.151	20.973	0.71	4678498	0.69	10000	
Mn	55	45	He	2344.920	234.024	1.18	33675963	0.77	50000	
Fe	56	45	He	120080.890	11984.121	1.62	2439342979	1.16	1000000	
Co	59	45	He	98.271	9.808	0.81	3426407	0.49	10000	
Ni	60	45	He	502.550	50.155	0.65	4644672	0.55	10000	
Cu	63	45	He	84.407	8.424	0.82	2160605	0.11	10000	
Zn	66	115	He	858.752	85.704	1.04	906031	0.84	50000	
As	75	115	He	45.310	4.522	1.21	31212	0.99	2000	
Se	78	115	H2	1.108	0.111	1.88	206	1.70	10000	
Se	78	115	He	18.800	1.876	3.92	968	3.65	10000	
Sr	88	115	NoGas	17305.302	1727.076	0.35	585814605	0.79	50000	
Mo	95	115	NoGas	3.908	0.390	1.31	27582	0.22	10000	
Ag	107	115	NoGas	0.212	0.021	4.60	3914	3.53	5000	
Cd	111	115	He	1.911	0.191	2.52	2834	2.43	10000	
Sn	118	115	He	8.985	0.897	0.86	30420	0.99	10000	
Sn	118	115	NoGas	8.578	0.856	1.21	99041	1.31	10000	
Sb	121	115	NoGas	1.805	0.180	2.74	32735	3.20	10000	
Ba	137	165	NoGas	2782.291	277.674	1.44	19535923	0.11	50000	
Tl	205	165	NoGas	0.465	0.046	3.18	22950	3.25	5000	
Pb	208	165	NoGas	180.697	18.034	1.18	12358068	0.31	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	569146	1.47	163616	347.86	70	120	ISTD Failed
Sc	45	He	242528	0.81	71079	341.21	70	120	ISTD Failed
Sc	45	NoGas	3648690	2.50	951149	383.61	70	120	ISTD Failed
In	115	H2	767819	0.16	1007583	76.20	70	120	
In	115	He	330347	0.29	439049	75.24	70	120	
In	115	NoGas	1402436	1.13	1619798	86.58	70	120	
Tb	159	H2	2224331	0.47	2111966	105.32	70	120	
Tb	159	He	1303613	0.73	1288440	101.18	70	120	
Tb	159	NoGas	2825322	0.82	2404338	117.51	70	120	
Ho	165	H2	2068550	1.47	2032817	101.76	70	120	
Ho	165	He	1259224	0.75	1283106	98.14	70	120	
Ho	165	NoGas	2651748	1.47	2371226	111.83	70	120	

Sample Report

Sample Table

Sample Name	AZ02102S01 1/50
Data File Name	062SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T17:06:12-07:00
Sample Type	Sample
Dilution	0.499001996
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.366	0.681	4.74	10887	4.09	10000	
B	11	45	NoGas	7.319	3.652	4.58	110826	1.10	10000	
Na	23	45	He	2616.369	1305.573	1.04	4182888	0.28	1000000	
Mg	24	45	He	29027.522	14484.791	0.46	25372500	0.69	1000000	
Al	27	45	He	26362.265	13154.823	0.75	11223474	0.14	1000000	
K	39	45	He	4089.714	2040.775	0.48	3613145	1.33	500000	
Ca	44	45	He	167145.911	83406.143	0.73	7599465	0.99	500000	
Ti	47	45	He	3055.842	1524.871	1.46	880667	0.81	10000	
V	51	45	He	88.191	44.008	1.16	729290	0.28	10000	
Cr	52	45	He	116.772	58.270	1.26	1152596	0.48	10000	
Mn	55	45	He	1298.343	647.876	1.30	8275957	0.70	50000	
Fe	56	45	He	68938.153	34400.276	0.13	615551531	0.80	1000000	
Co	59	45	He	54.269	27.080	0.89	830517	0.04	10000	
Ni	60	45	He	287.038	143.233	0.21	1198070	1.06	10000	
Cu	63	45	He	47.528	23.716	0.56	543195	1.12	10000	
Zn	66	115	He	204.047	101.820	0.75	266324	1.10	50000	
As	75	115	He	9.262	4.622	1.90	9398	1.88	2000	
Se	78	115	H2	0.197	0.098	13.92	63	10.65	10000	
Se	78	115	He	3.605	1.799	11.18	331	8.18	10000	
Sr	88	115	NoGas	3594.176	1793.501	1.48	119796165	0.84	50000	
Mo	95	115	NoGas	0.683	0.341	5.53	5988	3.09	10000	
Ag	107	115	NoGas	0.052	0.026	22.85	1023	19.55	5000	
Cd	111	115	He	0.444	0.222	8.38	766	8.15	10000	
Sn	118	115	He	1.602	0.799	4.13	7267	3.28	10000	
Sn	118	115	NoGas	1.564	0.780	2.38	21141	1.07	10000	
Sb	121	115	NoGas	0.157	0.078	23.65	8536	5.69	10000	
Ba	137	165	NoGas	640.280	319.501	1.08	3896829	0.54	50000	
Tl	205	165	NoGas	0.044	0.022	15.02	4094	5.05	5000	
Pb	208	165	NoGas	40.838	20.378	1.12	2193219	0.30	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	262904	0.36	164751	159.58	70	120	ISTD Failed
Sc	45	He	121116	0.89	76221	158.90	70	120	ISTD Failed
Sc	45	NoGas	1512298	0.44	928342	162.90	70	120	ISTD Failed
In	115	H2	925444	0.84	997448	92.78	70	120	
In	115	He	409295	0.39	448471	91.26	70	120	
In	115	NoGas	1435075	2.34	1548791	92.66	70	120	
Tb	159	H2	2074885	0.22	2006856	103.39	70	120	
Tb	159	He	1205141	0.56	1205156	100.00	70	120	
Tb	159	NoGas	2350147	0.22	2266694	103.68	70	120	
Ho	165	H2	1971867	1.28	1916437	102.89	70	120	
Ho	165	He	1174761	0.22	1172479	100.19	70	120	
Ho	165	NoGas	2247448	1.35	2192200	102.52	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN005
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02103

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.20 U	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	4.6	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.26 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.22	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	58.2	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	23.1	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	21.0	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.060 J	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	145	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.084 J	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.027 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.023 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	106	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02103S01 1/10
Data File Name	094SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T19:45:42-07:00
Sample Type	Sample
Dilution	0.101010101
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	2.597	0.262	3.32	44242	2.63	10000	
B	11	45	NoGas	50.685	5.120	0.93	562600	0.53	10000	
Na	23	45	He	4772.205	482.041	1.18	17106007	0.82	1000000	
Mg	24	45	He	52192.547	5271.974	1.27	102528936	1.04	1000000	
Al	27	45	He	48603.533	4909.448	0.95	45102406	0.46	1000000	
K	39	45	He	7478.452	755.399	1.23	13153917	0.65	500000	
Ca	44	45	He	313886.912	31705.749	1.26	31190518	0.70	500000	
Ti	47	45	He	5662.413	571.961	0.20	3555224	0.39	10000	
V	51	45	He	161.409	16.304	0.40	3030095	0.36	10000	
Cr	52	45	He	210.415	21.254	1.49	4740023	0.93	10000	
Mn	55	45	He	2354.312	237.809	0.75	34214309	0.27	50000	
Fe	56	45	He	119667.915	12087.668	0.78	2459996916	0.24	1000000	
Co	59	45	He	100.502	10.152	1.15	3545875	0.63	10000	
Ni	60	45	He	513.526	51.871	1.25	4802564	0.88	10000	
Cu	63	45	He	81.807	8.263	0.46	2119215	1.01	10000	
Zn	66	115	He	907.016	91.618	0.62	948791	0.57	50000	
As	75	115	He	46.369	4.684	0.30	31668	0.18	2000	
Se	78	115	H2	1.136	0.115	2.77	211	2.63	10000	
Se	78	115	He	19.209	1.940	0.80	980	0.91	10000	
Sr	88	115	NoGas	18092.545	1827.530	5.08	577400738	0.87	50000	
Mo	95	115	NoGas	4.164	0.421	6.25	27703	4.24	10000	
Ag	107	115	NoGas	0.241	0.024	9.35	4184	7.35	5000	
Cd	111	115	He	2.051	0.207	2.35	3016	2.48	10000	
Sn	118	115	He	9.021	0.911	1.34	30277	1.18	10000	
Sn	118	115	NoGas	8.796	0.889	4.42	95705	0.39	10000	
Sb	121	115	NoGas	1.918	0.194	4.43	32729	2.25	10000	
Ba	137	165	NoGas	2751.231	277.902	0.63	19347690	0.69	50000	
Tl	205	165	NoGas	0.473	0.048	4.80	23324	4.09	5000	
Pb	208	165	NoGas	188.556	19.046	0.27	12914421	0.86	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	577089	0.68	163616	352.71	70	120	ISTD Failed
Sc	45	He	245417	0.57	71079	345.27	70	120	ISTD Failed
Sc	45	NoGas	3698223	0.55	951149	388.82	70	120	ISTD Failed
In	115	H2	766233	0.27	1007583	76.05	70	120	
In	115	He	327536	0.15	439049	74.60	70	120	
In	115	NoGas	1324089	4.43	1619798	81.74	70	120	
Tb	159	H2	2227873	0.28	2111966	105.49	70	120	
Tb	159	He	1295996	0.23	1288440	100.59	70	120	
Tb	159	NoGas	2854227	0.74	2404338	118.71	70	120	
Ho	165	H2	2053377	0.81	2032817	101.01	70	120	
Ho	165	He	1250775	0.41	1283106	97.48	70	120	
Ho	165	NoGas	2655527	0.85	2371226	111.99	70	120	

Sample Report

Sample Table

Sample Name	AZ02103S01 1/50
Data File Name	063SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T17:12:15-07:00
Sample Type	Sample
Dilution	0.505050505
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.350	0.682	3.03	10820	1.99	10000	
B	11	45	NoGas	5.948	3.004	8.54	105036	1.32	10000	
Na	23	45	He	2606.826	1316.579	3.46	4215448	1.84	1000000	
Mg	24	45	He	28588.929	14438.853	2.27	25275027	0.99	1000000	
Al	27	45	He	25512.320	12885.010	2.39	10985972	0.97	1000000	
K	39	45	He	3908.056	1973.765	2.84	3499024	1.20	500000	
Ca	44	45	He	165402.797	83536.766	0.77	7607226	0.74	500000	
Ti	47	45	He	2961.089	1495.499	1.31	863256	0.67	10000	
V	51	45	He	86.432	43.652	1.83	723045	0.33	10000	
Cr	52	45	He	115.145	58.154	1.38	1149707	0.16	10000	
Mn	55	45	He	1270.460	641.646	2.62	8190879	1.11	50000	
Fe	56	45	He	67467.371	34074.430	2.26	609298447	0.82	1000000	
Co	59	45	He	54.424	27.487	1.62	842494	0.27	10000	
Ni	60	45	He	286.707	144.801	1.47	1210462	1.01	10000	
Cu	63	45	He	45.771	23.117	1.89	529164	0.41	10000	
Zn	66	115	He	209.194	105.653	1.07	274323	1.06	50000	
As	75	115	He	9.144	4.618	1.38	9325	1.22	2000	
Se	78	115	H2	0.166	0.084	18.87	55	13.09	10000	
Se	78	115	He	3.536	1.786	7.85	328	5.57	10000	
Sr	88	115	NoGas	3416.783	1725.648	1.13	115296125	0.82	50000	
Mo	95	115	NoGas	0.663	0.335	3.69	5921	3.71	10000	
Ag	107	115	NoGas	0.054	0.027	9.15	1087	7.83	5000	
Cd	111	115	He	0.437	0.221	5.20	757	5.06	10000	
Sn	118	115	He	1.481	0.748	3.98	6878	2.95	10000	
Sn	118	115	NoGas	1.441	0.728	1.98	20117	1.64	10000	
Sb	121	115	NoGas	0.159	0.080	6.60	8686	2.67	10000	
Ba	137	165	NoGas	604.260	305.182	0.48	3716288	0.66	50000	
Tl	205	165	NoGas	0.046	0.023	24.42	4204	10.59	5000	
Pb	208	165	NoGas	41.618	21.019	0.40	2258420	0.07	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	257277	0.46	164751	156.16	70	120	ISTD Failed
Sc	45	He	122526	1.50	76221	160.75	70	120	ISTD Failed
Sc	45	NoGas	1519387	1.13	928342	163.67	70	120	ISTD Failed
In	115	H2	916235	0.08	997448	91.86	70	120	
In	115	He	411244	0.13	448471	91.70	70	120	
In	115	NoGas	1452609	0.94	1548791	93.79	70	120	
Tb	159	H2	2076828	0.79	2006856	103.49	70	120	
Tb	159	He	1205817	0.68	1205156	100.05	70	120	
Tb	159	NoGas	2367809	0.87	2266694	104.46	70	120	
Ho	165	H2	1966300	0.91	1916437	102.60	70	120	
Ho	165	He	1176659	0.20	1172479	100.36	70	120	
Ho	165	NoGas	2270866	0.45	2192200	103.59	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
ARF: 74218
Sample ID: EN006
APPL ID: AZ02104
Sample Collection Date: 09/02/14

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.20 U	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	5.1	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.26 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.24	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	61.5	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	24.8	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	26.7	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.068 J	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	144	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.10 J	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.032 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.025 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	112	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02104S01 1/10
Data File Name	095SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T19:51:44-07:00
Sample Type	Sample
Dilution	0.100401606
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	2.585	0.260	2.29	43534	2.24	10000	
B	11	45	NoGas	52.373	5.258	0.82	573388	0.67	10000	
Na	23	45	He	4752.280	477.137	0.72	16835746	0.79	1000000	
Mg	24	45	He	50610.649	5081.390	0.76	98256572	1.30	1000000	
Al	27	45	He	50376.361	5057.868	0.57	46199846	1.16	1000000	
K	39	45	He	7593.542	762.404	1.12	13196901	0.55	500000	
Ca	44	45	He	335544.272	33689.184	0.68	32950782	0.18	500000	
Ti	47	45	He	6074.543	609.894	0.55	3769059	0.43	10000	
V	51	45	He	164.733	16.539	1.12	3055840	0.74	10000	
Cr	52	45	He	217.493	21.837	1.26	4841806	0.93	10000	
Mn	55	45	He	2362.379	237.187	0.72	33927410	0.12	50000	
Fe	56	45	He	121468.914	12195.674	1.26	2467585253	0.72	1000000	
Co	59	45	He	98.999	9.940	0.87	3451802	0.48	10000	
Ni	60	45	He	499.976	50.198	0.86	4620877	0.47	10000	
Cu	63	45	He	86.189	8.654	0.27	2206255	0.73	10000	
Zn	66	115	He	944.108	94.790	1.36	973556	0.49	50000	
As	75	115	He	50.556	5.076	1.73	34029	1.07	2000	
Se	78	115	H2	1.247	0.125	4.45	230	3.83	10000	
Se	78	115	He	19.861	1.994	4.91	998	5.50	10000	
Sr	88	115	NoGas	19493.175	1957.146	4.14	624445457	1.24	50000	
Mo	95	115	NoGas	4.178	0.419	4.75	27893	1.40	10000	
Ag	107	115	NoGas	0.293	0.029	9.64	5108	6.51	5000	
Cd	111	115	He	2.177	0.219	6.16	3154	5.30	10000	
Sn	118	115	He	10.416	1.046	1.54	34327	2.35	10000	
Sn	118	115	NoGas	10.226	1.027	4.10	111201	0.40	10000	
Sb	121	115	NoGas	2.094	0.210	4.66	35741	3.20	10000	
Ba	137	165	NoGas	2752.484	276.354	0.19	19098487	0.80	50000	
Tl	205	165	NoGas	0.468	0.047	3.20	22793	3.71	5000	
Pb	208	165	NoGas	233.366	23.430	0.87	15764595	0.63	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	576013	0.64	163616	352.05	70	120	ISTD Failed
Sc	45	He	242528	0.60	71079	341.21	70	120	ISTD Failed
Sc	45	NoGas	3653866	0.11	951149	384.15	70	120	ISTD Failed
In	115	H2	763521	0.85	1007583	75.78	70	120	
In	115	He	322914	0.90	439049	73.55	70	120	
In	115	NoGas	1328411	3.75	1619798	82.01	70	120	
Tb	159	H2	2192109	0.26	2111966	103.79	70	120	
Tb	159	He	1278999	0.68	1288440	99.27	70	120	
Tb	159	NoGas	2795287	0.65	2404338	116.26	70	120	
Ho	165	H2	2016119	1.46	2032817	99.18	70	120	
Ho	165	He	1226822	0.49	1283106	95.61	70	120	
Ho	165	NoGas	2620054	0.61	2371226	110.49	70	120	

Sample Report

Sample Table

Sample Name	AZ02104S01 1/50
Data File Name	064SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T17:18:17-07:00
Sample Type	Sample
Dilution	0.502008032
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.312	0.659	4.77	10457	2.51	10000	
B	11	45	NoGas	7.919	3.975	7.24	113333	1.66	10000	
Na	23	45	He	2640.401	1325.502	0.85	4267880	0.70	1000000	
Mg	24	45	He	28499.044	14306.749	1.65	25191377	1.44	1000000	
Al	27	45	He	26628.606	13367.774	0.55	11465243	0.70	1000000	
K	39	45	He	3985.928	2000.968	1.84	3565219	1.82	500000	
Ca	44	45	He	179055.986	89887.543	1.32	8232848	1.43	500000	
Ti	47	45	He	3254.295	1633.682	0.44	948500	0.46	10000	
V	51	45	He	90.566	45.465	0.56	757322	0.40	10000	
Cr	52	45	He	122.591	61.542	0.79	1223665	0.62	10000	
Mn	55	45	He	1315.941	660.613	1.26	8483248	1.27	50000	
Fe	56	45	He	70313.080	35297.731	0.54	634909593	0.58	1000000	
Co	59	45	He	55.040	27.631	0.17	851855	0.40	10000	
Ni	60	45	He	287.401	144.278	1.16	1213078	0.97	10000	
Cu	63	45	He	49.340	24.769	0.72	570210	0.94	10000	
Zn	66	115	He	222.459	111.676	0.59	291187	0.24	50000	
As	75	115	He	10.070	5.055	1.01	10229	0.87	2000	
Se	78	115	H2	0.208	0.105	6.32	65	4.42	10000	
Se	78	115	He	3.605	1.810	5.56	332	3.92	10000	
Sr	88	115	NoGas	3900.052	1957.858	0.29	129053728	0.90	50000	
Mo	95	115	NoGas	0.715	0.359	7.36	6161	5.38	10000	
Ag	107	115	NoGas	0.064	0.032	13.52	1250	12.50	5000	
Cd	111	115	He	0.476	0.239	9.79	823	10.34	10000	
Sn	118	115	He	1.856	0.932	1.10	8179	1.52	10000	
Sn	118	115	NoGas	1.831	0.919	1.61	23740	0.98	10000	
Sb	121	115	NoGas	0.198	0.099	5.43	9136	2.39	10000	
Ba	137	165	NoGas	613.886	308.176	1.42	3789187	1.32	50000	
Tl	205	165	NoGas	0.050	0.025	9.00	4377	3.97	5000	
Pb	208	165	NoGas	53.117	26.665	2.91	2890860	2.76	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	260528	0.31	164751	158.13	70	120	ISTD Failed
Sc	45	He	122482	0.23	76221	160.69	70	120	ISTD Failed
Sc	45	NoGas	1509460	2.05	928342	162.60	70	120	ISTD Failed
In	115	H2	919915	1.32	997448	92.23	70	120	
In	115	He	410557	0.79	448471	91.55	70	120	
In	115	NoGas	1424387	0.66	1548791	91.97	70	120	
Tb	159	H2	2078769	0.99	2006856	103.58	70	120	
Tb	159	He	1218931	0.69	1205156	101.14	70	120	
Tb	159	NoGas	2344653	0.23	2266694	103.44	70	120	
Ho	165	H2	1970527	1.05	1916437	102.82	70	120	
Ho	165	He	1182232	0.32	1172479	100.83	70	120	
Ho	165	NoGas	2279134	0.13	2192200	103.97	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN007

APPL ID: AZ02105

Sample Collection Date: 09/02/14

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.20 U	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	4.1	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.19 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.084 J	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	29.5	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	10.8	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	6.9	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.04 U	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	68.5	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.052 J	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.05 U	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.05 U	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	39.5	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02105S01 1/10
Data File Name	100SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T20:21:50-07:00
Sample Type	Sample
Dilution	0.100603622
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.876	0.189	5.12	16631	5.93	10000	
B	11	45	NoGas	113.074	11.376	1.57	622339	0.83	10000	
Na	23	45	He	10596.579	1066.054	1.05	19225333	1.36	1000000	
Mg	24	45	He	59528.351	5988.768	0.56	59756495	0.14	1000000	
Al	27	45	He	36552.018	3677.265	0.70	17333194	0.60	1000000	
K	39	45	He	6067.683	610.431	0.79	5468425	1.05	500000	
Ca	44	45	He	829481.250	83448.818	0.50	42120634	0.93	500000	>HDL
Ti	47	45	He	5041.364	507.180	1.06	1617447	0.93	10000	
V	51	45	He	120.633	12.136	1.12	1158320	1.10	10000	
Cr	52	45	He	158.920	15.988	1.33	1829799	1.28	10000	
Mn	55	45	He	1723.307	173.371	0.16	12798044	0.33	50000	
Fe	56	45	He	86770.611	8729.438	0.42	911524835	0.79	1000000	
Co	59	45	He	62.073	6.245	0.57	1119302	0.74	10000	
Ni	60	45	He	358.664	36.083	0.16	1714244	0.27	10000	
Cu	63	45	He	51.026	5.133	0.52	676087	0.35	10000	
Zn	66	115	He	336.331	33.836	0.62	345370	0.38	50000	
As	75	115	He	39.857	4.010	1.18	26708	0.48	2000	
Se	78	115	H2	0.842	0.085	1.47	153	1.05	10000	
Se	78	115	He	7.672	0.772	4.80	411	3.65	10000	
Sr	88	115	NoGas	27122.761	2728.648	4.32	844255667	0.62	50000	
Mo	95	115	NoGas	2.435	0.245	2.21	15848	2.73	10000	
Ag	107	115	NoGas	0.137	0.014	12.63	2327	11.45	5000	
Cd	111	115	He	0.874	0.088	4.83	1269	4.10	10000	
Sn	118	115	He	3.551	0.357	3.01	12238	2.30	10000	
Sn	118	115	NoGas	3.528	0.355	4.31	39047	1.89	10000	
Sb	121	115	NoGas	1.180	0.119	7.02	20092	2.44	10000	
Ba	137	165	NoGas	1117.672	112.442	0.85	6886896	1.22	50000	
Tl	205	165	NoGas	0.291	0.029	2.32	12625	2.61	5000	
Pb	208	165	NoGas	63.748	6.413	0.76	3837907	0.10	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	298034	0.95	163616	182.16	70	120	ISTD Failed
Sc	45	He	125408	0.43	71079	176.43	70	120	ISTD Failed
Sc	45	NoGas	1889501	1.49	951149	198.65	70	120	ISTD Failed
In	115	H2	748526	0.39	1007583	74.29	70	120	
In	115	He	321228	0.73	439049	73.16	70	120	
In	115	NoGas	1291132	4.36	1619798	79.71	70	120	
Tb	159	H2	1951995	0.19	2111966	92.43	70	120	
Tb	159	He	1115993	0.69	1288440	86.62	70	120	
Tb	159	NoGas	2450997	1.55	2404338	101.94	70	120	
Ho	165	H2	1851978	0.83	2032817	91.10	70	120	
Ho	165	He	1100483	0.41	1283106	85.77	70	120	
Ho	165	NoGas	2326661	0.69	2371226	98.12	70	120	

Sample Report

Sample Table

Sample Name	AZ02105S01 1/50
Data File Name	065SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T17:24:20-07:00
Sample Type	Sample
Dilution	0.503018109
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	0.629	0.317	8.59	3957	8.80	10000	
B	11	45	NoGas	22.815	11.476	0.89	135640	1.14	10000	
Na	23	45	He	3953.397	1988.630	1.05	4854179	0.37	1000000	
Mg	24	45	He	22400.294	11267.753	1.52	15201119	1.19	1000000	
Al	27	45	He	13057.762	6568.291	1.74	4316323	1.08	1000000	
K	39	45	He	2194.839	1104.044	0.67	1563225	0.61	500000	
Ca	44	45	He	300611.195	151212.875	1.77	10609528	1.01	500000	
Ti	47	45	He	1814.958	912.957	0.93	406118	0.68	10000	
V	51	45	He	46.533	23.407	1.40	300034	1.00	10000	
Cr	52	45	He	58.736	29.546	1.49	450751	0.67	10000	
Mn	55	45	He	661.288	332.640	0.92	3273180	0.91	50000	
Fe	56	45	He	33931.272	17068.044	2.15	235218417	1.55	1000000	
Co	59	45	He	25.440	12.797	0.68	302373	0.66	10000	
Ni	60	45	He	136.207	68.515	0.41	441696	1.40	10000	
Cu	63	45	He	21.406	10.767	2.23	190575	1.01	10000	
Zn	66	115	He	78.448	39.461	0.48	105069	0.65	50000	
As	75	115	He	8.106	4.078	1.40	8443	1.50	2000	
Se	78	115	H2	0.103	0.052	27.91	42	15.82	10000	
Se	78	115	He	1.353	0.681	11.79	186	6.20	10000	
Sr	88	115	NoGas	5137.650	2584.331	1.33	177529971	0.62	50000	
Mo	95	115	NoGas	0.322	0.162	20.87	3641	11.79	10000	
Ag	107	115	NoGas	0.025	0.012	31.66	553	26.83	5000	
Cd	111	115	He	0.168	0.084	3.90	308	3.44	10000	
Sn	118	115	He	0.399	0.201	17.47	3147	8.17	10000	
Sn	118	115	NoGas	0.357	0.179	8.34	8938	1.92	10000	
Sb	121	115	NoGas	-0.008	-0.004	-223.23	6118	3.03	10000	
Ba	137	165	NoGas	228.718	115.049	0.73	1386617	0.95	50000	
Tl	205	165	NoGas	0.012	0.006	30.61	2817	3.37	5000	
Pb	208	165	NoGas	13.699	6.891	1.96	737421	0.60	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	197252	0.49	164751	119.73	70	120	
Sc	45	He	94032	1.23	76221	123.37	70	120	ISTD Failed
Sc	45	NoGas	1128996	1.08	928342	121.61	70	120	ISTD Failed
In	115	H2	932921	0.43	997448	93.53	70	120	
In	115	He	418586	0.45	448471	93.34	70	120	
In	115	NoGas	1487649	1.62	1548791	96.05	70	120	
Tb	159	H2	2053126	1.53	2006856	102.31	70	120	
Tb	159	He	1191606	0.36	1205156	98.88	70	120	
Tb	159	NoGas	2300004	0.81	2266694	101.47	70	120	
Ho	165	H2	1929710	1.16	1916437	100.69	70	120	
Ho	165	He	1169407	0.74	1172479	99.74	70	120	
Ho	165	NoGas	2238268	1.54	2192200	102.10	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN008
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02106

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.20 U	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	4.2	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.19 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.10	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	33.2	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	11.9	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	8.2	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.04 U	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	74.4	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.092 J	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.05 U	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.05 U	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	42.7	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02106S01 1/10
Data File Name	101SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T20:27:53-07:00
Sample Type	Sample
Dilution	0.0999001
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.896	0.189	2.53	17268	2.69	10000	
B	11	45	NoGas	113.764	11.365	0.93	643794	0.39	10000	
Na	23	45	He	11071.444	1106.038	0.39	20422271	0.98	1000000	
Mg	24	45	He	62207.469	6214.532	0.92	63508849	0.19	1000000	
Al	27	45	He	38536.244	3849.775	0.57	18585449	0.39	1000000	
K	39	45	He	6310.100	630.380	1.30	5780332	0.53	500000	
Ca	44	45	He	837596.904	83676.014	0.94	43257553	1.23	500000	>HDL
Ti	47	45	He	5325.026	531.971	1.39	1737508	0.80	10000	
V	51	45	He	135.040	13.490	2.56	1318102	1.95	10000	
Cr	52	45	He	172.051	17.188	0.95	2014588	0.27	10000	
Mn	55	45	He	1704.772	170.307	1.73	12875312	1.07	50000	
Fe	56	45	He	90363.661	9027.339	1.37	965400317	0.97	1000000	
Co	59	45	He	64.273	6.421	1.23	1178648	0.48	10000	
Ni	60	45	He	373.631	37.326	1.95	1816052	1.25	10000	
Cu	63	45	He	54.134	5.408	1.20	729358	0.51	10000	
Zn	66	115	He	358.553	35.820	0.57	360921	0.59	50000	
As	75	115	He	41.174	4.113	0.99	27045	0.92	2000	
Se	78	115	H2	1.010	0.101	5.18	177	5.01	10000	
Se	78	115	He	7.800	0.779	5.44	409	4.95	10000	
Sr	88	115	NoGas	29755.261	2972.554	0.73	891296013	0.88	50000	
Mo	95	115	NoGas	3.653	0.365	3.86	22819	3.80	10000	
Ag	107	115	NoGas	0.128	0.013	18.43	2090	18.26	5000	
Cd	111	115	He	0.836	0.084	5.38	1191	5.33	10000	
Sn	118	115	He	3.703	0.370	3.89	12476	3.71	10000	
Sn	118	115	NoGas	3.817	0.381	1.51	40437	1.56	10000	
Sb	121	115	NoGas	1.569	0.157	0.69	25326	0.58	10000	
Ba	137	165	NoGas	1146.774	114.563	0.95	7126169	1.00	50000	
Tl	205	165	NoGas	0.332	0.033	5.35	14527	5.05	5000	
Pb	208	165	NoGas	76.002	7.593	0.75	4611147	1.15	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	299353	1.08	163616	182.96	70	120	ISTD Failed
Sc	45	He	127546	0.75	71079	179.44	70	120	ISTD Failed
Sc	45	NoGas	1942890	0.52	951149	204.27	70	120	ISTD Failed
In	115	H2	723251	0.59	1007583	71.78	70	120	
In	115	He	314908	0.10	439049	71.73	70	120	
In	115	NoGas	1240928	0.20	1619798	76.61	70	120	
Tb	159	H2	1911003	1.24	2111966	90.48	70	120	
Tb	159	He	1101531	0.71	1288440	85.49	70	120	
Tb	159	NoGas	2468765	0.47	2404338	102.68	70	120	
Ho	165	H2	1796102	1.90	2032817	88.36	70	120	
Ho	165	He	1076197	0.50	1283106	83.87	70	120	
Ho	165	NoGas	2346433	0.40	2371226	98.95	70	120	

Sample Report

Sample Table

Sample Name	AZ02106S01 1/50
Data File Name	066SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T17:30:23-07:00
Sample Type	Sample
Dilution	0.4995005
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	0.669	0.334	4.66	4254	4.73	10000	
B	11	45	NoGas	24.772	12.373	2.35	144714	1.49	10000	
Na	23	45	He	4350.150	2172.902	1.68	5391479	0.54	1000000	
Mg	24	45	He	24682.831	12329.087	1.41	16940098	0.09	1000000	
Al	27	45	He	14344.878	7165.274	0.66	4796055	0.75	1000000	
K	39	45	He	2407.140	1202.367	2.47	1721509	0.96	500000	
Ca	44	45	He	313845.241	156765.855	2.13	11202232	0.87	500000	
Ti	47	45	He	1970.316	984.174	1.31	445898	1.02	10000	
V	51	45	He	50.981	25.465	1.80	332179	0.77	10000	
Cr	52	45	He	66.563	33.248	2.04	516428	0.71	10000	
Mn	55	45	He	675.435	337.380	2.53	3380741	1.20	50000	
Fe	56	45	He	36902.325	18432.730	1.43	258728167	0.14	1000000	
Co	59	45	He	27.661	13.816	1.93	332462	0.67	10000	
Ni	60	45	He	148.853	74.352	1.77	488080	0.73	10000	
Cu	63	45	He	23.865	11.920	1.46	214790	2.03	10000	
Zn	66	115	He	85.551	42.733	0.58	114184	0.55	50000	
As	75	115	He	8.441	4.216	3.59	8755	3.11	2000	
Se	78	115	H2	0.185	0.092	12.45	61	8.79	10000	
Se	78	115	He	1.609	0.804	18.29	203	9.48	10000	
Sr	88	115	NoGas	5647.321	2820.839	1.08	191472090	0.93	50000	
Mo	95	115	NoGas	0.509	0.254	4.98	4878	4.61	10000	
Ag	107	115	NoGas	0.029	0.014	11.00	620	8.53	5000	
Cd	111	115	He	0.209	0.104	11.90	377	10.87	10000	
Sn	118	115	He	0.452	0.226	13.95	3325	6.47	10000	
Sn	118	115	NoGas	0.416	0.208	1.52	9400	0.36	10000	
Sb	121	115	NoGas	0.051	0.025	15.11	6958	0.79	10000	
Ba	137	165	NoGas	241.060	120.410	1.39	1483567	1.24	50000	
Tl	205	165	NoGas	0.033	0.016	9.17	3687	3.39	5000	
Pb	208	165	NoGas	16.472	8.228	0.37	898774	0.18	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	204364	0.48	164751	124.04	70	120	ISTD Failed
Sc	45	He	95105	1.34	76221	124.78	70	120	ISTD Failed
Sc	45	NoGas	1148012	1.08	928342	123.66	70	120	ISTD Failed
In	115	H2	938584	0.44	997448	94.10	70	120	
In	115	He	417328	0.67	448471	93.06	70	120	
In	115	NoGas	1459551	1.06	1548791	94.24	70	120	
Tb	159	H2	2038280	0.92	2006856	101.57	70	120	
Tb	159	He	1200242	0.66	1205156	99.59	70	120	
Tb	159	NoGas	2321337	1.02	2266694	102.41	70	120	
Ho	165	H2	1957778	0.61	1916437	102.16	70	120	
Ho	165	He	1175674	0.59	1172479	100.27	70	120	
Ho	165	NoGas	2272067	0.19	2192200	103.64	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN009
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02107

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.20 U	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	3.6	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.19 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.099 J	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	34.4	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	12.6	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	8.3	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.015 J	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	79.6	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.057 J	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.05 U	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.05 U	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	48.7	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02107S01 1/10
Data File Name	102SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T20:33:56-07:00
Sample Type	Sample
Dilution	0.100502513
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.924	0.193	3.20	18289	2.66	10000	
B	11	45	NoGas	99.499	10.000	0.55	590332	0.93	10000	
Na	23	45	He	9756.496	980.552	0.85	18567170	0.50	1000000	
Mg	24	45	He	59899.554	6020.056	1.34	63031206	1.34	1000000	
Al	27	45	He	39194.184	3939.114	0.34	19483034	0.43	1000000	
K	39	45	He	6588.453	662.156	0.61	6217285	0.65	500000	
Ca	44	45	He	723412.996	72704.824	0.49	38506108	0.08	500000	>HDL
Ti	47	45	He	5232.930	525.923	1.14	1759949	1.23	10000	
V	51	45	He	136.442	13.713	0.99	1372754	1.15	10000	
Cr	52	45	He	171.064	17.192	0.87	2064541	0.68	10000	
Mn	55	45	He	1804.086	181.315	1.56	14044169	1.42	50000	
Fe	56	45	He	92982.277	9344.952	1.34	1023865417	0.97	1000000	
Co	59	45	He	74.391	7.476	1.30	1406099	1.58	10000	
Ni	60	45	He	390.092	39.205	1.71	1954316	1.45	10000	
Cu	63	45	He	54.621	5.490	1.17	758524	1.28	10000	
Zn	66	115	He	392.873	39.485	0.55	392277	0.88	50000	
As	75	115	He	34.732	3.491	1.18	22646	1.56	2000	
Se	78	115	H2	0.866	0.087	3.06	152	3.55	10000	
Se	78	115	He	9.429	0.948	10.03	482	9.51	10000	
Sr	88	115	NoGas	26822.037	2695.682	0.49	802473348	1.16	50000	
Mo	95	115	NoGas	2.638	0.265	2.18	16488	3.14	10000	
Ag	107	115	NoGas	0.121	0.012	1.87	1974	2.50	5000	
Cd	111	115	He	0.931	0.094	4.99	1313	4.47	10000	
Sn	118	115	He	4.068	0.409	2.34	13508	1.94	10000	
Sn	118	115	NoGas	4.167	0.419	0.05	43854	1.03	10000	
Sb	121	115	NoGas	1.290	0.130	1.13	21020	1.91	10000	
Ba	137	165	NoGas	1290.023	129.651	0.52	8085285	0.45	50000	
Tl	205	165	NoGas	0.280	0.028	4.56	12362	5.17	5000	
Pb	208	165	NoGas	73.795	7.417	0.61	4516357	1.17	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	307928	0.26	163616	188.20	70	120	ISTD Failed
Sc	45	He	131459	0.43	71079	184.95	70	120	ISTD Failed
Sc	45	NoGas	2029751	0.44	951149	213.40	70	120	ISTD Failed
In	115	H2	722847	0.56	1007583	71.74	70	120	
In	115	He	312406	0.65	439049	71.16	70	120	
In	115	NoGas	1239448	0.99	1619798	76.52	70	120	
Tb	159	H2	1907050	1.92	2111966	90.30	70	120	
Tb	159	He	1105304	0.07	1288440	85.79	70	120	
Tb	159	NoGas	2456100	0.78	2404338	102.15	70	120	
Ho	165	H2	1797629	1.51	2032817	88.43	70	120	
Ho	165	He	1090726	0.43	1283106	85.01	70	120	
Ho	165	NoGas	2366663	0.68	2371226	99.81	70	120	

Sample Report

Sample Table

Sample Name	AZ02107S01 1/50
Data File Name	071SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T18:00:36-07:00
Sample Type	Sample
Dilution	0.502512563
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	0.727	0.365	5.43	4901	1.95	10000	
B	11	45	NoGas	20.600	10.352	9.28	139194	1.83	10000	
Na	23	45	He	4086.925	2053.731	0.95	5240746	0.26	1000000	
Mg	24	45	He	25666.550	12897.764	1.24	18202038	0.16	1000000	
Al	27	45	He	15705.334	7892.128	1.42	5425347	0.57	1000000	
K	39	45	He	2604.648	1308.868	1.24	1914486	1.80	500000	
Ca	44	45	He	290766.691	146113.915	1.13	10725348	0.88	500000	
Ti	47	45	He	1995.268	1002.647	1.19	466571	0.11	10000	
V	51	45	He	54.247	27.260	1.59	365065	0.97	10000	
Cr	52	45	He	68.540	34.442	1.53	549464	0.70	10000	
Mn	55	45	He	756.729	380.266	1.74	3914005	0.90	50000	
Fe	56	45	He	40002.562	20101.790	1.24	289811260	0.75	1000000	
Co	59	45	He	29.997	15.074	1.56	372542	0.54	10000	
Ni	60	45	He	158.465	79.631	1.26	536882	0.31	10000	
Cu	63	45	He	25.075	12.600	2.13	233105	1.73	10000	
Zn	66	115	He	96.869	48.678	0.48	129246	0.48	50000	
As	75	115	He	7.208	3.622	1.13	7514	1.23	2000	
Se	78	115	H2	0.114	0.057	3.50	45	2.74	10000	
Se	78	115	He	1.727	0.868	8.29	211	4.56	10000	
Sr	88	115	NoGas	5061.053	2543.243	1.02	178308617	0.77	50000	
Mo	95	115	NoGas	0.366	0.184	4.57	4034	3.38	10000	
Ag	107	115	NoGas	0.024	0.012	11.85	557	9.89	5000	
Cd	111	115	He	0.197	0.099	9.63	358	9.23	10000	
Sn	118	115	He	0.532	0.267	5.99	3609	3.05	10000	
Sn	118	115	NoGas	0.510	0.256	3.57	10798	1.46	10000	
Sb	121	115	NoGas	0.053	0.027	19.88	7272	2.21	10000	
Ba	137	165	NoGas	281.093	141.253	0.32	1782199	0.72	50000	
Tl	205	165	NoGas	0.010	0.005	76.33	2887	11.42	5000	
Pb	208	165	NoGas	16.567	8.325	1.21	931193	0.74	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	210612	0.19	164751	127.84	70	120	ISTD Failed
Sc	45	He	98271	1.09	76221	128.93	70	120	ISTD Failed
Sc	45	NoGas	1228329	3.30	928342	132.31	70	120	ISTD Failed
In	115	H2	941154	0.67	997448	94.36	70	120	
In	115	He	417428	0.14	448471	93.08	70	120	
In	115	NoGas	1516614	0.41	1548791	97.92	70	120	
Tb	159	H2	2119522	0.49	2006856	105.61	70	120	
Tb	159	He	1221790	0.65	1205156	101.38	70	120	
Tb	159	NoGas	2453599	2.30	2266694	108.25	70	120	
Ho	165	H2	2033353	0.44	1916437	106.10	70	120	
Ho	165	He	1198405	0.54	1172479	102.21	70	120	
Ho	165	NoGas	2340751	0.56	2192200	106.78	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN010
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02108

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3015^	ANTIMONY (SB)	0.50 U	1.0	0.50	0.14	ug/L	1	09/18/14	09/23/14
6020A/3015^	ARSENIC (AS)	0.20 U	0.5	0.20	0.09	ug/L	1	09/18/14	09/23/14
6020A/3015^	BERYLLIUM (BE)	0.10 U	0.2	0.10	0.04	ug/L	1	09/18/14	09/23/14
6020A/3015^	CADMIUM (CD)	0.10 U	0.2	0.10	0.02	ug/L	1	09/18/14	09/23/14
6020A/3015^	CHROMIUM (CR)	0.30 J	0.5	0.20	0.07	ug/L	1	09/18/14	09/23/14
6020A/3015^	COPPER (CU)	0.57	0.5	0.40	0.13	ug/L	1	09/18/14	09/23/14
6020A/3015^	LEAD (PB)	0.40 U	0.5	0.40	0.19	ug/L	1	09/18/14	09/23/14
7470A/7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	1	09/18/14	09/20/14
6020A/3015^	NICKEL (NI)	0.28 J	0.5	0.40	0.16	ug/L	1	09/18/14	09/23/14
6020A/3015^	SELENIUM (SE)	0.40 U	1.0	0.40	0.10	ug/L	1	09/18/14	09/23/14
6020A/3015^	SILVER (AG)	0.10 U	0.2	0.10	0.03	ug/L	1	09/18/14	09/23/14
6020A/3015^	THALLIUM (TL)	0.20 U	0.2	0.20	0.10	ug/L	1	09/18/14	09/23/14
6020A/3015^	ZINC (ZN)	15.0 U	20	15.0	12.7	ug/L	1	09/18/14	09/23/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02108W12
Data File Name	051SMPL.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T16:29:24-07:00
Sample Type	Sample
Dilution	1.111111111
Comment	
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	-0.033	-0.037	-22.79	123	33.76	10000	
B	11	45	NoGas	21.993	24.436	1.39	87789	1.31	10000	
Na	23	45	He	86.421	96.023	2.39	180767	0.63	1000000	
Mg	24	45	He	25.923	28.803	3.98	17760	2.90	1000000	
Al	27	45	He	15.916	17.684	4.29	5618	3.25	1000000	
K	39	45	He	18.614	20.683	40.68	124897	3.86	500000	
Ca	44	45	He	73.499	81.666	1.34	2819	0.60	500000	
Ti	47	45	He	0.290	0.322	112.41	94	72.88	10000	
V	51	45	He	-0.268	-0.298	-4.19	946	6.93	10000	
Cr	52	45	He	0.266	0.295	7.72	3044	4.16	10000	
Mn	55	45	He	0.214	0.237	11.37	1650	6.55	50000	
Fe	56	45	He	3.102	3.446	2.82	51015	1.58	1000000	
Co	59	45	He	0.018	0.020	14.86	306	8.82	10000	
Ni	60	45	He	0.252	0.280	48.03	1213	30.63	10000	
Cu	63	45	He	0.512	0.569	2.33	5788	1.21	10000	
Zn	66	115	He	1.761	1.956	3.67	3655	2.73	50000	
As	75	115	He	-0.225	-0.250	-1.65	41	11.09	2000	
Se	78	115	H2	-0.055	-0.062	-19.46	4	73.28	10000	
Se	78	115	He	0.346	0.384	21.22	126	4.64	10000	
Sr	88	115	NoGas	0.442	0.492	1.16	18794	1.01	50000	
Mo	95	115	NoGas	-0.115	-0.128	-10.23	420	22.71	10000	
Ag	107	115	NoGas	-0.004	-0.005	-12.35	17	69.28	5000	
Cd	111	115	He	0.000	-0.001	-439.77	7	56.77	10000	
Sn	118	115	He	-0.262	-0.292	-6.62	630	12.10	10000	
Sn	118	115	NoGas	-0.242	-0.269	-1.35	1925	1.74	10000	
Sb	121	115	NoGas	-0.378	-0.420	-1.73	1610	8.15	10000	
Ba	137	165	NoGas	0.133	0.148	28.99	1207	21.78	50000	
Tl	205	165	NoGas	-0.029	-0.032	-3.10	753	4.06	5000	
Pb	208	165	NoGas	0.005	0.006	112.22	7808	5.04	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	203094	0.94	185584	109.43	70	120	
Sc	45	He	91081	0.76	83499	109.08	70	120	
Sc	45	NoGas	1123815	0.88	1035739	108.50	70	120	
In	115	H2	1175851	0.67	1133962	103.69	70	120	
In	115	He	531363	0.17	512916	103.60	70	120	
In	115	NoGas	1827363	0.43	1726182	105.86	70	120	
Tb	159	H2	2342243	0.59	2259927	103.64	70	120	
Tb	159	He	1389146	0.47	1384042	100.37	70	120	
Tb	159	NoGas	2635788	1.65	2544437	103.59	70	120	
Ho	165	H2	2213425	1.16	2140395	103.41	70	120	
Ho	165	He	1360635	0.59	1350145	100.78	70	120	
Ho	165	NoGas	2592871	0.96	2467012	105.10	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN011
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02109

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3015^	ANTIMONY (SB)	0.50 U	1.0	0.50	0.14	ug/L	1	09/18/14	09/23/14
6020A/3015^	ARSENIC (AS)	0.20 U	0.5	0.20	0.09	ug/L	1	09/18/14	09/23/14
6020A/3015^	BERYLLIUM (BE)	0.10 U	0.2	0.10	0.04	ug/L	1	09/18/14	09/23/14
6020A/3015^	CADMIUM (CD)	0.10 U	0.2	0.10	0.02	ug/L	1	09/18/14	09/23/14
6020A/3015^	CHROMIUM (CR)	0.31 J	0.5	0.20	0.07	ug/L	1	09/18/14	09/23/14
6020A/3015^	COPPER (CU)	0.46 J	0.5	0.40	0.13	ug/L	1	09/18/14	09/23/14
6020A/3015^	LEAD (PB)	0.40 U	0.5	0.40	0.19	ug/L	1	09/18/14	09/23/14
7470A/7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	1	09/18/14	09/20/14
6020A/3015^	NICKEL (NI)	0.25 J	0.5	0.40	0.16	ug/L	1	09/18/14	09/23/14
6020A/3015^	SELENIUM (SE)	0.40 U	1.0	0.40	0.10	ug/L	1	09/18/14	09/23/14
6020A/3015^	SILVER (AG)	0.10 U	0.2	0.10	0.03	ug/L	1	09/18/14	09/23/14
6020A/3015^	THALLIUM (TL)	0.20 U	0.2	0.20	0.10	ug/L	1	09/18/14	09/23/14
6020A/3015^	ZINC (ZN)	15.0 U	20	15.0	12.7	ug/L	1	09/18/14	09/23/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02109W12
Data File Name	052SMPL.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T16:35:26-07:00
Sample Type	Sample
Dilution	1.111111111
Comment	
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	-0.020	-0.022	-34.90	197	17.86	10000	
B	11	45	NoGas	18.539	20.599	1.46	75952	0.50	10000	
Na	23	45	He	55.879	62.088	4.14	146763	0.75	1000000	
Mg	24	45	He	22.984	25.537	4.45	15904	3.00	1000000	
Al	27	45	He	2.406	2.674	11.40	1422	5.75	1000000	
K	39	45	He	17.458	19.398	37.98	124034	4.05	500000	
Ca	44	45	He	48.705	54.116	1.12	2000	1.76	500000	
Ti	47	45	He	0.133	0.148	87.00	61	40.21	10000	
V	51	45	He	-0.277	-0.308	-5.22	889	9.64	10000	
Cr	52	45	He	0.278	0.309	11.61	3127	6.65	10000	
Mn	55	45	He	0.266	0.296	12.19	1892	7.07	50000	
Fe	56	45	He	0.835	0.927	6.06	35923	0.81	1000000	
Co	59	45	He	0.018	0.020	32.21	310	20.43	10000	
Ni	60	45	He	0.222	0.246	11.91	1120	6.44	10000	
Cu	63	45	He	0.415	0.461	2.66	4981	2.81	10000	
Zn	66	115	He	2.509	2.788	2.04	4842	0.53	50000	
As	75	115	He	-0.220	-0.244	-3.66	46	19.58	2000	
Se	78	115	H2	-0.055	-0.061	-3.98	4	14.32	10000	
Se	78	115	He	0.320	0.355	55.48	124	11.41	10000	
Sr	88	115	NoGas	0.230	0.255	2.50	10460	2.93	50000	
Mo	95	115	NoGas	-0.110	-0.122	-5.29	463	9.73	10000	
Ag	107	115	NoGas	-0.003	-0.004	-24.52	40	43.30	5000	
Cd	111	115	He	0.003	0.003	124.77	14	51.51	10000	
Sn	118	115	He	-0.292	-0.324	-2.66	503	7.37	10000	
Sn	118	115	NoGas	-0.276	-0.307	-1.12	1522	1.76	10000	
Sb	121	115	NoGas	-0.379	-0.421	-4.49	1600	19.52	10000	
Ba	137	165	NoGas	0.081	0.090	16.84	863	9.65	50000	
Tl	205	165	NoGas	-0.029	-0.033	-3.58	750	4.81	5000	
Pb	208	165	NoGas	-0.019	-0.021	-54.10	6444	9.67	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	201457	1.72	185584	108.55	70	120	
Sc	45	He	90956	1.00	83499	108.93	70	120	
Sc	45	NoGas	1117806	1.39	1035739	107.92	70	120	
In	115	H2	1168029	0.25	1133962	103.00	70	120	
In	115	He	532331	1.18	512916	103.79	70	120	
In	115	NoGas	1839209	0.95	1726182	106.55	70	120	
Tb	159	H2	2339471	1.20	2259927	103.52	70	120	
Tb	159	He	1388721	0.31	1384042	100.34	70	120	
Tb	159	NoGas	2628066	1.30	2544437	103.29	70	120	
Ho	165	H2	2210807	0.53	2140395	103.29	70	120	
Ho	165	He	1363694	0.54	1350145	101.00	70	120	
Ho	165	NoGas	2585485	1.08	2467012	104.80	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN012
Sample Collection Date: 09/03/14

ARF: 74218
APPL ID: AZ02110

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.16 J	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	5.1	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.25 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.25	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	60.2	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	25.8	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	20.6	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.067 J	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	134	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.087 J	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.034 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.024 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	106	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02110S01 1/10
Data File Name	103SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T20:40:00-07:00
Sample Type	Sample
Dilution	0.099403579
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	2.467	0.245	0.53	38333	0.53	10000	
B	11	45	NoGas	39.492	3.926	0.88	404749	0.96	10000	
Na	23	45	He	5042.176	501.210	0.45	16300175	1.25	1000000	
Mg	24	45	He	43890.478	4362.871	0.85	77826412	0.22	1000000	
Al	27	45	He	48942.569	4865.066	1.12	40994999	0.34	1000000	
K	39	45	He	7686.151	764.031	0.34	12200048	0.86	500000	
Ca	44	45	He	281591.711	27991.224	0.63	25258232	0.49	500000	
Ti	47	45	He	5578.205	554.494	0.22	3161447	0.80	10000	
V	51	45	He	170.392	16.938	1.34	2886743	0.54	10000	
Cr	52	45	He	223.111	22.178	0.45	4536838	0.69	10000	
Mn	55	45	He	2522.788	250.774	0.45	33094333	0.72	50000	
Fe	56	45	He	121095.529	12037.329	0.64	2247027537	0.42	1000000	
Co	59	45	He	98.534	9.795	1.06	3138188	1.25	10000	
Ni	60	45	He	488.012	48.510	0.39	4119982	1.21	10000	
Cu	63	45	He	94.262	9.370	0.42	2203662	0.89	10000	
Zn	66	115	He	872.380	86.718	0.07	904059	0.07	50000	
As	75	115	He	49.772	4.948	0.52	33669	0.56	2000	
Se	78	115	H2	1.136	0.113	6.27	207	4.90	10000	
Se	78	115	He	17.611	1.751	6.75	894	6.53	10000	
Sr	88	115	NoGas	11906.750	1183.574	5.02	380460274	0.95	50000	
Mo	95	115	NoGas	5.177	0.515	6.28	34445	0.51	10000	
Ag	107	115	NoGas	0.321	0.032	8.39	5588	6.43	5000	
Cd	111	115	He	2.265	0.225	2.38	3296	2.23	10000	
Sn	118	115	He	9.209	0.915	1.40	30600	1.46	10000	
Sn	118	115	NoGas	9.177	0.912	5.47	99811	0.76	10000	
Sb	121	115	NoGas	2.484	0.247	7.23	42005	2.55	10000	
Ba	137	165	NoGas	2394.300	238.002	1.40	16735398	1.37	50000	
Tl	205	165	NoGas	0.430	0.043	3.01	21128	1.03	5000	
Pb	208	165	NoGas	185.785	18.468	2.42	12645421	1.01	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	515211	0.32	163616	314.89	70	120	ISTD Failed
Sc	45	He	221528	0.83	71079	311.67	70	120	ISTD Failed
Sc	45	NoGas	3363751	0.71	951149	353.65	70	120	ISTD Failed
In	115	H2	755246	1.33	1007583	74.96	70	120	
In	115	He	324477	0.14	439049	73.90	70	120	
In	115	NoGas	1326449	6.08	1619798	81.89	70	120	
Tb	159	H2	2176232	1.30	2111966	103.04	70	120	
Tb	159	He	1261865	0.65	1288440	97.94	70	120	
Tb	159	NoGas	2779864	0.86	2404338	115.62	70	120	
Ho	165	H2	2016132	1.86	2032817	99.18	70	120	
Ho	165	He	1222675	0.26	1283106	95.29	70	120	
Ho	165	NoGas	2639993	2.70	2371226	111.33	70	120	

Sample Report

Sample Table

Sample Name	AZ02110S01 1/50
Data File Name	072SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T18:06:38-07:00
Sample Type	Sample
Dilution	0.497017893
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.243	0.618	4.84	9756	4.68	10000	
B	11	45	NoGas	2.812	1.397	4.46	88403	2.02	10000	
Na	23	45	He	2868.806	1425.848	1.15	4384621	0.79	1000000	
Mg	24	45	He	25159.841	12504.891	0.37	21083453	0.80	1000000	
Al	27	45	He	26421.513	13131.965	1.04	10783551	0.24	1000000	
K	39	45	He	4025.289	2000.641	1.65	3411252	0.69	500000	
Ca	44	45	He	148314.334	73714.878	0.43	6464584	0.66	500000	
Ti	47	45	He	2897.855	1440.286	1.15	800633	0.63	10000	
V	51	45	He	90.982	45.219	1.33	721154	0.59	10000	
Cr	52	45	He	121.062	60.170	1.26	1145481	0.49	10000	
Mn	55	45	He	1377.098	684.442	0.83	8415308	0.68	50000	
Fe	56	45	He	69083.175	34335.574	0.87	591321612	0.16	1000000	
Co	59	45	He	53.353	26.517	1.21	782761	0.99	10000	
Ni	60	45	He	270.212	134.300	0.88	1081252	1.24	10000	
Cu	63	45	He	51.863	25.777	2.01	568051	1.55	10000	
Zn	66	115	He	213.632	106.179	0.74	277860	0.51	50000	
As	75	115	He	10.178	5.059	0.77	10269	0.47	2000	
Se	78	115	H2	0.175	0.087	26.42	58	17.83	10000	
Se	78	115	He	2.713	1.348	2.30	271	1.69	10000	
Sr	88	115	NoGas	2286.581	1136.472	1.41	79211817	0.59	50000	
Mo	95	115	NoGas	0.826	0.411	3.17	7242	2.76	10000	
Ag	107	115	NoGas	0.068	0.034	3.80	1380	4.41	5000	
Cd	111	115	He	0.512	0.255	2.79	878	3.36	10000	
Sn	118	115	He	1.676	0.833	3.16	7501	3.10	10000	
Sn	118	115	NoGas	1.535	0.763	0.96	21660	0.81	10000	
Sb	121	115	NoGas	0.315	0.156	5.49	11521	3.35	10000	
Ba	137	165	NoGas	521.547	259.218	2.11	3379853	1.36	50000	
Tl	205	165	NoGas	0.048	0.024	18.07	4534	6.84	5000	
Pb	208	165	NoGas	41.384	20.569	1.63	2366389	0.19	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	250830	0.83	164751	152.25	70	120	ISTD Failed
Sc	45	He	116110	0.94	76221	152.33	70	120	ISTD Failed
Sc	45	NoGas	1481899	2.02	928342	159.63	70	120	ISTD Failed
In	115	H2	921996	0.70	997448	92.44	70	120	
In	115	He	407919	0.65	448471	90.96	70	120	
In	115	NoGas	1491284	0.86	1548791	96.29	70	120	
Tb	159	H2	2190957	1.73	2006856	109.17	70	120	
Tb	159	He	1224336	0.14	1205156	101.59	70	120	
Tb	159	NoGas	2466128	0.78	2266694	108.80	70	120	
Ho	165	H2	2077431	2.35	1916437	108.40	70	120	
Ho	165	He	1197635	0.59	1172479	102.15	70	120	
Ho	165	NoGas	2393188	1.58	2192200	109.17	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN013
Sample Collection Date: 09/03/14

ARF: 74218
APPL ID: AZ02111

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.20 U	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	5.8	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.25 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.24	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	69.7	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	24.1	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	18.9	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.068 J	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	148	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.11 J	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.025 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.031 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	104	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02111S01 1/10
Data File Name	104SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T20:46:03-07:00
Sample Type	Sample
Dilution	0.100603622
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	2.479	0.249	1.83	42061	0.99	10000	
B	11	45	NoGas	42.283	4.254	1.46	471161	0.35	10000	
Na	23	45	He	5180.251	521.152	1.17	18147556	1.04	1000000	
Mg	24	45	He	46509.056	4678.980	1.03	89416099	1.20	1000000	
Al	27	45	He	49225.996	4952.313	0.46	44705866	0.61	1000000	
K	39	45	He	7911.360	795.911	1.17	13609765	0.64	500000	
Ca	44	45	He	295274.543	29705.688	0.84	28716068	1.10	500000	
Ti	47	45	He	5948.959	598.487	1.04	3655601	1.74	10000	
V	51	45	He	166.005	16.701	1.00	3049482	0.27	10000	
Cr	52	45	He	222.964	22.431	0.05	4915618	0.79	10000	
Mn	55	45	He	2101.476	211.416	0.31	29889512	1.07	50000	
Fe	56	45	He	118713.038	11942.962	0.53	2388347710	0.92	1000000	
Co	59	45	He	97.479	9.807	0.49	3365891	0.34	10000	
Ni	60	45	He	492.349	49.532	0.42	4506419	0.77	10000	
Cu	63	45	He	81.930	8.242	0.14	2077087	0.97	10000	
Zn	66	115	He	824.328	82.930	0.30	844468	0.15	50000	
As	75	115	He	54.467	5.480	0.75	36413	0.84	2000	
Se	78	115	H2	1.193	0.120	7.22	211	8.28	10000	
Se	78	115	He	19.005	1.912	4.93	950	4.74	10000	
Sr	88	115	NoGas	16849.571	1695.128	0.31	513924432	0.71	50000	
Mo	95	115	NoGas	4.257	0.428	2.09	27065	1.68	10000	
Ag	107	115	NoGas	0.241	0.024	2.56	4001	2.65	5000	
Cd	111	115	He	1.871	0.188	2.56	2695	2.29	10000	
Sn	118	115	He	9.067	0.912	1.12	29796	0.84	10000	
Sn	118	115	NoGas	9.299	0.935	0.67	96517	0.80	10000	
Sb	121	115	NoGas	2.017	0.203	1.32	32812	1.64	10000	
Ba	137	165	NoGas	2641.200	265.714	0.51	18179502	1.37	50000	
Tl	205	165	NoGas	0.484	0.049	2.38	23361	1.17	5000	
Pb	208	165	NoGas	164.352	16.534	1.47	11019000	0.76	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	556474	0.87	163616	340.11	70	120	ISTD Failed
Sc	45	He	240179	0.83	71079	337.91	70	120	ISTD Failed
Sc	45	NoGas	3674106	1.71	951149	386.28	70	120	ISTD Failed
In	115	H2	730616	1.48	1007583	72.51	70	120	
In	115	He	320747	0.26	439049	73.06	70	120	
In	115	NoGas	1263567	0.43	1619798	78.01	70	120	
Tb	159	H2	2136210	0.41	2111966	101.15	70	120	
Tb	159	He	1260789	0.30	1288440	97.85	70	120	
Tb	159	NoGas	2778797	1.67	2404338	115.57	70	120	
Ho	165	H2	1985321	1.18	2032817	97.66	70	120	
Ho	165	He	1214120	0.28	1283106	94.62	70	120	
Ho	165	NoGas	2599069	1.21	2371226	109.61	70	120	

Sample Report

Sample Table

Sample Name	AZ02111S01 1/50
Data File Name	073SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T18:12:39-07:00
Sample Type	Sample
Dilution	0.503018109
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.337	0.673	1.84	11014	2.89	10000	
B	11	45	NoGas	6.397	3.218	6.05	110010	1.48	10000	
Na	23	45	He	3136.632	1577.782	0.63	5009557	0.95	1000000	
Mg	24	45	He	28864.820	14519.527	0.48	25336806	0.37	1000000	
Al	27	45	He	28334.443	14252.738	0.30	12114386	0.57	1000000	
K	39	45	He	4368.132	2197.249	1.05	3864268	1.05	500000	
Ca	44	45	He	166276.396	83640.038	0.73	7591770	0.56	500000	
Ti	47	45	He	3293.583	1656.732	0.75	953242	0.77	10000	
V	51	45	He	94.693	47.632	0.36	786153	0.61	10000	
Cr	52	45	He	138.497	69.666	0.55	1372575	0.79	10000	
Mn	55	45	He	1238.429	622.952	1.07	7927999	1.31	50000	
Fe	56	45	He	73442.177	36942.745	0.91	658518232	0.68	1000000	
Co	59	45	He	56.771	28.557	0.36	872500	0.53	10000	
Ni	60	45	He	293.277	147.524	0.38	1229227	0.27	10000	
Cu	63	45	He	47.815	24.052	0.44	548764	0.27	10000	
Zn	66	115	He	206.652	103.950	1.08	266719	0.49	50000	
As	75	115	He	11.626	5.848	0.91	11605	0.60	2000	
Se	78	115	H2	0.211	0.106	8.15	65	6.17	10000	
Se	78	115	He	2.859	1.438	17.37	278	11.02	10000	
Sr	88	115	NoGas	3144.317	1581.648	2.38	109317048	0.59	50000	
Mo	95	115	NoGas	0.676	0.340	5.49	6195	3.97	10000	
Ag	107	115	NoGas	0.050	0.025	4.12	1043	2.41	5000	
Cd	111	115	He	0.483	0.243	11.46	823	10.46	10000	
Sn	118	115	He	1.601	0.805	1.64	7185	2.06	10000	
Sn	118	115	NoGas	1.540	0.775	3.46	21799	1.05	10000	
Sb	121	115	NoGas	0.188	0.095	10.16	9433	2.33	10000	
Ba	137	165	NoGas	594.237	298.912	0.27	3854487	0.78	50000	
Tl	205	165	NoGas	0.061	0.031	3.98	5058	1.40	5000	
Pb	208	165	NoGas	37.542	18.884	1.05	2149342	0.54	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	258248	0.61	164751	156.75	70	120	ISTD Failed
Sc	45	He	121626	0.34	76221	159.57	70	120	ISTD Failed
Sc	45	NoGas	1560593	1.19	928342	168.11	70	120	ISTD Failed
In	115	H2	903203	0.17	997448	90.55	70	120	
In	115	He	404773	0.81	448471	90.26	70	120	
In	115	NoGas	1496974	1.80	1548791	96.65	70	120	
Tb	159	H2	2151420	1.48	2006856	107.20	70	120	
Tb	159	He	1220275	0.26	1205156	101.25	70	120	
Tb	159	NoGas	2494722	0.42	2266694	110.06	70	120	
Ho	165	H2	2055155	0.94	1916437	107.24	70	120	
Ho	165	He	1191022	0.23	1172479	101.58	70	120	
Ho	165	NoGas	2395068	0.96	2192200	109.25	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN014
Sample Collection Date: 09/03/14

ARF: 74218
APPL ID: AZ02112

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.20 U	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	2.4	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.16 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.061 J	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	20.6	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	10.3	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	7.4	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.04 U	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	57.5	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.057 J	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.05 U	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.05 U	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	30.4	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02112S01 1/10
Data File Name	105SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T20:52:05-07:00
Sample Type	Sample
Dilution	0.099403579
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.587	0.158	2.81	11434	2.22	10000	
B	11	45	NoGas	94.003	9.344	0.22	417817	0.98	10000	
Na	23	45	He	9557.927	950.092	0.84	13666097	0.46	1000000	
Mg	24	45	He	55360.105	5502.993	1.05	43758884	0.17	1000000	
Al	27	45	He	30233.695	3005.337	1.23	11289307	0.60	1000000	
K	39	45	He	5961.534	592.598	0.94	4231656	0.60	500000	
Ca	44	45	He	726552.517	72221.920	0.37	29051677	0.72	500000	>HDL
Ti	47	45	He	3145.083	312.632	1.07	794561	0.39	10000	
V	51	45	He	104.579	10.396	0.25	791199	0.66	10000	
Cr	52	45	He	110.869	11.021	0.42	1005559	0.65	10000	
Mn	55	45	He	1469.784	146.102	0.75	8595156	0.59	50000	
Fe	56	45	He	78540.971	7807.254	0.24	649700134	0.75	1000000	
Co	59	45	He	57.984	5.764	1.25	823296	0.43	10000	
Ni	60	45	He	296.096	29.433	1.38	1114394	0.48	10000	
Cu	63	45	He	53.209	5.289	1.36	555083	0.88	10000	
Zn	66	115	He	243.924	24.247	0.63	242074	0.27	50000	
As	75	115	He	22.774	2.264	0.67	14777	0.90	2000	
Se	78	115	H2	0.804	0.080	5.05	142	4.37	10000	
Se	78	115	He	6.266	0.623	2.45	333	1.76	10000	
Sr	88	115	NoGas	20677.488	2055.416	0.81	608650751	1.47	50000	
Mo	95	115	NoGas	2.365	0.235	1.39	14546	1.10	10000	
Ag	107	115	NoGas	0.107	0.011	15.42	1723	15.98	5000	
Cd	111	115	He	0.553	0.055	8.02	782	7.97	10000	
Sn	118	115	He	2.746	0.273	0.13	9341	0.50	10000	
Sn	118	115	NoGas	2.912	0.289	2.28	30921	3.47	10000	
Sb	121	115	NoGas	0.263	0.026	6.19	5158	3.60	10000	
Ba	137	165	NoGas	723.555	71.924	2.37	4366483	2.14	50000	
Tl	205	165	NoGas	0.285	0.028	4.63	12098	3.65	5000	
Pb	208	165	NoGas	69.587	6.917	1.30	4101481	1.06	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	230781	0.48	163616	141.05	70	120	ISTD Failed
Sc	45	He	98753	0.91	71079	138.93	70	120	ISTD Failed
Sc	45	NoGas	1518150	1.17	951149	159.61	70	120	ISTD Failed
In	115	H2	724843	0.61	1007583	71.94	70	120	
In	115	He	310265	0.39	439049	70.67	70	120	
In	115	NoGas	1219473	1.50	1619798	75.29	70	120	
Tb	159	H2	1874154	0.69	2111966	88.74	70	120	
Tb	159	He	1077194	0.25	1288440	83.60	70	120	
Tb	159	NoGas	2368806	2.27	2404338	98.52	70	120	
Ho	165	H2	1769271	0.86	2032817	87.04	70	120	
Ho	165	He	1067362	0.20	1283106	83.19	70	120	
Ho	165	NoGas	2278811	1.05	2371226	96.10	70	120	

Sample Report

Sample Table

Sample Name	AZ02112S01 1/50
Data File Name	074SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T18:18:41-07:00
Sample Type	Sample
Dilution	0.497017893
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	0.499	0.248	6.01	3084	5.24	10000	
B	11	45	NoGas	15.395	7.652	3.82	105728	1.68	10000	
Na	23	45	He	3516.980	1748.002	2.07	4012635	0.90	1000000	
Mg	24	45	He	20725.946	10301.166	2.13	13035025	1.10	1000000	
Al	27	45	He	10660.456	5298.437	2.72	3265998	1.83	1000000	
K	39	45	He	2025.888	1006.903	1.53	1346183	0.85	500000	
Ca	44	45	He	250676.989	124590.949	2.42	8199442	1.29	500000	
Ti	47	45	He	1115.622	554.484	1.43	231377	0.38	10000	
V	51	45	He	37.944	18.859	2.36	227200	1.28	10000	
Cr	52	45	He	41.354	20.554	1.66	294517	1.57	10000	
Mn	55	45	He	541.540	269.155	1.98	2484267	0.83	50000	
Fe	56	45	He	29165.269	14495.661	0.83	187405326	0.64	1000000	
Co	59	45	He	22.153	11.010	1.07	244059	0.80	10000	
Ni	60	45	He	115.757	57.533	1.69	347950	0.65	10000	
Cu	63	45	He	20.687	10.282	1.33	170757	0.80	10000	
Zn	66	115	He	61.259	30.447	0.93	81665	0.63	50000	
As	75	115	He	4.835	2.403	1.59	5105	1.24	2000	
Se	78	115	H2	0.114	0.057	11.07	45	6.37	10000	
Se	78	115	He	0.688	0.342	8.45	140	2.58	10000	
Sr	88	115	NoGas	3807.925	1892.607	1.11	137791685	0.37	50000	
Mo	95	115	NoGas	0.236	0.117	7.38	3177	4.59	10000	
Ag	107	115	NoGas	0.018	0.009	24.11	450	20.37	5000	
Cd	111	115	He	0.122	0.061	8.00	228	7.89	10000	
Sn	118	115	He	0.268	0.133	19.02	2662	7.28	10000	
Sn	118	115	NoGas	0.211	0.105	4.96	7721	1.11	10000	
Sb	121	115	NoGas	-0.188	-0.094	-7.67	3254	6.99	10000	
Ba	137	165	NoGas	142.590	70.870	0.43	922552	0.51	50000	
Tl	205	165	NoGas	0.015	0.007	8.57	3147	1.32	5000	
Pb	208	165	NoGas	14.827	7.369	0.96	851125	0.92	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	186421	0.13	164751	113.15	70	120	
Sc	45	He	87152	1.15	76221	114.34	70	120	
Sc	45	NoGas	1082136	0.87	928342	116.57	70	120	
In	115	H2	936885	0.39	997448	93.93	70	120	
In	115	He	416008	0.66	448471	92.76	70	120	
In	115	NoGas	1557725	0.79	1548791	100.58	70	120	
Tb	159	H2	2164048	1.92	2006856	107.83	70	120	
Tb	159	He	1213887	0.23	1205156	100.72	70	120	
Tb	159	NoGas	2431683	1.40	2266694	107.28	70	120	
Ho	165	H2	1990493	2.32	1916437	103.86	70	120	
Ho	165	He	1188119	0.14	1172479	101.33	70	120	
Ho	165	NoGas	2388111	0.38	2192200	108.94	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN015
Sample Collection Date: 09/03/14

ARF: 74218
APPL ID: AZ02113

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.20	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	5.9	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.25 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.32	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	74.6	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	27.6	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	32.9	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.070 J	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	151	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.11 J	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.036 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.021 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	123	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02113S01 1/10
Data File Name	106SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T20:58:08-07:00
Sample Type	Sample
Dilution	0.100401606
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	2.468	0.248	1.23	42983	1.26	10000	
B	11	45	NoGas	33.973	3.411	0.73	394529	0.60	10000	
Na	23	45	He	5015.356	503.550	1.12	17955631	0.83	1000000	
Mg	24	45	He	46029.739	4621.460	0.72	90388445	0.39	1000000	
Al	27	45	He	52580.790	5279.196	0.21	48776165	0.74	1000000	
K	39	45	He	8010.281	804.245	1.54	14073883	1.62	500000	
Ca	44	45	He	239160.288	24012.077	0.96	23756407	0.51	500000	
Ti	47	45	He	6491.531	651.760	1.45	4073954	0.52	10000	
V	51	45	He	173.419	17.412	0.82	3253595	0.31	10000	
Cr	52	45	He	234.248	23.519	1.29	5274575	0.66	10000	
Mn	55	45	He	2334.391	234.377	0.80	33911599	0.16	50000	
Fe	56	45	He	121129.569	12161.603	0.92	2489061590	0.12	1000000	
Co	59	45	He	99.480	9.988	1.18	3508460	0.41	10000	
Ni	60	45	He	487.815	48.977	0.53	4560739	1.29	10000	
Cu	63	45	He	91.693	9.206	0.57	2373970	0.93	10000	
Zn	66	115	He	980.472	98.441	3.35	971592	0.57	50000	
As	75	115	He	54.503	5.472	3.34	35250	0.80	2000	
Se	78	115	H2	1.397	0.140	5.29	242	5.41	10000	
Se	78	115	He	19.257	1.933	1.45	931	1.87	10000	
Sr	88	115	NoGas	13919.617	1397.552	6.63	425212954	0.99	50000	
Mo	95	115	NoGas	5.296	0.532	4.67	33727	1.59	10000	
Ag	107	115	NoGas	0.376	0.038	3.98	6268	7.50	5000	
Cd	111	115	He	2.726	0.274	3.43	3791	0.61	10000	
Sn	118	115	He	10.329	1.037	4.40	32709	1.55	10000	
Sn	118	115	NoGas	10.178	1.022	5.29	105626	1.43	10000	
Sb	121	115	NoGas	2.947	0.296	5.30	47476	0.81	10000	
Ba	137	165	NoGas	3058.317	307.060	1.51	21050841	1.19	50000	
Tl	205	165	NoGas	0.464	0.047	3.09	22420	2.81	5000	
Pb	208	165	NoGas	276.431	27.754	1.08	18521080	0.52	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	580714	1.05	163616	354.93	70	120	ISTD Failed
Sc	45	He	245327	0.94	71079	345.15	70	120	ISTD Failed
Sc	45	NoGas	3770283	1.00	951149	396.39	70	120	ISTD Failed
In	115	H2	718331	0.36	1007583	71.29	70	120	
In	115	He	310489	2.86	439049	70.72	70	120	
In	115	NoGas	1268791	5.83	1619798	78.33	70	120	
Tb	159	H2	2134737	1.14	2111966	101.08	70	120	
Tb	159	He	1247095	2.42	1288440	96.79	70	120	
Tb	159	NoGas	2761996	1.10	2404338	114.88	70	120	
Ho	165	H2	1980715	0.56	2032817	97.44	70	120	
Ho	165	He	1193850	2.22	1283106	93.04	70	120	
Ho	165	NoGas	2599228	0.57	2371226	109.62	70	120	

Sample Report

Sample Table

Sample Name	AZ02113S01 1/50
Data File Name	075SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T18:24:43-07:00
Sample Type	Sample
Dilution	0.502008032
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.387	0.696	6.18	11761	4.66	10000	
B	11	45	NoGas	2.957	1.484	13.77	96734	0.64	10000	
Na	23	45	He	3080.017	1546.193	1.69	5066203	0.66	1000000	
Mg	24	45	He	28995.506	14555.977	1.95	26199348	0.81	1000000	
Al	27	45	He	30409.230	15265.678	2.39	13382708	1.18	1000000	
K	39	45	He	4534.909	2276.561	0.98	4123689	0.70	500000	
Ca	44	45	He	135412.076	67977.950	1.67	6364611	0.63	500000	
Ti	47	45	He	3678.655	1846.714	1.48	1096002	0.39	10000	
V	51	45	He	100.627	50.516	2.11	859709	0.87	10000	
Cr	52	45	He	148.635	74.616	1.37	1516260	0.60	10000	
Mn	55	45	He	1400.440	703.032	1.13	9228757	0.13	50000	
Fe	56	45	He	76051.315	38178.371	1.89	701979990	1.22	1000000	
Co	59	45	He	58.350	29.292	1.33	923134	0.10	10000	
Ni	60	45	He	300.510	150.858	0.43	1296778	1.65	10000	
Cu	63	45	He	54.894	27.557	1.29	648315	0.18	10000	
Zn	66	115	He	244.697	122.840	0.21	314198	0.21	50000	
As	75	115	He	11.729	5.888	0.52	11649	0.24	2000	
Se	78	115	H2	0.217	0.109	12.72	67	10.22	10000	
Se	78	115	He	3.732	1.873	4.74	334	3.13	10000	
Sr	88	115	NoGas	2637.118	1323.854	1.47	91879872	0.80	50000	
Mo	95	115	NoGas	0.847	0.425	4.71	7432	2.83	10000	
Ag	107	115	NoGas	0.072	0.036	11.77	1463	11.46	5000	
Cd	111	115	He	0.643	0.323	0.27	1083	0.59	10000	
Sn	118	115	He	1.866	0.937	4.02	8058	3.11	10000	
Sn	118	115	NoGas	1.683	0.845	2.53	23390	1.65	10000	
Sb	121	115	NoGas	0.389	0.195	11.27	12825	4.85	10000	
Ba	137	165	NoGas	686.082	344.419	0.57	4433896	0.94	50000	
Tl	205	165	NoGas	0.042	0.021	8.85	4241	4.13	5000	
Pb	208	165	NoGas	65.509	32.886	0.81	3731103	0.56	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	270443	0.54	164751	164.15	70	120	ISTD Failed
Sc	45	He	125219	1.23	76221	164.28	70	120	ISTD Failed
Sc	45	NoGas	1610015	1.42	928342	173.43	70	120	ISTD Failed
In	115	H2	911533	0.82	997448	91.39	70	120	
In	115	He	402803	0.41	448471	89.82	70	120	
In	115	NoGas	1499872	1.04	1548791	96.84	70	120	
Tb	159	H2	2200304	1.27	2006856	109.64	70	120	
Tb	159	He	1224308	0.65	1205156	101.59	70	120	
Tb	159	NoGas	2477117	0.14	2266694	109.28	70	120	
Ho	165	H2	2035400	2.36	1916437	106.21	70	120	
Ho	165	He	1190226	1.19	1172479	101.51	70	120	
Ho	165	NoGas	2386261	0.55	2192200	108.85	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN016

APPL ID: AZ02114

Sample Collection Date: 09/03/14

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.19 J	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	6.6	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.24 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.28	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	77.5	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	26.9	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	26.6	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.077 J	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	169	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.12 J	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.034 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.035 J	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	124	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02114S01 1/10
Data File Name	107SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T21:04:11-07:00
Sample Type	Sample
Dilution	0.099800399
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	2.422	0.242	0.66	43377	1.54	10000	
B	11	45	NoGas	34.165	3.410	1.63	407469	0.66	10000	
Na	23	45	He	5072.297	506.217	1.18	18635550	0.57	1000000	
Mg	24	45	He	47472.684	4737.793	1.57	95681774	1.02	1000000	
Al	27	45	He	51557.951	5145.504	2.03	49086989	1.45	1000000	
K	39	45	He	8510.047	849.306	1.12	15336765	0.51	500000	
Ca	44	45	He	245383.239	24489.345	1.19	25018651	0.91	500000	
Ti	47	45	He	6684.445	667.110	2.12	4305917	1.73	10000	
V	51	45	He	170.279	16.994	1.25	3279215	0.72	10000	
Cr	52	45	He	238.350	23.787	1.25	5508786	0.84	10000	
Mn	55	45	He	2150.170	214.588	0.61	32061661	0.68	50000	
Fe	56	45	He	121052.169	12081.055	0.88	2553218743	0.43	1000000	
Co	59	45	He	97.700	9.751	0.33	3536899	0.41	10000	
Ni	60	45	He	495.791	49.480	1.61	4757499	1.50	10000	
Cu	63	45	He	85.791	8.562	2.28	2279857	1.70	10000	
Zn	66	115	He	952.821	95.092	0.55	926741	0.17	50000	
As	75	115	He	59.170	5.905	0.75	37552	0.37	2000	
Se	78	115	H2	1.349	0.135	6.77	230	6.35	10000	
Se	78	115	He	20.674	2.063	3.56	977	3.04	10000	
Sr	88	115	NoGas	14050.456	1402.241	0.18	415707860	0.80	50000	
Mo	95	115	NoGas	4.422	0.441	1.51	27268	1.48	10000	
Ag	107	115	NoGas	0.310	0.031	3.35	4988	4.30	5000	
Cd	111	115	He	2.416	0.241	5.41	3300	5.76	10000	
Sn	118	115	He	14.099	1.407	1.31	43518	1.57	10000	
Sn	118	115	NoGas	14.290	1.426	0.67	142504	1.02	10000	
Sb	121	115	NoGas	2.703	0.270	2.33	42239	1.30	10000	
Ba	137	165	NoGas	3071.283	306.515	0.49	20827236	1.03	50000	
Tl	205	165	NoGas	0.489	0.049	0.54	23267	1.25	5000	
Pb	208	165	NoGas	219.641	21.920	1.07	14501784	0.43	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	586019	0.38	163616	358.17	70	120	ISTD Failed
Sc	45	He	251805	0.61	71079	354.26	70	120	ISTD Failed
Sc	45	NoGas	3873953	0.93	951149	407.29	70	120	ISTD Failed
In	115	H2	706847	0.36	1007583	70.15	70	120	
In	115	He	304556	0.38	439049	69.37	70	120	ISTD Failed
In	115	NoGas	1225726	0.97	1619798	75.67	70	120	
Tb	159	H2	2083885	0.43	2111966	98.67	70	120	
Tb	159	He	1238571	0.53	1288440	96.13	70	120	
Tb	159	NoGas	2746287	0.81	2404338	114.22	70	120	
Ho	165	H2	1907545	0.97	2032817	93.84	70	120	
Ho	165	He	1184440	0.17	1283106	92.31	70	120	
Ho	165	NoGas	2560635	0.73	2371226	107.99	70	120	

Sample Report

Sample Table

Sample Name	AZ02114S01 1/50
Data File Name	076SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T18:30:45-07:00
Sample Type	Sample
Dilution	0.499001996
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.358	0.677	1.86	12121	1.56	10000	
B	11	45	NoGas	4.098	2.045	6.05	107598	0.96	10000	
Na	23	45	He	3344.009	1668.667	0.43	5670595	0.76	1000000	
Mg	24	45	He	31188.959	15563.353	0.86	29115618	0.86	1000000	
Al	27	45	He	31441.347	15689.295	1.24	14295848	0.66	1000000	
K	39	45	He	4968.545	2479.314	0.40	4651118	0.99	500000	
Ca	44	45	He	145232.582	72471.348	2.18	7051818	1.58	500000	
Ti	47	45	He	3971.709	1981.891	2.37	1222339	1.19	10000	
V	51	45	He	102.944	51.369	0.69	908597	0.53	10000	
Cr	52	45	He	155.388	77.539	0.14	1637613	1.04	10000	
Mn	55	45	He	1332.424	664.882	1.18	9070832	0.02	50000	
Fe	56	45	He	78856.945	39349.773	1.36	751945570	0.36	1000000	
Co	59	45	He	60.447	30.163	0.91	987976	0.89	10000	
Ni	60	45	He	338.292	168.808	1.22	1507818	0.98	10000	
Cu	63	45	He	53.967	26.929	1.26	658508	1.53	10000	
Zn	66	115	He	249.338	124.420	0.68	315295	0.66	50000	
As	75	115	He	13.276	6.625	1.61	12954	1.66	2000	
Se	78	115	H2	0.233	0.116	9.53	69	7.22	10000	
Se	78	115	He	4.309	2.150	9.93	366	7.35	10000	
Sr	88	115	NoGas	2748.381	1371.448	4.67	93667342	1.09	50000	
Mo	95	115	NoGas	0.714	0.356	9.68	6335	3.85	10000	
Ag	107	115	NoGas	0.067	0.034	2.65	1350	4.44	5000	
Cd	111	115	He	0.556	0.278	2.82	925	3.03	10000	
Sn	118	115	He	2.798	1.396	2.54	11085	1.85	10000	
Sn	118	115	NoGas	2.626	1.310	6.73	32872	1.96	10000	
Sb	121	115	NoGas	0.372	0.186	1.86	12285	3.52	10000	
Ba	137	165	NoGas	723.665	361.110	1.62	4684567	1.08	50000	
Tl	205	165	NoGas	0.071	0.035	11.22	5454	6.48	5000	
Pb	208	165	NoGas	53.267	26.580	0.80	3040597	0.89	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	274984	0.61	164751	166.91	70	120	ISTD Failed
Sc	45	He	129358	1.17	76221	169.71	70	120	ISTD Failed
Sc	45	NoGas	1693238	0.25	928342	182.39	70	120	ISTD Failed
In	115	H2	894591	0.32	997448	89.69	70	120	
In	115	He	396697	0.32	448471	88.46	70	120	
In	115	NoGas	1468694	3.70	1548791	94.83	70	120	
Tb	159	H2	2170210	1.61	2006856	108.14	70	120	
Tb	159	He	1222139	0.27	1205156	101.41	70	120	
Tb	159	NoGas	2515173	1.20	2266694	110.96	70	120	
Ho	165	H2	2062378	1.37	1916437	107.62	70	120	
Ho	165	He	1193696	0.23	1172479	101.81	70	120	
Ho	165	NoGas	2390418	0.67	2192200	109.04	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN017
Sample Collection Date: 09/03/14

ARF: 74218
APPL ID: AZ02115

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3050B	ANTIMONY (SB)	0.20 U	0.2	0.20	0.10	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ARSENIC (AS)	2.0	0.5	0.30	0.08	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	BERYLLIUM (BE)	0.18 J	1.0	0.30	0.07	mg/Kg	1	09/19/14	09/19/14
6020A/3050B	CADMIUM (CD)	0.087 J	0.1	0.08	0.03	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	CHROMIUM (CR)	17.0	0.5	0.20	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	COPPER (CU)	9.9	0.1	0.08	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	LEAD (PB)	6.3	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
EPA 7471B	MERCURY (HG)	0.015 J	0.1	0.04	0.01	mg/Kg	1	09/19/14	09/27/14
6020A/3050B	NICKEL (NI)	65.3	0.2	0.20	0.14	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SELENIUM (SE)	0.10 U	0.2	0.10	0.04	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	SILVER (AG)	0.05 U	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	THALLIUM (TL)	0.05 U	0.1	0.05	0.02	mg/Kg	1	09/19/14	09/24/14
6020A/3050B	ZINC (ZN)	33.5	2.0	1.50	1.20	mg/Kg	1	09/19/14	09/24/14

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02115S01 1/10
Data File Name	108SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T21:10:14-07:00
Sample Type	Sample
Dilution	0.100401606
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.784	0.179	3.58	12808	3.34	10000	
B	11	45	NoGas	87.080	8.743	0.52	389840	0.48	10000	
Na	23	45	He	9363.662	940.127	0.80	13225509	0.99	1000000	
Mg	24	45	He	62196.431	6244.622	0.03	48556389	0.38	1000000	
Al	27	45	He	29165.707	2928.284	1.23	10756187	1.14	1000000	
K	39	45	He	7003.046	703.117	1.36	4898968	0.96	500000	
Ca	44	45	He	700643.541	70345.737	0.90	27668360	0.53	500000	>HDL
Ti	47	45	He	3014.905	302.701	0.43	752276	0.27	10000	
V	51	45	He	101.638	10.205	0.23	759525	0.21	10000	
Cr	52	45	He	89.687	9.005	0.72	803591	0.92	10000	
Mn	55	45	He	1577.356	158.369	1.30	9110130	1.27	50000	
Fe	56	45	He	79905.827	8022.673	1.02	652800401	0.94	1000000	
Co	59	45	He	65.468	6.573	0.87	918076	0.95	10000	
Ni	60	45	He	339.587	34.095	5.55	1262149	5.25	10000	
Cu	63	45	He	49.339	4.954	0.36	508471	0.71	10000	
Zn	66	115	He	257.266	25.830	0.74	247444	0.66	50000	
As	75	115	He	18.973	1.905	0.53	11946	0.49	2000	
Se	78	115	H2	0.419	0.042	20.51	72	20.31	10000	
Se	78	115	He	6.025	0.605	3.00	312	1.96	10000	
Sr	88	115	NoGas	20170.461	2025.147	0.92	592060698	1.15	50000	
Mo	95	115	NoGas	1.276	0.128	3.50	7869	3.30	10000	
Ag	107	115	NoGas	0.095	0.010	2.85	1513	2.67	5000	
Cd	111	115	He	0.702	0.071	5.48	958	6.32	10000	
Sn	118	115	He	2.610	0.262	2.22	8649	1.33	10000	
Sn	118	115	NoGas	2.603	0.261	1.66	27828	1.90	10000	
Sb	121	115	NoGas	0.324	0.032	5.32	6055	4.26	10000	
Ba	137	165	NoGas	824.521	82.783	0.72	5014699	0.33	50000	
Tl	205	165	NoGas	0.217	0.022	1.54	9320	2.10	5000	
Pb	208	165	NoGas	57.074	5.730	0.52	3393692	0.27	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	226767	0.42	163616	138.60	70	120	ISTD Failed
Sc	45	He	97530	0.39	71079	137.21	70	120	ISTD Failed
Sc	45	NoGas	1525525	0.57	951149	160.39	70	120	ISTD Failed
In	115	H2	693728	0.76	1007583	68.85	70	120	ISTD Failed
In	115	He	300740	1.01	439049	68.50	70	120	ISTD Failed
In	115	NoGas	1216009	0.40	1619798	75.07	70	120	
Tb	159	H2	1794444	0.77	2111966	84.97	70	120	
Tb	159	He	1053716	0.43	1288440	81.78	70	120	
Tb	159	NoGas	2346316	1.16	2404338	97.59	70	120	
Ho	165	H2	1704927	1.04	2032817	83.87	70	120	
Ho	165	He	1035851	0.58	1283106	80.73	70	120	
Ho	165	NoGas	2296555	0.65	2371226	96.85	70	120	

Sample Report

Sample Table

Sample Name	AZ02115S01 1/50
Data File Name	077SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T18:36:47-07:00
Sample Type	Sample
Dilution	0.502008032
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	0.570	0.286	0.60	3454	0.60	10000	
B	11	45	NoGas	15.124	7.592	2.99	104416	0.96	10000	
Na	23	45	He	3510.727	1762.413	0.18	3995943	0.42	1000000	
Mg	24	45	He	23459.205	11776.709	0.59	14717593	0.02	1000000	
Al	27	45	He	10348.689	5195.125	1.07	3162801	0.56	1000000	
K	39	45	He	2436.075	1222.929	0.47	1591324	0.53	500000	
Ca	44	45	He	244200.662	122590.694	0.44	7968605	0.91	500000	
Ti	47	45	He	1088.307	546.339	0.53	225152	0.05	10000	
V	51	45	He	37.386	18.768	0.73	223351	0.14	10000	
Cr	52	45	He	33.923	17.030	0.16	241205	0.72	10000	
Mn	55	45	He	581.879	292.108	0.38	2662814	0.96	50000	
Fe	56	45	He	30159.277	15140.199	0.38	193301926	0.63	1000000	
Co	59	45	He	25.690	12.896	0.74	282281	0.66	10000	
Ni	60	45	He	130.118	65.320	1.55	390090	1.63	10000	
Cu	63	45	He	19.700	9.890	0.93	162262	1.30	10000	
Zn	66	115	He	66.782	33.525	0.59	88146	1.11	50000	
As	75	115	He	3.988	2.002	1.40	4214	1.12	2000	
Se	78	115	H2	0.011	0.006	255.12	20	34.07	10000	
Se	78	115	He	1.018	0.511	22.74	161	8.74	10000	
Sr	88	115	NoGas	3777.604	1896.388	2.04	135183641	0.56	50000	
Mo	95	115	NoGas	0.072	0.036	38.65	1940	9.79	10000	
Ag	107	115	NoGas	0.015	0.007	10.76	373	6.74	5000	
Cd	111	115	He	0.174	0.087	5.89	314	6.08	10000	
Sn	118	115	He	0.260	0.130	19.92	2608	6.83	10000	
Sn	118	115	NoGas	0.180	0.091	16.74	7295	3.03	10000	
Sb	121	115	NoGas	-0.202	-0.101	-3.48	2980	3.08	10000	
Ba	137	165	NoGas	165.396	83.030	1.55	1058040	1.34	50000	
Tl	205	165	NoGas	-0.006	-0.003	-58.37	2250	6.67	5000	
Pb	208	165	NoGas	12.557	6.304	1.11	713896	0.87	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	184099	0.59	164751	111.74	70	120	
Sc	45	He	86928	0.58	76221	114.05	70	120	
Sc	45	NoGas	1077786	1.07	928342	116.10	70	120	
In	115	H2	920782	0.80	997448	92.31	70	120	
In	115	He	412117	0.88	448471	91.89	70	120	
In	115	NoGas	1540752	1.62	1548791	99.48	70	120	
Tb	159	H2	2128762	0.43	2006856	106.07	70	120	
Tb	159	He	1198720	0.25	1205156	99.47	70	120	
Tb	159	NoGas	2424063	2.24	2266694	106.94	70	120	
Ho	165	H2	1995102	3.66	1916437	104.10	70	120	
Ho	165	He	1176412	0.27	1172479	100.34	70	120	
Ho	165	NoGas	2361384	0.29	2192200	107.72	70	120	

Metals Analysis

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki

Project: 120033 CTO 0015 MCBH NOSC

ARF: 74218

Sample ID: EN018

APPL ID: AZ02116

Sample Collection Date: 09/03/14

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020A/3015^	ANTIMONY (SB)	0.50 U	1.0	0.50	0.14	ug/L	1	09/18/14	09/23/14
6020A/3015^	ARSENIC (AS)	0.20 U	0.5	0.20	0.09	ug/L	1	09/18/14	09/23/14
6020A/3015^	BERYLLIUM (BE)	0.10 U	0.2	0.10	0.04	ug/L	1	09/18/14	09/23/14
6020A/3015^	CADMIUM (CD)	0.10 U	0.2	0.10	0.02	ug/L	1	09/18/14	09/23/14
6020A/3015^	CHROMIUM (CR)	0.35 J	0.5	0.20	0.07	ug/L	1	09/18/14	09/23/14
6020A/3015^	COPPER (CU)	0.45 J	0.5	0.40	0.13	ug/L	1	09/18/14	09/23/14
6020A/3015^	LEAD (PB)	0.40 U	0.5	0.40	0.19	ug/L	1	09/18/14	09/23/14
7470A/7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	1	09/18/14	09/20/14
6020A/3015^	NICKEL (NI)	0.31 J	0.5	0.40	0.16	ug/L	1	09/18/14	09/23/14
6020A/3015^	SELENIUM (SE)	0.40 U	1.0	0.40	0.10	ug/L	1	09/18/14	09/23/14
6020A/3015^	SILVER (AG)	0.10 U	0.2	0.10	0.03	ug/L	1	09/18/14	09/23/14
6020A/3015^	THALLIUM (TL)	0.20 U	0.2	0.20	0.10	ug/L	1	09/18/14	09/23/14
6020A/3015^	ZINC (ZN)	15.0 U	20	15.0	12.7	ug/L	1	09/18/14	09/23/14

J = Estimated value.

Printed: 10/02/14 3:14:42 PM

APPL-F1-SC-NoMC-REG MDLs

Sample Report

Sample Table

Sample Name	AZ02116W12
Data File Name	053SMPL.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T16:41:28-07:00
Sample Type	Sample
Dilution	1.111111111
Comment	
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	-0.018	-0.020	-110.74	203	53.95	10000	
B	11	45	NoGas	16.750	18.611	1.82	70321	1.52	10000	
Na	23	45	He	124.204	138.004	2.62	219549	1.05	1000000	
Mg	24	45	He	29.193	32.437	1.90	19533	1.52	1000000	
Al	27	45	He	3.936	4.374	7.50	1873	4.47	1000000	
K	39	45	He	28.002	31.113	25.81	128892	3.95	500000	
Ca	44	45	He	65.277	72.530	5.17	2514	3.87	500000	
Ti	47	45	He	0.210	0.234	15.90	77	8.69	10000	
V	51	45	He	-0.282	-0.314	-3.45	849	6.29	10000	
Cr	52	45	He	0.311	0.345	10.08	3321	6.56	10000	
Mn	55	45	He	0.148	0.165	4.93	1328	2.14	50000	
Fe	56	45	He	-0.313	-0.348	-15.12	27974	1.33	1000000	
Co	59	45	He	0.015	0.017	13.09	276	7.87	10000	
Ni	60	45	He	0.278	0.309	20.43	1273	12.79	10000	
Cu	63	45	He	0.402	0.446	10.61	4814	7.54	10000	
Zn	66	115	He	0.284	0.316	28.03	1332	9.46	50000	
As	75	115	He	-0.229	-0.255	-1.47	35	11.78	2000	
Se	78	115	H2	-0.049	-0.054	-8.21	6	17.64	10000	
Se	78	115	He	0.039	0.043	59.43	101	1.71	10000	
Sr	88	115	NoGas	0.557	0.618	4.77	23443	3.20	50000	
Mo	95	115	NoGas	-0.045	-0.050	-45.74	980	15.84	10000	
Ag	107	115	NoGas	-0.002	-0.002	-72.42	67	45.83	5000	
Cd	111	115	He	0.002	0.002	52.85	12	16.67	10000	
Sn	118	115	He	-0.253	-0.281	-6.44	671	10.23	10000	
Sn	118	115	NoGas	-0.244	-0.271	-0.77	1916	1.75	10000	
Sb	121	115	NoGas	-0.400	-0.444	-1.35	1200	10.00	10000	
Ba	137	165	NoGas	0.093	0.104	34.87	937	20.32	50000	
Tl	205	165	NoGas	-0.028	-0.031	-10.32	810	13.07	5000	
Pb	208	165	NoGas	-0.019	-0.021	-2.64	6381	2.18	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	201828	0.44	185584	108.75	70	120	
Sc	45	He	89844	0.58	83499	107.60	70	120	
Sc	45	NoGas	1121765	0.54	1035739	108.31	70	120	
In	115	H2	1171153	0.80	1133962	103.28	70	120	
In	115	He	531785	0.38	512916	103.68	70	120	
In	115	NoGas	1839151	1.52	1726182	106.54	70	120	
Tb	159	H2	2339571	1.24	2259927	103.52	70	120	
Tb	159	He	1399511	0.52	1384042	101.12	70	120	
Tb	159	NoGas	2658099	1.75	2544437	104.47	70	120	
Ho	165	H2	2226915	0.55	2140395	104.04	70	120	
Ho	165	He	1361085	0.94	1350145	100.81	70	120	
Ho	165	NoGas	2567681	2.28	2467012	104.08	70	120	

METALS

Calibration Data

APPL, INC.

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No: 74218 SDG: 74218

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 09/19/14 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:48	%R(1)	True CCV1	Found 12:37	%R(1)	True CCV1	Found 18:09	%R(1)	
Beryllium (Be)	100	98.2065	98.2	50	47.8745	95.7	50	50.0547	100	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No: 74218 SDG: 74218

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 09/19/14 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:48	%R(1)	True CCV1	Found 19:57	%R(1)	True	Found	%R(1)	
Beryllium (Be)	100	98.2065	98.2	50	49.0939	98.2				P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No.: 74218 SDG: 74218

Preparation Blank Matrix (soil/water): soil

Preparation Blank Concentration Units (ug/L or mg/kg): mg/Kg

Analysis Date: 09/19/14

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
	12:12		12:55		18:27		20:15		18:33		
Beryllium (Be)	5.00	U	5.00	U	5.00	U	5.00	U	1.00	U	P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name:	A.P.P.L. INC.	Contract:	Element Environmental
ARF No.:	74218	SDG:	74218
ICP ID Number:	Megatron	ICS Source:	Environmental Express

Analysis Date: 09/19/14 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 13:01	Sol AB 13:19	%R(1)
Beryllium (Be)		50	-0.093138	42.587436	85.2

(1) Control Limits: Metals 80-120

A.P.P.L. INC.

9

ICP SERIAL DILUTION

CLIENT SAMPLE NO.

EN002

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No.: 74218 SDG: 74218

Matrix: soil

Analysis Date: 09/19/14 Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	%D	Q	M
Beryllium (Be)	0.257044		0.627669		NA		

Comments:

09/19/14 19:03 AZ02100S0I 1/10

09/19/14 19:27 AZ02100S01 1/50

Sample Report

Sample Table

Sample Name	AZ02100S01 1/50
Data File Name	091SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T19:27:32-07:00
Sample Type	Sample
Dilution	0.501002004
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	1.253	0.628	1.78	9059	1.93	10000	
B	11	45	NoGas	72.113	36.129	0.37	318198	0.31	10000	
Na	23	45	He	1861.029	932.379	7.48	2819795	1.88	1000000	
Mg	24	45	He	27779.476	13917.573	6.48	22463120	1.13	1000000	
Al	27	45	He	27218.012	13636.279	6.22	10397951	0.97	1000000	
K	39	45	He	4390.003	2199.401	5.83	3204851	0.39	500000	
Ca	44	45	He	172024.737	86184.738	5.97	7037782	0.68	500000	
Ti	47	45	He	3279.236	1642.904	6.29	847543	0.95	10000	
V	51	45	He	89.473	44.826	5.81	693121	0.49	10000	
Cr	52	45	He	116.756	58.495	6.46	1083196	1.15	10000	
Mn	55	45	He	1281.754	642.161	6.12	7668651	0.78	50000	
Fe	56	45	He	67039.219	33586.783	5.88	567395622	0.77	1000000	
Co	59	45	He	51.424	25.764	6.08	747087	0.79	10000	
Ni	60	45	He	264.623	132.577	6.39	1018928	1.05	10000	
Cu	63	45	He	50.512	25.307	5.32	539355	0.44	10000	
Zn	66	115	He	203.824	102.116	9.78	237175	1.00	50000	
As	75	115	He	10.353	5.187	9.69	7927	0.87	2000	
Se	78	115	H2	0.430	0.215	9.34	91	9.28	10000	
Se	78	115	He	3.993	2.000	15.45	267	6.03	10000	
Sr	88	115	NoGas	3233.350	1619.915	0.43	119284858	0.43	50000	
Mo	95	115	NoGas	0.986	0.494	2.28	7665	2.42	10000	
Ag	107	115	NoGas	0.072	0.036	7.16	1453	6.96	5000	
Cd	111	115	He	0.495	0.248	16.57	819	8.54	10000	
Sn	118	115	He	2.248	1.126	9.47	9158	0.40	10000	
Sn	118	115	NoGas	1.978	0.991	1.49	27344	1.02	10000	
Sb	121	115	NoGas	0.623	0.312	6.74	13286	5.92	10000	
Ba	137	165	NoGas	615.125	308.179	0.55	4120106	1.56	50000	
Tl	205	165	NoGas	0.316	0.158	0.87	14904	0.28	5000	
Pb	208	165	NoGas	47.337	23.716	1.15	3102891	0.16	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	230373	0.35	163616	140.80	70	120	ISTD Failed
Sc	45	He	101245	5.23	71079	142.44	70	120	ISTD Failed
Sc	45	NoGas	1493780	0.62	951149	157.05	70	120	ISTD Failed
In	115	H2	849259	0.34	1007583	84.29	70	120	
In	115	He	365679	8.63	439049	83.29	70	120	
In	115	NoGas	1528354	0.42	1619798	94.35	70	120	
Tb	159	H2	2150281	0.50	2111966	101.81	70	120	
Tb	159	He	1305362	12.63	1288440	101.31	70	120	
Tb	159	NoGas	2576187	1.17	2404338	107.15	70	120	
Ho	165	H2	2073250	0.99	2032817	101.99	70	120	
Ho	165	He	1279844	12.49	1283106	99.75	70	120	
Ho	165	NoGas	2528971	1.06	2371226	106.65	70	120	

A.P.P.L. INC.

5B

POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

EN002

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No.: 74218 SDG: 74218

Analysis Date: 09/19/14 Concentration Units: mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Beryllium (Be)	75-125	1.298305		0.257044		1.000	104		

Comments:

09/19/14 19:03 AZ02100S01 1/10

09/19/14 19:21 AZ02100S01-A 1/10

Sample Report

Sample Table

Sample Name	AZ02100S01-A 1/10
Data File Name	090SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T19:21:30-07:00
Sample Type	Sample
Dilution	0.100200401
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	12.957	1.298	0.47	211666	0.81	10000	
B	11	45	NoGas	111.684	11.191	0.34	1199114	0.47	10000	
Na	23	45	He	8894.031	891.185	0.62	31887298	0.61	1000000	
Mg	24	45	He	55791.251	5590.306	0.42	110513249	1.11	1000000	
Al	27	45	He	50402.140	5050.315	0.32	47162027	1.05	1000000	
K	39	45	He	9175.811	919.420	1.03	16239707	1.22	500000	
Ca	44	45	He	325627.634	32628.019	0.55	32626831	0.61	500000	
Ti	47	45	He	6436.257	644.916	1.20	4074457	0.66	10000	
V	51	45	He	227.471	22.793	1.63	4301795	0.51	10000	
Cr	52	45	He	273.729	27.428	1.91	6216355	1.07	10000	
Mn	55	45	He	2352.595	235.731	1.28	34472731	0.98	50000	
Fe	56	45	He	119778.030	12001.807	1.58	2482556204	0.63	1000000	
Co	59	45	He	149.675	14.998	0.86	5324318	0.42	10000	
Ni	60	45	He	544.349	54.544	1.17	5132964	0.59	10000	
Cu	63	45	He	144.816	14.511	2.18	3779393	1.06	10000	
Zn	66	115	He	1450.306	145.321	2.14	1554999	1.29	50000	
As	75	115	He	293.243	29.383	0.79	204852	0.19	2000	
Se	78	115	H2	229.244	22.970	1.73	42679	1.20	10000	
Se	78	115	He	245.582	24.607	0.52	12282	1.33	10000	
Sr	88	115	NoGas	16095.771	1612.803	2.74	551435885	0.42	50000	
Mo	95	115	NoGas	254.277	25.479	0.87	1810493	1.61	10000	
Ag	107	115	NoGas	80.199	8.036	1.45	1494950	1.06	5000	
Cd	111	115	He	47.268	4.736	1.34	70871	0.57	10000	
Sn	118	115	He	252.532	25.304	0.86	843349	0.78	10000	
Sn	118	115	NoGas	252.613	25.312	1.79	2868068	0.88	10000	
Sb	121	115	NoGas	234.463	23.493	1.91	4126491	0.66	10000	
Ba	137	165	NoGas	2737.890	274.338	0.32	19430932	1.37	50000	
Tl	205	165	NoGas	196.392	19.679	1.08	9736533	1.16	5000	
Pb	208	165	NoGas	387.746	38.852	0.96	26776299	1.01	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	578246	0.67	163616	353.42	70	120	ISTD Failed
Sc	45	He	247460	1.12	71079	348.15	70	120	ISTD Failed
Sc	45	NoGas	3684446	0.73	951149	387.37	70	120	ISTD Failed
In	115	H2	782751	0.60	1007583	77.69	70	120	
In	115	He	335832	0.99	439049	76.49	70	120	
In	115	NoGas	1419935	2.46	1619798	87.66	70	120	
Tb	159	H2	2298871	1.02	2111966	108.85	70	120	
Tb	159	He	1322757	0.40	1288440	102.66	70	120	
Tb	159	NoGas	2859982	0.72	2404338	118.95	70	120	
Ho	165	H2	2119518	1.20	2032817	104.27	70	120	
Ho	165	He	1273372	0.67	1283106	99.24	70	120	
Ho	165	NoGas	2679945	1.55	2371226	113.02	70	120	

Calibration Blank Report

Sample Table

Sample Name	Calibration Blank
Data File Name	010CALB.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T11:18:34-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	140728

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD
Be	9	45	NoGas	537	18.85
B	11	45	NoGas	7715	4.88
Na	23	45	He	85996	1.48
Mg	24	45	He	681	6.37
Al	27	45	He	552	2.29
K	39	45	He	43543	2.47
Ca	44	45	He	228	10.98
Ti	47	45	He	18	21.66
V	51	45	He	2486	7.91
Cr	52	45	He	807	9.45
Mn	55	45	He	491	6.31
Fe	56	45	He	14702	1.38
Co	59	45	He	216	21.05
Ni	60	45	He	300	17.64
Cu	63	45	He	987	22.33
Zn	66	115	He	722	9.17
As	75	115	He	119	19.76
Se	78	115	H2	5	5.09
Se	78	115	He	63	19.04
Sr	88	115	NoGas	783	18.34
Mo	95	115	NoGas	113	18.37
Ag	107	115	NoGas	3	173.21
Cd	111	115	He	22	18.18
Sn	118	115	He	1243	9.70
Sn	118	115	NoGas	3383	3.80
Sb	121	115	NoGas	1567	6.52
Ba	137	165	NoGas	300	3.33
Tl	205	165	NoGas	103	5.59
Pb	208	165	NoGas	19375	2.50

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD
Sc	45	H2	163616	0.50
Sc	45	He	71079	0.56
Sc	45	NoGas	951149	0.61
In	115	H2	1007583	0.14
In	115	He	439049	0.53
In	115	NoGas	1619798	0.42
Tb	159	H2	2111966	2.23
Tb	159	He	1288440	0.52
Tb	159	NoGas	2404338	0.60
Ho	165	H2	2032817	1.34
Ho	165	He	1283106	0.55
Ho	165	NoGas	2371226	0.24

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	011CALS.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T11:24:35-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	140728
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD	Cal Coef
Be	9	45	NoGas	863	7.36	1.0000
B	11	45	NoGas	7638	6.69	-1.0000
Na	23	45	He	78250	1.20	-1.0000
Mg	24	45	He	3558	6.08	1.0000
Al	27	45	He	1313	10.18	1.0000
K	39	45	He	45243	4.16	1.0000
Ca	44	45	He	284	1.79	1.0000
Ti	47	45	He	28	54.11	1.0000
V	51	45	He	3067	5.49	1.0000
Cr	52	45	He	1398	9.99	1.0000
Mn	55	45	He	847	5.03	1.0000
Fe	56	45	He	25388	0.39	1.0000
Co	59	45	He	1266	4.05	1.0000
Ni	60	45	He	713	40.08	1.0000
Cu	63	45	He	1887	11.03	1.0000
Zn	66	115	He	911	10.09	1.0000
As	75	115	He	217	8.49	1.0000
Se	78	115	H2	28	12.91	1.0000
Se	78	115	He	77	21.46	1.0000
Sr	88	115	NoGas	4611	6.11	1.0000
Mo	95	115	NoGas	827	8.05	1.0000
Ag	107	115	NoGas	1107	8.68	1.0000
Cd	111	115	He	218	18.33	1.0000
Sn	118	115	He	1322	7.50	1.0000
Sn	118	115	NoGas	3610	4.86	1.0000
Sb	121	115	NoGas	3087	7.51	1.0000
Ba	137	165	NoGas	890	13.25	1.0000
Tl	205	165	NoGas	4451	6.84	1.0000
Pb	208	165	NoGas	24025	0.96	1.0000

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	163595	1.15	163616	99.99	70	120	
Sc	45	He	70683	0.97	71079	99.44	70	120	
Sc	45	NoGas	953110	0.51	951149	100.21	70	120	
In	115	H2	997276	0.34	1007583	98.98	70	120	
In	115	He	435689	0.25	439049	99.23	70	120	
In	115	NoGas	1617085	1.72	1619798	99.83	70	120	
Tb	159	H2	2091154	0.78	2111966	99.01	70	120	
Tb	159	He	1284396	0.35	1288440	99.69	70	120	
Tb	159	NoGas	2416905	1.10	2404338	100.52	70	120	
Ho	165	H2	2012225	0.63	2032817	98.99	70	120	
Ho	165	He	1283574	0.34	1283106	100.04	70	120	
Ho	165	NoGas	2346180	0.73	2371226	98.94	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	012CALS.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T11:30:36-07:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	140728
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD	Cal Coef
Be	9	45	NoGas	4371	2.64	0.9999
B	11	45	NoGas	10500	3.77	0.9930
Na	23	45	He	101370	0.95	0.9240
Mg	24	45	He	28972	0.94	1.0000
Al	27	45	He	5805	5.26	0.9991
K	39	45	He	53303	1.59	0.9963
Ca	44	45	He	1592	7.65	0.9986
Ti	47	45	He	199	15.57	0.9991
V	51	45	He	7947	1.91	1.0000
Cr	52	45	He	7127	3.40	1.0000
Mn	55	45	He	4505	3.32	0.9999
Fe	56	45	He	131113	0.51	1.0000
Co	59	45	He	10523	0.03	1.0000
Ni	60	45	He	3061	15.69	0.9989
Cu	63	45	He	8670	5.20	0.9999
Zn	66	115	He	2015	1.67	0.9988
As	75	115	He	998	4.23	0.9999
Se	78	115	H2	242	6.15	1.0000
Se	78	115	He	138	5.93	0.9954
Sr	88	115	NoGas	39288	0.99	1.0000
Mo	95	115	NoGas	7645	2.55	1.0000
Ag	107	115	NoGas	10233	4.21	1.0000
Cd	111	115	He	2001	2.35	1.0000
Sn	118	115	He	5077	0.71	0.9975
Sn	118	115	NoGas	14878	2.04	0.9973
Sb	121	115	NoGas	20553	1.35	0.9998
Ba	137	165	NoGas	6802	3.32	1.0000
Tl	205	165	NoGas	42808	2.92	1.0000
Pb	208	165	NoGas	75795	2.06	0.9999

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	163801	0.15	163616	100.11	70	120	
Sc	45	He	70154	1.21	71079	98.70	70	120	
Sc	45	NoGas	948309	0.70	951149	99.70	70	120	
In	115	H2	1008329	0.88	1007583	100.07	70	120	
In	115	He	437549	0.72	439049	99.66	70	120	
In	115	NoGas	1610560	0.33	1619798	99.43	70	120	
Tb	159	H2	2123967	0.71	2111966	100.57	70	120	
Tb	159	He	1291611	0.97	1288440	100.25	70	120	
Tb	159	NoGas	2408172	1.35	2404338	100.16	70	120	
Ho	165	H2	2009378	1.18	2032817	98.85	70	120	
Ho	165	He	1282175	0.35	1283106	99.93	70	120	
Ho	165	NoGas	2360057	1.74	2371226	99.53	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	013CALS.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T11:36:37-07:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	140728
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD	Cal Coef
Be	9	45	NoGas	200771	1.40	1.0000
B	11	45	NoGas	134474	0.53	1.0000
Na	23	45	He	1324801	1.37	1.0000
Mg	24	45	He	1369235	1.25	1.0000
Al	27	45	He	257227	0.84	1.0000
K	39	45	He	523839	0.95	1.0000
Ca	44	45	He	69530	1.88	1.0000
Ti	47	45	He	8783	1.08	1.0000
V	51	45	He	262748	0.68	1.0000
Cr	52	45	He	312141	0.39	1.0000
Mn	55	45	He	201340	0.26	1.0000
Fe	56	45	He	5755038	0.58	1.0000
Co	59	45	He	486627	0.48	1.0000
Ni	60	45	He	131189	1.59	1.0000
Cu	63	45	He	360707	0.54	1.0000
Zn	66	115	He	67867	1.04	1.0000
As	75	115	He	43947	0.35	1.0000
Se	78	115	H2	11594	1.04	1.0000
Se	78	115	He	3171	2.14	1.0000
Sr	88	115	NoGas	1868954	2.23	1.0000
Mo	95	115	NoGas	379507	0.59	1.0000
Ag	107	115	NoGas	501003	0.81	1.0000
Cd	111	115	He	93458	0.38	1.0000
Sn	118	115	He	207282	1.08	1.0000
Sn	118	115	NoGas	611103	0.69	1.0000
Sb	121	115	NoGas	934125	0.45	1.0000
Ba	137	165	NoGas	309109	0.31	1.0000
Tl	205	165	NoGas	2164387	1.03	1.0000
Pb	208	165	NoGas	2975753	0.89	1.0000

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	161874	0.94	163616	98.94	70	120	
Sc	45	He	69357	0.20	71079	97.58	70	120	
Sc	45	NoGas	921118	0.51	951149	96.84	70	120	
In	115	H2	987951	0.68	1007583	98.05	70	120	
In	115	He	424676	0.78	439049	96.73	70	120	
In	115	NoGas	1559760	0.94	1619798	96.29	70	120	
Tb	159	H2	2078150	2.19	2111966	98.40	70	120	
Tb	159	He	1276972	0.69	1288440	99.11	70	120	
Tb	159	NoGas	2401870	1.68	2404338	99.90	70	120	
Ho	165	H2	2013600	0.35	2032817	99.05	70	120	
Ho	165	He	1260047	0.74	1283106	98.20	70	120	
Ho	165	NoGas	2357999	0.75	2371226	99.44	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	014CALS.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T11:42:40-07:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	140728
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD	Cal Coef
Be	9	45	NoGas	400603	0.93	1.0000
B	11	45	NoGas	267590	0.21	0.9998
Na	23	45	He	2509040	1.34	1.0000
Mg	24	45	He	2715477	1.60	1.0000
Al	27	45	He	514414	0.65	0.9999
K	39	45	He	1004198	0.78	0.9999
Ca	44	45	He	137504	1.00	1.0000
Ti	47	45	He	17361	3.14	1.0000
V	51	45	He	520016	0.40	1.0000
Cr	52	45	He	624222	1.19	0.9999
Mn	55	45	He	402926	0.95	0.9999
Fe	56	45	He	11371755	0.57	1.0000
Co	59	45	He	977693	0.59	0.9999
Ni	60	45	He	258429	0.56	1.0000
Cu	63	45	He	716071	0.81	1.0000
Zn	66	115	He	135145	1.18	1.0000
As	75	115	He	87662	1.16	1.0000
Se	78	115	H2	23142	1.41	1.0000
Se	78	115	He	6313	0.43	1.0000
Sr	88	115	NoGas	3706437	1.48	1.0000
Mo	95	115	NoGas	774338	1.41	0.9998
Ag	107	115	NoGas	1011489	1.03	0.9999
Cd	111	115	He	188302	0.70	1.0000
Sn	118	115	He	421072	0.40	0.9999
Sn	118	115	NoGas	1235059	0.96	0.9999
Sb	121	115	NoGas	1917567	1.71	0.9998
Ba	137	165	NoGas	618167	0.47	1.0000
Tl	205	165	NoGas	4313305	0.89	1.0000
Pb	208	165	NoGas	6049678	0.90	0.9999

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	158826	0.78	163616	97.07	70	120	
Sc	45	He	67598	0.45	71079	95.10	70	120	
Sc	45	NoGas	909130	0.91	951149	95.58	70	120	
In	115	H2	969612	0.52	1007583	96.23	70	120	
In	115	He	420324	1.02	439049	95.74	70	120	
In	115	NoGas	1532393	0.70	1619798	94.60	70	120	
Tb	159	H2	2106891	1.33	2111966	99.76	70	120	
Tb	159	He	1266942	0.40	1288440	98.33	70	120	
Tb	159	NoGas	2372055	0.95	2404338	98.66	70	120	
Ho	165	H2	2013224	0.98	2032817	99.04	70	120	
Ho	165	He	1258736	0.50	1283106	98.10	70	120	
Ho	165	NoGas	2326952	1.04	2371226	98.13	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	015_ICV.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T11:48:43-07:00
Sample Type	ICV
Dilution	1
Comment	140728
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	45	NoGas	98.207	0.341	394927	0.60	100	98.2	89.6	110.4	
B	11	45	NoGas	95.740	1.975	256281	1.95	100	95.7	89.6	110.4	
Na	23	45	He	2438.951	2.689	2474564	1.47	2500	97.6	89.6	110.4	
Mg	24	45	He	2478.400	0.485	1356404	0.65	2500	99.1	89.6	110.4	
Al	27	45	He	2458.709	0.789	635854	0.47	2500	98.3	89.6	110.4	
K	39	45	He	2468.106	1.035	1236912	0.20	2500	98.7	89.6	110.4	
Ca	44	45	He	2629.303	0.938	72982	1.96	2500	105.2	89.6	110.4	
Ti	47	45	He	94.847	1.062	16601	1.88	100	94.8	89.6	110.4	
V	51	45	He	98.851	0.869	517662	0.36	100	98.9	89.6	110.4	
Cr	52	45	He	97.297	0.756	610776	0.44	100	97.3	89.6	110.4	
Mn	55	45	He	96.304	0.428	390189	0.76	100	96.3	89.6	110.4	
Fe	56	45	He	2399.809	0.728	13751300	0.42	2500	96.0	89.6	110.4	
Co	59	45	He	97.276	1.075	955711	0.14	100	97.3	89.6	110.4	
Ni	60	45	He	99.716	1.812	259903	0.96	100	99.7	89.6	110.4	
Cu	63	45	He	99.220	0.590	715525	0.83	100	99.2	89.6	110.4	
Zn	66	115	He	97.983	1.436	131435	0.82	100	98.0	89.6	110.4	
As	75	115	He	91.001	1.523	79217	0.87	100	91.0	89.6	110.4	
Se	78	115	H2	97.755	1.133	22681	0.91	100	97.8	89.6	110.4	
Se	78	115	He	97.894	1.042	6130	0.39	100	97.9	89.6	110.4	
Sr	88	115	NoGas	96.078	1.203	3642782	0.39	100	96.1	89.6	110.4	
Mo	95	115	NoGas	95.270	0.924	750408	0.41	100	95.3	89.6	110.4	
Ag	107	115	NoGas	48.348	1.060	996984	0.28	50	96.7	89.6	110.4	
Cd	111	115	He	100.083	1.178	186793	0.63	100	100.1	89.6	110.4	
Sn	118	115	He	49.780	0.676	207911	0.29	100	49.8	89.6	110.4	>+\- 10%
Sn	118	115	NoGas	48.515	1.040	612023	0.65	100	48.5	89.6	110.4	>+\- 10%
Sb	121	115	NoGas	94.773	2.030	1846098	1.17	100	94.8	89.6	110.4	
Ba	137	165	NoGas	98.415	1.687	608025	0.60	100	98.4	89.6	110.4	
Tl	205	165	NoGas	99.531	1.159	4294054	0.48	100	99.5	89.6	110.4	
Pb	208	165	NoGas	98.703	0.590	5945846	0.72	100	98.7	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	158486	0.21	163616	96.86	70	120	
Sc	45	He	68342	1.13	71079	96.15	70	120	
Sc	45	NoGas	914788	0.29	951149	96.18	70	120	
In	115	H2	975327	0.43	1007583	96.80	70	120	
In	115	He	418082	0.67	439049	95.22	70	120	
In	115	NoGas	1570502	0.87	1619798	96.96	70	120	
Tb	159	H2	2107296	0.74	2111966	99.78	70	120	
Tb	159	He	1268607	0.52	1288440	98.46	70	120	
Tb	159	NoGas	2396923	0.55	2404338	99.69	70	120	
Ho	165	H2	2015511	0.43	2032817	99.15	70	120	
Ho	165	He	1266613	0.23	1283106	98.71	70	120	
Ho	165	NoGas	2332115	1.09	2371226	98.35	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	019_ICB.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T12:12:51-07:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.037	-35.7	370	14.3	0.1	
B	11	45	NoGas	1.643	10.3	11797	4.0	8	
Na	23	45	He	4.381	45.9	87364	1.9	50	
Mg	24	45	He	0.134	143.2	731	13.7	20	
Al	27	45	He	0.171	52.3	578	4.7	10	
K	39	45	He	-0.351	-329.1	41877	1.5	40	
Ca	44	45	He	-2.273	-65.2	157	25.8	150	
Ti	47	45	He	0.048	127.0	26	41.9	0.5	
V	51	45	He	-0.069	-9.1	2040	1.3	0.4	
Cr	52	45	He	-0.008	-44.9	728	3.9	0.2	
Mn	55	45	He	-0.004	-407.3	457	16.3	0.3	
Fe	56	45	He	0.095	29.5	14747	1.7	30	
Co	59	45	He	-0.007	-15.6	136	7.9	0.4	
Ni	60	45	He	0.014	598.9	327	67.4	0.4	
Cu	63	45	He	-0.008	-324.3	893	22.6	0.4	
Zn	66	115	He	0.019	116.7	724	4.3	15	
As	75	115	He	0.007	120.0	121	6.6	0.2	
Se	78	115	H2	0.016	69.7	8	32.2	0.4	
Se	78	115	He	0.047	344.0	64	16.6	0.4	
Sr	88	115	NoGas	0.003	239.3	887	29.9	0.1	
Mo	95	115	NoGas	0.025	52.1	313	32.6	0.3	
Ag	107	115	NoGas	0.004	69.5	77	65.7	0.1	
Cd	111	115	He	-0.005	-96.0	13	63.8	0.1	
Sn	118	115	He	0.018	138.7	1277	7.6	0.1	
Sn	118	115	NoGas	0.037	34.5	3815	3.3	0.1	
Sb	121	115	NoGas	-0.004	-72.0	1463	6.0	0.5	
Ba	137	165	NoGas	-0.001	-503.6	290	15.8	0.4	
Tl	205	165	NoGas	0.014	1.4	703	1.6	0.2	
Pb	208	165	NoGas	-0.122	-4.8	11876	3.5	0.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	158998	0.63	163616	97.18	70	120	
Sc	45	He	68642	0.73	71079	96.57	70	120	
Sc	45	NoGas	923018	0.24	951149	97.04	70	120	
In	115	H2	988318	0.28	1007583	98.09	70	120	
In	115	He	424749	0.89	439049	96.74	70	120	
In	115	NoGas	1600383	1.86	1619798	98.80	70	120	
Tb	159	H2	2116155	1.52	2111966	100.20	70	120	
Tb	159	He	1275297	0.35	1288440	98.98	70	120	
Tb	159	NoGas	2416196	0.91	2404338	100.49	70	120	
Ho	165	H2	2021257	1.00	2032817	99.43	70	120	
Ho	165	He	1266793	0.39	1283106	98.73	70	120	
Ho	165	NoGas	2363309	0.53	2371226	99.67	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	023_CCV.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T12:37:07-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	45	NoGas	47.875	0.693	192996	0.59	50	95.7	89.6	110.4	
B	11	45	NoGas	49.143	0.943	135308	0.95	50	98.3	89.6	110.4	
Na	23	45	He	1249.895	2.814	1312432	2.21	1250	100.0	89.6	110.4	
Mg	24	45	He	2453.826	1.960	1346805	1.06	2500	98.2	89.6	110.4	
Al	27	45	He	971.909	1.484	252401	0.43	1000	97.2	89.6	110.4	
K	39	45	He	977.966	1.843	516887	0.51	1000	97.8	89.6	110.4	
Ca	44	45	He	2447.942	1.876	68151	0.99	2500	97.9	89.6	110.4	
Ti	47	45	He	49.709	0.776	8734	1.67	50	99.4	89.6	110.4	
V	51	45	He	48.784	0.777	257444	0.59	50	97.6	89.6	110.4	
Cr	52	45	He	48.852	1.529	307940	0.29	50	97.7	89.6	110.4	
Mn	55	45	He	48.243	1.474	196263	0.45	50	96.5	89.6	110.4	
Fe	56	45	He	973.435	1.013	5602771	0.30	1000	97.3	89.6	110.4	
Co	59	45	He	48.890	1.438	481845	0.21	50	97.8	89.6	110.4	
Ni	60	45	He	48.276	1.867	126346	0.62	50	96.6	89.6	110.4	
Cu	63	45	He	48.812	1.768	353505	1.00	50	97.6	89.6	110.4	
Zn	66	115	He	49.119	0.553	65697	0.21	50	98.2	89.6	110.4	
As	75	115	He	49.482	1.533	42781	1.91	50	99.0	89.6	110.4	
Se	78	115	H2	48.521	0.717	11156	0.96	50	97.0	89.6	110.4	
Se	78	115	He	50.136	2.230	3143	1.62	50	100.3	89.6	110.4	
Sr	88	115	NoGas	49.254	2.689	1856209	2.08	50	98.5	89.6	110.4	
Mo	95	115	NoGas	48.167	0.279	377116	0.43	50	96.3	89.6	110.4	
Ag	107	115	NoGas	24.342	0.230	498877	0.73	25	97.4	89.6	110.4	
Cd	111	115	He	49.339	0.160	91353	0.59	50	98.7	89.6	110.4	
Sn	118	115	He	48.909	0.225	202643	0.54	50	97.8	89.6	110.4	
Sn	118	115	NoGas	47.998	0.293	601832	0.95	50	96.0	89.6	110.4	
Sb	121	115	NoGas	47.276	1.139	916121	1.72	50	94.6	89.6	110.4	
Ba	137	165	NoGas	49.120	1.027	302549	0.89	50	98.2	89.6	110.4	
Tl	205	165	NoGas	49.651	0.374	2134541	1.01	50	99.3	89.6	110.4	
Pb	208	165	NoGas	48.343	1.072	2911371	1.01	50	96.7	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	158502	0.45	163616	96.87	70	120	
Sc	45	He	68545	1.24	71079	96.44	70	120	
Sc	45	NoGas	915836	1.25	951149	96.29	70	120	
In	115	H2	966325	0.28	1007583	95.91	70	120	
In	115	He	414691	0.74	439049	94.45	70	120	
In	115	NoGas	1560804	0.67	1619798	96.36	70	120	
Tb	159	H2	2079529	0.84	2111966	98.46	70	120	
Tb	159	He	1249093	0.64	1288440	96.95	70	120	
Tb	159	NoGas	2385689	1.01	2404338	99.22	70	120	
Ho	165	H2	2023303	1.66	2032817	99.53	70	120	
Ho	165	He	1240137	0.70	1283106	96.65	70	120	
Ho	165	NoGas	2323677	0.84	2371226	97.99	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	026_CCB.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T12:55:13-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.080	-3.2	200	5.0	0.1	
B	11	45	NoGas	0.260	48.1	8242	4.1	8	
Na	23	45	He	4.377	5.6	88655	0.7	50	
Mg	24	45	He	0.128	122.6	739	11.9	20	
Al	27	45	He	0.185	42.5	590	3.7	10	
K	39	45	He	2.821	99.5	44054	2.4	40	
Ca	44	45	He	-0.422	-401.6	211	21.9	150	
Ti	47	45	He	-0.035	-30.4	11	17.3	0.5	
V	51	45	He	-0.044	-31.6	2202	3.3	0.4	
Cr	52	45	He	-0.017	-55.9	682	9.2	0.2	
Mn	55	45	He	-0.002	-802.7	474	12.3	0.3	
Fe	56	45	He	0.097	24.1	14972	1.7	30	
Co	59	45	He	-0.008	-33.0	127	22.8	0.4	
Ni	60	45	He	-0.010	-299.8	267	30.3	0.4	
Cu	63	45	He	-0.016	-88.2	847	13.0	0.4	
Zn	66	115	He	0.005	908.0	709	7.3	15	
As	75	115	He	-0.002	-201.3	114	3.8	0.2	
Se	78	115	H2	0.000	-1354.5	4	10.0	0.4	
Se	78	115	He	0.225	62.1	75	12.0	0.4	
Sr	88	115	NoGas	0.007	106.0	1037	26.8	0.1	
Mo	95	115	NoGas	0.008	85.9	173	28.5	0.3	
Ag	107	115	NoGas	0.002	92.3	50	87.2	0.1	
Cd	111	115	He	-0.006	-58.5	9	75.3	0.1	
Sn	118	115	He	0.016	120.5	1279	6.9	0.1	
Sn	118	115	NoGas	0.025	15.9	3672	3.1	0.1	
Sb	121	115	NoGas	-0.025	-20.3	1053	8.8	0.5	
Ba	137	165	NoGas	-0.002	-486.1	280	21.4	0.4	
Tl	205	165	NoGas	0.008	19.2	440	15.7	0.2	
Pb	208	165	NoGas	-0.170	-3.8	8765	3.6	0.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	145783	5.76	163616	89.10	70	120	
Sc	45	He	69656	0.79	71079	98.00	70	120	
Sc	45	NoGas	931359	0.47	951149	97.92	70	120	
In	115	H2	909179	8.48	1007583	90.23	70	120	
In	115	He	427451	0.75	439049	97.36	70	120	
In	115	NoGas	1604086	1.84	1619798	99.03	70	120	
Tb	159	H2	1906083	9.58	2111966	90.25	70	120	
Tb	159	He	1265485	0.16	1288440	98.22	70	120	
Tb	159	NoGas	2401216	0.76	2404338	99.87	70	120	
Ho	165	H2	1796495	10.06	2032817	88.37	70	120	
Ho	165	He	1262643	0.29	1283106	98.41	70	120	
Ho	165	NoGas	2318673	1.05	2371226	97.78	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	027ICSA.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T13:01:15-07:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.093	-9.5	140	24.7	0.1	
B	11	45	NoGas	2.009	16.3	12461	7.4	8	
Na	23	45	He	41414.502	1.7	40358722	0.2	60000	
Mg	24	45	He	41345.992	2.7	22423123	0.8	60000	
Al	27	45	He	42480.166	1.7	10884340	0.5	60000	
K	39	45	He	42334.850	1.9	20366473	0.5	60000	
Ca	44	45	He	42836.825	1.8	1175496	0.6	60000	
Ti	47	45	He	883.971	2.8	153234	1.2	1200	
V	51	45	He	-0.216	-1.2	1255	2.0	0.2	>RL
Cr	52	45	He	0.419	3.2	3371	0.6	30	
Mn	55	45	He	2.128	2.7	9009	2.8	24	
Fe	56	45	He	42411.172	2.6	240708444	1.2	60000	
Co	59	45	He	0.525	2.3	5317	0.5	5	
Ni	60	45	He	0.656	21.0	1980	18.4	20	
Cu	63	45	He	0.227	16.1	2567	11.6	25	
Zn	66	115	He	0.233	21.4	951	6.8	60	
As	75	115	He	0.176	13.7	254	8.0	0.4	
Se	78	115	H2	0.012	105.3	7	41.2	0.4	
Se	78	115	He	-0.054	-50.4	54	2.8	0.4	
Sr	88	115	NoGas	1.973	2.2	71136	1.4	5	
Mo	95	115	NoGas	897.442	2.6	6653407	2.0	1200	
Ag	107	115	NoGas	0.009	10.8	180	11.1	5	
Cd	111	115	He	0.157	5.6	299	5.4	0.5	
Sn	118	115	He	0.116	17.5	1587	4.9	5	
Sn	118	115	NoGas	0.132	8.5	4646	3.3	5	
Sb	121	115	NoGas	0.209	2.0	5254	1.3	5	
Ba	137	165	NoGas	0.121	5.5	1037	2.9	1.5	
Tl	205	165	NoGas	0.018	4.5	867	4.1	0.2	
Pb	208	165	NoGas	-0.128	-8.1	11299	4.1	1	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	159614	1.06	163616	97.55	70	120	
Sc	45	He	67774	1.95	71079	95.35	70	120	
Sc	45	NoGas	901444	0.81	951149	94.77	70	120	
In	115	H2	919741	0.28	1007583	91.28	70	120	
In	115	He	398208	0.17	439049	90.70	70	120	
In	115	NoGas	1478556	1.18	1619798	91.28	70	120	
Tb	159	H2	2031440	1.37	2111966	96.19	70	120	
Tb	159	He	1239023	0.64	1288440	96.16	70	120	
Tb	159	NoGas	2343966	1.38	2404338	97.49	70	120	
Ho	165	H2	1972903	0.40	2032817	97.05	70	120	
Ho	165	He	1246537	0.87	1283106	97.15	70	120	
Ho	165	NoGas	2315245	1.67	2371226	97.64	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	030ICSB.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T13:19:20-07:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	45	NoGas	42.587	0.669	170507	0.98	50	85.2	80	120	
B	11	45	NoGas	1.825	9.824	12088	3.52	-8	-22.8	80	120	
Na	23	45	He	41801.335	1.252	40673019	1.30	50000	83.6	80	120	
Mg	24	45	He	41324.531	0.331	22380114	0.44	50000	82.6	80	120	
Al	27	45	He	42241.001	1.299	10806714	1.54	50000	84.5	80	120	
K	39	45	He	42613.845	1.438	20469415	1.50	50000	85.2	80	120	
Ca	44	45	He	43034.497	0.879	1179125	1.02	50000	86.1	80	120	
Ti	47	45	He	886.988	0.941	153541	0.82	1000	88.7	80	120	
V	51	45	He	45.077	1.281	234990	1.14	50	90.2	80	120	
Cr	52	45	He	44.704	1.350	278236	1.24	50	89.4	80	120	
Mn	55	45	He	46.296	1.385	185937	1.24	50	92.6	80	120	
Fe	56	45	He	42769.500	0.396	242393075	0.41	50000	85.5	80	120	
Co	59	45	He	44.091	0.250	428973	0.12	50	88.2	80	120	
Ni	60	45	He	86.840	0.049	224135	0.32	100	86.8	80	120	
Cu	63	45	He	44.651	1.050	319289	0.79	50	89.3	80	120	
Zn	66	115	He	91.130	1.006	116503	0.52	100	91.1	80	120	
As	75	115	He	47.117	1.015	39129	1.46	50	94.2	80	120	
Se	78	115	H2	44.681	1.636	9811	1.39	50	89.4	80	120	
Se	78	115	He	45.276	1.828	2732	1.30	50	90.6	80	120	
Sr	88	115	NoGas	1.926	2.342	70708	2.77	-5	-38.5	80	120	
Mo	95	115	NoGas	931.946	0.882	7035919	0.48	1050	88.8	80	120	
Ag	107	115	NoGas	89.307	0.356	1765451	0.71	100	89.3	80	120	
Cd	111	115	He	92.046	0.658	163665	0.41	100	92.0	80	120	
Sn	118	115	He	0.096	34.752	1508	8.87	50	0.2	80	120	>+\- 20%
Sn	118	115	NoGas	0.114	9.685	4521	2.83	50	0.2	80	120	>+\- 20%
Sb	121	115	NoGas	44.053	0.504	823469	0.43	50	88.1	80	120	
Ba	137	165	NoGas	44.946	0.864	278119	0.34	50	89.9	80	120	
Tl	205	165	NoGas	44.666	0.190	1928940	0.62	50	89.3	80	120	
Pb	208	165	NoGas	86.149	0.349	5196781	0.42	100	86.1	80	120	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	156657	0.58	163616	95.75	70	120	
Sc	45	He	67656	0.27	71079	95.18	70	120	
Sc	45	NoGas	909200	0.33	951149	95.59	70	120	
In	115	H2	922858	0.29	1007583	91.59	70	120	
In	115	He	398284	0.49	439049	90.72	70	120	
In	115	NoGas	1505485	0.45	1619798	92.94	70	120	
Tb	159	H2	2065165	1.10	2111966	97.78	70	120	
Tb	159	He	1251404	0.31	1288440	97.13	70	120	
Tb	159	NoGas	2370622	1.15	2404338	98.60	70	120	
Ho	165	H2	1996641	0.16	2032817	98.22	70	120	
Ho	165	He	1259784	0.22	1283106	98.18	70	120	
Ho	165	NoGas	2334187	0.52	2371226	98.44	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	078_CCV.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T18:09:04-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	45	NoGas	50.055	0.202	222343	0.60	50	100.1	89.6	110.4	
B	11	45	NoGas	375.952	2.733	1086173	2.20	50	751.9	89.6	110.4	>+/- 10%
Na	23	45	He	1502.479	0.901	1693401	0.91	1250	120.2	89.6	110.4	>+/- 10%
Mg	24	45	He	2587.178	1.438	1540499	1.21	2500	103.5	89.6	110.4	
Al	27	45	He	982.132	1.659	276676	0.45	1000	98.2	89.6	110.4	
K	39	45	He	999.004	0.394	571883	1.23	1000	99.9	89.6	110.4	
Ca	44	45	He	2473.083	1.540	74699	2.08	2500	98.9	89.6	110.4	
Ti	47	45	He	48.637	1.188	9271	1.98	50	97.3	89.6	110.4	
V	51	45	He	50.033	1.812	286337	0.44	50	100.1	89.6	110.4	
Cr	52	45	He	49.248	1.458	336763	0.21	50	98.5	89.6	110.4	
Mn	55	45	He	48.721	1.075	215019	0.42	50	97.4	89.6	110.4	
Fe	56	45	He	1014.163	1.632	6331249	0.30	1000	101.4	89.6	110.4	
Co	59	45	He	49.344	1.536	527550	0.38	50	98.7	89.6	110.4	
Ni	60	45	He	48.789	3.526	138509	2.82	50	97.6	89.6	110.4	
Cu	63	45	He	49.579	0.527	389535	1.10	50	99.2	89.6	110.4	
Zn	66	115	He	50.704	0.578	72848	0.42	50	101.4	89.6	110.4	
As	75	115	He	50.827	1.090	47212	0.64	50	101.7	89.6	110.4	
Se	78	115	H2	50.038	1.709	12637	0.88	50	100.1	89.6	110.4	
Se	78	115	He	51.295	2.819	3454	2.70	50	102.6	89.6	110.4	
Sr	88	115	NoGas	49.666	0.426	2126331	0.73	50	99.3	89.6	110.4	
Mo	95	115	NoGas	47.043	0.464	418370	0.35	50	94.1	89.6	110.4	
Ag	107	115	NoGas	23.678	0.501	551217	0.39	25	94.7	89.6	110.4	
Cd	111	115	He	50.596	1.144	100658	0.74	50	101.2	89.6	110.4	
Sn	118	115	He	50.935	0.400	226714	0.57	50	101.9	89.6	110.4	
Sn	118	115	NoGas	47.898	0.653	682168	0.17	50	95.8	89.6	110.4	
Sb	121	115	NoGas	47.091	1.060	1036490	0.98	50	94.2	89.6	110.4	
Ba	137	165	NoGas	48.084	2.115	338216	0.78	50	96.2	89.6	110.4	
Tl	205	165	NoGas	50.415	0.787	2475365	1.25	50	100.8	89.6	110.4	
Pb	208	165	NoGas	48.115	1.439	3309310	0.54	50	96.2	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	175015	1.34	163616	106.97	70	120	
Sc	45	He	74359	1.41	71079	104.62	70	120	
Sc	45	NoGas	1009210	0.67	951149	106.10	70	120	
In	115	H2	1061497	0.84	1007583	105.35	70	120	
In	115	He	445596	0.46	439049	101.49	70	120	
In	115	NoGas	1772913	0.76	1619798	109.45	70	120	
Tb	159	H2	2441239	0.99	2111966	115.59	70	120	
Tb	159	He	1347199	0.86	1288440	104.56	70	120	
Tb	159	NoGas	2704203	1.09	2404338	112.47	70	120	
Ho	165	H2	2296988	0.48	2032817	113.00	70	120	
Ho	165	He	1372937	3.10	1283106	107.00	70	120	
Ho	165	NoGas	2653955	1.33	2371226	111.92	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	081_CCB.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T18:27:08-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.093	-3.9	163	9.4	0.1	
B	11	45	NoGas	236.895	1.0	710830	0.2	8	>LOD
Na	23	45	He	124.153	13.1	221733	4.2	50	>LOD
Mg	24	45	He	3.086	3.4	2547	5.6	20	
Al	27	45	He	0.284	52.0	656	2.3	10	
K	39	45	He	11.411	40.1	51434	1.9	40	
Ca	44	45	He	1.280	93.3	278	18.0	150	
Ti	47	45	He	0.052	181.3	28	60.4	0.5	
V	51	45	He	0.228	35.6	3872	5.9	0.4	
Cr	52	45	He	-0.005	-253.4	810	5.8	0.2	
Mn	55	45	He	0.008	227.2	553	20.2	0.3	
Fe	56	45	He	0.369	63.3	17607	2.6	30	
Co	59	45	He	-0.015	-6.1	64	21.5	0.4	
Ni	60	45	He	0.029	121.3	393	20.6	0.4	
Cu	63	45	He	0.096	41.1	1780	16.3	0.4	
Zn	66	115	He	0.044	50.5	806	4.7	15	
As	75	115	He	0.040	58.7	160	8.3	0.2	
Se	78	115	H2	0.031	35.0	13	22.4	0.4	
Se	78	115	He	0.149	145.0	74	18.1	0.4	
Sr	88	115	NoGas	0.060	6.6	3527	5.1	0.1	
Mo	95	115	NoGas	0.048	23.1	563	17.8	0.3	
Ag	107	115	NoGas	0.004	58.9	110	56.8	0.1	
Cd	111	115	He	0.000	-854.6	22	41.7	0.1	
Sn	118	115	He	0.057	77.4	1530	10.2	0.1	
Sn	118	115	NoGas	0.069	27.2	4805	5.8	0.1	
Sb	121	115	NoGas	0.031	21.2	2460	6.1	0.5	
Ba	137	165	NoGas	0.009	125.1	403	19.9	0.4	
Tl	205	165	NoGas	0.134	2.9	6822	3.4	0.2	
Pb	208	165	NoGas	-0.207	-2.1	7644	4.3	0.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	172892	0.98	163616	105.67	70	120	
Sc	45	He	74318	6.36	71079	104.56	70	120	
Sc	45	NoGas	1043491	0.93	951149	109.71	70	120	
In	115	H2	1061142	0.85	1007583	105.32	70	120	
In	115	He	451840	6.49	439049	102.91	70	120	
In	115	NoGas	1820837	0.18	1619798	112.41	70	120	
Tb	159	H2	2370371	1.75	2111966	112.24	70	120	
Tb	159	He	1420272	8.10	1288440	110.23	70	120	
Tb	159	NoGas	2744074	0.81	2404338	114.13	70	120	
Ho	165	H2	2230134	1.34	2032817	109.71	70	120	
Ho	165	He	1414738	8.93	1283106	110.26	70	120	
Ho	165	NoGas	2696814	0.99	2371226	113.73	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	096_CCV.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T19:57:46-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	45	NoGas	49.094	1.396	188256	1.59	50	98.2	89.6	110.4	
B	11	45	NoGas	115.469	1.079	292883	0.47	50	230.9	89.6	110.4	>+/- 10%
Na	23	45	He	1363.188	1.353	1248873	1.58	1250	109.1	89.6	110.4	
Mg	24	45	He	2609.712	0.730	1256273	0.77	2500	104.4	89.6	110.4	
Al	27	45	He	984.159	0.712	224160	1.00	1000	98.4	89.6	110.4	
K	39	45	He	1022.111	0.832	472148	0.42	1000	102.2	89.6	110.4	
Ca	44	45	He	2524.829	1.218	61645	1.17	2500	101.0	89.6	110.4	
Ti	47	45	He	52.228	2.208	8047	2.55	50	104.5	89.6	110.4	
V	51	45	He	50.239	0.373	232455	0.70	50	100.5	89.6	110.4	
Cr	52	45	He	49.708	0.153	274809	0.19	50	99.4	89.6	110.4	
Mn	55	45	He	50.119	0.923	178810	0.59	50	100.2	89.6	110.4	
Fe	56	45	He	1062.288	0.064	5361217	0.28	1000	106.2	89.6	110.4	
Co	59	45	He	49.675	0.242	429389	0.23	50	99.4	89.6	110.4	
Ni	60	45	He	49.888	2.014	114511	2.05	50	99.8	89.6	110.4	
Cu	63	45	He	49.137	0.527	312108	0.71	50	98.3	89.6	110.4	
Zn	66	115	He	47.749	1.044	59262	0.46	50	95.5	89.6	110.4	
As	75	115	He	49.055	0.323	39343	0.29	50	98.1	89.6	110.4	
Se	78	115	H2	48.799	1.268	10354	0.53	50	97.6	89.6	110.4	
Se	78	115	He	50.074	2.528	2913	3.03	50	100.1	89.6	110.4	
Sr	88	115	NoGas	50.688	1.740	2008986	1.13	50	101.4	89.6	110.4	
Mo	95	115	NoGas	45.869	2.177	377642	1.41	50	91.7	89.6	110.4	
Ag	107	115	NoGas	22.846	1.007	492396	0.51	25	91.4	89.6	110.4	
Cd	111	115	He	49.969	0.650	85825	0.58	50	99.9	89.6	110.4	
Sn	118	115	He	50.416	0.956	193736	0.46	50	100.8	89.6	110.4	
Sn	118	115	NoGas	46.616	1.169	614755	0.47	50	93.2	89.6	110.4	
Sb	121	115	NoGas	46.365	0.852	944913	1.62	50	92.7	89.6	110.4	
Ba	137	165	NoGas	47.500	0.494	317499	0.23	50	95.0	89.6	110.4	
Tl	205	165	NoGas	50.016	0.929	2333289	0.83	50	100.0	89.6	110.4	
Pb	208	165	NoGas	48.362	1.348	3160541	1.45	50	96.7	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	136326	1.10	163616	83.32	70	120	
Sc	45	He	60111	0.35	71079	84.57	70	120	
Sc	45	NoGas	871212	1.50	951149	91.60	70	120	
In	115	H2	891775	0.76	1007583	88.51	70	120	
In	115	He	384693	0.60	439049	87.62	70	120	
In	115	NoGas	1641430	0.78	1619798	101.34	70	120	
Tb	159	H2	2048909	1.40	2111966	97.01	70	120	
Tb	159	He	1189212	0.58	1288440	92.30	70	120	
Tb	159	NoGas	2549254	0.92	2404338	106.03	70	120	
Ho	165	H2	1976718	0.37	2032817	97.24	70	120	
Ho	165	He	1187985	0.60	1283106	92.59	70	120	
Ho	165	NoGas	2521546	0.72	2371226	106.34	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	099_CCB.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T20:15:49-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.099	-14.8	123	48.9	0.1	
B	11	45	NoGas	62.794	1.5	175382	1.2	8	>LOD
Na	23	45	He	40.745	5.5	117111	1.3	50	
Mg	24	45	He	6.229	1.2	3879	1.6	20	
Al	27	45	He	1.287	24.8	824	9.4	10	
K	39	45	He	17.982	12.7	48288	2.3	40	
Ca	44	45	He	14.539	3.0	593	2.6	150	
Tl	47	45	He	0.888	27.7	164	24.4	0.5	>LOD
V	51	45	He	-0.250	-3.3	1039	4.6	0.4	
Cr	52	45	He	-0.020	-78.7	623	14.2	0.2	
Mn	55	45	He	0.134	19.8	968	10.9	0.3	
Fe	56	45	He	4.970	4.5	40658	2.7	30	
Co	59	45	He	-0.008	-21.7	122	12.9	0.4	
Ni	60	45	He	0.085	63.8	487	27.4	0.4	
Cu	63	45	He	0.023	110.3	1067	17.0	0.4	
Zn	66	115	He	0.062	87.1	749	9.2	15	
As	75	115	He	-0.052	-27.8	66	18.4	0.2	
Se	78	115	H2	0.010	25.5	7	9.4	0.4	
Se	78	115	He	0.314	80.8	77	20.0	0.4	
Sr	88	115	NoGas	0.164	9.5	7642	7.8	0.1	>LOD
Mo	95	115	NoGas	0.018	67.3	280	38.6	0.3	
Ag	107	115	NoGas	0.003	26.6	63	24.1	0.1	
Cd	111	115	He	-0.004	-14.6	13	9.1	0.1	
Sn	118	115	He	0.000	-4487.2	1149	7.4	0.1	
Sn	118	115	NoGas	0.007	34.0	3693	0.7	0.1	
Sb	121	115	NoGas	-0.023	-22.9	1180	8.9	0.5	
Ba	137	165	NoGas	0.041	24.8	597	11.4	0.4	
Tl	205	165	NoGas	0.043	4.0	2120	2.6	0.2	
Pb	208	165	NoGas	-0.236	-2.8	5301	8.5	0.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	151002	0.40	163616	92.29	70	120	
Sc	45	He	65255	0.65	71079	91.81	70	120	
Sc	45	NoGas	940217	0.53	951149	98.85	70	120	
In	115	H2	951063	0.55	1007583	94.39	70	120	
In	115	He	406523	0.25	439049	92.59	70	120	
In	115	NoGas	1723258	1.15	1619798	106.39	70	120	
Tb	159	H2	2152926	1.32	2111966	101.94	70	120	
Tb	159	He	1220798	0.34	1288440	94.75	70	120	
Tb	159	NoGas	2574779	0.60	2404338	107.09	70	120	
Ho	165	H2	2065128	0.72	2032817	101.59	70	120	
Ho	165	He	1218974	0.17	1283106	95.00	70	120	
Ho	165	NoGas	2529462	1.13	2371226	106.67	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	109_CCV.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T21:16:16-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	45	NoGas	47.721	0.645	161212	1.00	50	95.4	89.6	110.4	
B	11	45	NoGas	79.760	1.143	180156	1.59	50	159.5	89.6	110.4	>+/- 10%
Na	23	45	He	1250.891	1.316	1017261	0.59	1250	100.1	89.6	110.4	
Mg	24	45	He	2428.887	1.422	1032521	0.15	2500	97.2	89.6	110.4	
Al	27	45	He	974.491	1.138	196007	0.51	1000	97.4	89.6	110.4	
K	39	45	He	1036.777	1.646	422459	0.89	1000	103.7	89.6	110.4	
Ca	44	45	He	2577.038	3.160	55548	1.60	2500	103.1	89.6	110.4	
Ti	47	45	He	51.739	0.862	7040	1.53	50	103.5	89.6	110.4	
V	51	45	He	49.453	1.340	202093	0.78	50	98.9	89.6	110.4	
Cr	52	45	He	48.551	2.280	237014	0.73	50	97.1	89.6	110.4	
Mn	55	45	He	50.030	2.334	157605	0.91	50	100.1	89.6	110.4	
Fe	56	45	He	1051.449	2.639	4685440	1.09	1000	105.1	89.6	110.4	
Co	59	45	He	48.620	1.613	371114	0.33	50	97.2	89.6	110.4	
Ni	60	45	He	49.309	1.418	99957	1.64	50	98.6	89.6	110.4	
Cu	63	45	He	47.952	0.756	269004	1.29	50	95.9	89.6	110.4	
Zn	66	115	He	44.252	2.957	50680	0.29	50	88.5	89.6	110.4	>+/- 10%
As	75	115	He	46.820	2.579	34629	1.42	50	93.6	89.6	110.4	
Se	78	115	H2	50.756	4.879	9284	0.48	50	101.5	89.6	110.4	
Se	78	115	He	47.568	4.042	2554	3.32	50	95.1	89.6	110.4	
Sr	88	115	NoGas	50.269	1.647	1852184	0.68	50	100.5	89.6	110.4	
Mo	95	115	NoGas	44.163	1.281	338041	0.56	50	88.3	89.6	110.4	>+/- 10%
Ag	107	115	NoGas	21.838	1.116	437558	0.97	25	87.4	89.6	110.4	>+/- 10%
Cd	111	115	He	47.956	2.816	75944	0.20	50	95.9	89.6	110.4	
Sn	118	115	He	49.600	3.711	175728	1.24	50	99.2	89.6	110.4	
Sn	118	115	NoGas	45.733	1.650	560718	0.05	50	91.5	89.6	110.4	
Sb	121	115	NoGas	44.588	1.875	844679	0.47	50	89.2	89.6	110.4	>+/- 10%
Ba	137	165	NoGas	48.178	1.233	295742	0.06	50	96.4	89.6	110.4	
Tl	205	165	NoGas	50.166	0.817	2149446	1.13	50	100.3	89.6	110.4	
Pb	208	165	NoGas	47.684	0.793	2862221	0.41	50	95.4	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	114321	5.56	163616	69.87	70	120	ISTD Failed
Sc	45	He	53089	1.55	71079	74.69	70	120	
Sc	45	NoGas	767421	0.54	951149	80.68	70	120	
In	115	H2	769998	5.03	1007583	76.42	70	120	
In	115	He	354858	2.67	439049	80.82	70	120	
In	115	NoGas	1526064	1.58	1619798	94.21	70	120	
Tb	159	H2	1773570	4.06	2111966	83.98	70	120	
Tb	159	He	1091149	2.40	1288440	84.69	70	120	
Tb	159	NoGas	2359094	0.59	2404338	98.12	70	120	
Ho	165	H2	1702257	5.87	2032817	83.74	70	120	
Ho	165	He	1100295	2.42	1283106	85.75	70	120	
Ho	165	NoGas	2315928	1.16	2371226	97.67	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	112_CCB.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T21:34:20-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.107	-1.5	77	7.5	0.1	
B	11	45	NoGas	33.957	1.4	85398	1.5	8	>LOD
Na	23	45	He	31.814	8.9	92223	1.0	50	
Mg	24	45	He	9.847	0.9	4893	0.9	20	
Al	27	45	He	1.753	8.0	797	2.7	10	
K	39	45	He	32.410	12.2	46608	2.9	40	
Ca	44	45	He	17.820	3.9	577	2.1	150	
Ti	47	45	He	0.734	5.1	118	3.3	0.5	>LOD
V	51	45	He	-0.225	-11.5	988	12.4	0.4	
Cr	52	45	He	-0.015	-73.3	552	11.2	0.2	
Mn	55	45	He	0.173	14.4	950	7.1	0.3	
Fe	56	45	He	5.973	2.3	39137	0.5	30	
Co	59	45	He	-0.010	-30.1	92	26.1	0.4	
Ni	60	45	He	0.127	29.6	500	14.4	0.4	
Cu	63	45	He	0.017	58.8	867	8.1	0.4	
Zn	66	115	He	0.004	388.2	610	2.7	15	
As	75	115	He	-0.051	-23.1	61	15.3	0.2	
Se	78	115	H2	-0.002	-183.1	3	17.6	0.4	
Se	78	115	He	0.228	86.3	65	16.2	0.4	
Sr	88	115	NoGas	0.215	11.1	9046	9.2	0.1	>LOD
Mo	95	115	NoGas	0.008	71.0	173	26.0	0.3	
Ag	107	115	NoGas	0.003	47.2	57	44.4	0.1	
Cd	111	115	He	-0.004	-112.9	12	60.1	0.1	
Sn	118	115	He	0.002	836.5	1048	4.9	0.1	
Sn	118	115	NoGas	-0.001	-1046.8	3315	6.7	0.1	
Sb	121	115	NoGas	-0.028	-6.2	993	4.1	0.5	
Ba	137	165	NoGas	0.029	51.5	477	18.9	0.4	
Tl	205	165	NoGas	0.024	13.4	1163	12.3	0.2	
Pb	208	165	NoGas	-0.247	-1.5	4250	6.8	0.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	128477	0.24	163616	78.52	70	120	
Sc	45	He	55350	1.58	71079	77.87	70	120	
Sc	45	NoGas	816423	0.37	951149	85.84	70	120	
In	115	H2	847739	1.19	1007583	84.14	70	120	
In	115	He	368011	0.38	439049	83.82	70	120	
In	115	NoGas	1595700	0.90	1619798	98.51	70	120	
Tb	159	H2	1899942	1.45	2111966	89.96	70	120	
Tb	159	He	1101949	0.27	1288440	85.53	70	120	
Tb	159	NoGas	2387700	1.16	2404338	99.31	70	120	
Ho	165	H2	1817840	0.50	2032817	89.42	70	120	
Ho	165	He	1105352	0.98	1283106	86.15	70	120	
Ho	165	NoGas	2354944	1.34	2371226	99.31	70	120	

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Element Environmental
ARF No: 74218 SDG: 74218
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 09/23/14 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 12:52	%R(1)	True CCV1	Found 13:46	%R(1)	True CCV1	Found 15:11	%R(1)	
Silver (Ag)	50	48.9338	97.9	25	24.5129	98.1	25	24.4778	97.9	P
Arsenic (As)	100	90.6160	90.6	50	49.2134	98.4	50	49.8818	99.8	P
Beryllium (Be)	100	98.1731	98.2	50	49.0836	98.2	50	47.7617	95.5	P
Cadmium (Cd)	100	98.6608	98.7	50	48.8538	97.7	50	48.7398	97.5	P
Chromium (Cr)	100	98.1616	98.2	50	48.7040	97.4	50	48.5965	97.2	P
Copper (Cu)	100	97.7813	97.8	50	49.3795	98.8	50	48.3563	96.7	P
Nickel (Ni)	100	99.2430	99.2	50	49.0951	98.2	50	48.9871	98.0	P
Lead (Pb)	100	100.229	100	50	48.5558	97.1	50	48.4283	96.9	P
Antimony (Sb)	100	100.722	101	50	47.0534	94.1	50	47.1549	94.3	P
Selenium (Se)	100	97.2321	97.2	50	48.5173	97.0	50	48.5859	97.2	P
Thallium (Tl)	100	99.5705	99.6	50	49.4119	98.8	50	50.0598	100	P
Zinc (Zn)	100	97.6226	97.6	50	48.5653	97.1	50	48.8498	97.7	P

(1) Control Limits: Metals 90-110

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No: 74218 SDG: 74218

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 09/23/14 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 12:52	%R(1)	True CCV1	Found 17:11	%R(1)	True	Found	%R(1)	
Silver (Ag)	50	48.9338	97.9	25	24.2939	97.2				P
Arsenic (As)	100	90.6160	90.6	50	50.1224	100				P
Beryllium (Be)	100	98.1731	98.2	50	47.0173	94.0				P
Cadmium (Cd)	100	98.6608	98.7	50	49.1496	98.3				P
Chromium (Cr)	100	98.1616	98.2	50	49.0365	98.1				P
Copper (Cu)	100	97.7813	97.8	50	48.5133	97.0				P
Nickel (Ni)	100	99.2430	99.2	50	48.8873	97.8				P
Lead (Pb)	100	100.229	100	50	48.4657	96.9				P
Antimony (Sb)	100	100.722	101	50	47.6515	95.3				P
Selenium (Se)	100	97.2321	97.2	50	49.0189	98.0				P
Thallium (Tl)	100	99.5705	99.6	50	50.4770	101				P
Zinc (Zn)	100	97.6226	97.6	50	49.7249	99.4				P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No.: 74218 SDG: 74218

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 09/23/14

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	13:22		14:04		15:29		17:29		16:05		
Silver (Ag)	.20	U	.20	U	.20	U	.20	U	.20	U	P
Arsenic (As)	.50	U	.50	U	.50	U	.50	U	.50	U	P
Beryllium (Be)	.20	U	.20	U	.20	U	.20	U	.20	U	P
Cadmium (Cd)	.20	U	.20	U	.20	U	.20	U	.20	U	P
Chromium (Cr)	.50	U	.50	U	.50	U	.50	U	.23	J	P
Copper (Cu)	.50	U	.50	U	.50	U	.50	U	.50	U	P
Nickel (Ni)	.50	U	.50	U	.50	U	.50	U	.50	U	P
Lead (Pb)	.50	U	.50	U	.50	U	.50	U	.50	U	P
Antimony (Sb)	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U	P
Selenium (Se)	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U	P
Thallium (Tl)	.20	U	.20	U	.20	U	.20	U	.20	U	P
Zinc (Zn)	20.00	U	20.00	U	20.00	U	20.00	U	20.00	U	P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name:	A.P.P.L. INC.	Contract:	Element Environmental
ARF No.:	74218	SDG:	74218
ICP ID Number:	Megatron	ICS Source:	Environmental Express

Analysis Date: 09/23/14 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 14:10	Sol AB 14:28	%R(1)
Silver (Ag)		100	0.000799	88.219964	88.2
Arsenic (As)		50	0.096071	45.57218	91.1
Beryllium (Be)		50	-0.001354	42.42091	84.8
Cadmium (Cd)		100	0.183166	87.597425	87.6
Chromium (Cr)		50	0.473697	42.860292	85.7
Copper (Cu)		50	0.243117	41.7186	83.4
Nickel (Ni)		100	0.707273	84.168408	84.2
Lead (Pb)		100	0.03777	85.22538	85.2
Antimony (Sb)		50	-0.052523	46.286493	92.6
Selenium (Se)		50	-0.030125	44.18787	88.4
Thallium (Tl)		50	-0.024837	43.335807	86.7
Zinc (Zn)		100	0.148396	87.42177	87.4

(1) Control Limits: Metals 80-120

A.P.P.L. INC.
9
ICP SERIAL DILUTION

CLIENT SAMPLE NO.
EN018

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No.: 74218 SDG: 74218

Matrix: water

Analysis Date: 09/23/14 Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	%D	Q	M
Silver (Ag)	-0.002212		0.001277		NA		
Arsenic (As)	-0.254512		-0.384723		NA		
Beryllium (Be)	-0.0205		-0.150023		NA		
Cadmium (Cd)	0.001986		-0.00816		NA		
Chromium (Cr)	0.345079		0.372186		NA		
Copper (Cu)	0.446408		0.306669		NA		
Nickel (Ni)	0.309209		0.361095		NA		
Lead (Pb)	-0.021364		-0.259714		NA		
Antimony (Sb)	-0.444306		3.28631		NA		
Selenium (Se)	-0.054		0.032215		NA		
Thallium (Tl)	-0.030715		-0.05757		NA		
Zinc (Zn)	0.315774		-1.148664		NA		

Comments:

09/23/14 16:41 AZ02116W12

09/23/14 17:05 AZ02116W12 1/5

Sample Report

Sample Table

Sample Name	AZ02116W12 1/5
Data File Name	057SMPL.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T17:05:33-07:00
Sample Type	Sample
Dilution	5.555555556
Comment	
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	-0.027	-0.150	-41.47	160	38.02	10000	
B	11	45	NoGas	12.075	67.081	1.94	55893	1.56	10000	
Na	23	45	He	22.308	123.931	46.41	112059	10.03	1000000	
Mg	24	45	He	5.392	29.957	5.27	5060	3.06	1000000	
Al	27	45	He	-0.257	-1.429	-63.12	610	8.95	1000000	
K	39	45	He	24.648	136.934	33.56	131224	3.59	500000	
Ca	44	45	He	10.980	61.000	38.86	777	19.07	500000	
Ti	47	45	He	0.045	0.251	87.59	43	20.36	10000	
V	51	45	He	0.244	1.354	10.00	4096	4.00	10000	
Cr	52	45	He	0.067	0.372	10.20	1637	3.08	10000	
Mn	55	45	He	-0.052	-0.286	-21.96	422	12.49	50000	
Fe	56	45	He	-2.819	-15.663	-1.23	11971	1.43	1000000	
Co	59	45	He	0.001	0.007	159.04	128	18.51	10000	
Ni	60	45	He	0.065	0.361	66.62	667	20.42	10000	
Cu	63	45	He	0.055	0.307	50.86	2060	11.45	10000	
Zn	66	115	He	-0.207	-1.149	-33.16	572	19.16	50000	
As	75	115	He	-0.069	-0.385	-25.07	232	9.90	2000	
Se	78	115	H2	0.006	0.032	433.11	22	32.94	10000	
Se	78	115	He	0.262	1.455	44.60	122	7.85	10000	
Sr	88	115	NoGas	0.089	0.493	3.10	5071	2.71	50000	
Mo	95	115	NoGas	-0.059	-0.329	-22.81	907	12.30	10000	
Ag	107	115	NoGas	0.000	0.001	1001.67	120	43.30	5000	
Cd	111	115	He	-0.001	-0.008	-135.12	5	78.06	10000	
Sn	118	115	He	0.328	1.824	26.03	3276	11.49	10000	
Sn	118	115	NoGas	0.263	1.463	9.38	8521	3.24	10000	
Sb	121	115	NoGas	0.592	3.286	5.34	21064	2.61	10000	
Ba	137	165	NoGas	-0.008	-0.044	-71.31	300	11.55	50000	
Tl	205	165	NoGas	-0.010	-0.058	-40.13	1580	10.65	5000	
Pb	208	165	NoGas	-0.047	-0.260	-8.49	5047	4.69	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	207613	1.16	185584	111.87	70	120	
Sc	45	He	92953	0.57	83499	111.32	70	120	
Sc	45	NoGas	1142309	0.69	1035739	110.29	70	120	
In	115	H2	1218196	0.19	1133962	107.43	70	120	
In	115	He	544567	1.08	512916	106.17	70	120	
In	115	NoGas	1916502	0.49	1726182	111.03	70	120	
Tb	159	H2	2432672	0.80	2259927	107.64	70	120	
Tb	159	He	1430141	0.12	1384042	103.33	70	120	
Tb	159	NoGas	2770834	0.77	2544437	108.90	70	120	
Ho	165	H2	2321329	1.10	2140395	108.45	70	120	
Ho	165	He	1395561	0.77	1350145	103.36	70	120	
Ho	165	NoGas	2671872	1.09	2467012	108.30	70	120	

A.P.P.L. INC.

5B

POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

EN018

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No.: 74218 SDG: 74218

Analysis Date: 09/23/14 Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Silver (Ag)	75-125	94.375032		-0.002212		100.000	94.4		
Arsenic (As)	75-125	267.165735		-0.254512		250.000	107		
Beryllium (Be)	75-125	52.276972		-0.0205		50.000	105		
Cadmium (Cd)	75-125	52.061999		0.001986		50.000	104		
Chromium (Cr)	75-125	272.100973		0.345079		250.000	109		
Copper (Cu)	75-125	263.519093		0.446408		250.000	105		
Nickel (Ni)	75-125	252.947217		0.309209		250.000	101		
Lead (Pb)	75-125	267.819475		-0.021364		250.000	107		
Antimony (Sb)	75-125	270.067308		-0.444306		250.000	108		
Selenium (Se)	75-125	258.534726		-0.054		250.000	103		
Thallium (Tl)	75-125	262.151407		-0.030715		250.000	105		
Zinc (Zn)	75-125	511.057004		0.315774		500.000	102		

Comments:

09/23/14 16:41 AZ02116W12

09/23/14 16:59 AZ02116W12-A

Sample Report

Sample Table

Sample Name	AZ02116W12-A
Data File Name	056SMPL.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T16:59:32-07:00
Sample Type	Sample
Dilution	1.111111111
Comment	
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	47.049	52.277	1.01	250470	1.03	10000	
B	11	45	NoGas	257.541	286.157	0.69	851050	0.76	10000	
Na	23	45	He	24447.208	27163.564	1.73	26633950	1.59	1000000	
Mg	24	45	He	23944.761	26605.290	0.79	14658218	0.66	1000000	
Al	27	45	He	1932.473	2147.192	0.60	589480	0.48	1000000	
K	39	45	He	4980.791	5534.212	1.10	3109273	0.98	500000	
Ca	44	45	He	23753.288	26392.542	0.83	768085	0.70	500000	
Ti	47	45	He	237.579	263.976	1.50	49918	1.37	10000	
V	51	45	He	250.231	278.035	1.73	1474366	1.59	10000	
Cr	52	45	He	244.891	272.101	1.43	1741346	1.29	10000	
Mn	55	45	He	236.686	262.984	0.84	1084105	0.69	50000	
Fe	56	45	He	942.451	1047.168	1.55	6166711	1.39	1000000	
Co	59	45	He	240.233	266.926	1.17	2624780	1.03	10000	
Ni	60	45	He	227.652	252.947	1.36	669402	1.22	10000	
Cu	63	45	He	237.167	263.519	0.69	1923182	0.55	10000	
Zn	66	115	He	459.951	511.057	2.12	706793	1.21	50000	
As	75	115	He	240.449	267.166	1.27	281022	1.31	2000	
Se	78	115	H2	232.681	258.535	1.11	62706	0.70	10000	
Se	78	115	He	231.544	257.271	0.45	18777	1.32	10000	
Sr	88	115	NoGas	247.564	275.071	0.67	9646093	0.81	50000	
Mo	95	115	NoGas	253.233	281.370	1.12	1997782	0.62	10000	
Ag	107	115	NoGas	84.938	94.375	0.85	1812638	1.35	5000	
Cd	111	115	He	46.856	52.062	1.55	94820	0.72	10000	
Sn	118	115	He	248.124	275.693	0.90	1052967	0.73	10000	
Sn	118	115	NoGas	250.660	278.511	0.39	3037782	0.75	10000	
Sb	121	115	NoGas	243.061	270.067	0.50	4580014	0.77	10000	
Ba	137	165	NoGas	254.928	283.254	0.71	1640883	0.89	50000	
Tl	205	165	NoGas	235.936	262.151	1.24	9689627	0.64	5000	
Pb	208	165	NoGas	241.038	267.819	1.66	13442263	0.90	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	200123	1.37	185584	107.83	70	120	
Sc	45	He	89393	0.15	83499	107.06	70	120	
Sc	45	NoGas	1103377	0.33	1035739	106.53	70	120	
In	115	H2	1142949	0.41	1133962	100.79	70	120	
In	115	He	518243	1.51	512916	101.04	70	120	
In	115	NoGas	1803365	0.75	1726182	104.47	70	120	
Tb	159	H2	2312735	1.65	2259927	102.34	70	120	
Tb	159	He	1392211	0.59	1384042	100.59	70	120	
Tb	159	NoGas	2634159	0.45	2544437	103.53	70	120	
Ho	165	H2	2211556	0.95	2140395	103.32	70	120	
Ho	165	He	1365983	0.72	1350145	101.17	70	120	
Ho	165	NoGas	2573750	1.44	2467012	104.33	70	120	

Calibration Blank Report

Sample Table

Sample Name	Calibration Blank
Data File Name	010CALB.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T12:22:02-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	140728

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD
Be	9	45	NoGas	320	20.49
B	11	45	NoGas	6795	3.94
Na	23	45	He	80301	4.77
Mg	24	45	He	1551	6.61
Al	27	45	He	612	19.33
K	39	45	He	103331	3.72
Ca	44	45	He	384	16.66
Ti	47	45	He	19	20.36
V	51	45	He	3037	4.75
Cr	52	45	He	953	7.79
Mn	55	45	He	642	8.53
Fe	56	45	He	23406	2.06
Co	59	45	He	81	21.09
Ni	60	45	He	473	23.27
Cu	63	45	He	1247	8.83
Zn	66	115	He	857	10.23
As	75	115	He	137	11.76
Se	78	115	H2	4	52.92
Se	78	115	He	85	18.69
Sr	88	115	NoGas	1360	39.08
Mo	95	115	NoGas	117	19.79
Ag	107	115	NoGas	50	34.64
Cd	111	115	He	4	86.60
Sn	118	115	He	830	4.87
Sn	118	115	NoGas	2125	8.55
Sb	121	115	NoGas	2390	11.09
Ba	137	165	NoGas	270	20.62
Tl	205	165	NoGas	157	39.00
Pb	208	165	NoGas	8605	2.39

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD
Sc	45	H2	198067	2.64
Sc	45	He	83343	1.78
Sc	45	NoGas	1029890	0.94
In	115	H2	1208512	3.49
In	115	He	508472	0.60
In	115	NoGas	1725637	1.82
Tb	159	H2	2415126	4.77
Tb	159	He	1365308	0.28
Tb	159	NoGas	2525837	0.88
Ho	165	H2	2318561	2.98
Ho	165	He	1339360	0.87
Ho	165	NoGas	2420391	0.37

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	011CALS.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T12:28:03-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	140728
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD	Cal Coef
Be	9	45	NoGas	910	7.21	1.0000
B	11	45	NoGas	6698	3.15	-1.0000
Na	23	45	He	60479	8.00	-1.0000
Mg	24	45	He	4318	3.88	1.0000
Al	27	45	He	962	4.70	1.0000
K	39	45	He	101027	5.57	-1.0000
Ca	44	45	He	467	3.78	1.0000
Ti	47	45	He	32	52.06	1.0000
V	51	45	He	3593	1.84	1.0000
Cr	52	45	He	1530	10.77	1.0000
Mn	55	45	He	739	4.97	1.0000
Fe	56	45	He	19607	1.80	-1.0000
Co	59	45	He	1126	6.33	1.0000
Ni	60	45	He	807	5.73	1.0000
Cu	63	45	He	1967	14.89	1.0000
Zn	66	115	He	676	1.99	-1.0000
As	75	115	He	248	10.53	1.0000
Se	78	115	H2	28	24.18	1.0000
Se	78	115	He	105	13.44	1.0000
Sr	88	115	NoGas	4184	10.15	1.0000
Mo	95	115	NoGas	823	11.54	1.0000
Ag	107	115	NoGas	920	13.18	1.0000
Cd	111	115	He	190	27.91	1.0000
Sn	118	115	He	766	13.99	-1.0000
Sn	118	115	NoGas	2068	5.40	-1.0000
Sb	121	115	NoGas	4127	8.95	1.0000
Ba	137	165	NoGas	790	4.56	1.0000
Tl	205	165	NoGas	4054	5.81	1.0000
Pb	208	165	NoGas	12896	2.40	1.0000

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	183355	0.50	198067	92.57	70	120	
Sc	45	He	83878	0.37	83343	100.64	70	120	
Sc	45	NoGas	1040473	0.81	1029890	101.03	70	120	
In	115	H2	1120632	0.59	1208512	92.73	70	120	
In	115	He	507687	0.39	508472	99.85	70	120	
In	115	NoGas	1715102	0.64	1725637	99.39	70	120	
Tb	159	H2	2230814	0.86	2415126	92.37	70	120	
Tb	159	He	1375164	0.08	1365308	100.72	70	120	
Tb	159	NoGas	2530560	2.49	2525837	100.19	70	120	
Ho	165	H2	2137640	1.13	2318561	92.20	70	120	
Ho	165	He	1341124	0.40	1339360	100.13	70	120	
Ho	165	NoGas	2447046	2.35	2420391	101.10	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	012CALS.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T12:34:06-07:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	140728
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD	Cal Coef
Be	9	45	NoGas	5211	0.84	0.9998
B	11	45	NoGas	9533	6.97	0.9895
Na	23	45	He	84937	4.41	0.5482
Mg	24	45	He	30075	1.90	1.0000
Al	27	45	He	6044	2.25	0.9994
K	39	45	He	115562	3.67	0.9570
Ca	44	45	He	1639	10.64	0.9994
Ti	47	45	He	232	12.54	0.9994
V	51	45	He	8426	3.59	1.0000
Cr	52	45	He	7449	1.95	0.9999
Mn	55	45	He	4666	2.68	0.9975
Fe	56	45	He	124782	0.42	0.9923
Co	59	45	He	10363	0.86	1.0000
Ni	60	45	He	3087	8.56	0.9997
Cu	63	45	He	8516	0.95	1.0000
Zn	66	115	He	1993	6.79	0.9763
As	75	115	He	1292	3.40	1.0000
Se	78	115	H2	252	4.29	1.0000
Se	78	115	He	171	5.76	0.9896
Sr	88	115	NoGas	37728	0.89	0.9998
Mo	95	115	NoGas	7232	3.56	1.0000
Ag	107	115	NoGas	10180	7.49	0.9999
Cd	111	115	He	1873	0.64	1.0000
Sn	118	115	He	4315	1.63	0.9943
Sn	118	115	NoGas	11994	0.91	0.9955
Sb	121	115	NoGas	18534	4.55	1.0000
Ba	137	165	NoGas	6218	5.25	0.9999
Tl	205	165	NoGas	37478	1.70	1.0000
Pb	208	165	NoGas	58717	0.86	0.9999

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	185122	0.59	198067	93.46	70	120	
Sc	45	He	84122	0.73	83343	100.93	70	120	
Sc	45	NoGas	1044227	0.43	1029890	101.39	70	120	
In	115	H2	1131732	0.79	1208512	93.65	70	120	
In	115	He	511113	1.11	508472	100.52	70	120	
In	115	NoGas	1733484	1.09	1725637	100.45	70	120	
Tb	159	H2	2245918	0.94	2415126	92.99	70	120	
Tb	159	He	1381699	0.24	1365308	101.20	70	120	
Tb	159	NoGas	2541233	1.47	2525837	100.61	70	120	
Ho	165	H2	2134212	0.56	2318561	92.05	70	120	
Ho	165	He	1347740	0.39	1339360	100.63	70	120	
Ho	165	NoGas	2485483	1.69	2420391	102.69	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	013CALS.d
Data Path Name	D:\DATA\140923A.b
Acq Date TIme	2014-09-23T12:40:08-07:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	140728
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD	Cal Coef
Be	9	45	NoGas	245960	0.95	1.0000
B	11	45	NoGas	159021	1.06	1.0000
Na	23	45	He	1350297	1.60	0.9999
Mg	24	45	He	1434103	0.89	1.0000
Al	27	45	He	278193	0.13	1.0000
K	39	45	He	659477	0.50	1.0000
Ca	44	45	He	74076	0.61	1.0000
Ti	47	45	He	9579	0.80	1.0000
V	51	45	He	272145	0.31	1.0000
Cr	52	45	He	326004	1.04	1.0000
Mn	55	45	He	210645	0.45	1.0000
Fe	56	45	He	5927718	0.10	1.0000
Co	59	45	He	503442	0.25	1.0000
Ni	60	45	He	136050	0.89	1.0000
Cu	63	45	He	376521	1.66	1.0000
Zn	66	115	He	74053	0.38	1.0000
As	75	115	He	55664	0.63	1.0000
Se	78	115	H2	12965	1.32	1.0000
Se	78	115	He	3905	2.60	1.0000
Sr	88	115	NoGas	1826677	0.58	1.0000
Mo	95	115	NoGas	369930	0.24	1.0000
Ag	107	115	NoGas	499123	0.08	1.0000
Cd	111	115	He	96928	0.60	1.0000
Sn	118	115	He	201085	0.59	1.0000
Sn	118	115	NoGas	565174	0.62	1.0000
Sb	121	115	NoGas	858413	0.68	1.0000
Ba	137	165	NoGas	305216	0.54	1.0000
Tl	205	165	NoGas	1956296	0.10	1.0000
Pb	208	165	NoGas	2642213	0.70	1.0000

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	186928	0.48	198067	94.38	70	120	
Sc	45	He	83970	1.00	83343	100.75	70	120	
Sc	45	NoGas	1039286	0.45	1029890	100.91	70	120	
In	115	H2	1125871	0.06	1208512	93.16	70	120	
In	115	He	506770	0.99	508472	99.67	70	120	
In	115	NoGas	1726978	0.95	1725637	100.08	70	120	
Tb	159	H2	2265591	0.86	2415126	93.81	70	120	
Tb	159	He	1393365	0.45	1365308	102.06	70	120	
Tb	159	NoGas	2562730	1.69	2525837	101.46	70	120	
Ho	165	H2	2151792	1.07	2318561	92.81	70	120	
Ho	165	He	1355837	0.61	1339360	101.23	70	120	
Ho	165	NoGas	2484491	1.08	2420391	102.65	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	014CALS.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T12:46:10-07:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	140728
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD	Cal Coef
Be	9	45	NoGas	505133	0.49	0.9999
B	11	45	NoGas	324830	1.16	0.9998
Na	23	45	He	2614871	1.16	1.0000
Mg	24	45	He	2861295	1.31	1.0000
Al	27	45	He	573875	0.63	0.9998
K	39	45	He	1233155	0.54	0.9999
Ca	44	45	He	152332	0.61	0.9999
Ti	47	45	He	19791	2.19	0.9998
V	51	45	He	554743	0.61	0.9999
Cr	52	45	He	668888	0.24	0.9999
Mn	55	45	He	430466	0.14	0.9999
Fe	56	45	He	12295241	0.58	0.9998
Co	59	45	He	1025045	0.23	0.9999
Ni	60	45	He	275961	0.35	0.9999
Cu	63	45	He	760670	0.52	1.0000
Zn	66	115	He	151091	0.66	0.9999
As	75	115	He	114729	0.35	0.9998
Se	78	115	H2	26635	0.45	0.9999
Se	78	115	He	8008	2.41	0.9998
Sr	88	115	NoGas	3750402	0.61	0.9999
Mo	95	115	NoGas	760389	0.70	0.9999
Ag	107	115	NoGas	1027244	0.69	0.9999
Cd	111	115	He	197892	0.65	0.9999
Sn	118	115	He	417748	0.74	0.9998
Sn	118	115	NoGas	1172225	0.46	0.9998
Sb	121	115	NoGas	1834066	1.73	0.9995
Ba	137	165	NoGas	625696	0.24	0.9999
Tl	205	165	NoGas	3987927	0.44	1.0000
Pb	208	165	NoGas	5427259	0.29	0.9999

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	186824	0.57	198067	94.32	70	120	
Sc	45	He	83464	0.34	83343	100.15	70	120	
Sc	45	NoGas	1042748	1.08	1029890	101.25	70	120	
In	115	H2	1122282	0.29	1208512	92.86	70	120	
In	115	He	504156	0.47	508472	99.15	70	120	
In	115	NoGas	1726324	1.25	1725637	100.04	70	120	
Tb	159	H2	2278734	1.07	2415126	94.35	70	120	
Tb	159	He	1388575	0.27	1365308	101.70	70	120	
Tb	159	NoGas	2543730	0.65	2525837	100.71	70	120	
Ho	165	H2	2168085	2.42	2318561	93.51	70	120	
Ho	165	He	1357318	0.36	1339360	101.34	70	120	
Ho	165	NoGas	2490028	1.67	2420391	102.88	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	015_ICV.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T12:52:12-07:00
Sample Type	ICV
Dilution	1
Comment	140728
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	45	NoGas	98.173	0.892	493744	0.76	100	98.2	89.6	110.4	
B	11	45	NoGas	97.012	0.830	312987	1.09	100	97.0	89.6	110.4	
Na	23	45	He	2435.944	1.024	2566460	1.57	2500	97.4	89.6	110.4	
Mg	24	45	He	2502.994	0.818	1442463	0.77	2500	100.1	89.6	110.4	
Al	27	45	He	2459.058	0.363	705341	0.97	2500	98.4	89.6	110.4	
K	39	45	He	2489.328	0.972	1514127	0.34	2500	99.6	89.6	110.4	
Ca	44	45	He	2618.616	0.738	79977	1.34	2500	104.7	89.6	110.4	
Ti	47	45	He	95.070	3.603	18805	3.16	100	95.1	89.6	110.4	
V	51	45	He	98.397	0.269	546586	0.87	100	98.4	89.6	110.4	
Cr	52	45	He	98.162	0.504	657112	0.27	100	98.2	89.6	110.4	
Mn	55	45	He	97.226	0.224	419191	0.55	100	97.2	89.6	110.4	
Fe	56	45	He	2418.439	0.572	14841748	1.00	2500	96.7	89.6	110.4	
Co	59	45	He	98.016	0.202	1007300	0.72	100	98.0	89.6	110.4	
Ni	60	45	He	99.243	0.194	274695	0.72	100	99.2	89.6	110.4	
Cu	63	45	He	97.781	1.221	746664	1.75	100	97.8	89.6	110.4	
Zn	66	115	He	97.623	0.463	147063	0.46	100	97.6	89.6	110.4	
As	75	115	He	90.616	1.375	103543	1.19	100	90.6	89.6	110.4	
Se	78	115	H2	97.232	0.474	25653	0.35	100	97.2	89.6	110.4	
Se	78	115	He	96.404	1.968	7684	1.80	100	96.4	89.6	110.4	
Sr	88	115	NoGas	97.934	1.765	3688152	0.90	100	97.9	89.6	110.4	
Mo	95	115	NoGas	96.859	2.605	739326	0.90	100	96.9	89.6	110.4	
Ag	107	115	NoGas	48.934	1.471	1009178	0.78	50	97.9	89.6	110.4	
Cd	111	115	He	98.661	0.570	194834	0.33	100	98.7	89.6	110.4	
Sn	118	115	He	49.853	0.094	207455	0.32	100	49.9	89.6	110.4	>+\- 10%
Sn	118	115	NoGas	49.851	1.641	586541	0.67	100	49.9	89.6	110.4	>+\- 10%
Sb	121	115	NoGas	100.723	1.197	1840329	0.78	100	100.7	89.6	110.4	
Ba	137	165	NoGas	99.874	0.431	616230	0.77	100	99.9	89.6	110.4	
Tl	205	165	NoGas	99.571	1.109	3920017	0.67	100	99.6	89.6	110.4	
Pb	208	165	NoGas	100.229	1.104	5360371	0.83	100	100.2	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	186031	1.00	198067	93.92	70	120	
Sc	45	He	84076	0.61	83343	100.88	70	120	
Sc	45	NoGas	1043063	0.32	1029890	101.28	70	120	
In	115	H2	1118359	0.74	1208512	92.54	70	120	
In	115	He	505681	0.24	508472	99.45	70	120	
In	115	NoGas	1742983	1.97	1725637	101.01	70	120	
Tb	159	H2	2256213	1.71	2415126	93.42	70	120	
Tb	159	He	1394631	0.39	1365308	102.15	70	120	
Tb	159	NoGas	2564567	0.44	2525837	101.53	70	120	
Ho	165	H2	2140478	1.33	2318561	92.32	70	120	
Ho	165	He	1356994	0.47	1339360	101.32	70	120	
Ho	165	NoGas	2466157	0.44	2420391	101.89	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	020_ICB.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T13:22:20-07:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.009	-212.9	240	39.7	0.1	
B	11	45	NoGas	-1.850	-3.5	8396	2.5	8	
Na	23	45	He	-1.084	-65.7	79246	0.7	50	
Mg	24	45	He	-0.124	-54.1	1433	2.8	20	
Al	27	45	He	-0.040	-383.4	628	7.6	10	
K	39	45	He	-6.432	-119.0	103405	4.4	40	
Ca	44	45	He	1.361	19.3	419	1.7	150	
Ti	47	45	He	-0.016	-344.8	28	38.6	0.5	
V	51	45	He	0.039	83.9	2630	6.6	0.4	
Cr	52	45	He	-0.016	-75.6	944	8.7	0.2	
Mn	55	45	He	-0.019	-29.7	536	4.1	0.3	
Fe	56	45	He	-0.686	-11.5	24439	2.3	30	
Co	59	45	He	0.001	544.6	110	28.9	0.4	
Ni	60	45	He	0.017	86.6	480	8.3	0.4	
Cu	63	45	He	-0.036	-128.4	1193	30.9	0.4	
Zn	66	115	He	0.032	66.8	918	4.0	15	
As	75	115	He	-0.105	-7.1	180	4.6	0.2	
Se	78	115	H2	-0.052	-11.9	5	36.3	0.4	
Se	78	115	He	0.082	397.6	103	26.3	0.4	
Sr	88	115	NoGas	0.001	328.4	1320	12.0	0.1	
Mo	95	115	NoGas	-0.137	-5.0	230	22.6	0.3	
Ag	107	115	NoGas	-0.002	-100.4	63	65.7	0.1	
Cd	111	115	He	-0.002	-144.8	5	107.9	0.1	
Sn	118	115	He	-0.177	-20.5	983	16.2	0.1	
Sn	118	115	NoGas	-0.174	-4.4	2651	3.2	0.1	
Sb	121	115	NoGas	-0.285	-3.6	3234	5.8	0.5	
Ba	137	165	NoGas	-0.004	-182.4	307	14.7	0.4	
Tl	205	165	NoGas	-0.035	-2.1	477	6.1	0.2	
Pb	208	165	NoGas	-0.017	-53.7	6324	6.9	0.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	182047	3.07	185584	98.09	70	120	
Sc	45	He	85981	0.42	83499	102.97	70	120	
Sc	45	NoGas	1055686	0.50	1035739	101.93	70	120	
In	115	H2	1131012	2.12	1133962	99.74	70	120	
In	115	He	521647	0.72	512916	101.70	70	120	
In	115	NoGas	1749376	0.20	1726182	101.34	70	120	
Tb	159	H2	2240134	2.68	2259927	99.12	70	120	
Tb	159	He	1392594	0.85	1384042	100.62	70	120	
Tb	159	NoGas	2608838	1.38	2544437	102.53	70	120	
Ho	165	H2	2170839	2.16	2140395	101.42	70	120	
Ho	165	He	1366582	0.52	1350145	101.22	70	120	
Ho	165	NoGas	2489784	0.97	2467012	100.92	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	024_CCV.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T13:46:39-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	45	NoGas	49.084	1.131	250100	1.40	50	98.2	89.6	110.4	
B	11	45	NoGas	47.495	0.421	161767	1.02	50	95.0	89.6	110.4	
Na	23	45	He	1249.733	2.075	1384603	0.66	1250	100.0	89.6	110.4	
Mg	24	45	He	2489.837	2.005	1466060	0.66	2500	99.6	89.6	110.4	
Al	27	45	He	974.376	1.661	285949	0.48	1000	97.4	89.6	110.4	
K	39	45	He	995.411	1.887	682813	0.80	1000	99.5	89.6	110.4	
Ca	44	45	He	2475.392	2.419	77254	1.06	2500	99.0	89.6	110.4	
Ti	47	45	He	48.836	5.341	9883	4.10	50	97.7	89.6	110.4	
V	51	45	He	48.601	2.027	277124	0.66	50	97.2	89.6	110.4	
Cr	52	45	He	48.704	1.456	333667	0.15	50	97.4	89.6	110.4	
Mn	55	45	He	49.202	1.411	217069	0.14	50	98.4	89.6	110.4	
Fe	56	45	He	965.848	2.104	6072459	0.81	1000	96.6	89.6	110.4	
Co	59	45	He	49.116	1.835	515785	0.52	50	98.2	89.6	110.4	
Ni	60	45	He	49.095	3.533	139049	2.19	50	98.2	89.6	110.4	
Cu	63	45	He	49.380	1.931	385960	0.60	50	98.8	89.6	110.4	
Zn	66	115	He	48.565	1.384	75181	0.69	50	97.1	89.6	110.4	
As	75	115	He	49.213	0.228	57587	0.67	50	98.4	89.6	110.4	
Se	78	115	H2	48.517	1.459	13186	1.17	50	97.0	89.6	110.4	
Se	78	115	He	48.682	1.511	4011	0.75	50	97.4	89.6	110.4	
Sr	88	115	NoGas	49.833	0.605	1905310	0.66	50	99.7	89.6	110.4	
Mo	95	115	NoGas	48.451	0.872	375921	0.42	50	96.9	89.6	110.4	
Ag	107	115	NoGas	24.513	0.444	513123	1.04	25	98.1	89.6	110.4	
Cd	111	115	He	48.854	0.681	98578	0.82	50	97.7	89.6	110.4	
Sn	118	115	He	48.210	0.360	205379	0.84	50	96.4	89.6	110.4	
Sn	118	115	NoGas	48.338	1.604	578307	0.76	50	96.7	89.6	110.4	
Sb	121	115	NoGas	47.053	0.413	876454	1.09	50	94.1	89.6	110.4	
Ba	137	165	NoGas	49.270	1.021	310678	0.89	50	98.5	89.6	110.4	
Tl	205	165	NoGas	49.412	2.729	1987535	1.41	50	98.8	89.6	110.4	
Pb	208	165	NoGas	48.556	1.421	2656387	0.49	50	97.1	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	190218	0.76	185584	102.50	70	120	
Sc	45	He	85919	1.34	83499	102.90	70	120	
Sc	45	NoGas	1056155	1.11	1035739	101.97	70	120	
In	115	H2	1151310	0.29	1133962	101.53	70	120	
In	115	He	516682	0.72	512916	100.73	70	120	
In	115	NoGas	1768690	1.24	1726182	102.46	70	120	
Tb	159	H2	2296454	0.90	2259927	101.62	70	120	
Tb	159	He	1401543	0.19	1384042	101.26	70	120	
Tb	159	NoGas	2623311	0.56	2544437	103.10	70	120	
Ho	165	H2	2171968	1.11	2140395	101.48	70	120	
Ho	165	He	1369458	0.13	1350145	101.43	70	120	
Ho	165	NoGas	2519318	1.71	2467012	102.12	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	027_CCB.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T14:04:49-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.005	-650.5	263	59.6	0.1	
B	11	45	NoGas	-1.989	-8.5	8009	6.3	8	
Na	23	45	He	-1.606	-88.3	79107	1.1	50	
Mg	24	45	He	-0.108	-95.2	1450	4.8	20	
Al	27	45	He	0.165	132.1	691	8.6	10	
K	39	45	He	9.266	89.0	113102	5.1	40	
Ca	44	45	He	0.571	271.2	397	12.9	150	
Ti	47	45	He	-0.049	-49.1	21	24.1	0.5	
V	51	45	He	0.031	27.8	2597	2.5	0.4	
Cr	52	45	He	-0.013	-63.7	972	6.5	0.2	
Mn	55	45	He	-0.006	-224.6	592	11.1	0.3	
Fe	56	45	He	-0.554	-2.2	25393	1.0	30	
Co	59	45	He	0.001	276.1	113	20.6	0.4	
Ni	60	45	He	0.053	186.9	587	48.5	0.4	
Cu	63	45	He	-0.059	-48.0	1020	22.6	0.4	
Zn	66	115	He	-0.021	-297.2	843	11.7	15	
As	75	115	He	-0.131	-2.4	151	2.3	0.2	
Se	78	115	H2	-0.048	-16.7	6	35.9	0.4	
Se	78	115	He	0.132	135.4	108	13.8	0.4	
Sr	88	115	NoGas	0.002	99.2	1353	3.0	0.1	
Mo	95	115	NoGas	-0.132	-9.8	277	38.0	0.3	
Ag	107	115	NoGas	-0.002	-143.5	73	61.5	0.1	
Cd	111	115	He	0.001	222.7	10	40.0	0.1	
Sn	118	115	He	0.000	100239.9	1754	79.9	0.1	
Sn	118	115	NoGas	-0.153	-4.9	2924	2.4	0.1	
Sb	121	115	NoGas	-0.270	-4.2	3547	6.8	0.5	
Ba	137	165	NoGas	-0.003	-596.5	317	34.6	0.4	
Tl	205	165	NoGas	-0.035	-2.3	513	6.0	0.2	
Pb	208	165	NoGas	-0.045	-11.5	4877	6.6	0.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	191764	0.74	185584	103.33	70	120	
Sc	45	He	86431	0.88	83499	103.51	70	120	
Sc	45	NoGas	1062186	0.85	1035739	102.55	70	120	
In	115	H2	1160880	0.43	1133962	102.37	70	120	
In	115	He	526564	0.19	512916	102.66	70	120	
In	115	NoGas	1769219	2.16	1726182	102.49	70	120	
Tb	159	H2	2301954	0.87	2259927	101.86	70	120	
Tb	159	He	1405783	0.17	1384042	101.57	70	120	
Tb	159	NoGas	2580566	0.75	2544437	101.42	70	120	
Ho	165	H2	2202802	1.04	2140395	102.92	70	120	
Ho	165	He	1368501	0.84	1350145	101.36	70	120	
Ho	165	NoGas	2524550	1.03	2467012	102.33	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	028ICSA.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T14:10:53-07:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.001	-1482.5	277	36.2	0.1	
B	11	45	NoGas	-0.135	-195.6	13645	6.4	8	
Na	23	45	He	45027.081	1.5	46679339	0.4	60000	
Mg	24	45	He	44942.207	2.1	26214903	0.9	60000	
Al	27	45	He	45381.092	1.7	13177021	0.5	60000	
K	39	45	He	45914.417	0.9	26442956	0.9	60000	
Ca	44	45	He	46067.828	2.2	1419170	1.5	60000	
Ti	47	45	He	919.352	0.9	183999	0.4	1200	
V	51	45	He	-0.007	-302.3	2349	3.8	0.2	
Cr	52	45	He	0.474	6.2	4256	5.8	30	
Mn	55	45	He	2.208	1.6	10244	2.4	24	
Fe	56	45	He	44825.802	1.6	278187598	1.0	60000	
Co	59	45	He	0.567	1.7	6008	2.2	5	
Ni	60	45	He	0.707	14.8	2407	11.0	20	
Cu	63	45	He	0.243	14.2	3341	8.7	25	
Zn	66	115	He	0.148	26.4	1030	5.5	60	
As	75	115	He	0.096	37.7	391	10.3	0.4	
Se	78	115	H2	-0.030	-18.2	10	12.5	0.4	
Se	78	115	He	0.099	119.9	98	9.5	0.4	
Sr	88	115	NoGas	2.040	1.5	75334	1.8	5	
Mo	95	115	NoGas	950.334	1.2	6988560	1.0	1200	
Ag	107	115	NoGas	0.001	203.6	117	27.6	5	
Cd	111	115	He	0.183	8.9	358	8.9	0.5	
Sn	118	115	He	-0.035	-123.9	1493	11.4	5	
Sn	118	115	NoGas	-0.039	-39.7	4067	4.1	5	
Sb	121	115	NoGas	-0.053	-40.1	7188	5.0	5	
Ba	137	165	NoGas	0.086	29.3	853	18.2	1.5	
Tl	205	165	NoGas	-0.025	-12.1	887	13.1	0.2	
Pb	208	165	NoGas	0.038	24.5	9145	5.2	1	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	192479	1.62	185584	103.72	70	120	
Sc	45	He	85195	1.21	83499	102.03	70	120	
Sc	45	NoGas	1049527	0.53	1035739	101.33	70	120	
In	115	H2	1083859	1.29	1133962	95.58	70	120	
In	115	He	489800	0.22	512916	95.49	70	120	
In	115	NoGas	1681754	0.25	1726182	97.43	70	120	
Tb	159	H2	2236288	1.10	2259927	98.95	70	120	
Tb	159	He	1355923	0.29	1384042	97.97	70	120	
Tb	159	NoGas	2556404	0.31	2544437	100.47	70	120	
Ho	165	H2	2163145	0.54	2140395	101.06	70	120	
Ho	165	He	1339633	0.37	1350145	99.22	70	120	
Ho	165	NoGas	2458693	0.37	2467012	99.66	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	031ICSB.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T14:28:57-07:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	45	NoGas	42.421	0.178	215569	0.75	50	84.8	80	120	
B	11	45	NoGas	-0.257	-109.828	13315	7.31	-8	3.2	80	120	
Na	23	45	He	43639.637	0.554	45488258	0.28	50000	87.3	80	120	
Mg	24	45	He	43236.990	1.685	25356662	1.07	50000	86.5	80	120	
Al	27	45	He	43531.690	1.235	12708194	0.45	50000	87.1	80	120	
K	39	45	He	44188.909	2.019	25587450	1.39	50000	88.4	80	120	
Ca	44	45	He	43533.162	0.753	1348400	0.86	50000	87.1	80	120	
Ti	47	45	He	884.069	0.657	177897	1.35	1000	88.4	80	120	
V	51	45	He	43.949	0.615	250079	0.67	50	87.9	80	120	
Cr	52	45	He	42.860	0.946	292863	0.67	50	85.7	80	120	
Mn	55	45	He	44.507	0.324	195818	0.52	50	89.0	80	120	
Fe	56	45	He	42921.745	1.193	267797652	0.43	50000	85.8	80	120	
Co	59	45	He	42.386	0.929	443785	0.28	50	84.8	80	120	
Ni	60	45	He	84.168	2.605	237374	1.97	100	84.2	80	120	
Cu	63	45	He	41.719	1.230	325324	0.87	50	83.4	80	120	
Zn	66	115	He	87.422	2.282	128967	1.33	100	87.4	80	120	
As	75	115	He	45.572	1.596	51099	0.64	50	91.1	80	120	
Se	78	115	H2	44.188	1.556	11365	0.84	50	88.4	80	120	
Se	78	115	He	43.821	2.279	3468	3.03	50	87.6	80	120	
Sr	88	115	NoGas	1.959	0.979	71964	0.70	-5	-39.2	80	120	
Mo	95	115	NoGas	964.111	1.568	7047850	0.38	1050	91.8	80	120	
Ag	107	115	NoGas	88.220	2.555	1745138	1.42	100	88.2	80	120	
Cd	111	115	He	87.597	1.345	169301	0.92	100	87.6	80	120	
Sn	118	115	He	-0.041	-1.399	1483	0.98	50	-0.1	80	120	>+\- 20%
Sn	118	115	NoGas	-0.067	-11.010	3734	0.97	50	-0.1	80	120	>+\- 20%
Sb	121	115	NoGas	46.286	1.767	815085	1.19	50	92.6	80	120	
Ba	137	165	NoGas	43.664	0.828	271481	2.03	50	87.3	80	120	
Tl	205	165	NoGas	43.336	1.481	1718715	0.23	50	86.7	80	120	
Pb	208	165	NoGas	85.225	1.482	4590659	0.82	100	85.2	80	120	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	192817	1.25	185584	103.90	70	120	
Sc	45	He	85649	0.81	83499	102.57	70	120	
Sc	45	NoGas	1053114	0.90	1035739	101.68	70	120	
In	115	H2	1089413	0.71	1133962	96.07	70	120	
In	115	He	494937	1.01	512916	96.49	70	120	
In	115	NoGas	1671982	1.23	1726182	96.86	70	120	
Tb	159	H2	2251730	0.74	2259927	99.64	70	120	
Tb	159	He	1364960	0.13	1384042	98.62	70	120	
Tb	159	NoGas	2580875	1.39	2544437	101.43	70	120	
Ho	165	H2	2173095	0.89	2140395	101.53	70	120	
Ho	165	He	1346125	0.61	1350145	99.70	70	120	
Ho	165	NoGas	2483404	1.66	2467012	100.66	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	038_CCV.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T15:11:05-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	45	NoGas	47.762	0.195	259406	0.79	50	95.5	89.6	110.4	
B	11	45	NoGas	118.127	1.115	406398	0.28	50	236.3	89.6	110.4	>+/- 10%
Na	23	45	He	1277.188	0.917	1507938	1.33	1250	102.2	89.6	110.4	
Mg	24	45	He	2485.330	0.869	1561373	0.32	2500	99.4	89.6	110.4	
Al	27	45	He	975.544	0.865	305445	0.36	1000	97.6	89.6	110.4	
K	39	45	He	1024.016	0.811	746138	0.05	1000	102.4	89.6	110.4	
Ca	44	45	He	2458.655	0.907	81875	0.59	2500	98.3	89.6	110.4	
Ti	47	45	He	48.315	1.049	10435	1.39	50	96.6	89.6	110.4	
V	51	45	He	49.626	0.311	301869	0.55	50	99.3	89.6	110.4	
Cr	52	45	He	48.597	1.023	355204	0.66	50	97.2	89.6	110.4	
Mn	55	45	He	48.669	0.528	229090	0.78	50	97.3	89.6	110.4	
Fe	56	45	He	963.884	1.540	6465908	1.35	1000	96.4	89.6	110.4	
Co	59	45	He	48.710	0.874	545768	0.70	50	97.4	89.6	110.4	
Ni	60	45	He	48.987	2.869	148039	2.23	50	98.0	89.6	110.4	
Cu	63	45	He	48.356	1.702	403298	1.59	50	96.7	89.6	110.4	
Zn	66	115	He	48.850	2.060	78662	1.55	50	97.7	89.6	110.4	
As	75	115	He	49.882	1.233	60714	0.86	50	99.8	89.6	110.4	
Se	78	115	H2	48.586	1.207	13893	0.62	50	97.2	89.6	110.4	
Se	78	115	He	50.025	1.717	4285	1.41	50	100.1	89.6	110.4	
Sr	88	115	NoGas	50.384	2.267	2011268	1.75	50	100.8	89.6	110.4	
Mo	95	115	NoGas	48.763	1.527	395030	1.02	50	97.5	89.6	110.4	
Ag	107	115	NoGas	24.478	0.886	534984	0.52	25	97.9	89.6	110.4	
Cd	111	115	He	48.740	1.303	102306	0.83	50	97.5	89.6	110.4	
Sn	118	115	He	48.545	0.328	215118	0.19	50	97.1	89.6	110.4	
Sn	118	115	NoGas	48.886	1.582	610628	0.31	50	97.8	89.6	110.4	
Sb	121	115	NoGas	47.155	1.069	917040	0.40	50	94.3	89.6	110.4	
Ba	137	165	NoGas	49.932	0.705	329224	1.12	50	99.9	89.6	110.4	
Tl	205	165	NoGas	50.060	0.689	2105848	1.16	50	100.1	89.6	110.4	
Pb	208	165	NoGas	48.428	0.276	2770446	0.57	50	96.9	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	203841	1.15	185584	109.84	70	120	
Sc	45	He	91657	0.65	83499	109.77	70	120	
Sc	45	NoGas	1125718	0.80	1035739	108.69	70	120	
In	115	H2	1211326	0.61	1133962	106.82	70	120	
In	115	He	537491	0.50	512916	104.79	70	120	
In	115	NoGas	1846785	1.34	1726182	106.99	70	120	
Tb	159	H2	2417829	1.11	2259927	106.99	70	120	
Tb	159	He	1435406	0.43	1384042	103.71	70	120	
Tb	159	NoGas	2716403	1.07	2544437	106.76	70	120	
Ho	165	H2	2329341	1.41	2140395	108.83	70	120	
Ho	165	He	1401784	0.15	1350145	103.82	70	120	
Ho	165	NoGas	2634018	0.84	2467012	106.77	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	041_CCB.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T15:29:08-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.012	-69.8	240	18.2	0.1	
B	11	45	NoGas	24.372	2.2	95345	1.7	8	>LOD
Na	23	45	He	5.995	26.1	91925	0.6	50	
Mg	24	45	He	1.634	20.8	2617	6.7	20	
Al	27	45	He	1.300	12.9	1083	6.2	10	
K	39	45	He	16.942	36.5	124083	3.3	40	
Ca	44	45	He	7.570	26.2	650	11.6	150	
Tl	47	45	He	-0.029	-283.8	27	66.1	0.5	
V	51	45	He	0.685	3.8	6669	1.2	0.4	>LOD
Cr	52	45	He	-0.004	-111.4	1089	4.7	0.2	
Mn	55	45	He	0.049	24.1	884	7.7	0.3	
Fe	56	45	He	0.540	26.1	34069	1.4	30	
Co	59	45	He	0.004	87.4	159	27.9	0.4	
Ni	60	45	He	0.005	819.6	473	25.5	0.4	
Cu	63	45	He	-0.043	-14.4	1207	5.8	0.4	
Zn	66	115	He	-0.109	-40.6	716	10.4	15	
As	75	115	He	-0.071	-19.5	225	7.3	0.2	
Se	78	115	H2	-0.051	-9.4	5	25.7	0.4	
Se	78	115	He	0.270	33.4	121	6.7	0.4	
Sr	88	115	NoGas	0.083	12.7	4674	7.5	0.1	
Mo	95	115	NoGas	-0.098	-18.5	560	24.5	0.3	
Ag	107	115	NoGas	0.000	-407.7	103	34.0	0.1	
Cd	111	115	He	0.002	96.6	13	32.9	0.1	
Sn	118	115	He	-0.220	-4.9	819	6.2	0.1	
Sn	118	115	NoGas	-0.198	-3.7	2510	4.2	0.1	
Sb	121	115	NoGas	-0.309	-1.0	2970	1.3	0.5	
Ba	137	165	NoGas	0.005	209.7	377	18.8	0.4	
Tl	205	165	NoGas	-0.035	-5.9	523	14.3	0.2	
Pb	208	165	NoGas	-0.038	-27.5	5407	12.2	0.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	200465	0.93	185584	108.02	70	120	
Sc	45	He	91241	1.56	83499	109.27	70	120	
Sc	45	NoGas	1120149	0.42	1035739	108.15	70	120	
In	115	H2	1200914	1.00	1133962	105.90	70	120	
In	115	He	534008	0.58	512916	104.11	70	120	
In	115	NoGas	1858753	1.64	1726182	107.68	70	120	
Tb	159	H2	2415052	0.77	2259927	106.86	70	120	
Tb	159	He	1415385	0.52	1384042	102.26	70	120	
Tb	159	NoGas	2698669	2.17	2544437	106.06	70	120	
Ho	165	H2	2284878	1.73	2140395	106.75	70	120	
Ho	165	He	1382390	0.27	1350145	102.39	70	120	
Ho	165	NoGas	2610302	2.06	2467012	105.81	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	058_CCV.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T17:11:35-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	45	NoGas	47.017	0.807	258016	1.45	50	94.0	89.6	110.4	
B	11	45	NoGas	56.537	1.147	204463	0.76	50	113.1	89.6	110.4	>+/- 10%
Na	23	45	He	1284.663	3.342	1533814	3.64	1250	102.8	89.6	110.4	
Mg	24	45	He	2550.875	1.824	1620987	1.89	2500	102.0	89.6	110.4	
Al	27	45	He	969.013	1.128	306898	0.99	1000	96.9	89.6	110.4	
K	39	45	He	1025.178	0.554	755451	0.14	1000	102.5	89.6	110.4	
Ca	44	45	He	2433.720	0.604	81985	1.14	2500	97.3	89.6	110.4	
Tl	47	45	He	48.275	1.059	10546	1.19	50	96.6	89.6	110.4	
V	51	45	He	49.850	0.385	306710	0.85	50	99.7	89.6	110.4	
Cr	52	45	He	49.037	0.786	362542	0.91	50	98.1	89.6	110.4	
Mn	55	45	He	48.373	1.102	230328	1.58	50	96.7	89.6	110.4	
Fe	56	45	He	973.100	0.286	6602638	0.33	1000	97.3	89.6	110.4	
Co	59	45	He	48.786	0.826	552910	0.80	50	97.6	89.6	110.4	
Ni	60	45	He	48.887	1.764	149462	2.21	50	97.8	89.6	110.4	
Cu	63	45	He	48.513	0.833	409271	1.21	50	97.0	89.6	110.4	
Zn	66	115	He	49.725	1.352	80341	1.51	50	99.4	89.6	110.4	
As	75	115	He	50.122	0.564	61221	0.78	50	100.2	89.6	110.4	
Se	78	115	H2	49.019	1.400	13997	1.38	50	98.0	89.6	110.4	
Se	78	115	He	49.179	2.527	4229	2.43	50	98.4	89.6	110.4	
Sr	88	115	NoGas	51.357	1.619	2074455	0.10	50	102.7	89.6	110.4	
Mo	95	115	NoGas	48.923	1.041	401049	0.50	50	97.8	89.6	110.4	
Ag	107	115	NoGas	24.294	1.168	537279	0.66	25	97.2	89.6	110.4	
Cd	111	115	He	49.150	0.496	103530	0.43	50	98.3	89.6	110.4	
Sn	118	115	He	49.071	0.319	218191	0.09	50	98.1	89.6	110.4	
Sn	118	115	NoGas	49.136	1.036	621061	0.51	50	98.3	89.6	110.4	
Sb	121	115	NoGas	47.652	0.404	937706	1.21	50	95.3	89.6	110.4	
Ba	137	165	NoGas	49.188	1.173	329529	1.72	50	98.4	89.6	110.4	
Tl	205	165	NoGas	50.477	1.402	2157673	2.48	50	101.0	89.6	110.4	
Pb	208	165	NoGas	48.466	0.236	2817440	2.13	50	96.9	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	202613	0.75	185584	109.18	70	120	
Sc	45	He	92711	0.60	83499	111.03	70	120	
Sc	45	NoGas	1137368	0.93	1035739	109.81	70	120	
In	115	H2	1209642	0.29	1133962	106.67	70	120	
In	115	He	539366	0.23	512916	105.16	70	120	
In	115	NoGas	1868809	1.54	1726182	108.26	70	120	
Tb	159	H2	2458668	0.38	2259927	108.79	70	120	
Tb	159	He	1431539	0.11	1384042	103.43	70	120	
Tb	159	NoGas	2782692	1.34	2544437	109.36	70	120	
Ho	165	H2	2345565	0.76	2140395	109.59	70	120	
Ho	165	He	1400119	0.35	1350145	103.70	70	120	
Ho	165	NoGas	2676517	1.89	2467012	108.49	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	061_CCB.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T17:29:40-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	016CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.020	-47.6	200	26.5	0.1	
B	11	45	NoGas	4.989	5.4	32422	3.2	8	
Na	23	45	He	4.048	9.9	90679	0.7	50	
Mg	24	45	He	1.745	7.9	2716	3.8	20	
Al	27	45	He	1.149	18.8	1047	7.4	10	
K	39	45	He	18.978	39.1	126572	3.2	40	
Ca	44	45	He	8.420	16.7	684	7.8	150	
Ti	47	45	He	-0.004	-426.1	32	12.0	0.5	
V	51	45	He	0.431	2.3	5195	2.0	0.4	>LOD
Cr	52	45	He	0.002	578.8	1150	9.8	0.2	
Mn	55	45	He	0.048	7.5	890	2.6	0.3	
Fe	56	45	He	0.714	12.1	35589	1.9	30	
Co	59	45	He	0.006	18.5	179	7.8	0.4	
Ni	60	45	He	0.038	40.4	580	9.1	0.4	
Cu	63	45	He	-0.031	-82.8	1327	16.3	0.4	
Zn	66	115	He	-0.137	-5.6	689	2.0	15	
As	75	115	He	-0.071	-33.6	232	12.3	0.2	
Se	78	115	H2	-0.040	-30.7	9	39.6	0.4	
Se	78	115	He	0.384	37.1	133	8.9	0.4	
Sr	88	115	NoGas	0.084	5.5	4884	4.1	0.1	
Mo	95	115	NoGas	-0.117	-3.9	423	8.9	0.3	
Ag	107	115	NoGas	0.000	798.7	123	54.0	0.1	
Cd	111	115	He	0.004	57.1	17	27.7	0.1	
Sn	118	115	He	-0.116	-11.6	1302	5.0	0.1	
Sn	118	115	NoGas	-0.115	-4.2	3664	1.3	0.1	
Sb	121	115	NoGas	-0.208	-7.7	5091	6.6	0.5	
Ba	137	165	NoGas	0.004	97.3	387	6.5	0.4	
Tl	205	165	NoGas	-0.032	-6.2	687	13.2	0.2	
Pb	208	165	NoGas	-0.045	-6.3	5217	3.0	0.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	203796	0.78	185584	109.81	70	120	
Sc	45	He	92152	0.99	83499	110.36	70	120	
Sc	45	NoGas	1154699	0.35	1035739	111.49	70	120	
In	115	H2	1221020	0.39	1133962	107.68	70	120	
In	115	He	547142	0.35	512916	106.67	70	120	
In	115	NoGas	1918511	0.44	1726182	111.14	70	120	
Tb	159	H2	2484203	0.68	2259927	109.92	70	120	
Tb	159	He	1448276	0.76	1384042	104.64	70	120	
Tb	159	NoGas	2815178	1.26	2544437	110.64	70	120	
Ho	165	H2	2367525	0.78	2140395	110.61	70	120	
Ho	165	He	1413544	0.30	1350145	104.70	70	120	
Ho	165	NoGas	2716666	1.37	2467012	110.12	70	120	

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Element Environmental
ARF No: 74218 SDG: 74218
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 09/24/14 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:24	%R(1)	True CCV1	Found 12:19	%R(1)	True CCV1	Found 17:36	%R(1)	
Silver (Ag)	50	49.9092	99.8	25	24.2659	97.1	25	23.5679	94.3	P
Arsenic (As)	100	92.3376	92.3	50	49.2639	98.5	50	49.9177	99.8	P
Cadmium (Cd)	100	101.280	101	50	49.1897	98.4	50	50.3895	101	P
Chromium (Cr)	100	101.484	101	50	50.9500	102	50	50.7433	101	P
Copper (Cu)	100	101.816	102	50	50.6788	101	50	50.4913	101	P
Nickel (Ni)	100	101.049	101	50	50.8814	102	50	50.6077	101	P
Lead (Pb)	100	97.0605	97.1	50	47.4687	94.9	50	46.9393	93.9	P
Antimony (Sb)	100	103.075	103	50	48.3093	96.6	50	46.9295	93.9	P
Selenium (Se)	100	98.0298	98.0	50	48.2439	96.5	50	47.2220	94.4	P
Thallium (Tl)	100	98.0276	98.0	50	48.7690	97.5	50	49.1939	98.4	P
Zinc (Zn)	100	100.250	100	50	49.7431	99.5	50	50.5423	101	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No: 74218 SDG: 74218

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 09/24/14 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11.24	%R(1)	True CCV1	Found 18.42	%R(1)	True	Found	%R(1)	
Silver (Ag)	50	49.9092	99.8	25	23.5007	94.0				P
Arsenic (As)	100	92.3376	92.3	50	51.6906	103				P
Cadmium (Cd)	100	101.280	101	50	51.7621	104				P
Chromium (Cr)	100	101.484	101	50	52.0948	104				P
Copper (Cu)	100	101.816	102	50	51.8743	104				P
Nickel (Ni)	100	101.049	101	50	50.9066	102				P
Lead (Pb)	100	97.0605	97.1	50	46.7470	93.5				P
Antimony (Sb)	100	103.075	103	50	46.9517	93.9				P
Selenium (Se)	100	98.0298	98.0	50	48.3125	96.6				P
Thallium (Tl)	100	98.0276	98.0	50	50.4116	101				P
Zinc (Zn)	100	100.250	100	50	52.0412	104				P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No.: 74218 SDG: 74218

Preparation Blank Matrix (soil/water): soil

Preparation Blank Concentration Units (ug/L or mg/kg): mg/Kg

Analysis Date: 09/24/14

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)								Preparation Blank		M
		C	1	C	2	C	3	C		C			
	11:55		12:37		17:54		19:00		15:59				
Silver (Ag)	.50	U	.50	U	.50	U	.50	U	.10	U	P		
Arsenic (As)	2.50	U	2.50	U	2.50	U	2.50	U	.50	U	P		
Cadmium (Cd)	.50	U	.50	U	.50	U	.50	U	.10	U	P		
Chromium (Cr)	2.50	U	2.50	U	2.50	U	2.50	U	.50	U	P		
Copper (Cu)	.50	U	.50	U	.50	U	.50	U	.10	U	P		
Nickel (Ni)	1.00	U	1.00	U	1.00	U	1.00	U	.20	U	P		
Lead (Pb)	.50	U	.50	U	.50	U	.50	U	.10	U	P		
Antimony (Sb)	1.00	U	1.00	U	1.00	U	1.00	U	.20	U	P		
Selenium (Se)	1.00	U	1.00	U	1.00	U	1.00	U	.20	U	P		
Thallium (Tl)	.50	U	.50	U	.50	U	.50	U	.10	U	P		
Zinc (Zn)	10.00	U	10.00	U	10.00	U	10.00	U	2.00	U	P		

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name: A.P.P.L. INC. Contract: Element Environmental
ARF No.: 74218 SDG: 74218
ICP ID Number: Megatron ICS Source: Environmental Express

Analysis Date: 09/24/14 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 12:43	Sol AB 13:01	%R(1)
Silver (Ag)		100	0.003767	86.583467	86.6
Arsenic (As)		50	0.13104	45.95728	91.9
Cadmium (Cd)		100	0.155274	89.076948	89.1
Chromium (Cr)		50	0.454991	43.562435	87.1
Copper (Cu)		50	0.244934	42.560959	85.1
Nickel (Ni)		100	0.701648	84.243698	84.2
Lead (Pb)	0	100	0.026451	82.361166	82.4
Antimony (Sb)		50	0.027679	46.865667	93.7
Selenium (Se)		50	-0.040496	43.60576	87.2
Thallium (Tl)		50	-0.040565	41.277249	82.6
Zinc (Zn)		100	0.336619	89.161439	89.2

(1) Control Limits: Metals 80-120

A.P.P.L. INC.
9
ICP SERIAL DILUTION

CLIENT SAMPLE NO.
EN002

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No.: 74218 SDG: 74218

Matrix: soil

Analysis Date: 09/24/14 Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	%D	Q	M
Silver (Ag)	0.033599		0.000266		NA		
Arsenic (As)	5.088721		-0.23263		NA		
Cadmium (Cd)	0.222416		-0.017092		NA		
Chromium (Cr)	60.581935		-0.043901		NA		
Copper (Cu)	26.448511		0.20255		NA		
Nickel (Ni)	136.139807		0.151246		NA		
Lead (Pb)	22.464203		-0.101066		NA		
Antimony (Sb)	0.138739		-0.297345		NA		
Selenium (Se)	0.120165		0.10299		NA		
Thallium (Tl)	0.021283		-0.027513		NA		
Zinc (Zn)	106.352939		0.953739		NA		

Comments:

09/24/14 16:30 AZ02100S01 1/50

09/24/14 16:54 AZ02100S01 1/250

Sample Report

Sample Table

Sample Name	AZ02100S01 1/250
Data File Name	060SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T16:54:08-07:00
Sample Type	Sample
Dilution	2.50501002
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	-0.053	-0.133	-12.30	73	41.66	10000	
B	11	45	NoGas	-7.779	-19.487	-2.34	26102	1.03	10000	
Na	23	45	He	-25.373	-63.559	-7.00	59552	2.42	1000000	
Mg	24	45	He	-2.188	-5.481	-5.15	1389	5.68	1000000	
Al	27	45	He	-0.701	-1.755	-36.37	698	10.69	1000000	
K	39	45	He	22.479	56.311	36.10	114240	2.95	500000	
Ca	44	45	He	-6.191	-15.509	-30.68	414	12.21	500000	
Ti	47	45	He	0.411	1.029	30.54	121	18.33	10000	
V	51	45	He	-0.267	-0.668	-1.90	837	3.01	10000	
Cr	52	45	He	-0.018	-0.044	-82.61	970	8.51	10000	
Mn	55	45	He	0.047	0.118	81.59	1062	15.84	50000	
Fe	56	45	He	-1.193	-2.989	-8.32	30652	2.50	1000000	
Co	59	45	He	-0.010	-0.026	-34.78	70	49.72	10000	
Ni	60	45	He	0.060	0.151	173.48	647	44.21	10000	
Cu	63	45	He	0.081	0.203	29.43	1587	10.87	10000	
Zn	66	115	He	0.381	0.954	7.95	1149	3.73	50000	
As	75	115	He	-0.093	-0.233	-15.96	164	9.58	2000	
Se	78	115	H2	0.041	0.103	48.45	29	16.72	10000	
Se	78	115	He	-0.027	-0.069	-107.70	98	2.70	10000	
Sr	88	115	NoGas	-0.033	-0.083	-11.74	3007	3.83	50000	
Mo	95	115	NoGas	0.011	0.028	197.86	1520	10.77	10000	
Ag	107	115	NoGas	0.000	0.000	2190.52	87	54.53	5000	
Cd	111	115	He	-0.007	-0.017	-9.39	9	13.32	10000	
Sn	118	115	He	-0.063	-0.157	-76.71	1589	11.78	10000	
Sn	118	115	NoGas	-0.116	-0.290	-13.16	4078	2.53	10000	
Sb	121	115	NoGas	-0.119	-0.297	-10.10	4504	3.45	10000	
Ba	137	165	NoGas	-0.026	-0.066	-10.05	247	6.19	50000	
Tl	205	165	NoGas	-0.011	-0.028	-46.44	1960	10.04	5000	
Pb	208	165	NoGas	-0.040	-0.101	-3.81	5117	2.01	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	162674	0.52	164751	98.74	70	120	
Sc	45	He	76939	1.15	76221	100.94	70	120	
Sc	45	NoGas	944795	1.02	928342	101.77	70	120	
In	115	H2	995979	0.54	997448	99.85	70	120	
In	115	He	443768	0.53	448471	98.95	70	120	
In	115	NoGas	1570579	1.90	1548791	101.41	70	120	
Tb	159	H2	2060559	0.35	2006856	102.68	70	120	
Tb	159	He	1196066	0.91	1205156	99.25	70	120	
Tb	159	NoGas	2372286	0.56	2266694	104.66	70	120	
Ho	165	H2	1997577	0.96	1916437	104.23	70	120	
Ho	165	He	1169593	0.54	1172479	99.75	70	120	
Ho	165	NoGas	2260973	0.46	2192200	103.14	70	120	

A.P.P.L. INC.

5B

POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

EN002

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No.: 74218 SDG: 74218

Analysis Date: 09/24/14 Concentration Units: mg/Kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Silver (Ag)	75-125	41.412911		0.033599		50.100	82.6		
Arsenic (As)	75-125	129.796974		5.088721		125.251	99.6		
Cadmium (Cd)	75-125	24.503135		0.222416		25.050	96.9		
Chromium (Cr)	75-125	137.355096		60.581935		125.251	61.3		M
Copper (Cu)	75-125	99.324015		26.448511		125.251	58.2		M
Nickel (Ni)	75-125	212.027864		136.139807		125.251	60.6		M
Lead (Pb)	75-125	129.725438		22.464203		125.251	85.6		
Antimony (Sb)	75-125	127.540261		0.138739		125.000	102		
Selenium (Se)	75-125	116.192816		0.120165		125.251	92.7		
Thallium (Tl)	75-125	107.723884		0.021283		125.251	86.0		
Zinc (Zn)	75-125	340.292357		106.352939		250.501	93.4		

Comments:

09/24/14 16:30 AZ02100S01 1/50

09/24/14 16:48 AZ02100S01-A 1/50

Sample Report

Sample Table

Sample Name	AZ02100S01-A 1/50
Data File Name	059SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T16:48:07-07:00
Sample Type	Sample
Dilution	0.501002004
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	27.566	13.811	0.81	210496	0.43	10000	
B	11	45	NoGas	139.671	69.975	1.31	718519	0.83	10000	
Na	23	45	He	16832.090	8432.911	1.36	26105840	1.81	1000000	
Mg	24	45	He	42440.132	21262.591	0.15	36976660	0.88	1000000	
Al	27	45	He	28157.976	14107.202	0.36	11950125	0.87	1000000	
K	39	45	He	7185.230	3599.815	1.22	6205724	0.45	500000	
Ca	44	45	He	183244.854	91806.039	1.55	8304149	0.81	500000	
Ti	47	45	He	3553.558	1780.339	0.71	1020901	1.10	10000	
V	51	45	He	246.766	123.630	0.49	2027950	1.07	10000	
Cr	52	45	He	274.161	137.355	0.48	2695406	1.18	10000	
Mn	55	45	He	1410.403	706.615	1.58	8961599	1.33	50000	
Fe	56	45	He	68189.047	34162.849	0.70	606904171	0.50	1000000	
Co	59	45	He	201.069	100.736	1.09	3066593	0.84	10000	
Ni	60	45	He	423.208	212.028	1.47	1760354	1.37	10000	
Cu	63	45	He	198.251	99.324	2.15	2253399	1.71	10000	
Zn	66	115	He	679.224	340.292	0.80	888616	0.21	50000	
As	75	115	He	259.075	129.797	1.03	257318	0.39	2000	
Se	78	115	H2	231.921	116.193	1.21	53744	1.27	10000	
Se	78	115	He	239.252	119.866	0.91	16003	1.16	10000	
Sr	88	115	NoGas	3463.289	1735.114	1.97	116177522	0.50	50000	
Mo	95	115	NoGas	254.427	127.469	3.14	1753288	1.05	10000	
Ag	107	115	NoGas	82.660	41.413	2.44	1531310	0.79	5000	
Cd	111	115	He	48.908	24.503	1.47	82567	0.54	10000	
Sn	118	115	He	254.049	127.279	0.54	890735	1.03	10000	
Sn	118	115	NoGas	252.951	126.729	1.17	2645060	1.14	10000	
Sb	121	115	NoGas	254.570	127.540	1.86	4123214	0.67	10000	
Ba	137	165	NoGas	793.931	397.761	1.72	4857568	0.72	50000	
Tl	205	165	NoGas	215.017	107.724	0.38	8409390	0.68	5000	
Pb	208	165	NoGas	258.932	129.725	1.71	13941070	0.71	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	260410	0.58	164751	158.06	70	120	ISTD Failed
Sc	45	He	120730	0.82	76221	158.39	70	120	ISTD Failed
Sc	45	NoGas	1517545	0.83	928342	163.47	70	120	ISTD Failed
In	115	H2	920180	0.07	997448	92.25	70	120	
In	115	He	410894	0.97	448471	91.62	70	120	
In	115	NoGas	1444387	2.16	1548791	93.26	70	120	
Tb	159	H2	2063286	0.21	2006856	102.81	70	120	
Tb	159	He	1210134	0.73	1205156	100.41	70	120	
Tb	159	NoGas	2330197	1.23	2266694	102.80	70	120	
Ho	165	H2	1953286	0.39	1916437	101.92	70	120	
Ho	165	He	1178284	0.41	1172479	100.50	70	120	
Ho	165	NoGas	2259457	1.01	2192200	103.07	70	120	

Calibration Blank Report

Sample Table

Sample Name	Calibration Blank
Data File Name	015CALB.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T10:54:48-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	140728

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD
Be	9	45	NoGas	303	25.61
B	11	45	NoGas	44674	4.47
Na	23	45	He	74855	0.70
Mg	24	45	He	2597	7.58
Al	27	45	He	931	9.16
K	39	45	He	99587	4.29
Ca	44	45	He	540	6.87
Ti	47	45	He	39	26.18
V	51	45	He	3089	2.10
Cr	52	45	He	1064	2.51
Mn	55	45	He	1019	30.78
Fe	56	45	He	32230	2.19
Co	59	45	He	173	8.81
Ni	60	45	He	473	27.49
Cu	63	45	He	1040	5.09
Zn	66	115	He	619	23.29
As	75	115	He	143	17.01
Se	78	115	H2	6	40.88
Se	78	115	He	95	11.60
Sr	88	115	NoGas	3917	4.38
Mo	95	115	NoGas	213	22.15
Ag	107	115	NoGas	130	46.79
Cd	111	115	He	8	90.14
Sn	118	115	He	1032	4.06
Sn	118	115	NoGas	3077	1.90
Sb	121	115	NoGas	1944	10.04
Ba	137	165	NoGas	367	46.39
Tl	205	165	NoGas	187	30.46
Pb	208	165	NoGas	7364	3.37

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD
Sc	45	H2	162675	0.07
Sc	45	He	74657	0.20
Sc	45	NoGas	907972	0.42
In	115	H2	980903	0.23
In	115	He	438353	0.19
In	115	NoGas	1508142	2.28
Tb	159	H2	1970710	0.28
Tb	159	He	1176707	0.35
Tb	159	NoGas	2189593	0.98
Ho	165	H2	1888834	1.65
Ho	165	He	1149891	0.25
Ho	165	NoGas	2115412	0.13

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	016CALS.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T11:00:49-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	140728
ISTD Ref File Name	015CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD	Cal Coef
Be	9	45	NoGas	840	4.29	1.0000
B	11	45	NoGas	46331	2.15	1.0000
Na	23	45	He	62401	4.33	-1.0000
Mg	24	45	He	4089	4.95	1.0000
Al	27	45	He	922	5.99	-1.0000
K	39	45	He	104097	5.45	1.0000
Ca	44	45	He	386	22.32	-1.0000
Tl	47	45	He	34	34.00	-1.0000
V	51	45	He	3497	3.39	1.0000
Cr	52	45	He	1559	5.42	1.0000
Mn	55	45	He	742	3.43	-1.0000
Fe	56	45	He	20800	1.27	-1.0000
Co	59	45	He	1158	11.38	1.0000
Ni	60	45	He	733	25.34	1.0000
Cu	63	45	He	1714	20.03	1.0000
Zn	66	115	He	691	8.77	1.0000
As	75	115	He	258	1.47	1.0000
Se	78	115	H2	23	5.57	1.0000
Se	78	115	He	112	8.13	1.0000
Sr	88	115	NoGas	4047	3.22	1.0000
Mo	95	115	NoGas	770	19.99	1.0000
Ag	107	115	NoGas	910	7.61	1.0000
Cd	111	115	He	187	25.05	1.0000
Sn	118	115	He	762	13.72	-1.0000
Sn	118	115	NoGas	2198	3.76	-1.0000
Sb	121	115	NoGas	3334	8.95	1.0000
Ba	137	165	NoGas	883	16.50	1.0000
Tl	205	165	NoGas	3874	2.20	1.0000
Pb	208	165	NoGas	10899	4.27	1.0000

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	171026	26.03	162675	105.13	70	120	
Sc	45	He	74919	0.61	74657	100.35	70	120	
Sc	45	NoGas	923685	0.85	907972	101.73	70	120	
In	115	H2	1023492	28.02	980903	104.34	70	120	
In	115	He	439456	0.23	438353	100.25	70	120	
In	115	NoGas	1470022	0.71	1508142	97.47	70	120	
Tb	159	H2	2004614	27.99	1970710	101.72	70	120	
Tb	159	He	1191517	0.63	1176707	101.26	70	120	
Tb	159	NoGas	2236595	0.28	2189593	102.15	70	120	
Ho	165	H2	1910115	27.85	1888834	101.13	70	120	
Ho	165	He	1161087	0.39	1149891	100.97	70	120	
Ho	165	NoGas	2154221	0.63	2115412	101.83	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	017CALS.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T11:06:51-07:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	140728
ISTD Ref File Name	015CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD	Cal Coef
Be	9	45	NoGas	4898	5.68	0.9999
B	11	45	NoGas	46949	1.32	0.7086
Na	23	45	He	84016	1.37	0.7155
Mg	24	45	He	29987	1.24	0.9991
Al	27	45	He	5925	3.66	0.9957
K	39	45	He	112936	3.97	0.9537
Ca	44	45	He	1606	6.42	0.9775
Ti	47	45	He	203	9.13	0.9933
V	51	45	He	8070	3.87	0.9999
Cr	52	45	He	7482	0.15	0.9998
Mn	55	45	He	4406	1.75	0.9870
Fe	56	45	He	124089	0.78	0.9809
Co	59	45	He	10157	1.66	1.0000
Ni	60	45	He	3274	8.86	1.0000
Cu	63	45	He	8183	12.94	1.0000
Zn	66	115	He	1891	11.02	0.9992
As	75	115	He	1211	1.05	1.0000
Se	78	115	H2	243	1.12	0.9997
Se	78	115	He	163	4.53	0.9890
Sr	88	115	NoGas	35944	0.70	0.9964
Mo	95	115	NoGas	7132	4.88	0.9999
Ag	107	115	NoGas	9650	4.34	0.9999
Cd	111	115	He	1856	2.71	1.0000
Sn	118	115	He	4213	3.63	0.9867
Sn	118	115	NoGas	11662	1.67	0.9858
Sb	121	115	NoGas	19048	4.41	0.9999
Ba	137	165	NoGas	5668	1.80	1.0000
Tl	205	165	NoGas	35811	3.74	1.0000
Pb	208	165	NoGas	55927	2.34	0.9996

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	165062	0.92	162675	101.47	70	120	
Sc	45	He	76489	0.81	74657	102.45	70	120	
Sc	45	NoGas	932102	0.93	907972	102.66	70	120	
In	115	H2	989498	0.22	980903	100.88	70	120	
In	115	He	445124	0.47	438353	101.54	70	120	
In	115	NoGas	1491318	1.76	1508142	98.88	70	120	
Tb	159	H2	1995720	0.31	1970710	101.27	70	120	
Tb	159	He	1195512	0.28	1176707	101.60	70	120	
Tb	159	NoGas	2242383	0.85	2189593	102.41	70	120	
Ho	165	H2	1900068	0.42	1888834	100.59	70	120	
Ho	165	He	1167037	0.53	1149891	101.49	70	120	
Ho	165	NoGas	2159643	0.60	2115412	102.09	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	018CALS.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T11:12:54-07:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	140728
ISTD Ref File Name	015CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD	Cal Coef
Be	9	45	NoGas	227491	2.01	1.0000
B	11	45	NoGas	182962	2.12	0.9999
Na	23	45	He	1316490	1.08	0.9999
Mg	24	45	He	1435607	0.56	1.0000
Al	27	45	He	272947	0.16	1.0000
K	39	45	He	649656	0.68	1.0000
Ca	44	45	He	72656	1.24	1.0000
Ti	47	45	He	9167	2.89	1.0000
V	51	45	He	268371	0.08	1.0000
Cr	52	45	He	318092	0.49	1.0000
Mn	55	45	He	206613	0.69	1.0000
Fe	56	45	He	5779286	1.04	1.0000
Co	59	45	He	489360	0.17	1.0000
Ni	60	45	He	135347	0.50	1.0000
Cu	63	45	He	365942	0.19	1.0000
Zn	66	115	He	72283	1.74	1.0000
As	75	115	He	53593	0.47	1.0000
Se	78	115	H2	12076	0.46	1.0000
Se	78	115	He	3647	1.43	1.0000
Sr	88	115	NoGas	1756413	1.25	1.0000
Mo	95	115	NoGas	352779	1.29	1.0000
Ag	107	115	NoGas	476792	1.46	1.0000
Cd	111	115	He	91481	0.61	1.0000
Sn	118	115	He	187343	0.49	1.0000
Sn	118	115	NoGas	536135	0.36	1.0000
Sb	121	115	NoGas	819995	0.96	1.0000
Ba	137	165	NoGas	285775	1.48	1.0000
Tl	205	165	NoGas	1853408	0.62	1.0000
Pb	208	165	NoGas	2521435	0.45	1.0000

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	166376	0.53	162675	102.28	70	120	
Sc	45	He	77218	0.11	74657	103.43	70	120	
Sc	45	NoGas	929767	1.32	907972	102.40	70	120	
In	115	H2	983060	0.65	980903	100.22	70	120	
In	115	He	443678	0.44	438353	101.21	70	120	
In	115	NoGas	1510825	1.28	1508142	100.18	70	120	
Tb	159	H2	1980924	0.35	1970710	100.52	70	120	
Tb	159	He	1210213	0.82	1176707	102.85	70	120	
Tb	159	NoGas	2257616	0.99	2189593	103.11	70	120	
Ho	165	H2	1905242	1.49	1888834	100.87	70	120	
Ho	165	He	1180375	0.70	1149891	102.65	70	120	
Ho	165	NoGas	2161100	0.27	2115412	102.16	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	019CALS.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T11:18:56-07:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	140728
ISTD Ref File Name	015CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	CPS	%RSD	Cal Coef
Be	9	45	NoGas	470841	1.19	0.9999
B	11	45	NoGas	331897	0.75	0.9998
Na	23	45	He	2626566	0.74	1.0000
Mg	24	45	He	2840013	2.66	0.9998
Al	27	45	He	557876	1.62	1.0000
K	39	45	He	1206509	0.96	1.0000
Ca	44	45	He	149751	0.84	1.0000
Ti	47	45	He	18908	3.63	1.0000
V	51	45	He	539073	1.59	1.0000
Cr	52	45	He	644841	1.59	1.0000
Mn	55	45	He	417042	1.02	1.0000
Fe	56	45	He	11702792	1.74	1.0000
Co	59	45	He	1001966	0.55	1.0000
Ni	60	45	He	272296	2.51	1.0000
Cu	63	45	He	746485	1.28	1.0000
Zn	66	115	He	144470	0.55	1.0000
As	75	115	He	109980	0.60	1.0000
Se	78	115	H2	25013	1.03	0.9999
Se	78	115	He	7472	0.17	1.0000
Sr	88	115	NoGas	3548433	0.81	1.0000
Mo	95	115	NoGas	733257	0.60	0.9999
Ag	107	115	NoGas	982279	0.42	1.0000
Cd	111	115	He	186295	0.35	1.0000
Sn	118	115	He	389926	1.09	1.0000
Sn	118	115	NoGas	1114986	0.28	0.9999
Sb	121	115	NoGas	1730421	2.10	0.9998
Ba	137	165	NoGas	593454	0.44	0.9999
Tl	205	165	NoGas	3778287	0.90	1.0000
Pb	208	165	NoGas	5221359	0.82	0.9999

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	166561	0.86	162675	102.39	70	120	
Sc	45	He	80664	15.68	74657	108.05	70	120	
Sc	45	NoGas	931447	1.70	907972	102.59	70	120	
In	115	H2	986541	0.59	980903	100.57	70	120	
In	115	He	459534	13.79	438353	104.83	70	120	
In	115	NoGas	1525384	1.85	1508142	101.14	70	120	
Tb	159	H2	1984823	0.94	1970710	100.72	70	120	
Tb	159	He	1274732	16.87	1176707	108.33	70	120	
Tb	159	NoGas	2255372	0.62	2189593	103.00	70	120	
Ho	165	H2	1918355	1.22	1888834	101.56	70	120	
Ho	165	He	1235456	16.23	1149891	107.44	70	120	
Ho	165	NoGas	2176607	0.71	2115412	102.89	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	020_ICV.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T11:24:59-07:00
Sample Type	ICV
Dilution	1
Comment	140728
ISTD Ref File Name	015CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	45	NoGas	97.659	0.749	459943	0.56	100	97.7	89.6	110.4	
B	11	45	NoGas	94.829	0.560	317106	1.18	100	94.8	89.6	110.4	
Na	23	45	He	2519.967	2.550	2563413	1.14	2500	100.8	89.6	110.4	
Mg	24	45	He	2585.993	2.041	1438007	1.12	2500	103.4	89.6	110.4	
Al	27	45	He	2541.551	1.199	688042	0.33	2500	101.7	89.6	110.4	
K	39	45	He	2572.822	0.791	1481415	1.05	2500	102.9	89.6	110.4	
Ca	44	45	He	2704.856	1.403	78680	0.49	2500	108.2	89.6	110.4	
Ti	47	45	He	100.361	0.728	18420	2.00	100	100.4	89.6	110.4	
V	51	45	He	102.536	1.965	537950	0.45	100	102.5	89.6	110.4	
Cr	52	45	He	101.485	1.776	636371	0.36	100	101.5	89.6	110.4	
Mn	55	45	He	101.570	1.768	411983	0.62	100	101.6	89.6	110.4	
Fe	56	45	He	2532.762	1.113	14402822	1.13	2500	101.3	89.6	110.4	
Co	59	45	He	101.385	1.020	985395	0.73	100	101.4	89.6	110.4	
Ni	60	45	He	101.049	0.595	268218	1.25	100	101.0	89.6	110.4	
Cu	63	45	He	101.816	1.662	737891	0.19	100	101.8	89.6	110.4	
Zn	66	115	He	100.250	0.333	141972	0.43	100	100.3	89.6	110.4	
As	75	115	He	92.338	0.340	99099	0.72	100	92.3	89.6	110.4	
Se	78	115	H2	98.030	0.872	24252	0.96	100	98.0	89.6	110.4	
Se	78	115	He	100.207	0.827	7287	0.87	100	100.2	89.6	110.4	
Sr	88	115	NoGas	100.828	0.896	3543609	0.84	100	100.8	89.6	110.4	
Mo	95	115	NoGas	98.536	0.409	711798	0.29	100	98.5	89.6	110.4	
Ag	107	115	NoGas	49.909	0.643	967675	0.60	50	99.8	89.6	110.4	
Cd	111	115	He	101.280	0.414	184396	0.18	100	101.3	89.6	110.4	
Sn	118	115	He	51.913	1.180	197452	0.67	100	51.9	89.6	110.4	>+\- 10%
Sn	118	115	NoGas	50.135	0.547	551898	0.28	100	50.1	89.6	110.4	>+\- 10%
Sb	121	115	NoGas	103.076	1.261	1751923	0.83	100	103.1	89.6	110.4	
Ba	137	165	NoGas	97.879	1.125	584423	0.28	100	97.9	89.6	110.4	
Tl	205	165	NoGas	98.028	1.103	3740557	0.40	100	98.0	89.6	110.4	
Pb	208	165	NoGas	97.061	0.977	5101173	0.44	100	97.1	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	163668	2.45	162675	100.61	70	120	
Sc	45	He	76935	1.52	74657	103.05	70	120	
Sc	45	NoGas	937655	0.97	907972	103.27	70	120	
In	115	H2	981907	1.49	980903	100.10	70	120	
In	115	He	443142	0.54	438353	101.09	70	120	
In	115	NoGas	1511180	0.58	1508142	100.20	70	120	
Tb	159	H2	1989338	2.46	1970710	100.95	70	120	
Tb	159	He	1216426	0.30	1176707	103.38	70	120	
Tb	159	NoGas	2266857	2.21	2189593	103.53	70	120	
Ho	165	H2	1892938	3.89	1888834	100.22	70	120	
Ho	165	He	1181836	0.27	1149891	102.78	70	120	
Ho	165	NoGas	2203623	1.32	2115412	104.17	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	025_ICB.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T11:55:09-07:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.024	-74.7	207	41.7	0.1	
B	11	45	NoGas	-5.082	-0.9	33283	0.5	8	
Na	23	45	He	-9.197	-7.0	74617	0.8	50	
Mg	24	45	He	0.073	533.0	2614	7.8	20	
Al	27	45	He	0.657	82.0	1053	14.4	10	
K	39	45	He	18.009	45.8	110633	4.7	40	
Ca	44	45	He	-1.286	-243.5	550	15.8	150	
Ti	47	45	He	-0.123	-53.0	23	51.5	0.5	
V	51	45	He	0.060	30.1	2518	4.5	0.4	
Cr	52	45	He	-0.020	-104.5	942	13.3	0.2	
Mn	55	45	He	-0.008	-639.7	829	23.4	0.3	
Fe	56	45	He	-0.843	-17.5	32266	1.8	30	
Co	59	45	He	-0.005	-72.2	120	28.2	0.4	
Ni	60	45	He	-0.010	-563.8	453	31.0	0.4	
Cu	63	45	He	-0.023	-88.9	827	17.2	0.4	
Zn	66	115	He	0.007	893.3	627	14.8	15	
As	75	115	He	-0.097	-13.7	161	9.0	0.2	
Se	78	115	H2	-0.043	-21.4	8	28.9	0.4	
Se	78	115	He	-0.287	-80.2	80	21.0	0.4	
Sr	88	115	NoGas	0.005	287.9	4341	12.3	0.1	
Mo	95	115	NoGas	-0.149	-6.9	317	24.1	0.3	
Ag	107	115	NoGas	0.000	-906.9	80	45.1	0.1	
Cd	111	115	He	-0.004	-69.6	15	31.5	0.1	
Sn	118	115	He	-0.171	-11.8	1191	6.3	0.1	
Sn	118	115	NoGas	-0.184	-7.7	3261	4.8	0.1	
Sb	121	115	NoGas	-0.245	-5.0	2264	8.4	0.5	
Ba	137	165	NoGas	0.004	224.4	413	12.4	0.4	
Tl	205	165	NoGas	-0.050	-1.7	413	8.5	0.2	
Pb	208	165	NoGas	-0.020	-22.7	5941	4.7	0.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	165551	1.27	164751	100.49	70	120	
Sc	45	He	76075	0.98	76221	99.81	70	120	
Sc	45	NoGas	930026	0.75	928342	100.18	70	120	
In	115	H2	1005671	0.85	997448	100.82	70	120	
In	115	He	447399	0.20	448471	99.76	70	120	
In	115	NoGas	1552253	1.66	1548791	100.22	70	120	
Tb	159	H2	2030403	0.76	2006856	101.17	70	120	
Tb	159	He	1201938	0.35	1205156	99.73	70	120	
Tb	159	NoGas	2237634	1.80	2266694	98.72	70	120	
Ho	165	H2	1910071	0.86	1916437	99.67	70	120	
Ho	165	He	1180552	0.50	1172479	100.69	70	120	
Ho	165	NoGas	2165135	0.77	2192200	98.77	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	029_CCV.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T12:19:23-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	45	NoGas	47.718	1.341	229256	0.80	50	95.4	89.6	110.4	
B	11	45	NoGas	42.541	2.002	171841	1.00	50	85.1	89.6	110.4	>+/- 10%
Na	23	45	He	1255.339	1.868	1334321	2.24	1250	100.4	89.6	110.4	
Mg	24	45	He	2536.559	4.165	1427135	4.00	2500	101.5	89.6	110.4	
Al	27	45	He	1005.476	0.490	275956	0.25	1000	100.5	89.6	110.4	
K	39	45	He	1016.992	1.776	655030	1.25	1000	101.7	89.6	110.4	
Ca	44	45	He	2483.432	1.312	73148	0.77	2500	99.3	89.6	110.4	
Ti	47	45	He	50.952	0.812	9483	1.02	50	101.9	89.6	110.4	
V	51	45	He	50.755	0.436	270696	0.96	50	101.5	89.6	110.4	
Cr	52	45	He	50.950	0.563	323806	0.45	50	101.9	89.6	110.4	
Mn	55	45	He	50.524	0.599	207813	0.09	50	101.0	89.6	110.4	
Fe	56	45	He	1022.900	1.301	5906536	1.16	1000	102.3	89.6	110.4	
Co	59	45	He	50.702	0.613	498651	0.33	50	101.4	89.6	110.4	
Ni	60	45	He	50.881	2.591	136869	2.30	50	101.8	89.6	110.4	
Cu	63	45	He	50.679	0.453	372145	0.99	50	101.4	89.6	110.4	
Zn	66	115	He	49.743	1.123	72101	1.33	50	99.5	89.6	110.4	
As	75	115	He	49.264	0.345	53994	0.66	50	98.5	89.6	110.4	
Se	78	115	H2	48.244	0.852	12212	0.85	50	96.5	89.6	110.4	
Se	78	115	He	49.651	3.758	3730	3.25	50	99.3	89.6	110.4	
Sr	88	115	NoGas	49.653	1.843	1775206	1.25	50	99.3	89.6	110.4	
Mo	95	115	NoGas	48.694	0.689	358042	1.03	50	97.4	89.6	110.4	
Ag	107	115	NoGas	24.266	2.141	478059	0.47	25	97.1	89.6	110.4	
Cd	111	115	He	49.190	0.661	91272	1.03	50	98.4	89.6	110.4	
Sn	118	115	He	48.803	0.880	189549	0.82	50	97.6	89.6	110.4	
Sn	118	115	NoGas	48.482	0.787	543331	1.21	50	97.0	89.6	110.4	
Sb	121	115	NoGas	48.309	1.340	837274	1.27	50	96.6	89.6	110.4	
Ba	137	165	NoGas	48.407	1.474	291584	1.02	50	96.8	89.6	110.4	
Tl	205	165	NoGas	48.769	2.622	1876822	1.49	50	97.5	89.6	110.4	
Pb	208	165	NoGas	47.469	1.834	2518593	0.68	50	94.9	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	171000	0.78	164751	103.79	70	120	
Sc	45	He	77831	0.54	76221	102.11	70	120	
Sc	45	NoGas	955839	0.81	928342	102.96	70	120	
In	115	H2	1003912	0.34	997448	100.65	70	120	
In	115	He	451565	0.41	448471	100.69	70	120	
In	115	NoGas	1535705	1.70	1548791	99.16	70	120	
Tb	159	H2	2025882	2.02	2006856	100.95	70	120	
Tb	159	He	1211101	0.26	1205156	100.49	70	120	
Tb	159	NoGas	2311782	2.81	2266694	101.99	70	120	
Ho	165	H2	1937077	0.85	1916437	101.08	70	120	
Ho	165	He	1182725	0.63	1172479	100.87	70	120	
Ho	165	NoGas	2221858	2.50	2192200	101.35	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	032_CCB.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T12:37:28-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.013	-95.1	260	24.0	0.1	
B	11	45	NoGas	-6.868	-2.4	28492	2.4	8	
Na	23	45	He	-11.716	-11.3	73524	1.2	50	
Mg	24	45	He	-0.413	-45.4	2391	4.1	20	
Al	27	45	He	0.196	196.4	947	10.8	10	
K	39	45	He	12.102	85.7	109480	4.4	40	
Ca	44	45	He	0.191	910.4	603	7.7	150	
Ti	47	45	He	-0.046	-165.1	38	36.7	0.5	
V	51	45	He	0.089	23.7	2716	4.7	0.4	
Cr	52	45	He	-0.008	-107.5	1037	5.4	0.2	
Mn	55	45	He	0.002	957.3	886	9.0	0.3	
Fe	56	45	He	-0.892	-11.7	32598	1.7	30	
Co	59	45	He	-0.001	-366.6	166	12.1	0.4	
Ni	60	45	He	-0.046	-134.4	367	45.4	0.4	
Cu	63	45	He	-0.016	-178.3	893	24.2	0.4	
Zn	66	115	He	0.049	78.3	687	8.1	15	
As	75	115	He	-0.126	-8.4	130	9.1	0.2	
Se	78	115	H2	-0.051	-30.6	6	65.7	0.4	
Se	78	115	He	-0.146	-99.8	90	12.1	0.4	
Sr	88	115	NoGas	-0.010	-135.7	3741	11.2	0.1	
Mo	95	115	NoGas	-0.152	-4.7	293	16.1	0.3	
Ag	107	115	NoGas	0.002	160.0	113	44.4	0.1	
Cd	111	115	He	-0.001	-653.2	20	43.6	0.1	
Sn	118	115	He	-0.160	-11.3	1233	5.8	0.1	
Sn	118	115	NoGas	-0.165	-13.2	3428	7.7	0.1	
Sb	121	115	NoGas	-0.232	-6.2	2454	8.3	0.5	
Ba	137	165	NoGas	0.017	38.4	497	8.4	0.4	
Tl	205	165	NoGas	-0.051	-5.0	387	24.9	0.2	
Pb	208	165	NoGas	-0.032	-25.9	5387	7.4	0.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	168010	0.57	164751	101.98	70	120	
Sc	45	He	77509	0.80	76221	101.69	70	120	
Sc	45	NoGas	937580	0.93	928342	101.00	70	120	
In	115	H2	1004042	0.38	997448	100.66	70	120	
In	115	He	447975	0.51	448471	99.89	70	120	
In	115	NoGas	1530508	1.83	1548791	98.82	70	120	
Tb	159	H2	2032220	1.04	2006856	101.26	70	120	
Tb	159	He	1204460	0.13	1205156	99.94	70	120	
Tb	159	NoGas	2254014	0.83	2266694	99.44	70	120	
Ho	165	H2	1918815	1.08	1916437	100.12	70	120	
Ho	165	He	1171594	0.41	1172479	99.92	70	120	
Ho	165	NoGas	2189360	0.63	2192200	99.87	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	033ICSA.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T12:43:29-07:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.010	-208.6	267	36.0	0.1	
B	11	45	NoGas	-5.040	-1.9	32739	1.8	8	
Na	23	45	He	46716.285	0.8	44344343	0.3	60000	
Mg	24	45	He	46575.597	1.4	24916510	0.8	60000	
Al	27	45	He	46953.824	1.2	12235494	1.0	60000	
K	39	45	He	46739.294	0.9	24247125	0.9	60000	
Ca	44	45	He	47252.883	1.0	1315401	0.4	60000	
Ti	47	45	He	990.060	0.7	174686	0.4	1200	
V	51	45	He	0.004	1365.0	2167	10.7	0.2	
Cr	52	45	He	0.455	7.3	3786	5.3	30	
Mn	55	45	He	2.313	1.0	9864	0.9	24	
Fe	56	45	He	47464.745	0.4	259425616	0.5	60000	
Co	59	45	He	0.589	6.1	5681	5.9	5	
Ni	60	45	He	0.702	23.8	2260	19.6	20	
Cu	63	45	He	0.245	5.1	2674	3.8	25	
Zn	66	115	He	0.337	12.6	1021	5.0	60	
As	75	115	He	0.131	6.1	380	1.9	0.4	
Se	78	115	H2	-0.040	-25.8	8	31.1	0.4	
Se	78	115	He	-0.049	-136.6	91	5.4	0.4	
Sr	88	115	NoGas	2.030	0.8	70092	1.6	5	
Mo	95	115	NoGas	961.305	1.5	6447865	1.9	1200	
Ag	107	115	NoGas	0.004	68.1	143	31.5	5	
Cd	111	115	He	0.155	13.8	286	13.3	0.5	
Sn	118	115	He	-0.080	-27.7	1431	5.2	5	
Sn	118	115	NoGas	-0.099	-9.6	3818	2.8	5	
Sb	121	115	NoGas	0.028	36.8	6338	1.6	5	
Ba	137	165	NoGas	0.086	7.6	880	6.0	1.5	
Tl	205	165	NoGas	-0.041	-4.8	753	7.7	0.2	
Pb	208	165	NoGas	0.026	44.1	8191	9.0	1	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	166959	0.71	164751	101.34	70	120	
Sc	45	He	74135	0.63	76221	97.26	70	120	
Sc	45	NoGas	911522	1.08	928342	98.19	70	120	
In	115	H2	923185	0.78	997448	92.55	70	120	
In	115	He	417091	0.49	448471	93.00	70	120	
In	115	NoGas	1406022	1.11	1548791	90.78	70	120	
Tb	159	H2	1926575	0.17	2006856	96.00	70	120	
Tb	159	He	1170139	0.69	1205156	97.09	70	120	
Tb	159	NoGas	2169126	0.66	2266694	95.70	70	120	
Ho	165	H2	1856148	1.69	1916437	96.85	70	120	
Ho	165	He	1142892	0.50	1172479	97.48	70	120	
Ho	165	NoGas	2123572	2.07	2192200	96.87	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	036ICSB.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T13:01:35-07:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	45	NoGas	40.674	1.179	185072	0.69	50	81.3	80	120	
B	11	45	NoGas	-6.107	-4.387	29584	3.02	-8	76.3	80	120	
Na	23	45	He	43626.305	1.839	42345409	1.02	50000	87.3	80	120	
Mg	24	45	He	43232.840	2.392	23648716	2.17	50000	86.5	80	120	
Al	27	45	He	43375.732	1.201	11556853	0.10	50000	86.8	80	120	
K	39	45	He	43206.410	1.105	22925410	0.72	50000	86.4	80	120	
Ca	44	45	He	43800.600	0.665	1246780	0.46	50000	87.6	80	120	
Ti	47	45	He	910.288	1.711	164214	0.59	1000	91.0	80	120	
V	51	45	He	44.613	1.391	231981	0.35	50	89.2	80	120	
Cr	52	45	He	43.562	1.137	269781	0.42	50	87.1	80	120	
Mn	55	45	He	45.059	0.897	180590	0.49	50	90.1	80	120	
Fe	56	45	He	43935.300	1.097	245528115	0.49	50000	87.9	80	120	
Co	59	45	He	42.862	2.056	410542	1.18	50	85.7	80	120	
Ni	60	45	He	84.244	1.577	220393	1.23	100	84.2	80	120	
Cu	63	45	He	42.561	1.177	304520	0.19	50	85.1	80	120	
Zn	66	115	He	89.161	0.442	119486	0.10	100	89.2	80	120	
As	75	115	He	45.957	0.951	46765	0.58	50	91.9	80	120	
Se	78	115	H2	43.606	1.165	10185	1.36	50	87.2	80	120	
Se	78	115	He	44.826	2.804	3135	2.61	50	89.7	80	120	
Sr	88	115	NoGas	1.888	2.660	65880	1.85	-5	-37.8	80	120	
Mo	95	115	NoGas	956.361	2.422	6455959	0.62	1050	91.1	80	120	
Ag	107	115	NoGas	86.583	1.699	1572131	0.91	100	86.6	80	120	
Cd	111	115	He	89.077	0.744	153382	0.48	100	89.1	80	120	
Sn	118	115	He	-0.125	-3.186	1280	1.14	50	-0.2	80	120	>+\- 20%
Sn	118	115	NoGas	-0.144	-14.804	3383	4.56	50	-0.3	80	120	>+\- 20%
Sb	121	115	NoGas	46.866	1.806	748765	0.53	50	93.7	80	120	
Ba	137	165	NoGas	42.461	0.818	244822	0.95	50	84.9	80	120	
Tl	205	165	NoGas	41.277	1.510	1520732	1.43	50	82.6	80	120	
Pb	208	165	NoGas	82.361	1.362	4177169	1.03	100	82.4	80	120	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	166581	0.97	164751	101.11	70	120	
Sc	45	He	75804	1.13	76221	99.45	70	120	
Sc	45	NoGas	905003	0.65	928342	97.49	70	120	
In	115	H2	926180	0.20	997448	92.85	70	120	
In	115	He	419108	0.38	448471	93.45	70	120	
In	115	NoGas	1415486	1.83	1548791	91.39	70	120	
Tb	159	H2	1927019	0.76	2006856	96.02	70	120	
Tb	159	He	1167016	0.67	1205156	96.84	70	120	
Tb	159	NoGas	2170400	0.78	2266694	95.75	70	120	
Ho	165	H2	1855753	0.80	1916437	96.83	70	120	
Ho	165	He	1150540	0.67	1172479	98.13	70	120	
Ho	165	NoGas	2125853	0.56	2192200	96.97	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	067_CCV.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T17:36:26-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	45	NoGas	44.361	0.805	214428	0.57	50	88.7	89.6	110.4	>+/- 10%
B	11	45	NoGas	34.432	2.235	149289	1.24	50	68.9	89.6	110.4	>+/- 10%
Na	23	45	He	1306.100	2.686	1413348	2.67	1250	104.5	89.6	110.4	
Mg	24	45	He	2581.776	2.513	1482528	2.31	2500	103.3	89.6	110.4	
Al	27	45	He	980.166	0.615	274588	0.68	1000	98.0	89.6	110.4	
K	39	45	He	1008.552	1.900	663873	1.28	1000	100.9	89.6	110.4	
Ca	44	45	He	2488.054	0.244	74800	0.85	2500	99.5	89.6	110.4	
Ti	47	45	He	52.386	0.873	9949	1.08	50	104.8	89.6	110.4	
V	51	45	He	51.186	0.955	278597	0.18	50	102.4	89.6	110.4	
Cr	52	45	He	50.743	1.665	329129	0.57	50	101.5	89.6	110.4	
Mn	55	45	He	49.735	1.381	208792	0.35	50	99.5	89.6	110.4	
Fe	56	45	He	1012.238	1.282	5965800	0.43	1000	101.2	89.6	110.4	
Co	59	45	He	50.318	1.167	505067	0.12	50	100.6	89.6	110.4	
Ni	60	45	He	50.608	1.908	138940	0.93	50	101.2	89.6	110.4	
Cu	63	45	He	50.491	2.610	378369	1.76	50	101.0	89.6	110.4	
Zn	66	115	He	50.542	0.793	73571	0.02	50	101.1	89.6	110.4	
As	75	115	He	49.918	0.625	54950	0.91	50	99.8	89.6	110.4	
Se	78	115	H2	47.222	1.799	12094	1.13	50	94.4	89.6	110.4	
Se	78	115	He	48.633	1.176	3672	1.69	50	97.3	89.6	110.4	
Sr	88	115	NoGas	49.408	3.302	1886040	1.20	50	98.8	89.6	110.4	
Mo	95	115	NoGas	46.772	1.580	367310	0.62	50	93.5	89.6	110.4	
Ag	107	115	NoGas	23.568	2.467	495850	0.76	25	94.3	89.6	110.4	
Cd	111	115	He	50.390	1.116	93907	0.35	50	100.8	89.6	110.4	
Sn	118	115	He	50.717	1.135	197785	1.09	50	101.4	89.6	110.4	
Sn	118	115	NoGas	47.668	2.205	570504	0.24	50	95.3	89.6	110.4	
Sb	121	115	NoGas	46.930	2.556	868666	0.49	50	93.9	89.6	110.4	
Ba	137	165	NoGas	46.774	1.336	300495	0.71	50	93.5	89.6	110.4	
Tl	205	165	NoGas	49.194	0.240	2019409	0.98	50	98.4	89.6	110.4	
Pb	208	165	NoGas	46.939	1.164	2656340	0.11	50	93.9	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	168225	1.22	164751	102.11	70	120	
Sc	45	He	79440	1.09	76221	104.22	70	120	
Sc	45	NoGas	961503	0.34	928342	103.57	70	120	
In	115	H2	1015775	0.68	997448	101.84	70	120	
In	115	He	453574	0.77	448471	101.14	70	120	
In	115	NoGas	1640177	2.13	1548791	105.90	70	120	
Tb	159	H2	2155299	0.86	2006856	107.40	70	120	
Tb	159	He	1243538	0.99	1205156	103.18	70	120	
Tb	159	NoGas	2430027	0.79	2266694	107.21	70	120	
Ho	165	H2	2049415	0.70	1916437	106.94	70	120	
Ho	165	He	1221211	0.88	1172479	104.16	70	120	
Ho	165	NoGas	2369202	1.06	2192200	108.07	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	070_CCB.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T17:54:33-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.035	-28.7	163	28.9	0.1	
B	11	45	NoGas	-10.245	-2.3	19544	3.1	8	
Na	23	45	He	-9.607	-6.8	77026	0.9	50	
Mg	24	45	He	0.080	35.8	2717	0.6	20	
Al	27	45	He	0.372	80.5	1013	8.1	10	
K	39	45	He	-0.147	-5764.3	104802	4.4	40	
Ca	44	45	He	-2.073	-91.4	548	10.4	150	
Ti	47	45	He	0.116	128.7	69	40.6	0.5	
V	51	45	He	-0.157	-11.0	1448	6.4	0.4	
Cr	52	45	He	0.000	1331.7	1111	3.2	0.2	
Mn	55	45	He	0.007	147.9	924	4.9	0.3	
Fe	56	45	He	0.288	156.9	40070	6.5	30	
Co	59	45	He	-0.007	-18.1	100	13.3	0.4	
Ni	60	45	He	0.040	195.6	607	35.3	0.4	
Cu	63	45	He	-0.014	-120.6	927	13.0	0.4	
Zn	66	115	He	0.046	81.2	698	8.1	15	
As	75	115	He	-0.129	-1.9	130	1.8	0.2	
Se	78	115	H2	-0.044	-43.2	8	62.1	0.4	
Se	78	115	He	0.087	261.3	110	15.5	0.4	
Sr	88	115	NoGas	0.004	101.3	4631	3.2	0.1	
Mo	95	115	NoGas	-0.132	-4.1	473	10.0	0.3	
Ag	107	115	NoGas	0.001	92.8	117	21.6	0.1	
Cd	111	115	He	-0.004	-50.6	14	28.6	0.1	
Sn	118	115	He	-0.152	-9.4	1292	4.1	0.1	
Sn	118	115	NoGas	-0.146	-7.1	3972	3.7	0.1	
Sb	121	115	NoGas	-0.220	-6.5	2890	8.4	0.5	
Ba	137	165	NoGas	-0.005	-287.4	403	26.5	0.4	
Tl	205	165	NoGas	-0.051	-2.6	427	11.8	0.2	
Pb	208	165	NoGas	-0.064	-1.4	4140	0.7	0.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	167750	0.84	164751	101.82	70	120	
Sc	45	He	78949	0.13	76221	103.58	70	120	
Sc	45	NoGas	968941	1.80	928342	104.37	70	120	
In	115	H2	1022378	0.53	997448	102.50	70	120	
In	115	He	458202	0.41	448471	102.17	70	120	
In	115	NoGas	1668781	0.95	1548791	107.75	70	120	
Tb	159	H2	2168839	1.40	2006856	108.07	70	120	
Tb	159	He	1254037	0.74	1205156	104.06	70	120	
Tb	159	NoGas	2473392	1.06	2266694	109.12	70	120	
Ho	165	H2	2091918	1.62	1916437	109.16	70	120	
Ho	165	He	1227314	0.39	1172479	104.68	70	120	
Ho	165	NoGas	2427231	1.62	2192200	110.72	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	078_CCV.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T18:42:49-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	45	NoGas	45.215	1.102	215153	0.21	50	90.4	89.6	110.4	
B	11	45	NoGas	33.866	1.335	145360	1.03	50	67.7	89.6	110.4	>+/- 10%
Na	23	45	He	1394.193	1.420	1432077	0.37	1250	111.5	89.6	110.4	>+/- 10%
Mg	24	45	He	2749.764	2.113	1504529	1.03	2500	110.0	89.6	110.4	
Al	27	45	He	998.317	0.759	266517	0.72	1000	99.8	89.6	110.4	
K	39	45	He	1019.559	1.743	638467	0.09	1000	102.0	89.6	110.4	
Ca	44	45	He	2510.620	2.113	71918	1.01	2500	100.4	89.6	110.4	
Tl	47	45	He	52.039	3.567	9417	2.21	50	104.1	89.6	110.4	
V	51	45	He	52.632	1.308	272938	0.12	50	105.3	89.6	110.4	
Cr	52	45	He	52.095	0.884	322017	0.73	50	104.2	89.6	110.4	
Mn	55	45	He	51.225	1.058	204932	1.05	50	102.4	89.6	110.4	
Fe	56	45	He	1073.104	2.147	6024682	0.74	1000	107.3	89.6	110.4	
Co	59	45	He	52.485	1.419	502060	0.17	50	105.0	89.6	110.4	
Ni	60	45	He	50.907	3.608	133171	2.37	50	101.8	89.6	110.4	
Cu	63	45	He	51.874	1.218	370472	0.29	50	103.7	89.6	110.4	
Zn	66	115	He	52.041	2.634	72992	1.45	50	104.1	89.6	110.4	
As	75	115	He	51.691	1.704	54834	0.53	50	103.4	89.6	110.4	
Se	78	115	H2	48.313	1.131	12132	1.21	50	96.6	89.6	110.4	
Se	78	115	He	49.570	0.831	3606	0.64	50	99.1	89.6	110.4	
Sr	88	115	NoGas	50.839	0.242	1944298	0.33	50	101.7	89.6	110.4	
Mo	95	115	NoGas	46.520	1.132	365947	0.67	50	93.0	89.6	110.4	
Ag	107	115	NoGas	23.501	0.197	495327	0.38	25	94.0	89.6	110.4	
Cd	111	115	He	51.762	0.799	92987	0.61	50	103.5	89.6	110.4	
Sn	118	115	He	51.484	2.180	193482	1.15	50	103.0	89.6	110.4	
Sn	118	115	NoGas	47.219	0.632	566181	0.34	50	94.4	89.6	110.4	
Sb	121	115	NoGas	46.952	0.575	870657	0.54	50	93.9	89.6	110.4	
Ba	137	165	NoGas	46.132	1.150	300374	1.03	50	92.3	89.6	110.4	
Tl	205	165	NoGas	50.412	0.803	2097076	0.44	50	100.8	89.6	110.4	
Pb	208	165	NoGas	46.747	0.851	2681161	0.55	50	93.5	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	161160	0.32	164751	97.82	70	120	
Sc	45	He	75710	1.42	76221	99.33	70	120	
Sc	45	NoGas	946614	0.91	928342	101.97	70	120	
In	115	H2	995913	0.46	997448	99.85	70	120	
In	115	He	437221	1.16	448471	97.49	70	120	
In	115	NoGas	1642595	0.57	1548791	106.06	70	120	
Tb	159	H2	2195622	0.69	2006856	109.41	70	120	
Tb	159	He	1222355	0.44	1205156	101.43	70	120	
Tb	159	NoGas	2498236	0.78	2266694	110.21	70	120	
Ho	165	H2	2085880	2.28	1916437	108.84	70	120	
Ho	165	He	1198859	0.51	1172479	102.25	70	120	
Ho	165	NoGas	2400997	0.38	2192200	109.52	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	081_CCB.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T19:00:53-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	45	NoGas	-0.042	-8.1	123	12.4	0.1	
B	11	45	NoGas	-10.601	-0.9	17832	1.0	8	
Na	23	45	He	-6.749	-6.5	75649	0.7	50	
Mg	24	45	He	0.311	48.5	2697	3.2	20	
Al	27	45	He	0.349	18.3	953	1.5	10	
K	39	45	He	9.311	102.2	104128	4.3	40	
Ca	44	45	He	1.624	146.0	622	10.7	150	
Tl	47	45	He	-0.014	-406.4	42	24.1	0.5	
V	51	45	He	-0.189	-8.4	1206	6.6	0.4	
Cr	52	45	He	-0.004	-256.5	1022	6.5	0.2	
Mn	55	45	He	0.033	66.1	976	8.7	0.3	
Fe	56	45	He	0.269	32.9	37827	0.9	30	
Co	59	45	He	-0.001	-158.5	156	8.7	0.4	
Ni	60	45	He	0.092	94.0	707	31.6	0.4	
Cu	63	45	He	0.009	76.1	1033	4.9	0.4	
Zn	66	115	He	0.052	45.6	678	4.8	15	
As	75	115	He	-0.136	-14.1	116	18.2	0.2	
Se	78	115	H2	-0.051	-12.9	6	27.6	0.4	
Se	78	115	He	-0.170	-213.3	87	29.7	0.4	
Sr	88	115	NoGas	0.016	28.3	5038	4.1	0.1	
Mo	95	115	NoGas	-0.144	-9.5	373	29.6	0.3	
Ag	107	115	NoGas	0.002	138.5	137	48.7	0.1	
Cd	111	115	He	-0.005	-54.9	13	36.5	0.1	
Sn	118	115	He	-0.121	-15.4	1358	5.3	0.1	
Sn	118	115	NoGas	-0.136	-17.1	4037	6.3	0.1	
Sb	121	115	NoGas	-0.195	-5.8	3324	6.3	0.5	
Ba	137	165	NoGas	0.000	-3453.3	430	15.3	0.4	
Tl	205	165	NoGas	-0.052	-6.9	367	41.0	0.2	
Pb	208	165	NoGas	-0.066	-2.1	3940	2.1	0.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	160026	0.93	164751	97.13	70	120	
Sc	45	He	74741	0.47	76221	98.06	70	120	
Sc	45	NoGas	933751	0.61	928342	100.58	70	120	
In	115	H2	985799	0.73	997448	98.83	70	120	
In	115	He	439715	0.61	448471	98.05	70	120	
In	115	NoGas	1650147	0.69	1548791	106.54	70	120	
Tb	159	H2	2152014	0.36	2006856	107.23	70	120	
Tb	159	He	1198352	0.65	1205156	99.44	70	120	
Tb	159	NoGas	2455775	1.33	2266694	108.34	70	120	
Ho	165	H2	2041954	0.98	1916437	106.55	70	120	
Ho	165	He	1179709	0.69	1172479	100.62	70	120	
Ho	165	NoGas	2389892	0.57	2192200	109.02	70	120	

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No: 74218 SDG: 74218

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 09/20/14 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 15:14	%R(1)	True CCV1	Found 15:18	%R(1)	True CCV1	Found 16:33	%R(1)	
Mercury (Hg)	4.17	3.854	92.4	5.208	5.086	97.7	5.208	4.555	87.5	

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No: 74218 SDG: 74218

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 09/20/14 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 15:14	%R(1)	True CCV1	Found 17:02	%R(1)	True	Found	%R(1)	
Mercury (Hg)	4.17	3.854	92.4	5.208	4.581	88.0				

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No.: 74218 SDG: 74218

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 09/20/14

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)								Preparation Blank		M
		C	1	C	2	C	3	C		C			
	15:16		15:20		16:35		17:04						
Mercury (Hg)	.20	U	.20	U	.20	U	.20	U					P

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No: 74218 SDG: 74218

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 09/27/14 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:39	%R(1)	True CCV1	Found 11:43	%R(1)	True CCV1	Found 12:30	%R(1)	
Mercury (Hg)	4.17	4.242	102	5.208	5.283	101	5.208	5.377	103	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No.: 74218 SDG: 74218

Preparation Blank Matrix (soil/water): soil

Preparation Blank Concentration Units (ug/L or mg/kg): mg/Kg

Analysis Date: 09/27/14

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
	11:41		11:45		12:32				11:56		
Mercury (Hg)	.63	U	.63	U	.63	U			.10	U	P

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No: 74218 SDG: 74218

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 09/27/14 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 15:48	%R(1)	True CCV1	Found 12:58	%R(1)	True CCV1	Found 15:52	%R(1)	
Mercury (Hg)	4.17	4.262	102	5.208	5.292	102	5.208	5.225	100	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Element Environmental
ARF No: 74218 SDG: 74218
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 09/27/14 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 15:48	%R(1)	True CCV1	Found 16:59	%R(1)	True CCV1	Found 17:27	%R(1)	
Mercury (Hg)	4.17	4.262	102	5.208	5.169	99.3	5.208	5.308	102	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No: 74218 SDG: 74218

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 09/27/14 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 15:48	%R(1)	True CCV1	Found 17:48	%R(1)	True	Found	%R(1)	
Mercury (Hg)	4.17	4.262	102	5.208	5.338	102				P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No.: 74218 SDG: 74218

Preparation Blank Matrix (soil/water): soil

Preparation Blank Concentration Units (ug/L or mg/kg): mg/Kg

Analysis Date: 09/27/14

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
	15:50		13:00		15:54		17:01				
Mercury (Hg)	.63	U	.63	U	.63	U	.63	U			P

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Element Environmental

ARF No.: 74218 SDG: 74218

Preparation Blank Matrix (soil/water): soil

Preparation Blank Concentration Units (ug/L or mg/kg): mg/Kg

Analysis Date: 09/27/14

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
	15:50		17:29		17:51						
Mercury (Hg)	.63	U	.63	U	.63	U					P

METALS

Raw Data

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6020A	ANTIMONY (SB)	0.20 U	0.2	0.20	0.10	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	ARSENIC (AS)	0.30 U	0.5	0.30	0.08	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	CADMIUM (CD)	0.08 U	0.1	0.08	0.03	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	CHROMIUM (CR)	0.20 U	0.5	0.20	0.04	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	COPPER (CU)	0.08 U	0.1	0.08	0.04	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	LEAD (PB)	0.05 U	0.1	0.05	0.02	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	NICKEL (NI)	0.20 U	0.2	0.20	0.14	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	SELENIUM (SE)	0.10 U	0.2	0.10	0.04	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	SILVER (AG)	0.05 U	0.1	0.05	0.02	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	THALLIUM (TL)	0.05 U	0.1	0.05	0.02	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	ZINC (ZN)	1.50 U	2.0	1.50	1.20	mg/Kg	09/19/14	09/24/14	#6020A-140919A-AZ02100
6020A	BERYLLIUM (BE)	0.30 U	1.0	0.30	0.07	mg/Kg	09/19/14	09/19/14	#6020A-140919A1-AZ02100
EPA 7471	MERCURY (HG)	0.04 U	0.1	0.04	0.01	mg/Kg	09/19/14	09/27/14	#HGDOD-140919A-AZ02100

Metals SC-Blank-REG MDLs
Printed: 09/29/14 5:55:11 PM

Sample Report

Sample Table

Sample Name	140919A BLK
Data File Name	082SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T18:33:09-07:00
Sample Type	Sample
Dilution	0.01
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	-0.094	-0.001	-9.25	123	26.07	10000	
B	11	45	NoGas	282.893	2.829	1.51	668637	0.37	10000	
Na	23	45	He	237.899	2.379	3.43	272625	1.19	1000000	
Mg	24	45	He	18.293	0.183	3.02	9202	4.34	1000000	
Al	27	45	He	6.313	0.063	3.76	1866	2.91	1000000	
K	39	45	He	12.011	0.120	17.11	41140	2.57	500000	
Ca	44	45	He	220.780	2.208	4.32	5459	3.20	500000	
Ti	47	45	He	0.698	0.007	11.91	120	10.01	10000	
V	51	45	He	3.536	0.035	0.99	17969	2.02	10000	
Cr	52	45	He	0.574	0.006	0.78	3774	2.17	10000	
Mn	55	45	He	0.616	0.006	7.28	2557	6.19	50000	
Fe	56	45	He	19.014	0.190	1.31	106099	0.53	1000000	
Co	59	45	He	0.062	0.001	8.15	701	4.42	10000	
Ni	60	45	He	0.233	0.002	32.29	773	22.30	10000	
Cu	63	45	He	1.234	0.012	5.31	8489	6.13	10000	
Zn	66	115	He	0.756	0.008	9.68	1489	5.68	50000	
As	75	115	He	1.348	0.013	6.80	1129	6.82	2000	
Se	78	115	H2	0.769	0.008	5.27	161	5.26	10000	
Se	78	115	He	0.973	0.010	20.31	105	9.56	10000	
Sr	88	115	NoGas	2.687	0.027	2.81	99334	1.45	50000	
Mo	95	115	NoGas	0.245	0.002	13.39	1970	11.44	10000	
Ag	107	115	NoGas	0.012	0.000	12.34	247	13.03	5000	
Cd	111	115	He	-0.001	0.000	-676.69	17	68.23	10000	
Sn	118	115	He	2.019	0.020	9.77	8402	8.84	10000	
Sn	118	115	NoGas	1.394	0.014	4.19	20104	2.96	10000	
Sb	121	115	NoGas	0.833	0.008	6.54	17159	5.16	10000	
Ba	137	165	NoGas	0.109	0.001	11.17	997	8.17	50000	
Tl	205	165	NoGas	0.162	0.002	4.40	7292	5.11	5000	
Pb	208	165	NoGas	0.160	0.002	0.57	29508	0.96	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	136814	1.31	163616	83.62	70	120	
Sc	45	He	58968	1.61	71079	82.96	70	120	
Sc	45	NoGas	823625	1.57	951149	86.59	70	120	
In	115	H2	861272	0.72	1007583	85.48	70	120	
In	115	He	367001	0.80	439049	83.59	70	120	
In	115	NoGas	1520471	1.34	1619798	93.87	70	120	
Tb	159	H2	2019304	1.03	2111966	95.61	70	120	
Tb	159	He	1151847	0.52	1288440	89.40	70	120	
Tb	159	NoGas	2425157	1.36	2404338	100.87	70	120	
Ho	165	H2	1934469	0.85	2032817	95.16	70	120	
Ho	165	He	1152107	0.69	1283106	89.79	70	120	
Ho	165	NoGas	2401026	0.80	2371226	101.26	70	120	

Sample Report

Sample Table

Sample Name	140919A BLK
Data File Name	051SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T15:59:54-07:00
Sample Type	Sample
Dilution	0.01
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	0.009	0.000	40.82	303	5.04	10000	
B	11	45	NoGas	-9.083	-0.091	-5.06	18453	5.65	10000	
Na	23	45	He	-1.398	-0.014	-115.07	69600	0.32	1000000	
Mg	24	45	He	5.163	0.052	5.42	4582	4.68	1000000	
Al	27	45	He	0.501	0.005	39.59	856	3.36	1000000	
K	39	45	He	20.401	0.204	27.17	94784	4.53	500000	
Ca	44	45	He	173.857	1.739	1.51	4701	0.74	500000	
Tl	47	45	He	0.083	0.001	126.06	51	30.13	10000	
V	51	45	He	5.718	0.057	1.20	26901	1.84	10000	
Cr	52	45	He	0.672	0.007	1.19	4428	1.87	10000	
Mn	55	45	He	0.193	0.002	9.79	1383	4.18	50000	
Fe	56	45	He	3.071	0.031	6.52	45909	0.63	1000000	
Co	59	45	He	0.033	0.000	12.89	410	9.86	10000	
Ni	60	45	He	0.581	0.006	17.82	1694	12.12	10000	
Cu	63	45	He	0.409	0.004	9.11	3314	5.48	10000	
Zn	66	115	He	0.384	0.004	27.60	979	12.94	50000	
As	75	115	He	1.408	0.014	3.37	1504	2.76	2000	
Se	78	115	H2	0.353	0.004	21.15	93	16.80	10000	
Se	78	115	He	0.397	0.004	61.74	109	13.70	10000	
Sr	88	115	NoGas	2.129	0.021	1.56	68349	2.21	50000	
Mo	95	115	NoGas	0.034	0.000	65.58	1413	10.62	10000	
Ag	107	115	NoGas	0.002	0.000	159.72	110	56.78	5000	
Cd	111	115	He	-0.007	0.000	-41.00	7	69.28	10000	
Sn	118	115	He	0.994	0.010	6.76	4737	4.66	10000	
Sn	118	115	NoGas	0.542	0.005	8.56	9634	4.61	10000	
Sb	121	115	NoGas	0.505	0.005	6.61	12919	3.44	10000	
Ba	137	165	NoGas	-0.004	0.000	-366.50	333	27.06	50000	
Tl	205	165	NoGas	-0.059	-0.001	-1.98	77	52.72	5000	
Pb	208	165	NoGas	0.410	0.004	3.70	25592	1.64	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	141883	0.97	164751	86.12	70	120	
Sc	45	He	64427	1.91	76221	84.53	70	120	
Sc	45	NoGas	779088	1.07	928342	83.92	70	120	
In	115	H2	862456	0.96	997448	86.47	70	120	
In	115	He	376520	0.12	448471	83.96	70	120	
In	115	NoGas	1311012	0.76	1548791	84.65	70	120	
Tb	159	H2	1740424	0.80	2006856	86.72	70	120	
Tb	159	He	1056085	0.68	1205156	87.63	70	120	
Tb	159	NoGas	2049567	1.02	2266694	90.42	70	120	
Ho	165	H2	1679502	2.36	1916437	87.64	70	120	
Ho	165	He	1032051	0.95	1172479	88.02	70	120	
Ho	165	NoGas	1970009	1.36	2192200	89.86	70	120	

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6020A	ANTIMONY (SB)	0.50 U	1.0	0.50	0.14	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	ARSENIC (AS)	0.20 U	0.5	0.20	0.09	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	BERYLLIUM (BE)	0.10 U	0.2	0.10	0.04	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	CADMIUM (CD)	0.10 U	0.2	0.10	0.02	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	CHROMIUM (CR)	0.23 J	0.5	0.20	0.07	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	COPPER (CU)	0.40 U	0.5	0.40	0.13	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	LEAD (PB)	0.40 U	0.5	0.40	0.19	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	NICKEL (NI)	0.40 U	0.5	0.40	0.16	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	SELENIUM (SE)	0.40 U	1.0	0.40	0.10	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	SILVER (AG)	0.10 U	0.2	0.10	0.03	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	THALLIUM (TL)	0.20 U	0.2	0.20	0.10	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
6020A	ZINC (ZN)	15.0 U	20	15.0	12.7	ug/L	09/18/14	09/23/14	#6020A-140918A-AZ02116
7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	09/18/14	09/20/14	#HGDOD-140918A-AZ02116

Metals SC-Blank-REG MDLs
Printed: 10/02/14 3:13:36 PM

Sample Report

Sample Table

Sample Name	140918A BLK
Data File Name	047SMPL.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T16:05:18-07:00
Sample Type	Sample
Dilution	1.111111111
Comment	
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	-0.017	-0.019	-31.50	213	14.32	10000	
B	11	45	NoGas	38.258	42.508	1.68	141596	1.74	10000	
Na	23	45	He	6.571	7.301	27.85	92379	0.42	1000000	
Mg	24	45	He	0.354	0.393	73.17	1815	7.99	1000000	
Al	27	45	He	2.127	2.363	5.69	1338	4.57	1000000	
K	39	45	He	12.717	14.130	87.30	121222	5.06	500000	
Ca	44	45	He	3.510	3.899	21.70	514	5.28	500000	
Ti	47	45	He	0.096	0.107	58.22	53	22.53	10000	
V	51	45	He	-0.283	-0.314	-2.93	859	6.75	10000	
Cr	52	45	He	0.209	0.233	3.04	2634	2.49	10000	
Mn	55	45	He	0.137	0.152	10.13	1290	3.30	50000	
Fe	56	45	He	0.413	0.459	4.79	33169	2.01	1000000	
Co	59	45	He	0.023	0.026	18.23	371	12.59	10000	
Ni	60	45	He	-0.020	-0.022	-114.78	400	18.03	10000	
Cu	63	45	He	0.028	0.031	65.22	1794	7.17	10000	
Zn	66	115	He	-0.129	-0.143	-14.36	687	4.23	50000	
As	75	115	He	-0.232	-0.258	-3.65	32	31.59	2000	
Se	78	115	H2	-0.057	-0.063	-12.94	4	54.98	10000	
Se	78	115	He	0.238	0.264	41.69	118	7.09	10000	
Sr	88	115	NoGas	0.009	0.010	224.11	1686	46.34	50000	
Mo	95	115	NoGas	-0.128	-0.142	-8.64	317	26.86	10000	
Ag	107	115	NoGas	-0.003	-0.003	-44.27	43	66.62	5000	
Cd	111	115	He	0.002	0.002	26.40	13	9.12	10000	
Sn	118	115	He	-0.265	-0.295	-7.00	623	12.98	10000	
Sn	118	115	NoGas	-0.260	-0.289	-2.45	1722	2.42	10000	
Sb	121	115	NoGas	-0.388	-0.431	-2.07	1420	10.84	10000	
Ba	137	165	NoGas	-0.006	-0.007	-231.47	300	29.63	50000	
Tl	205	165	NoGas	-0.024	-0.027	-8.06	943	8.10	5000	
Pb	208	165	NoGas	-0.015	-0.017	-54.68	6631	5.64	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	202675	1.34	185584	109.21	70	120	
Sc	45	He	91066	1.80	83499	109.06	70	120	
Sc	45	NoGas	1123939	1.14	1035739	108.52	70	120	
In	115	H2	1177047	0.25	1133962	103.80	70	120	
In	115	He	535603	0.16	512916	104.42	70	120	
In	115	NoGas	1838010	2.18	1726182	106.48	70	120	
Tb	159	H2	2314954	1.09	2259927	102.43	70	120	
Tb	159	He	1395805	0.07	1384042	100.85	70	120	
Tb	159	NoGas	2672148	2.28	2544437	105.02	70	120	
Ho	165	H2	2233316	0.94	2140395	104.34	70	120	
Ho	165	He	1368297	0.09	1350145	101.34	70	120	
Ho	165	NoGas	2575301	1.28	2467012	104.39	70	120	

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/Kg	SPK Result mg/Kg	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6020A	ANTIMONY (SB)	2.50	2.3	92.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	ARSENIC (AS)	2.50	2.2	88.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	BERYLLIUM (BE)	0.500	0.45	90.0	80-120	09/19/14	09/19/14	#6020A-140919A1-AZ02100
EPA 6020A	CADMIUM (CD)	0.500	0.45	90.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	CHROMIUM (CR)	2.50	2.3	92.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	COPPER (CU)	2.50	2.2	88.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	LEAD (PB)	2.50	2.1	84.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	NICKEL (NI)	2.50	2.2	88.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	SELENIUM (SE)	2.50	2.1	84.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	SILVER (AG)	1.0	0.90	90.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	THALLIUM (TL)	2.50	2.1	84.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 6020A	ZINC (ZN)	5.00	4.5	90.0	80-120	09/19/14	09/24/14	#6020A-140919A-AZ02100
EPA 7471B	MERCURY (HG)	0.160	0.16	100	80-120	09/19/14	09/27/14	#HGDOD-140919A-AZ02100

Comments: _____

Sample Report

Sample Table

Sample Name	140919A LCS
Data File Name	083SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T18:39:12-07:00
Sample Type	Sample
Dilution	0.01
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	45.020	0.450	0.50	162783	0.33	10000	
B	11	45	NoGas	506.731	5.067	0.56	1189160	0.41	10000	
Na	23	45	He	22038.414	220.384	0.70	18373471	1.41	1000000	
Mg	24	45	He	21403.992	214.040	1.42	9914090	1.47	1000000	
Al	27	45	He	1610.415	16.104	1.55	352760	0.41	1000000	
K	39	45	He	4394.082	43.941	1.47	1836822	0.49	500000	
Ca	44	45	He	20371.134	203.711	1.41	477431	0.55	500000	
Ti	47	45	He	212.686	2.127	2.44	31494	1.05	10000	
V	51	45	He	227.331	2.273	1.48	1005300	0.20	10000	
Cr	52	45	He	217.544	2.175	1.31	1155411	0.42	10000	
Mn	55	45	He	208.428	2.084	0.88	714535	0.82	50000	
Fe	56	45	He	874.918	8.749	1.11	4252371	0.58	1000000	
Co	59	45	He	230.370	2.304	1.98	1915934	0.38	10000	
Ni	60	45	He	208.119	2.081	1.79	459033	1.27	10000	
Cu	63	45	He	219.828	2.198	2.24	1341720	3.87	10000	
Zn	66	115	He	427.892	4.279	0.51	475566	0.49	50000	
As	75	115	He	217.396	2.174	0.50	157305	0.82	2000	
Se	78	115	H2	205.759	2.058	0.49	39842	0.74	10000	
Se	78	115	He	207.056	2.071	1.04	10731	0.63	10000	
Sr	88	115	NoGas	209.539	2.095	0.36	7528133	1.64	50000	
Mo	95	115	NoGas	218.093	2.181	0.66	1627696	1.06	10000	
Ag	107	115	NoGas	86.847	0.868	0.90	1697001	0.83	5000	
Cd	111	115	He	44.340	0.443	0.73	68854	1.01	10000	
Sn	118	115	He	230.505	2.305	0.75	797296	0.90	10000	
Sn	118	115	NoGas	227.777	2.278	1.55	2711308	1.47	10000	
Sb	121	115	NoGas	207.783	2.078	0.24	3834168	1.56	10000	
Ba	137	165	NoGas	191.078	1.911	0.44	1221665	1.16	50000	
Tl	205	165	NoGas	205.031	2.050	0.58	9155834	1.53	5000	
Pb	208	165	NoGas	206.643	2.066	0.16	12862442	1.08	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	133368	1.86	163616	81.51	70	120	
Sc	45	He	57868	1.65	71079	81.41	70	120	
Sc	45	NoGas	821263	0.27	951149	86.34	70	120	
In	115	H2	814054	0.36	1007583	80.79	70	120	
In	115	He	347782	0.52	439049	79.21	70	120	
In	115	NoGas	1488243	1.60	1619798	91.88	70	120	
Tb	159	H2	2031147	0.59	2111966	96.17	70	120	
Tb	159	He	1146680	0.28	1288440	89.00	70	120	
Tb	159	NoGas	2437733	0.71	2404338	101.39	70	120	
Ho	165	H2	1945586	0.84	2032817	95.71	70	120	
Ho	165	He	1160460	1.02	1283106	90.44	70	120	
Ho	165	NoGas	2413669	0.97	2371226	101.79	70	120	

Sample Report

Sample Table

Sample Name	140919A LCS
Data File Name	052SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T16:05:56-07:00
Sample Type	Sample
Dilution	0.01
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	41.698	0.417	1.83	161705	0.94	10000	
B	11	45	NoGas	220.221	2.202	1.00	553146	1.31	10000	
Na	23	45	He	22317.799	223.178	1.17	18083786	0.46	1000000	
Mg	24	45	He	21733.823	217.338	0.84	9907005	0.94	1000000	
Al	27	45	He	1712.218	17.122	1.38	380802	0.69	1000000	
K	39	45	He	4414.944	44.149	2.13	2027076	1.47	500000	
Ca	44	45	He	21279.909	212.799	0.78	504939	0.26	500000	
Ti	47	45	He	223.682	2.237	1.74	33651	1.23	10000	
V	51	45	He	238.055	2.381	1.02	1023463	0.60	10000	
Cr	52	45	He	228.281	2.283	1.35	1174161	0.81	10000	
Mn	55	45	He	221.428	2.214	1.21	736625	0.76	50000	
Fe	56	45	He	908.384	9.084	1.50	4259746	1.14	1000000	
Co	59	45	He	227.654	2.277	0.10	1816416	0.78	10000	
Ni	60	45	He	219.443	2.194	1.13	477734	1.68	10000	
Cu	63	45	He	220.017	2.200	0.35	1308265	0.63	10000	
Zn	66	115	He	446.561	4.466	1.13	511642	0.66	50000	
As	75	115	He	220.776	2.208	0.49	192010	0.45	2000	
Se	78	115	H2	205.913	2.059	1.59	41405	0.78	10000	
Se	78	115	He	209.618	2.096	0.46	12285	0.66	10000	
Sr	88	115	NoGas	223.177	2.232	0.40	6531482	0.82	50000	
Mo	95	115	NoGas	230.856	2.309	0.36	1387554	0.21	10000	
Ag	107	115	NoGas	89.833	0.898	1.02	1451298	1.58	5000	
Cd	111	115	He	44.806	0.448	0.76	66230	1.24	10000	
Sn	118	115	He	238.606	2.386	0.52	732478	0.12	10000	
Sn	118	115	NoGas	238.384	2.384	0.63	2173703	1.19	10000	
Sb	121	115	NoGas	233.460	2.335	1.60	3297532	1.33	10000	
Ba	137	165	NoGas	203.991	2.040	1.03	1088434	1.08	50000	
Tl	205	165	NoGas	206.905	2.069	0.24	7054658	0.15	5000	
Pb	208	165	NoGas	212.749	2.127	0.93	9987814	0.76	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	136411	0.85	164751	82.80	70	120	
Sc	45	He	63158	0.75	76221	82.86	70	120	
Sc	45	NoGas	771399	0.93	928342	83.09	70	120	
In	115	H2	798495	0.83	997448	80.05	70	120	
In	115	He	359719	0.52	448471	80.21	70	120	
In	115	NoGas	1259157	0.57	1548791	81.30	70	120	
Tb	159	H2	175S686	2.00	2006856	87.48	70	120	
Tb	159	He	1051895	0.29	1205156	87.28	70	120	
Tb	159	NoGas	2035960	1.02	2266694	89.82	70	120	
Ho	165	H2	1645429	0.72	1916437	85.86	70	120	
Ho	165	He	1033000	0.04	1172479	88.10	70	120	
Ho	165	NoGas	1969716	0.26	2192200	89.85	70	120	

Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6020A	ANTIMONY (SB)	50.0	46.8	93.6	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	ARSENIC (AS)	50.0	46.6	93.2	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	BERYLLIUM (BE)	10.00	9.3	93.0	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	CADMIUM (CD)	10.00	9.1	91.0	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	CHROMIUM (CR)	50.0	48.0	96.0	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	COPPER (CU)	50.0	45.4	90.8	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	LEAD (PB)	50.0	46.6	93.2	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	NICKEL (NI)	50.0	45.4	90.8	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	SELENIUM (SE)	50.0	45.5	91.0	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	SILVER (AG)	20.0	18.7	93.5	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	THALLIUM (TL)	50.0	47.5	95.0	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 6020A	ZINC (ZN)	100.0	92.7	92.7	80-120	09/18/14	09/23/14	#6020A-140918A-AZ02116
EPA 7470A	MERCURY (HG)	4.00	3.3	82.5	80-120	09/18/14	09/20/14	#HGDOD-140918A-AZ02116

Comments: _____

Sample Report

Sample Table

Sample Name	140918A LCS
Data File Name	048SMPL.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T16:11:19-07:00
Sample Type	Sample
Dilution	1.111111111
Comment	
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	8.367	9.297	1.34	44724	2.48	10000	
B	11	45	NoGas	75.002	83.335	2.22	257872	1.06	10000	
Na	23	45	He	4398.143	4886.825	1.23	4900340	0.34	1000000	
Mg	24	45	He	4419.671	4910.746	2.07	2729157	1.33	1000000	
Al	27	45	He	348.955	387.728	1.88	107870	0.94	1000000	
K	39	45	He	900.511	1000.568	0.71	658821	0.60	500000	
Ca	44	45	He	4282.554	4758.393	0.78	139956	0.71	500000	
Ti	47	45	He	42.564	47.294	2.40	9043	1.60	10000	
V	51	45	He	44.778	49.753	0.62	268112	1.10	10000	
Cr	52	45	He	43.189	47.988	0.51	310575	0.48	10000	
Mn	55	45	He	42.640	47.378	1.19	197459	0.78	50000	
Fe	56	45	He	166.769	185.299	1.45	1125038	0.70	1000000	
Co	59	45	He	43.049	47.832	1.19	474337	0.54	10000	
Ni	60	45	He	40.891	45.434	0.71	121617	1.51	10000	
Cu	63	45	He	40.904	45.449	1.09	335718	0.38	10000	
Zn	66	115	He	83.443	92.714	0.22	133063	0.57	50000	
As	75	115	He	41.948	46.609	0.69	50850	0.63	2000	
Se	78	115	H2	40.983	45.536	1.61	11342	1.75	10000	
Se	78	115	He	41.056	45.618	1.80	3516	1.31	10000	
Sr	88	115	NoGas	46.090	51.211	1.84	1801717	1.61	50000	
Mo	95	115	NoGas	43.385	48.206	0.48	344307	0.75	10000	
Ag	107	115	NoGas	16.810	18.678	1.05	359798	1.63	5000	
Cd	111	115	He	8.210	9.122	1.51	17152	0.78	10000	
Sn	118	115	He	42.829	47.587	1.24	189028	0.60	10000	
Sn	118	115	NoGas	43.490	48.322	0.38	532489	0.85	10000	
Sb	121	115	NoGas	42.125	46.806	1.02	803141	1.40	10000	
Ba	137	165	NoGas	43.291	48.101	1.41	281146	0.81	50000	
Tl	205	165	NoGas	42.767	47.519	0.93	1772052	0.07	5000	
Pb	208	165	NoGas	41.914	46.571	1.88	2362355	1.00	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	202094	0.48	185584	108.90	70	120	
Sc	45	He	90139	0.93	83499	107.95	70	120	
Sc	45	NoGas	1101632	1.15	1035739	106.36	70	120	
In	115	H2	1172003	0.14	1133962	103.35	70	120	
In	115	He	534770	0.74	512916	104.26	70	120	
In	115	NoGas	1808282	1.16	1726182	104.76	70	120	
Tb	159	H2	2356536	0.43	2259927	104.27	70	120	
Tb	159	He	1400299	0.35	1384042	101.17	70	120	
Tb	159	NoGas	2647164	1.04	2544437	104.04	70	120	
Ho	165	H2	2240348	0.66	2140395	104.67	70	120	
Ho	165	He	1375307	0.58	1350145	101.86	70	120	
Ho	165	NoGas	2594229	0.89	2467012	105.16	70	120	

Matrix Spike Recoveries

METALS

APPL ID: **140919S-02100 MS - 190189**

Sample ID: AZ02100

Client ID: EN002

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/Kg	Matrix Res mg/Kg	SPK Res mg/Kg	DUP Res mg/Kg	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6020A	ANTIMONY (SB)	10.00	0.14	3.1	3.2	29.6 #	30.6 #	3.2	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	ARSENIC (AS)	10.00	5.1	11.7	11.2	66.0 #	61.0 #	4.4	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	BERYLLIUM (BE)	0.100	0.26	0.61	0.61	350 #	350 #	0.0	20	80-120	09/19/14	09/19/14	09/19/14	09/19/14	190302	AZ02100
EPA 6020A	CADMIUM (CD)	2.00	0.22	1.9	1.9	84.0	84.0	0.0	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	CHROMIUM (CR)	10.00	60.6	66.2	67.9	56.0 #	73.0 #	2.5	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	COPPER (CU)	10.00	26.4	31.0	31.0	46.0 #	46.0 #	0.0	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	LEAD (PB)	5.00	22.5	30.4	29.6	158 #	142 #	2.7	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	NICKEL (NI)	10.00	136	141	143	50.0 #	70.0 #	1.4	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	SELENIUM (SE)	10.00	0.12	5.6	5.5	54.8 #	53.8 #	1.8	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	SILVER (AG)	4.00	0.034	3.1	3.1	76.7 #	76.7 #	0.0	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	THALLIUM (TL)	10.00	0.021	7.0	7.1	69.8 #	70.8 #	1.4	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 6020A	ZINC (ZN)	20.0	106	122	121	80.0	75.0 #	0.8	20	80-120	09/19/14	09/24/14	09/19/14	09/24/14	190189	AZ02100
EPA 7471B	MERCURY (HG)	0.159	0.061	0.19	0.18	81.1	74.8 #	5.4	20	80-120	09/19/14	09/27/14	09/19/14	09/27/14	190298	AZ02100

= Recovery is outside QC limits.

Comments: _____

Sample Report

Sample Table

Sample Name	AZ02100S01 MS 1/10
Data File Name	088SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T19:09:24-07:00
Sample Type	Sample
Dilution	0.100200401
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	6.118	0.613	0.56	105368	0.21	10000	
B	11	45	NoGas	80.031	8.019	1.43	904951	1.13	10000	
Na	23	45	He	5449.135	546.006	0.61	20419765	0.86	1000000	
Mg	24	45	He	53523.028	5363.029	0.49	110153591	0.12	1000000	
Al	27	45	He	52347.022	5245.193	0.82	50891189	0.53	1000000	
K	39	45	He	8699.717	871.715	0.83	16005990	0.83	500000	
Ca	44	45	He	327948.889	32860.610	0.65	34141656	0.53	500000	
Ti	47	45	He	7066.735	708.090	0.72	4648284	0.47	10000	
V	51	45	He	194.236	19.463	0.47	3818332	0.91	10000	
Cr	52	45	He	248.142	24.864	0.87	5855969	0.75	10000	
Mn	55	45	He	2349.284	235.399	0.97	35769890	1.41	50000	
Fe	56	45	He	123363.315	12361.054	0.17	2656855148	0.35	1000000	
Co	59	45	He	117.965	11.820	0.49	4360312	0.16	10000	
Ni	60	45	He	527.672	52.873	1.24	5170162	1.36	10000	
Cu	63	45	He	113.479	11.371	0.05	3078323	0.47	10000	
Zn	66	115	He	1117.305	111.954	0.57	1220977	0.58	50000	
As	75	115	He	121.848	12.209	0.73	86793	0.68	2000	
Se	78	115	H2	57.900	5.802	2.40	10955	1.30	10000	
Se	78	115	He	75.898	7.605	0.99	3901	0.96	10000	
Sr	88	115	NoGas	17342.034	1737.679	1.17	598118551	0.81	50000	
Mo	95	115	NoGas	70.260	7.040	1.42	503519	0.62	10000	
Ag	107	115	NoGas	29.166	2.922	1.14	547209	0.76	5000	
Cd	111	115	He	18.028	1.806	2.44	27556	2.51	10000	
Sn	118	115	He	92.922	9.311	0.46	316830	0.49	10000	
Sn	118	115	NoGas	86.791	8.696	2.29	993656	0.60	10000	
Sb	121	115	NoGas	29.708	2.977	2.14	527426	0.62	10000	
Ba	137	165	NoGas	2664.023	266.936	0.41	19282651	0.54	50000	
Tl	205	165	NoGas	67.467	6.760	0.56	3411517	0.39	5000	
Pb	208	165	NoGas	273.525	27.407	0.89	19271278	0.06	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	601603	1.16	163616	367.69	70	120	ISTD Failed
Sc	45	He	257110	0.47	71079	361.72	70	120	ISTD Failed
Sc	45	NoGas	3842546	0.76	951149	403.99	70	120	ISTD Failed
In	115	H2	795403	1.19	1007583	78.94	70	120	
In	115	He	342204	0.13	439049	77.94	70	120	
In	115	NoGas	1429018	1.83	1619798	88.22	70	120	
Tb	159	H2	2320672	0.82	2111966	109.88	70	120	
Tb	159	He	1334945	1.02	1288440	103.61	70	120	
Tb	159	NoGas	2867397	0.84	2404338	119.26	70	120	
Ho	165	H2	2141975	2.20	2032817	105.37	70	120	
Ho	165	He	1279530	0.57	1283106	99.72	70	120	
Ho	165	NoGas	2733249	0.95	2371226	115.27	70	120	

Sample Report

Sample Table

Sample Name	AZ02100S01 MSD 1/10
Data File Name	089SMPL.d
Data Path Name	D:\DATA\140919A.b
Acq Date Time	2014-09-19T19:15:27-07:00
Sample Type	Sample
Dilution	0.100200401
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	6.066	0.608	3.20	103253	2.93	10000	
B	11	45	NoGas	72.518	7.266	1.29	813190	0.25	10000	
Na	23	45	He	5311.970	532.262	0.32	19858277	0.47	1000000	
Mg	24	45	He	52747.454	5285.316	0.54	108256696	0.17	1000000	
Al	27	45	He	51958.972	5206.310	1.39	50373670	1.13	1000000	
K	39	45	He	8531.299	854.840	0.88	15655442	0.51	500000	
Ca	44	45	He	301477.118	30208.128	0.54	31298959	0.42	500000	
Ti	47	45	He	6787.496	680.110	0.98	4452383	1.25	10000	
V	51	45	He	190.519	19.090	0.52	3735023	0.69	10000	
Cr	52	45	He	244.891	24.538	0.78	5763315	0.80	10000	
Mn	55	45	He	2307.248	231.187	0.35	35031456	0.46	50000	
Fe	56	45	He	121136.812	12137.957	0.56	2601686012	0.69	1000000	
Co	59	45	He	115.590	11.582	0.56	4260724	0.50	10000	
Ni	60	45	He	511.502	51.253	1.04	4997908	1.22	10000	
Cu	63	45	He	112.310	11.253	0.61	3038194	0.77	10000	
Zn	66	115	He	1083.912	108.608	0.54	1171373	0.12	50000	
As	75	115	He	115.226	11.546	1.53	81170	1.21	2000	
Se	78	115	H2	56.271	5.638	0.80	10610	0.99	10000	
Se	78	115	He	74.003	7.415	3.95	3763	3.46	10000	
Sr	88	115	NoGas	15100.096	1513.036	0.97	527063285	0.19	50000	
Mo	95	115	NoGas	66.893	6.703	1.03	485180	0.38	10000	
Ag	107	115	NoGas	27.380	2.743	2.01	519840	1.10	5000	
Cd	111	115	He	17.328	1.736	0.86	26194	1.37	10000	
Sn	118	115	He	90.881	9.106	0.53	306461	0.44	10000	
Sn	118	115	NoGas	83.608	8.378	1.80	968929	0.89	10000	
Sb	121	115	NoGas	29.550	2.961	2.34	530972	1.42	10000	
Ba	137	165	NoGas	2751.769	275.728	1.48	19911389	1.31	50000	
Tl	205	165	NoGas	65.931	6.606	0.55	3332880	0.49	5000	
Pb	208	165	NoGas	259.377	25.990	0.68	18270479	0.51	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	598844	0.50	163616	366.01	70	120	ISTD Failed
Sc	45	He	256397	0.37	71079	360.72	70	120	ISTD Failed
Sc	45	NoGas	3797388	1.46	951149	399.24	70	120	ISTD Failed
In	115	H2	792448	0.29	1007583	78.65	70	120	
In	115	He	338418	0.57	439049	77.08	70	120	
In	115	NoGas	1446103	0.92	1619798	89.28	70	120	
Tb	159	H2	2305633	0.76	2111966	109.17	70	120	
Tb	159	He	1334555	0.48	1288440	103.58	70	120	
Tb	159	NoGas	2890432	0.60	2404338	120.22	70	120	ISTD Failed
Ho	165	H2	2143991	1.38	2032817	105.47	70	120	
Ho	165	He	1283167	0.11	1283106	100.00	70	120	
Ho	165	NoGas	2732351	0.18	2371226	115.23	70	120	

Sample Report

Sample Table

Sample Name	AZ02100S01 MS 1/50
Data File Name	057SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T16:36:03-07:00
Sample Type	Sample
Dilution	0.501002004
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	2.986	1.496	3.53	23575	2.94	10000	
B	11	45	NoGas	15.821	7.926	5.56	152216	1.43	10000	
Na	23	45	He	2896.993	1451.399	2.18	4697506	2.16	1000000	
Mg	24	45	He	28598.190	14327.750	1.46	25430523	1.45	1000000	
Al	27	45	He	27235.258	13644.919	0.50	11796390	0.52	1000000	
K	39	45	He	4484.125	2246.556	0.41	4014298	0.41	500000	
Ca	44	45	He	169188.827	84763.941	1.34	7825606	1.34	500000	
Ti	47	45	He	3692.342	1849.871	0.12	1082591	0.15	10000	
V	51	45	He	102.281	51.243	0.29	859936	0.34	10000	
Cr	52	45	He	132.107	66.186	1.96	1326409	2.00	10000	
Mn	55	45	He	1243.439	622.966	0.89	8063803	0.88	50000	
Fe	56	45	He	67714.541	33925.121	0.52	615099833	0.58	1000000	
Co	59	45	He	62.360	31.243	0.23	970875	0.19	10000	
Ni	60	45	He	280.866	140.714	0.55	1192605	0.50	10000	
Cu	63	45	He	61.954	31.039	0.56	719845	0.51	10000	
Zn	66	115	He	244.399	122.444	0.60	325751	0.78	50000	
As	75	115	He	23.303	11.675	2.23	23780	2.17	2000	
Se	78	115	H2	11.216	5.619	2.03	2668	2.31	10000	
Se	78	115	He	14.267	7.148	4.48	1060	4.37	10000	
Sr	88	115	NoGas	3373.924	1690.343	1.10	115712522	1.06	50000	
Mo	95	115	NoGas	13.908	6.968	1.49	99282	1.55	10000	
Ag	107	115	NoGas	6.109	3.061	1.60	115781	0.68	5000	
Cd	111	115	He	3.729	1.868	0.63	6425	0.66	10000	
Sn	118	115	He	18.011	9.024	1.82	65857	1.35	10000	
Sn	118	115	NoGas	17.397	8.716	1.34	190674	0.52	10000	
Sb	121	115	NoGas	6.099	3.056	3.01	107040	2.31	10000	
Ba	137	165	NoGas	592.644	296.916	0.69	3608525	1.42	50000	
Tl	205	165	NoGas	13.968	6.998	1.28	545766	0.40	5000	
Pb	208	165	NoGas	60.600	30.361	0.57	3252417	1.24	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	264133	0.80	164751	160.32	70	120	ISTD Failed
Sc	45	He	123213	0.05	76221	161.65	70	120	ISTD Failed
Sc	45	NoGas	1537981	1.27	928342	165.67	70	120	ISTD Failed
In	115	H2	938523	0.36	997448	94.09	70	120	
In	115	He	418122	0.59	448471	93.23	70	120	
In	115	NoGas	1476466	1.80	1548791	95.33	70	120	
Tb	159	H2	2073321	1.11	2006856	103.31	70	120	
Tb	159	He	1225599	0.40	1205156	101.70	70	120	
Tb	159	NoGas	2335552	0.64	2266694	103.04	70	120	
Ho	165	H2	1950056	0.89	1916437	101.75	70	120	
Ho	165	He	1194426	0.44	1172479	101.87	70	120	
Ho	165	NoGas	2248263	1.40	2192200	102.56	70	120	

Sample Report

Sample Table

Sample Name	AZ02100S01 MSD 1/50
Data File Name	058SMPL.d
Data Path Name	D:\DATA\140924A.b
Acq Date Time	2014-09-24T16:42:05-07:00
Sample Type	Sample
Dilution	0.501002004
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	2.951	1.479	7.05	23238	5.09	10000	
B	11	45	NoGas	13.986	7.007	4.19	143341	0.84	10000	
Na	23	45	He	2891.499	1448.647	1.86	4689953	0.92	1000000	
Mg	24	45	He	28813.026	14435.384	1.20	25628557	0.12	1000000	
Al	27	45	He	27809.867	13932.799	1.79	12048007	0.70	1000000	
K	39	45	He	4506.900	2257.966	1.69	4034890	0.83	500000	
Ca	44	45	He	160581.249	80451.527	1.69	7429522	1.14	500000	
Ti	47	45	He	3643.622	1825.462	1.42	1068608	0.90	10000	
V	51	45	He	102.809	51.508	1.34	864592	0.51	10000	
Cr	52	45	He	135.602	67.937	0.10	1361945	1.12	10000	
Mn	55	45	He	1277.872	640.217	0.97	8289514	0.39	50000	
Fe	56	45	He	68017.072	34076.689	1.82	617990571	0.83	1000000	
Co	59	45	He	62.886	31.506	1.71	979314	1.03	10000	
Ni	60	45	He	284.551	142.561	1.64	1208562	0.92	10000	
Cu	63	45	He	61.920	31.022	1.10	719684	1.12	10000	
Zn	66	115	He	241.338	120.911	0.46	323482	0.87	50000	
As	75	115	He	22.309	11.177	0.47	22903	0.86	2000	
Se	78	115	H2	11.015	5.518	1.10	2633	0.63	10000	
Se	78	115	He	14.604	7.317	7.78	1088	6.85	10000	
Sr	88	115	NoGas	3019.346	1512.698	1.45	103187615	0.92	50000	
Mo	95	115	NoGas	13.853	6.940	2.48	98530	0.44	10000	
Ag	107	115	NoGas	6.142	3.077	1.53	116003	0.77	5000	
Cd	111	115	He	3.697	1.852	0.48	6407	0.84	10000	
Sn	118	115	He	18.011	9.024	0.23	66227	0.43	10000	
Sn	118	115	NoGas	17.415	8.725	1.63	190206	0.99	10000	
Sb	121	115	NoGas	6.369	3.191	2.20	111109	1.98	10000	
Ba	137	165	NoGas	621.992	311.619	0.43	3777111	0.50	50000	
Tl	205	165	NoGas	14.111	7.070	0.47	549911	0.39	5000	
Pb	208	165	NoGas	59.088	29.603	0.93	3163020	0.86	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	268335	0.46	164751	162.87	70	120	ISTD Failed
Sc	45	He	123258	1.10	76221	161.71	70	120	ISTD Failed
Sc	45	NoGas	1534256	1.80	928342	165.27	70	120	ISTD Failed
In	115	H2	943065	0.62	997448	94.55	70	120	
In	115	He	420460	0.50	448471	93.75	70	120	
In	115	NoGas	1471383	2.12	1548791	95.00	70	120	
Tb	159	H2	2105939	1.11	2006856	104.94	70	120	
Tb	159	He	1224219	0.32	1205156	101.58	70	120	
Tb	159	NoGas	2348818	0.86	2266694	103.62	70	120	
Ho	165	H2	1978659	0.28	1916437	103.25	70	120	
Ho	165	He	1190821	0.11	1172479	101.56	70	120	
Ho	165	NoGas	2242237	0.08	2192200	102.28	70	120	

Matrix Spike Recoveries

METALS

APPL ID: **140918W-02116 MS - 190115**

Sample ID: AZ02116

Client ID: EN018

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6020A	ANTIMONY (SB)	50.0	ND	47.0	45.7	94.0	91.4	2.8	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	ARSENIC (AS)	50.0	ND	46.7	46.4	93.4	92.8	0.6	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	BERYLLIUM (BE)	10.00	ND	9.4	9.3	94.0	93.0	1.1	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	CADMIUM (CD)	10.00	ND	9.1	9.1	91.0	91.0	0.0	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	CHROMIUM (CR)	50.0	0.35	48.8	46.8	96.9	92.9	4.2	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	COPPER (CU)	50.0	0.45	45.5	44.8	90.1	88.7	1.6	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	LEAD (PB)	50.0	ND	47.5	46.4	95.0	92.8	2.3	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	NICKEL (NI)	50.0	0.31	47.5	46.1	94.4	91.6	3.0	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	SELENIUM (SE)	50.0	ND	45.7	44.5	91.4	89.0	2.7	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	SILVER (AG)	20.0	ND	18.6	18.4	93.0	92.0	1.1	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	THALLIUM (TL)	50.0	ND	49.4	48.1	98.8	96.2	2.7	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116
EPA 6020A	ZINC (ZN)	100.0	0.32	94.1	92.9	93.8	92.6	1.3	20	80-120	09/18/14	09/23/14	09/18/14	09/23/14	190115	AZ02116

Comments: _____

Sample Report

Sample Table

Sample Name	AZ02116W12 MS
Data File Name	054SMPL.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T16:47:29-07:00
Sample Type	Sample
Dilution	1.111111111
Comment	
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	8.504	9.449	1.77	44991	1.73	10000	
B	11	45	NoGas	59.500	66.111	1.01	205584	1.21	10000	
Na	23	45	He	4537.491	5041.657	1.50	5008133	0.80	1000000	
Mg	24	45	He	4489.601	4988.445	1.94	2747810	1.38	1000000	
Al	27	45	He	351.239	390.266	0.88	107619	0.83	1000000	
K	39	45	He	908.408	1009.343	2.34	657657	0.46	500000	
Ca	44	45	He	4372.348	4858.164	0.43	141624	1.29	500000	
Ti	47	45	He	42.790	47.544	2.28	9010	0.57	10000	
V	51	45	He	45.220	50.244	0.76	268330	1.08	10000	
Cr	52	45	He	43.959	48.843	0.79	313298	1.28	10000	
Mn	55	45	He	43.999	48.888	1.84	201908	0.34	50000	
Fe	56	45	He	172.520	191.689	1.46	1152478	0.32	1000000	
Co	59	45	He	43.349	48.166	1.50	473401	0.27	10000	
Ni	60	45	He	42.784	47.538	1.80	126080	0.27	10000	
Cu	63	45	He	40.945	45.495	2.14	333040	0.55	10000	
Zn	66	115	He	84.673	94.081	0.32	133688	0.70	50000	
As	75	115	He	42.051	46.723	1.60	50471	0.90	2000	
Se	78	115	H2	41.153	45.725	1.16	11326	1.04	10000	
Se	78	115	He	40.679	45.199	1.89	3451	1.08	10000	
Sr	88	115	NoGas	45.351	50.390	2.41	1774167	2.20	50000	
Mo	95	115	NoGas	43.071	47.856	0.37	342093	1.43	10000	
Ag	107	115	NoGas	16.739	18.598	1.49	358504	0.82	5000	
Cd	111	115	He	8.224	9.138	1.14	17013	0.37	10000	
Sn	118	115	He	43.698	48.553	0.31	190946	0.66	10000	
Sn	118	115	NoGas	43.209	48.010	0.43	529469	0.65	10000	
Sb	121	115	NoGas	42.266	46.962	0.99	806446	1.94	10000	
Ba	137	165	NoGas	44.999	49.999	1.72	284273	1.44	50000	
Tl	205	165	NoGas	44.500	49.445	1.66	1793546	1.16	5000	
Pb	208	165	NoGas	42.781	47.534	0.87	2345552	0.71	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	200546	1.94	185584	108.06	70	120	
Sc	45	He	89346	1.70	83499	107.00	70	120	
Sc	45	NoGas	1090629	0.67	1035739	105.30	70	120	
In	115	H2	1165579	0.27	1133962	102.79	70	120	
In	115	He	529528	0.80	512916	103.24	70	120	
In	115	NoGas	1809620	1.05	1726182	104.83	70	120	
Tb	159	H2	2323067	1.30	2259927	102.79	70	120	
Tb	159	He	1390506	0.34	1384042	100.47	70	120	
Tb	159	NoGas	2613818	1.59	2544437	102.73	70	120	
Ho	165	H2	2222282	1.29	2140395	103.83	70	120	
Ho	165	He	1363557	0.33	1350145	100.99	70	120	
Ho	165	NoGas	2523700	1.58	2467012	102.30	70	120	

Sample Report

Sample Table

Sample Name	AZ02116W12 MSD
Data File Name	055SMPL.d
Data Path Name	D:\DATA\140923A.b
Acq Date Time	2014-09-23T16:53:30-07:00
Sample Type	Sample
Dilution	1.111111111
Comment	
ISTD Ref FileName	016CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	45	NoGas	8.365	9.295	1.26	45489	1.08	10000	
B	11	45	NoGas	60.385	67.095	0.58	214205	0.49	10000	
Na	23	45	He	4388.868	4876.520	0.90	4971666	1.07	1000000	
Mg	24	45	He	4339.718	4821.909	0.57	2724619	1.12	1000000	
Al	27	45	He	342.005	380.005	0.84	107504	1.38	1000000	
K	39	45	He	884.542	982.825	0.96	659896	0.23	500000	
Ca	44	45	He	4245.751	4717.501	0.53	141063	0.84	500000	
Ti	47	45	He	41.798	46.442	5.28	9029	5.10	10000	
V	51	45	He	43.738	48.597	0.61	266289	1.00	10000	
Cr	52	45	He	42.144	46.827	1.18	308123	1.36	10000	
Mn	55	45	He	42.261	46.957	0.22	198965	0.63	50000	
Fe	56	45	He	164.332	182.592	0.35	1127531	0.80	1000000	
Co	59	45	He	42.098	46.775	0.19	471589	0.72	10000	
Ni	60	45	He	41.491	46.101	1.82	125438	1.91	10000	
Cu	63	45	He	40.338	44.820	1.03	336616	1.43	10000	
Zn	66	115	He	83.630	92.922	1.19	133781	0.60	50000	
As	75	115	He	41.765	46.406	1.82	50788	1.14	2000	
Se	78	115	H2	40.073	44.526	1.56	11167	0.47	10000	
Se	78	115	He	40.349	44.832	3.03	3468	2.44	10000	
Sr	88	115	NoGas	44.427	49.364	0.75	1787179	1.62	50000	
Mo	95	115	NoGas	42.259	46.955	1.27	345088	0.31	10000	
Ag	107	115	NoGas	16.518	18.354	1.50	363752	0.89	5000	
Cd	111	115	He	8.148	9.053	0.56	17078	1.23	10000	
Sn	118	115	He	43.169	47.966	0.44	191133	0.44	10000	
Sn	118	115	NoGas	42.506	47.229	0.87	535626	1.48	10000	
Sb	121	115	NoGas	41.090	45.656	1.10	806262	0.98	10000	
Ba	137	165	NoGas	43.460	48.288	0.33	283677	0.24	50000	
Tl	205	165	NoGas	43.269	48.077	2.04	1801877	1.73	5000	
Pb	208	165	NoGas	41.780	46.422	1.12	2366819	0.62	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	H2	201840	1.65	185584	108.76	70	120	
Sc	45	He	91634	0.56	83499	109.74	70	120	
Sc	45	NoGas	1120902	0.63	1035739	108.22	70	120	
In	115	H2	1180287	1.33	1133962	104.09	70	120	
In	115	He	536480	0.67	512916	104.59	70	120	
In	115	NoGas	1860658	1.51	1726182	107.79	70	120	
Tb	159	H2	2343805	0.50	2259927	103.71	70	120	
Tb	159	He	1409858	0.39	1384042	101.87	70	120	
Tb	159	NoGas	2705468	1.04	2544437	106.33	70	120	
Ho	165	H2	2234799	2.02	2140395	104.41	70	120	
Ho	165	He	1379256	0.32	1350145	102.16	70	120	
Ho	165	NoGas	2607266	0.54	2467012	105.69	70	120	

Reprocessing Begun
Logged In Analyst: chemist_metals Technique: AA FIMS-MHS

Results Data Set (original): 140919A-7470
Results Library (original): C:\Users\Public\PerkinElmer\AA\Data\Results\Results.mdb
Results Data Set (reprocessed): 140908B-7470 BRK-2X
Results Library (reprocessed): C:\Users\Public\PerkinElmer\AA\Data\Results\Results.mdb

Method Loaded
Method Name: 140919A-7470 Method Last Saved: 09/20/14 2:45:24 PM
Method Description: EPA 7470A

Sequence No.: 1 Autosampler Location: 1
Sample ID: Calib. Blank Date Collected: 09/20/14 2:59:37 PM
Analyst: Data Type: Reprocessed on 09/20/14 6:18:55 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: Calib. Blank Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	0.0004	0.0001	3:00:27 PM	Yes
2		[0.00]	0.0001	0.0004	0.0001	3:00:55 PM	Yes
3		[0.00]	0.0001	0.0007	0.0001	3:01:24 PM	Yes
Mean:		[0.00]	0.0001				
SD:		0.0000	0.0000				
%RSD:		0.00%	27.84				

Auto-zero performed.

Sequence No.: 2 Autosampler Location: 2
Sample ID: 0.2 Date Collected: 09/20/14 3:01:44 PM
Analyst: Data Type: Reprocessed on 09/20/14 6:18:55 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 0.2 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0025	0.0139	0.0026	3:02:33 PM	Yes
2		[0.2]	0.0026	0.0135	0.0027	3:03:02 PM	Yes
3		[0.2]	0.0025	0.0136	0.0026	3:03:31 PM	Yes
Mean:		[0.2]	0.0026				
SD:		0.000	0.0000				
%RSD:		0.00%	0.11				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.01275 Intercept: 0.00000

Sequence No.: 3 Autosampler Location: 3
Sample ID: 0.5 Date Collected: 09/20/14 3:03:50 PM
Analyst: Data Type: Reprocessed on 09/20/14 6:18:55 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 0.5 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0063	0.0333	0.0064	3:04:40 PM	Yes
2		[0.5]	0.0063	0.0328	0.0064	3:05:09 PM	Yes
3		[0.5]	0.0063	0.0327	0.0064	3:05:37 PM	Yes
Mean:		[0.5]	0.0063				

SD: 0.000 0.0000
%RSD: 0.00% 0.25
Standard number 2 applied. [0.5]
Correlation Coef.: 0.999916 Slope: 0.01259 Intercept: 0.00000

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: 1 **Date Collected: 09/20/14 3:05:57 PM**
Analyst: **Data Type: Reprocessed on 09/20/14 6:18:56 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 1 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1]	0.0130	0.0672	0.0131	3:06:46 PM	Yes
2		[1]	0.0130	0.0660	0.0131	3:07:15 PM	Yes
3		[1]	0.0131	0.0665	0.0132	3:07:44 PM	Yes
Mean:		[1]	0.0130				
SD:		0.00	0.0000				
%RSD:		0.00%	0.33				

Standard number 3 applied. [1]
Correlation Coef.: 0.999580 Slope: 0.01294 Intercept: 0.00000

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: 2 **Date Collected: 09/20/14 3:08:04 PM**
Analyst: **Data Type: Reprocessed on 09/20/14 6:18:56 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 2 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2]	0.0262	0.1339	0.0263	3:08:54 PM	Yes
2		[2]	0.0261	0.1329	0.0262	3:09:23 PM	Yes
3		[2]	0.0260	0.1314	0.0261	3:09:51 PM	Yes
Mean:		[2]	0.0261				
SD:		0.00	0.0001				
%RSD:		0.00%	0.27				

Standard number 4 applied. [2]
Correlation Coef.: 0.999906 Slope: 0.01303 Intercept: 0.00000

Sequence No.: 6 **Autosampler Location: 6**
Sample ID: 5 **Date Collected: 09/20/14 3:10:11 PM**
Analyst: **Data Type: Reprocessed on 09/20/14 6:18:56 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 5 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5]	0.0633	0.3237	0.0634	3:11:02 PM	Yes
2		[5]	0.0628	0.3218	0.0629	3:11:31 PM	Yes
3		[5]	0.0628	0.3208	0.0629	3:12:00 PM	Yes
Mean:		[5]	0.0630				
SD:		0.00	0.0003				
%RSD:		0.00%	0.49				

Standard number 5 applied. [5]
Correlation Coef.: 0.999817 Slope: 0.01267 Intercept: 0.00000

Sequence No.: 7 **Autosampler Location: 7**
Sample ID: 10 **Date Collected: 09/20/14 3:12:20 PM**
Analyst: **Data Type: Reprocessed on 09/20/14 6:18:56 PM**

Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 10 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10]	0.1212	0.6206	0.1213	3:13:11 PM	Yes
2		[10]	0.1201	0.6147	0.1202	3:13:40 PM	Yes
3		[10]	0.1201	0.6146	0.1202	3:14:09 PM	Yes
Mean:		[10]	0.1205				
SD:		0.00	0.0006				
%RSD:		0.00%	0.52				

Standard number 6 applied. [10]
Correlation Coef.: 0.999539 Slope: 0.01220 Intercept: 0.00000

Calibration data for Hg 253.7 Equation: Linear Through Zero

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib. Blank	0.0000	0	0.000	0.00	27.84
0.2	0.0026	0.2	0.209	0.00	0.11
0.5	0.0063	0.5	0.515	0.00	0.25
1	0.0130	1.0	1.069	0.00	0.33
2	0.0261	2.0	2.141	0.00	0.27
5	0.0630	5.0	5.162	0.00	0.49
10	0.1205	10.0	9.876	0.00	0.52

Correlation Coef.: 0.999539 Slope: 0.01220 Intercept: 0.00000

==========

Sequence No.: 8 Autosampler Location: 9
Sample ID: ICV 09/20/14 RE Date Collected: 09/20/14 3:14:30 PM
Analyst: Data Type: Reprocessed on 09/20/14 6:18:56 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: ICV 09/20/14 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.884	3.884	0.0474	0.2437	0.0475	3:15:19 PM	Yes
2	3.842	3.842	0.0469	0.2406	0.0470	3:15:48 PM	Yes
3	3.837	3.837	0.0468	0.2409	0.0469	3:16:16 PM	Yes
Mean:	3.854	3.854	0.0470				
SD:	0.0259	0.0259	0.0003				
%RSD:	0.67%	0.67%	0.67				

QC value within limits for Hg 253.7 Recovery = 96.35%
All analyte(s) passed QC.

==========

Sequence No.: 9 Autosampler Location: 1
Sample ID: ICB 09/20/14 RE Date Collected: 09/20/14 3:16:35 PM
Analyst: Data Type: Reprocessed on 09/20/14 6:18:57 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: ICB 09/20/14 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.004	-0.004	-0.0000	-0.0007	0.0001	3:17:25 PM	Yes
2	0.003	0.003	0.0000	0.0008	0.0001	3:17:54 PM	Yes
3	0.004	0.004	0.0000	0.0010	0.0001	3:18:22 PM	Yes
Mean:	0.001	0.001	0.0000				
SD:	0.0042	0.0042	0.0001				
%RSD:	332.74%	332.74%	332.74				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 10
Sample ID: CCV 09/20/14 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 09/20/14 3:18:42 PM
Data Type: Reprocessed on 09/20/14 6:18:57 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV 09/20/14 RE — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.116	5.116	0.0624	0.3203	0.0625	3:19:32 PM	Yes
2	5.061	5.061	0.0617	0.3162	0.0618	3:20:01 PM	Yes
3	5.082	5.082	0.0620	0.3167	0.0621	3:20:29 PM	Yes
Mean:	5.086	5.086	0.0620				
SD:	0.0275	0.0275	0.0003				
%RSD:	0.54%	0.54%	0.54				

QC value within limits for Hg 253.7 Recovery = 101.73%
All analyte(s) passed QC.

Sequence No.: 11
Sample ID: CCB 09/20/14 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 09/20/14 3:20:50 PM
Data Type: Reprocessed on 09/20/14 6:18:57 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB 09/20/14 RE — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000	-0.000	-0.0000	0.0003	0.0001	3:21:39 PM	Yes
2	-0.000	-0.000	-0.0000	0.0003	0.0001	3:22:08 PM	Yes
3	-0.001	-0.001	-0.0000	0.0002	0.0001	3:22:37 PM	Yes
Mean:	-0.000	-0.000	-0.0000				
SD:	0.0005	0.0005	0.0000				
%RSD:	130.81%	130.81%	130.81				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: 140917A BLK
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 17
Date Collected: 09/20/14 3:22:56 PM
Data Type: Reprocessed on 09/20/14 6:18:57 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 140917A BLK — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.003	0.003	0.0000	0.0008	0.0001	3:23:45 PM	Yes
2	0.004	0.004	0.0001	0.0006	0.0002	3:24:14 PM	Yes
3	0.003	0.003	0.0000	0.0004	0.0001	3:24:43 PM	Yes
Mean:	0.003	0.003	0.0000				
SD:	0.0010	0.0010	0.0000				
%RSD:	28.86%	28.86%	28.86				

Sequence No.: 13
Sample ID: 140917A LCS
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 18
Date Collected: 09/20/14 3:25:02 PM
Data Type: Reprocessed on 09/20/14 6:18:57 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 140917A LCS — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.267	3.267	0.0398	0.2081	0.0399	3:25:51 PM	Yes
2	3.242	3.242	0.0395	0.2046	0.0396	3:26:20 PM	Yes
3	3.248	3.248	0.0396	0.2049	0.0397	3:26:49 PM	Yes
Mean:	3.252	3.252	0.0397				
SD:	0.0131	0.0131	0.0002				
%RSD:	0.40%	0.40%	0.40				

Sequence No.: 14
Sample ID: AZ02067W05
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 19
Date Collected: 09/20/14 3:27:08 PM
Data Type: Reprocessed on 09/20/14 6:18:58 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ02067W05 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.060	0.060	0.0007	0.0037	0.0008	3:27:58 PM	Yes
2	0.060	0.060	0.0007	0.0039	0.0008	3:28:26 PM	Yes
3	0.060	0.060	0.0007	0.0038	0.0008	3:28:55 PM	Yes
Mean:	0.060	0.060	0.0007				
SD:	0.0004	0.0004	0.0000				
%RSD:	0.70%	0.70%	0.70				

Sequence No.: 15
Sample ID: AZ02140W09
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 20
Date Collected: 09/20/14 3:29:14 PM
Data Type: Reprocessed on 09/20/14 6:18:58 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ02140W09 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.002	-0.002	-0.0000	-0.0007	0.0001	3:30:03 PM	Yes
2	0.008	0.008	0.0001	0.0009	0.0002	3:30:32 PM	Yes
3	0.005	0.005	0.0001	0.0005	0.0002	3:31:01 PM	Yes
Mean:	0.004	0.004	0.0000				
SD:	0.0050	0.0050	0.0001				
%RSD:	128.99%	128.99%	128.99				

Sequence No.: 16
Sample ID: AZ02141W09
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 21
Date Collected: 09/20/14 3:31:20 PM
Data Type: Reprocessed on 09/20/14 6:18:58 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ02141W09 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.012	0.012	0.0001	0.0009	0.0002	3:32:10 PM	Yes
2	0.006	0.006	0.0001	0.0005	0.0002	3:32:39 PM	Yes
3	0.007	0.007	0.0001	0.0005	0.0002	3:33:07 PM	Yes
Mean:	0.009	0.009	0.0001				
SD:	0.0029	0.0029	0.0000				
%RSD:	33.27%	33.27%	33.27				

Sequence No.: 17
Sample ID: AZ02612W08
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:

Autosampler Location: 22
Date Collected: 09/20/14 3:33:27 PM
Data Type: Reprocessed on 09/20/14 6:18:59 PM
Initial Sample Vol:

Dilution: Sample Prep Vol:

Replicate Data: AZ02612W08 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.004	0.004	0.0000	0.0004	0.0001	3:34:16 PM	Yes
2	0.007	0.007	0.0001	0.0007	0.0002	3:34:45 PM	Yes
3	0.018	0.018	0.0002	0.0020	0.0003	3:35:14 PM	Yes
Mean:	0.009	0.009	0.0001				
SD:	0.0076	0.0076	0.0001				
%RSD:	80.65%	80.65%	80.65				

==========

Sequence No.: 18 Autosampler Location: 23
Sample ID: AZ02613W10 Date Collected: 09/20/14 3:35:33 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/20/14 6:18:59 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ02613W10 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.013	0.013	0.0002	0.0006	0.0003	3:36:23 PM	Yes
2	0.016	0.016	0.0002	0.0016	0.0003	3:36:51 PM	Yes
3	0.013	0.013	0.0002	0.0011	0.0003	3:37:20 PM	Yes
Mean:	0.014	0.014	0.0002				
SD:	0.0015	0.0015	0.0000				
%RSD:	10.81%	10.81%	10.81				

==========

Sequence No.: 19 Autosampler Location: 24
Sample ID: AZ02614W07 Date Collected: 09/20/14 3:37:40 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/20/14 6:18:59 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ02614W07 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.006	0.006	0.0001	-0.0003	0.0002	3:38:30 PM	Yes
2	0.010	0.010	0.0001	0.0002	0.0002	3:38:59 PM	Yes
3	0.015	0.015	0.0002	-0.0005	0.0003	3:39:28 PM	Yes
Mean:	0.011	0.011	0.0001				
SD:	0.0043	0.0043	0.0001				
%RSD:	40.35%	40.35%	40.35				

==========

Sequence No.: 20 Autosampler Location: 25
Sample ID: AZ02615W08 Date Collected: 09/20/14 3:39:47 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/20/14 6:19:00 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ02615W08 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.011	0.011	0.0001	0.0003	0.0002	3:40:37 PM	Yes
2	0.017	0.017	0.0002	0.0008	0.0003	3:41:07 PM	Yes
3	0.009	0.009	0.0001	0.0002	0.0002	3:41:35 PM	Yes
Mean:	0.012	0.012	0.0002				
SD:	0.0041	0.0041	0.0001				
%RSD:	33.44%	33.44%	33.44				

==========

Sequence No.: 21 Autosampler Location: 26

Sample ID: AZ02616W07
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Date Collected: 09/20/14 3:41:55 PM
Data Type: Reprocessed on 09/20/14 6:19:00 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ02616W07 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.017	0.017	0.0002	0.0005	0.0003	3:42:45 PM	Yes
2	0.015	0.015	0.0002	-0.0007	0.0003	3:43:14 PM	Yes
3	0.009	0.009	0.0001	0.0002	0.0002	3:43:43 PM	Yes
Mean:	0.014	0.014	0.0002				
SD:	0.0040	0.0040	0.0000				
%RSD:	29.38%	29.38%	29.38				

Sequence No.: 22
Sample ID: AZ02617W08
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 27
Date Collected: 09/20/14 3:44:03 PM
Data Type: Reprocessed on 09/20/14 6:19:00 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ02617W08 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.022	0.022	0.0003	0.0013	0.0004	3:44:53 PM	Yes
2	0.015	0.015	0.0002	0.0008	0.0003	3:45:23 PM	Yes
3	0.019	0.019	0.0002	0.0005	0.0003	3:45:52 PM	Yes
Mean:	0.019	0.019	0.0002				
SD:	0.0037	0.0037	0.0000				
%RSD:	19.89%	19.89%	19.89				

Sequence No.: 23
Sample ID: AZ02617W08 MS
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 28
Date Collected: 09/20/14 3:46:12 PM
Data Type: Reprocessed on 09/20/14 6:19:00 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ02617W08 MS Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.105	3.105	0.0379	0.2024	0.0380	3:47:03 PM	Yes
2	3.155	3.155	0.0385	0.1992	0.0386	3:47:31 PM	Yes
3	3.155	3.155	0.0385	0.1981	0.0386	3:48:00 PM	Yes
Mean:	3.138	3.138	0.0383				
SD:	0.0291	0.0291	0.0004				
%RSD:	0.93%	0.93%	0.93				

Sequence No.: 24
Sample ID: AZ02617W08 MSD
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 29
Date Collected: 09/20/14 3:56:07 PM
Data Type: Reprocessed on 09/20/14 6:19:00 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ02617W08 MSD Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.036	3.036	0.0370	0.1926	0.0371	3:56:58 PM	Yes
2	3.017	3.017	0.0368	0.1906	0.0369	3:57:27 PM	Yes
3	3.005	3.005	0.0367	0.1876	0.0368	3:57:56 PM	Yes
Mean:	3.019	3.019	0.0368				
SD:	0.0155	0.0155	0.0002				

%RSD: 0.51% 0.51% 0.51

Sequence No.: 25 **Autosampler Location: 6**
Sample ID: CCV 09/20/14 RE **Date Collected: 09/20/14 4:33:14 PM**
Analyst: **Data Type: Reprocessed on 09/20/14 6:19:01 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV 09/20/14 RE **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.550	4.550	0.0555	0.2842	0.0556	4:34:05 PM	Yes
2	4.551	4.551	0.0555	0.2816	0.0556	4:34:33 PM	Yes
3	4.563	4.563	0.0557	0.2824	0.0558	4:35:02 PM	Yes
Mean:	4.555	4.555	0.0556				
SD:	0.0074	0.0074	0.0001				
%RSD:	0.16%	0.16%	0.16				

QC value within limits for Hg 253.7 Recovery = 91.10%
All analyte(s) passed QC.

Sequence No.: 26 **Autosampler Location: 1**
Sample ID: CCB 09/20/14 RE **Date Collected: 09/20/14 4:35:22 PM**
Analyst: **Data Type: Reprocessed on 09/20/14 6:19:01 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB 09/20/14 RE **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.009	0.009	0.0001	0.0012	0.0002	4:36:12 PM	Yes
2	0.009	0.009	0.0001	0.0007	0.0002	4:36:41 PM	Yes
3	0.012	0.012	0.0001	0.0009	0.0002	4:37:10 PM	Yes
Mean:	0.010	0.010	0.0001				
SD:	0.0017	0.0017	0.0000				
%RSD:	17.52%	17.52%	17.52				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 27 **Autosampler Location: 30**
Sample ID: 140918A BLK **Date Collected: 09/20/14 4:37:30 PM**
Analyst: RE-Freddie **Data Type: Reprocessed on 09/20/14 6:19:01 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 140918A BLK **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.010	0.010	0.0001	0.0002	0.0002	4:38:21 PM	Yes
2	0.007	0.007	0.0001	0.0008	0.0002	4:38:50 PM	Yes
3	0.010	0.010	0.0001	0.0006	0.0002	4:39:19 PM	Yes
Mean:	0.009	0.009	0.0001				
SD:	0.0017	0.0017	0.0000				
%RSD:	19.13%	19.13%	19.13				

Sequence No.: 28 **Autosampler Location: 32**
Sample ID: AZ02108W12 **Date Collected: 09/20/14 4:41:49 PM**
Analyst: RE-Freddie **Data Type: Reprocessed on 09/20/14 6:19:01 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: AZ02108W12 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.010	0.010	0.0001	0.0002	0.0002	4:42:38 PM	Yes
2	0.012	0.012	0.0002	0.0009	0.0002	4:43:07 PM	Yes
3	0.007	0.007	0.0001	-0.0001	0.0002	4:43:35 PM	Yes
Mean:	0.010	0.010	0.0001				
SD:	0.0026	0.0026	0.0000				
%RSD:	26.42%	26.42%	26.42				

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Sequence No.: 29 Autosampler Location: 33
Sample ID: AZ02109W12 Date Collected: 09/20/14 4:43:54 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/20/14 6:19:02 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ02109W12 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000	0.009	0.0001	-0.0002	0.0002	4:44:44 PM	Yes
2	0.000	0.013	0.0002	0.0001	0.0003	4:45:13 PM	Yes
3	0.000	0.011	0.0001	-0.0002	0.0002	4:45:41 PM	Yes
Mean:	0.000	0.011	0.0001				
SD:	0.0000	0.0021	0.0000				
%RSD:	19.06%	19.06%	19.06				

==========

Sequence No.: 30 Autosampler Location: 34
Sample ID: AZ02116W12 Date Collected: 09/20/14 4:46:00 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/20/14 6:19:02 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ02116W12 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000	0.010	0.0001	0.0007	0.0002	4:46:49 PM	Yes
2	0.000	0.007	0.0001	-0.0004	0.0002	4:47:18 PM	Yes
3	0.000	0.014	0.0002	-0.0001	0.0003	4:47:47 PM	Yes
Mean:	0.000	0.010	0.0001				
SD:	0.0000	0.0037	0.0000				
%RSD:	36.45%	36.45%	36.45				

==========

Sequence No.: 31 Autosampler Location: 35
Sample ID: AZ02116W12 MS Date Collected: 09/20/14 4:48:05 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/20/14 6:19:02 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ02116W12 MS Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.003	3.225	0.0393	0.2032	0.0394	4:48:55 PM	Yes
2	0.003	3.220	0.0393	0.2026	0.0394	4:49:24 PM	Yes
3	0.003	3.190	0.0389	0.2005	0.0390	4:49:52 PM	Yes
Mean:	0.003	3.212	0.0392				
SD:	0.0000	0.0189	0.0002				
%RSD:	0.59%	0.59%	0.59				

==========

Sequence No.: 32 Autosampler Location: 36
Sample ID: AZ02116W12 MSD Date Collected: 09/20/14 4:50:11 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/20/14 6:19:02 PM
Logged In Analyst (Original) : chemist_metals

Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ02116W12 MSD Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.003	3.256	0.0397	0.2054	0.0398	4:51:01 PM	Yes
2	0.003	3.203	0.0391	0.2020	0.0392	4:51:30 PM	Yes
3	0.003	3.174	0.0387	0.2027	0.0388	4:51:59 PM	Yes
Mean:	0.003	3.211	0.0392				
SD:	0.0000	0.0413	0.0005				
%RSD:	1.29%	1.29%	1.29				

==========

Sequence No.: 33 Autosampler Location: 31
Sample ID: 140918A LCS Date Collected: 09/20/14 4:54:00 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/20/14 6:19:03 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 140918A LCS Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.321	3.321	0.0405	0.2093	0.0406	4:54:51 PM	Yes
2	3.320	3.320	0.0405	0.2107	0.0406	4:55:20 PM	Yes
3	3.299	3.299	0.0402	0.2084	0.0403	4:55:48 PM	Yes
Mean:	3.313	3.313	0.0404				
SD:	0.0122	0.0122	0.0001				
%RSD:	0.37%	0.37%	0.37				

==========

Sequence No.: 34 Autosampler Location: 6
Sample ID: CCV 09/20/14 RE Date Collected: 09/20/14 5:02:37 PM
Analyst: Data Type: Reprocessed on 09/20/14 6:19:03 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCV 09/20/14 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.620	4.620	0.0563	0.2889	0.0564	5:03:27 PM	Yes
2	4.568	4.568	0.0557	0.2818	0.0558	5:03:56 PM	Yes
3	4.554	4.554	0.0556	0.2805	0.0556	5:04:25 PM	Yes
Mean:	4.581	4.581	0.0559				
SD:	0.0345	0.0345	0.0004				
%RSD:	0.75%	0.75%	0.75				

QC value within limits for Hg 253.7 Recovery = 91.61%
All analyte(s) passed QC.

==========

Sequence No.: 35 Autosampler Location: 1
Sample ID: CCB 09/20/14 RE Date Collected: 09/20/14 5:04:45 PM
Analyst: Data Type: Reprocessed on 09/20/14 6:19:03 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCB 09/20/14 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.031	0.031	0.0004	0.0009	0.0005	5:05:35 PM	Yes
2	0.018	0.018	0.0002	0.0007	0.0003	5:06:03 PM	Yes
3	0.030	0.030	0.0004	-0.0003	0.0005	5:06:32 PM	Yes
Mean:	0.026	0.026	0.0003				
SD:	0.0072	0.0072	0.0001				
%RSD:	27.37%	27.37%	27.37				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Reprocessing Begun
Logged In Analyst: chemist_metals Technique: AA FIMS-MHS

Results Data Set (original): 140926A-7471
Results Library (original): C:\Users\Public\PerkinElmer\AA\Data\Results\Results.mdb
Results Data Set (reprocessed): 140926A-7471X
Results Library (reprocessed): C:\Users\Public\PerkinElmer\AA\Data\Results\Results.mdb

Method Loaded
Method Name: 140926A-7471 Method Last Saved: 09/27/14 10:34:49 AM
Method Description: EPA 7471

Sequence No.: 1 Autosampler Location: 1
Sample ID: Calib. Blank Date Collected: 09/27/14 10:52:51 AM
Analyst: Data Type: Reprocessed on 09/27/14 6:05:36 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: Calib. Blank Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	0.0009	0.0001	10:53:41 AM	Yes
2		[0.00]	0.0001	0.0008	0.0001	10:54:10 AM	Yes
3		[0.00]	0.0001	0.0004	0.0001	10:54:39 AM	Yes
Mean:		[0.00]	0.0001				
SD:		0.0000	0.0000				
%RSD:		0.00%	17.05				

Auto-zero performed.

Sequence No.: 2 Autosampler Location: 2
Sample ID: 0.2083333 Date Collected: 09/27/14 10:54:58 AM
Analyst: Data Type: Reprocessed on 09/27/14 6:05:36 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 0.2083333 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.208333]	0.0024	0.0117	0.0025	10:55:48 AM	Yes
2		[0.208333]	0.0025	0.0120	0.0026	10:56:16 AM	Yes
3		[0.208333]	0.0025	0.0124	0.0026	10:56:45 AM	Yes
Mean:		[0.208333]	0.0025				
SD:		0.000000000	.0000				
%RSD:		0.00%	1.72				

Standard number 1 applied. [0.2083333]
Correlation Coef.: 1.000000 Slope: 0.01181 Intercept: 0.00000

Sequence No.: 3 Autosampler Location: 3
Sample ID: 0.520833 Date Collected: 09/27/14 10:57:04 AM
Analyst: Data Type: Reprocessed on 09/27/14 6:05:36 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 0.520833 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.520833]	0.0061	0.0302	0.0063	10:57:54 AM	Yes
2		[0.520833]	0.0062	0.0305	0.0063	10:58:23 AM	Yes
3		[0.520833]	0.0061	0.0297	0.0062	10:58:51 AM	Yes
Mean:		[0.520833]	0.0062				

SD: 0.000000010.0000
%RSD: 0.00% 0.66
Standard number 2 applied. [0.520833]
Correlation Coef.: 0.999998 Slope: 0.01184 Intercept: 0.00000

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: 1.041667 **Date Collected: 09/27/14 10:59:11 AM**
Analyst: **Data Type: Reprocessed on 09/27/14 6:05:36 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 1.041667 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.041667]	0.0125	0.0593	0.0126	11:00:00 AM	Yes
2		[1.041667]	0.0128	0.0609	0.0129	11:00:29 AM	Yes
3		[1.041667]	0.0127	0.0607	0.0128	11:00:58 AM	Yes
Mean:		[1.041667]	0.0127				
SD:		0.000000000	.0001				
%RSD:		0.00%	1.01				

Standard number 3 applied. [1.041667]
Correlation Coef.: 0.999766 Slope: 0.01208 Intercept: 0.00000

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: 2.083333 **Date Collected: 09/27/14 11:01:18 AM**
Analyst: **Data Type: Reprocessed on 09/27/14 6:05:36 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 2.083333 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.083333]	0.0254	0.1217	0.0255	11:02:08 AM	Yes
2		[2.083333]	0.0253	0.1213	0.0254	11:02:37 AM	Yes
3		[2.083333]	0.0254	0.1221	0.0255	11:03:06 AM	Yes
Mean:		[2.083333]	0.0254				
SD:		0.000000040	.0000				
%RSD:		0.00%	0.20				

Standard number 4 applied. [2.083333]
Correlation Coef.: 0.999941 Slope: 0.01216 Intercept: 0.00000

Sequence No.: 6 **Autosampler Location: 6**
Sample ID: 5.208 **Date Collected: 09/27/14 11:03:26 AM**
Analyst: **Data Type: Reprocessed on 09/27/14 6:05:37 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 5.208 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.208]	0.0639	0.3079	0.0640	11:04:16 AM	Yes
2		[5.208]	0.0639	0.3067	0.0640	11:04:45 AM	Yes
3		[5.208]	0.0639	0.3059	0.0640	11:05:14 AM	Yes
Mean:		[5.208]	0.0639				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.05				

Standard number 5 applied. [5.208]
Correlation Coef.: 0.999981 Slope: 0.01225 Intercept: 0.00000

Sequence No.: 7 **Autosampler Location: 7**
Sample ID: 10.417 **Date Collected: 09/27/14 11:05:34 AM**
Analyst: **Data Type: Reprocessed on 09/27/14 6:05:37 PM**

Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 10.417 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.417]	0.1248	0.6090	0.1249	11:06:25 AM	Yes
2		[10.417]	0.1250	0.6078	0.1251	11:06:53 AM	Yes
3		[10.417]	0.1250	0.6086	0.1251	11:07:22 AM	Yes
Mean:		[10.417]	0.1249				
SD:		0.00000	0.0001				
%RSD:		0.00%	0.08				

Standard number 6 applied. [10.417]
Correlation Coef.: 0.999922 Slope: 0.01205 Intercept: 0.00000

Calibration data for Hg 253.7 Equation: Linear Through Zero

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib. Blank	0.0000	0	0.000	0.00	17.05
0.2083333	0.0025	0.2083333	0.204	0.00	1.72
0.520833	0.0062	0.520833	0.512	0.00	0.66
1.041667	0.0127	1.041667	1.050	0.00	1.01
2.083333	0.0254	2.083333	2.106	0.00	0.20
5.208	0.0639	5.208	5.302	0.00	0.05
10.417	0.1249	10.417	10.364	0.00	0.08

Correlation Coef.: 0.999922 Slope: 0.01205 Intercept: 0.00000

==========

Sequence No.: 8 Autosampler Location: 9
Sample ID: ICV 09/27/14 RE Date Collected: 09/27/14 11:39:23 AM
Analyst: Data Type: Reprocessed on 09/27/14 6:05:37 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: ICV 09/27/14 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.218	4.218	0.0508	0.2437	0.0509	11:40:13 AM	Yes
2	4.252	4.252	0.0513	0.2446	0.0514	11:40:42 AM	Yes
3	4.255	4.255	0.0513	0.2431	0.0514	11:41:10 AM	Yes
Mean:	4.242	4.242	0.0511				
SD:	0.0204	0.0204	0.0002				
%RSD:	0.48%	0.48%	0.48				

QC value within limits for Hg 253.7 Recovery = 101.72%
All analyte(s) passed QC.

==========

Sequence No.: 9 Autosampler Location: 1
Sample ID: ICB 09/27/14 RE Date Collected: 09/27/14 11:41:30 AM
Analyst: Data Type: Reprocessed on 09/27/14 6:05:37 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: ICB 09/27/14 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.004	-0.004	-0.0001	-0.0007	0.0001	11:42:19 AM	Yes
2	0.002	0.002	0.0000	0.0007	0.0001	11:42:48 AM	Yes
3	-0.002	-0.002	-0.0000	0.0005	0.0001	11:43:17 AM	Yes
Mean:	-0.001	-0.001	-0.0000				
SD:	0.0031	0.0031	0.0000				
%RSD:	219.87%	219.87%	219.87				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 10
Sample ID: CCV 09/27/14 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 09/27/14 11:43:36 AM
Data Type: Reprocessed on 09/27/14 6:05:37 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV 09/27/14 RE

Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.214	5.214	0.0628	0.3009	0.0629	11:44:27 AM	Yes
2	5.296	5.296	0.0638	0.3109	0.0639	11:44:55 AM	Yes
3	5.340	5.340	0.0644	0.3102	0.0645	11:45:24 AM	Yes
Mean:	5.283	5.283	0.0637				
SD:	0.0641	0.0641	0.0008				
%RSD:	1.21%	1.21%	1.21				

QC value within limits for Hg 253.7 Recovery = 101.44%
All analyte(s) passed QC.

Sequence No.: 11
Sample ID: CCB 09/27/14 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 09/27/14 11:45:45 AM
Data Type: Reprocessed on 09/27/14 6:05:37 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB 09/27/14 RE

Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.003	-0.003	-0.0000	-0.0007	0.0001	11:46:34 AM	Yes
2	0.001	0.001	0.0000	0.0005	0.0001	11:47:03 AM	Yes
3	0.003	0.003	0.0000	0.0007	0.0001	11:47:32 AM	Yes
Mean:	0.001	0.001	0.0000				
SD:	0.0030	0.0030	0.0000				
%RSD:	544.17%	544.17%	544.17				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: 140922A BLK
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.6 g
Dilution:

Autosampler Location: 17
Date Collected: 09/27/14 11:47:51 AM
Data Type: Reprocessed on 09/27/14 6:05:37 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: 140922A BLK

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.001	-0.005	-0.0001	-0.0001	0.0000	11:48:40 AM	Yes
2	0.001	0.003	0.0000	0.0012	0.0001	11:49:09 AM	Yes
3	-0.001	-0.008	-0.0001	-0.0010	0.0000	11:49:38 AM	Yes
Mean:	-0.000	-0.003	-0.0000				
SD:	0.0009	0.0057	0.0001				
%RSD:	182.94%	182.94%	182.94				

Sequence No.: 13
Sample ID: 140922A LCS
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.6 g
Dilution:

Autosampler Location: 18
Date Collected: 09/27/14 11:49:57 AM
Data Type: Reprocessed on 09/27/14 6:05:38 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: 140922A LCS

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.589	3.684	0.0444	0.2100	0.0445	11:50:46 AM	Yes
2	0.592	3.703	0.0446	0.2115	0.0447	11:51:15 AM	Yes
3	0.591	3.697	0.0446	0.2116	0.0447	11:51:44 AM	Yes
Mean:	0.591	3.695	0.0445				
SD:	0.0016	0.0098	0.0001				
%RSD:	0.27%	0.27%	0.27				

Sequence No.: 14 **Autosampler Location: 19**
Sample ID: 140926A BLK **Date Collected: 09/27/14 11:52:03 AM**
Analyst: RE-Freddie **Data Type: Reprocessed on 09/27/14 6:05:38 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.6 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 96 mL**

Replicate Data: 140926A BLK **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.001	0.007	0.0001	0.0008	0.0002	11:52:52 AM	Yes
2	0.000	0.001	0.0000	0.0005	0.0001	11:53:21 AM	Yes
3	-0.000	-0.002	-0.0000	-0.0001	0.0001	11:53:50 AM	Yes
Mean:	0.000	0.002	0.0000				
SD:	0.0008	0.0047	0.0001				
%RSD:	205.26%	205.26%	205.26				

Sequence No.: 15 **Autosampler Location: 20**
Sample ID: 140926A LCS **Date Collected: 09/27/14 11:54:09 AM**
Analyst: RE-Freddie **Data Type: Reprocessed on 09/27/14 6:05:38 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.6 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 96 mL**

Replicate Data: 140926A LCS **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.613	3.829	0.0461	0.2197	0.0463	11:54:59 AM	Yes
2	0.615	3.845	0.0463	0.2197	0.0465	11:55:28 AM	Yes
3	0.619	3.866	0.0466	0.2212	0.0467	11:55:57 AM	Yes
Mean:	0.615	3.847	0.0464				
SD:	0.0030	0.0187	0.0002				
%RSD:	0.49%	0.49%	0.49				

Sequence No.: 16 **Autosampler Location: 21**
Sample ID: 140919A BLK **Date Collected: 09/27/14 11:56:16 AM**
Analyst: RE-Freddie **Data Type: Reprocessed on 09/27/14 6:05:38 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.5 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 96 mL**

Replicate Data: 140919A BLK **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000	0.005	0.0001	0.0007	0.0002	11:57:05 AM	Yes
2	-0.000	-0.006	-0.0001	-0.0005	0.0000	11:57:34 AM	Yes
3	-0.000	-0.000	-0.0000	0.0004	0.0001	11:58:03 AM	Yes
Mean:	-0.000	-0.000	-0.0000				
SD:	0.0002	0.0054	0.0001				
%RSD:	>999.9%	>999.9%	>999.9%				

Sequence No.: 17 **Autosampler Location: 22**
Sample ID: 140919A LCS **Date Collected: 09/27/14 11:58:22 AM**
Analyst: RE-Freddie **Data Type: Reprocessed on 09/27/14 6:05:38 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.5 g **Initial Sample Vol:**

Dilution: Sample Prep Vol: 96 mL

Replicate Data: 140919A LCS Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.156	4.068	0.0490	0.2329	0.0491	11:59:12 AM	Yes
2	0.157	4.091	0.0493	0.2330	0.0494	11:59:41 AM	Yes
3	0.157	4.083	0.0492	0.2352	0.0493	12:00:10 PM	Yes
Mean:	0.157	4.081	0.0492				
SD:	0.0004	0.0115	0.0001				
%RSD:	0.28%	0.28%	0.28				

==========

Sequence No.: 18 Autosampler Location: 23
Sample ID: AZ01755S01 Date Collected: 09/27/14 12:00:30 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/27/14 6:05:38 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.61 g Initial Sample Vol:
Dilution: Sample Prep Vol: 96 mL

Replicate Data: AZ01755S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.367	2.334	0.0281	0.1347	0.0282	12:01:20 PM	Yes
2	0.364	2.314	0.0279	0.1340	0.0280	12:01:49 PM	Yes
3	0.363	2.304	0.0278	0.1330	0.0279	12:02:18 PM	Yes
Mean:	0.365	2.317	0.0279				
SD:	0.0024	0.0150	0.0002				
%RSD:	0.65%	0.65%	0.65				

==========

Sequence No.: 19 Autosampler Location: 24
Sample ID: AZ01755S01 PDS-1/2 Date Collected: 09/27/14 12:02:37 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/27/14 6:05:38 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.61 g Initial Sample Vol:
Dilution: 2X Sample Prep Vol: 96 mL

Replicate Data: AZ01755S01 PDS-1/2 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.494	7.924	0.0955	0.4767	0.0956	12:03:27 PM	Yes
2	2.508	7.969	0.0960	0.4748	0.0962	12:03:57 PM	Yes
3	2.507	7.965	0.0960	0.4744	0.0961	12:04:26 PM	Yes
Mean:	2.503	7.953	0.0958				
SD:	0.0078	0.0249	0.0003				
%RSD:	0.31%	0.31%	0.31				

==========

Sequence No.: 20 Autosampler Location: 25
Sample ID: AZ01755S01-1/5 Date Collected: 09/27/14 12:04:45 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/27/14 6:05:39 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.61 g Initial Sample Vol:
Dilution: 5X Sample Prep Vol: 96 mL

Replicate Data: AZ01755S01-1/5 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.281	0.357	0.0043	0.0222	0.0044	12:05:36 PM	Yes
2	0.255	0.323	0.0039	0.0200	0.0040	12:06:05 PM	Yes
3	0.255	0.324	0.0039	0.0203	0.0040	12:06:34 PM	Yes
Mean:	0.264	0.335	0.0040				
SD:	0.0152	0.0193	0.0002				
%RSD:	5.77%	5.77%	5.77				

==========

Sequence No.: 21 Autosampler Location: 26

Sample ID: AZ01771S02
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.62 g
Dilution:

Date Collected: 09/27/14 12:06:54 PM
Data Type: Reprocessed on 09/27/14 6:05:39 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ01771S02 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.169	1.092	0.0132	0.0633	0.0133	12:07:44 PM	Yes
2	0.169	1.095	0.0132	0.0628	0.0133	12:08:13 PM	Yes
3	0.169	1.094	0.0132	0.0626	0.0133	12:08:42 PM	Yes
Mean:	0.169	1.094	0.0132				
SD:	0.0002	0.0012	0.0000				
%RSD:	0.11%	0.11%	0.11				

Sequence No.: 22
Sample ID: AZ01771S02 PDS-1/2
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.62 g
Dilution: 2X

Autosampler Location: 27
Date Collected: 09/27/14 12:09:02 PM
Data Type: Reprocessed on 09/27/14 6:05:39 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ01771S02 PDS-1/2 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.300	7.426	0.0895	0.4445	0.0896	12:09:53 PM	Yes
2	2.299	7.425	0.0895	0.4436	0.0896	12:10:21 PM	Yes
3	2.320	7.493	0.0903	0.4443	0.0904	12:10:50 PM	Yes
Mean:	2.306	7.448	0.0898				
SD:	0.0120	0.0386	0.0005				
%RSD:	0.52%	0.52%	0.52				

Sequence No.: 23
Sample ID: AZ01771S02-1/5
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.62 g
Dilution: 5X

Autosampler Location: 28
Date Collected: 09/27/14 12:11:10 PM
Data Type: Reprocessed on 09/27/14 6:05:39 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ01771S02-1/5 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.137	0.177	0.0021	0.0109	0.0022	12:12:01 PM	Yes
2	0.123	0.159	0.0019	0.0107	0.0020	12:12:30 PM	Yes
3	0.122	0.157	0.0019	0.0102	0.0020	12:12:59 PM	Yes
Mean:	0.127	0.165	0.0020				
SD:	0.0082	0.0106	0.0001				
%RSD:	6.43%	6.43%	6.43				

Sequence No.: 24
Sample ID: AZ03344S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.66 g
Dilution:

Autosampler Location: 29
Date Collected: 09/27/14 12:13:19 PM
Data Type: Reprocessed on 09/27/14 6:05:39 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03344S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.009	0.060	0.0007	0.0036	0.0008	12:14:10 PM	Yes
2	0.009	0.062	0.0007	0.0035	0.0009	12:14:39 PM	Yes
3	0.009	0.061	0.0007	0.0035	0.0008	12:15:08 PM	Yes
Mean:	0.009	0.061	0.0007				
SD:	0.0001	0.0009	0.0000				

%RSD: 1.47% 1.47% 1.47

Sequence No.: 25
Sample ID: AZ03345S02
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.65 g
Dilution:

Autosampler Location: 30
Date Collected: 09/27/14 12:15:28 PM
Data Type: Reprocessed on 09/27/14 6:05:39 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03345S02 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.017	0.116	0.0014	0.0066	0.0015	12:16:20 PM	Yes
2	0.019	0.129	0.0016	0.0079	0.0017	12:16:48 PM	Yes
3	0.018	0.123	0.0015	0.0075	0.0016	12:17:18 PM	Yes
Mean:	0.018	0.123	0.0015				
SD:	0.0010	0.0066	0.0001				
%RSD:	5.35%	5.35%	5.35				

Sequence No.: 26
Sample ID: AZ03346S02
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.62 g
Dilution:

Autosampler Location: 31
Date Collected: 09/27/14 12:17:39 PM
Data Type: Reprocessed on 09/27/14 6:05:39 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03346S02 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.018	0.114	0.0014	0.0070	0.0015	12:18:30 PM	Yes
2	0.017	0.111	0.0013	0.0067	0.0014	12:18:58 PM	Yes
3	0.018	0.119	0.0014	0.0075	0.0015	12:19:27 PM	Yes
Mean:	0.018	0.115	0.0014				
SD:	0.0007	0.0042	0.0001				
%RSD:	3.68%	3.68%	3.68				

Sequence No.: 27
Sample ID: AZ03347S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.62 g
Dilution:

Autosampler Location: 32
Date Collected: 09/27/14 12:19:48 PM
Data Type: Reprocessed on 09/27/14 6:05:40 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03347S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.033	0.214	0.0026	0.0128	0.0027	12:20:38 PM	Yes
2	0.033	0.211	0.0025	0.0121	0.0027	12:21:06 PM	Yes
3	0.033	0.212	0.0026	0.0122	0.0027	12:21:35 PM	Yes
Mean:	0.033	0.213	0.0026				
SD:	0.0003	0.0016	0.0000				
%RSD:	0.76%	0.76%	0.76				

Sequence No.: 28
Sample ID: AZ03348S02
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.63 g
Dilution:

Autosampler Location: 33
Date Collected: 09/27/14 12:21:54 PM
Data Type: Reprocessed on 09/27/14 6:05:40 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03348S02 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.012	0.079	0.0010	0.0048	0.0011	12:22:43 PM	Yes

2	0.012	0.081	0.0010	0.0048	0.0011	12:23:12 PM	Yes
3	0.012	0.080	0.0010	0.0049	0.0011	12:23:40 PM	Yes
Mean:	0.012	0.080	0.0010				
SD:	0.0001	0.0010	0.0000				
%RSD:	1.21%	1.21%	1.21				

Sequence No.: 29 **Autosampler Location: 34**
Sample ID: AZ03349S01 **Date Collected: 09/27/14 12:23:59 PM**
Analyst: RE-Freddie **Data Type: Reprocessed on 09/27/14 6:05:40 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.64 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 96 mL**

Replicate Data: AZ03349S01 **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.021	0.141	0.0017	0.0084	0.0018	12:24:48 PM	Yes
2	0.022	0.144	0.0017	0.0083	0.0018	12:25:17 PM	Yes
3	0.021	0.143	0.0017	0.0085	0.0018	12:25:46 PM	Yes
Mean:	0.021	0.142	0.0017				
SD:	0.0002	0.0013	0.0000				
%RSD:	0.95%	0.95%	0.95				

Sequence No.: 30 **Autosampler Location: 35**
Sample ID: AZ03350S02 **Date Collected: 09/27/14 12:26:05 PM**
Analyst: RE-Freddie **Data Type: Reprocessed on 09/27/14 6:05:40 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.6 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 96 mL**

Replicate Data: AZ03350S02 **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.015	0.091	0.0011	0.0058	0.0012	12:26:54 PM	Yes
2	0.009	0.054	0.0006	0.0012	0.0008	12:27:22 PM	Yes
3	0.015	0.095	0.0011	0.0061	0.0012	12:27:51 PM	Yes
Mean:	0.013	0.080	0.0010				
SD:	0.0036	0.0227	0.0003				
%RSD:	28.43%	28.43%	28.43				

Sequence No.: 31 **Autosampler Location: 36**
Sample ID: AZ03351S02 **Date Collected: 09/27/14 12:28:10 PM**
Analyst: RE-Freddie **Data Type: Reprocessed on 09/27/14 6:05:40 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.64 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 96 mL**

Replicate Data: AZ03351S02 **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.021	0.137	0.0017	0.0088	0.0018	12:28:59 PM	Yes
2	0.019	0.126	0.0015	0.0072	0.0016	12:29:28 PM	Yes
3	0.020	0.136	0.0016	0.0082	0.0017	12:29:57 PM	Yes
Mean:	0.020	0.133	0.0016				
SD:	0.0009	0.0062	0.0001				
%RSD:	4.66%	4.66%	4.66				

Sequence No.: 32 **Autosampler Location: 6**
Sample ID: CCV 09/27/14 RE **Date Collected: 09/27/14 12:30:16 PM**
Analyst: **Data Type: Reprocessed on 09/27/14 6:05:40 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV 09/27/14 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.369	5.369	0.0647	0.3220	0.0648	12:31:07 PM	Yes
2	5.374	5.374	0.0648	0.3214	0.0649	12:31:36 PM	Yes
3	5.388	5.388	0.0649	0.3211	0.0651	12:32:04 PM	Yes
Mean:	5.377	5.377	0.0648				
SD:	0.0102	0.0102	0.0001				
%RSD:	0.19%	0.19%	0.19				

QC value within limits for Hg 253.7 Recovery = 103.24%
All analyte(s) passed QC.

Sequence No.: 33 Autosampler Location: 1
Sample ID: CCB 09/27/14 RE Date Collected: 09/27/14 12:32:25 PM
Analyst: Data Type: Reprocessed on 09/27/14 6:05:40 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCB 09/27/14 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.007	0.007	0.0001	0.0004	0.0002	12:33:14 PM	Yes
2	0.000	0.000	0.0000	0.0001	0.0001	12:33:43 PM	Yes
3	0.003	0.003	0.0000	0.0003	0.0001	12:34:12 PM	Yes
Mean:	0.003	0.003	0.0000				
SD:	0.0037	0.0037	0.0000				
%RSD:	107.76%	107.76%	107.76				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 34 Autosampler Location: 37
Sample ID: AZ03351S02 DUP Date Collected: 09/27/14 12:34:31 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/27/14 6:05:40 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.64 g Initial Sample Vol:
Dilution: Sample Prep Vol: 96 mL

Replicate Data: AZ03351S02 DUP Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.022	0.148	0.0018	0.0090	0.0019	12:35:21 PM	Yes
2	0.021	0.139	0.0017	0.0082	0.0018	12:35:49 PM	Yes
3	0.022	0.149	0.0018	0.0089	0.0019	12:36:18 PM	Yes
Mean:	0.022	0.145	0.0018				
SD:	0.0008	0.0051	0.0001				
%RSD:	3.54%	3.54%	3.54				

Sequence No.: 35 Autosampler Location: 38
Sample ID: AZ03351S02 MS Date Collected: 09/27/14 12:36:38 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/27/14 6:05:41 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.64 g Initial Sample Vol:
Dilution: Sample Prep Vol: 96 mL

Replicate Data: AZ03351S02 MS Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.562	3.745	0.0451	0.2186	0.0452	12:37:27 PM	Yes
2	0.572	3.815	0.0460	0.2206	0.0461	12:37:56 PM	Yes
3	0.574	3.826	0.0461	0.2222	0.0462	12:38:25 PM	Yes
Mean:	0.569	3.796	0.0457				
SD:	0.0066	0.0440	0.0005				
%RSD:	1.16%	1.16%	1.16				

Sequence No.: 36
Sample ID: AZ03352S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.64 g
Dilution:

Autosampler Location: 39
Date Collected: 09/27/14 12:38:44 PM
Data Type: Reprocessed on 09/27/14 6:05:41 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03352S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.012	0.079	0.0010	0.0041	0.0011	12:39:34 PM	Yes
2	0.012	0.078	0.0009	0.0046	0.0010	12:40:03 PM	Yes
3	0.011	0.076	0.0009	0.0048	0.0010	12:40:31 PM	Yes
Mean:	0.012	0.078	0.0009				
SD:	0.0002	0.0015	0.0000				
%RSD:	1.94%	1.94%	1.94				

Sequence No.: 37
Sample ID: AZ03353S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.67 g
Dilution:

Autosampler Location: 40
Date Collected: 09/27/14 12:40:51 PM
Data Type: Reprocessed on 09/27/14 6:05:41 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03353S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.011	0.078	0.0009	0.0050	0.0011	12:41:41 PM	Yes
2	0.010	0.073	0.0009	0.0047	0.0010	12:42:10 PM	Yes
3	0.011	0.080	0.0010	0.0050	0.0011	12:42:38 PM	Yes
Mean:	0.011	0.077	0.0009				
SD:	0.0005	0.0034	0.0000				
%RSD:	4.44%	4.44%	4.44				

Sequence No.: 38
Sample ID: AZ03355S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.65 g
Dilution:

Autosampler Location: 41
Date Collected: 09/27/14 12:42:58 PM
Data Type: Reprocessed on 09/27/14 6:05:41 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03355S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.021	0.141	0.0017	0.0074	0.0018	12:43:49 PM	Yes
2	0.022	0.152	0.0018	0.0088	0.0019	12:44:18 PM	Yes
3	0.023	0.153	0.0018	0.0091	0.0019	12:44:47 PM	Yes
Mean:	0.022	0.148	0.0018				
SD:	0.0010	0.0067	0.0001				
%RSD:	4.52%	4.52%	4.52				

Sequence No.: 39
Sample ID: AZ03356S02
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.66 g
Dilution:

Autosampler Location: 42
Date Collected: 09/27/14 12:45:07 PM
Data Type: Reprocessed on 09/27/14 6:05:41 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03356S02 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.018	0.122	0.0015	0.0067	0.0016	12:45:57 PM	Yes
2	0.019	0.130	0.0016	0.0075	0.0017	12:46:26 PM	Yes
3	0.018	0.123	0.0015	0.0061	0.0016	12:46:55 PM	Yes
Mean:	0.018	0.125	0.0015				

SD:	0.0006	0.0044	0.0001
%RSD:	3.51%	3.51%	3.51

Sequence No.: 40
Sample ID: AZ03357S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.66 g
Dilution:

Autosampler Location: 43
Date Collected: 09/27/14 12:47:15 PM
Data Type: Reprocessed on 09/27/14 6:05:41 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03357S01

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.022	0.154	0.0019	0.0097	0.0020	12:48:06 PM	Yes
2	0.022	0.149	0.0018	0.0081	0.0019	12:48:35 PM	Yes
3	0.022	0.152	0.0018	0.0086	0.0019	12:49:03 PM	Yes
Mean:	0.022	0.152	0.0018				
SD:	0.0004	0.0026	0.0000				
%RSD:	1.71%	1.71%	1.71				

Sequence No.: 41
Sample ID: AZ03358S02
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.66 g
Dilution:

Autosampler Location: 44
Date Collected: 09/27/14 12:49:24 PM
Data Type: Reprocessed on 09/27/14 6:05:41 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03358S02

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.014	0.098	0.0012	0.0058	0.0013	12:50:14 PM	Yes
2	0.014	0.097	0.0012	0.0056	0.0013	12:50:43 PM	Yes
3	0.014	0.095	0.0011	0.0051	0.0013	12:51:12 PM	Yes
Mean:	0.014	0.097	0.0012				
SD:	0.0002	0.0016	0.0000				
%RSD:	1.68%	1.68%	1.68				

Sequence No.: 42
Sample ID: AZ03359S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.64 g
Dilution:

Autosampler Location: 45
Date Collected: 09/27/14 12:51:32 PM
Data Type: Reprocessed on 09/27/14 6:05:42 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03359S01

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.011	0.075	0.0009	0.0044	0.0010	12:52:23 PM	Yes
2	0.011	0.074	0.0009	0.0036	0.0010	12:52:52 PM	Yes
3	0.008	0.054	0.0007	-0.0016	0.0008	12:53:21 PM	Yes
Mean:	0.010	0.068	0.0008				
SD:	0.0018	0.0117	0.0001				
%RSD:	17.23%	17.23%	17.23				

Sequence No.: 43
Sample ID: AZ03360S02
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.6 g
Dilution:

Autosampler Location: 46
Date Collected: 09/27/14 12:53:42 PM
Data Type: Reprocessed on 09/27/14 6:05:42 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03360S02

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

1	0.015	0.094	0.0011	0.0044	0.0012	12:54:33 PM	Yes
2	0.015	0.091	0.0011	0.0056	0.0012	12:55:02 PM	Yes
3	0.014	0.089	0.0011	0.0057	0.0012	12:55:31 PM	Yes
Mean:	0.015	0.091	0.0011				
SD:	0.0004	0.0028	0.0000				
%RSD:	3.02%	3.02%	3.02				

Sequence No.: 44
Sample ID: AZ03361S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.63 g
Dilution:

Autosampler Location: 47
Date Collected: 09/27/14 12:55:52 PM
Data Type: Reprocessed on 09/27/14 6:05:42 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03361S01 **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.015	0.095	0.0011	0.0054	0.0013	12:56:43 PM	Yes
2	0.014	0.091	0.0011	0.0051	0.0012	12:57:11 PM	Yes
3	0.014	0.093	0.0011	0.0056	0.0012	12:57:40 PM	Yes
Mean:	0.014	0.093	0.0011				
SD:	0.0004	0.0024	0.0000				
%RSD:	2.57%	2.57%	2.57				

Sequence No.: 45
Sample ID: CCV 09/27/14 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 09/27/14 12:58:02 PM
Data Type: Reprocessed on 09/27/14 6:05:42 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV 09/27/14 RE **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.287	5.287	0.0637	0.3190	0.0638	12:58:52 PM	Yes
2	5.281	5.281	0.0636	0.3160	0.0638	12:59:21 PM	Yes
3	5.307	5.307	0.0640	0.3163	0.0641	12:59:49 PM	Yes
Mean:	5.292	5.292	0.0638				
SD:	0.0139	0.0139	0.0002				
%RSD:	0.26%	0.26%	0.26				

QC value within limits for Hg 253.7 Recovery = 101.61%
All analyte(s) passed QC.

Sequence No.: 46
Sample ID: CCB 09/27/14 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 09/27/14 1:00:10 PM
Data Type: Reprocessed on 09/27/14 6:05:42 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB 09/27/14 RE **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.012	0.012	0.0001	0.0008	0.0003	1:01:00 PM	Yes
2	0.005	0.005	0.0001	-0.0003	0.0002	1:01:28 PM	Yes
3	0.011	0.011	0.0001	-0.0001	0.0002	1:01:57 PM	Yes
Mean:	0.009	0.009	0.0001				
SD:	0.0036	0.0036	0.0000				
%RSD:	38.48%	38.48%	38.48				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 47
Sample ID: Calib. Blank
Analyst:

Autosampler Location: 1
Date Collected: 09/27/14 3:33:18 PM
Data Type: Reprocessed on 09/27/14 6:05:42 PM

Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: Calib. Blank Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	0.0009	0.0002	3:34:08 PM	Yes
2		[0.00]	0.0000	0.0006	0.0001	3:34:36 PM	Yes
3		[0.00]	0.0000	0.0009	0.0001	3:35:05 PM	Yes
Mean:		[0.00]	0.0000				
SD:		0.0000	0.0000				
%RSD:		0.00%	56.40				

Auto-zero performed.

==========

Sequence No.: 48 Autosampler Location: 2
Sample ID: 0.2083333 Date Collected: 09/27/14 3:35:24 PM
Analyst: Data Type: Reprocessed on 09/27/14 6:05:42 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 0.2083333 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.208333]	0.0033	0.0169	0.0034	3:36:14 PM	Yes
2		[0.208333]	0.0033	0.0170	0.0034	3:36:43 PM	Yes
3		[0.208333]	0.0034	0.0176	0.0035	3:37:12 PM	Yes
Mean:		[0.208333]	0.0033				
SD:		0.000000000	0.0001				
%RSD:		0.00%	1.99				

Standard number 1 applied. [0.2083333]
Correlation Coef.: 0.999894 Slope: 0.01205 Intercept: 0.00000

==========

Sequence No.: 49 Autosampler Location: 3
Sample ID: 0.520833 Date Collected: 09/27/14 3:37:31 PM
Analyst: Data Type: Reprocessed on 09/27/14 6:05:43 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 0.520833 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.520833]	0.0081	0.0410	0.0082	3:38:21 PM	Yes
2		[0.520833]	0.0082	0.0416	0.0083	3:38:50 PM	Yes
3		[0.520833]	0.0082	0.0416	0.0083	3:39:18 PM	Yes
Mean:		[0.520833]	0.0081				
SD:		0.000000010	0.0000				
%RSD:		0.00%	0.59				

Standard number 2 applied. [0.520833]
Correlation Coef.: 0.999742 Slope: 0.01206 Intercept: 0.00000

==========

Sequence No.: 50 Autosampler Location: 4
Sample ID: 1.041667 Date Collected: 09/27/14 3:39:38 PM
Analyst: Data Type: Reprocessed on 09/27/14 6:05:43 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 1.041667 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.041667]	0.0167	0.0837	0.0168	3:40:27 PM	Yes
2		[1.041667]	0.0168	0.0839	0.0170	3:40:56 PM	Yes

3	[1.041667]	0.0168	0.0838	0.0169	3:41:26 PM	Yes
Mean:	[1.041667]	0.0168				
SD:	0.000000000	.0001				
%RSD:	0.00%	0.43				

Standard number 3 applied. [1.041667]
Correlation Coef.: 0.998976 Slope: 0.01210 Intercept: 0.00000

Sequence No.: 51 **Autosampler Location: 5**
Sample ID: 2.083333 **Date Collected: 09/27/14 3:41:45 PM**
Analyst: **Data Type: Reprocessed on 09/27/14 6:05:43 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 2.083333 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.083333]	0.0335	0.1688	0.0336	3:42:36 PM	Yes
2		[2.083333]	0.0338	0.1692	0.0340	3:43:04 PM	Yes
3		[2.083333]	0.0337	0.1698	0.0339	3:43:34 PM	Yes
Mean:		[2.083333]	0.0337				
SD:		0.000000040	.0002				
%RSD:		0.00%	0.49				

Standard number 4 applied. [2.083333]
Correlation Coef.: 0.996008 Slope: 0.01227 Intercept: 0.00000

Sequence No.: 52 **Autosampler Location: 6**
Sample ID: 5.208 **Date Collected: 09/27/14 3:43:53 PM**
Analyst: **Data Type: Reprocessed on 09/27/14 6:05:43 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 5.208 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.208]	0.0810	0.4090	0.0812	3:44:44 PM	Yes
2		[5.208]	0.0820	0.4108	0.0821	3:45:13 PM	Yes
3		[5.208]	0.0818	0.4103	0.0820	3:45:42 PM	Yes
Mean:		[5.208]	0.0816				
SD:		0.00000	0.0005				
%RSD:		0.00%	0.62				

Standard number 5 applied. [5.208]
Correlation Coef.: 0.986291 Slope: 0.01306 Intercept: 0.00000

Sequence No.: 53 **Autosampler Location: 7**
Sample ID: 10.417 **Date Collected: 09/27/14 3:46:02 PM**
Analyst: **Data Type: Reprocessed on 09/27/14 6:05:43 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: 10.417 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.417]	0.1633	0.8250	0.1635	3:46:53 PM	Yes
2		[10.417]	0.1635	0.8260	0.1636	3:47:22 PM	Yes
3		[10.417]	0.1634	0.8261	0.1635	3:47:51 PM	Yes
Mean:		[10.417]	0.1634				
SD:		0.00000	0.0001				
%RSD:		0.00%	0.04				

Standard number 6 applied. [10.417]
Correlation Coef.: 0.999970 Slope: 0.01570 Intercept: 0.00000

Calibration data for Hg 253.7 **Equation: Linear Through Zero**

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib. Blank	0.0000	0	0.000	0.00	56.40
0.2083333	0.0033	0.2083333	0.211	0.00	1.99
0.520833	0.0081	0.520833	0.519	0.00	0.59
1.041667	0.0168	1.041667	1.068	0.00	0.43
2.083333	0.0337	2.083333	2.145	0.00	0.49
5.208	0.0816	5.208	5.198	0.00	0.62
10.417	0.1634	10.417	10.407	0.00	0.04

Correlation Coef.: 0.999970 Slope: 0.01570 Intercept: 0.00000

Sequence No.: 54
Sample ID: ICV 09/27/14 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 09/27/14 3:48:11 PM
Data Type: Reprocessed on 09/27/14 6:05:43 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV 09/27/14 RE **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.259	4.259	0.0669	0.3346	0.0670	3:49:01 PM	Yes
2	4.244	4.244	0.0666	0.3352	0.0668	3:49:30 PM	Yes
3	4.284	4.284	0.0673	0.3354	0.0674	3:49:58 PM	Yes
Mean:	4.262	4.262	0.0669				
SD:	0.0205	0.0205	0.0003				
%RSD:	0.48%	0.48%	0.48				

QC value within limits for Hg 253.7 Recovery = 102.21%
All analyte(s) passed QC.

Sequence No.: 55
Sample ID: ICB 09/27/14 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 09/27/14 3:50:18 PM
Data Type: Reprocessed on 09/27/14 6:05:43 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB 09/27/14 RE **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.003	0.003	0.0001	0.0009	0.0002	3:51:07 PM	Yes
2	0.001	0.001	0.0000	0.0007	0.0002	3:51:36 PM	Yes
3	0.001	0.001	0.0000	0.0006	0.0002	3:52:05 PM	Yes
Mean:	0.002	0.002	0.0000				
SD:	0.0014	0.0014	0.0000				
%RSD:	87.33%	87.33%	87.33				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 56
Sample ID: CCV 09/27/14 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 09/27/14 3:52:25 PM
Data Type: Reprocessed on 09/27/14 6:05:44 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV 09/27/14 RE **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.202	5.202	0.0817	0.4115	0.0818	3:53:15 PM	Yes
2	5.237	5.237	0.0822	0.4141	0.0824	3:53:44 PM	Yes
3	5.236	5.236	0.0822	0.4143	0.0824	3:54:12 PM	Yes
Mean:	5.225	5.225	0.0820				
SD:	0.0198	0.0198	0.0003				
%RSD:	0.38%	0.38%	0.38				

QC value within limits for Hg 253.7 Recovery = 100.33%
All analyte(s) passed QC.

Sequence No.: 57
Sample ID: CCB 09/27/14 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 09/27/14 3:54:33 PM
Data Type: Reprocessed on 09/27/14 6:05:44 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB 09/27/14 RE **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000	0.000	0.0000	0.0004	0.0001	3:55:22 PM	Yes
2	0.002	0.002	0.0000	0.0006	0.0002	3:55:51 PM	Yes
3	0.002	0.002	0.0000	0.0008	0.0002	3:56:20 PM	Yes
Mean:	0.002	0.002	0.0000				
SD:	0.0012	0.0012	0.0000				
%RSD:	71.80%	71.80%	71.80				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 58
Sample ID: AZ03362S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.64 g
Dilution:

Autosampler Location: 48
Date Collected: 09/27/14 3:56:39 PM
Data Type: Reprocessed on 09/27/14 6:05:44 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03362S01 **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.011	0.074	0.0012	0.0059	0.0013	3:57:28 PM	Yes
2	0.011	0.076	0.0012	0.0064	0.0013	3:57:57 PM	Yes
3	0.012	0.078	0.0012	0.0065	0.0014	3:58:25 PM	Yes
Mean:	0.011	0.076	0.0012				
SD:	0.0003	0.0023	0.0000				
%RSD:	3.06%	3.06%	3.06				

Sequence No.: 59
Sample ID: AZ03363S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.62 g
Dilution:

Autosampler Location: 49
Date Collected: 09/27/14 3:58:44 PM
Data Type: Reprocessed on 09/27/14 6:05:44 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03363S01 **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.016	0.103	0.0016	0.0086	0.0018	3:59:33 PM	Yes
2	0.016	0.102	0.0016	0.0085	0.0017	4:00:02 PM	Yes
3	0.016	0.104	0.0016	0.0083	0.0018	4:00:30 PM	Yes
Mean:	0.016	0.103	0.0016				
SD:	0.0001	0.0007	0.0000				
%RSD:	0.67%	0.67%	0.67				

Sequence No.: 60
Sample ID: AZ03364S02
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.67 g
Dilution:

Autosampler Location: 50
Date Collected: 09/27/14 4:00:49 PM
Data Type: Reprocessed on 09/27/14 6:05:44 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ03364S02 **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.010	0.069	0.0011	0.0055	0.0012	4:01:38 PM	Yes
2	0.010	0.072	0.0011	0.0061	0.0013	4:02:07 PM	Yes
3	0.010	0.068	0.0011	0.0053	0.0012	4:02:36 PM	Yes
Mean:	0.010	0.070	0.0011				
SD:	0.0003	0.0021	0.0000				
%RSD:	3.02%	3.02%	3.02				

==========

Sequence No.: 61 **Autosampler Location: 50**
Sample ID: AZ03364S02 **Date Collected: 09/27/14 4:00:49 PM**
Analyst: RE-Freddie **Data Type: Reprocessed on 09/27/14 6:05:44 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.67 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 96 mL**

Replicate Data: AZ03364S02 **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.010	0.069	0.0011	0.0055	0.0012	4:01:38 PM	Yes
2	0.010	0.072	0.0011	0.0061	0.0013	4:02:07 PM	Yes
3	0.010	0.068	0.0011	0.0053	0.0012	4:02:36 PM	Yes
Mean:	0.010	0.070	0.0011				
SD:	0.0003	0.0021	0.0000				
%RSD:	3.02%	3.02%	3.02				

==========

Sequence No.: 62 **Autosampler Location: 6**
Sample ID: CCV 09/27/14 RE **Date Collected: 09/27/14 4:03:05 PM**
Analyst: **Data Type: Reprocessed on 09/27/14 6:05:44 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV 09/27/14 RE **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.246	5.246	0.0824	0.4168	0.0825	4:03:55 PM	Yes
2	5.255	5.255	0.0825	0.4152	0.0827	4:04:24 PM	Yes
3	5.266	5.266	0.0827	0.4166	0.0828	4:04:52 PM	Yes
Mean:	5.256	5.256	0.0825				
SD:	0.0099	0.0099	0.0002				
%RSD:	0.19%	0.19%	0.19				

QC value within limits for Hg 253.7 Recovery = 100.92%
All analyte(s) passed QC.

==========

Sequence No.: 63 **Autosampler Location: 1**
Sample ID: CCB 09/27/14 RE **Date Collected: 09/27/14 4:05:13 PM**
Analyst: **Data Type: Reprocessed on 09/27/14 6:05:44 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCB 09/27/14 RE **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.001	-0.001	-0.0000	0.0002	0.0001	4:06:03 PM	Yes
2	0.002	0.002	0.0000	0.0002	0.0002	4:06:32 PM	Yes
3	0.001	0.001	0.0000	0.0004	0.0002	4:07:00 PM	Yes
Mean:	0.001	0.001	0.0000				
SD:	0.0017	0.0017	0.0000				
%RSD:	330.14%	330.14%	330.14				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 64 **Autosampler Location: 6**

Sample ID: CCV 09/27/14 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Date Collected: 09/27/14 4:59:42 PM
Data Type: Reprocessed on 09/27/14 6:05:45 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV 09/27/14 RE — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.161	5.161	0.0810	0.3962	0.0812	5:00:32 PM	Yes
2	5.171	5.171	0.0812	0.3965	0.0813	5:01:01 PM	Yes
3	5.175	5.175	0.0813	0.3954	0.0814	5:01:30 PM	Yes
Mean:	5.169	5.169	0.0812				
SD:	0.0071	0.0071	0.0001				
%RSD:	0.14%	0.14%	0.14				

QC value within limits for Hg 253.7 Recovery = 99.24%
All analyte(s) passed QC.

==========

Sequence No.: 65
Sample ID: CCB 09/27/14 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 09/27/14 5:01:50 PM
Data Type: Reprocessed on 09/27/14 6:05:45 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB 09/27/14 RE — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.005	-0.005	-0.0001	-0.0001	0.0001	5:02:40 PM	Yes
2	-0.005	-0.005	-0.0001	0.0000	0.0001	5:03:08 PM	Yes
3	0.001	0.001	0.0000	0.0008	0.0001	5:03:37 PM	Yes
Mean:	-0.003	-0.003	-0.0000				
SD:	0.0031	0.0031	0.0000				
%RSD:	101.28%	101.28%	101.28				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 66
Sample ID: AZ02099S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.48 g
Dilution:

Autosampler Location: 51
Date Collected: 09/27/14 5:03:56 PM
Data Type: Reprocessed on 09/27/14 6:05:45 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ02099S01 — Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.064	1.665	0.0261	0.1273	0.0263	5:04:46 PM	Yes
2	0.065	1.680	0.0264	0.1282	0.0265	5:05:14 PM	Yes
3	0.065	1.672	0.0262	0.1274	0.0264	5:05:43 PM	Yes
Mean:	0.065	1.672	0.0263				
SD:	0.0003	0.0074	0.0001				
%RSD:	0.44%	0.44%	0.44				

==========

Sequence No.: 67
Sample ID: AZ02100S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.52 g
Dilution:

Autosampler Location: 52
Date Collected: 09/27/14 5:06:02 PM
Data Type: Reprocessed on 09/27/14 6:05:45 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ02100S01 — Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.061	1.604	0.0252	0.1218	0.0253	5:06:52 PM	Yes

2	0.062	1.618	0.0254	0.1242	0.0256	5:07:21 PM	Yes
3	0.061	1.604	0.0252	0.1230	0.0253	5:07:50 PM	Yes
Mean:	0.061	1.609	0.0253				
SD:	0.0003	0.0082	0.0001				
%RSD:	0.51%	0.51%	0.51				

Sequence No.: 68
Sample ID: AZ02100S01 MS
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.52 g
Dilution:

Autosampler Location: 53
Date Collected: 09/27/14 5:08:09 PM
Data Type: Reprocessed on 09/27/14 6:05:45 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ02100S01 MS **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.190	4.995	0.0784	0.3826	0.0786	5:08:59 PM	Yes
2	0.190	4.997	0.0785	0.3818	0.0786	5:09:28 PM	Yes
3	0.190	4.975	0.0781	0.3817	0.0783	5:09:57 PM	Yes
Mean:	0.190	4.989	0.0783				
SD:	0.0005	0.0121	0.0002				
%RSD:	0.24%	0.24%	0.24				

Sequence No.: 69
Sample ID: AZ02100S01 MSD
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.52 g
Dilution:

Autosampler Location: 54
Date Collected: 09/27/14 5:10:17 PM
Data Type: Reprocessed on 09/27/14 6:05:45 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ02100S01 MSD **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.178	4.663	0.0732	0.3578	0.0734	5:11:06 PM	Yes
2	0.177	4.658	0.0731	0.3585	0.0733	5:11:35 PM	Yes
3	0.178	4.673	0.0734	0.3588	0.0735	5:12:04 PM	Yes
Mean:	0.178	4.665	0.0732				
SD:	0.0003	0.0074	0.0001				
%RSD:	0.16%	0.16%	0.16				

Sequence No.: 70
Sample ID: AZ02101S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.49 g
Dilution:

Autosampler Location: 55
Date Collected: 09/27/14 5:16:58 PM
Data Type: Reprocessed on 09/27/14 6:05:45 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ02101S01 **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.058	1.510	0.0237	0.1160	0.0238	5:17:48 PM	Yes
2	0.058	1.513	0.0238	0.1167	0.0239	5:18:17 PM	Yes
3	0.058	1.512	0.0237	0.1165	0.0239	5:18:46 PM	Yes
Mean:	0.058	1.511	0.0237				
SD:	0.0001	0.0016	0.0000				
%RSD:	0.10%	0.10%	0.10				

Sequence No.: 71
Sample ID: AZ02102S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.5 g
Dilution:

Autosampler Location: 56
Date Collected: 09/27/14 5:19:06 PM
Data Type: Reprocessed on 09/27/14 6:05:46 PM

Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ02102S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.068	1.779	0.0279	0.1365	0.0281	5:19:56 PM	Yes
2	0.068	1.771	0.0278	0.1365	0.0280	5:20:25 PM	Yes
3	0.068	1.780	0.0279	0.1364	0.0281	5:20:54 PM	Yes
Mean:	0.068	1.777	0.0279				
SD:	0.0002	0.0045	0.0001				
%RSD:	0.25%	0.25%	0.25				

Sequence No.: 72
Sample ID: AZ02103S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.51 g
Dilution:

Autosampler Location: 57
Date Collected: 09/27/14 5:21:14 PM
Data Type: Reprocessed on 09/27/14 6:05:46 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ02103S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.060	1.577	0.0248	0.1212	0.0249	5:22:05 PM	Yes
2	0.060	1.574	0.0247	0.1204	0.0249	5:22:33 PM	Yes
3	0.060	1.572	0.0247	0.1205	0.0248	5:23:02 PM	Yes
Mean:	0.060	1.574	0.0247				
SD:	0.0001	0.0021	0.0000				
%RSD:	0.14%	0.14%	0.14				

Sequence No.: 73
Sample ID: AZ02104S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.48 g
Dilution:

Autosampler Location: 58
Date Collected: 09/27/14 5:23:22 PM
Data Type: Reprocessed on 09/27/14 6:05:46 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ02104S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.068	1.753	0.0275	0.1356	0.0277	5:24:13 PM	Yes
2	0.068	1.752	0.0275	0.1345	0.0276	5:24:42 PM	Yes
3	0.068	1.756	0.0276	0.1346	0.0277	5:25:10 PM	Yes
Mean:	0.068	1.754	0.0275				
SD:	0.0001	0.0021	0.0000				
%RSD:	0.12%	0.12%	0.12				

Sequence No.: 74
Sample ID: AZ02105S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.53 g
Dilution:

Autosampler Location: 59
Date Collected: 09/27/14 5:25:31 PM
Data Type: Reprocessed on 09/27/14 6:05:46 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ02105S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.006	0.169	0.0026	0.0142	0.0028	5:26:22 PM	Yes
2	0.006	0.167	0.0026	0.0131	0.0028	5:26:51 PM	Yes
3	0.006	0.169	0.0026	0.0138	0.0028	5:27:20 PM	Yes
Mean:	0.006	0.168	0.0026				
SD:	0.0000	0.0010	0.0000				
%RSD:	0.60%	0.60%	0.60				

Sequence No.: 75
Sample ID: CCV 09/27/14 RE
Analyst:
Logged In Analyst (Original) : chemist_metals

Autosampler Location: 6
Date Collected: 09/27/14 5:27:40 PM
Data Type: Reprocessed on 09/27/14 6:05:46 PM

Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCV 09/27/14 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.310	5.310	0.0834	0.4130	0.0835	5:28:31 PM	Yes
2	5.302	5.302	0.0833	0.4129	0.0834	5:28:59 PM	Yes
3	5.311	5.311	0.0834	0.4103	0.0835	5:29:28 PM	Yes
Mean:	5.308	5.308	0.0833				
SD:	0.0049	0.0049	0.0001				
%RSD:	0.09%	0.09%	0.09				

QC value within limits for Hg 253.7 Recovery = 101.92%
All analyte(s) passed QC.

==========

Sequence No.: 76 Autosampler Location: 1
Sample ID: CCB 09/27/14 RE Date Collected: 09/27/14 5:29:48 PM
Analyst: Data Type: Reprocessed on 09/27/14 6:05:46 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCB 09/27/14 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.002	-0.002	-0.0000	-0.0000	0.0001	5:30:38 PM	Yes
2	0.002	0.002	0.0000	0.0005	0.0002	5:31:06 PM	Yes
3	0.004	0.004	0.0001	0.0004	0.0002	5:31:35 PM	Yes
Mean:	0.001	0.001	0.0000				
SD:	0.0033	0.0033	0.0001				
%RSD:	262.65%	262.65%	262.65				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 77 Autosampler Location: 60
Sample ID: AZ02106S01 Date Collected: 09/27/14 5:31:54 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/27/14 6:05:46 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.45 g Initial Sample Vol:
Dilution: Sample Prep Vol: 96 mL

Replicate Data: AZ02106S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000	0.001	0.0000	-0.0001	0.0002	5:32:45 PM	Yes
2	0.000	0.003	0.0000	0.0009	0.0002	5:33:14 PM	Yes
3	0.000	0.003	0.0001	0.0001	0.0002	5:33:43 PM	Yes
Mean:	0.000	0.002	0.0000				
SD:	0.0000	0.0012	0.0000				
%RSD:	51.55%	51.55%	51.55				

==========

Sequence No.: 78 Autosampler Location: 61
Sample ID: AZ02107S01 Date Collected: 09/27/14 5:34:03 PM
Analyst: RE-Freddie Data Type: Reprocessed on 09/27/14 6:05:47 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.55 g Initial Sample Vol:
Dilution: Sample Prep Vol: 96 mL

Replicate Data: AZ02107S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.015	0.395	0.0062	0.0301	0.0063	5:34:54 PM	Yes
2	0.015	0.394	0.0062	0.0297	0.0063	5:35:23 PM	Yes
3	0.015	0.394	0.0062	0.0298	0.0063	5:35:52 PM	Yes
Mean:	0.015	0.394	0.0062				

SD:	0.0000	0.0009	0.0000
%RSD:	0.22%	0.22%	0.22

Sequence No.: 79
Sample ID: AZ02110S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.49 g
Dilution:

Autosampler Location: 62
Date Collected: 09/27/14 5:36:13 PM
Data Type: Reprocessed on 09/27/14 6:05:47 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ02110S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.067	1.740	0.0273	0.1326	0.0275	5:37:04 PM	Yes
2	0.067	1.742	0.0274	0.1319	0.0275	5:37:33 PM	Yes
3	0.067	1.741	0.0273	0.1313	0.0275	5:38:02 PM	Yes
Mean:	0.067	1.741	0.0273				
SD:	0.0001	0.0013	0.0000				
%RSD:	0.08%	0.08%	0.08				

Sequence No.: 80
Sample ID: AZ02111S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.55 g
Dilution:

Autosampler Location: 63
Date Collected: 09/27/14 5:38:23 PM
Data Type: Reprocessed on 09/27/14 6:05:47 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ02111S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.068	1.817	0.0285	0.1409	0.0287	5:39:12 PM	Yes
2	0.068	1.813	0.0285	0.1385	0.0286	5:39:40 PM	Yes
3	0.068	1.811	0.0284	0.1380	0.0286	5:40:09 PM	Yes
Mean:	0.068	1.814	0.0285				
SD:	0.0001	0.0029	0.0000				
%RSD:	0.16%	0.16%	0.16				

Sequence No.: 81
Sample ID: AZ02112S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.46 g
Dilution:

Autosampler Location: 64
Date Collected: 09/27/14 5:40:28 PM
Data Type: Reprocessed on 09/27/14 6:05:47 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ02112S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.001	0.029	0.0005	0.0027	0.0006	5:41:17 PM	Yes
2	0.001	0.021	0.0003	0.0013	0.0005	5:41:45 PM	Yes
3	0.001	0.020	0.0003	0.0011	0.0005	5:42:14 PM	Yes
Mean:	0.001	0.023	0.0004				
SD:	0.0002	0.0046	0.0001				
%RSD:	19.91%	19.91%	19.91				

Sequence No.: 82
Sample ID: AZ02113S01
Analyst: RE-Freddie
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.49 g
Dilution:

Autosampler Location: 65
Date Collected: 09/27/14 5:42:33 PM
Data Type: Reprocessed on 09/27/14 6:05:47 PM
Initial Sample Vol:
Sample Prep Vol: 96 mL

Replicate Data: AZ02113S01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

1	0.070	1.821	0.0286	0.1397	0.0287	5:43:22 PM	Yes
2	0.069	1.793	0.0282	0.1382	0.0283	5:43:50 PM	Yes
3	0.070	1.811	0.0284	0.1382	0.0286	5:44:19 PM	Yes
Mean:	0.070	1.808	0.0284				
SD:	0.0005	0.0138	0.0002				
%RSD:	0.76%	0.76%	0.76				

Sequence No.: 83 **Autosampler Location: 66**
Sample ID: AZ02114S01 **Date Collected: 09/27/14 5:44:38 PM**
Analyst: RE-Freddie **Data Type: Reprocessed on 09/27/14 6:05:47 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.44 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 96 mL**

Replicate Data: AZ02114S01 **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.078	1.971	0.0309	0.1514	0.0311	5:45:28 PM	Yes
2	0.077	1.965	0.0309	0.1503	0.0310	5:45:57 PM	Yes
3	0.077	1.967	0.0309	0.1502	0.0310	5:46:26 PM	Yes
Mean:	0.077	1.967	0.0309				
SD:	0.0001	0.0031	0.0000				
%RSD:	0.16%	0.16%	0.16				

Sequence No.: 84 **Autosampler Location: 67**
Sample ID: AZ02115S01 **Date Collected: 09/27/14 5:46:45 PM**
Analyst: RE-Freddie **Data Type: Reprocessed on 09/27/14 6:05:47 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 2.5 g **Initial Sample Vol:**
Dilution: **Sample Prep Vol: 96 mL**

Replicate Data: AZ02115S01 **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.015	0.394	0.0062	0.0317	0.0063	5:47:35 PM	Yes
2	0.016	0.407	0.0064	0.0321	0.0065	5:48:03 PM	Yes
3	0.015	0.379	0.0060	0.0318	0.0061	5:48:32 PM	Yes
Mean:	0.015	0.393	0.0062				
SD:	0.0005	0.0138	0.0002				
%RSD:	3.51%	3.51%	3.51				

Sequence No.: 85 **Autosampler Location: 6**
Sample ID: CCV 09/27/14 RE **Date Collected: 09/27/14 5:48:51 PM**
Analyst: **Data Type: Reprocessed on 09/27/14 6:05:47 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV 09/27/14 RE **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.330	5.330	0.0837	0.4161	0.0838	5:49:42 PM	Yes
2	5.334	5.334	0.0838	0.4142	0.0839	5:50:11 PM	Yes
3	5.350	5.350	0.0840	0.4151	0.0841	5:50:40 PM	Yes
Mean:	5.338	5.338	0.0838				
SD:	0.0105	0.0105	0.0002				
%RSD:	0.20%	0.20%	0.20				

QC value within limits for Hg 253.7 Recovery = 102.50%
All analyte(s) passed QC.

Sequence No.: 86 **Autosampler Location: 1**
Sample ID: CCB 09/27/14 RE **Date Collected: 09/27/14 5:51:00 PM**
Analyst: **Data Type: Reprocessed on 09/27/14 6:05:48 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**

Dilution: Sample Prep Vol:

Replicate Data: CCB 09/27/14 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.024	0.024	0.0004	0.0009	0.0005	5:51:49 PM	Yes
2	0.015	0.015	0.0002	0.0001	0.0004	5:52:18 PM	Yes
3	0.004	0.004	0.0001	-0.0001	0.0002	5:52:47 PM	Yes
Mean:	0.014	0.014	0.0002				
SD:	0.0100	0.0100	0.0002				
%RSD:	71.66%	71.66%	71.66				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

US EPA Tune Check Sample Report

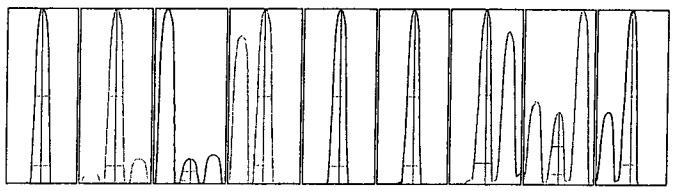
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Report Comment C:\Agilent\ICPMH\Report Templates\en\Letter\Tune Report\New and Improved 200_8TuneCheckSampleReport.xltx
Instrument Name G3281A JP12101628

[NoGas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	5970878	0.36	5.00	
24	15407293	0.64	5.00	
25	2131186	0.37	5.00	
26	2493820	0.33	5.00	
59	36216849	0.45	5.00	
115	62252076	0.35	5.00	
206	18668696	0.73	5.00	
207	16501920	0.88	5.00	
208	39003117	0.46	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	5936996	5980382	5984161	5963654	5989196
24	15267348	15442993	15442648	15527498	15355976
25	2119531	2126859	2133919	2138112	2137509
26	2492949	2484488	2505564	2497642	2488456
59	36010353	36216869	36356644	36393797	36106583
115	62316940	62184606	62107357	62050359	62601119
206	18666006	18707734	18725330	18803724	18440685
207	16311761	16483443	16672410	16616984	16425001
208	38710350	38990887	39039517	39096240	39178591

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	952310	9.00	8.9 - 9.1		0.765	0.900	
24	2517607	24.00	23.9 - 24.1		0.762	0.900	
25	345013	25.05	24.9 - 25.1		0.736	0.900	
26	406993	26.00	25.9 - 26.1		0.763	0.900	
59	6185906	59.05	58.9 - 59.1		0.745	0.900	
115	11202543	115.05	114.9 - 115.1		0.730	0.900	
206	3377165	206.05	205.9 - 206.1		0.750	0.900	
207	2959320	207.00	206.9 - 207.1		0.709	0.900	
208	7125439	208.00	207.9 - 208.1		0.728	0.900	

X% = 10 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.40	L/min			
RF Matching	2.50	V	Option Gas	0.0	%			
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps			
S/C Temp	2	°C						

Lenses Parameters

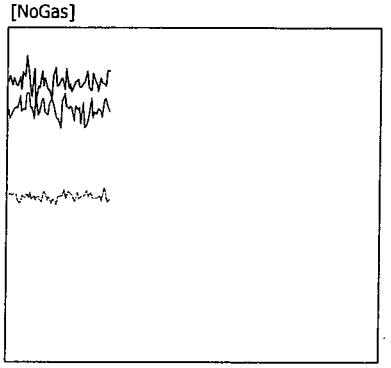
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.2	V			
Extract 2	-170.0	V	Cell Entrance	-45	V			
Omega Bias	-80	V	Cell Exit	-50	V			
Deflect	14.0	V						

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		3rd Gas Flow	0	%			
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	190	V			
Energy Discrimination	5.0	V						

Current Signal

[NoGas]



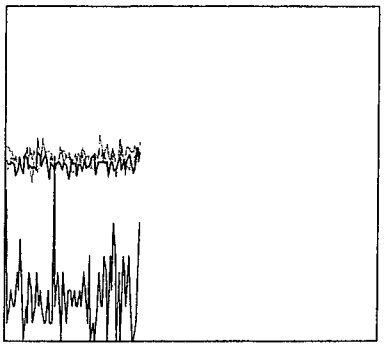
Mass	Range	Count	Avg. Count	RSD [%]
7	2000	1502	1514.6	3.48
59	5000	2736	2882.0	3.59
89	10000	4857	4917.0	2.51
140	10000	5068	5478.5	2.75
205	5000	4365	4196.2	3.13
156/140	1	0.592 %	0.542 %	22.85
70/140	5	3.453 %	3.069 %	11.28
Integration Time [sec]		0.10		

## Plasma Parameters ##					
RF Power	1600	W	Carrier Gas	0.40	L/min
RF Matching	2.50	V	Option Gas	0.0	%
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps
S/C Temp	2	°C			
## Lenses Parameters ##					
Extract 1	0.0	V	Omega Lens	8.2	V
Extract 2	-170.0	V	Cell Entrance	-45	V
Omega Bias	-80	V	Cell Exit	-50	V
Deflect	14.0	V			
## Cell Parameters ##					
Use Gas	false		3rd Gas Flow	0	%
He Flow	0.0	mL/min	OctP Bias	-8.0	V
H2 Flow	0.0	mL/min	OctP RF	190	V
Energy Discrimination	5.0	V			

Meters					
IF/BK Press	2.55E+2	Pa	Internal Temp	38.0	°C
TMP Revolution	100.0	%	S/C Temp (L)	2.1	°C
Reflected Power	43	W			

Current Signal

[He]



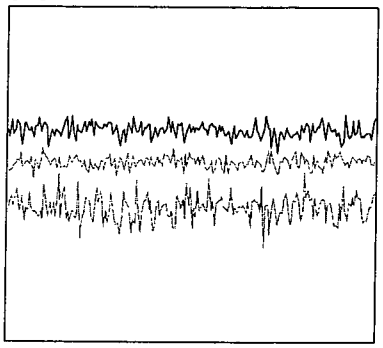
Mass	Range	Count	Avg. Count	RSD [%]
59	2000	1121	1062.8	4.51
89	2000	1179	1107.7	4.12
140	5000	2620	2684.5	3.31
205	5000	2806	2629.2	3.68
156/140	1	0.229 %	0.313 %	44.47
75	20	7	2.7	76.23
78	20	13	8.1	48.09
Integration Time [sec]		0.10		

## Plasma Parameters ##					
RF Power	1600	W	Carrier Gas	0.40	L/min
RF Matching	2.50	V	Option Gas	0.0	%
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps
S/C Temp	2	°C			
## Lenses Parameters ##					
Extract 1	0.0	V	Omega Lens	8.2	V
Extract 2	-170.0	V	Cell Entrance	-40	V
Omega Bias	-80	V	Cell Exit	-60	V
Deflect	1.0	V			
## Cell Parameters ##					
Use Gas	true		3rd Gas Flow	0	%
He Flow	3.7	mL/min	OctP Bias	-19.0	V
H2 Flow	0.0	mL/min	OctP RF	190	V
Energy Discrimination	5.0	V			

Meters					
IF/BK Press	2.56E+2	Pa	Internal Temp	39.0	°C
TMP Revolution	100.0	%	S/C Temp (L)	2.0	°C
Reflected Power	43	W			

Current Signal

[H2]



Mass	Range	Count	Avg. Count	RSD [%]
59	500	220	198.9	9.56
89	5000	2719	2672.4	3.33
140	2000	1129	1121.4	4.15
205	5000	3343	3154.0	3.30
56	5000	2042	2151.4	8.74
78	20	0	0.2	287.14
80	100	33	30.6	23.88
Integration Time [sec]		0.10		

## Plasma Parameters ##					
RF Power	1600	W	Carrier Gas	0.40	L/min
RF Matching	2.50	V	Option Gas	0.0	%
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps
S/C Temp	2	°C			
## Lenses Parameters ##					
Extract 1	0.0	V	Omega Lens	8.2	V
Extract 2	-170.0	V	Cell Entrance	-30	V
Omega Bias	-80	V	Cell Exit	-60	V
Deflect	-1.6	V			
## Cell Parameters ##					
Use Gas	true		3rd Gas Flow	0	%
He Flow	0.0	mL/min	OctP Bias	-18.0	V
H2 Flow	6.0	mL/min	OctP RF	190	V
Energy Discrimination	3.0	V			

Meters					
IF/BK Press	2.61E+2	Pa	Internal Temp	36.9	°C
TMP Revolution	100.0	%	S/C Temp (L)	2.0	°C
Reflected Power	43	W			

US EPA Tune Check Sample Report

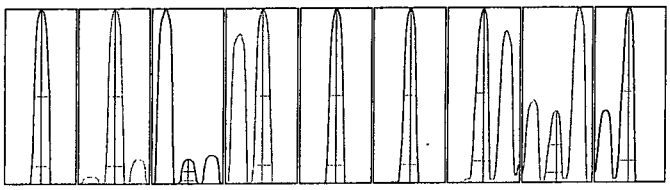
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Report Comment C:\Agilent\ICPMH\Report Templates\en\Letter\Tune Report\New and Improved 200_8TuneCheckSampleReport.xltx
Instrument Name G3281A JP12101628

[NoGas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	7908817	0.30	5.00	
24	16254019	0.46	5.00	
25	2233964	0.59	5.00	
26	2600373	0.35	5.00	
59	39642023	0.44	5.00	
115	62254604	0.45	5.00	
206	17846537	0.55	5.00	
207	16022456	0.54	5.00	
208	37880601	0.70	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	7885109	7893660	7942871	7899672	7922775
24	16180518	16230156	16350644	16196584	16312192
25	2211100	2235384	2243360	2242967	2237009
26	2591429	2589755	2606620	2610072	2603989
59	39429348	39828387	39502035	39795667	39654676
115	62278214	62656575	62268871	61866288	62203071
206	18007136	17855866	17833618	17748346	17787719
207	16082357	16092032	15880524	16003778	16053591
208	37827883	38075193	37544248	37740656	38215027

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	1255470	9.05	8.9 - 9.1		0.768	0.900	
24	2736889	24.05	23.9 - 24.1		0.754	0.900	
25	375308	25.05	24.9 - 25.1		0.705	0.900	
26	437778	26.05	25.9 - 26.1		0.754	0.900	
59	6764851	59.05	58.9 - 59.1		0.721	0.900	
115	11313538	115.05	114.9 - 115.1		0.722	0.900	
206	3267511	206.00	205.9 - 206.1		0.729	0.900	
207	2842303	207.00	206.9 - 207.1		0.738	0.900	
208	6958826	207.95	207.9 - 208.1		0.745	0.900	

X% = 10 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.40	L/min			
RF Matching	2.50	V	Option Gas	0.0	%			
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps			
S/C Temp	2	°C						

Lenses Parameters

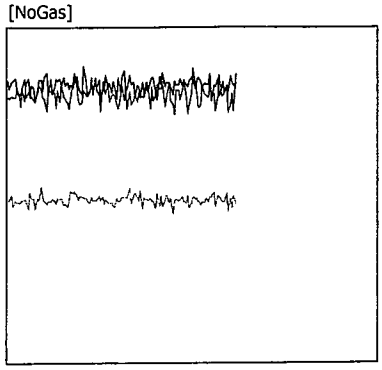
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	9.2	V			
Extract 2	-190.0	V	Cell Entrance	-45	V			
Omega Bias	-95	V	Cell Exit	-50	V			
Deflect	13.8	V						

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		3rd Gas Flow	0	%			
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	190	V			
Energy Discrimination	5.0	V						

Current Signal

[NoGas]



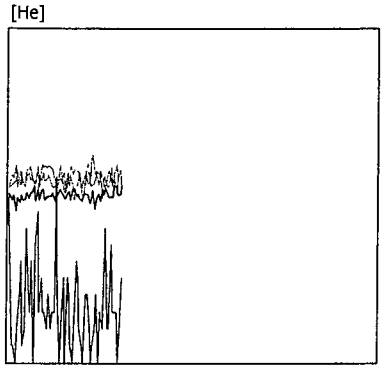
Mass	Range	Count	Avg. Count	RSD [%]
7	2000	1722	1597.8	3.49
59	5000	2889	2987.3	2.96
89	10000	4691	4820.6	2.86
140	10000	5511	5542.0	2.49
205	5000	4163	4140.7	2.53
156/140	1	0.399 %	0.488 %	23.38
70/140	10	3.194 %	3.189 %	13.84
Integration Time [sec]		0.10		

## Plasma Parameters ##					
RF Power	1600	W	Carrier Gas	0.40	L/min
RF Matching	2.50	V	Option Gas	0.0	%
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps
S/C Temp	2	°C			
## Lenses Parameters ##					
Extract 1	0.0	V	Omega Lens	9.2	V
Extract 2	-190.0	V	Cell Entrance	-45	V
Omega Bias	-95	V	Cell Exit	-50	V
Deflect	13.8	V			
## Cell Parameters ##					
Use Gas	false		3rd Gas Flow	0	%
He Flow	0.0	mL/min	OctP Bias	-8.0	V
H2 Flow	0.0	mL/min	OctP RF	190	V
Energy Discrimination	5.0	V			

Meters					
IF/BK Press	2.49E+2	Pa	Internal Temp	38.7	°C
TMP Revolution	100.0	%	S/C Temp (L)	2.0	°C
Reflected Power	40	W			

Current Signal

[He]



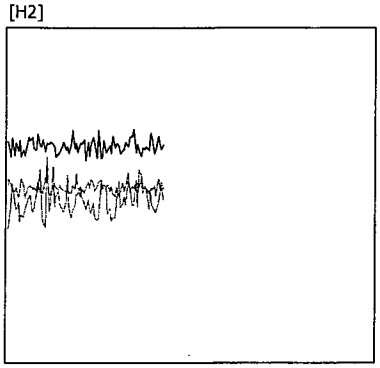
Mass	Range	Count	Avg. Count	RSD [%]
59	2000	1004	1077.5	4.62
89	2000	1055	1110.2	4.88
140	5000	2564	2662.2	2.83
205	5000	2633	2487.9	3.16
156/140	1	0.429 %	0.237 %	50.62
75	20	5	3.3	77.71
78	20	5	9.2	46.09
Integration Time [sec]		0.10		

## Plasma Parameters ##					
RF Power	1600	W	Carrier Gas	0.40	L/min
RF Matching	2.50	V	Option Gas	0.0	%
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps
S/C Temp	2	°C			
## Lenses Parameters ##					
Extract 1	0.0	V	Omega Lens	9.2	V
Extract 2	-190.0	V	Cell Entrance	-40	V
Omega Bias	-95	V	Cell Exit	-60	V
Deflect	0.4	V			
## Cell Parameters ##					
Use Gas	true		3rd Gas Flow	0	%
He Flow	3.7	mL/min	OctP Bias	-19.0	V
H2 Flow	0.0	mL/min	OctP RF	190	V
Energy Discrimination	5.0	V			

Meters					
IF/BK Press	2.53E+2	Pa	Internal Temp	37.2	°C
TMP Revolution	100.0	%	S/C Temp (L)	2.0	°C
Reflected Power	42	W			

Current Signal

[H2]



Mass	Range	Count	Avg. Count	RSD [%]
59	500	242	239.6	9.22
89	5000	2581	2595.7	3.24
140	2000	1093	1154.8	4.55
205	5000	3251	3223.4	3.31
56	5000	2267	2257.1	3.25
78	20	0	0.2	303.07
80	20	6	7.0	44.59
Integration Time [sec]		0.10		

## Plasma Parameters ##					
RF Power	1600	W	Carrier Gas	0.40	L/min
RF Matching	2.50	V	Option Gas	0.0	%
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps
S/C Temp	2	°C			
## Lenses Parameters ##					
Extract 1	0.0	V	Omega Lens	9.2	V
Extract 2	-190.0	V	Cell Entrance	-30	V
Omega Bias	-95	V	Cell Exit	-60	V
Deflect	-2.0	V			
## Cell Parameters ##					
Use Gas	true		3rd Gas Flow	0	%
He Flow	0.0	mL/min	OctP Bias	-18.0	V
H2 Flow	6.0	mL/min	OctP RF	190	V
Energy Discrimination	3.0	V			

Meters					
IF/BK Press	2.58E+2	Pa	Internal Temp	37.6	°C
TMP Revolution	100.0	%	S/C Temp (L)	2.0	°C
Reflected Power	42	W			

US EPA Tune Check Sample Report

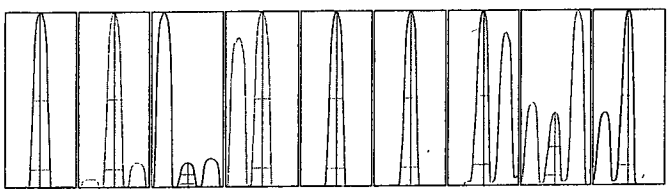
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Report Comment C:\Agilent\ICPMH\Report Templates\en\Letter\Tune Report\New and Improved 200_8TuneCheckSampleReport.xltx
Instrument Name G3281A JP12101628

[NoGas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	7042465	0.38	5.00	
24	15701885	0.35	5.00	
25	2140769	0.51	5.00	
26	2514685	0.28	5.00	
59	37109735	0.67	5.00	
115	57089726	0.24	5.00	
206	15643240	0.67	5.00	
207	13793596	0.61	5.00	
208	32562319	0.72	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	7058148	7050581	7012582	7016548	7074469
24	15699545	15659723	15665296	15795124	15689738
25	2128593	2153279	2147563	2144049	2130359
26	2525978	2509827	2507945	2516755	2512922
59	36802437	37383748	37326989	37091602	36943900
115	57135133	56943106	57143579	57268882	56957928
206	15725751	15591915	15540809	15574787	15782939
207	13859699	13674747	13827298	13739479	13866757
208	32576182	32458930	32931845	32548526	32296110

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	1099140	9.00	8.9 - 9.1		0.800	0.900	
24	2530192	24.05	23.9 - 24.1		0.763	0.900	
25	342984	25.05	24.9 - 25.1		0.736	0.900	
26	402879	26.05	25.9 - 26.1		0.764	0.900	
59	6188656	59.05	58.9 - 59.1		0.751	0.900	
115	10265124	115.05	114.9 - 115.1		0.726	0.900	
206	2885738	206.05	205.9 - 206.1		0.731	0.900	
207	2541780	207.00	206.9 - 207.1		0.704	0.900	
208	6117082	208.00	207.9 - 208.1		0.710	0.900	

X% = 10 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.40	L/min			
RF Matching	2.50	V	Option Gas	0.0	%			
Smpl Depth	8.4	mm	Nebulizer Pump	0.10	rps			
S/C Temp	-2	°C						

Lenses Parameters

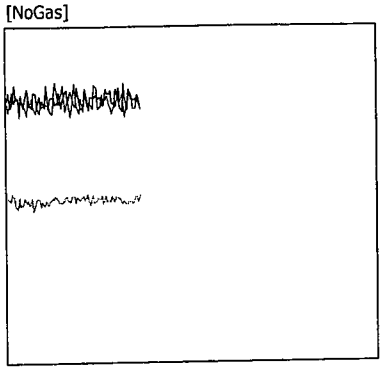
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	9.2	V			
Extract 2	-180.0	V	Cell Entrance	-45	V			
Omega Bias	-95	V	Cell Exit	-50	V			
Deflect	13.8	V						

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		3rd Gas Flow	0	%			
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	190	V			
Energy Discrimination	5.0	V						

Current Signal

[NoGas]



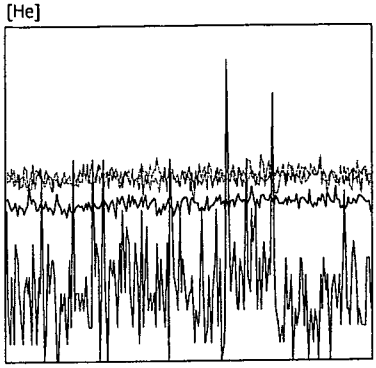
Mass	Range	Count	Avg. Count	RSD [%]
7	2000	1510	1550.1	3.29
59	5000	3015	2972.6	2.79
89	10000	4934	4809.3	2.24
140	10000	5475	5433.3	2.24
205	5000	3787	3926.6	2.71
156/140	1	0.493 %	0.506 %	23.35
70/140	5	3.233 %	3.337 %	11.04
Integration Time [sec]		0.10		

## Plasma Parameters ##					
RF Power	1600	W	Carrier Gas	0.40	L/min
RF Matching	2.50	V	Option Gas	0.0	%
Smpl Depth	8.4	mm	Nebulizer Pump	0.10	rps
S/C Temp	2	°C			
## Lenses Parameters ##					
Extract 1	0.0	V	Omega Lens	9.2	V
Extract 2	-180.0	V	Cell Entrance	-45	V
Omega Bias	-95	V	Cell Exit	-50	V
Deflect	13.8	V			
## Cell Parameters ##					
Use Gas	false		3rd Gas Flow	0	%
He Flow	0.0	mL/min	OctP Bias	-8.0	V
H2 Flow	0.0	mL/min	OctP RF	190	V
Energy Discrimination	5.0	V			

Meters					
IF/BK Press	2.49E+2	Pa	Internal Temp	41.4	°C
TMP Revolution	100.0	%	S/C Temp (L)	2.0	°C
Reflected Power	39	W			

Current Signal

[He]



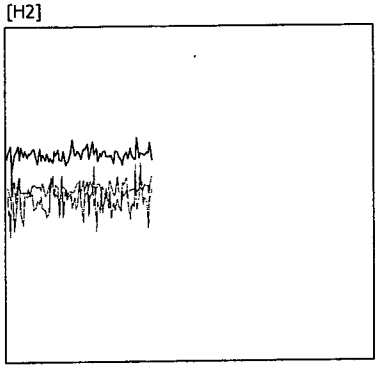
Mass	Range	Count	Avg. Count	RSD [%]
59	2000	1082	1088.0	3.91
89	2000	1078	1099.8	4.27
140	5000	2598	2563.6	3.00
205	5000	2188	2336.5	3.53
156/140	1	0.462 %	0.286 %	51.33
75	20	3	4.4	65.76
78	50	8	9.2	39.24
Integration Time [sec]		0.10		

## Plasma Parameters ##					
RF Power	1600	W	Carrier Gas	0.40	L/min
RF Matching	2.50	V	Option Gas	0.0	%
Smpl Depth	8.4	mm	Nebulizer Pump	0.10	rps
S/C Temp	2	°C			
## Lenses Parameters ##					
Extract 1	0.0	V	Omega Lens	9.2	V
Extract 2	-180.0	V	Cell Entrance	-40	V
Omega Bias	-95	V	Cell Exit	-60	V
Deflect	0.4	V			
## Cell Parameters ##					
Use Gas	true		3rd Gas Flow	0	%
He Flow	3.7	mL/min	OctP Bias	-19.0	V
H2 Flow	0.0	mL/min	OctP RF	190	V
Energy Discrimination	5.0	V			

Meters					
IF/BK Press	2.49E+2	Pa	Internal Temp	41.7	°C
TMP Revolution	100.0	%	S/C Temp (L)	1.9	°C
Reflected Power	39	W			

Current Signal

[H2]



Mass	Range	Count	Avg. Count	RSD [%]
59	500	280	240.9	9.91
89	5000	2564	2554.4	3.57
140	2000	1029	1054.7	4.34
205	5000	3000	3087.9	2.94
56	5000	2028	2081.9	4.68
78	20	0	0.3	212.13
80	50	35	26.0	23.33
Integration Time [sec]		0.10		

## Plasma Parameters ##					
RF Power	1600	W	Carrier Gas	0.40	L/min
RF Matching	2.50	V	Option Gas	0.0	%
Smpl Depth	8.4	mm	Nebulizer Pump	0.10	rps
S/C Temp	2	°C			
## Lenses Parameters ##					
Extract 1	0.0	V	Omega Lens	9.2	V
Extract 2	-180.0	V	Cell Entrance	-30	V
Omega Bias	-95	V	Cell Exit	-60	V
Deflect	-2.0	V			
## Cell Parameters ##					
Use Gas	true		3rd Gas Flow	0	%
He Flow	0.0	mL/min	OctP Bias	-18.0	V
H2 Flow	6.0	mL/min	OctP RF	190	V
Energy Discrimination	3.0	V			

Meters					
IF/BK Press	2.53E+2	Pa	Internal Temp	41.6	°C
TMP Revolution	100.0	%	S/C Temp (L)	2.1	°C
Reflected Power	39	W			

Metals Standards Log Book # 39 Page # 98

RE 9/13/14

Hg WORKING STANDARDS 7470A/7471/245.1				
Hg WORKING STD	1ml 10ug/ml Hg STOCK STD. and 2mL HNO3 JT Baker LOT#50770 to final vol 200mL with milipore water	08/28/14	exp: 09/25/14 final conc: 50ug/L expires daily	
Hg WORKING ICV	1ml 10ug/ml Hg STOCK ICV and 2mL HNO3 JT Baker LOT#50770 to final vol 200mL with milipore water	08/28/14	exp: 09/25/14 final conc: 50ug/L expires daily	RE 9/13/14

RE 9/15/14

ICP-MS STANDARDS Prep'd by: SJH
Prep Date: Today
Expires: 1 week

Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL DI Water
Lot #
20 mL HCL / 2000mL DI Water
Lot #

Internal Standard Mix: Prep 09/15/14

Standard 4

Amount	STD	Manufacturer	Lot #
50 uL	CCV-A	ENV EXPRESS	1331823-33166
50 uL	CCV-B	ENV EXPRESS	1331824-33167
50 uL	CCV-C	ENV EXPRESS	1331825-33168

Prepared in 100 mL of 1% HNO3/1.0% HCL

Standard 3
Amount STD
25 mL Standard 4
Prepared in 50 mL of 1% HNO3/1.0% HCL

Standard 2
Amount STD
500 uL Standard 4
Prepared in 50 mL of 1% HNO3/1.0% HCL

Standard 1
Amount STD
50 uL Standard 4
Prepared in 50 mL of 1% HNO3/1.0% HCL

ICP-MS ICV

Amount	STD		
50 uL	QCS ICV A	CPI	13I145-32869
50 uL	QCS ICV B	CPI	13I145-32870

Prepared in 50 mL of 1% HNO3/1.0% HCL

ICSA Prep:

1 mL	ICSA-DF2	O2Si	1053467-33165

Prepared in 10 mL of 1% HNO3/1.0% HCL

ICSAB Prep:

1mL	ICSA	CPI	12J143-33110
100uL	INT - DF10	O2Si	1054694-33223

Prepared in 10 mL of 1% HNO3/1.0% HCL

Second Source As:
25 uL Metals Mix #2 AbsoluteGrade 161613-33063
Prepared in 100 mL of 1% HNO3/ 1% HCl

RE 9/15/14

RE 9/15/14

KMnO4 J.T. BAKER	**Lot #** 0000020503 - 325	**DATE:**	9/15/14
KMnO4		**EXP:**	9/15/15
		PREP BY:	DH
Procedure: Add 200g KMnO4 to 4000mL DI H2O.		RE 9/15/14	

RE 9/15/14

Hg WORKING STANDARDS 7470A/7471/245.1				
Hg WORKING STD	1ml 10ug/ml Hg STOCK STD. and 2mL HNO3 JT Baker LOT#50770 to final vol 200mL with milipore water	08/28/14	exp: 09/25/14 final conc: 50ug/L expires daily	RE 9/15/14

RE 9/15/14

Internal Standard Concentration

Amt	STD	Element	Vendor	Lot#	Final Conc. in Std	Expires
50uL	1001 ug/mL	Li	BDH	F2-L102140-33279	200 ug/L	02/01/15
125uL	1000 ug/mL	Sc	o2si	1051538-32901	500ug/L	03/30/15
125uL	1000 ug/mL	Ge	CPI	12G219-32033	500ug/L	08/08/14
125uL	1000 ug/mL	In	CPI	13H191-32872	500ug/L	03/20/15
125uL	1000 ug/mL	Tb	CPI	13J004-33038	500ug/L	04/15/15
125uL	1000 ug/mL	Ho	CPI	13G236-32873	500ug/L	03/20/15

Prep:	09/15/14	By: SJH	Prep in - 1%HNO3/1.0%HCL:	Final Volume: 250mL
Expires:	10/14/14			

RE 9/15/14

Metals Standards Log Book # 39 Page # 102

SJH 09/18/14
6010B/L
(A)

2%HNO3 / 2%HCl BLK					200.7 ICV				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
40 mL	HCL	BDH	4114020	09/18/14	0.25ML	QCS ICV A	CPI	13I145-32869	03/18/15
40 mL	HNO3	JT BAKER	0000067379	09/18/14	0.25ML	QCS ICV B	CPI	13I145-32870	03/18/15
Prepared in 2000 ml DI Water					Prepared in 50ml 2%HNO3/2%HCl				
STD 1 / LDL 200.7					200.7 ICSA				
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	0.5mL	Al	CPI	12K049-32257	10/16/14
0.250 mL	200.7 LDL	O2SI	1052542-33103	11/01/14	0.5mL	Ca	CPI	13A332-32259	10/16/14
Prepared in 50 ml 2%HNO3/2%HCl					0.5mL	Mg	CPI	13B063-32258	10/16/14
STD 3 / HDL 200.7					0.5mL	Fe	O2SI	1043869-32197	09/14/14
0.5 mL	CCV-A	Environmental Express	1331823-33166	11/18/14	Prepared in 50 ml 2%HNO3/2%HCl				
0.5 mL	CCV-B	Environmental Express	1331824-33167	11/18/14	200.7 ICSAB				
0.5 mL	CCV-C	Environmental Express	1331825-33168	11/18/14	0.5mL	Al	CPI	12K049-32257	10/16/14
Prepared in 100 ml 2%HNO3/2%HCl					0.5mL	Ca	CPI	13A332-32259	10/16/14
STD 2 / CCV1 200.7					0.5mL	Mg	CPI	13B063-32258	10/16/14
AMOUNT	STD	PREP DATE	EXP DATE		0.5mL	Fe	O2SI	1043869-32197	09/14/14
25mL	STD 3	TODAY	1 WEEK		0.25mL	INT SPECIAL MIX	O2SI	1054694-33223	1/1/15
25mL	2%HNO3/2%HCl	TODAY	1 WEEK		Prepared in 50 ml 2%HNO3/2%HCl				
CCV2 200.7									
15mL	STD 3	TODAY	1 WEEK						
25mL	2%HNO3/2%HCl	TODAY	1 WEEK						

SJH 09/18/14

SJH 09/18/14

ICP-MS STANDARDS Prep'd by: SJH
Prep Date: Today
Expires: 1 week

Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL Di Water
Lot #
20 mL HCL / 2000mL Di Water
Lot #

Internal Standard Mix: Prep 09/15/14

Standard 4

Amount	STD	Manufacturer	Lot #
50 uL	CCV-A	ENV EXPRESS	1331823-33166
50 uL	CCV-B	ENV EXPRESS	1331824-33167
50 uL	CCV-C	ENV EXPRESS	1331825-33168

Prepared in 100 mL of 1% HNO3/1.0% HCL

Standard 3
Amount STD
25 mL Standard 4
Prepared in 50 mL of 1% HNO3/1.0% HCL

Standard 2
Amount STD
500 uL Standard 4
Prepared in 50 mL of 1% HNO3/1.0% HCL

Standard 1
Amount STD
50 uL Standard 4
Prepared in 50 mL of 1% HNO3/1.0% HCL

ICP-MS ICV

Amount	STD		
50 uL	QCS ICV A	CPI	13I145-32869
50 uL	QCS ICV B	CPI	13I145-32870

Prepared in 50 mL of 1% HNO3/1.0% HCL

ICSA Prep:

1 mL	ICSA-DF2	O2Si	1053467-33165

Prepared in 10 mL of 1% HNO3/1.0% HCL

ICSAB Prep:

1mL	ICSA	CPI	12J143-33110
100uL	INT - DF10	O2Si	1054694-33223

Prepared in 10 mL of 1% HNO3/1.0% HCL

Second Source As:

25 uL	Metals Mix #2	AbsoluteGrade	161613-33063

Prepared in 100 mL of 1% HNO3/ 1% HCl

SJH 09/18/14

SJH 09/18/14

RE 9/18/14

Hg WORKING STANDARDS 7470A/7471/245.1

Hg WORKING STD	1ml 10ug/ml Hg STOCK STD. and 2mL HNO3 JT Baker LOT#50770 to final vol 200mL with milipore water	08/28/14	exp: 09/25/14	final conc: 50ug/L expires daily
Hg WORKING ICV	1ml 10ug/ml Hg STOCK ICV and 2mL HNO3 JT Baker LOT#50770 to final vol 200mL with milipore water	08/28/14	exp: 09/25/14	final conc: 50ug/L expires daily

RE 9/18/14

Metals Standards Log Book # 39 Page # 103

SJH 09/19/14

1%HNO3 / 5%HCl BLK				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE
100 mL	HCl	BDH	4114020	09/18/14
20 mL	HNO3	JT BAKER	0000067379	09/18/14
Prepared in 2000 ml DI Water				09/19/14

STD 1 / LDL 6010B/6010C				
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.5 mL	6010 LDL	O2SI	1050245-32826	10/01/14
Prepared in 50 ml 1%HNO3/5%HCl				

STD 3 / HDL 6010B/6010C				
1ML	CCV-A	Environmental Express	1331823-33166	11/18/14
1ML	CCV-B	Environmental Express	1331824-33167	11/18/14
1ML	CCV-C	Environmental Express	1331825-33168	11/18/14
Prepared in 100 ml 1%HNO3 / 5%HCl				

STD 2 / CCV1 6010B/6010C/6010C			
AMOUNT	STD	PREP DATE	EXP DATE
25mL	STD 3	Today	1 week
25mL	1%HNO3/5%HCl	Today	1 week
CCV2 6010B/6010C			
AMOUNT	STD	PREP DATE	EXP DATE
15mL	STD 3	Today	1 week
25mL	1%HNO3/5%HCl	Today	1 week

6010B/6010C ICSA				
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
1mL	Al	CPI	12K049-32257	10/16/14
1mL	Ca	CPI	13A332-32259	10/16/14
1mL	Mg	CPI	13B063-32258	10/16/14
1mL	Fe	O2SI	1043869-32197	09/14/14
Prepared in 50 ml 1%HNO3/5%HCl				

6010B/6010C ICSAB				
1mL	Al	CPI	12K049-32257	10/16/14
1mL	Ca	CPI	13A332-32259	10/16/14
1mL	Mg	CPI	13B063-32258	10/16/14
1mL	Fe	O2SI	1043869-32197	09/14/14
0.5mL	INT SPECIAL MIX	O2SI	1054694-33223	01/01/15
Prepared in 50 ml 1%HNO3/5%HCl				

6010B/6010C ICV				
0.5ML	QCS ICV A	CPI	13I145-32869	03/18/15
0.5ML	QCS ICV B	CPI	13I145-32870	03/18/15
Prepared in 50ml 1%HNO3/5%HCl				

6010B/6010C Internal Standard				
AMOUNT	STD	MANUFACTURER		
2mL	Yttrium	O2SI	1052462-33100	04/24/15
Prepared in 2L 1%HNO3 / 5%HCl				

SJH 09/19/14

SJH 09/19/14

ICP-MS STANDARDS Prep'd by: SJH
Prep Date: Today
Expires: 1 week

Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL DI Water
Lot #
20 mL HCL / 2000mL Di Water
Lot #

Internal Standard Mix: Prep 09/15/14

Standard 4

Amount	STD	Manufacturer	Lot #
50 uL	CCV-A	ENV EXPRESS	1331823-33166
50 uL	CCV-B	ENV EXPRESS	1331824-33167
50 uL	CCV-C	ENV EXPRESS	1331825-33168

Prepared in 100 mL of 1% HNO3/1.0% HCL

Standard 3
Amount STD
25 mL Standard 4
Prepared in 50 mL of 1% HNO3/1.0% HCL

Standard 2
Amount STD
500 uL Standard 4
Prepared in 50 mL of 1% HNO3/1.0% HCL

Standard 1
Amount STD
50 uL Standard 4
Prepared in 50 mL of 1% HNO3/1.0% HCL

ICP-MS ICV

Amount	STD		
50 uL	QCS ICV A	CPI	13I145-32869
50 uL	QCS ICV B	CPI	13I145-32870

Prepared in 50 mL of 1% HNO3/1.0% HCL

ICSA Prep:

1 mL	ICSA-DF2	O2Si	1053467-33165

Prepared in 10 mL of 1% HNO3/1.0% HCL

ICSAB Prep:

1mL	ICSA	CPI	12J143-33110
100uL	INT - DF10	O2Si	1054694-33223

Prepared in 10 mL of 1% HNO3/1.0% HCL

Second Source As:

25 uL	Metals Mix #2	AbsoluteGrade	161613-33083

Prepared in 100 mL of 1% HNO3/ 1% HCl

SJH 09/19/14

SJH 09/19/14

2%HNO3 / 2%HCl BLK				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE
40 mL	HCl	BDH	4114020	09/19/14
40 mL	HNO3	JT BAKER	0000067379	09/19/14
Prepared in 2000 ml DI Water				

STD 1 / LDL 200.7				
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.250 mL	200.7 LDL	O2SI	1052542-33103	11/01/14
Prepared in 50 ml 2%HNO3/2%HCl				

STD 3 / HDL 200.7				
0.5 mL	CCV-A	Environmental Express	1331823-33166	11/18/14
0.5 mL	CCV-B	Environmental Express	1331824-33167	11/18/14
0.5 mL	CCV-C	Environmental Express	1331825-33168	11/18/14
Prepared in 100 ml 2%HNO3/2%HCl				

STD 2 / CCV1 200.7			
AMOUNT	STD	PREP DATE	EXP DATE
25mL	STD 3	TODAY	1 WEEK
25mL	2%HNO3/2%HCl	TODAY	1 WEEK
CCV2 200.7			
15mL	STD 3	TODAY	1 WEEK
25mL	2%HNO3/2%HCl	TODAY	1 WEEK

200.7 ICV				
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.25ML	QCS ICV A	CPI	13I145-32869	03/18/15
0.25ML	QCS ICV B	CPI	13I145-32870	03/18/15
Prepared in 50ml 2%HNO3/2%HCl				

200.7 ICSA				
0.5mL	Al	CPI	12K049-32257	10/16/14
0.5mL	Ca	CPI	13A332-32259	10/16/14
0.5mL	Mg	CPI	13B063-32258	10/16/14
0.5mL	Fe	O2SI	1043869-32197	09/14/14
Prepared in 50 ml 2%HNO3/2%HCl				

200.7 ICSAB				
0.5mL	Al	CPI	12K049-32257	10/16/14
0.5mL	Ca	CPI	13A332-32259	10/16/14
0.5mL	Mg	CPI	13B063-32258	10/16/14
0.5mL	Fe	O2SI	1043869-32197	09/14/14
0.25mL	INT SPECIAL MIX	O2SI	1054694-33223	1/1/15
Prepared in 50 ml 2%HNO3/2%HCl				

SJH 09/19/14

9-2014
RE

SJH

Hg WORKING STANDARDS 7470A/7471/245.1			
Hg WORKING STD	1ml 10ug/ml Hg STOCK STD. 08/28/14 exp: 09/25/14 and 2mL HNO3 JT Baker LOT#50770 to final vol 200mL with milipore water		final conc: 50ug/L expires daily
Hg WORKING ICV	1ml 10ug/ml Hg STOCK ICV 08/28/14 exp: 09/25/14 and 2mL HNO3 JT Baker LOT#50770 to final vol 200mL with milipore water		final conc: 50ug/L expires daily

SJH 09/22/14

ICP-MS STANDARDS Prep'd by SJH
Prep Date Today
Expires 1 week

Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL Di Water
Lot #
20 mL HCL / 2000mL Di Water
Lot #

Internal Standard Mix: Prep 09/15/14

Standard 4

Amount	STD	Manufacturer	Lot #
50 uL	CCV-A	ENV EXPRESS	1331823-33166
50 uL	CCV-B	ENV EXPRESS	1331824-33167
50 uL	CCV-C	ENV EXPRESS	1331825-33168

Prepared in 100 mL of 1% HNO3/1 0% HCL

Standard 3
Amount STD
25 mL Standard 4
Prepared in 50 mL of 1% HNO3/1.0% HCL

Standard 2
Amount STD
500 uL Standard 4
Prepared in 50 mL of 1% HNO3/1 0% HCL

Standard 1
Amount STD
50 uL Standard 4
Prepared in 50 mL of 1% HNO3/1 0% HCL

ICP-MS ICV

Amount	STD		
50 uL	QCS ICV A	CPI	13I145-32869
50 uL	QCS ICV B	CPI	13I145-32870

Prepared in 50 mL of 1% HNO3/1 0% HCL

ICSA Prep.
1 mL ICSA-DF2 O2SI 1053467-33165
Prepared in 10 mL of 1% HNO3/1.0% HCL

ICSAB Prep:
1mL ICSA CPI 12J143-33110
100uL INT - DF10 O2SI 1054694-33223
Prepared in 10 mL of 1% HNO3/1 0% HCL

Second Source As:
25 uL Metals Mix #2 AbsoluteGrade 161613-33063
Prepared in 100 mL of 1% HNO3/ 1% HCl

SJH 09/22/14

SJH 09/22/14

Hg WORKING STANDARDS 7470A/7471/245.1			
Hg WORKING STD	1ml 10ug/ml Hg STOCK STD. 08/28/14 exp: 09/25/14 and 2mL HNO3 JT Baker LOT#50770 to final vol 200mL with milipore water		final conc: 50ug/L expires daily

SJH 09/22/14

SJH 09/22/14

1:1 HNO3	Lot #	DATE:	9/22/14
HNO3 J.T. BAKER	74185-1841	EXP:	9/22/15
Procedure: Add 500mL HNO3 to 500mL DI H2O		PREP BY:	NM

SJH 09/22/14

SJH 09/22/14

1:1 HCl	Lot #	DATE:	9/22/14
HCl	BDH #4114020-1824	EXP:	9/22/15
Procedure: Add 500mL HCl to 500mL DI H2O		PREP BY:	NM

SJH 09/22/14

SJH 09/22/14

1%HNO3 / 5%HCl BLK

AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE
100 mL	HCL	BDH	4114020	09/18/14
20 mL	HNO3	JT BAKER	0000067379	09/18/14

Prepared in 2000 ml DI Water

SJH 09/22/14

STD 1 / LDL 6010B/6010C

AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.5 mL	6010 LDL	ABSOLUTE	1050245-32826	10/01/14

Prepared in 50 ml 1%HNO3/5%HCl

STD 3 / HDL 6010B/6010C

1ML	CCV-A	Environmental Express	1331823-33166	11/18/14
1ML	CCV-B	Environmental Express	1331824-33167	11/18/14
1ML	CCV-C	Environmental Express	1331825-33168	11/18/14

Prepared in 100 ml 1%HNO3 / 5%HCl

STD 2 / CCV1 6010B/6010C/6010C

AMOUNT	STD	PREP DATE	EXP DATE
25mL	STD 3	Today	1 week
25mL	1%HNO3/5%HCl	Today	1 week

CCV2 6010B/6010C

AMOUNT	STD	PREP DATE	EXP DATE
15mL	STD 3	Today	1 week
25mL	1%HNO3/5%HCl	Today	1 week

6010B/6010C ICSA

AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
1mL	Al	CPI	12K049-32257	10/16/14
1mL	Ca	CPI	13A332-32259	10/16/14
1mL	Mg	CPI	13B063-32258	10/16/14
1mL	Fe	O2SI	1043869-32197	09/14/14

Prepared in 50 ml 1%HNO3/5%HCl

6010B/6010C ICSAB

1mL	Al	CPI	12K049-32257	10/16/14
1mL	Ca	CPI	13A332-32259	10/16/14
1mL	Mg	CPI	13B063-32258	10/16/14
1mL	Fe	O2SI	1043869-32197	09/14/14
0.5mL	INTERSPECTRUM	O2SI	1054694-33223	01/01/15

Prepared in 50 ml 1%HNO3/5%HCl

6010B/6010C ICV

0.5ML	QCS ICV A	CPI	13I145-32869	03/18/15
0.5ML	QCS ICV B	CPI	13I145-32870	03/18/15

Prepared in 50ml 1%HNO3/5%HCl

6010B/6010C Internal Standard

AMOUNT	STD	MANUFACTURER	PREP	EXP
2mL	Yttrium	O2SI	Today	1 week

Prepared in 2L 1%HNO3 / 5%HCl

SJH 09/22/14

SJH 09/23/14

Hg WORKING STANDARDS 7470A/7471/245.1				
Hg WORKING STD	1ml 10ug/ml Hg STOCK STD. 08/28/14	exp:	09/25/14	
	and 2mL HNO3 JT Baker LOT#53953		final conc:	50ug/L
	to final vol 200mL with milipore water		expires daily	
Hg WORKING ICV	1ml 10ug/ml Hg STOCK ICV 08/28/14	exp:	09/25/14	
	and 2mL HNO3 JT Baker LOT#50770		final conc:	50ug/L
	to final vol 200mL with milipore water		expires daily	

SJH 09/23/14

SJH 09/23/14

1.1% STANNOUS CHLORIDE

11g SnCl2 EMD Lot #B1006939-411
30 mL HCl BDH Lot #41140210
Brought to 1000 mL with DI Water
Prep. Date 09/23/14
Exp. Date 09/23/15
By RE

SJH 09/23/14

SJH 09/23/14

10% HCL

200 mL of HCL in 2000 mL of DI H2O

Prep Date: 09/23/14
Exp Date: 09/23/15
Prepared by: RE

Lot# HCL: BDH 4114020

SJH 09/23/14

SJH 09/23/14

3% HCL

30 mL of HCL in 1000 mL of DI H2O

Prep Date: 09/23/14
Exp Date: 09/23/15
Prepared by: RE

Lot# HCL: BDH 4114020

SJH 09/23/14

SJH 09/23/14 (A)

ICP-MS STANDARDS	Prep'd by. SJH
Prep Date.	Today
Expires	1 week

Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL Di Water
Lot #
20 mL HCL / 2000mL Di Water
Lot #

Internal Standard Mix Prep 09/23/14

Standard 4

Amount	STD	Manufacturer	Lot #
50 uL	CCV-A	ENV EXPRESS	1331823-33166
50 uL	CCV-B	ENV EXPRESS	1331824-33167
50 uL	CCV-C	ENV EXPRESS	1331825-33168

Prepared in 100 mL of 1% HNO3/1 0% HCL

Standard 3

Amount	STD
25 mL	Standard 4

Prepared in 50 mL of 1% HNO3/1 0% HCL

Standard 2

Amount	STD
500 uL	Standard 4

Prepared in 50 mL of 1% HNO3/1 0% HCL

Standard 1

Amount	STD
50 uL	Standard 4

Prepared in 50 mL of 1% HNO3/1.0% HCL

ICP-MS ICV

Amount	STD		
50 uL	QCS ICV A	CPI	131145-32869
50 uL	QCS ICV B	CPI	131145-32870

Prepared in 50 mL of 1% HNO3/1 0% HCL

ICSA Prep:

1 mL	ICSA-DF2	O2Si	1053467-33165

Prepared in 10 mL of 1% HNO3/1 0% HCL

ICSAB Prep:

1mL	ICSA	CPI	12J143-33110
100uL	INT - DF10	O2Si	1054694-33223

Prepared in 10 mL of 1% HNO3/1 0% HCL

Second Source As:

25 uL	Metals Mix #2	AbsoluteGrade	161613-330

Prepared in 100 mL of 1% HNO3/ 1% HCl

SJH 09/23/14

SJH (A)

SJH (A)

SJH (A)

RE 9/24
Book edu
Rec 9/18

SJH 09/23/14

Internal Standard Concentration

Amt	STD	Element	Vendor	Lot#	Final Conc. in Std	Expires
50uL	1001 ug/mL	Li	BDH	F2-L102140-33279	200 ug/L	02/01/15
125uL	1000 ug/mL	Sc	o2si	1051538-32901	500ug/L	03/30/15
125uL	1000 ug/mL	Ge	CPI	12G219-32033	500ug/L	08/08/14
125uL	1000 ug/mL	In	CPI	13H191-32872	500ug/L	03/20/15
125uL	1000 ug/mL	Tb	CPI	13J004-33038	500ug/L	04/15/15
125uL	1000 ug/mL	Ho	CPI	13G236-32873	500ug/L	03/20/15

Prep 09/23/14 By SJH Prep in - 1%HNO3/1 0%HCL Final Volume 250mL

Expires 10/22/14

SJH 09/23/14

SJH 09/24/14 (A)

1%HNO3 / 5%HCl BLK

AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE
100 mL	HCL	BDH	4114020	09/23/14
20 mL	HNO3	JT BAKER	0000067379	09/23/14

Prepared in 2000 ml DI Water

STD 1 / LDL 6010B/6010C

AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.5 mL	6010 LDL	ABSOLUTE	1050245-32826	10/01/14

Prepared in 50 ml 1%HNO3/5%HCl

STD 3 / HDL 6010B/6010C

1ML	CCV-A	Environmental Express	1331823-33166	11/18/14
1ML	CCV-B	Environmental Express	1331824-33167	11/18/14
1ML	CCV-C	Environmental Express	1331825-33168	11/18/14

Prepared in 100 ml 1%HNO3 / 5%HCl

STD 2 / CCV1 6010B/6010C/6010C

AMOUNT	STD	PREP DATE	EXP DATE
25mL	STD 3	Today	1 week
25mL	1%HNO3/5%HCl	Today	1 week

CCV2 6010B/6010C

AMOUNT	STD	PREP DATE	EXP DATE
15mL	STD 3	Today	1 week
25mL	1%HNO3/5%HCl	Today	1 week

6010B/6010C ICSA

AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
1mL	Al	CPI	12K049-32257	10/16/14
1mL	Ca	CPI	13A332-32259	10/16/14
1mL	Mg	CPI	13B063-32258	10/16/14
1mL	Fe	O2SI	1043869-32197	09/14/14

Prepared in 50 ml 1%HNO3/5%HCl

6010B/6010C ICSAB

1mL	Al	CPI	12K049-32257	10/16/14
1mL	Ca	CPI	13A332-32259	10/16/14
1mL	Mg	CPI	13B063-32258	10/16/14
1mL	Fe	O2SI	1043869-32197	09/14/14
0.5mL	INT SPECIAL MIX	O2SI	1054694-33223	01/01/15

Prepared in 50 ml 1%HNO3/5%HCl

6010B/6010C ICV

0.5ML	QCS ICV A	CPI	13I145-32869 03/18/15
0.5ML	QCS ICV B	CPI	13I145-32870 03/18/15

Prepared in 50ml 1%HNO3/5%HCl

6010B/6010C Internal Standard

AMOUNT	STD	MANUFACTURER	PREP	EXP
2mL	Yttrium	O2SI	Today	1 week

Prepared in 2L 1%HNO3 / 5%HCl

SJH 09/24/14

SJH 09/24/14 (A)

2%HNO3 / 2%HCl BLK

AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE
40 mL	HCL	BDH	4114020	09/23/14
40 mL	HNO3	JT BAKER	0000067379	09/23/14

Prepared in 2000 ml DI Water SJH 09/24/14

STD 1 / LDL 200.7

AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.250 mL	200.7 LDL	O2SI	1052542-33103	11/01/14

Prepared in 50 ml 2%HNO3/2%HCl

STD 3 / HDL 200.7

0.5 mL	CCV-A	Environmental Express	1331823-33166	11/18/14
0.5 mL	CCV-B	Environmental Express	1331824-33167	11/18/14
0.5 mL	CCV-C	Environmental Express	1331825-33168	11/18/14

Prepared in 100 ml 2%HNO3/2%HCl

STD 2 / CCV1 200.7

AMOUNT	STD	PREP DATE	EXP DATE
25mL	STD 3	TODAY	1 WEEK
25mL	2%HNO3/2%HCl	TODAY	1 WEEK

CCV2 200.7

15mL	STD 3	TODAY	1 WEEK
25mL	2%HNO3/2%HCl	TODAY	1 WEEK

200.7 ICV

AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.25ML	QCS ICV A	CPI	13I145-32869	03/18/15
0.25ML	QCS ICV B	CPI	13I145-32870	03/18/15

Prepared in 50ml 2%HNO3/2%HCl

200.7 ICSA

0.5mL	Al	CPI	12K049-32257	10/16/14
0.5mL	Ca	CPI	13A332-32259	10/16/14
0.5mL	Mg	CPI	13B063-32258	10/16/14
0.5mL	Fe	O2SI	1043869-32197	09/14/14

Prepared in 50 ml 2%HNO3/2%HCl

200.7 ICSAB

0.5mL	Al	CPI	12K049-32257	10/16/14
0.5mL	Ca	CPI	13A332-32259	10/16/14
0.5mL	Mg	CPI	13B063-32258	10/16/14
0.5mL	Fe	O2SI	1043869-32197	09/14/14
0.25mL	INT SPECIAL MIX	O2SI	1054694-33223	1/1/15

Prepared in 50 ml 2%HNO3/2%HCl

SJH 09/24/14

RE 9/24/14

Book edit

Per 9/18/14

	Alfa Aesar	RE 9/24/14
DECOLORIZER	Lot # F21C25	DATE: 9/16/14
NaCl		EXP: 9/16/15
NH2OH-HCL		PREP BY:

Procedure: Add 240g NaCl + 240g NH2OH-HCL to 2000mL DI H2O. RE

Metals Standards Log Book # 39 Page # 112

SJH 09/26/14 (A)

1%HNO3 / 5%HCl BLK				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE
100 mL	HCL	BDH	4114020	09/30/14
20 mL	HNO3	JT BAKER	0000067379	09/30/14
Prepared in 2000 ml DI Water				
STD 1 / LDL 6010B/6010C				
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.5 mL	6010 LDL	ABSOLUTE	1050245-32826	10/01/14
Prepared in 50 ml 1%HNO3/5%HCl				
STD 3 / HDL 6010B/6010C				
1ML	CCV-A	Environmental Express	1331823-33166	11/18/14
1ML	CCV-B	Environmental Express	1331824-33167	11/18/14
1ML	CCV-C	Environmental Express	1331825-33168	11/18/14
Prepared in 100 ml 1%HNO3 / 5%HCl				
STD 2 / CCV1 6010B/6010C/6010C				
AMOUNT	STD	PREP DATE	EXP DATE	
25mL	STD 3	Today	1 week	
25mL	1%HNO3/5%HCl	Today	1 week	
CCV2 6010B/6010C				
AMOUNT	STD	PREP DATE	EXP DATE	
15mL	STD 3	Today	1 week	
25mL	1%HNO3/5%HCl	Today	1 week	

6010B/6010C ICSA				
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
1mL	Al	CPI	12K049-32257	10/16/14
1mL	Ca	CPI	13A332-32259	10/16/14
1mL	Mg	CPI	13B063-32258	10/16/14
1mL	Fe	O2SI	1043869-32197	09/14/14
Prepared in 50 ml 1%HNO3/5%HCl				
6010B/6010C ICSAB				
1mL	Al	CPI	12K049-32257	10/16/14
1mL	Ca	CPI	13A332-32259	10/16/14
1mL	Mg	CPI	13B063-32258	10/16/14
1mL	Fe	O2SI	1043869-32197	09/14/14
0.5mL	INT SPECIAL MIX	O2SI	1054694-33223	01/01/15
Prepared in 50 ml 1%HNO3/5%HCl				
6010B/6010C ICV				
0.5ML	QCS ICV A	CPI	13I145-32869	03/18/15
0.5ML	QCS ICV B	CPI	13I145-32870	03/18/15
Prepared in 50ml 1%HNO3/5%HCl				
6010B/6010C Internal Standard				
AMOUNT	STD	MANUFACTURER	PREP	EXP
2mL	Yttrium	O2SI	Today	1 week
Prepared in 2L 1%HNO3 / 5%HCl				

SJH 09/26/14

SJH 09/26/14 (A)

2%HNO3 / 2%HCl BLK				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE
40 mL	HCL	BDH	4114020	09/23/14
40 mL	HNO3	JT BAKER	0000067379	09/23/14
Prepared in 2000 ml DI Water				
STD 1 / LDL 200.7				
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.250 mL	200.7 LDL	O2SI	1052542-33103	11/01/14
Prepared in 50 ml 2%HNO3/2%HC				
STD 3 / HDL 200.7				
0.5 mL	CCV-A	Environmental Express	1331823-33166	11/18/14
0.5 mL	CCV-B	Environmental Express	1331824-33167	11/18/14
0.5 mL	CCV-C	Environmental Express	1331825-33168	11/18/14
Prepared in 100 ml 2%HNO3/2%HCl				
STD 2 / CCV1 200.7				
AMOUNT	STD	PREP DATE	EXP DATE	
25mL	STD 3	TODAY	1 WEEK	
25mL	2%HNO3/2%HCl	TODAY	1 WEEK	
CCV2 200.7				
15mL	STD 3	TODAY	1 WEEK	
25mL	2%HNO3/2%HCl	TODAY	1 WEEK	

200.7 ICV				
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.25ML	QCS ICV A	CPI	13I145-32869	03/18/15
0.25ML	QCS ICV B	CPI	13I145-32870	03/18/15
Prepared in 50ml 2%HNO3/2%HCl				
200.7 ICSA				
0.5mL	Al	CPI	12K049-32257	10/16/14
0.5mL	Ca	CPI	13A332-32259	10/16/14
0.5mL	Mg	CPI	13B063-32258	10/16/14
0.5mL	Fe	O2SI	1043869-32197	09/14/14
Prepared in 50 ml 2%HNO3/2%HCl				
200.7 ICSAB				
0.5mL	Al	CPI	12K049-32257	10/16/14
0.5mL	Ca	CPI	13A332-32259	10/16/14
0.5mL	Mg	CPI	13B063-32258	10/16/14
0.5mL	Fe	O2SI	1043869-32197	09/14/14
0.25mL	INT SPECIAL MIX	O2SI	1054694-33223	1/1/15
Prepared in 50 ml 2%HNO3/2%HCl				

SJH 09/28/14

SJH 09/27/14

Hg WORKING STANDARDS 7470A/7471/245.1			
Hg WORKING STD	1ml 10ug/ml Hg STOCK STD. 07/31/14 and 2mL HNO3 JT Baker LOT#50770 to final vol 200mL with milipore water	exp: 08/28/14 final conc: 50ug/L expires daily	
Hg WORKING ICV	1ml 10ug/ml Hg STOCK ICV 07/31/14 and 2mL HNO3 JT Baker LOT#50770 to final vol 200mL with milipore water	exp: 08/28/14 final conc: 50ug/L expires daily	

SJH 09/27/14

SJH 09/27/14

1.1% STANNOUS CHLORIDE

11g SnCl2 EMD Lot #B1006939-348
30 mL HCl BDH Lot #41140210
Brought to 1000 mL with DI Water
Prep. Date 09/27/14
Exp. Date 09/27/15
By RE

SJH 09/27/14

SJH 09/27/14

Hg STOCK STD 7470A/7471/245.1

1mL CPI Hg STD Lot # 13I020-32868
conc: 1000ug/mL exp 03/06/2015
and 1mL HNO3 JT Baker LOT# 67379 1284
to final volume of 100mL milipore water

Final conc.: 10ug/mL Hg in 1%HNO3
Prep. Date 09/27/14
Exp. Date 10/25/14

Hg STOCK ICV 7470A/7471/245.1

1mL Ultra Sci Hg ICV STD Lot #P00139-32881
conc: 1000ug/mL exp 03/31/19
and 1mL HNO3 JT Baker LOT# 50770 623
to final volume of 100mL milipore water

Final conc.: 10ug/mL Hg in 1%HNO3
Prep.Date 09/27/14
Exp. Date 10/25/14

SJH 09/27/14

SJH 09/27/14

6/10

3% HCL

30 mL of HCL in 1000 mL of DI H2O

Prep Date: 09/27/14
Exp Date: 09/27/15
Prepared by: RE
Lot# HCL: BDH 4114020

SJH 09/27/14

SJH 09/29/14 (A)

1%HNO3 / 5%HCl BLK

AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE
100 mL	HCL	BDH	4114020	09/30/14
20 mL	HNO3	JT BAKER	0000067379	09/30/14

Prepared in 2000 ml DI Water

STD 1 / LDL 6010B/6010C

AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.5 mL	6010 LDL	ABSOLUTE	1050245-32826	10/01/14

Prepared in 50 ml 1%HNO3/5%HCl

STD 3 / HDL 6010B/6010C

1ML	CCV-A	Environmental Express	1331823-33166	11/18/14
1ML	CCV-B	Environmental Express	1331824-33167	11/18/14
1ML	CCV-C	Environmental Express	1331825-33168	11/18/14

Prepared in 100 ml 1%HNO3 / 5%HCl

STD 2 / CCV1 6010B/6010C/6010C

AMOUNT	STD	PREP DATE	EXP DATE
25mL	STD 3	Today	1 week
25mL	1%HNO3/5%HCl	Today	1 week

CCV2 6010B/6010C

AMOUNT	STD	PREP DATE	EXP DATE
15mL	STD 3	Today	1 week
25mL	1%HNO3/5%HCl	Today	1 week

6010B/6010C ICSA

AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
1mL	Al	CPI	12K049-32257	10/16/14
1mL	Ca	CPI	13A332-32259	10/16/14
1mL	Mg	CPI	13B063-32258	10/16/14
1mL	Fe	O2SI	1043869-32197	09/14/14

Prepared in 50 ml 1%HNO3/5%HCl

6010B/6010C ICSAB

1mL	Al	CPI	12K049-32257	10/16/14
1mL	Ca	CPI	13A332-32259	10/16/14
1mL	Mg	CPI	13B063-32258	10/16/14
1mL	Fe	O2SI	1043869-32197	09/14/14
0.5mL	INT SPECIAL MIX	O2SI	1054694-33223	01/01/15

Prepared in 50 ml 1%HNO3/5%HCl

6010B/6010C ICV

0.5ML	QCS ICV A	CPI	131145-32869	03/18/15
0.5ML	QCS ICV B	CPI	131145-32870	03/18/15

Prepared in 50ml 1%HNO3/5%HCl

6010B/6010C Internal Standard

AMOUNT	STD	MANUFACTURER	PREP	EXP
2mL	Yttrium	O2SI	Today	1 week

Prepared in 2L 1%HNO3 / 5%HCl

SJH 09/29/14

SJH 09/29/14 (A)

ICP-MS STANDARDS Prep'd by: SJH
Prep Date. Today
Expires: 1 week

Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL DI Water
Lot #
20 mL HCL / 2000mL Di Water
Lot #

Internal Standard Mix: Prep 09/23/14

Standard 4

Amount	STD	Manufacturer	Lot #
50 uL	CCV-A	ENV EXPRESS	1331823-33166
50 uL	CCV-B	ENV EXPRESS	1331824-33167
50 uL	CCV-C	ENV EXPRESS	1331825-33168

Prepared in 100 mL of 1% HNO3/1 0% HCL

Standard 3
Amount STD
25 mL Standard 4
Prepared in 50 mL of 1% HNO3/1.0% HCL

Standard 2
Amount STD
500 uL Standard 4
Prepared in 50 mL of 1% HNO3/1.0% HCL

Standard 1
Amount STD
50 uL Standard 4
Prepared in 50 mL of 1% HNO3/1.0% HCL

ICP-MS ICV

Amount	STD		
50 uL	QCS ICV A	CPI	131145-32869
50 uL	QCS ICV B	CPI	131145-32870

Prepared in 50 mL of 1% HNO3/1.0% HCL

ICSA Prep:

1 mL	ICSA-DF2	O2SI	1053467-33165

Prepared in 10 mL of 1% HNO3/1.0% HCL

ICSAB Prep:

1mL	ICSA	CPI	12J143-33110
100uL	INT - DF10	O2SI	1054694-33223

Prepared in 10 mL of 1% HNO3/1.0% HCL

Second Source As:
25 uL Metals Mix #2 AbsoluteGrade 161813-33063
Prepared in 100 mL of 1% HNO3/ 1% HCl

SJH 09/29/14

Metals Digestion Worksheet

Method Name 3015 Digestion **Prep Method** M3015 **Set** 140918A **Units** mL

Spikes			
Spiked ID 1	LCSW LOT#1062795-33881		
Spiked ID 2	LCSW LOT#1062904-33882		
Spiked ID 3			
Spiked ID 4			
Spiked By	NM	Date:	09/18/14 12:50:00 PM
Witnessed By	RE	Date:	09/18/14 12:50:00 PM

Starting Temp:	23 c
Ending Temp:	170 c
Temperature Type:	Microwave
Sufficient Vol for Matrix QC:	Yes
End Date/Time	09/18/14 14:00

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	140918A Blk				45mL	50mL	09/18/14 12:50	equip: MultiWave
2	140918A LCS		90uL	1+2	45mL	50mL	09/18/14 12:50	equip: MultiWave
3	AZ02108	AZ02108W12			45mL	50mL	09/18/14 12:50	equip: MultiWave
4	AZ02109	AZ02109W12			45mL	50mL	09/18/14 12:50	equip: MultiWave
5	AZ02116	AZ02116W12			45mL	50mL	09/18/14 12:50	equip: MultiWave
6	AZ02116 MS	AZ02116W12	90uL	1+2	45mL	50mL	09/18/14 12:50	equip: MultiWave
7	AZ02116 MSD	AZ02116W12	90uL	1+2	45mL	50mL	09/18/14 12:50	equip: MultiWave
8	AZ02140	AZ02140W08			45mL	50mL	09/18/14 12:50	equip: MultiWave
9	AZ02140 FF	AZ02140W09			45mL	50mL	09/18/14 12:50	equip: MultiWave Field Filter
10	AZ02141	AZ02141W08			45mL	50mL	09/18/14 12:50	equip: MultiWave
11	AZ02141 FF	AZ02141W09			45mL	50mL	09/18/14 12:50	equip: MultiWave Field Filter

Solvent and Lot#
HNO3 J.T.B #74185 1841

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	SJH
Date	09/18/14
Time	14:34
Moved to	Metals

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	nmm
Modified	09/18/14 12:09:37 PM

Reviewed By: DH **Date:** 09/18/14

Metals Digestion Worksheet

Method Name 3050B Dig (LOW LEVEL) (MULT IN **Prep Method** M3050LLMISal **Set** 140919A **Units** mL

Spikes			
Spiked ID 1	LCSW LOT#1062795-33881		
Spiked ID 2	LCSW LOT#1062904-33882		
Spiked ID 3			
Spiked ID 4			
Spiked By	NM	Date:	09/19/14 10:32:00 AM
Witnessed By	RJS	Date:	09/19/14 10:32:00 AM

Starting Temp:	95 c
Ending Temp:	95 c
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	Yes
End Date/Time	09/19/14 14:00

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	140919A Blk				10.00g	100mL	09/19/14 10:32	equip: Modblock4
2	140919A LCS		1mL	1+2	10.00g	100mL	09/19/14 10:32	equip: Modblock4
3	AZ02099	AZ02099S01			10.04g	100mL	09/19/14 10:32	equip: Modblock4
4	AZ02100	AZ02100S01			9.98g	100mL	09/19/14 10:32	equip: Modblock4
5	AZ02100 MS	AZ02100S01	4mL	1+2	9.98g	100mL	09/19/14 10:32	equip: Modblock4
6	AZ02100 MSD	AZ02100S01	4mL	1+2	9.98g	100mL	09/19/14 10:32	equip: Modblock4
7	AZ02101	AZ02101S01			9.98g	100mL	09/19/14 10:32	equip: Modblock4
8	AZ02102	AZ02102S01			10.02g	100mL	09/19/14 10:32	equip: Modblock4
9	AZ02103	AZ02103S01			9.90g	100mL	09/19/14 10:32	equip: Modblock4
10	AZ02104	AZ02104S01			9.96g	100mL	09/19/14 10:32	equip: Modblock4
11	AZ02105	AZ02105S01			9.94g	100mL	09/19/14 10:32	equip: Modblock4
12	AZ02106	AZ02106S01			10.01g	100mL	09/19/14 10:32	equip: Modblock4
13	AZ02107	AZ02107S01			9.95g	100mL	09/19/14 10:32	equip: Modblock4
14	AZ02110	AZ02110S01			10.06g	100mL	09/19/14 10:32	equip: Modblock4
15	AZ02111	AZ02111S01			9.94g	100mL	09/19/14 10:32	equip: Modblock4
16	AZ02112	AZ02112S01			10.06g	100mL	09/19/14 10:32	equip: Modblock4
17	AZ02113	AZ02113S01			9.96g	100mL	09/19/14 10:32	equip: Modblock4
18	AZ02114	AZ02114S01			10.02g	100mL	09/19/14 10:32	equip: Modblock4
19	AZ02115	AZ02115S01			9.96g	100mL	09/19/14 10:32	equip: Modblock4

Solvent and Lot#
1:1 HNO3 NA
HNO3 J.T.B #74185 1841
H2O2 EMD NA
HCL BDH 4114020 1921

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	DH
Date	09/19/14
Time	15:34
Moved to	Metals

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	09/19/14 12:20:24 PM

Reviewed By: DH **Date:** 09/19/14

Mercury Digestion Worksheet

Method Name 7470A Mercury Digestion **Prep Method** M7470 **Set** 140918A **Units** mL

Spikes			
Spiked ID 1	Hg WORKING STANDARD prep 9-18-14		
Spiked ID 2	Hg WORKING ICV prep 9-18-14		
Spiked ID 3			
Spiked ID 4			
Spiked By	NM	Date:	09/18/14 1:12:00 PM
Witnessed By	RE	Date:	09/18/14 1:12:00 PM

Starting Temp:	95 c
Ending Temp:	95 c
Temp Type:	Modblock3
End Date/Time	09/18/14 3:20:00 PM

Mercury Calibration

Sample	Spike Amount	Spike ID	Final Volume
0 ppb		1	72.25 ml
0.2 ppb	0.2 ml	1	72.25 ml
0.5 ppb	0.5 ml	1	72.25 ml
1 ppb	1 ml	1	72.25 ml
2 ppb	2 ml	1	72.25 ml
5 ppb	5 ml	1	72.25 ml
5 ppb	5 ml	1	72.25 ml
10 ppb	10 ml	1	72.25 ml
ICV	4 ml	2	72.25 ml

Start Date/Time of Calibration 09/18/14 13:12

Sufficient Vol for Matrix QC:	Yes

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	140918A Blk				50mL	72.25mL	09/18/14 13:12	equip: Modblock3
2	140918A LCS		4mL	1	50mL	72.25mL	09/18/14 13:12	equip: Modblock3
3	AZ02108	AZ02108W12			50mL	72.25mL	09/18/14 13:12	equip: Modblock3
4	AZ02109	AZ02109W12			50mL	72.25mL	09/18/14 13:12	equip: Modblock3
5	AZ02116	AZ02116W12			50mL	72.25mL	09/18/14 13:12	equip: Modblock3
6	AZ02116 MS	AZ02116W12	4mL	1	50mL	72.25mL	09/18/14 13:12	equip: Modblock3
7	AZ02116 MSD	AZ02116W12	4mL	1	50mL	72.25mL	09/18/14 13:12	equip: Modblock3

Solvent and Lot#
HNO3 J.T.B #74185 1841
H2SO4 J.T.B 60269 1286
KMnO4 9-15-14
K2s2o8 8-13-14
Decolorizer 9-18-14

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	RE
Date	9/20/14
Time	10:01
Moved to	Metals

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	09/18/14 1:02:41 PM

Reviewed By: RE **Date:** 9/20/14

Mercury Digestion Worksheet

Method Name 7471A Digestion (Mult Incr Sampl) **Prep Method** M7471MIS **Set** 140919A **Units** mL

Spikes			
Spiked ID 1	Hg WORKING STANDARD 9-19-14		
Spiked ID 2	Hg WORKING ICV 9-19-14		
Spiked ID 3			
Spiked ID 4			
Spiked By	NM	Date:	09/19/14 9:57:00 AM
Witnessed By	SJH	Date:	09/19/14 9:57:00 AM

Starting Temp:	95 c
Ending Temp:	95 c
Temp Type:	Modblock4
End Date/Time	09/19/14 11:00:00 AM

Mercury Calibration			
Sample	**Spike Amount**	**Spike ID**	**Final Volume**
0 ppb		1	96 ml
0.2083 ppb	0.4 ml	1	96 ml
0.5208 ppb	1 ml	1	96 ml
1.0417 ppb	2 ml	1	96 ml
2.083 ppb	4ml	1	96 ml
5.208 ppb	10 ml	1	96 ml
5.208 ppb	10 ml	1	96 ml
10.417 ppb	20 ml	1	96 ml
ICV	8 ml	2	96 ml

Start Date/Time of Calibration 09/19/14 9:57

Sufficient Vol for Matrix QC:	Yes

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	140919A Blk				2.50g	96mL	09/19/14 9:57	equip: Modblock4
2	140919A LCS		8mL	1	2.50g	96mL	09/19/14 9:57	equip: Modblock4
3	AZ02099	AZ02099S01			2.48g	96mL	09/19/14 9:57	equip: Modblock4
4	AZ02100	AZ02100S01			2.52g	96mL	09/19/14 9:57	equip: Modblock4
5	AZ02100 MS	AZ02100S01	8mL	1	2.52g	96mL	09/19/14 9:57	equip: Modblock4
6	AZ02100 MSD	AZ02100S01	8mL	1	2.52g	96mL	09/19/14 9:57	equip: Modblock4
7	AZ02101	AZ02101S01			2.49g	96mL	09/19/14 9:57	equip: Modblock4
8	AZ02102	AZ02102S01			2.50g	96mL	09/19/14 9:57	equip: Modblock4
9	AZ02103	AZ02103S01			2.51g	96mL	09/19/14 9:57	equip: Modblock4
10	AZ02104	AZ02104S01			2.48g	96mL	09/19/14 9:57	equip: Modblock4
11	AZ02105	AZ02105S01			2.53g	96mL	09/19/14 9:57	equip: Modblock4
12	AZ02106	AZ02106S01			2.45g	96mL	09/19/14 9:57	equip: Modblock4
13	AZ02107	AZ02107S01			2.55g	96mL	09/19/14 9:57	equip: Modblock4
14	AZ02110	AZ02110S01			2.49g	96mL	09/19/14 9:57	equip: Modblock4
15	AZ02111	AZ02111S01			2.55g	96mL	09/19/14 9:57	equip: Modblock4
16	AZ02112	AZ02112S01			2.46g	96mL	09/19/14 9:57	equip: Modblock4
17	AZ02113	AZ02113S01			2.49g	96mL	09/19/14 9:57	equip: Modblock4
18	AZ02114	AZ02114S01			2.44g	96mL	09/19/14 9:57	equip: Modblock4
19	AZ02115	AZ02115S01			2.50g	96mL	09/19/14 9:57	equip: Modblock4

Solvent and Lot#
AQUAREGIA 9-10-14
KMnO4 9-15-14
DECOLORIZER 9-18-14

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	RE
Date	9/20/14
Time	18:08
Moved to	Metals

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	09/19/14 12:07:48 PM

Reviewed By: RE **Date:** 9/20/14

6020/200.8 Injection Log

Directory: K:\ICP-MS Megatron\raw data output csv\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	19 Sep 2014	11:18	Calibration Blank		140919A	1.
2	19 Sep 2014	11:24	Standard 1		140919A	1.
3	19 Sep 2014	11:30	Standard 2		140919A	1.
4	19 Sep 2014	11:36	Standard 3		140919A	1.
5	19 Sep 2014	11:42	Standard 4		140919A	1.
6	19 Sep 2014	11:48	ICV		140919A	1.
8	19 Sep 2014	12:12	ICB		140919A	1.
12	19 Sep 2014	12:37	CCV		140919A	1.
13	19 Sep 2014	12:55	CCB		140919A	1.
14	19 Sep 2014	13:01	ICSA		140919A	1.
15	19 Sep 2014	13:19	ICSAB		140919A	1.
43	19 Sep 2014	18:09	CCV		140919A	1.
44	19 Sep 2014	18:27	CCB		140919A	1.
45	19 Sep 2014	18:33	140919A BLK		140919A	1.
46	19 Sep 2014	18:39	140919A LCS		140919A	1.
47	19 Sep 2014	18:57	AZ02099S01 1/10		140919A	10.
48	19 Sep 2014	19:03	AZ02100S01 1/10		140919A	10.
49	19 Sep 2014	19:09	AZ02100S01 MS 1/10		140919A	10.
50	19 Sep 2014	19:15	AZ02100S01 MSD 1/10		140919A	10.
51	19 Sep 2014	19:21	AZ02100S01-A 1/10		140919A	10.
52	19 Sep 2014	19:27	AZ02100S01 1/50		140919A	50.
53	19 Sep 2014	19:33	AZ02101S01 1/10		140919A	10.
54	19 Sep 2014	19:39	AZ02102S01 1/10		140919A	10.
55	19 Sep 2014	19:45	AZ02103S01 1/10		140919A	10.
56	19 Sep 2014	19:51	AZ02104S01 1/10		140919A	10.
57	19 Sep 2014	19:57	CCV		140919A	1.
58	19 Sep 2014	20:15	CCB		140919A	1.
59	19 Sep 2014	20:21	AZ02105S01 1/10		140919A	10.
60	19 Sep 2014	20:27	AZ02106S01 1/10		140919A	10.
61	19 Sep 2014	20:33	AZ02107S01 1/10		140919A	10.
62	19 Sep 2014	20:40	AZ02110S01 1/10		140919A	10.
63	19 Sep 2014	20:46	AZ02111S01 1/10		140919A	10.
64	19 Sep 2014	20:52	AZ02112S01 1/10		140919A	10.
65	19 Sep 2014	20:58	AZ02113S01 1/10		140919A	10.
66	19 Sep 2014	21:04	AZ02114S01 1/10		140919A	10.
67	19 Sep 2014	21:10	AZ02115S01 1/10		140919A	10.
68	19 Sep 2014	21:16	CCV		140919A	1.
69	19 Sep 2014	21:34	CCB		140919A	1.

6020/200.8 Injection Log

Directory: K:\ICP-MS Megatron\raw data output csv\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	23 Sep 2014	12:22	Calibration Blank		140923A	1.
2	23 Sep 2014	12:28	Standard 1		140923A	1.
3	23 Sep 2014	12:34	Standard 2		140923A	1.
4	23 Sep 2014	12:40	Standard 3		140923A	1.
5	23 Sep 2014	12:46	Standard 4		140923A	1.
6	23 Sep 2014	12:52	ICV		140923A	1.
7	23 Sep 2014	13:22	ICB		140923A	1.
11	23 Sep 2014	13:46	CCV		140923A	1.
12	23 Sep 2014	14:04	CCB		140923A	1.
13	23 Sep 2014	14:10	ICSA		140923A	1.
14	23 Sep 2014	14:28	ICSAB		140923A	1.
16	23 Sep 2014	15:11	CCV		140923A	1.
17	23 Sep 2014	15:29	CCB		140923A	1.
21	23 Sep 2014	16:05	140918A BLK		140923A	1.
22	23 Sep 2014	16:11	140918A LCS		140923A	1.
23	23 Sep 2014	16:29	AZ02108W12		140923A	1.
24	23 Sep 2014	16:35	AZ02109W12		140923A	1.
25	23 Sep 2014	16:41	AZ02116W12		140923A	1.
26	23 Sep 2014	16:47	AZ02116W12 MS		140923A	1.
27	23 Sep 2014	16:53	AZ02116W12 MSD		140923A	1.
28	23 Sep 2014	16:59	AZ02116W12-A		140923A	1.
29	23 Sep 2014	17:05	AZ02116W12 1/5		140923A	5.
30	23 Sep 2014	17:11	CCV		140923A	1.
31	23 Sep 2014	17:29	CCB		140923A	1.

6020/200.8 Injection Log

Directory: K:\ICP-MS Megatron\raw data output csv\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	24 Sep 2014	10:54	Calibration Blank		140924A	1.
2	24 Sep 2014	11:00	Standard 1		140924A	1.
3	24 Sep 2014	11:06	Standard 2		140924A	1.
4	24 Sep 2014	11:12	Standard 3		140924A	1.
5	24 Sep 2014	11:18	Standard 4		140924A	1.
6	24 Sep 2014	11:24	ICV		140924A	1.
7	24 Sep 2014	11:55	ICB		140924A	1.
11	24 Sep 2014	12:19	CCV		140924A	1.
12	24 Sep 2014	12:37	CCB		140924A	1.
13	24 Sep 2014	12:43	ICSA		140924A	1.
14	24 Sep 2014	13:01	ICSAB		140924A	1.
15	24 Sep 2014	15:59	140919A BLK		140924A	1.
16	24 Sep 2014	16:05	140919A LCS		140924A	1.
17	24 Sep 2014	16:23	AZ02099S01 1/50		140924A	50.
18	24 Sep 2014	16:30	AZ02100S01 1/50		140924A	50.
19	24 Sep 2014	16:36	AZ02100S01 MS 1/50		140924A	50.
20	24 Sep 2014	16:42	AZ02100S01 MSD 1/50		140924A	50.
21	24 Sep 2014	16:48	AZ02100S01-A 1/50		140924A	50.
22	24 Sep 2014	16:54	AZ02100S01 1/250		140924A	250.
23	24 Sep 2014	17:00	AZ02101S01 1/50		140924A	50.
24	24 Sep 2014	17:06	AZ02102S01 1/50		140924A	50.
25	24 Sep 2014	17:12	AZ02103S01 1/50		140924A	50.
26	24 Sep 2014	17:18	AZ02104S01 1/50		140924A	50.
27	24 Sep 2014	17:24	AZ02105S01 1/50		140924A	50.
28	24 Sep 2014	17:30	AZ02106S01 1/50		140924A	50.
29	24 Sep 2014	17:36	CCV		140924A	1.
30	24 Sep 2014	17:54	CCB		140924A	1.
31	24 Sep 2014	18:00	AZ02107S01 1/50		140924A	50.
32	24 Sep 2014	18:06	AZ02110S01 1/50		140924A	50.
33	24 Sep 2014	18:12	AZ02111S01 1/50		140924A	50.
34	24 Sep 2014	18:18	AZ02112S01 1/50		140924A	50.
35	24 Sep 2014	18:24	AZ02113S01 1/50		140924A	50.
36	24 Sep 2014	18:30	AZ02114S01 1/50		140924A	50.
37	24 Sep 2014	18:36	AZ02115S01 1/50		140924A	50.
38	24 Sep 2014	18:42	CCV		140924A	1.
39	24 Sep 2014	19:00	CCB		140924A	1.

74218

various Injection Log

Directory: K:\FIMS Freddie\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	20 Sep 2014	14:59	Calib. Blank		140920W	1.
2	20 Sep 2014	15:01	0.2		140920W	1.
3	20 Sep 2014	15:03	0.5		140920W	1.
4	20 Sep 2014	15:05	1		140920W	1.
5	20 Sep 2014	15:08	2		140920W	1.
6	20 Sep 2014	15:10	5		140920W	1.
7	20 Sep 2014	15:12	10		140920W	1.
8	20 Sep 2014	15:14	ICV 09/20/14 RE		140920W	1.
9	20 Sep 2014	15:16	ICB 09/20/14 RE		140920W	1.
10	20 Sep 2014	15:18	CCV 09/20/14 RE		140920W	1.
11	20 Sep 2014	15:20	CCB 09/20/14 RE		140920W	1.
25	20 Sep 2014	16:33	CCV 09/20/14 RE		140920W	1.
26	20 Sep 2014	16:35	CCB 09/20/14 RE		140920W	1.
27	20 Sep 2014	16:37	140918A BLK		140920W	1.
28	20 Sep 2014	16:41	AZ02108W12		140920W	1.
29	20 Sep 2014	16:43	AZ02109W12		140920W	1.
30	20 Sep 2014	16:46	AZ02116W12		140920W	1.
33	20 Sep 2014	16:54	140918A LCS		140920W	1.
34	20 Sep 2014	17:02	CCV 09/20/14 RE		140920W	1.
35	20 Sep 2014	17:04	CCB 09/20/14 RE		140920W	1.

various Injection Log

Directory: K:\FIMS Freddie\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	27 Sep 2014	10:52	Calib. Blank		140927S	1.
2	27 Sep 2014	10:54	0.2083333		140927S	1.
3	27 Sep 2014	10:57	0.520833		140927S	1.
4	27 Sep 2014	10:59	1.041667		140927S	1.
5	27 Sep 2014	11:01	2.083333		140927S	1.
6	27 Sep 2014	11:03	5.208		140927S	1.
7	27 Sep 2014	11:05	10.417		140927S	1.
8	27 Sep 2014	11:39	ICV 09/27/14 RE		140927S	1.
9	27 Sep 2014	11:41	ICB 09/27/14 RE		140927S	1.
10	27 Sep 2014	11:43	CCV 09/27/14 RE		140927S	1.
11	27 Sep 2014	11:45	CCB 09/27/14 RE		140927S	1.
16	27 Sep 2014	11:56	140919A BLK		140927S	1.
17	27 Sep 2014	11:58	140919A LCS		140927S	1.
32	27 Sep 2014	12:30	CCV 09/27/14 RE		140927S	1.
33	27 Sep 2014	12:32	CCB 09/27/14 RE		140927S	1.
45	27 Sep 2014	12:58	CCV 09/27/14 RE		140927S	1.
46	27 Sep 2014	13:00	CCB 09/27/14 RE		140927S	1.
47	27 Sep 2014	15:33	Calib. Blank		140927S	1.
48	27 Sep 2014	15:35	0.2083333		140927S	1.
49	27 Sep 2014	15:37	0.520833		140927S	1.
50	27 Sep 2014	15:39	1.041667		140927S	1.
51	27 Sep 2014	15:41	2.083333		140927S	1.
52	27 Sep 2014	15:43	5.208		140927S	1.
53	27 Sep 2014	15:46	10.417		140927S	1.
54	27 Sep 2014	15:48	ICV 09/27/14 RE		140927S	1.
55	27 Sep 2014	15:50	ICB 09/27/14 RE		140927S	1.
56	27 Sep 2014	15:52	CCV 09/27/14 RE		140927S	1.
57	27 Sep 2014	15:54	CCB 09/27/14 RE		140927S	1.
64	27 Sep 2014	16:59	CCV 09/27/14 RE		140927S	1.
65	27 Sep 2014	17:01	CCB 09/27/14 RE		140927S	1.
66	27 Sep 2014	17:03	AZ02099S01		140927S	1.
67	27 Sep 2014	17:06	AZ02100S01		140927S	1.
68	27 Sep 2014	17:08	AZ02100S01 MS		140927S	1.
69	27 Sep 2014	17:10	AZ02100S01 MSD		140927S	1.
70	27 Sep 2014	17:16	AZ02101S01		140927S	1.
71	27 Sep 2014	17:19	AZ02102S01		140927S	1.
72	27 Sep 2014	17:21	AZ02103S01		140927S	1.
73	27 Sep 2014	17:23	AZ02104S01		140927S	1.
74	27 Sep 2014	17:25	AZ02105S01		140927S	1.
75	27 Sep 2014	17:27	CCV 09/27/14 RE		140927S	1.
76	27 Sep 2014	17:29	CCB 09/27/14 RE		140927S	1.
77	27 Sep 2014	17:31	AZ02106S01		140927S	1.
78	27 Sep 2014	17:34	AZ02107S01		140927S	1.

79	27 Sep 2014	17:36	AZ02110S01	140927S	1.
80	27 Sep 2014	17:38	AZ02111S01	140927S	1.
81	27 Sep 2014	17:40	AZ02112S01	140927S	1.
82	27 Sep 2014	17:42	AZ02113S01	140927S	1.
83	27 Sep 2014	17:44	AZ02114S01	140927S	1.
84	27 Sep 2014	17:46	AZ02115S01	140927S	1.
85	27 Sep 2014	17:48	CCV 09/27/14 RE	140927S	1.
86	27 Sep 2014	17:51	CCB 09/27/14 RE	140927S	1.

EPA METHOD 8290
Dioxins/Furans

APPL, INC.

1984

EPA METHOD 8290
Dioxins/Furans

QC Summary

APPL, INC.

1985

Method Blank
EPA 8290 IS SOILS

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **140917S-02099 - 190027**
Batch ID: $8290IS-140917B

Sample Type	Analyte	Result	PQL	EDL/EMPC	Units	Ext Date	Analysis Date
BLANK	1,2,3,4,6,7,8-HPCDD	0.11 U	12.5	0.11DL	pg/g	09/17/14	09/20/14
BLANK	1,2,3,4,6,7,8-HPCDF	0.095 U	12.5	0.095DL	pg/g	09/17/14	09/20/14
BLANK	1,2,3,4,7,8,9-HPCDF	0.13 U	12.5	0.13DL	pg/g	09/17/14	09/20/14
BLANK	1,2,3,4,7,8-HXCDD	0.084 U	12.5	0.084DL	pg/g	09/17/14	09/20/14
BLANK	1,2,3,4,7,8-HXCDF	0.083 U	12.5	0.083DL	pg/g	09/17/14	09/20/14
BLANK	1,2,3,6,7,8-HXCDD	0.084 U	12.5	0.084DL	pg/g	09/17/14	09/20/14
BLANK	1,2,3,6,7,8-HXCDF	0.080 U	12.5	0.080DL	pg/g	09/17/14	09/20/14
BLANK	1,2,3,7,8,9-HXCDD	0.14 U	12.5	0.14PC	pg/g	09/17/14	09/20/14
BLANK	1,2,3,7,8,9-HXCDF	0.10 U	12.5	0.10DL	pg/g	09/17/14	09/20/14
BLANK	1,2,3,7,8-PECDD	0.12 U	12.5	0.12DL	pg/g	09/17/14	09/20/14
BLANK	1,2,3,7,8-PECDF	0.24 U	12.5	0.24PC	pg/g	09/17/14	09/20/14
BLANK	2,3,4,6,7,8-HXCDF	0.049 U	12.5	0.049PC	pg/g	09/17/14	09/20/14
BLANK	2,3,4,7,8-PECDF	0.14 U	12.5	0.14DL	pg/g	09/17/14	09/20/14
BLANK	2,3,7,8-TCDD	0.13 U	5.0	0.13PC	pg/g	09/17/14	09/20/14
BLANK	2,3,7,8-TCDF	0.099 U	5.0	0.099DL	pg/g	09/17/14	09/20/14
BLANK	OCDD	0.35 U	25.0	0.35PC	pg/g	09/17/14	09/20/14
BLANK	OCDF	0.10 U	25.0	0.10DL	pg/g	09/17/14	09/20/14
BLANK	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S)	85.6	40-135		%	09/17/14	09/20/14
BLANK	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S)	66.1	40-135		%	09/17/14	09/20/14
BLANK	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	75.6	40-135		%	09/17/14	09/20/14
BLANK	SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)	88.7	40-135		%	09/17/14	09/20/14
BLANK	SURROGATE: 13C-1,2,3,7,8-PECDD (S)	95.0	40-135		%	09/17/14	09/20/14
BLANK	SURROGATE: 13C-1,2,3,7,8-PECDF (S)	79.1	40-135		%	09/17/14	09/20/14
BLANK	SURROGATE: 13C-2,3,7,8-TCDD (S)	90.5	40-135		%	09/17/14	09/20/14
BLANK	SURROGATE: 13C-2,3,7,8-TCDF (S)	80.1	40-135		%	09/17/14	09/20/14
BLANK	SURROGATE: 13C-OCDD (S)	87.0	40-135		%	09/17/14	09/20/14

Quant Method: 140919_8290
Run #: 140919_HR_17
Instrument: Magneto
Sequence: 140919
Initials: RP

Printed: 09/22/14 2:08:35 PM

Laboratory Control Spike Recovery
EPA 8290 IS SOILS

APPL ID: **140917S-02099 LCS - 190027**
Batch ID: #8290IS-140917B

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level pg/g	SPK Result pg/g	SPK % Recovery	Recovery Limits
1,2,3,4,6,7,8-HPCDD	125	118	94.4	70-130
1,2,3,4,6,7,8-HPCDF	125	122	97.6	70-130
1,2,3,4,7,8,9-HPCDF	125	133	106	70-130
1,2,3,4,7,8-HXCDD	125	123	98.4	70-130
1,2,3,4,7,8-HXCDF	125	112	89.6	70-130
1,2,3,6,7,8-HXCDD	125	117	93.6	70-130
1,2,3,6,7,8-HXCDF	125	124	99.2	70-130
1,2,3,7,8,9-HXCDD	125	129	103	70-130
1,2,3,7,8,9-HXCDF	125	113	90.4	70-130
1,2,3,7,8-PECDD	125	119	95.2	70-130
1,2,3,7,8-PECDF	125	124	99.2	70-130
2,3,4,6,7,8-HXCDF	125	119	95.2	70-130
2,3,4,7,8-PECDF	125	119	95.2	70-130
2,3,7,8-TCDD	50.0	48.7	97.4	70-130
2,3,7,8-TCDF	50.0	48.6	97.2	70-130
OCDD	250	224	89.6	70-130
OCDF	250	202	80.8	70-130
SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD	500	461	92.2	40-135
SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF	500	373	74.6	40-135
SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S	500	396	79.2	40-135
SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S	500	445	89.0	40-135
SURROGATE: 13C-1,2,3,7,8-PECDD (S)	200	179	89.5	40-135
SURROGATE: 13C-1,2,3,7,8-PECDF (S)	200	169	84.5	40-135
SURROGATE: 13C-2,3,7,8-TCDD (S)	200	177	88.5	40-135
SURROGATE: 13C-2,3,7,8-TCDF (S)	200	162	81.0	40-135
SURROGATE: 13C-OCDD (S)	1000	935	93.5	40-135

Comments: _____

Primary	SPK
Quant Method :	140919_8290
Extraction Date :	09/17/14
Analysis Date :	09/20/14
Instrument :	Magneto
Run :	140919_HR_13
Initials :	RP

Printed: 09/22/14 2:08:32 PM
APPL Standard LCS

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/20/14

Matrix: SOIL Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S)			SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140917B-LCS	Lab Control Spike	40-135	92.2		40-135	74.6	
140917B-BLK	Blank	40-135	85.6		40-135	66.1	
AZ02099	EN001	40-135	80.1		40-135	75.5	

Comments: Batch: #8290IS-140917B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/20/14

Matrix: SOIL Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)			SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140917B-LCS	Lab Control Spike	40-135	79.2		40-135	89.0	
140917B-BLK	Blank	40-135	75.6		40-135	88.7	
AZ02099	EN001	40-135	87.9		40-135	94.1	

Comments: Batch: #8290IS-140917B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/20/14

Matrix: SOIL Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-1,2,3,7,8-PECDD (S)			SURROGATE: 13C-1,2,3,7,8-PECDF (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140917B-LCS	Lab Control Spike	40-135	89.5		40-135	84.5	
140917B-BLK	Blank	40-135	95.0		40-135	79.1	
AZ02099	EN001	40-135	102		40-135	93.9	

Comments: Batch: #8290IS-140917B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/20/14

Matrix: SOIL Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-2,3,7,8-TCDD (S)			SURROGATE: 13C-2,3,7,8-TCDF (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
140917B-LCS	Lab Control Spike	40-135	88.5		40-135	81.0	
140917B-BLK	Blank	40-135	90.5		40-135	80.1	
AZ02099	EN001	40-135	105		40-135	95.1	

Comments: Batch: #8290IS-140917B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/20/14

Matrix: SOIL Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-OCDD (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
140917B-LCS	Lab Control Spike	40-135	93.5				
140917B-BLK	Blank	40-135	87.0				
AZ02099	EN001	40-135	71.4				

Comments: Batch: #8290IS-140917B

EPA 8290

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 74218

Case No: 74218 Date Analyzed: 09/20/14

Matrix: SOIL Instrument: Magneto

Blank ID: 140917B-BLK Time Analyzed: 1125

APPL ID.	Client Sample No.	File ID.	Date Analyzed
140917B-LCS	Lab Control Spike	140919_HR_13	09/20/14 0642
140917B-BLK	Blank	140919_HR_17	09/20/14 1125
AZ02099	EN001	140919_HR_18	09/20/14 1234

Comments: Batch: #8290IS-140917B

EPA METHOD 8290
Dioxins/Furans

Sample Data

APPL, INC.

1994

EPA 8290 IS SOILS

Element Environmental
98-030 Hekaha St., Unit 9
Aiea, HI 96701

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Roger Aoki
Project: 120033 CTO 0015 MCBH NOSC
Sample ID: EN001
Sample Collection Date: 09/02/14

ARF: 74218
APPL ID: AZ02099
QCG: $8290IS-140917B-190027

Method	Analyte	Result	PQL	EDL/EMPC	Units	Ext Date	Analysis Date
EPA 8290	1,2,3,4,6,7,8-HPCDD	56	12.5	56PC	pg/g	09/17/14	09/20/14
EPA 8290	1,2,3,4,6,7,8-HPCDF	0.46 U	12.5	0.46DL	pg/g	09/17/14	09/20/14
EPA 8290	1,2,3,4,7,8,9-HPCDF	0.63 U	12.5	0.63DL	pg/g	09/17/14	09/20/14
EPA 8290	1,2,3,4,7,8-HXCDD	2.4 J	12.5	2.4PC	pg/g	09/17/14	09/20/14
EPA 8290	1,2,3,4,7,8-HXCDF	0.77 U	12.5	0.77DL	pg/g	09/17/14	09/20/14
EPA 8290	1,2,3,6,7,8-HXCDD	0.80 U	12.5	0.80DL	pg/g	09/17/14	09/20/14
EPA 8290	1,2,3,6,7,8-HXCDF	3.0 U	12.5	3.0PC	pg/g	09/17/14	09/20/14
EPA 8290	1,2,3,7,8,9-HXCDD	0.77 U	12.5	0.77DL	pg/g	09/17/14	09/20/14
EPA 8290	1,2,3,7,8,9-HXCDF	0.93 U	12.5	0.93DL	pg/g	09/17/14	09/20/14
EPA 8290	1,2,3,7,8-PECDD	0.66 U	12.5	0.66PC	pg/g	09/17/14	09/20/14
EPA 8290	1,2,3,7,8-PECDF	1.3 U	12.5	1.3DL	pg/g	09/17/14	09/20/14
EPA 8290	2,3,4,6,7,8-HXCDF	0.79 U	12.5	0.79DL	pg/g	09/17/14	09/20/14
EPA 8290	2,3,4,7,8-PECDF	1.4 U	12.5	1.4DL	pg/g	09/17/14	09/20/14
EPA 8290	2,3,7,8-TCDD	0.51 U	5.0	0.51DL	pg/g	09/17/14	09/20/14
EPA 8290	2,3,7,8-TCDF	2.4 U	5.0	2.4DL	pg/g	09/17/14	09/20/14
EPA 8290	OCDD	560	25.0	560PC	pg/g	09/17/14	09/20/14
EPA 8290	OCDF	40	25.0	40PC	pg/g	09/17/14	09/20/14
EPA 8290	TEQ	2.3	NA			09/17/14	09/20/14
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S	80.1	40-135		%	09/17/14	09/20/14
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S	75.5	40-135		%	09/17/14	09/20/14
EPA 8290	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	87.9	40-135		%	09/17/14	09/20/14
EPA 8290	SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)	94.1	40-135		%	09/17/14	09/20/14
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDD (S)	102	40-135		%	09/17/14	09/20/14
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDF (S)	93.9	40-135		%	09/17/14	09/20/14
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDD (S)	105	40-135		%	09/17/14	09/20/14
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDF (S)	95.1	40-135		%	09/17/14	09/20/14
EPA 8290	SURROGATE: 13C-OCDD (S)	71.4	40-135		%	09/17/14	09/20/14

J = Estimated value.

Quant Method: 140919_8290
Run #: 140919_HR_18
Instrument: Magneto
Sequence: 140919
Dilution Factor: 1
Initials: RP

Printed: 09/24/14 10:30:21 AM
Form 1 - APPL Standard GC - No MC

Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

Name: 140919_HR_18, Date: 20-Sep-2014, Time: 12:34:41, ID: , Description: AZ02099_S11 4.965 DF 09/17/14, User:

Name	Peak Area	1° Area	RT	Ion Ab	Ion Fail?	S/N1	S/N2	Conc.	%Rec	LOD	EMPC	Multiplier
2,3,7,8-TCDD										0.510		4.96
1,2,3,7,8-PeCDD	7.443600e1	2.753470e2	40.09	0.27	YES	NO	NO	~~1.885~~		~~0.718~~	0.660	4.96
1,2,3,4,7,8-HxCDD	2.375640e2	1.856640e2	47.92	1.28	NO	NO	NO	2.393		~~0.803~~	2.393	4.96
1,2,3,6,7,8-HxCDD										0.799		4.96
1,2,3,7,8,9-HxCDD	9.232000e1	1.062380e2	48.47	0.87	YES	YES	YES	1~~.072~~		0.767	~~0.901~~	4.96
1,2,3,4,6,7,8-HpCDD	4.413393e3	4.184110e3	54.48	1.05	NO	NO	NO	55.519		~~0.555~~	55.519	4.96
OCDD	3.435780e4	3.714111e4	60.83	0.93	NO	NO	NO	564.642		~~0.542~~	564.642	4.96
2,3,7,8-TCDF	6.801510e2	4.670010e2	30.16	1.46	YES	YES	NO	3~~.851~~		2.372	~~2.775~~	4.96
1,2,3,7,8-PeCDF	7.376360e2	4.590600e2	37.24	1.61	NO	NO	NO	4.~~470~~		1.341	~~4.470~~	4.96
2,3,4,7,8-PeCDF	6.965310e2	4.690430e2	39.94	1.49	NO	NO	NO	~~4.620~~		1.423	~~4.620~~	4.96
1,2,3,4,7,8-HxCDF	2.424710e2	1.578110e2	45.85	1.54	YES	NO	NO	~~1.597~~		0.771	~~1.410~~	4.96
1,2,3,6,7,8-HxCDF	4.412440e2	4.297270e2	45.92	1.03	YES	NO	NO	~~3.324~~		~~0.738~~	3.042	4.96
2,3,4,6,7,8-HxCDF	1.171210e2	6.113900e1	47.30	1.92	YES	YES	YES	~~0.725~~		0.787	~~0.557~~	4.96
1,2,3,7,8,9-HxCDF	4.534500e1	2.499500e1	49.19	1.81	YES	YES	YES	~~0.339~~		0.933	0.270	4.96
1,2,3,4,6,7,8-HpCDF	3.160597e3	3.173869e3	52.29	1.00	NO	NO	NO	~~28.173~~		0.464	~~28.173~~	4.96
1,2,3,4,7,8,9-HpCDF	1.801600e1	1.361700e1	55.32	1.32	YES	YES	YES	~~0.189~~		0.625	~~0.166~~	4.96
OCDF	2.824128e3	2.876282e3	61.18	0.98	NO	NO	NO	40.400		~~0.585~~	40.400	4.96
13C-2,3,7,8-TCDD	2.155493e4	2.821437e4	31.34	0.76	NO	NO	NO	208.966	105.22	0.314		4.96
13C-1,2,3,7,8-PeCDD	2.449861e4	1.557126e4	40.07	1.57	NO	NO	NO	203.006	102.22	0.238		4.96
13C-1,2,3,6,7,8-HxCDD	4.715986e4	3.805933e4	47.89	1.24	NO	NO	NO	467.176	94.09	0.599		4.96
13C-1,2,3,4,6,7,8-HpCDD	3.727780e4	3.588861e4	54.46	1.04	NO	NO	NO	397.653	80.09	0.550		4.96
13C-OCDD	5.393828e4	5.840009e4	60.80	0.92	NO	NO	NO	709.312	71.43	1.813		4.96
13C-2,3,7,8-TCDF	2.802843e4	3.570223e4	30.42	0.79	NO	NO	NO	188.800	95.07	0.426		4.96
13C-1,2,3,7,8-PeCDF	3.190711e4	1.990906e4	37.27	1.60	NO	NO	NO	186.409	93.86	2.359		4.96
13C-1,2,3,4,7,8-HxCDF	3.367240e4	6.634715e4	45.78	0.51	NO	NO	NO	436.297	87.87	0.328		4.96
13C-1,2,3,4,6,7,8-HpCDF	2.299298e4	5.399054e4	52.23	0.43	NO	NO	NO	374.963	75.52	0.393		4.96
13C-1,2,3,4-TCDD	2.125813e4	2.751379e4	30.66	0.77	NO	NO	NO	198.600	100.00	0.305		4.96
13C-1,2,3,7,8,9-HxCDD	2.191397e4	1.677820e4	48.44	1.31	NO	NO	NO	198.600	100.00	0.561		4.96
Total Tetra-Dioxins	4.658783e3							36.706		0.510	13.259	4.96
Total Penta-Dioxins	1.286234e3							1760.896		0.718	11.401	4.96
Total Hexa-Dioxins	1.811300e3							77.235		0.789	15.206	4.96
Total Hepta-Dioxins	9.581584e3							122.579		0.555	76.119	4.96
Total Tetra-Furans	2.998346e4							203.873		2.372	177.034	4.96
Total Penta-Furans	8.386488e3							57.039		1.381	37.249	4.96
Total Hexa-Furans	8.356027e3							63.625		0.801	60.463	4.96
Total Hepa-Furans	6.770918e3							63.928		0.533	62.316	4.96
PFK1	0.000000e0											1.00
PFK2	0.000000e0											1.00
PFK3	0.000000e0											1.00
PFK4	0.000000e0											1.00
PFK5	0.000000e0											1.00
HxCDPE	0.000000e0											1.00
HpCDPE	0.000000e0											1.00
OCDPE	0.000000e0											1.00
NCDPE	0.000000e0											1.00
DCDPE	0.000000e0											1.00

9/22/14 JR

RETENTION TIME CHECK

AZ02099_S11 4.965 DF 09/17/14 — **EPA Method 8290**

INSTRUMENT: Magneto
COLUMN: Restek DB5 - 60m
MATRIX:

ANALYSIS DATE/TIME:
EXTRACTION DATE:
SEQUENCE:
RUN FILE: 140919_HR_18

Analyte	RT of congener in sample 140919_HR_18	RT of ^{13}C congener in sample 140919_HR_18	RRT of congener in sample 140919_HR_18	RRT of congener in CCV 140919_HR_10	LCL[a]	UCL[b]	Qualifiers
2,3,7,8-TCDD		31.3425	0.0000	1.0009	31.3258	31.3925	Fail
1,2,3,7,8-PeCDD	40.0887	40.0685	1.0005	1.0008	40.0518	40.1185	Pass
1,2,3,4,7,8-HxCDD	47.9152	47.8940	1.0004	0.9962	0.9912	1.0012	Pass
1,2,3,6,7,8-HxCDD		47.8940	0.0000	1.0007	47.8773	47.9440	Fail
1,2,3,7,8,9-HxCDD	48.4677	48.4358	1.0007	1.0004	48.4191	48.4858	Pass
1,2,3,4,6,7,8-HpCDD	54.4805	54.4602	1.0004	1.0004	54.4435	54.5102	Pass
OCDD	60.8332	60.8027	1.0005	1.0005	60.7860	60.8527	Pass
2,3,7,8-TCDF	30.1585	30.4170	0.9915	1.0005	30.4003	30.4670	Fail
1,2,3,7,8-PeCDF	37.2407	37.2712	0.9992	1.0008	37.2545	37.3212	Fail
2,3,4,7,8-PeCDF	39.9368	37.2712	1.0715	1.0577	1.0524	1.0630	Fail
1,2,3,4,7,8-HxCDF	45.8543	45.7800	1.0016	1.0005	45.7633	45.8300	Fail
1,2,3,6,7,8-HxCDF	45.9180	45.7800	1.0030	1.0063	1.0012	1.0113	Pass
2,3,4,6,7,8-HxCDF	47.2990	45.7800	1.0332	1.0339	1.0288	1.0391	Pass
1,2,3,7,8,9-HxCDF	49.1900	45.7800	1.0745	1.0721	1.0667	1.0774	Pass
1,2,3,4,6,7,8-HpCDF	52.2912	52.2305	1.0012	1.0004	52.2138	52.2805	Fail
1,2,3,4,7,8,9-HpCDF	55.3217	52.2305	1.0592	1.0609	1.0556	1.0662	Pass
OCDF	61.1777	60.8027	1.0062	1.0062	1.0012	1.0112	Pass
$^{13}C_{12}$-2,3,7,8-TCDD	31.3425	30.6620	1.0222	1.0222	1.0171	1.0273	Pass
$^{13}C_{12}$-1,2,3,7,8-PeCDD	40.0685	30.6620	1.3068	1.3069	1.3003	1.3134	Pass
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	47.8940	48.4358	0.9888	0.9888	0.9838	0.9937	Pass
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	54.4602	48.4358	1.1244	1.1233	1.1176	1.1289	Pass
$^{13}C_{12}$-OCDD	60.8027	48.4358	1.2553	1.2528	1.2465	1.2590	Pass
$^{13}C_{12}$-2,3,7,8-TCDF	30.4170	30.6620	0.9920	0.9924	0.9875	0.9974	Pass
$^{13}C_{12}$-1,2,3,7,8-PeCDF	37.2712	30.6620	1.2156	1.2155	1.2094	1.2216	Pass
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	45.7800	48.4358	0.9452	0.9453	0.9406	0.9500	Pass
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	52.2305	48.4358	1.0783	1.0773	1.0720	1.0827	Pass
$^{13}C_{12}$-1,2,3,4-TCDD	30.6620	30.6620	1.0000	1.0000	0.9950	1.0050	Pass
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	48.4358	48.4358	1.0000	1.0000	0.9950	1.0050	Pass

a. Lower control limit
b. Upper control limit

Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

Name: 140919_HR_18, Date: 20-Sep-2014, Time: 12:34:41, ID: , Description: AZ02099_S11 4.965 DF 09/17/14, User:

#	Name	RT	RRT
1	2,3,7,8-TCDD		
2	1,2,3,7,8-PeCDD	40.088699	1.000504
3	1,2,3,4,7,8-HxCDD	47.915199	1.000443
4	1,2,3,6,7,8-HxCDD		
5	1,2,3,7,8,9-HxCDD	48.467701	1.000659
6	1,2,3,4,6,7,8-HpCDD	54.480499	1.000373
7	OCDD	60.833199	1.000502
8	2,3,7,8-TCDF	30.158501	0.991502
9	1,2,3,7,8-PeCDF	37.240700	0.999182
10	2,3,4,7,8-PeCDF	39.936798	1.071519
11	1,2,3,4,7,8-HxCDF	45.854301	1.001623
12	1,2,3,6,7,8-HxCDF	45.917999	1.003014
13	2,3,4,6,7,8-HxCDF	47.299000	1.033180
14	1,2,3,7,8,9-HxCDF	49.189999	1.074487
15	1,2,3,4,6,7,8-HpCDF	52.291199	1.001162
16	1,2,3,4,7,8,9-HpCDF	55.321701	1.059184
17	OCDF	61.177700	1.006168
18	13C-2,3,7,8-TCDD	31.342501	1.022194
19	13C-1,2,3,7,8-PeCDD	40.068501	1.306780
20	13C-1,2,3,6,7,8-HxCDD	47.894001	0.988814
21	13C-1,2,3,4,6,7,8-HpCDD	54.460201	1.124379
22	13C-OCDD	60.802700	1.255326
23	13C-2,3,7,8-TCDF	30.417000	0.992010
24	13C-1,2,3,7,8-PeCDF	37.271198	1.215550
25	13C-1,2,3,4,7,8-HxCDF	45.779999	0.945169
26	13C-1,2,3,4,6,7,8-HpCDF	52.230499	1.078345
27	13C-1,2,3,4-TCDD	30.662001	1.000000
28	13C-1,2,3,7,8,9-HxCDD	48.435799	1.000000

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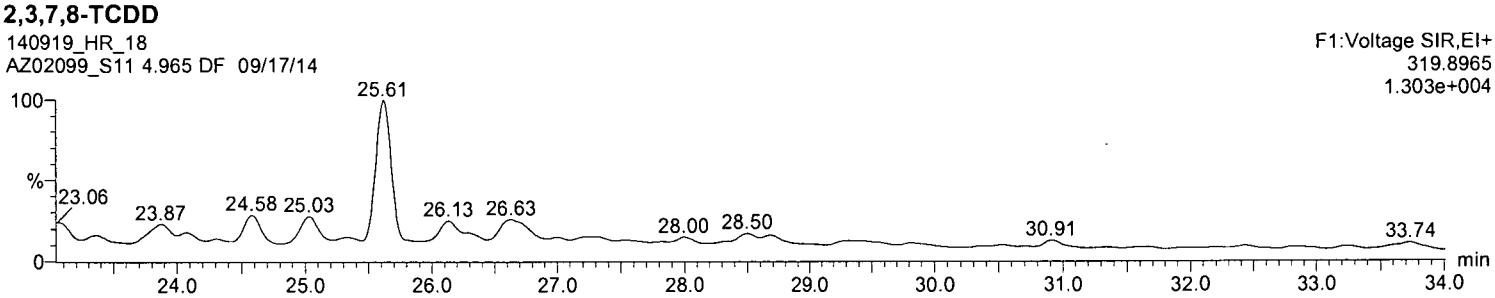
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#	Name	Signal	Noise 1	S/N 1	Flag S/N...	Signal 2	Noise 2	S/N 2	Flag S/N...
1	2,3,7,8-TCDD		1.8440778e2				1.6323177e2		
2	1,2,3,7,8-PeCDD	3.5500000e2	6.8641113e1	4.28	NO	1.4070000e3	3.1067554e2	4.53	NO
3	1,2,3,4,7,8-HxCDD	1.4030000e3	1.5886948e2	7.18	NO	1.1830000e3	2.6169479e2	4.52	NO
4	1,2,3,6,7,8-HxCDD		1.5886948e2				2.6169479e2		
5	1,2,3,7,8,9-HxCDD	6.0000000e2	1.5886948e2	1.69	YES	6.2500000e2	2.6169479e2	2.39	YES
6	1,2,3,4,6,7,8-HpCDD	3.2381000e4	1.3303778e2	240.49	NO	3.0542000e4	1.1288647e2	270.56	NO
7	OCDD	2.1879700e5	9.2212975e1	2372.97	NO	2.4099900e5	8.5600143e1	2815.40	NO
8	2,3,7,8-TCDF	3.5900000e3	8.2210168e2	2.35	YES	5.1070000e3	1.0559639e3	4.84	NO
9	1,2,3,7,8-PeCDF	4.1580000e3	6.1900842e2	4.17	NO	2.6010000e3	3.2468707e2	8.01	NO
10	2,3,4,7,8-PeCDF	4.9500000e3	6.1900842e2	7.10	NO	3.3220000e3	3.2468707e2	10.23	NO
11	1,2,3,4,7,8-HxCDF	2.2460000e3	2.6444427e2	7.48	NO	1.3510000e3	2.7578241e2	4.90	NO
12	1,2,3,6,7,8-HxCDF	2.8720000e3	2.6444427e2	9.74	NO	2.7100000e3	2.7578241e2	9.83	NO
13	2,3,4,6,7,8-HxCDF	1.3840000e3	2.6444427e2	2.78	YES	6.7600000e2	2.7578241e2	2.45	YES
14	1,2,3,7,8,9-HxCDF	4.1200000e2	2.6444427e2	-1.04	YES	2.6600000e2	2.7578241e2	0.96	YES
15	1,2,3,4,6,7,8-HpCDF	2.0728000e4	1.4733507e2	139.36	NO	2.0980000e4	1.5277736e2	137.32	NO
16	1,2,3,4,7,8,9-HpCDF	2.3000000e2	1.4733507e2	1.41	YES	1.5200000e2	1.5277736e2	0.99	YES
17	OCDF	1.9177000e4	1.1356111e2	165.73	NO	2.0267000e4	1.0029425e2	202.08	NO
18	13C-2,3,7,8-TCDD	1.4242400e5	1.3556728e2	1049.42	NO	1.8444200e5	6.0427711e1	3052.28	NO
19	13C-1,2,3,7,8-PeCDD	1.7425500e5	6.4261589e1	2710.75	NO	1.1028600e5	5.8812492e1	1875.21	NO
20	13C-1,2,3,6,7,8-HxCDD	3.4925700e5	2.1424454e2	1630.02	NO	2.8071600e5	8.6200172e1	3256.56	NO
21	13C-1,2,3,4,6,7,8-HpCDD	2.6668400e5	1.3295885e2	2003.07	NO	2.5584500e5	1.4522052e2	1761.77	NO
22	13C-OCDD	3.4929200e5	6.9251843e2	499.33	NO	3.7447300e5	9.6818710e1	3867.78	NO
23	13C-2,3,7,8-TCDF	1.8624300e5	1.8303001e2	1015.25	NO	2.3759400e5	1.9368240e2	1226.72	NO
24	13C-1,2,3,7,8-PeCDF	2.0970500e5	6.2478584e1	3355.34	NO	1.2901300e5	1.6563307e3	77.89	NO
25	13C-1,2,3,4,7,8-HxCDF	2.3514800e5	8.5475952e1	2750.87	NO	4.6689900e5	1.2118500e2	3852.78	NO
26	13C-1,2,3,4,6,7,8-HpCDF	1.6525200e5	1.2526668e2	1318.62	NO	3.9767600e5	9.6712982e1	4111.92	NO
27	13C-1,2,3,4-TCDD	1.3928500e5	1.3556728e2	1025.37	NO	1.8048400e5	6.0427711e1	2986.78	NO
28	13C-1,2,3,7,8,9-HxCDD	1.5057000e5	2.1424454e2	702.25	NO	1.1520600e5	8.6200172e1	1336.49	NO

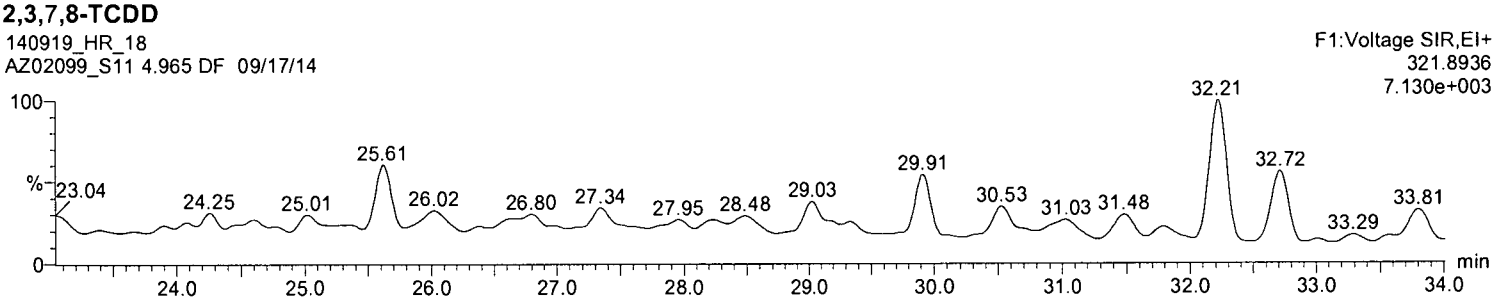
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Name: 140919_HR_18, Date: 20-Sep-2014, Time: 12:34:41, ID: , Description: AZ02099_S11 4.965 DF 09/17/14, User:

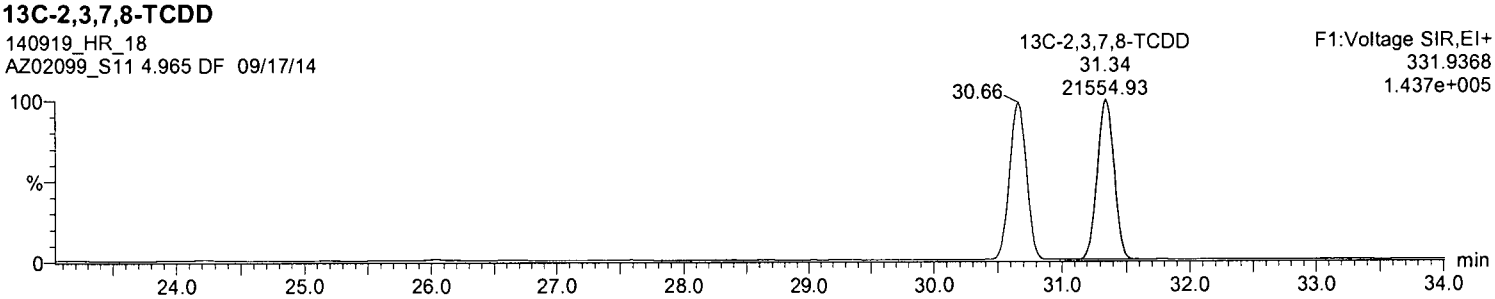
2,3,7,8-TCDD



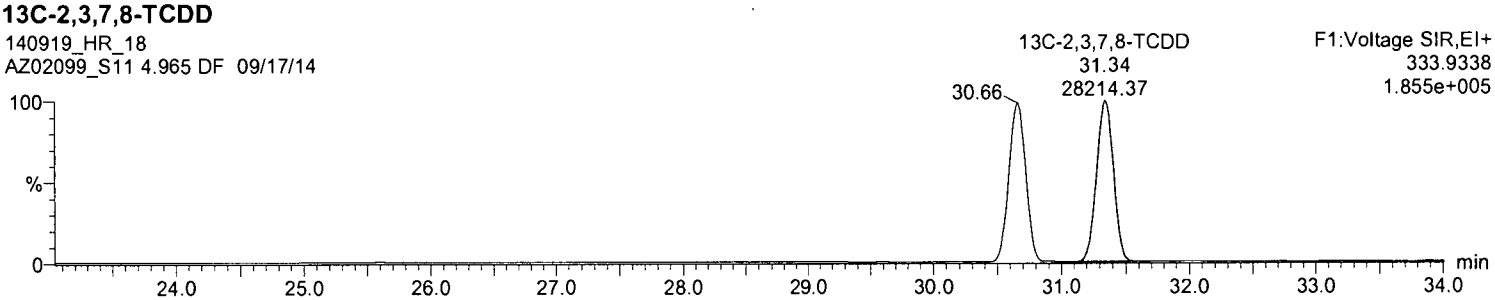
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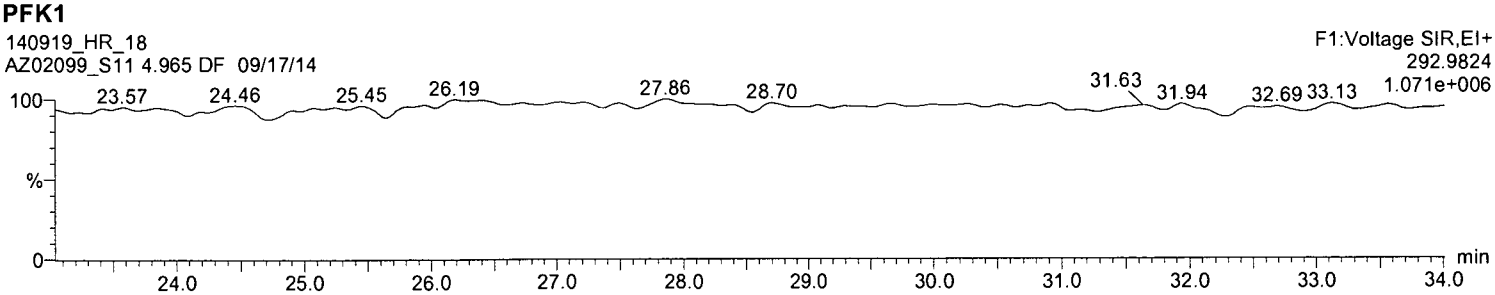
13C-2,3,7,8-TCDD



13C-2,3,7,8-TCDD

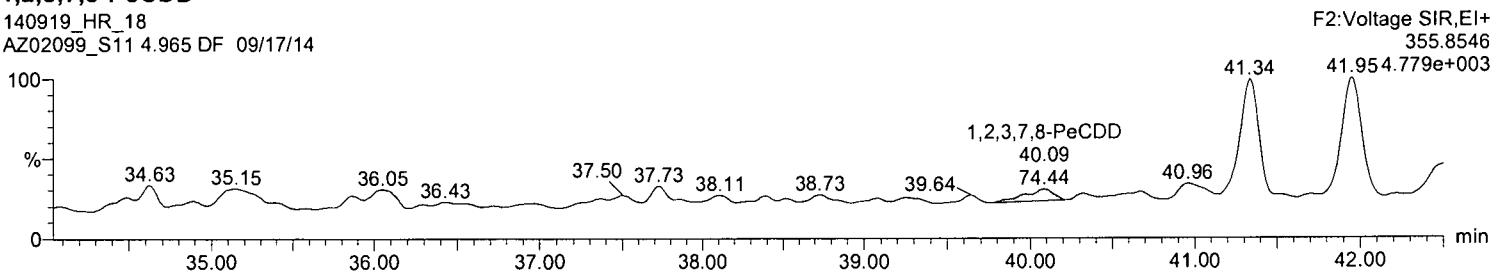


PFK1

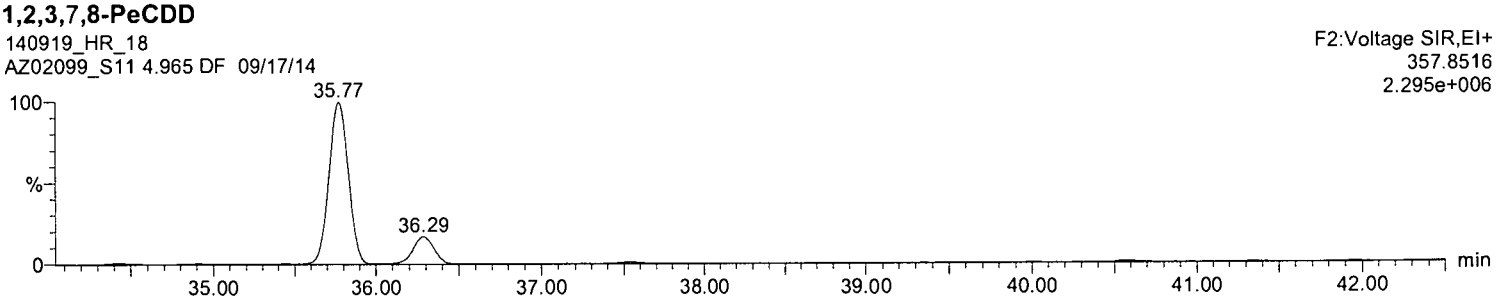


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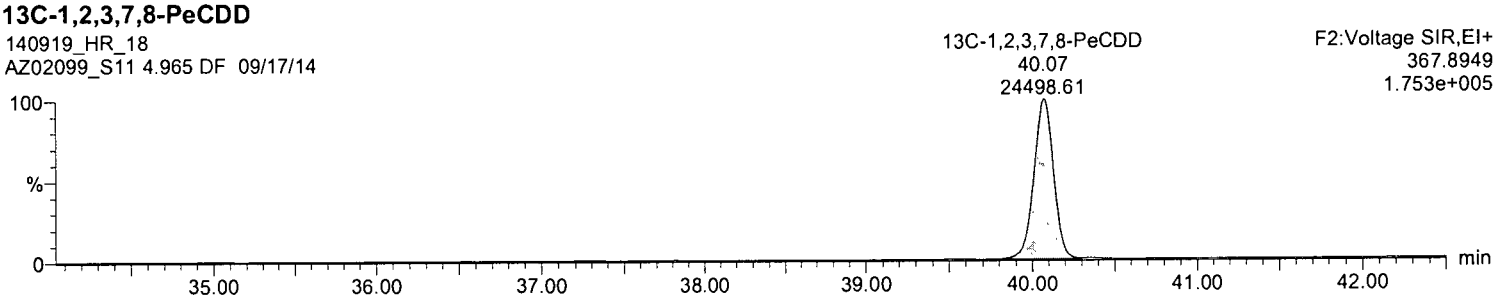
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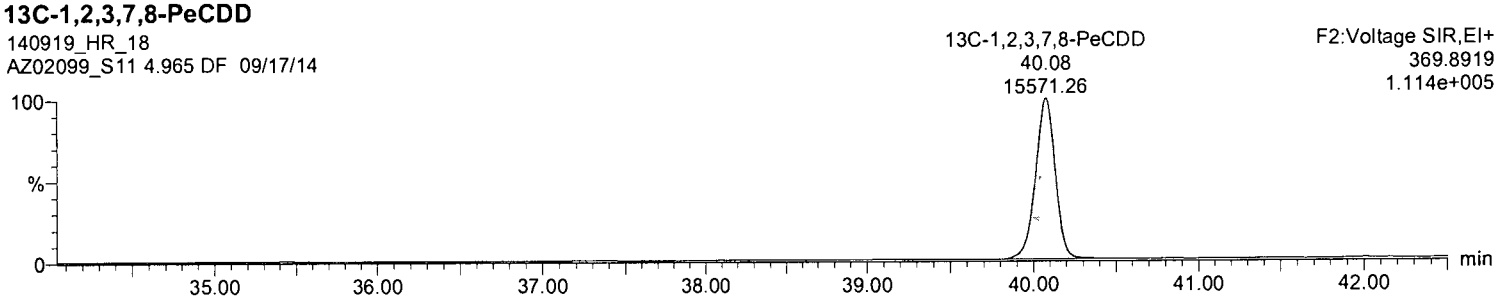
1,2,3,7,8-PeCDD



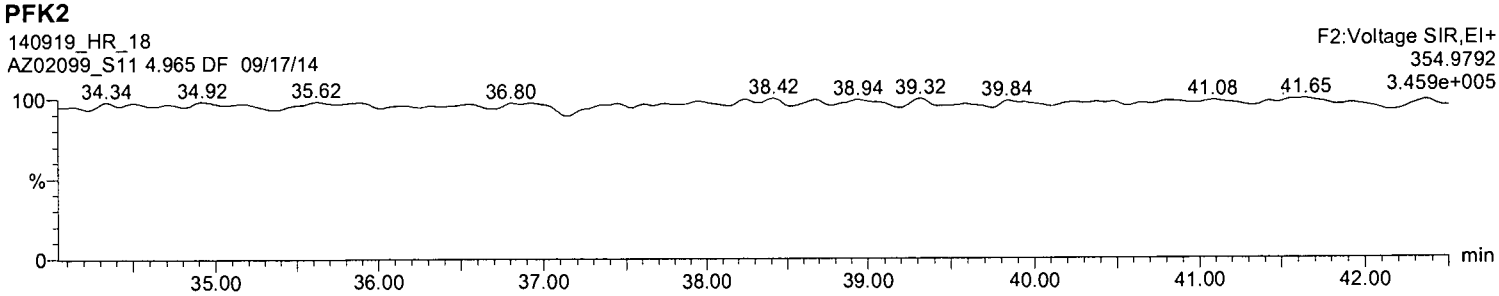
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13C-1,2,3,7,8-PeCDD

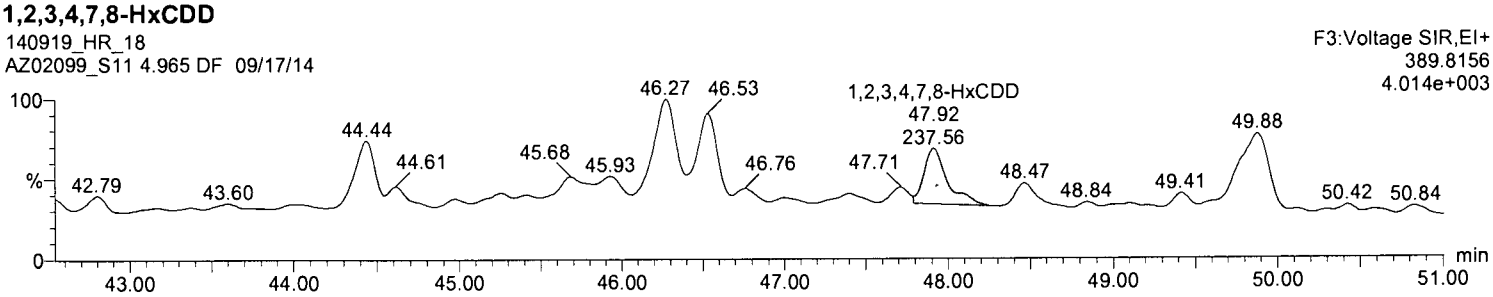


PFK2

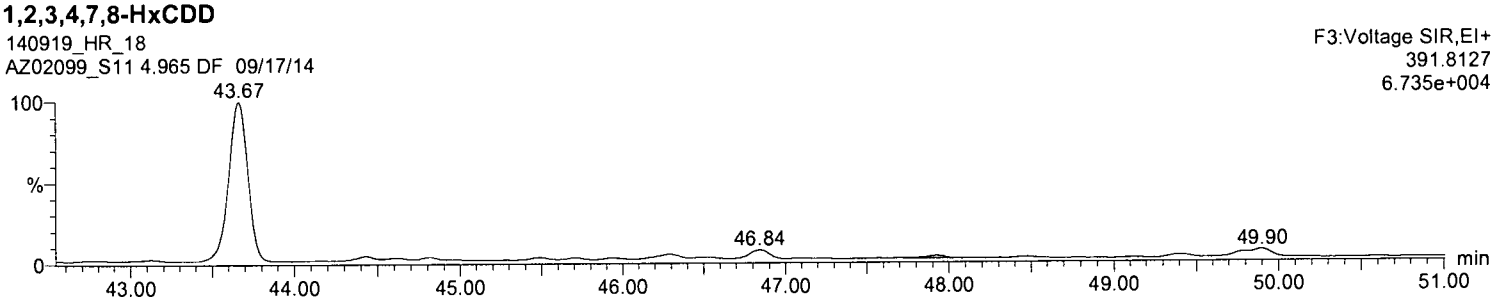


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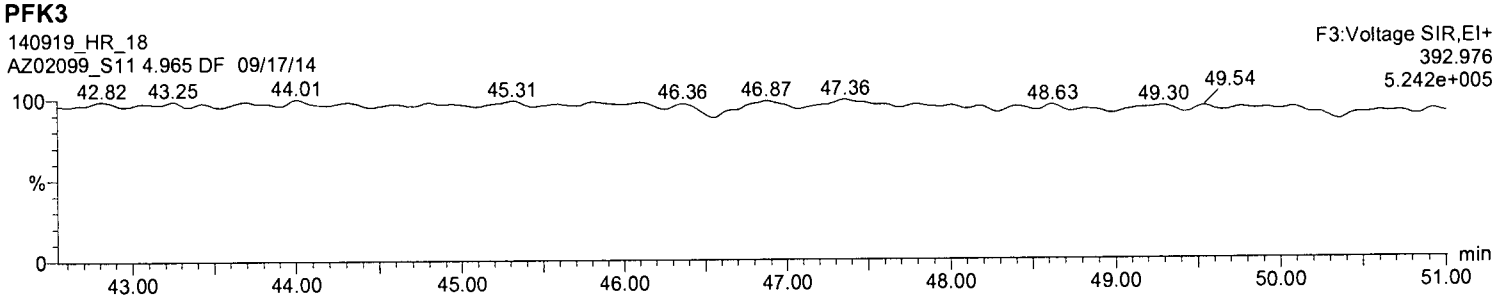
1,2,3,4,7,8-HxCDD



1,2,3,4,7,8-HxCDD

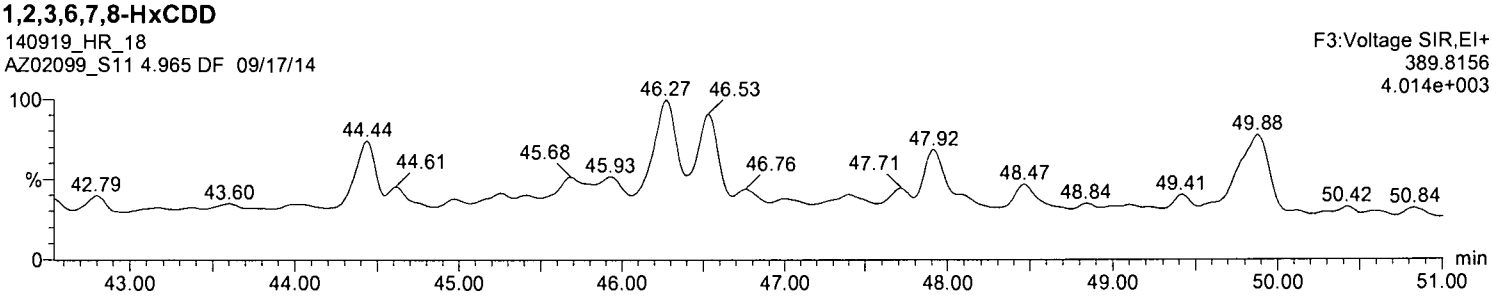


PFK3

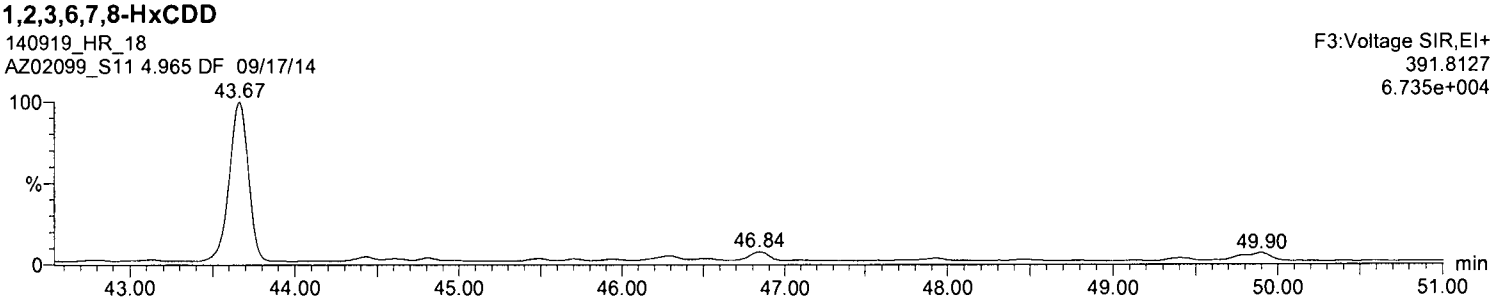


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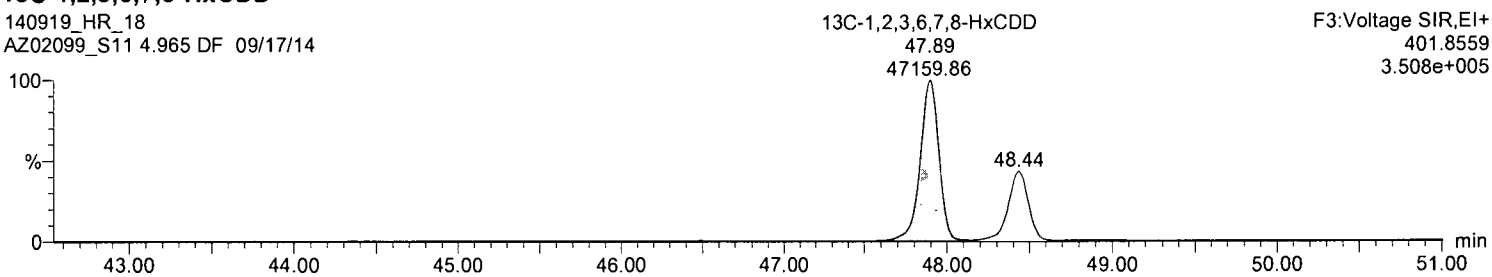
1,2,3,6,7,8-HxCDD



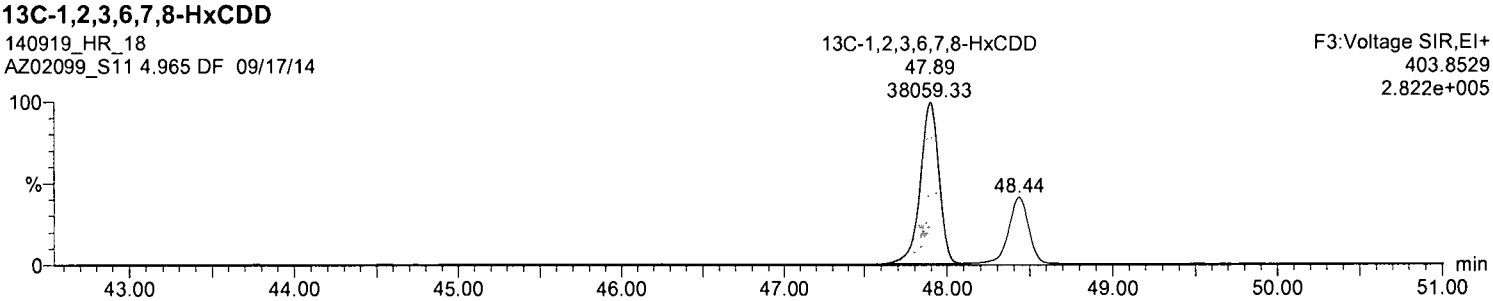
1,2,3,6,7,8-HxCDD



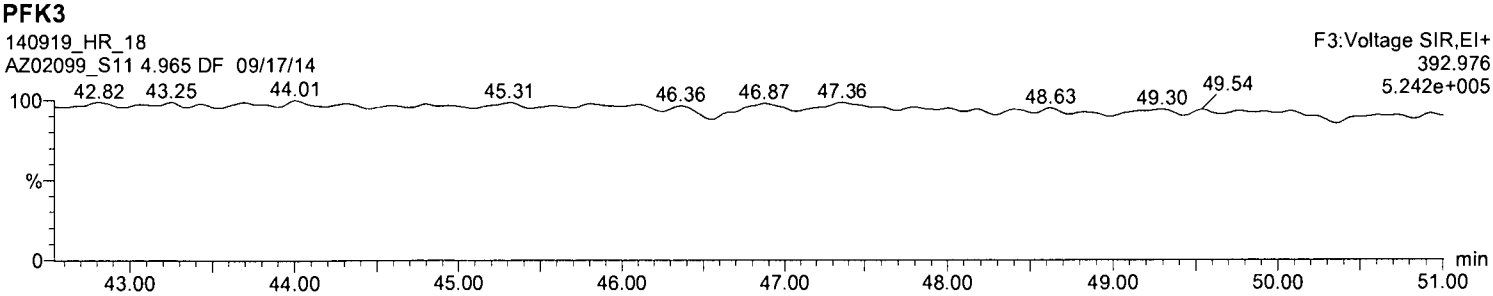
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13C-1,2,3,6,7,8-HxCDD

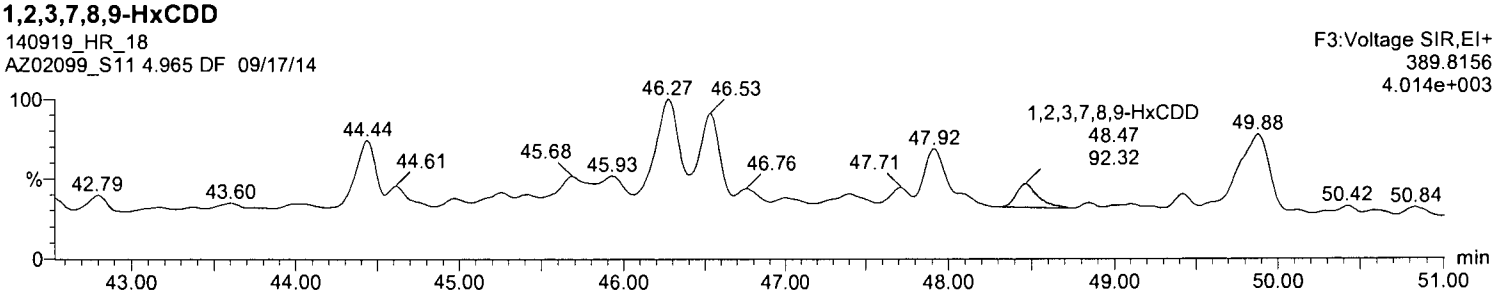


PFK3

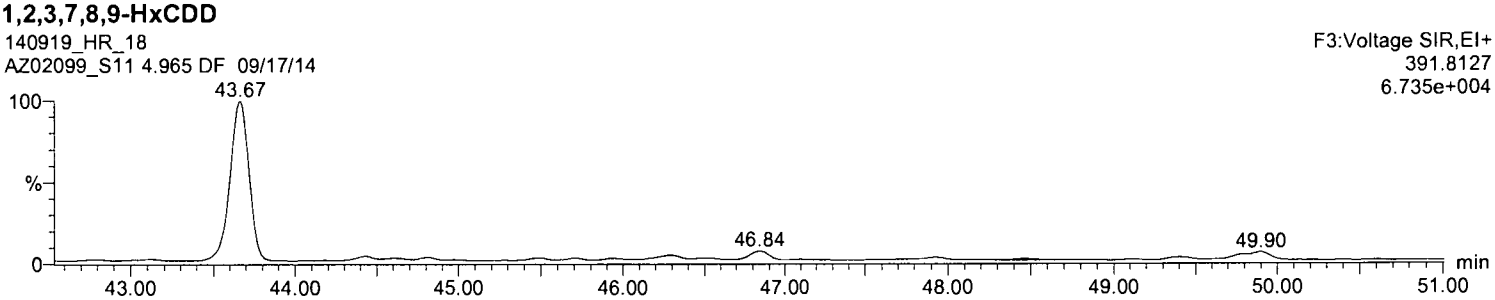


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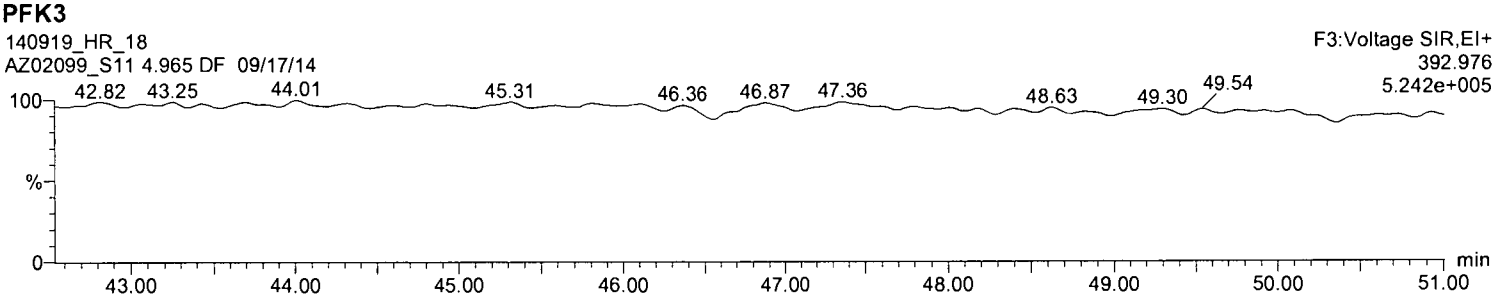
1,2,3,7,8,9-HxCDD



1,2,3,7,8,9-HxCDD

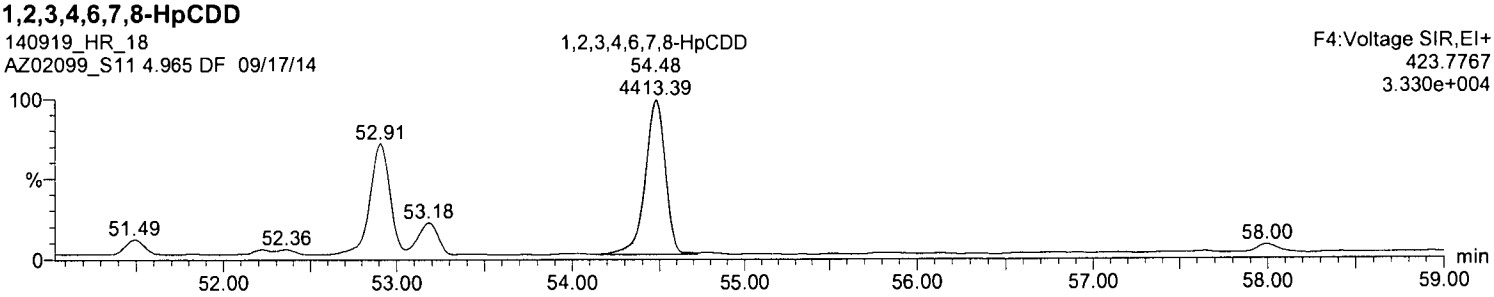


PFK3

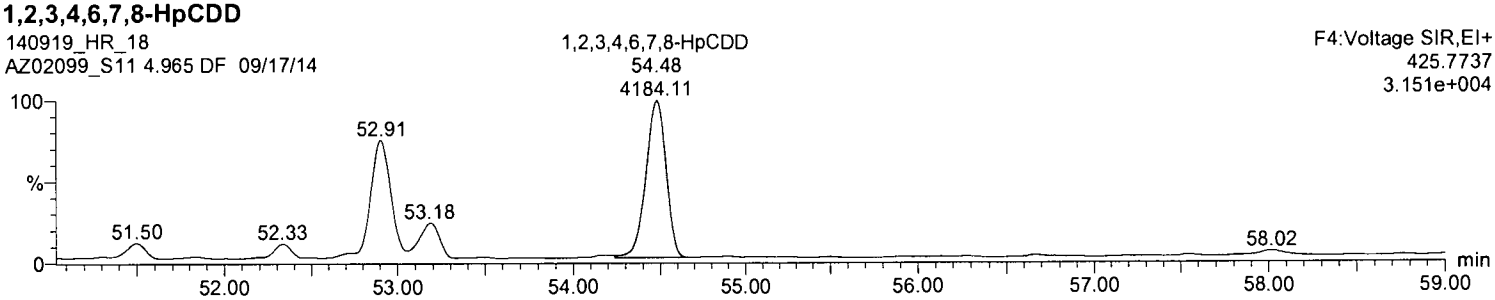


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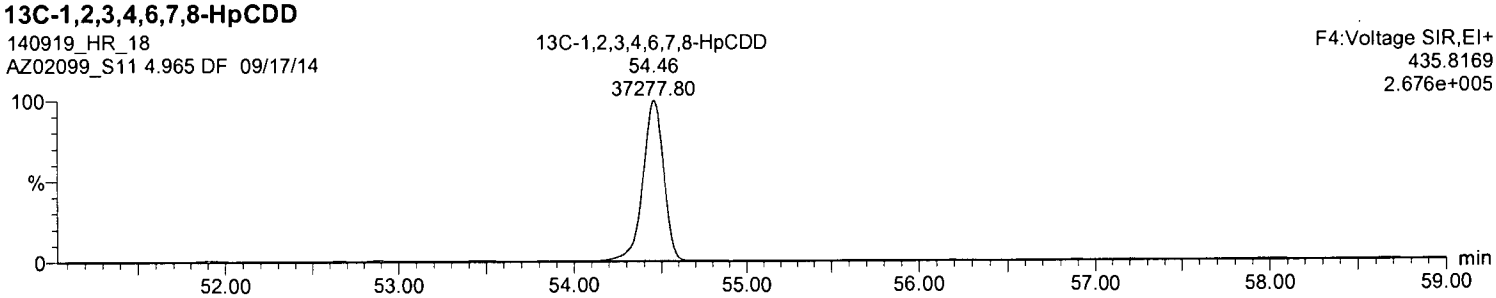
1,2,3,4,6,7,8-HpCDD



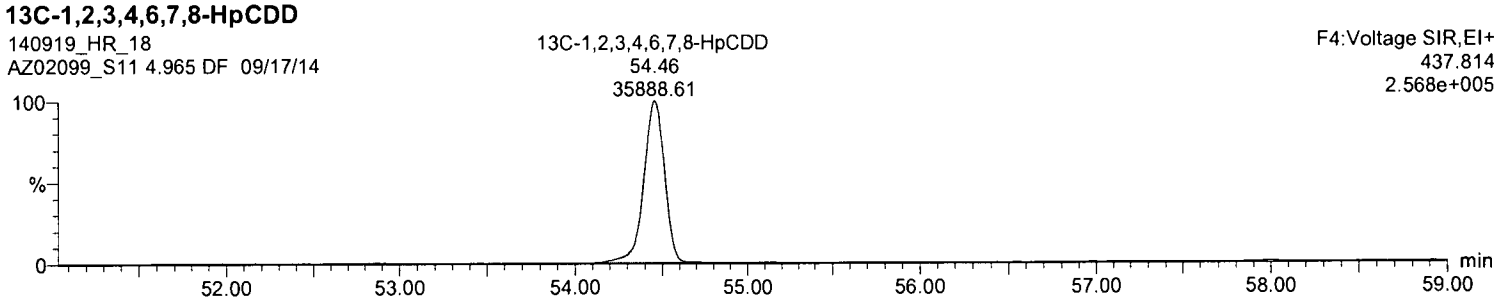
1,2,3,4,6,7,8-HpCDD



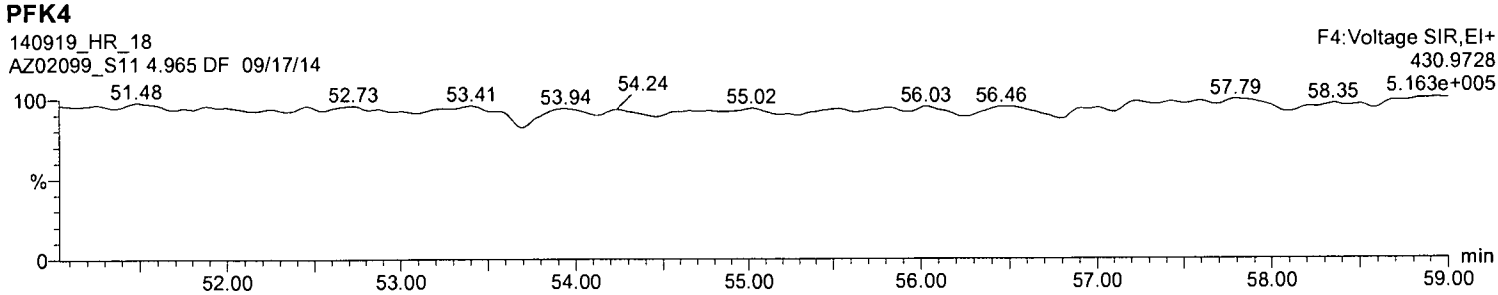
13C-1,2,3,4,6,7,8-HpCDD



13C-1,2,3,4,6,7,8-HpCDD

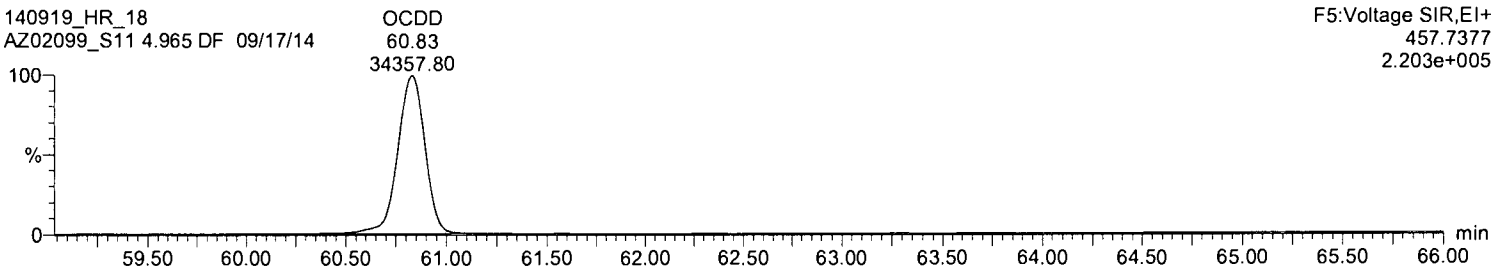


PFK4

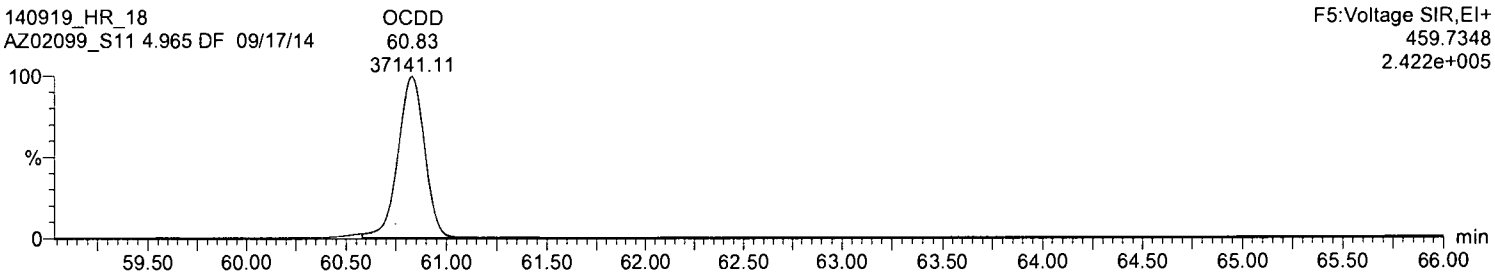


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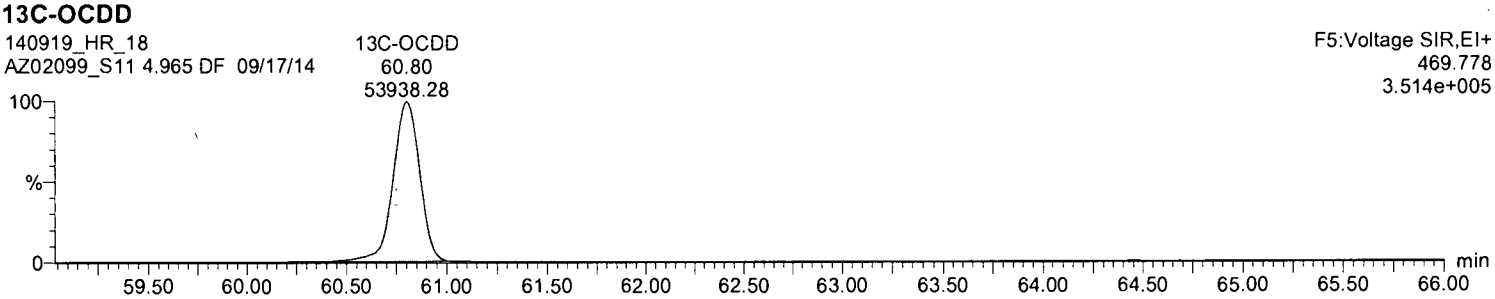
OCDD



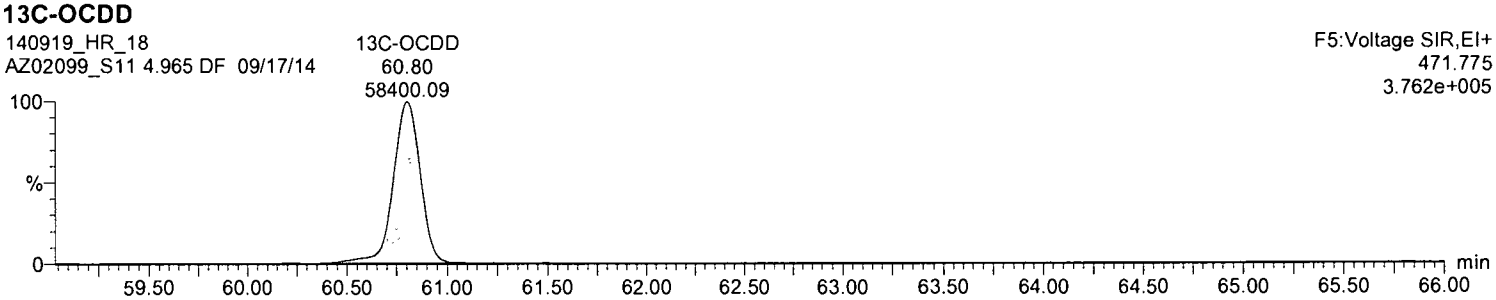
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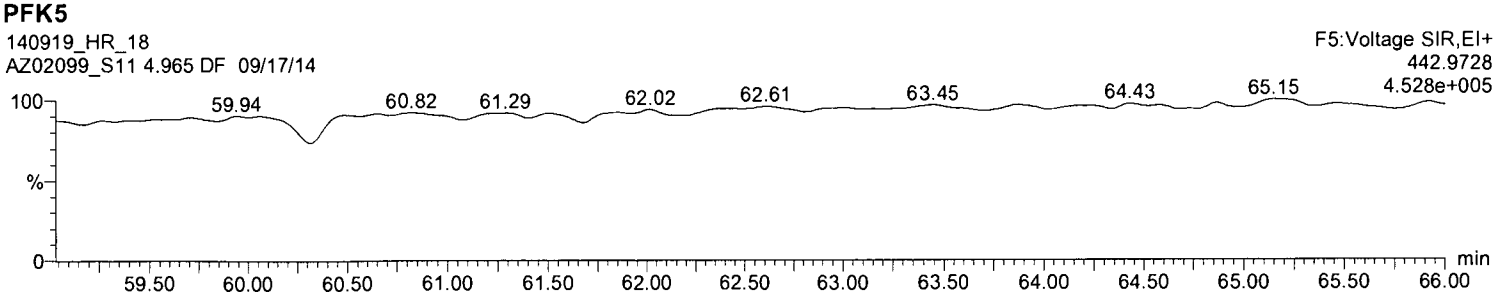
13C-OCDD



13C-OCDD

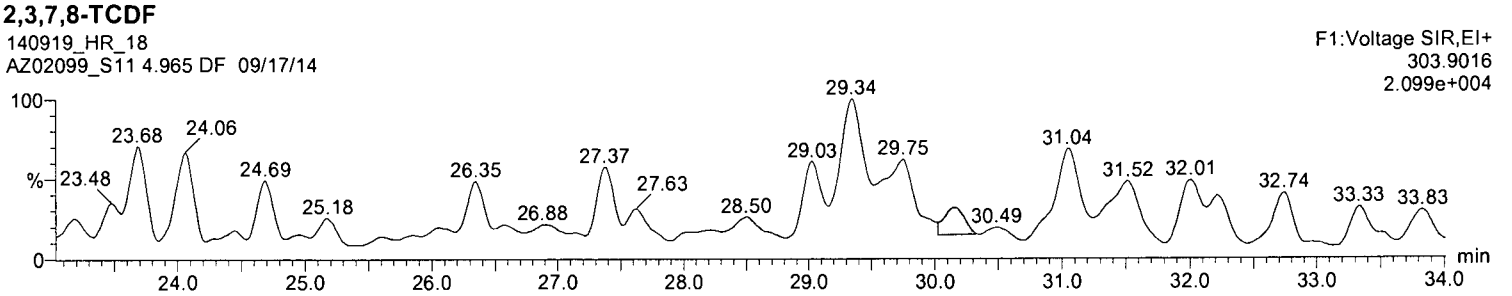


PFK5

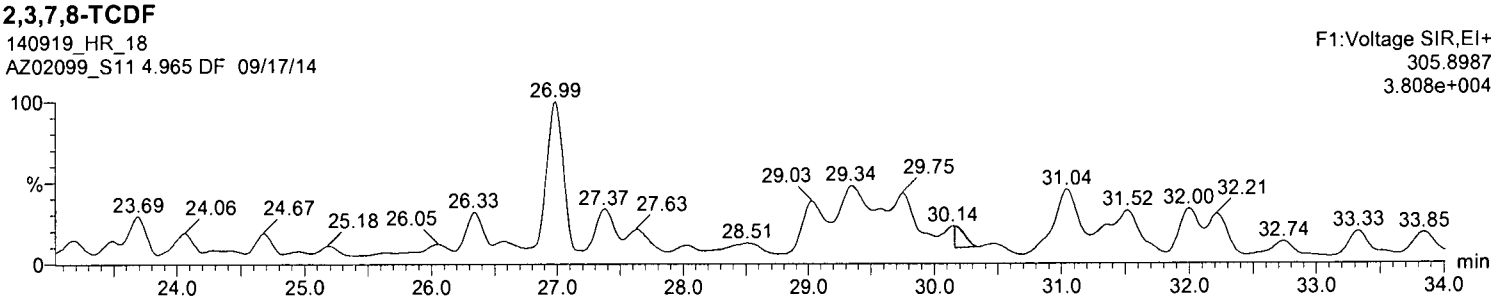


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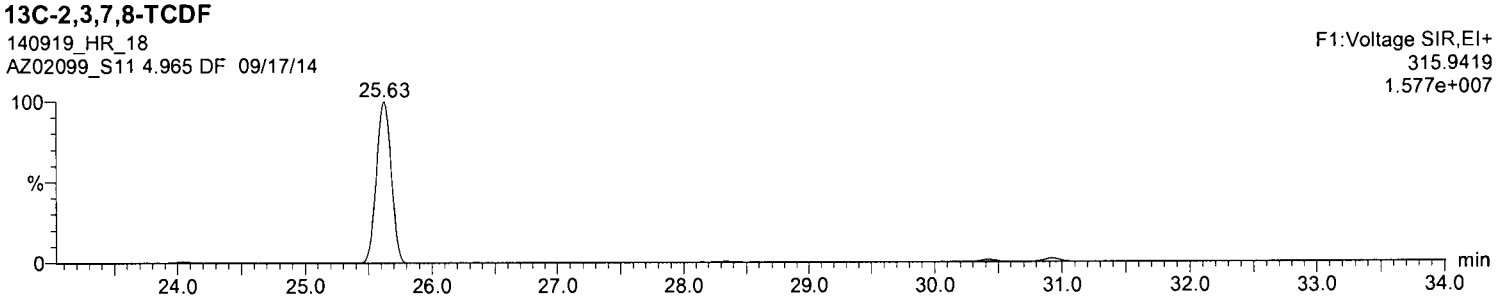
2,3,7,8-TCDF



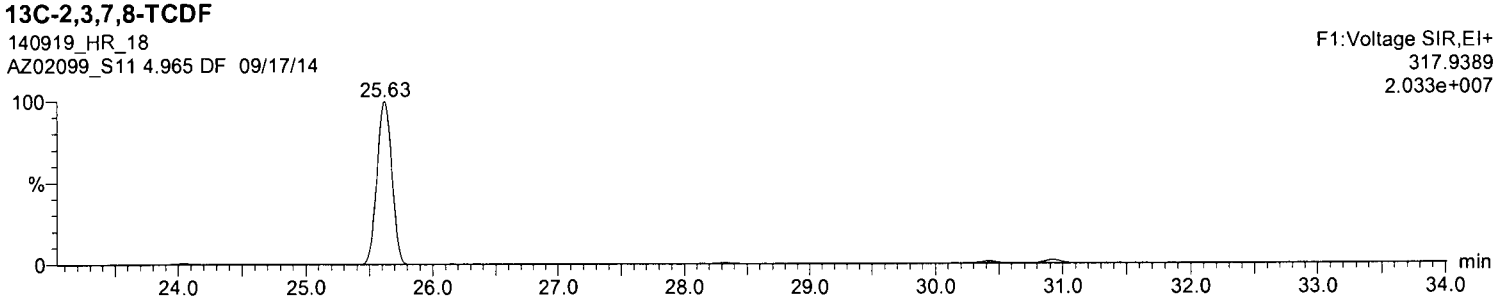
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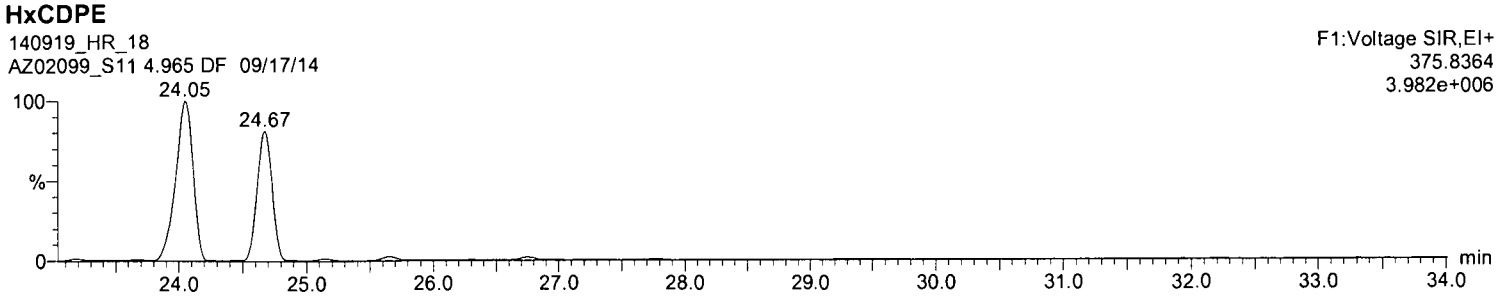
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13C-2,3,7,8-TCDF

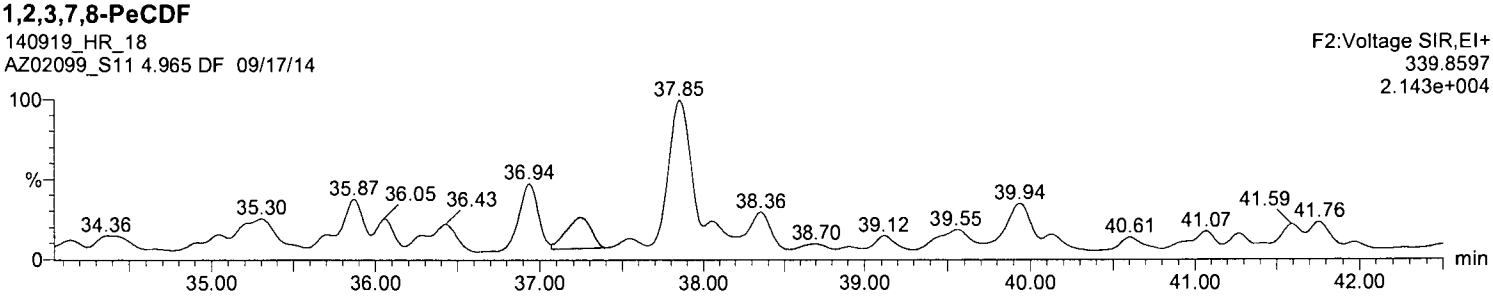


HxCDPE

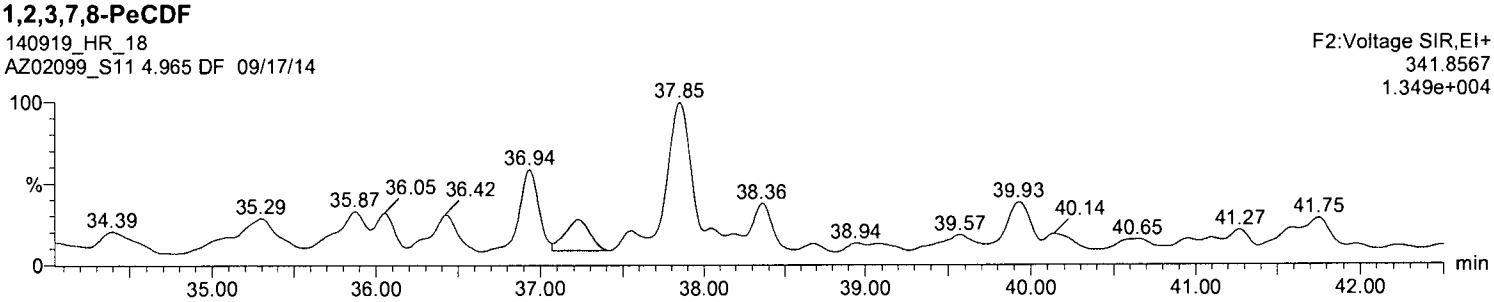


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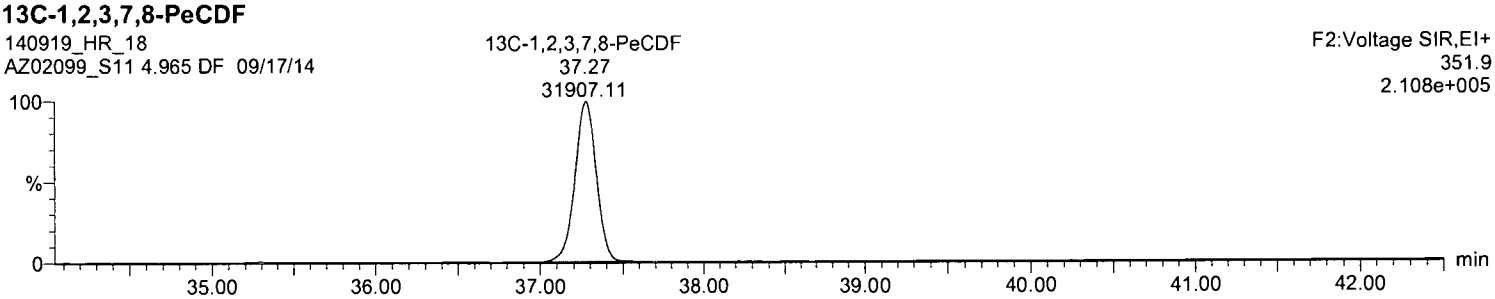
1,2,3,7,8-PeCDF



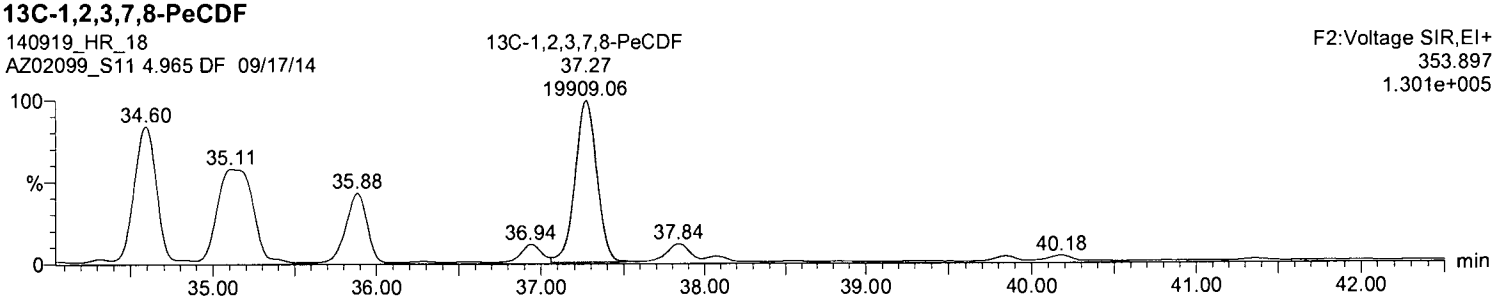
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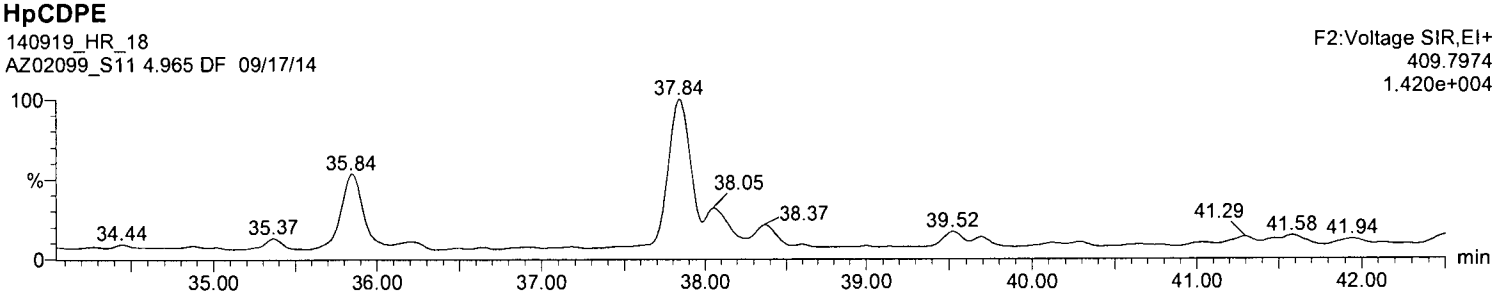
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13C-1,2,3,7,8-PeCDF

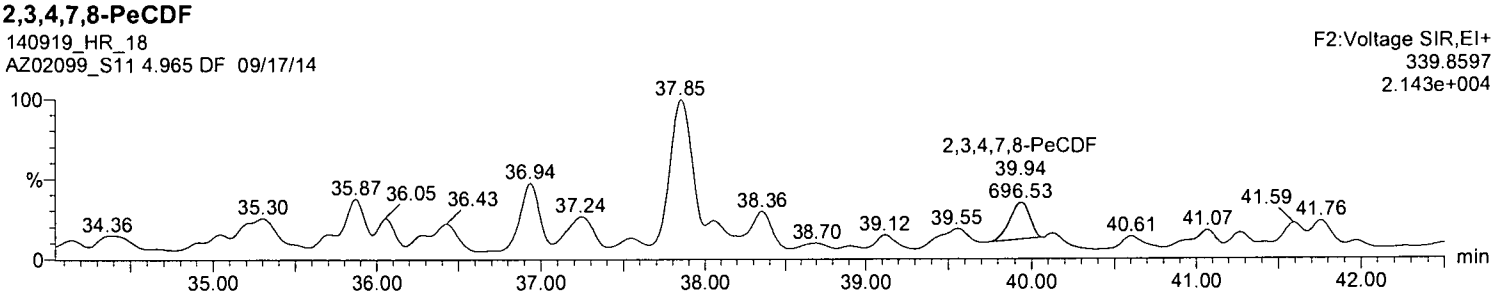


HpCDPE

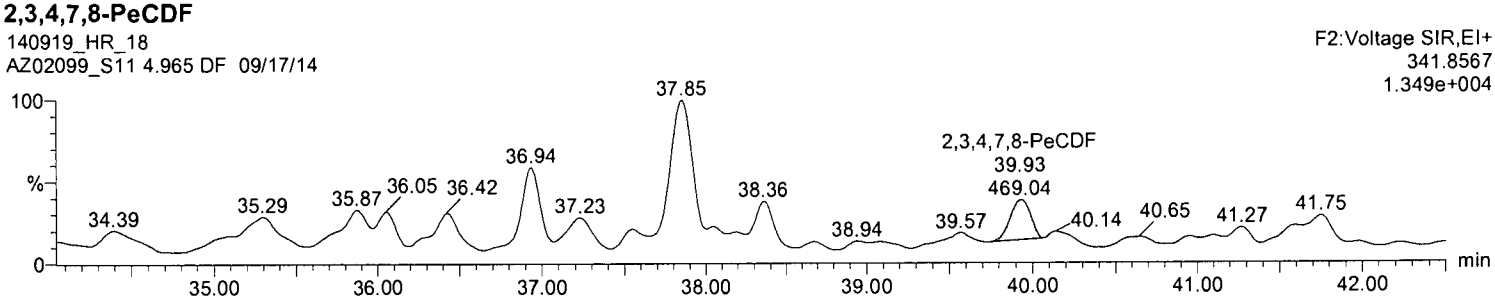


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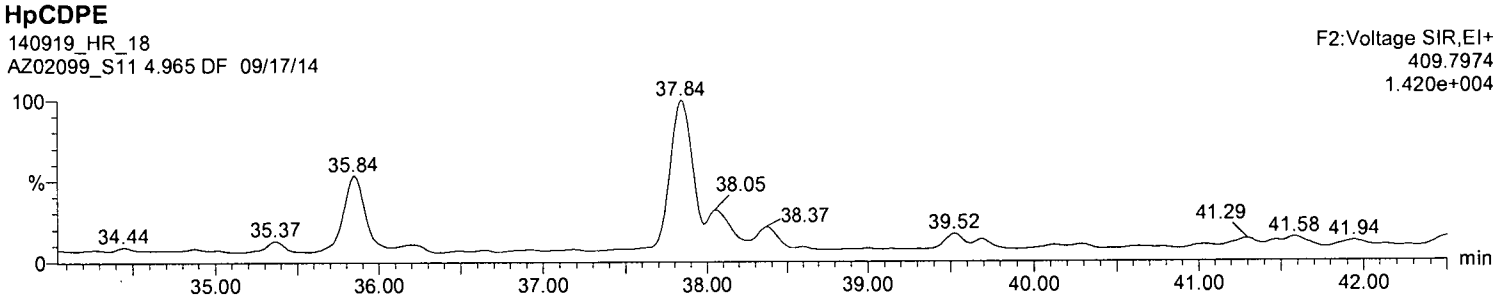
2,3,4,7,8-PeCDF



2,3,4,7,8-PeCDF

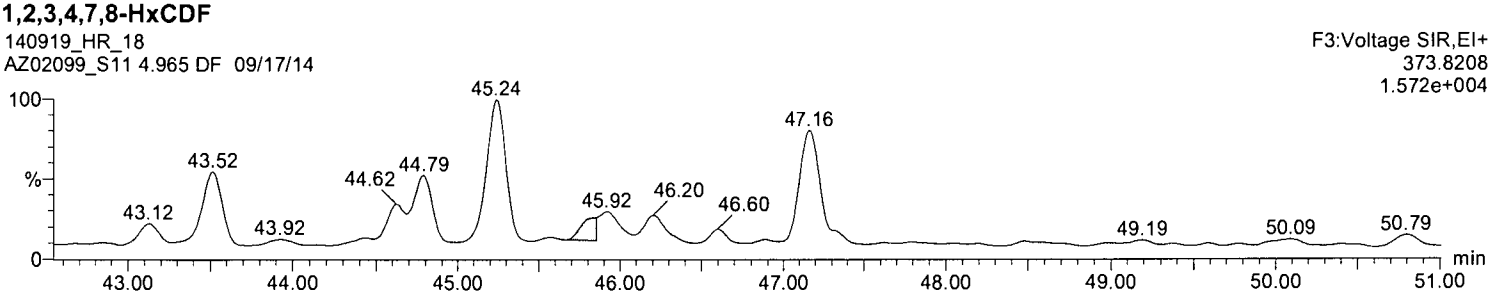


HpCDPE

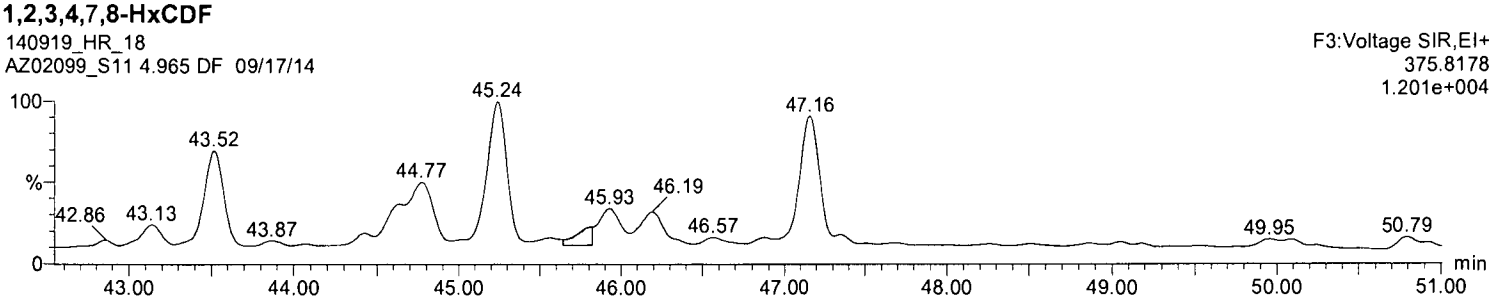


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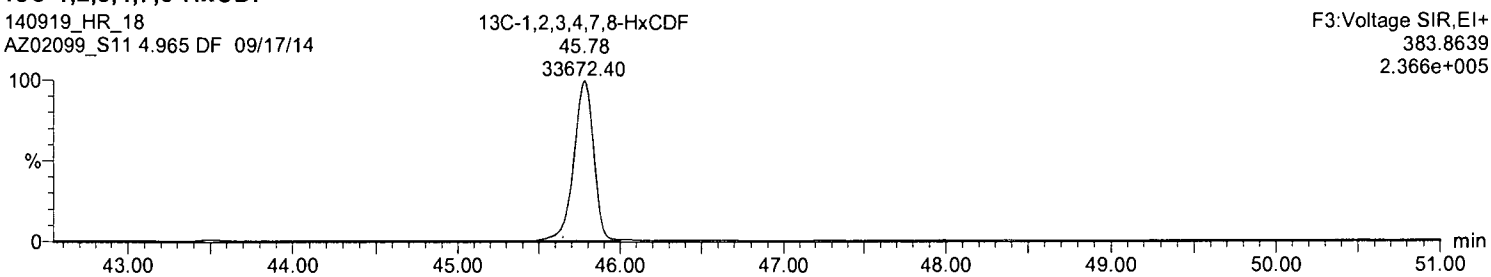
1,2,3,4,7,8-HxCDF



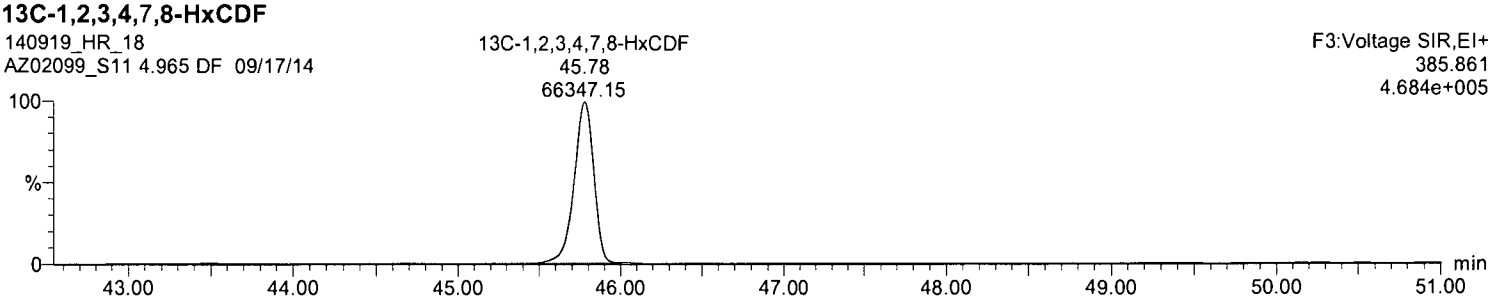
1,2,3,4,7,8-HxCDF



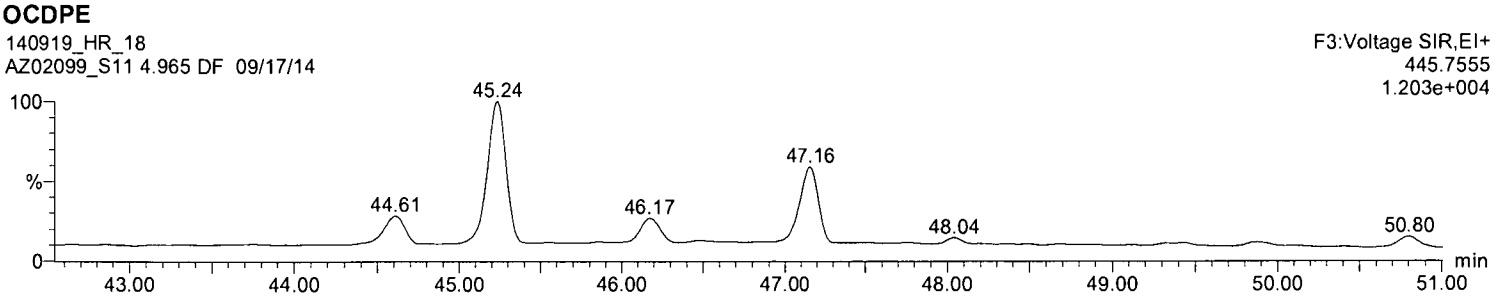
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13C-1,2,3,4,7,8-HxCDF

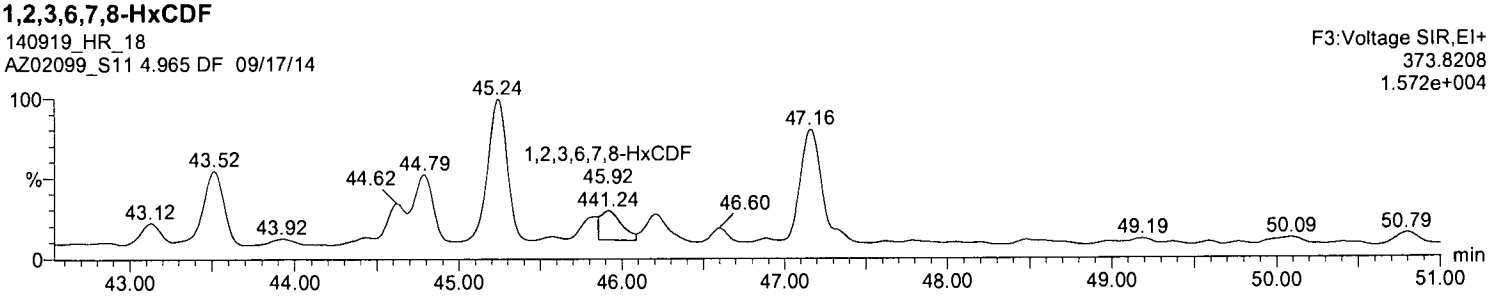


OCDPE

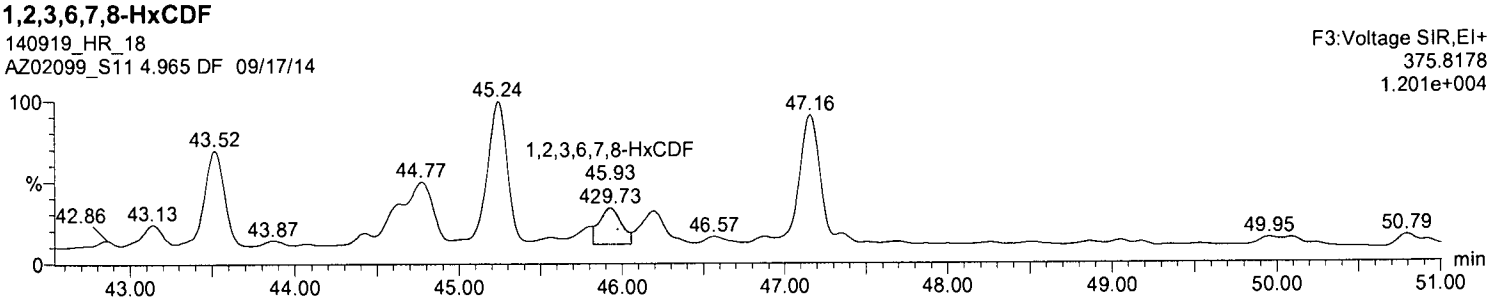


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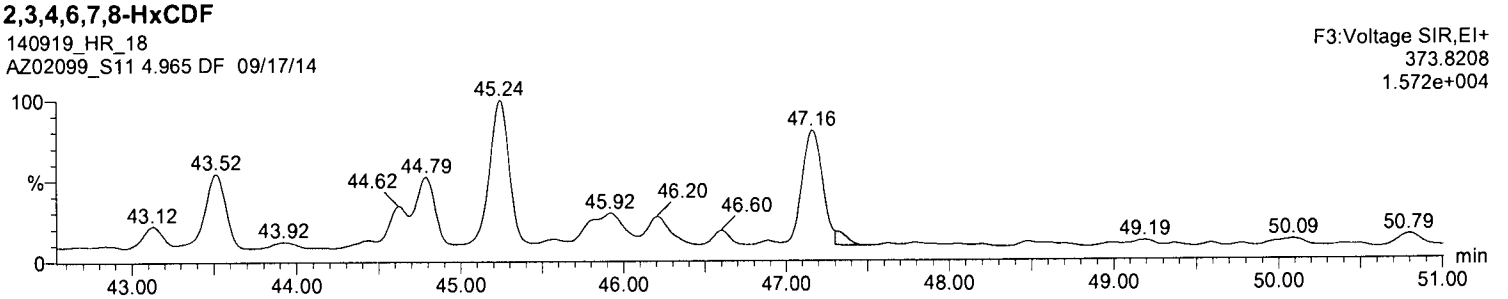
1,2,3,6,7,8-HxCDF



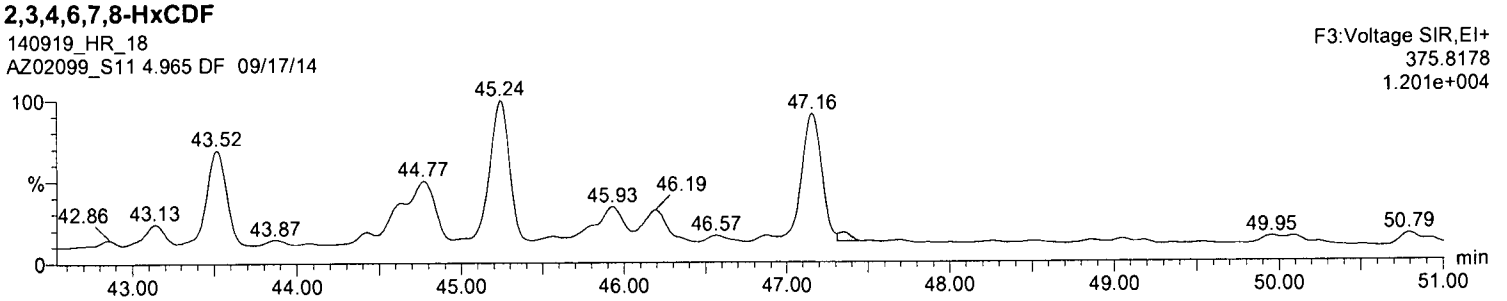
1,2,3,6,7,8-HxCDF



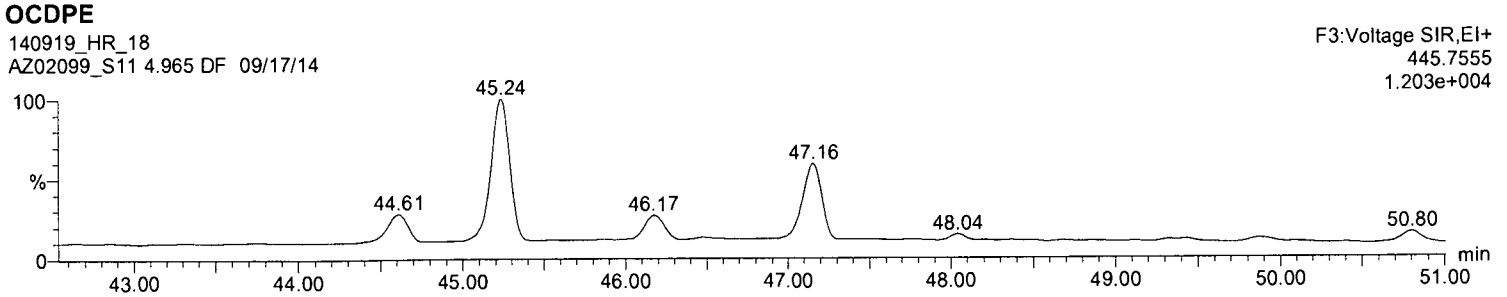
2,3,4,6,7,8-HxCDF



2,3,4,6,7,8-HxCDF

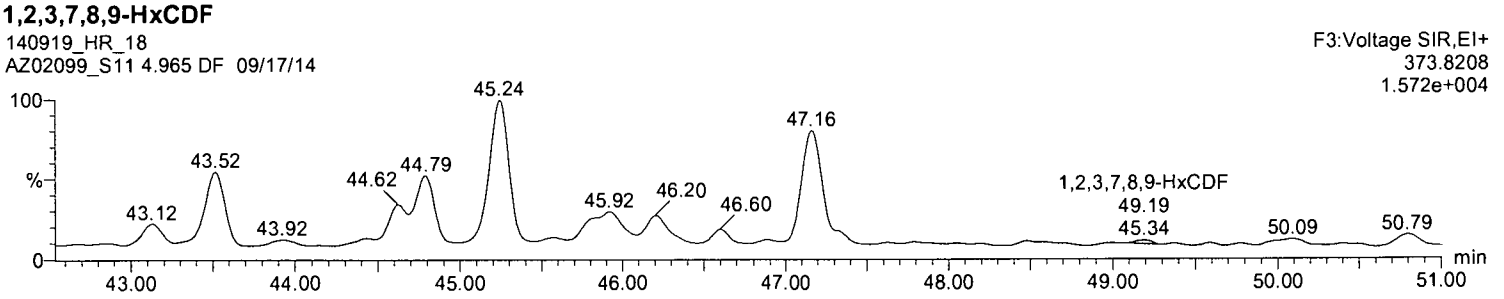


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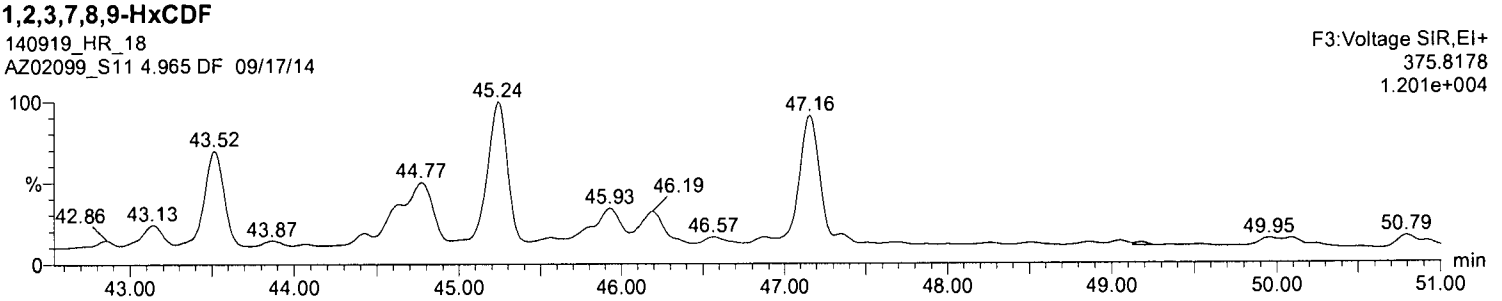


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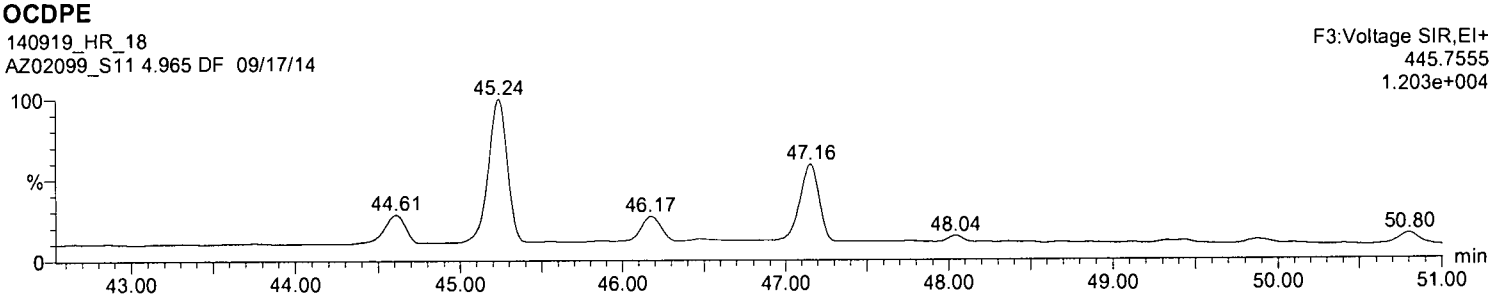
1,2,3,7,8,9-HxCDF



1,2,3,7,8,9-HxCDF

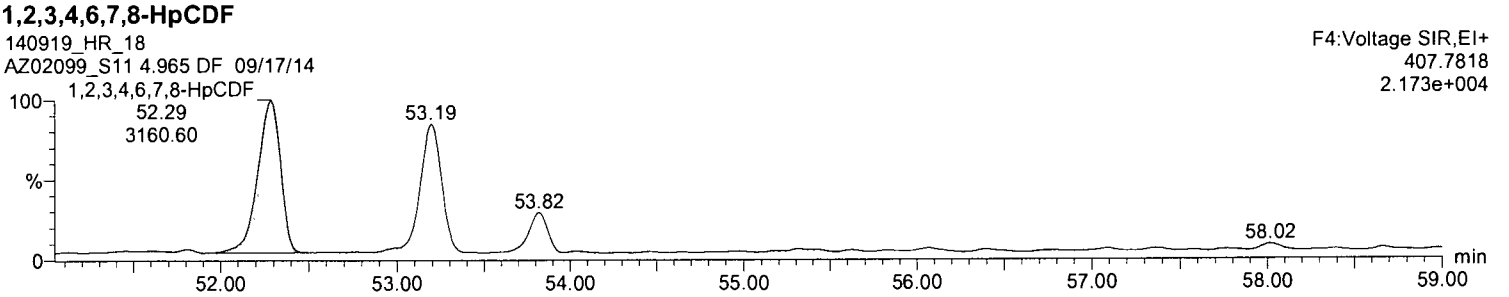


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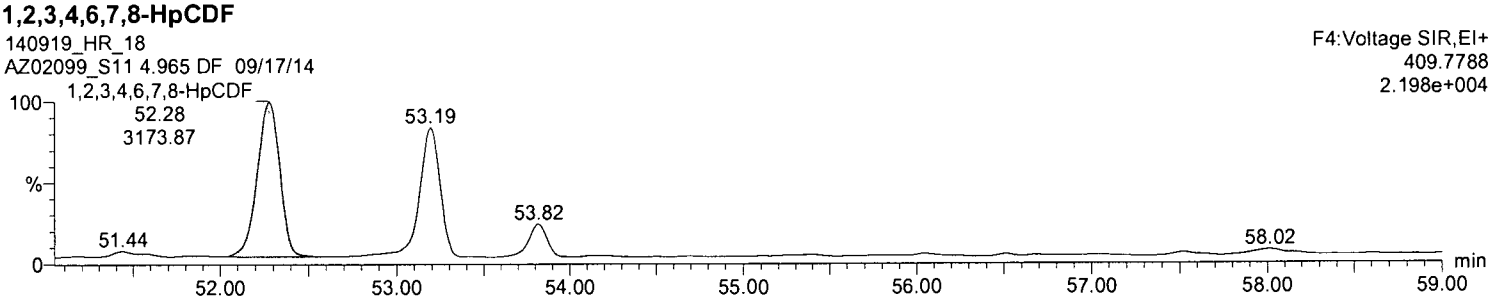


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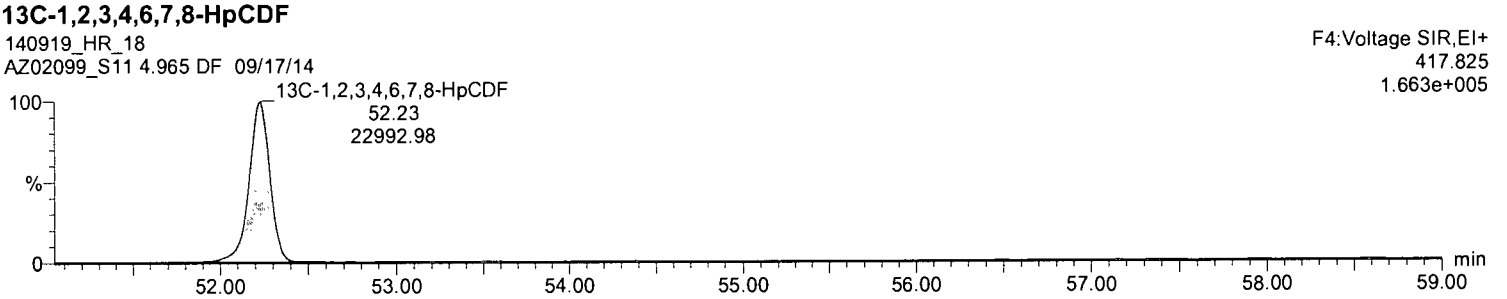
1,2,3,4,6,7,8-HpCDF



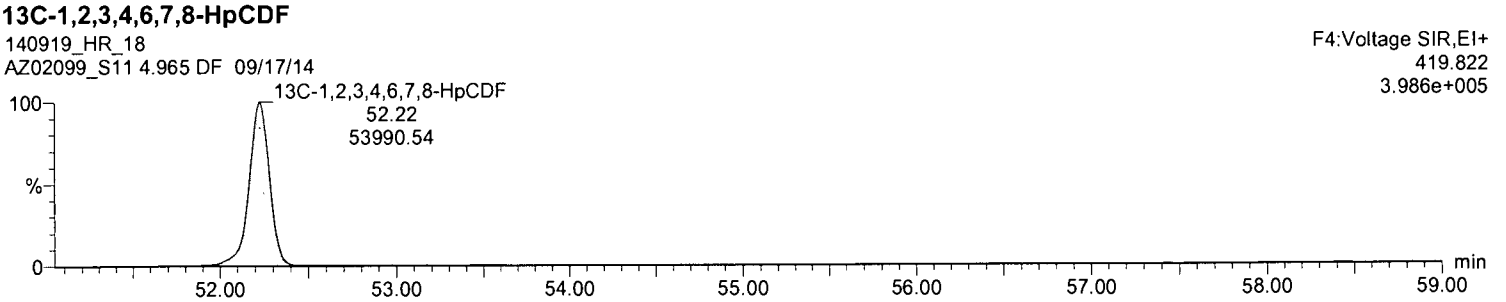
1,2,3,4,6,7,8-HpCDF



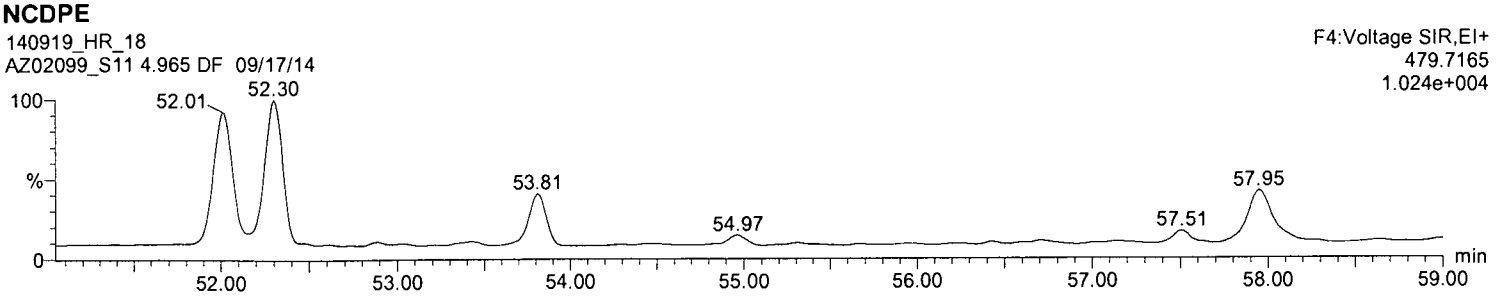
13C-1,2,3,4,6,7,8-HpCDF



13C-1,2,3,4,6,7,8-HpCDF

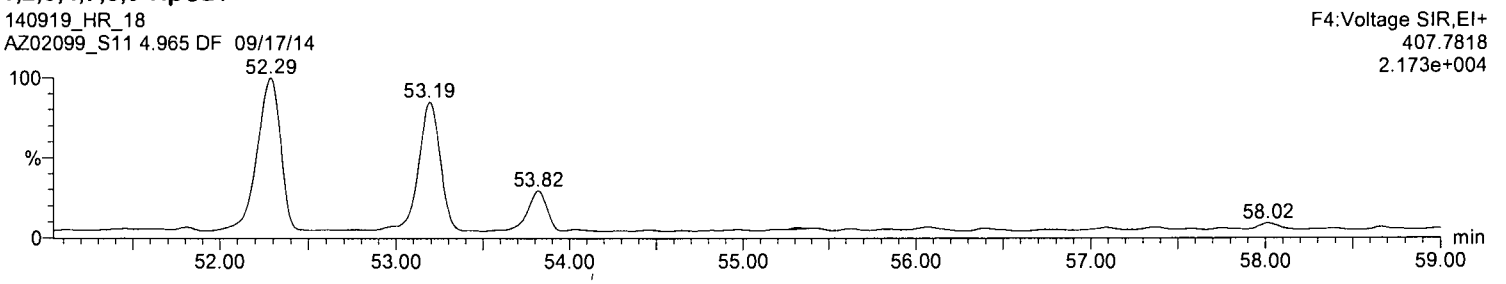


NCDPE

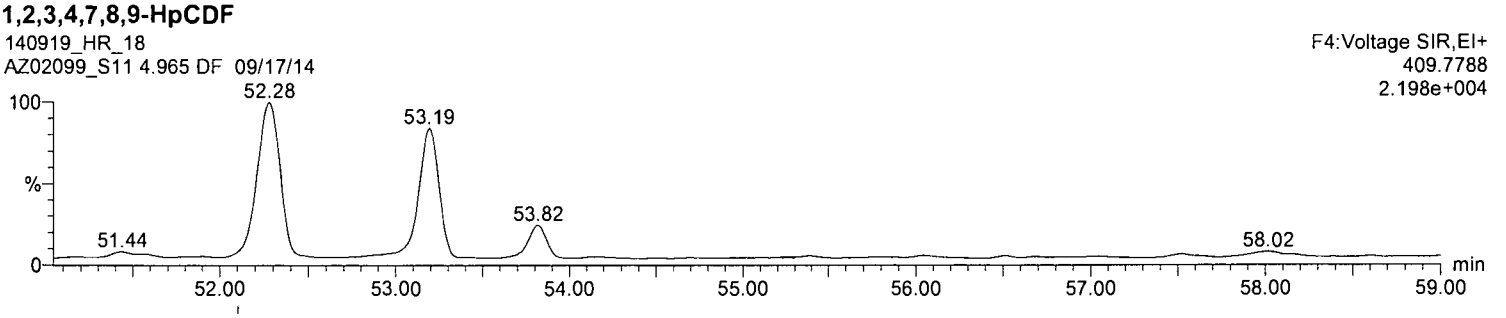


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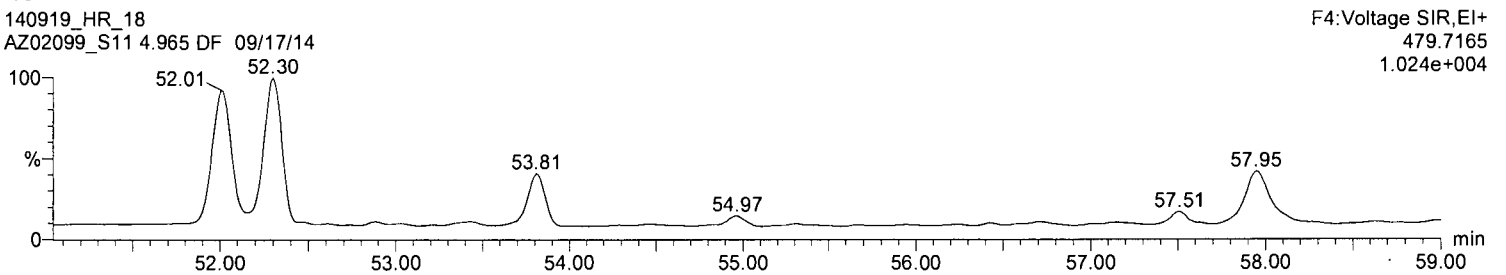
1,2,3,4,7,8,9-HpCDF



1,2,3,4,7,8,9-HpCDF

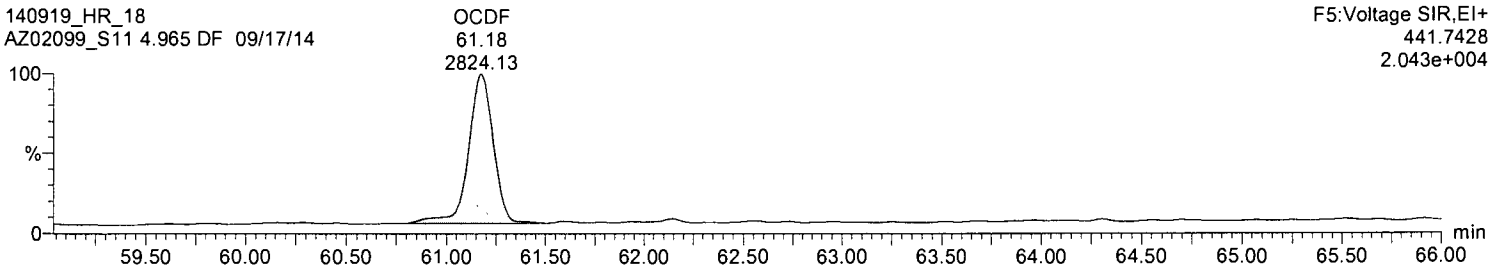


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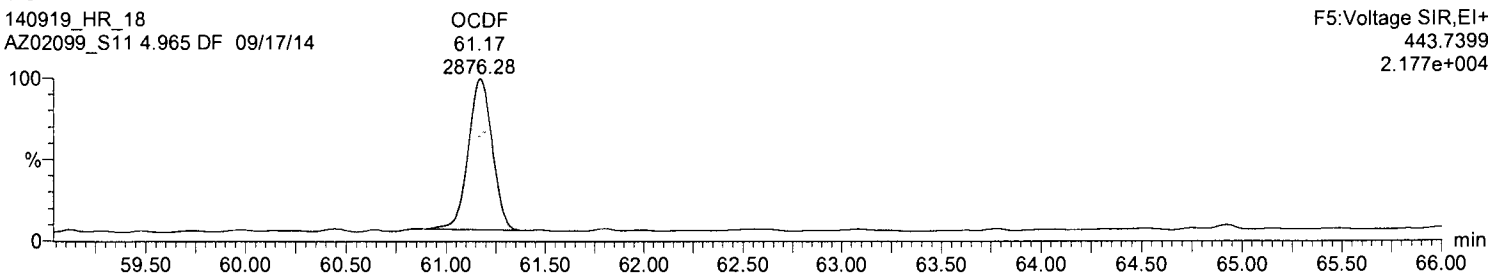


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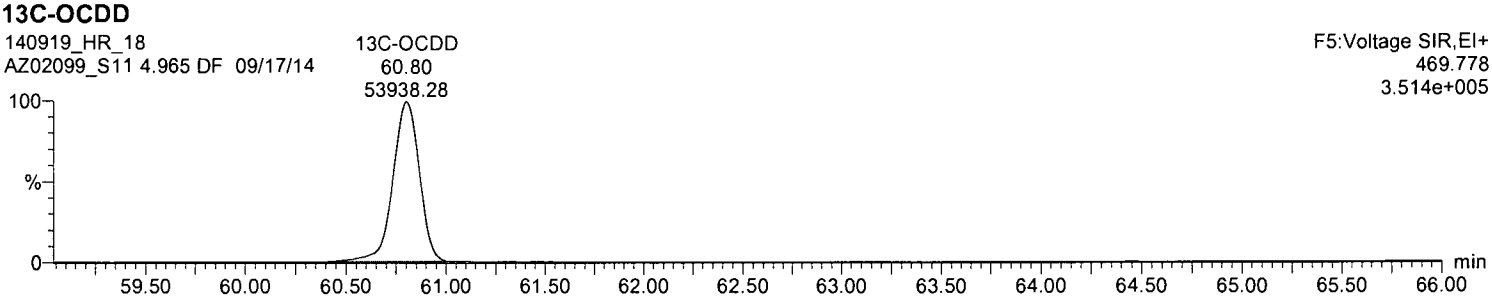
OCDF



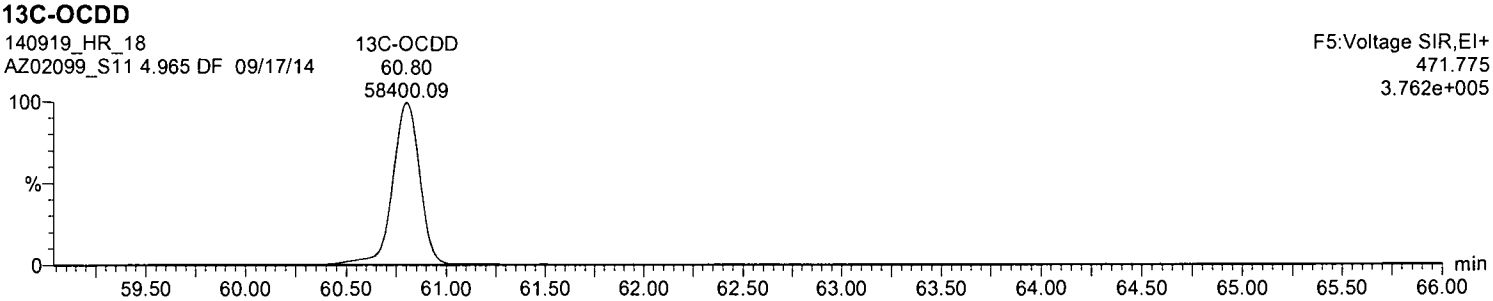
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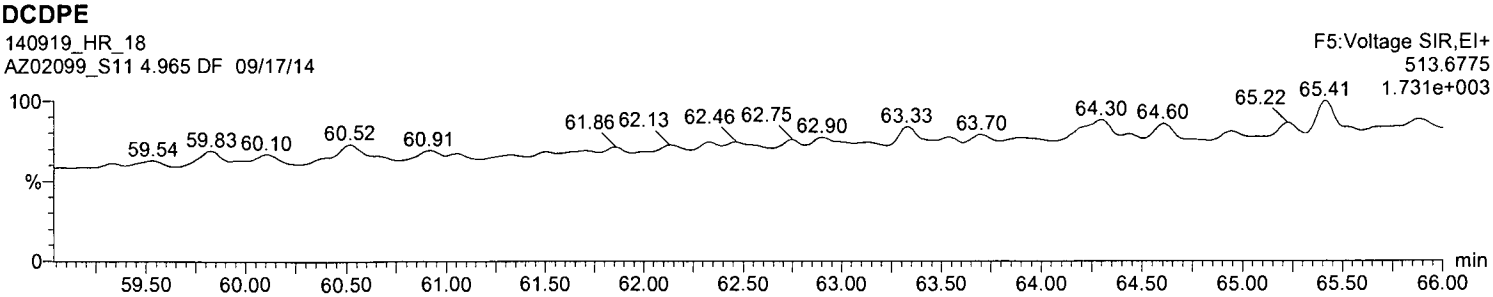
13C-OCDD



13C-OCDD

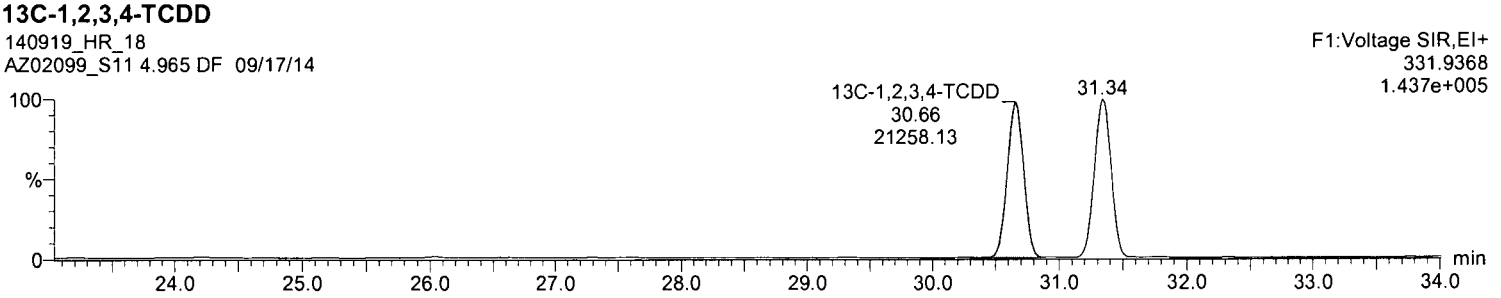


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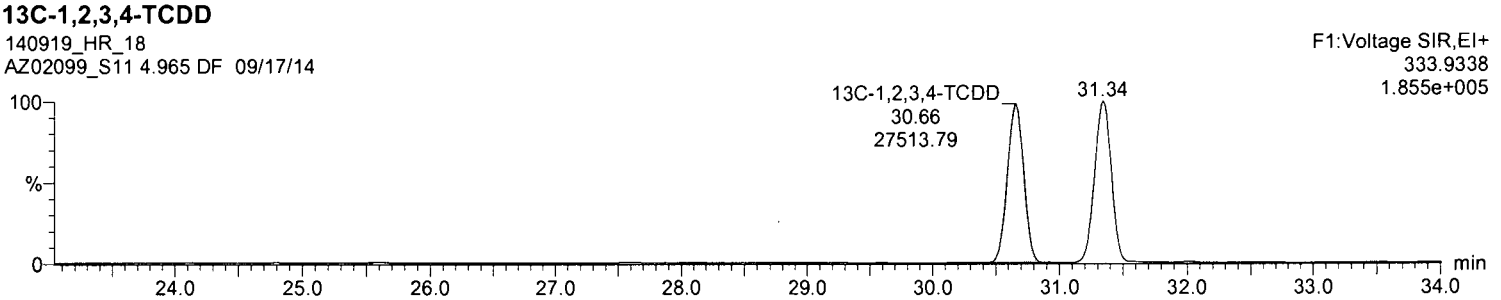


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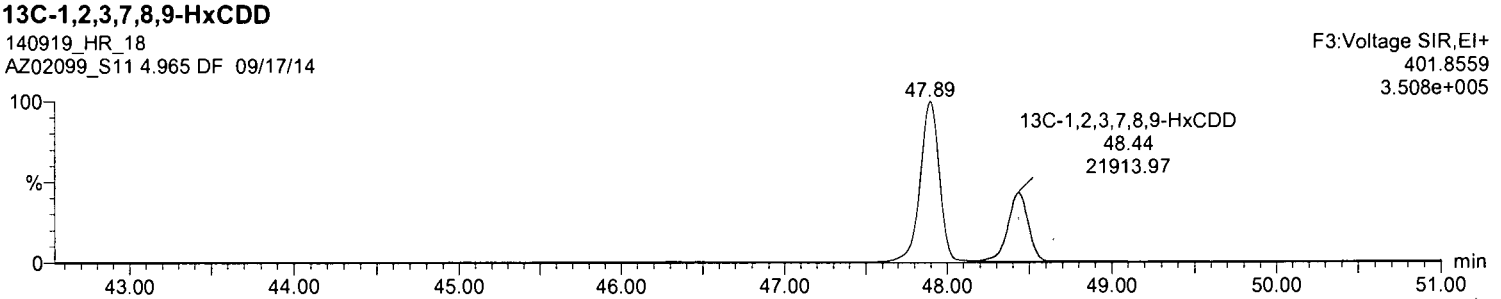
13C-1,2,3,4-TCDD



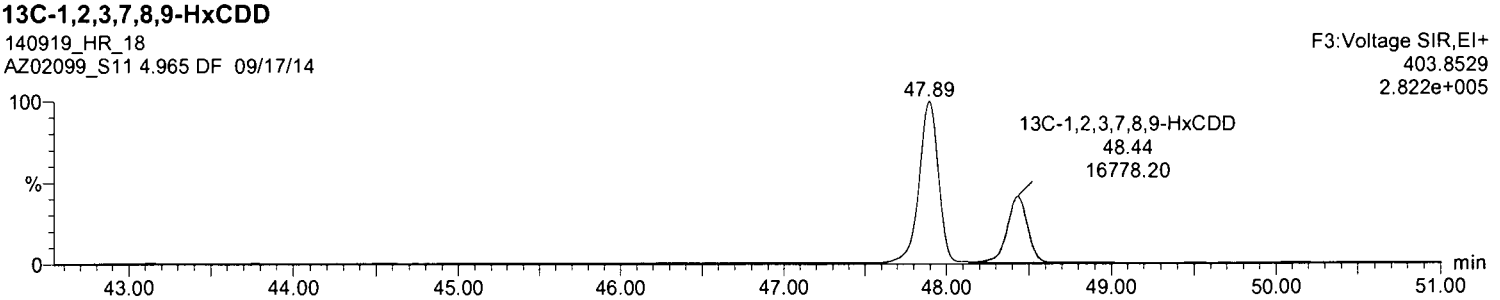
13C-1,2,3,4-TCDD



13C-1,2,3,7,8,9-HxCDD



13C-1,2,3,7,8,9-HxCDD



EPA METHOD 8290
Dioxins/Furans

Calibration Data

APPL, INC.

2017

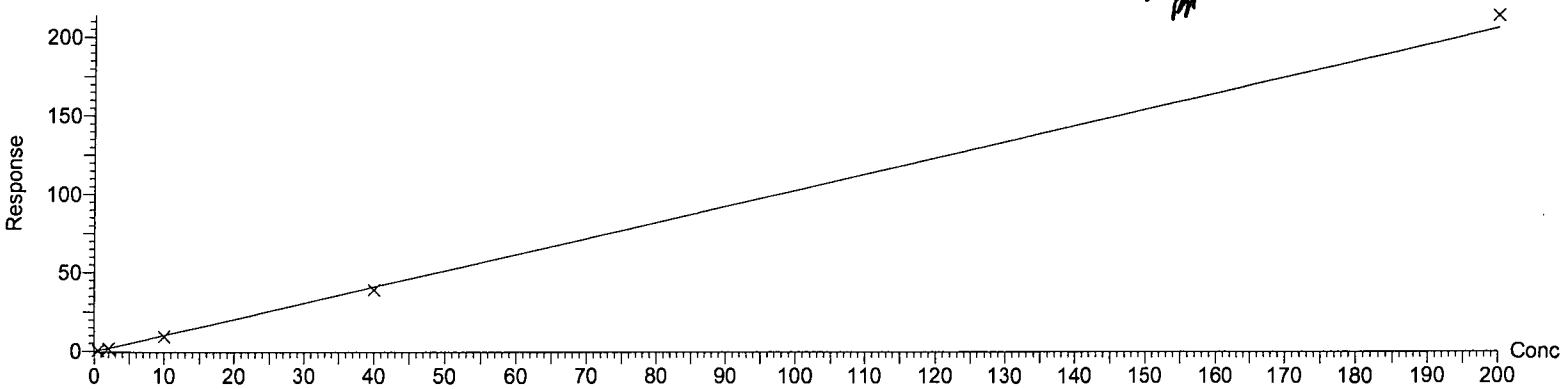
Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: 22 Sep 2014 12:13:12

Compound name: 2,3,7,8-TCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	0.50	0.86	NO	31.32	6.179170e2	7.144840e2	1.17680
2	140919_HR_04	EDF-9999 CS-2 04/22/14	2.00	0.79	NO	31.30	1.456855e3	1.846406e3	0.96295
3	140919_HR_05	EDF-9999 CS-3 09/11/14	10.00	0.83	NO	31.37	4.272744e3	5.148923e3	0.95288
4	140919_HR_06	EDF-9999 CS-4 04/22/14	40.00	0.73	NO	31.34	3.713750e4	5.109250e4	0.98053
5	140919_HR_07	EDF-9999 CS-5 04/22/14	200.00	0.79	NO	31.32	1.885149e5	2.376793e5	1.06806

Compound name: 2,3,7,8-TCDD
Response Factor: 1.02824
RRF SD: 0.0946987, % Relative SD: 9.20976
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

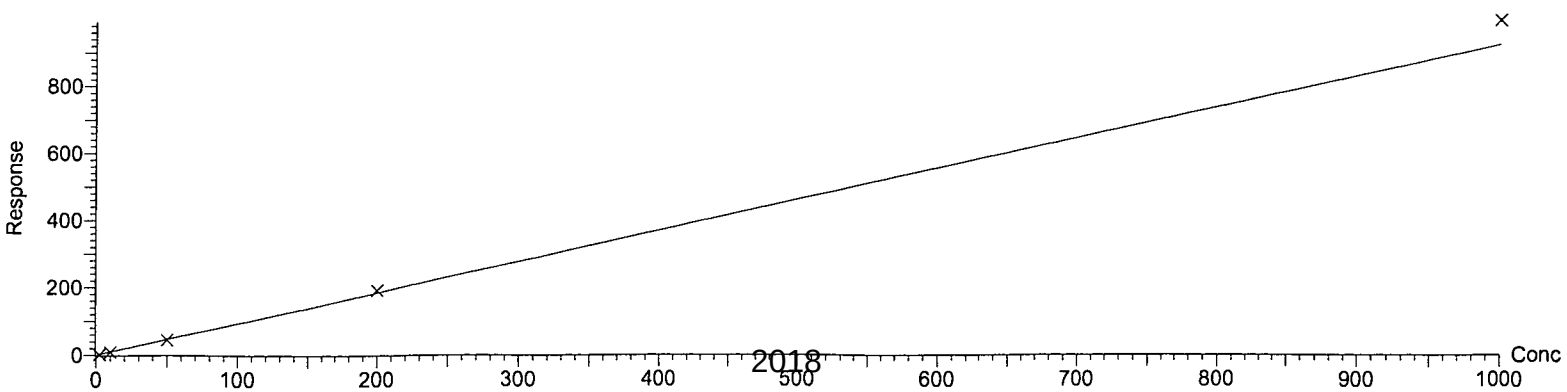
= 5.14122/5
= 1.02824
9/22/14 PM



Compound name: 1,2,3,7,8-PeCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	2.50	1.37	NO	40.03	2.200082e3	1.602490e3	0.89894
2	140919_HR_04	EDF-9999 CS-2 04/22/14	10.00	1.50	NO	40.00	7.830653e3	5.226789e3	0.86743
3	140919_HR_05	EDF-9999 CS-3 09/11/14	50.00	1.53	NO	40.11	2.104170e4	1.370761e4	0.88533
4	140919_HR_06	EDF-9999 CS-4 04/22/14	200.00	1.57	NO	40.06	2.083555e5	1.322945e5	0.95601
5	140919_HR_07	EDF-9999 CS-5 04/22/14	1000.00	1.57	NO	40.03	1.137481e6	7.257573e5	0.99180

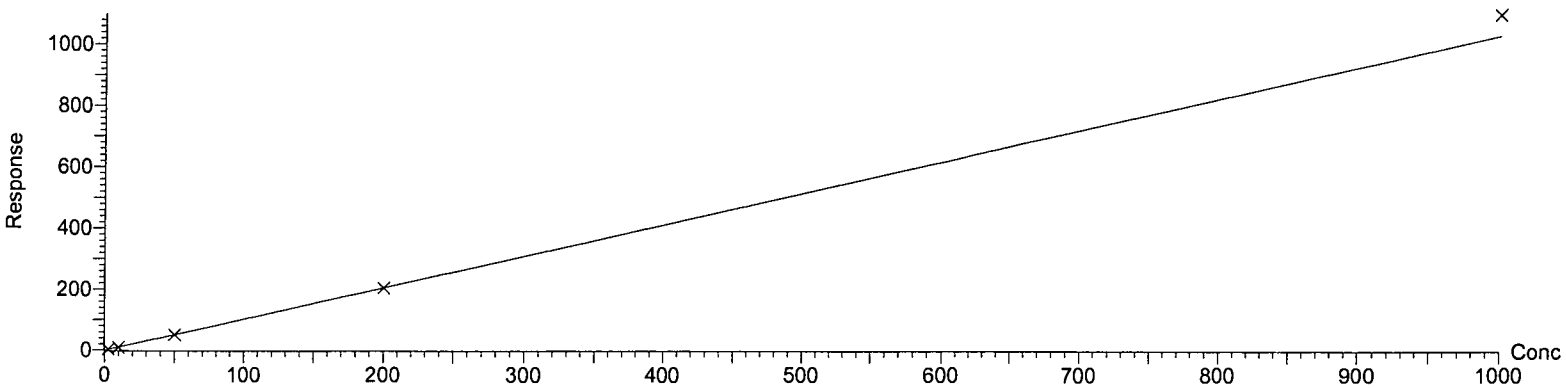
Compound name: 1,2,3,7,8-PeCDD
Response Factor: 0.919903
RRF SD: 0.0521084, % Relative SD: 5.66456
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 1,2,3,4,7,8-HxCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	2.50	1.35	NO	47.59	2.302493e3	1.701914e3	1.08017
2	140919_HR_04	EDF-9999 CS-2 04/22/14	10.00	1.23	NO	47.55	6.393363e3	5.193517e3	0.92784
3	140919_HR_05	EDF-9999 CS-3 09/11/14	50.00	1.32	NO	47.66	1.973584e4	1.494533e4	1.01653
4	140919_HR_06	EDF-9999 CS-4 04/22/14	200.00	1.24	NO	47.62	1.908526e5	1.536379e5	1.02718
5	140919_HR_07	EDF-9999 CS-5 04/22/14	1000.00	1.25	NO	47.60	1.011042e6	8.076133e5	1.09947

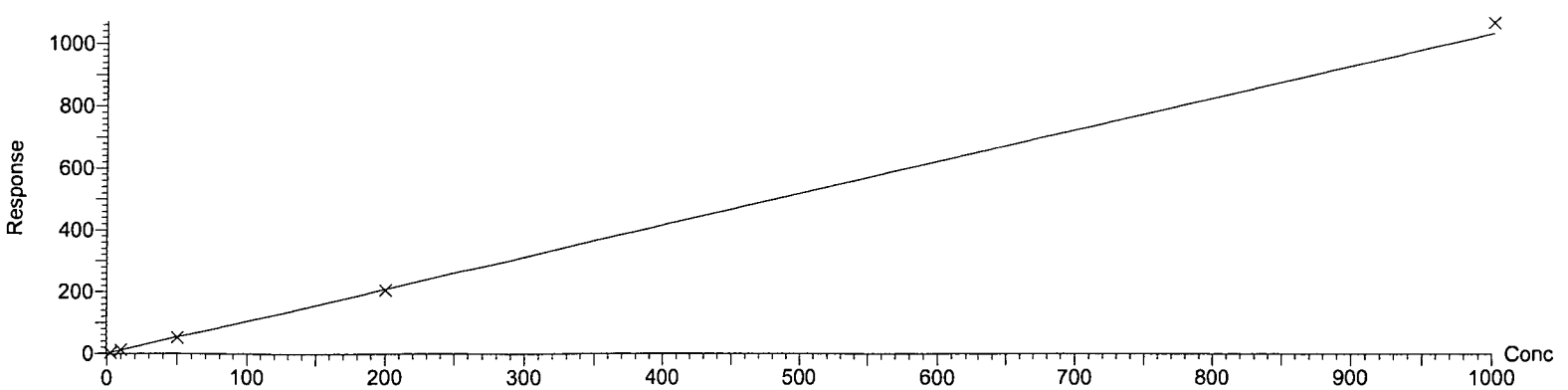
Compound name: 1,2,3,4,7,8-HxCDD
Response Factor: 1.03024
RRF SD: 0.0670217, % Relative SD: 6.50546
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 1,2,3,6,7,8-HxCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	2.50	1.27	NO	47.81	2.056512e3	1.621763e3	0.99219
2	140919_HR_04	EDF-9999 CS-2 04/22/14	10.00	1.36	NO	47.77	7.873013e3	5.771927e3	1.09264
3	140919_HR_05	EDF-9999 CS-3 09/11/14	50.00	1.22	NO	47.87	1.877385e4	1.538923e4	1.00135
4	140919_HR_06	EDF-9999 CS-4 04/22/14	200.00	1.26	NO	47.83	1.914889e5	1.517075e5	1.02332
5	140919_HR_07	EDF-9999 CS-5 04/22/14	1000.00	1.26	NO	47.81	9.873503e5	7.820401e5	1.06968

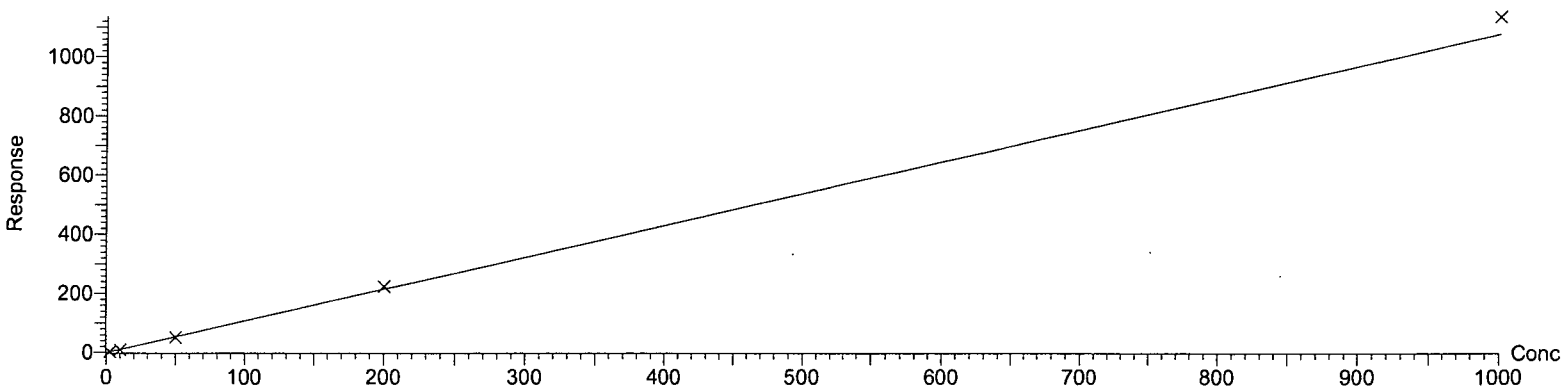
Compound name: 1,2,3,6,7,8-HxCDD
Response Factor: 1.03584
RRF SD: 0.0436563, % Relative SD: 4.21459
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 1,2,3,7,8,9-HxCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	2.50	1.26	NO	48.34	2.293358e3	1.824647e3	1.11081
2	140919_HR_04	EDF-9999 CS-2 04/22/14	10.00	1.21	NO	48.31	6.653994e3	5.495506e3	0.97289
3	140919_HR_05	EDF-9999 CS-3 09/11/14	50.00	1.24	NO	48.41	1.979030e4	1.597553e4	1.04832
4	140919_HR_06	EDF-9999 CS-4 04/22/14	200.00	1.26	NO	48.37	2.098500e5	1.671474e5	1.12411
5	140919_HR_07	EDF-9999 CS-5 04/22/14	1000.00	1.27	NO	48.34	1.051113e6	8.306368e5	1.13761

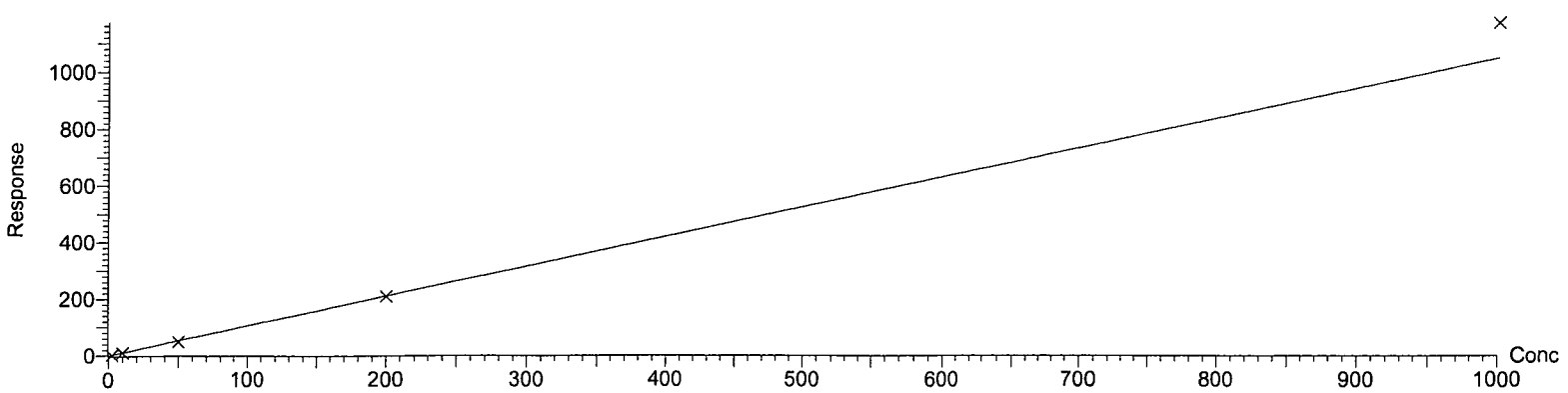
Compound name: 1,2,3,7,8,9-HxCDD
Response Factor: 1.07875
RRF SD: 0.0683382, % Relative SD: 6.33496
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 1,2,3,4,6,7,8-HpCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	2.50	1.13	NO	54.30	2.298341e3	2.027420e3	1.09135
2	140919_HR_04	EDF-9999 CS-2 04/22/14	10.00	1.08	NO	54.27	6.156454e3	5.701404e3	0.99519
3	140919_HR_05	EDF-9999 CS-3 09/11/14	50.00	1.09	NO	54.37	1.797190e4	1.649704e4	0.94918
4	140919_HR_06	EDF-9999 CS-4 04/22/14	200.00	1.05	NO	54.33	1.883797e5	1.795330e5	1.04499
5	140919_HR_07	EDF-9999 CS-5 04/22/14	1000.00	1.05	NO	54.30	9.059071e5	8.598804e5	1.17352

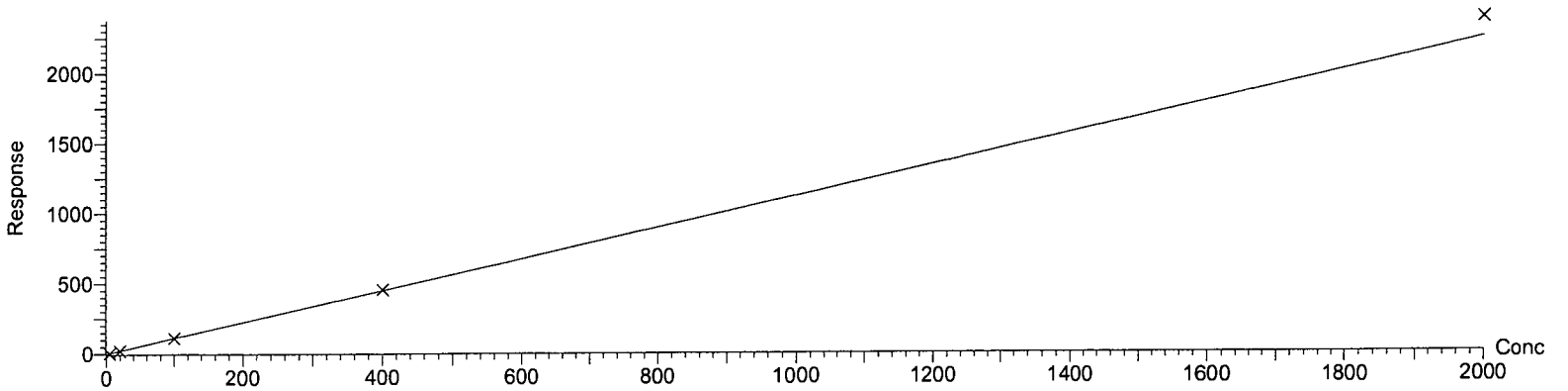
Compound name: 1,2,3,4,6,7,8-HpCDD
Response Factor: 1.05085
RRF SD: 0.0868282, % Relative SD: 8.26268
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: OCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	5.00	0.88	NO	60.54	3.421571e3	3.899609e3	1.08324
2	140919_HR_04	EDF-9999 CS-2 04/22/14	20.00	0.92	NO	60.51	1.087029e4	1.182200e4	1.08033
3	140919_HR_05	EDF-9999 CS-3 09/11/14	100.00	0.91	NO	60.65	3.230485e4	3.544561e4	1.10964
4	140919_HR_06	EDF-9999 CS-4 04/22/14	400.00	0.90	NO	60.59	3.115534e5	3.470358e5	1.13508
5	140919_HR_07	EDF-9999 CS-5 04/22/14	2000.00	0.89	NO	60.56	1.541929e6	1.727283e6	1.18822

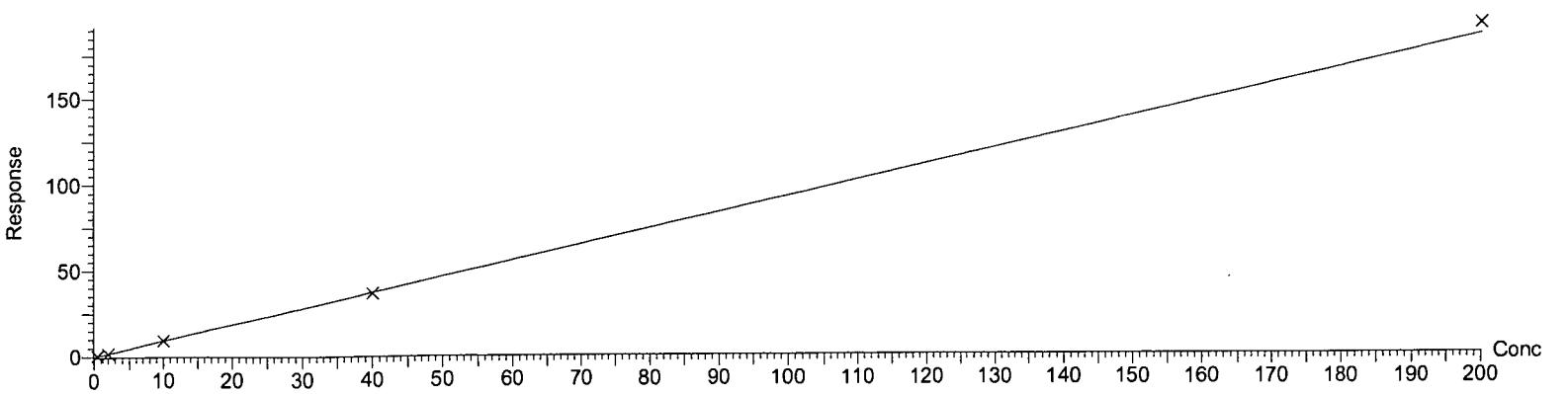
Compound name: OCDD
Response Factor: 1.1193
RRF SD: 0.0444743, % Relative SD: 3.9734
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 2,3,7,8-TCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	0.50	0.66	NO	30.39	5.711890e2	8.601800e2	0.92717
2	140919_HR_04	EDF-9999 CS-2 04/22/14	2.00	0.85	NO	30.39	2.046656e3	2.416119e3	0.90692
3	140919_HR_05	EDF-9999 CS-3 09/11/14	10.00	0.80	NO	30.44	5.713286e3	7.134111e3	0.93422
4	140919_HR_06	EDF-9999 CS-4 04/22/14	40.00	0.77	NO	30.43	5.342791e4	6.909870e4	0.91435
5	140919_HR_07	EDF-9999 CS-5 04/22/14	200.00	0.76	NO	30.39	2.345245e5	3.070312e5	0.95909

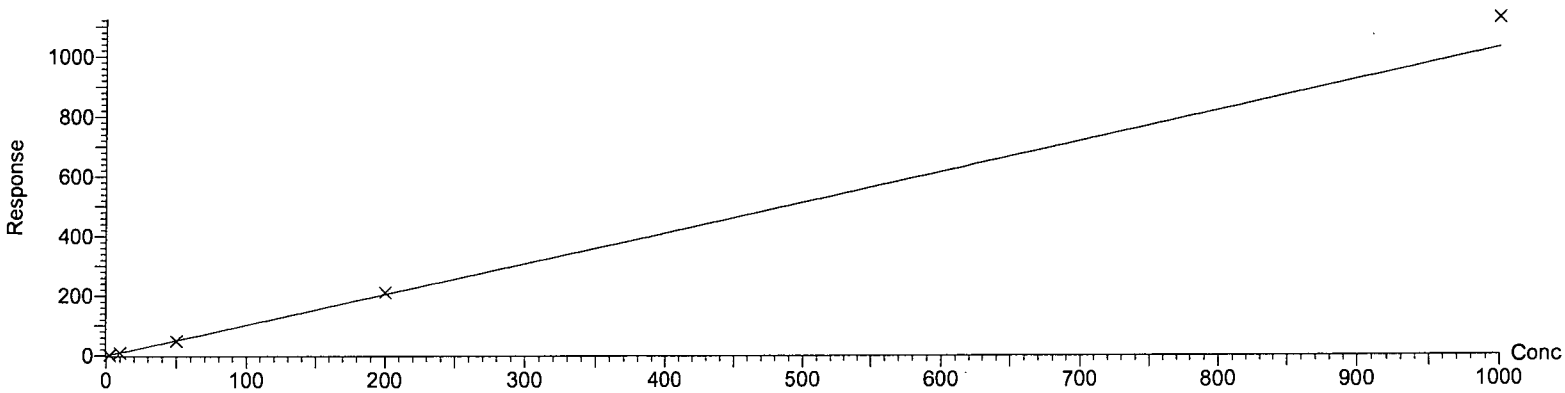
Compound name: 2,3,7,8-TCDF
Response Factor: 0.92835
RRF SD: 0.0202225, % Relative SD: 2.17833
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 1,2,3,7,8-PeCDF

#	Name	Sample Text	Std Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	2.50	1.46	NO	37.22	3.473300e3	2.374535e3	0.96184
2	140919_HR_04	EDF-9999 CS-2 04/22/14	10.00	1.57	NO	37.18	1.199636e4	7.624982e3	0.99199
3	140919_HR_05	EDF-9999 CS-3 09/11/14	50.00	1.49	NO	37.29	3.428070e4	2.296569e4	0.99237
4	140919_HR_06	EDF-9999 CS-4 04/22/14	200.00	1.55	NO	37.26	3.445122e5	2.218912e5	1.05930
5	140919_HR_07	EDF-9999 CS-5 04/22/14	1000.00	1.58	NO	37.22	1.734390e6	1.100437e6	1.12456

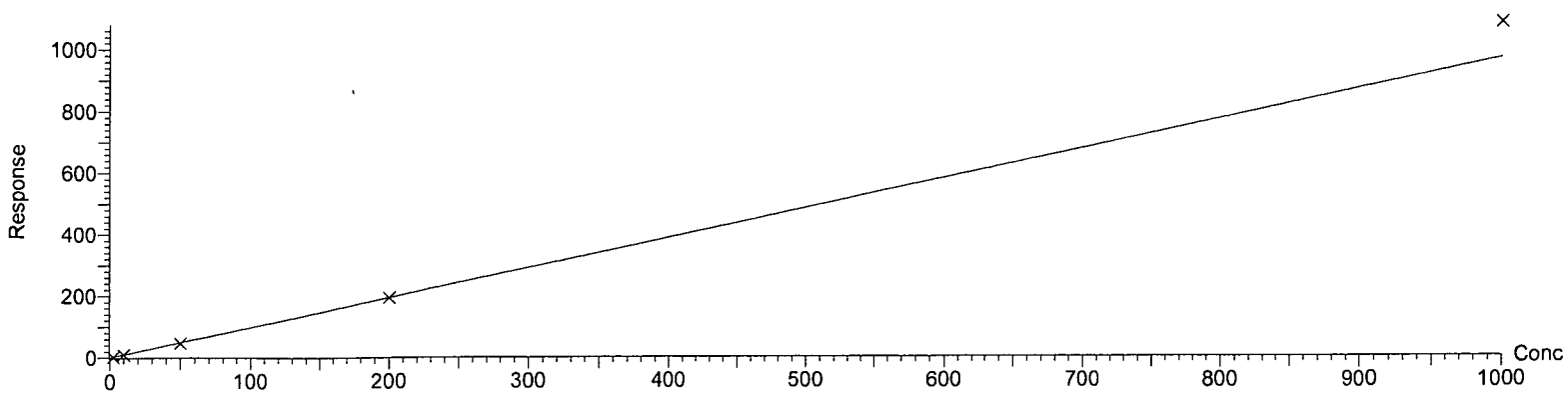
Compound name: 1,2,3,7,8-PeCDF
Response Factor: 1.02601
RRF SD: 0.0656256, % Relative SD: 6.39617
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 2,3,4,7,8-PeCDF

#	Name	Sample Text	Std Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	2.50	1.53	NO	39.35	3.477553e3	2.270518e3	0.94544
2	140919_HR_04	EDF-9999 CS-2 04/22/14	10.00	1.49	NO	39.32	1.122338e4	7.538317e3	0.94853
3	140919_HR_05	EDF-9999 CS-3 09/11/14	50.00	1.53	NO	39.43	3.125270e4	2.042894e4	0.89590
4	140919_HR_06	EDF-9999 CS-4 04/22/14	200.00	1.57	NO	39.38	3.151712e5	2.010150e5	0.96538
5	140919_HR_07	EDF-9999 CS-5 04/22/14	1000.00	1.55	NO	39.35	1.654080e6	1.067975e6	1.07983

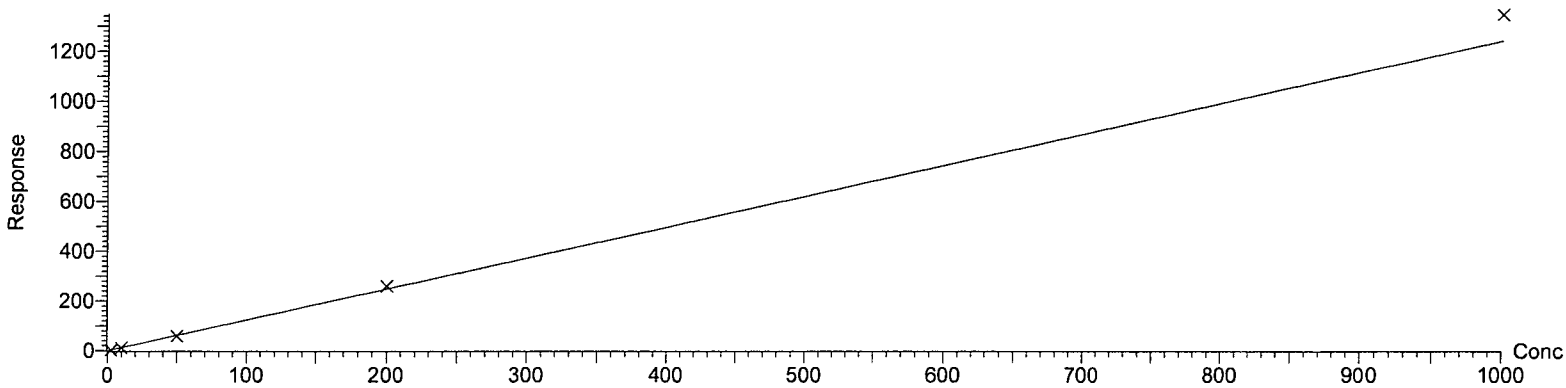
Compound name: 2,3,4,7,8-PeCDF
Response Factor: 0.967016
RRF SD: 0.0681783, % Relative SD: 7.05038
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 1,2,3,4,7,8-HxCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	2.50	1.31	NO	45.68	3.303054e3	2.525821e3	1.18439
2	140919_HR_04	EDF-9999 CS-2 04/22/14	10.00	1.32	NO	45.65	1.006240e4	7.642267e3	1.20685
3	140919_HR_05	EDF-9999 CS-3 09/11/14	50.00	1.24	NO	45.77	2.924508e4	2.363582e4	1.18090
4	140919_HR_06	EDF-9999 CS-4 04/22/14	200.00	1.26	NO	45.73	3.129873e5	2.482703e5	1.30040
5	140919_HR_07	EDF-9999 CS-5 04/22/14	1000.00	1.25	NO	45.69	1.471527e6	1.181888e6	1.34949

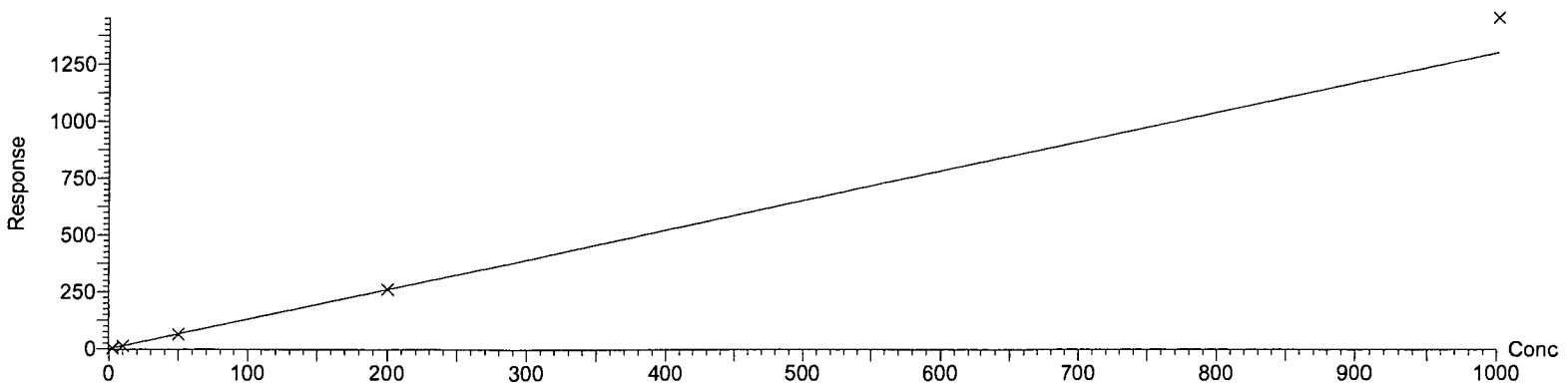
Compound name: 1,2,3,4,7,8-HxCDF
Response Factor: 1.24441
RRF SD: 0.076197, % Relative SD: 6.12316
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 1,2,3,6,7,8-HxCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	2.50	1.23	NO	45.96	3.277920e3	2.659274e3	1.20640
2	140919_HR_04	EDF-9999 CS-2 04/22/14	10.00	1.16	NO	45.93	1.011603e4	8.686014e3	1.28165
3	140919_HR_05	EDF-9999 CS-3 09/11/14	50.00	1.25	NO	46.02	3.131339e4	2.508299e4	1.25941
4	140919_HR_06	EDF-9999 CS-4 04/22/14	200.00	1.24	NO	45.99	3.110125e5	2.516117e5	1.30357
5	140919_HR_07	EDF-9999 CS-5 04/22/14	1000.00	1.23	NO	45.96	1.577171e6	1.279097e6	1.45266

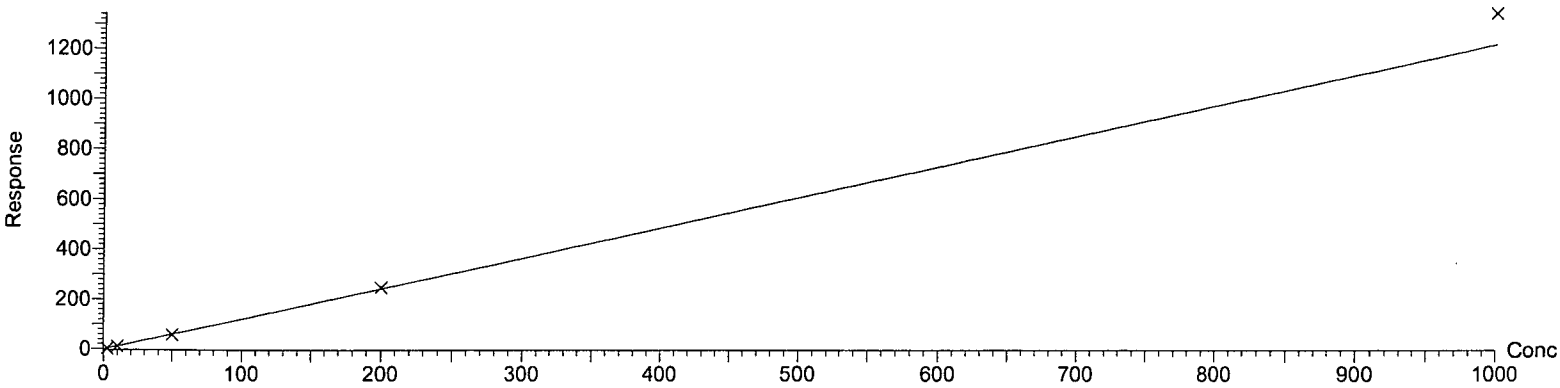
Compound name: 1,2,3,6,7,8-HxCDF
Response Factor: 1.30074
RRF SD: 0.0922787, % Relative SD: 7.09435
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 2,3,4,6,7,8-HxCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	2.50	1.27	NO	47.21	3.258526e3	2.565971e3	1.18350
2	140919_HR_04	EDF-9999 CS-2 04/22/14	10.00	1.16	NO	47.18	9.120597e3	7.877512e3	1.15868
3	140919_HR_05	EDF-9999 CS-3 09/11/14	50.00	1.23	NO	47.29	2.870306e4	2.340205e4	1.16358
4	140919_HR_06	EDF-9999 CS-4 04/22/14	200.00	1.25	NO	47.25	2.994967e5	2.395429e5	1.24892
5	140919_HR_07	EDF-9999 CS-5 04/22/14	1000.00	1.23	NO	47.21	1.456283e6	1.187937e6	1.34482

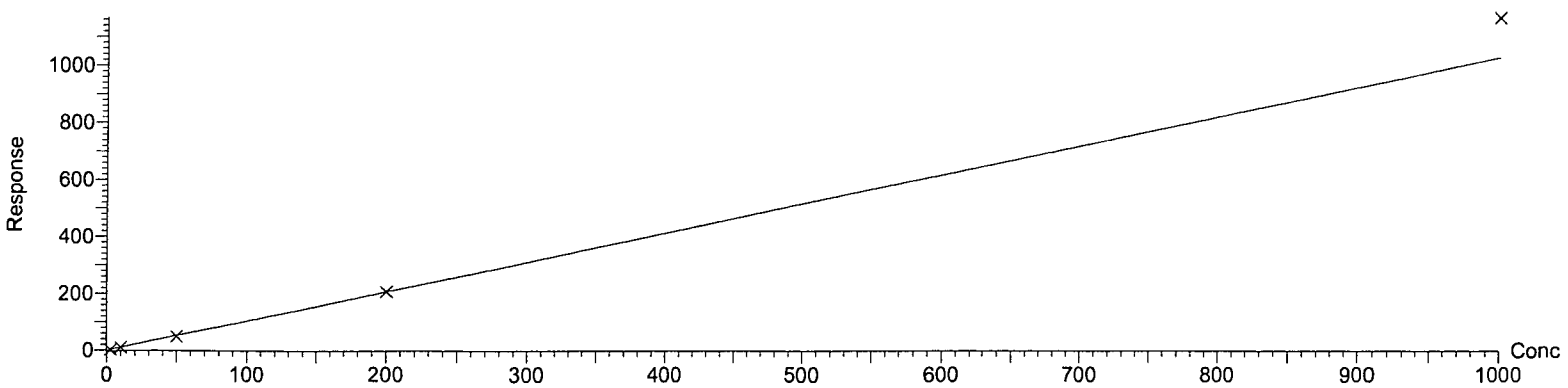
Compound name: 2,3,4,6,7,8-HxCDF
Response Factor: 1.2199
RRF SD: 0.0785666, % Relative SD: 6.44042
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 1,2,3,7,8,9-HxCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	2.50	1.13	NO	48.97	2.527549e3	2.229293e3	0.96656
2	140919_HR_04	EDF-9999 CS-2 04/22/14	10.00	1.27	NO	48.92	8.491741e3	6.669936e3	1.03350
3	140919_HR_05	EDF-9999 CS-3 09/11/14	50.00	1.28	NO	49.03	2.377430e4	1.862463e4	0.94683
4	140919_HR_06	EDF-9999 CS-4 04/22/14	200.00	1.25	NO	48.99	2.474721e5	1.983181e5	1.03287
5	140919_HR_07	EDF-9999 CS-5 04/22/14	1000.00	1.26	NO	48.97	1.280377e6	1.013030e6	1.16640

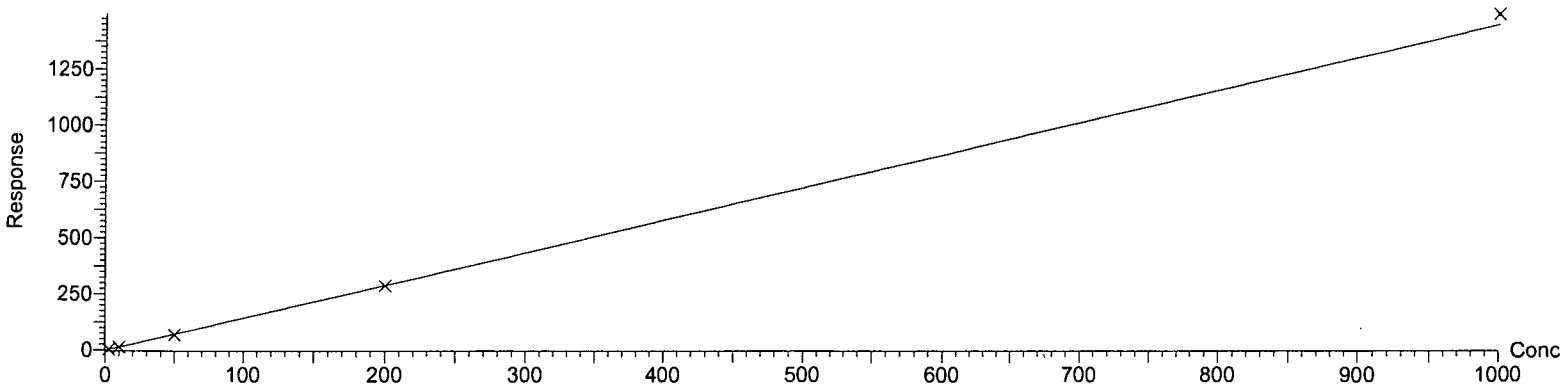
Compound name: 1,2,3,7,8,9-HxCDF
Response Factor: 1.02923
RRF SD: 0.0859714, % Relative SD: 8.35298
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 1,2,3,4,6,7,8-HpCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	2.50	0.99	NO	52.08	3.399215e3	3.424929e3	1.53367
2	140919_HR_04	EDF-9999 CS-2 04/22/14	10.00	1.09	NO	52.05	9.317025e3	8.531762e3	1.38383
3	140919_HR_05	EDF-9999 CS-3 09/11/14	50.00	1.06	NO	52.16	2.753986e4	2.605890e4	1.39113
4	140919_HR_06	EDF-9999 CS-4 04/22/14	200.00	1.04	NO	52.10	3.054788e5	2.937763e5	1.44479
5	140919_HR_07	EDF-9999 CS-5 04/22/14	1000.00	1.00	NO	52.09	1.283514e6	1.282767e6	1.49716

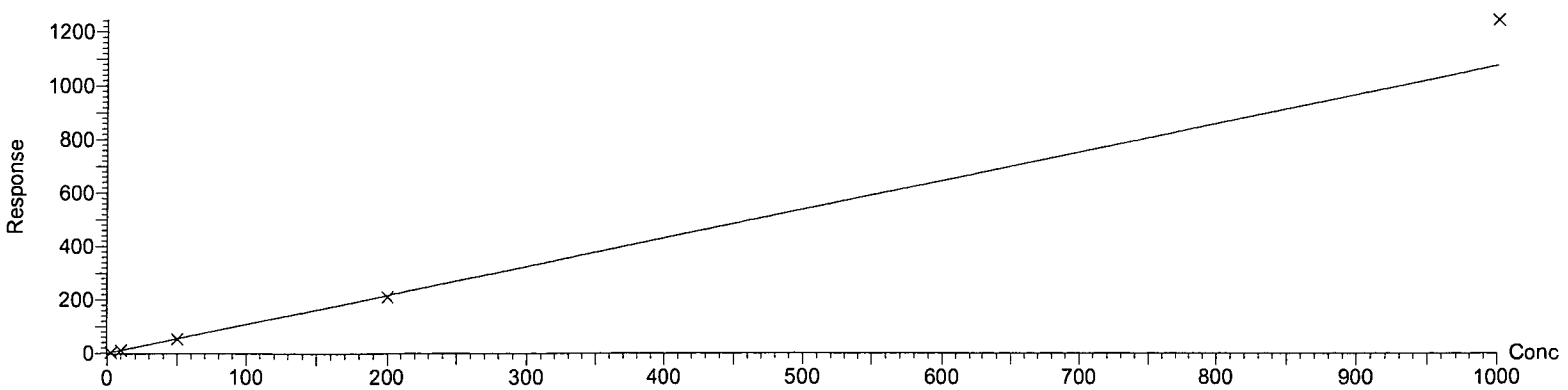
Compound name: 1,2,3,4,6,7,8-HpCDF
Response Factor: 1.45012
RRF SD: 0.065378, % Relative SD: 4.50847
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 1,2,3,4,7,8,9-HpCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	2.50	1.12	NO	55.23	2.382429e3	2.127813e3	1.01364
2	140919_HR_04	EDF-9999 CS-2 04/22/14	10.00	1.03	NO	55.20	6.825277e3	6.594951e3	1.04048
3	140919_HR_05	EDF-9999 CS-3 09/11/14	50.00	1.04	NO	55.31	2.036246e4	1.957987e4	1.03668
4	140919_HR_06	EDF-9999 CS-4 04/22/14	200.00	1.02	NO	55.27	2.201843e5	2.154182e5	1.05023
5	140919_HR_07	EDF-9999 CS-5 04/22/14	1000.00	1.06	NO	55.24	1.097289e6	1.037231e6	1.24527

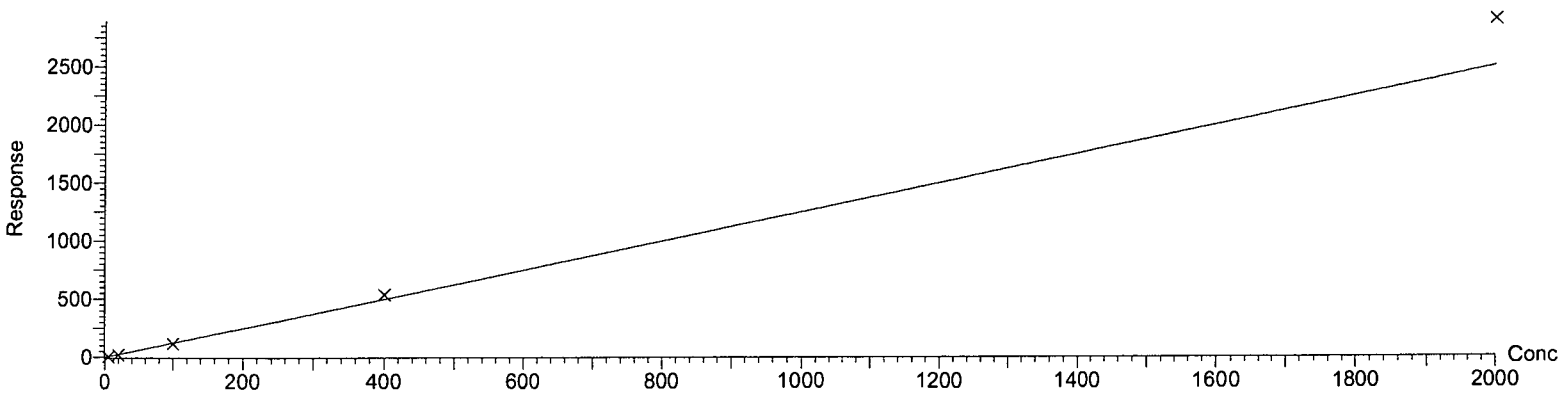
Compound name: 1,2,3,4,7,8,9-HpCDF
Response Factor: 1.07726
RRF SD: 0.0948754, % Relative SD: 8.80709
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: OCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	5.00	0.86	NO	60.90	3.672510e3	4.284137e3	1.17726
2	140919_HR_04	EDF-9999 CS-2 04/22/14	20.00	0.86	NO	60.86	1.040602e4	1.208234e4	1.07062
3	140919_HR_05	EDF-9999 CS-3 09/11/14	100.00	0.86	NO	61.01	3.376836e4	3.923213e4	1.19562
4	140919_HR_06	EDF-9999 CS-4 04/22/14	400.00	0.91	NO	60.93	3.712703e5	4.097078e5	1.34602
5	140919_HR_07	EDF-9999 CS-5 04/22/14	2000.00	0.91	NO	60.92	1.895188e6	2.084824e6	1.44657

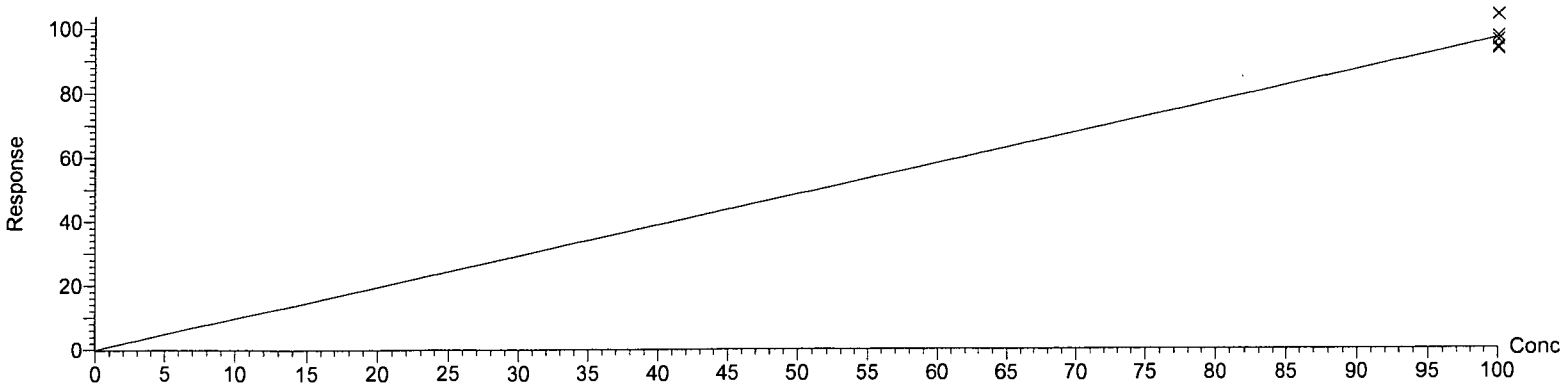
Compound name: OCDF
Response Factor: 1.24722
RRF SD: 0.14853, % Relative SD: 11.9089
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 13C-2,3,7,8-TCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	100.00	0.76	NO	31.30	9.770356e4	1.287421e5	1.03983
2	140919_HR_04	EDF-9999 CS-2 04/22/14	100.00	0.79	NO	31.27	7.559571e4	9.592165e4	0.96155
3	140919_HR_05	EDF-9999 CS-3 09/11/14	100.00	0.78	NO	31.34	4.321242e4	5.566322e4	0.97328
4	140919_HR_06	EDF-9999 CS-4 04/22/14	100.00	0.78	NO	31.32	9.866780e4	1.262862e5	0.93484
5	140919_HR_07	EDF-9999 CS-5 04/22/14	100.00	0.79	NO	31.29	8.794016e4	1.115785e5	0.93966

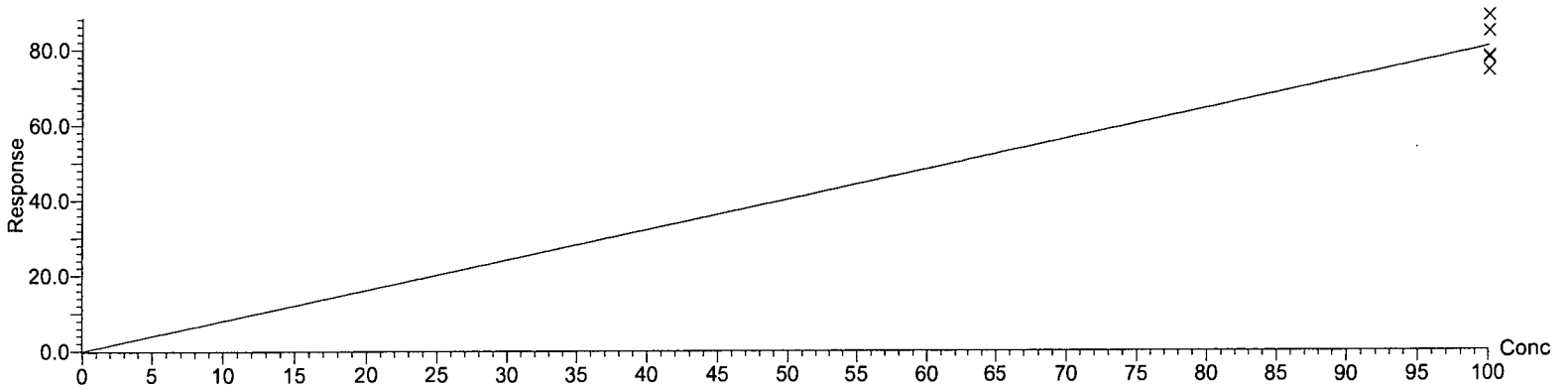
Compound name: 13C-2,3,7,8-TCDD
Response Factor: 0.96983
RRF SD: 0.0421759, % Relative SD: 4.34879
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 13C-1,2,3,7,8-PeCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	100.00	1.55	NO	40.00	1.028602e5	6.634260e4	0.77697
2	140919_HR_04	EDF-9999 CS-2 04/22/14	100.00	1.60	NO	39.97	9.263294e4	5.789688e4	0.84389
3	140919_HR_05	EDF-9999 CS-3 09/11/14	100.00	1.61	NO	40.07	4.841244e4	3.008781e4	0.77271
4	140919_HR_06	EDF-9999 CS-4 04/22/14	100.00	1.59	NO	40.03	1.093028e5	6.885916e4	0.74039
5	140919_HR_07	EDF-9999 CS-5 04/22/14	100.00	1.59	NO	40.00	1.151963e5	7.266784e4	0.88477

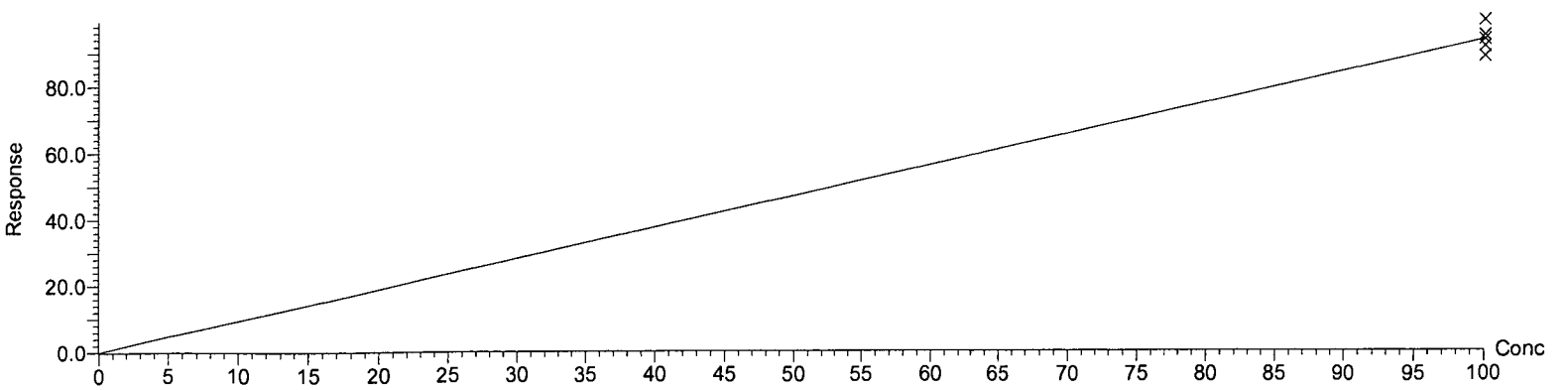
Compound name: 13C-1,2,3,7,8-PeCDD
Response Factor: 0.803746
RRF SD: 0.0588865, % Relative SD: 7.32651
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 13C-1,2,3,6,7,8-HxCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	100.00	1.21	NO	47.78	8.113270e4	6.715599e4	0.88564
2	140919_HR_04	EDF-9999 CS-2 04/22/14	100.00	1.20	NO	47.73	6.817198e4	5.670812e4	0.99427
3	140919_HR_05	EDF-9999 CS-3 09/11/14	100.00	1.22	NO	47.85	3.748208e4	3.075217e4	0.94860
4	140919_HR_06	EDF-9999 CS-4 04/22/14	100.00	1.27	NO	47.80	9.378480e4	7.390302e4	0.93667
5	140919_HR_07	EDF-9999 CS-5 04/22/14	100.00	1.26	NO	47.78	9.223198e4	7.318077e4	0.91629

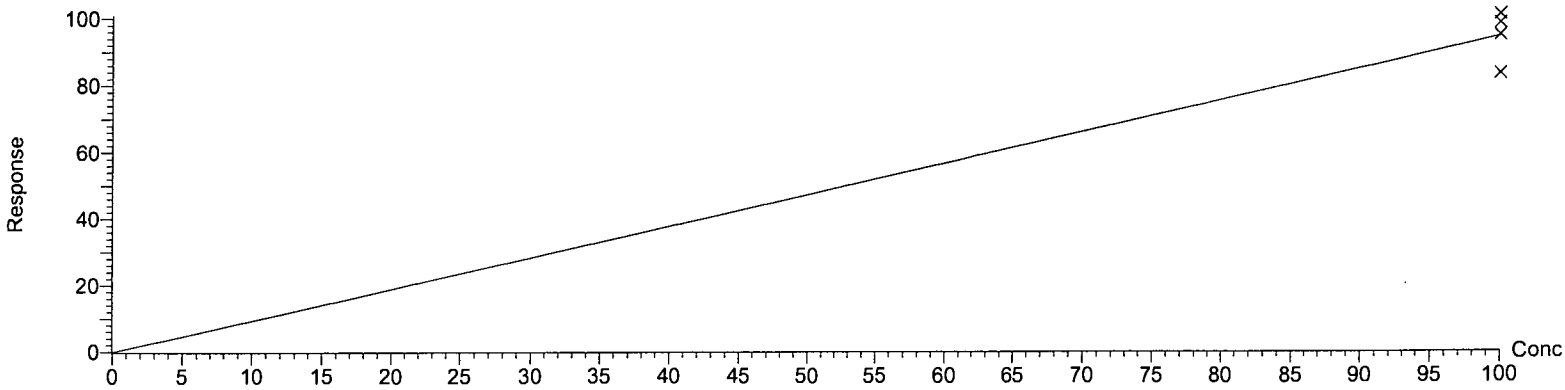
Compound name: 13C-1,2,3,6,7,8-HxCDD
Response Factor: 0.936295
RRF SD: 0.0402468, % Relative SD: 4.29852
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 13C-1,2,3,4,6,7,8-HpCDD

#	Name	Sample Text	Std Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	100.00	1.05	NO	54.28	8.106297e4	7.748438e4	0.94691
2	140919_HR_04	EDF-9999 CS-2 04/22/14	100.00	1.07	NO	54.25	6.156951e4	5.758179e4	0.94866
3	140919_HR_05	EDF-9999 CS-3 09/11/14	100.00	1.05	NO	54.36	3.712060e4	3.550796e4	1.00969
4	140919_HR_06	EDF-9999 CS-4 04/22/14	100.00	1.08	NO	54.30	9.143327e4	8.460296e4	0.98331
5	140919_HR_07	EDF-9999 CS-5 04/22/14	100.00	1.06	NO	54.28	7.738280e4	7.308621e4	0.83351

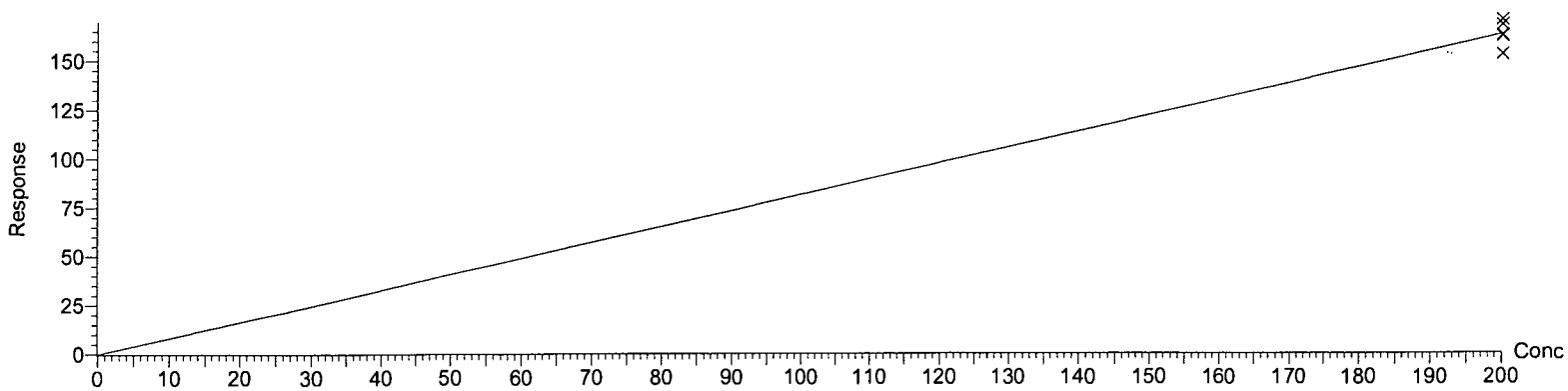
Compound name: 13C-1,2,3,4,6,7,8-HpCDD
Response Factor: 0.944415
RRF SD: 0.067264, % Relative SD: 7.12229
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 13C-OCDD

#	Name	Sample Text	Std Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	200.00	0.89	NO	60.52	1.276355e5	1.427091e5	0.80730
2	140919_HR_04	EDF-9999 CS-2 04/22/14	200.00	0.88	NO	60.49	9.803538e4	1.120142e5	0.83619
3	140919_HR_05	EDF-9999 CS-3 09/11/14	200.00	0.88	NO	60.63	5.704798e4	6.506486e4	0.84882
4	140919_HR_06	EDF-9999 CS-4 04/22/14	200.00	0.89	NO	60.56	1.368988e5	1.532077e5	0.81024
5	140919_HR_07	EDF-9999 CS-5 04/22/14	200.00	0.89	NO	60.54	1.298637e5	1.452712e5	0.76204

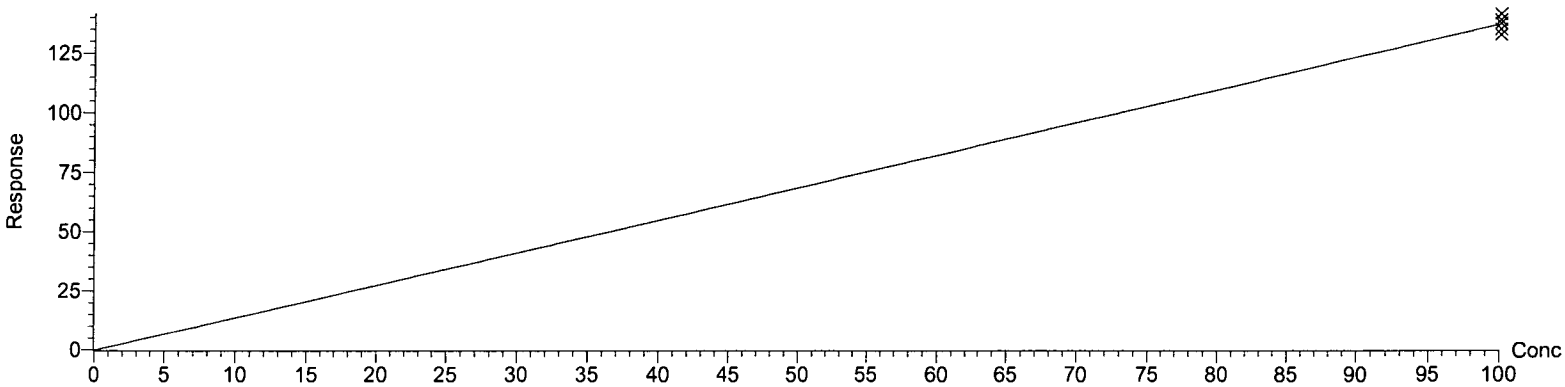
Compound name: 13C-OCDD
Response Factor: 0.812918
RRF SD: 0.0333804, % Relative SD: 4.10625
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 13C-2,3,7,8-TCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	100.00	0.77	NO	30.38	1.347040e5	1.740559e5	1.41781
2	140919_HR_04	EDF-9999 CS-2 04/22/14	100.00	0.77	NO	30.36	1.072690e5	1.387708e5	1.37933
3	140919_HR_05	EDF-9999 CS-3 09/11/14	100.00	0.77	NO	30.42	5.970948e4	7.781050e4	1.35367
4	140919_HR_06	EDF-9999 CS-4 04/22/14	100.00	0.79	NO	30.40	1.476712e5	1.873390e5	1.39220
5	140919_HR_07	EDF-9999 CS-5 04/22/14	100.00	0.77	NO	30.38	1.231594e5	1.591693e5	1.32966

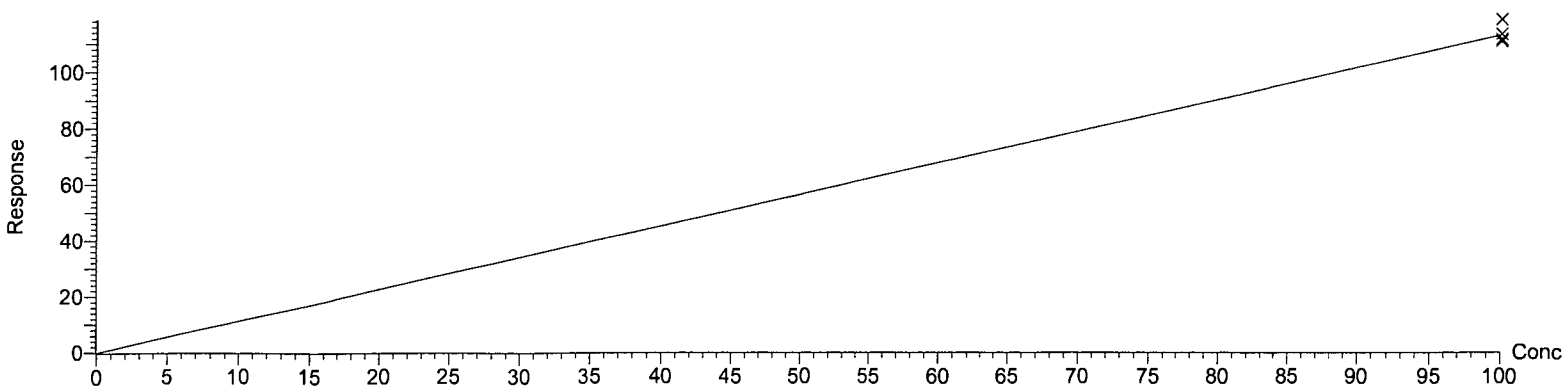
Compound name: 13C-2,3,7,8-TCDF
Response Factor: 1.37453
RRF SD: 0.0341211, % Relative SD: 2.48237
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 13C-1,2,3,7,8-PeCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	100.00	1.61	NO	37.19	1.500140e5	9.317850e4	1.11673
2	140919_HR_04	EDF-9999 CS-2 04/22/14	100.00	1.61	NO	37.16	1.221489e5	7.564835e4	1.10887
3	140919_HR_05	EDF-9999 CS-3 09/11/14	100.00	1.62	NO	37.26	7.133413e4	4.403899e4	1.13567
4	140919_HR_06	EDF-9999 CS-4 04/22/14	100.00	1.59	NO	37.23	1.641022e5	1.032460e5	1.11102
5	140919_HR_07	EDF-9999 CS-5 04/22/14	100.00	1.60	NO	37.19	1.550515e5	9.703111e4	1.18721

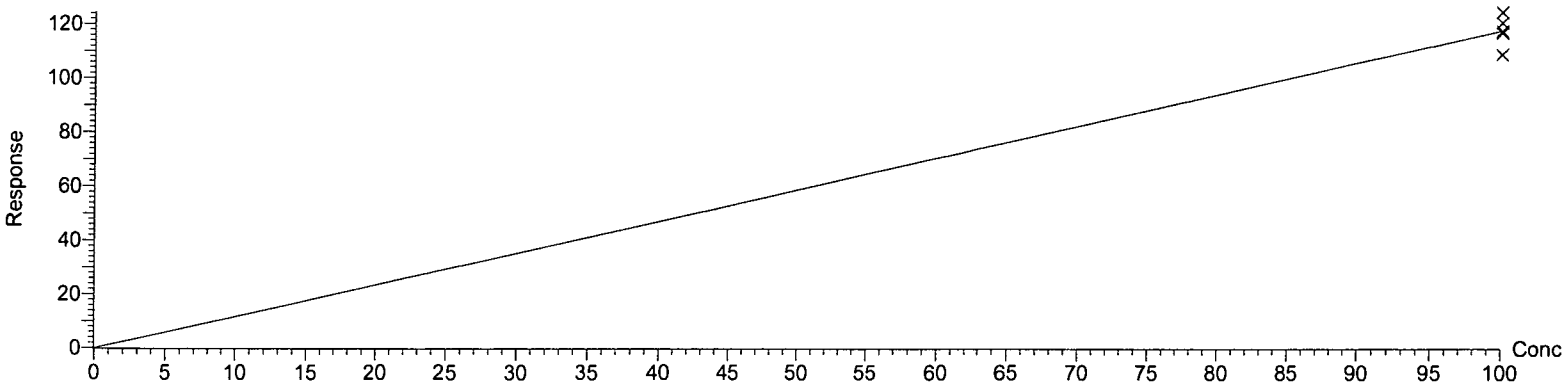
Compound name: 13C-1,2,3,7,8-PeCDF
Response Factor: 1.1319
RRF SD: 0.0326737, % Relative SD: 2.88662
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 13C-1,2,3,4,7,8-HxCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	100.00	0.52	NO	45.65	6.740970e4	1.294476e5	1.17571
2	140919_HR_04	EDF-9999 CS-2 04/22/14	100.00	0.52	NO	45.62	5.025198e4	9.645007e4	1.16801
3	140919_HR_05	EDF-9999 CS-3 09/11/14	100.00	0.50	NO	45.74	2.991604e4	5.964395e4	1.24508
4	140919_HR_06	EDF-9999 CS-4 04/22/14	100.00	0.51	NO	45.71	7.326973e4	1.425324e5	1.20543
5	140919_HR_07	EDF-9999 CS-5 04/22/14	100.00	0.51	NO	45.67	6.632916e4	1.302941e5	1.08918

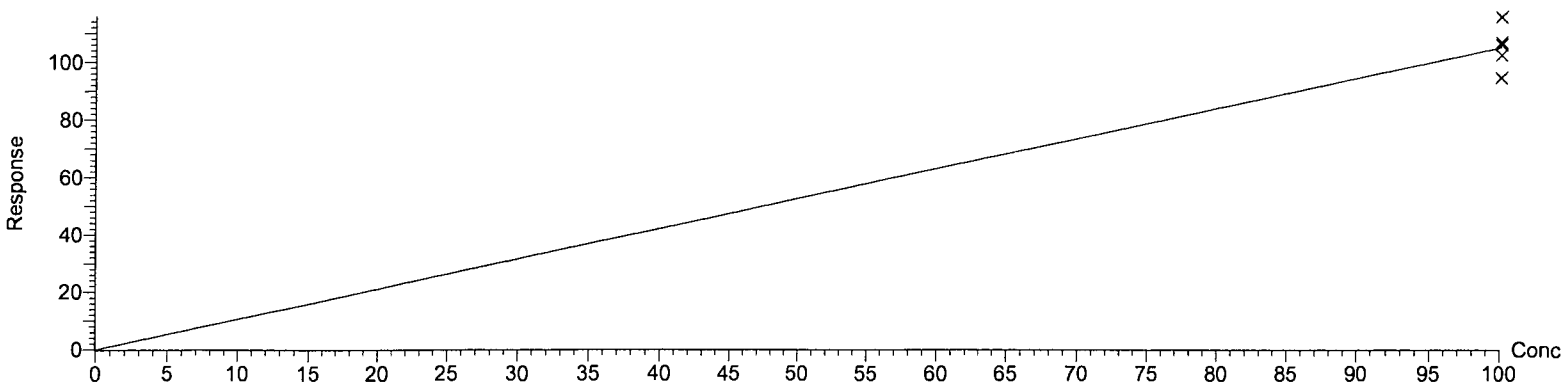
Compound name: 13C-1,2,3,4,7,8-HxCDF
Response Factor: 1.17668
RRF SD: 0.0575268, % Relative SD: 4.8889
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 13C-1,2,3,4,6,7,8-HpCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	100.00	0.43	NO	52.06	5.319307e4	1.247886e5	1.06298
2	140919_HR_04	EDF-9999 CS-2 04/22/14	100.00	0.43	NO	52.03	3.879479e4	9.018633e4	1.02692
3	140919_HR_05	EDF-9999 CS-3 09/11/14	100.00	0.41	NO	52.14	2.258885e4	5.446927e4	1.07127
4	140919_HR_06	EDF-9999 CS-4 04/22/14	100.00	0.44	NO	52.08	6.301425e4	1.443702e5	1.15841
5	140919_HR_07	EDF-9999 CS-5 04/22/14	100.00	0.43	NO	52.07	5.155420e4	1.198557e5	0.94951

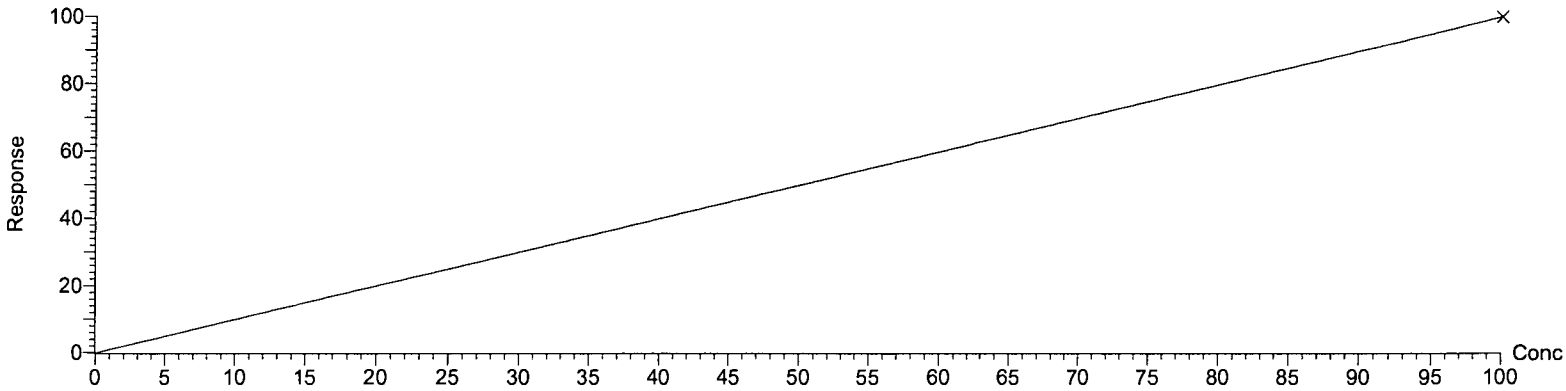
Compound name: 13C-1,2,3,4,6,7,8-HpCDF
Response Factor: 1.05382
RRF SD: 0.0757161, % Relative SD: 7.18492
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 13C-1,2,3,4-TCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	100.00	0.79	NO	30.62	9.626974e4	1.215020e5	1.00000
2	140919_HR_04	EDF-9999 CS-2 04/22/14	100.00	0.76	NO	30.59	7.694632e4	1.014303e5	1.00000
3	140919_HR_05	EDF-9999 CS-3 09/11/14	100.00	0.76	NO	30.66	4.393346e4	5.765707e4	1.00000
4	140919_HR_06	EDF-9999 CS-4 04/22/14	100.00	0.76	NO	30.63	1.036399e5	1.369940e5	1.00000
5	140919_HR_07	EDF-9999 CS-5 04/22/14	100.00	0.78	NO	30.61	9.333311e4	1.189980e5	1.00000

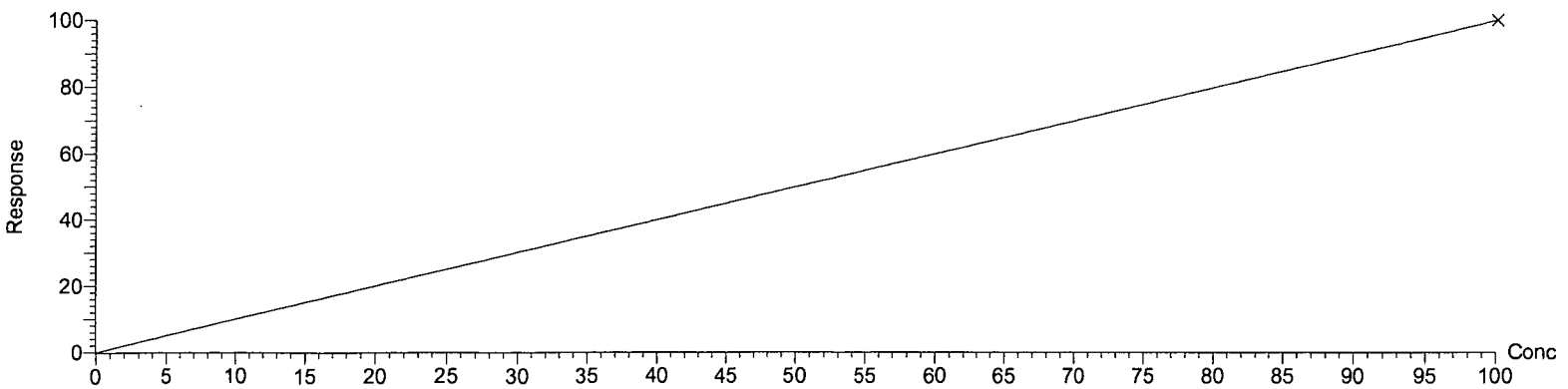
Compound name: 13C-1,2,3,4-TCDD
Response Factor: 1
RRF SD: 0, % Relative SD: 0
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 13C-1,2,3,7,8,9-HxCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	140919_HR_03	EDF-9999 CS-1 04/22/14	100.00	1.28	NO	48.31	9.398588e4	7.345127e4	1.00000
2	140919_HR_04	EDF-9999 CS-2 04/22/14	100.00	1.29	NO	48.29	7.073489e4	5.486470e4	1.00000
3	140919_HR_05	EDF-9999 CS-3 09/11/14	100.00	1.23	NO	48.39	3.966427e4	3.226705e4	1.00000
4	140919_HR_06	EDF-9999 CS-4 04/22/14	100.00	1.25	NO	48.34	9.942854e4	7.959629e4	1.00000
5	140919_HR_07	EDF-9999 CS-5 04/22/14	100.00	1.25	NO	48.32	1.002600e5	8.026442e4	1.00000

Compound name: 13C-1,2,3,7,8,9-HxCDD
Response Factor: 1
RRF SD: 0, % Relative SD: 0
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF



Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: 22 Sep 2014 12:13:12

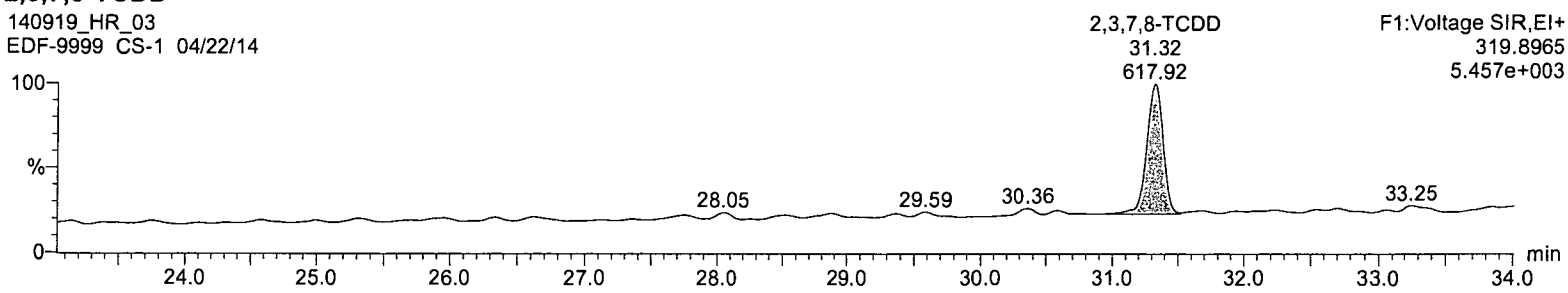
Name: 140919_HR_03, Date: 19-Sep-2014, Time: 19:00:39, ID: , Description: EDF-9999 CS-1 04/22/14, User:

#	Name	Signal 1	Noise 1	S/N 1	Flag S/N	Signal 2	Noise 2	S/N 2	Flag S/N
1	2,3,7,8-TCDD	4.1970000e3	3.7416084e1	114.68	NO	4.2390000e3	3.5302696e1	120.08	NO
2	1,2,3,7,8-PeCDD	1.5231000e4	5.7248566e1	263.36	NO	1.0896000e4	2.7557053e1	395.40	NO
3	1,2,3,4,7,8-HxCDD	1.7664000e4	8.7575317e1	198.49	NO	1.2498000e4	1.5939197e2	78.41	NO
4	1,2,3,6,7,8-HxCDD	1.5458000e4	8.7575317e1	173.43	NO	1.1386000e4	1.5939197e2	71.43	NO
5	1,2,3,7,8,9-HxCDD	1.7050000e4	8.7575317e1	191.92	NO	1.3322000e4	1.5939197e2	83.58	NO
6	1,2,3,4,6,7,8-HpCDD	1.8294000e4	1.4812689e2	122.98	NO	1.5986000e4	7.7191460e1	207.10	NO
7	OCDD	2.4848000e4	9.6280075e1	254.73	NO	2.8625000e4	2.9322956e1	976.20	NO
8	2,3,7,8-TCDF	3.3560000e3	2.2648762e1	150.56	NO	5.4380000e3	3.7754971e1	144.03	NO
9	1,2,3,7,8-PeCDF	2.4527000e4	8.1988609e1	298.47	NO	1.6378000e4	5.8033592e1	282.22	NO
10	2,3,4,7,8-PeCDF	2.5241000e4	8.1988609e1	305.87	NO	1.5921000e4	5.8033592e1	274.34	NO
11	1,2,3,4,7,8-HxCDF	2.4453000e4	2.0734818e2	115.62	NO	1.9109000e4	2.1114134e2	90.50	NO
12	1,2,3,6,7,8-HxCDF	2.3695000e4	2.0734818e2	111.90	NO	1.9391000e4	2.1114134e2	91.84	NO
13	2,3,4,6,7,8-HxCDF	2.2956000e4	2.0734818e2	108.18	NO	1.8369000e4	2.1114134e2	87.00	NO
14	1,2,3,7,8,9-HxCDF	1.8984000e4	2.0734818e2	89.65	NO	1.5939000e4	2.1114134e2	75.49	NO
15	1,2,3,4,6,7,8-HpCDF	2.6765000e4	1.1683391e2	227.10	NO	2.6111000e4	8.8457306e1	295.18	NO
16	1,2,3,4,7,8,9-HpCDF	1.7357000e4	1.1683391e2	147.66	NO	1.6307000e4	8.8457306e1	184.35	NO
17	OCDF	2.5721000e4	1.9244377e3	12.92	NO	2.8903000e4	1.9220053e2	150.38	NO
18	13C-2,3,7,8-TCDD	6.6794900e5	2.1339398e2	3131.82	NO	8.7630300e5	1.7807782e2	4920.90	NO
19	13C-1,2,3,7,8-PeCDD	7.0684500e5	3.0552707e2	2311.81	NO	4.5404900e5	9.0141830e1	5037.05	NO
20	13C-1,2,3,6,7,8-HxCDD	6.1775700e5	1.9173767e2	3222.72	NO	5.1799800e5	2.7795328e2	1863.62	NO
21	13C-1,2,3,4,6,7,8-HpCDD	6.1656700e5	1.4621788e2	4214.36	NO	5.8937300e5	1.0183177e2	5787.71	NO
22	13C-OCDD	9.2629700e5	2.1752618e2	4255.92	NO	1.0364240e6	1.3297899e2	7793.89	NO
23	13C-2,3,7,8-TCDF	9.2095800e5	8.1642647e1	11280.34	NO	1.1870760e6	1.1402852e2	10410.34	NO
24	13C-1,2,3,7,8-PeCDF	1.0023660e6	6.0788733e2	1647.74	NO	6.2417000e5	4.4249725e2	1410.56	NO
25	13C-1,2,3,4,7,8-HxCDF	5.1112000e5	2.8200433e2	1810.60	NO	9.8314700e5	2.8860220e2	3406.58	NO
26	13C-1,2,3,4,6,7,8-HpCDF	4.1421700e5	1.2571370e2	3293.77	NO	9.7285500e5	2.6447742e2	3678.40	NO
27	13C-1,2,3,4-TCDD	6.5698700e5	2.1339398e2	3080.27	NO	8.2689100e5	1.7807782e2	4643.42	NO
28	13C-1,2,3,7,8,9-HxCDD	7.2034900e5	1.9173767e2	3763.71	NO	5.6435800e5	2.7795328e2	2030.41	NO

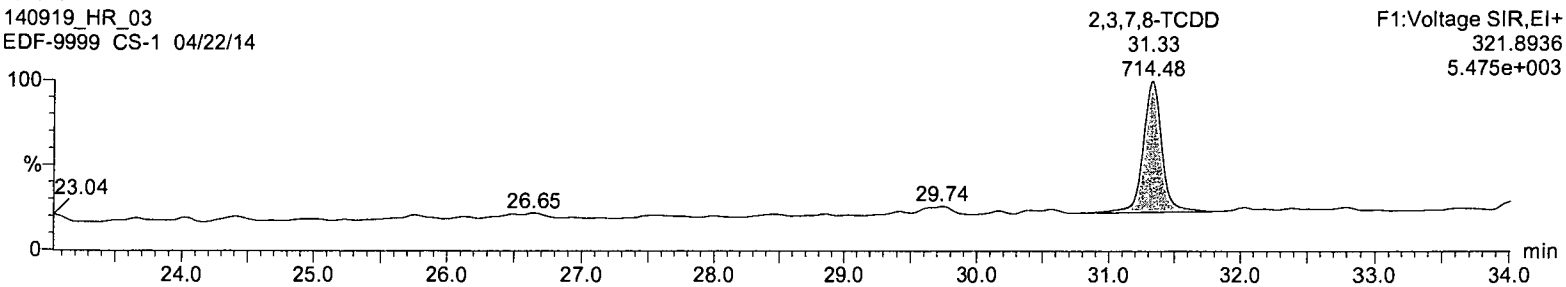
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Calibration: 22 Sep 2014 12:13:12

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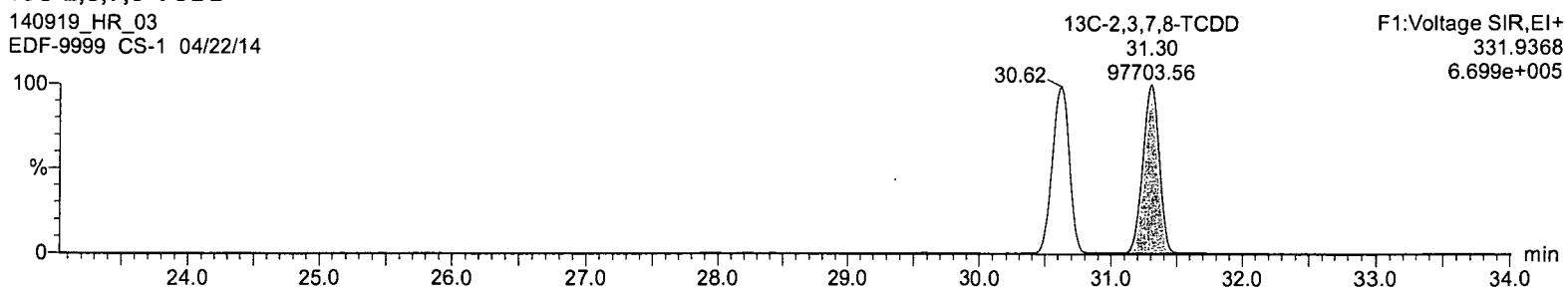
2,3,7,8-TCDD



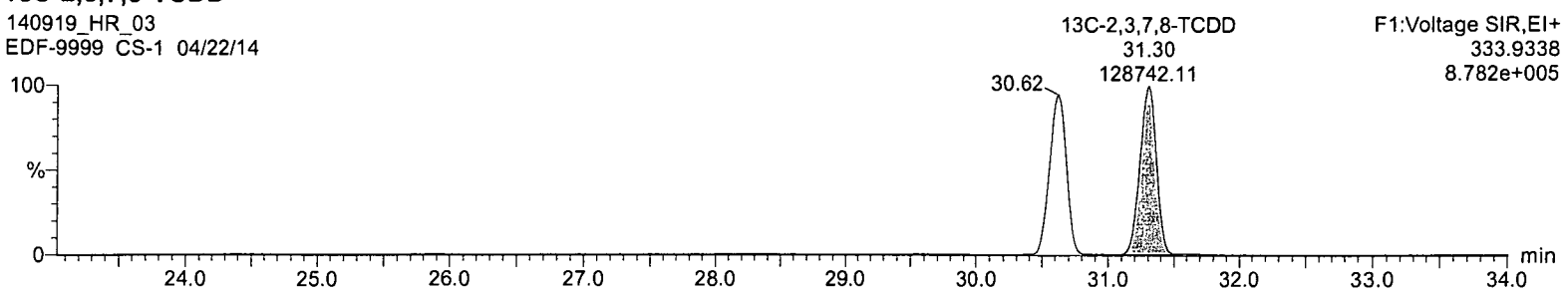
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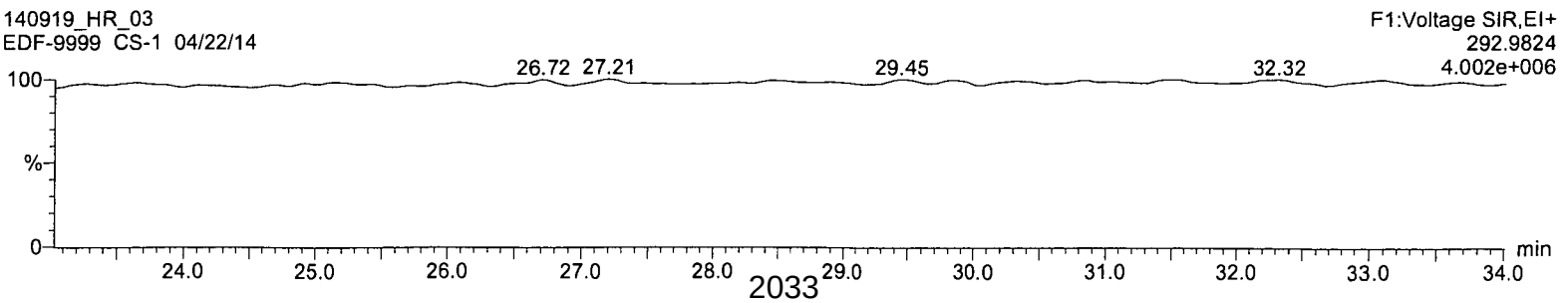
13C-2,3,7,8-TCDD



13C-2,3,7,8-TCDD

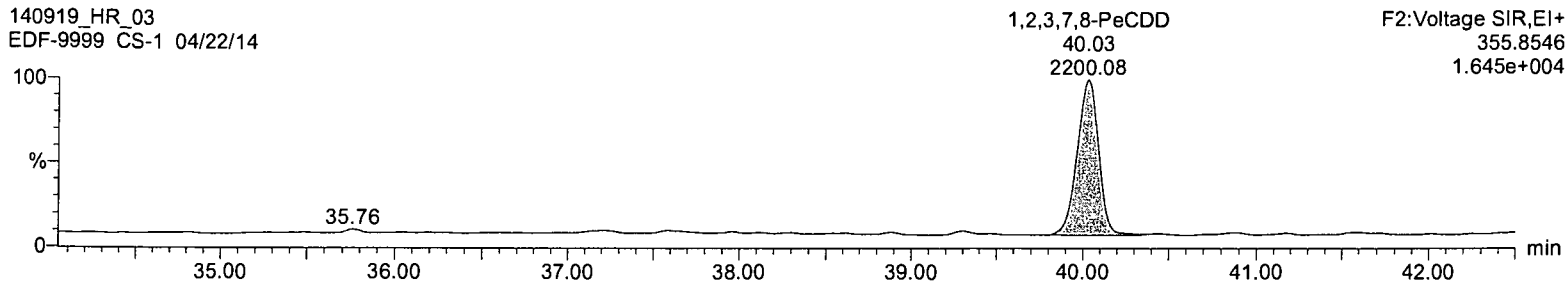


PFK1

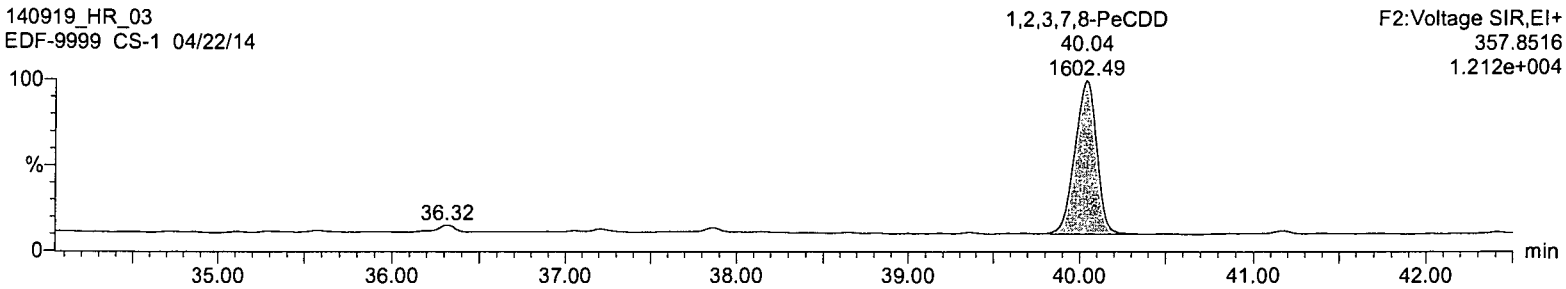


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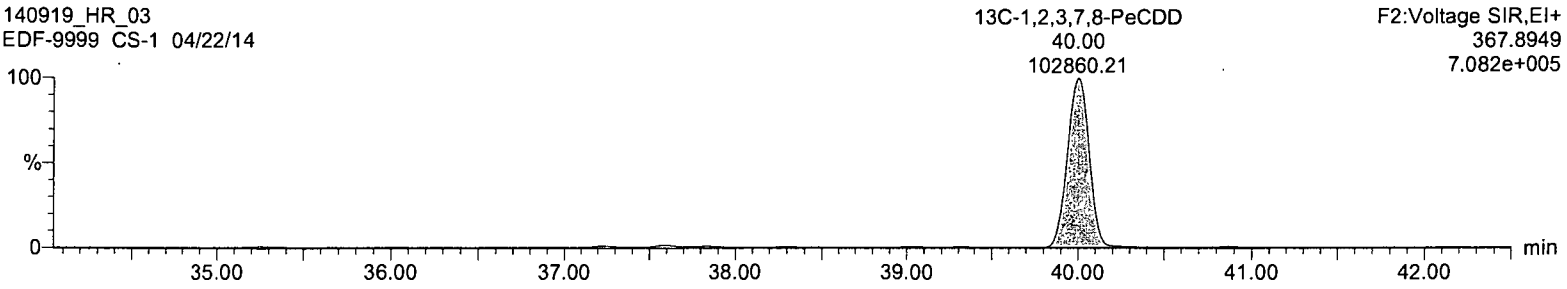
1,2,3,7,8-PeCDD



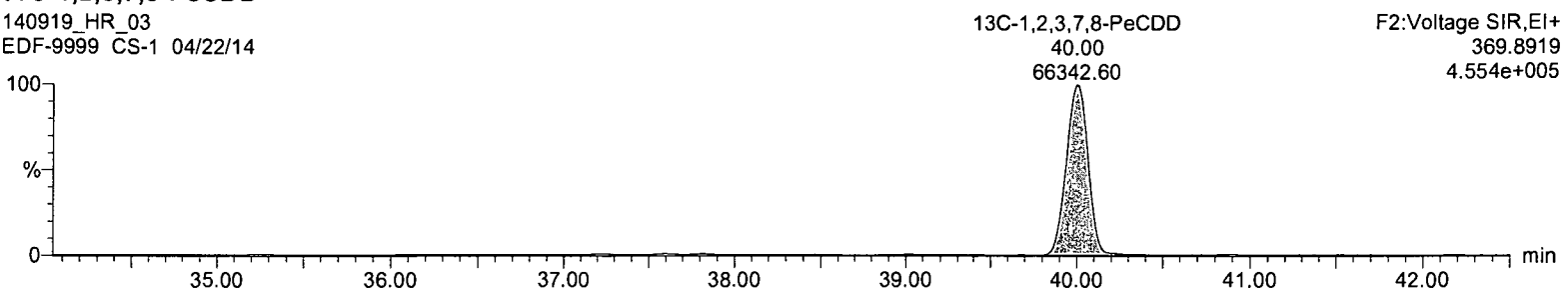
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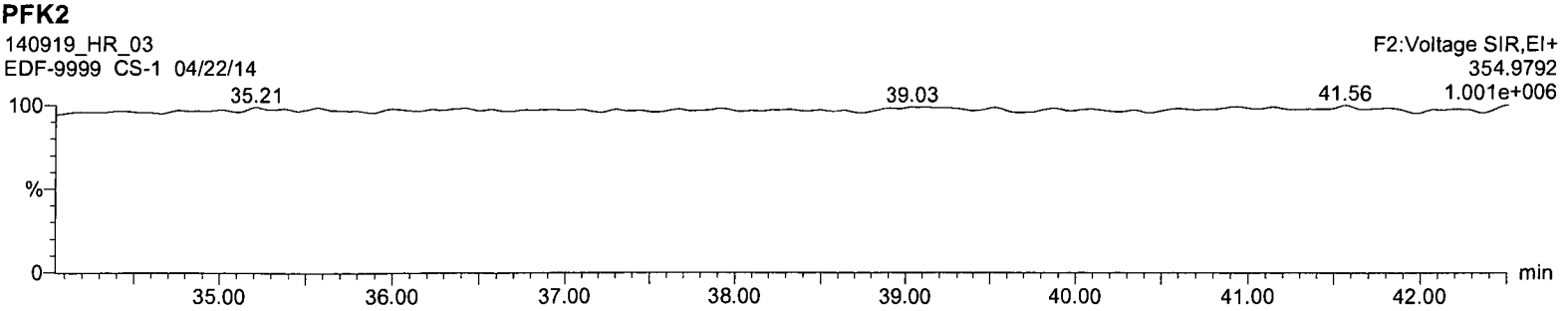
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13C-1,2,3,7,8-PeCDD

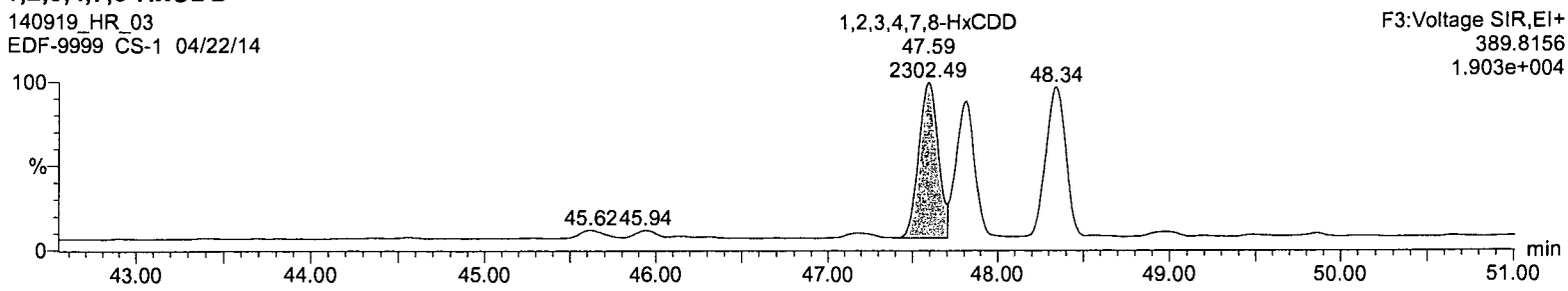


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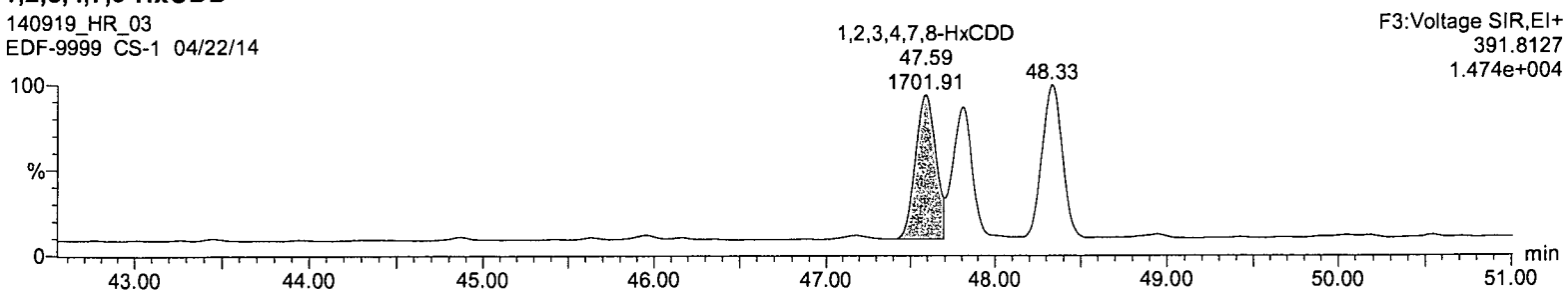


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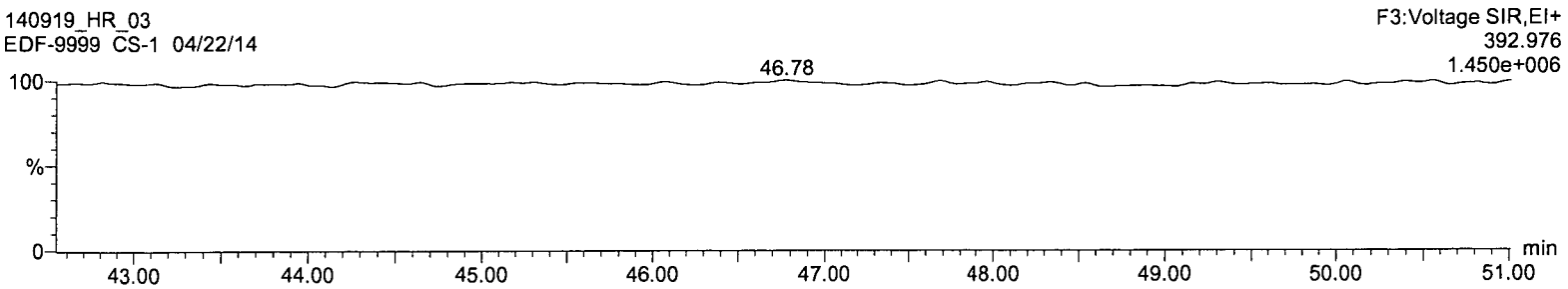
1,2,3,4,7,8-HxCDD



1,2,3,4,7,8-HxCDD

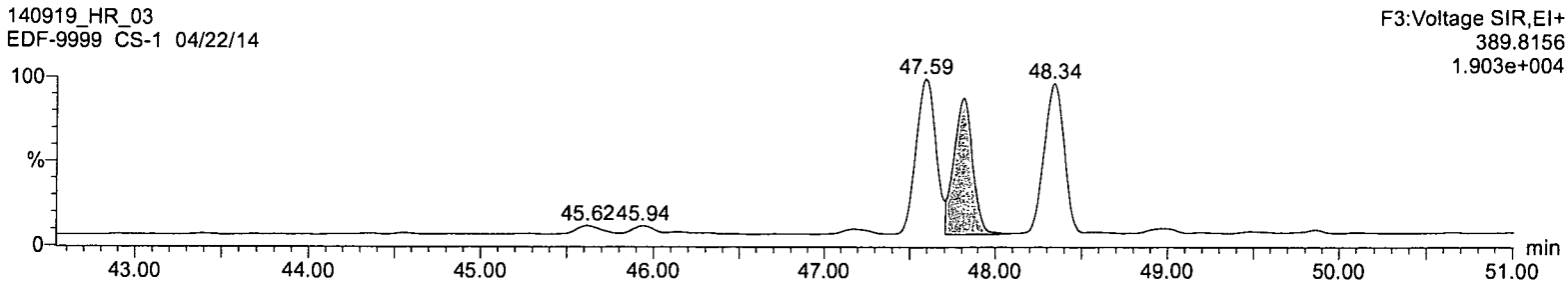


PFK3

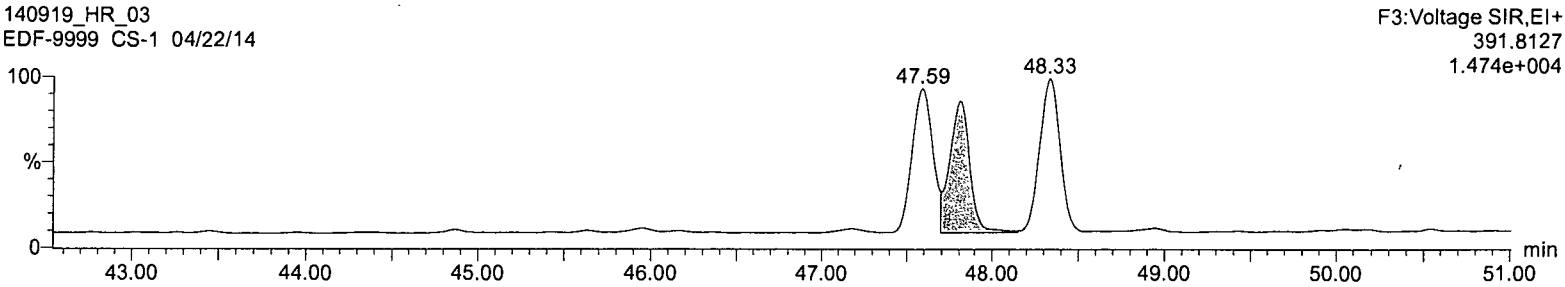


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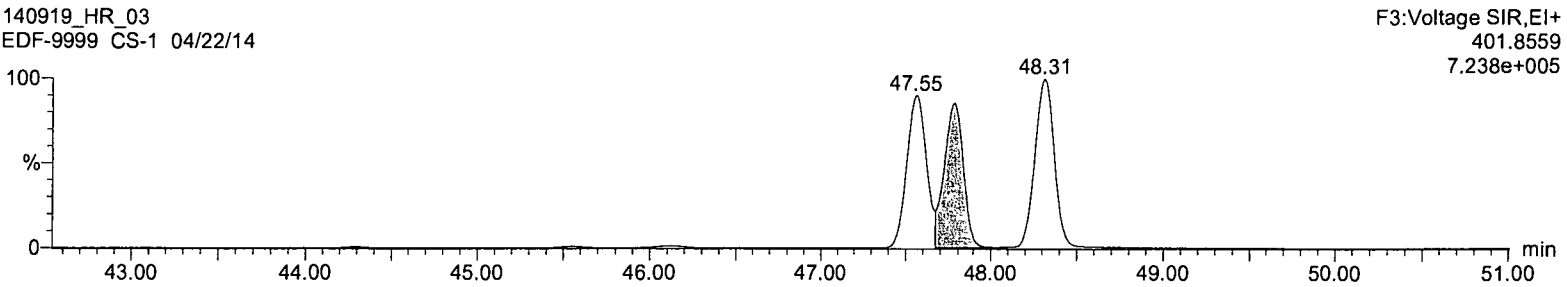
1,2,3,6,7,8-HxCDD



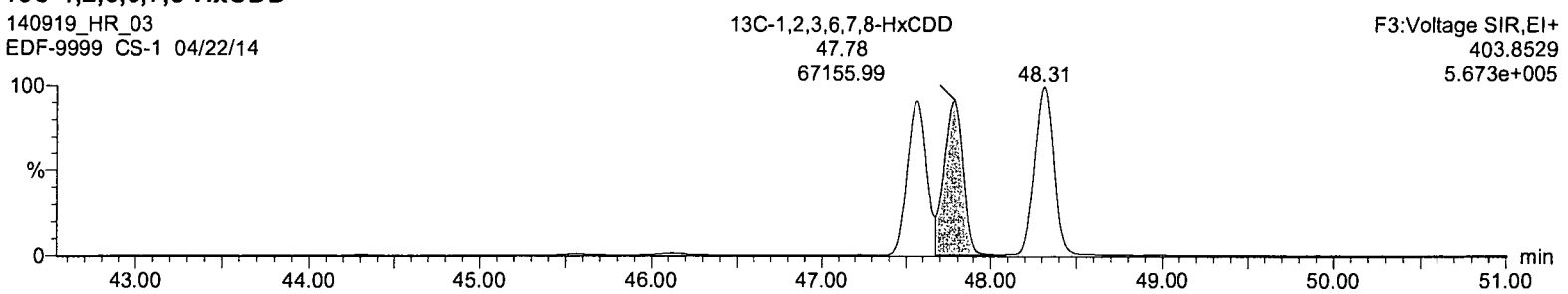
1,2,3,6,7,8-HxCDD



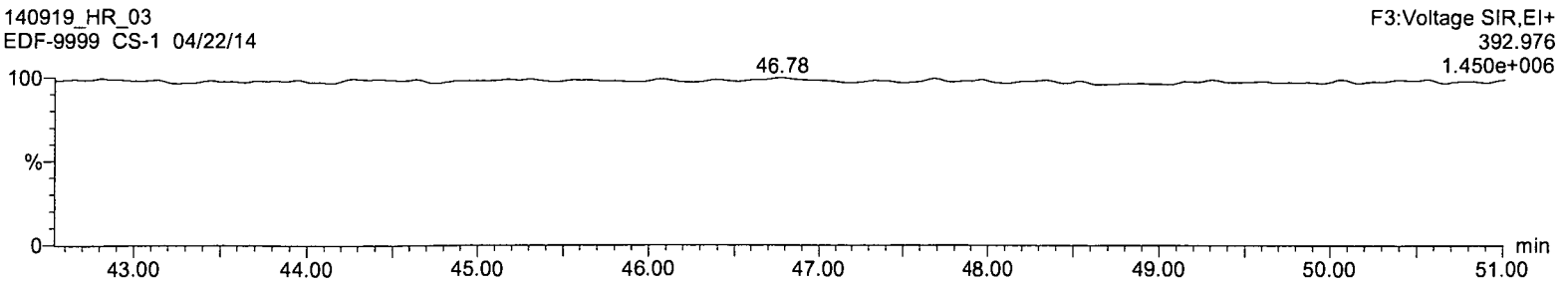
13C-1,2,3,6,7,8-HxCDD



13C-1,2,3,6,7,8-HxCDD

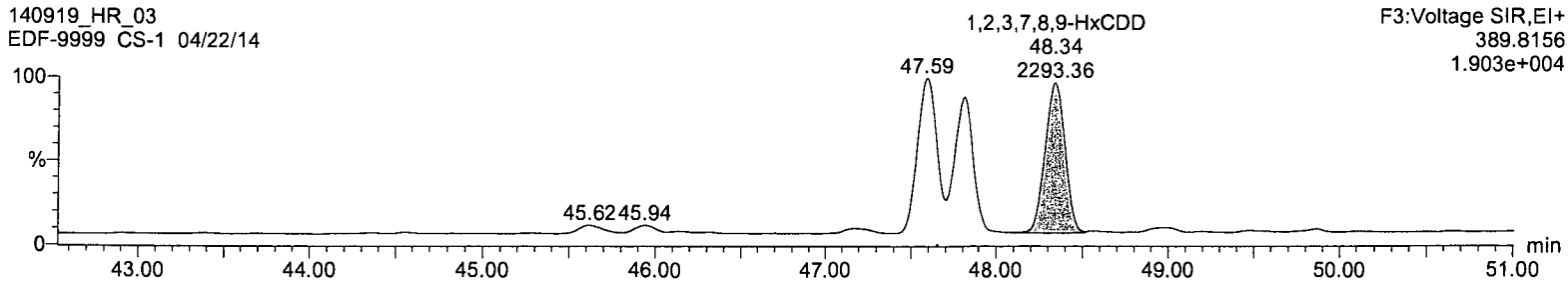


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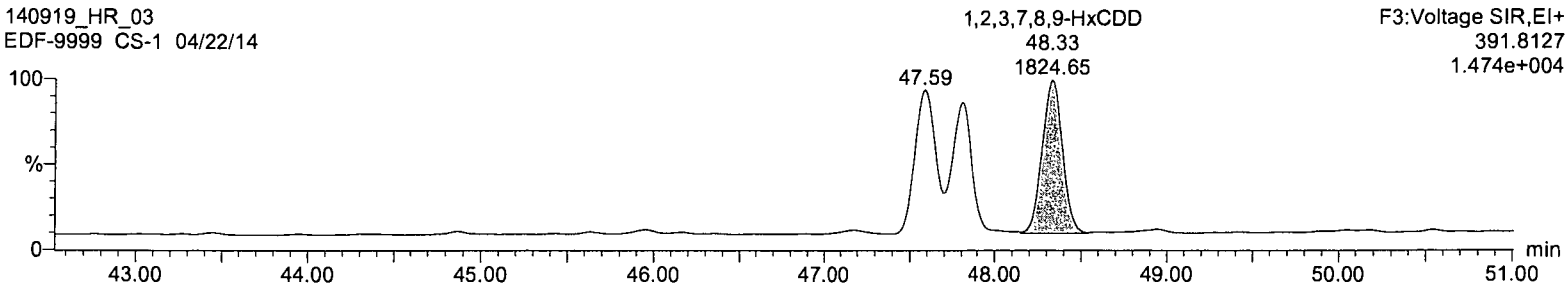


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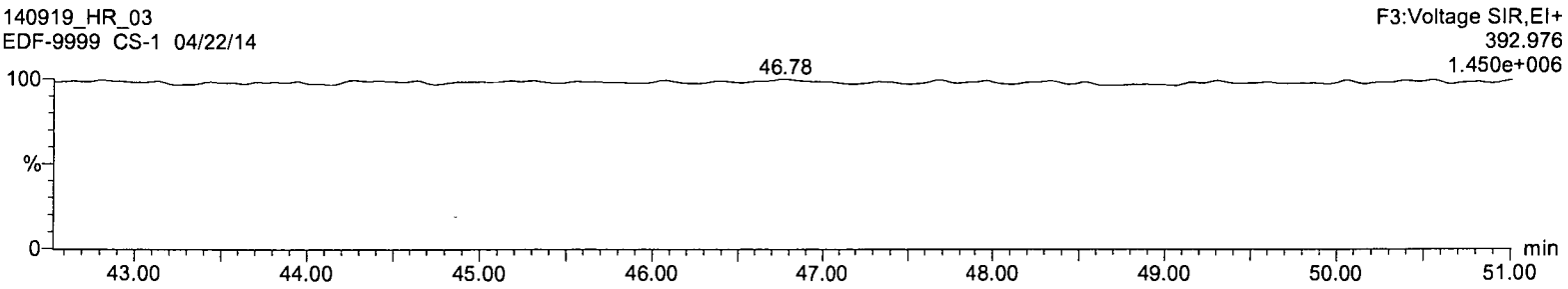
1,2,3,7,8,9-HxCDD



1,2,3,7,8,9-HxCDD

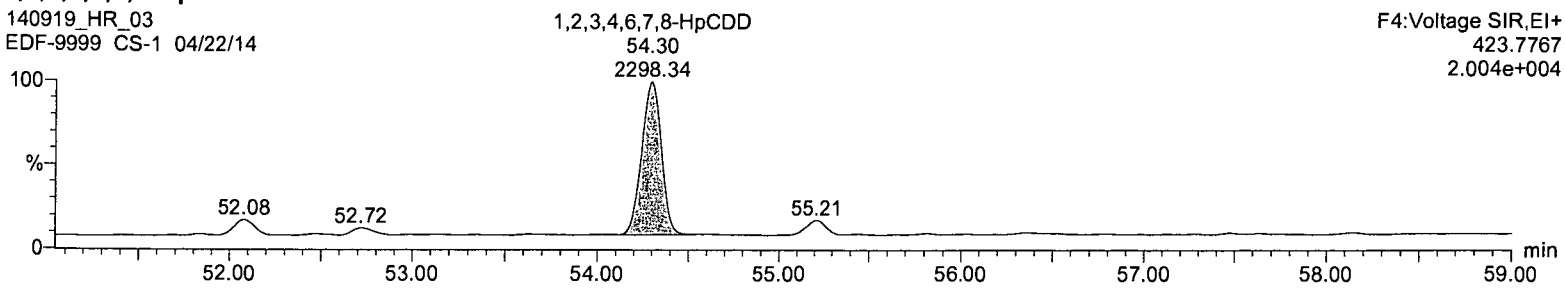


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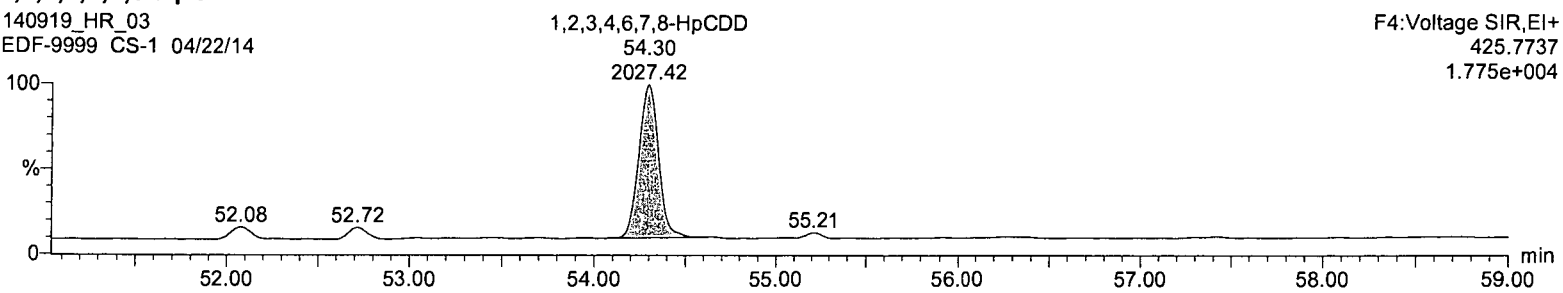


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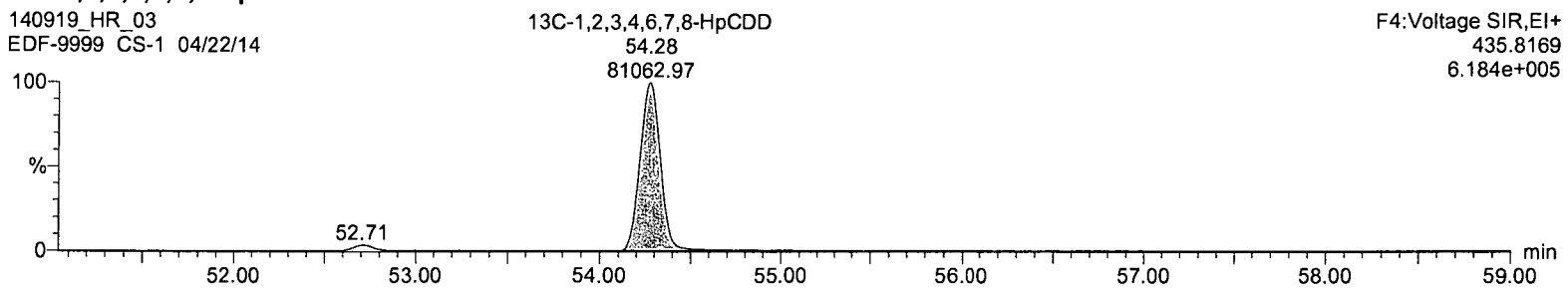
1,2,3,4,6,7,8-HpCDD



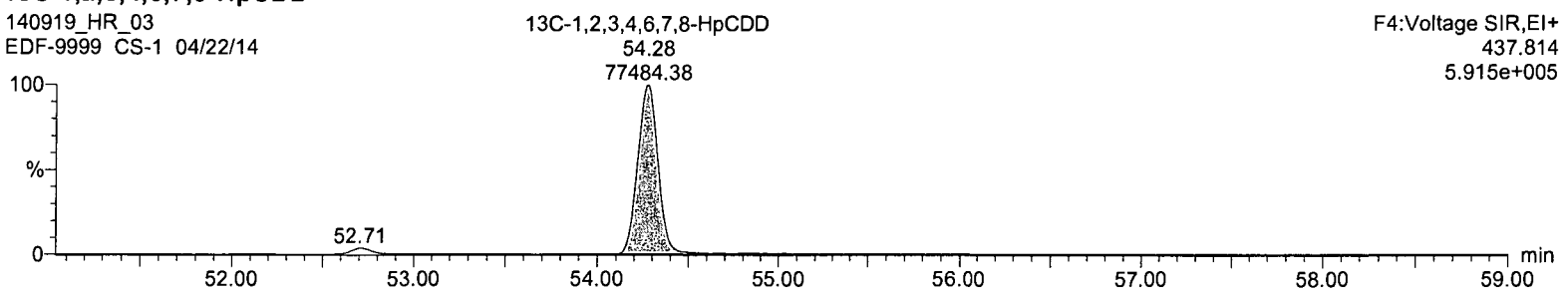
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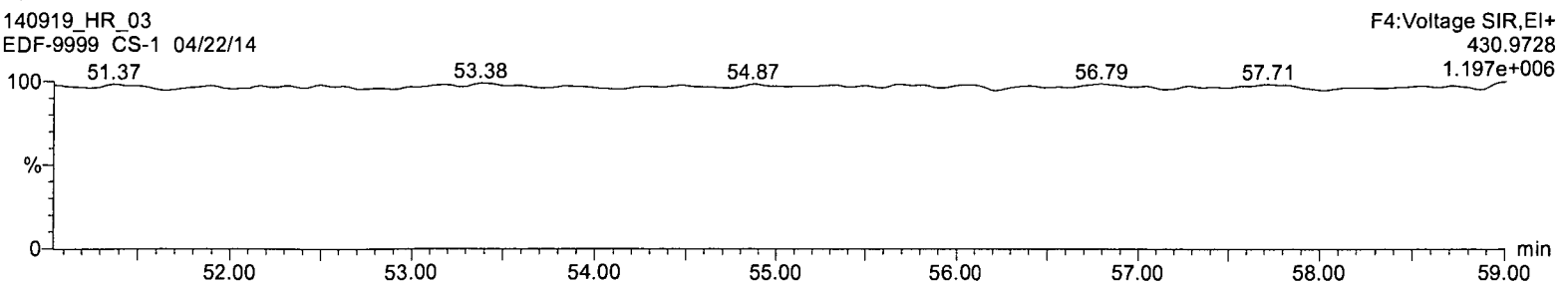
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13C-1,2,3,4,6,7,8-HpCDD

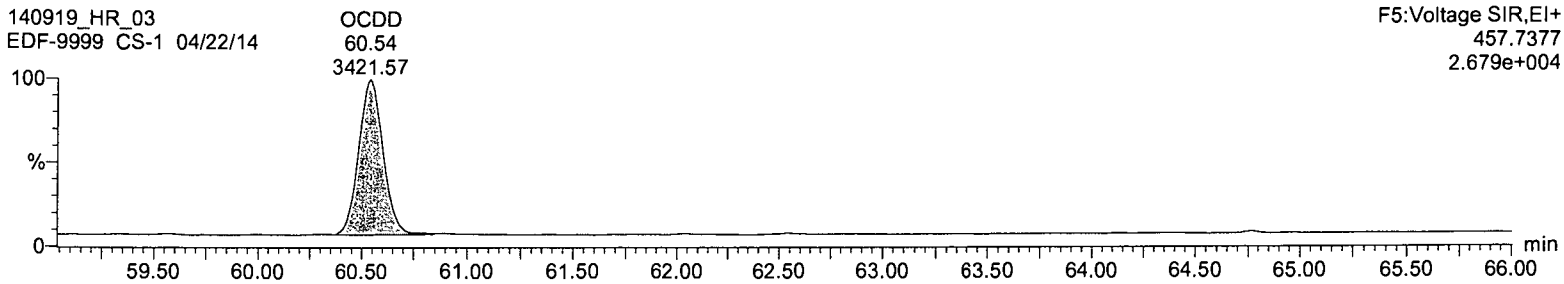


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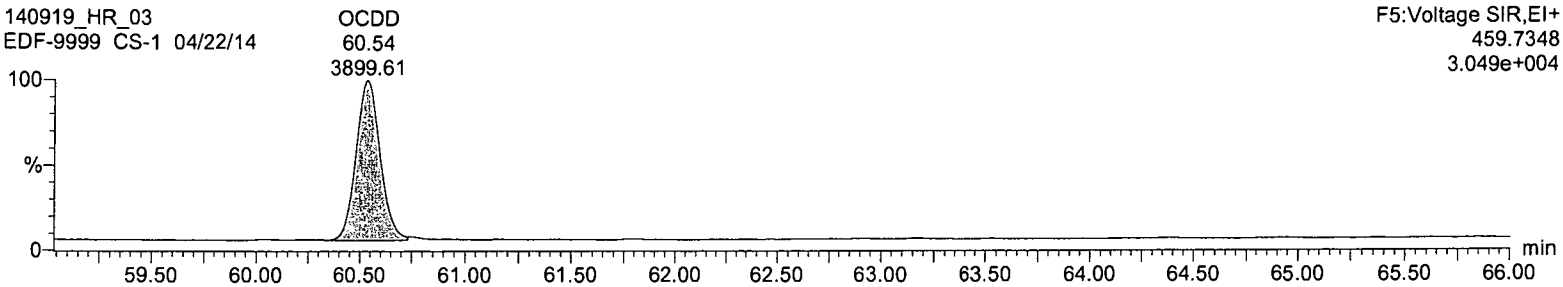


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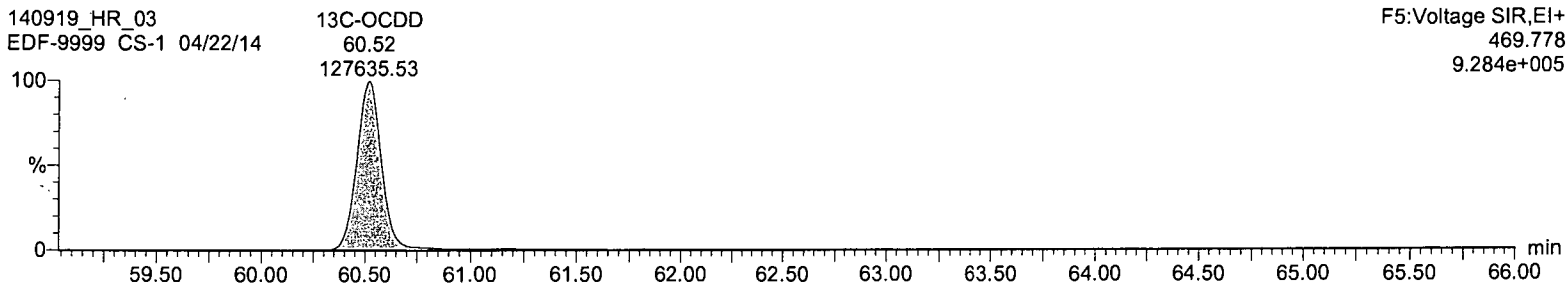
OCDD



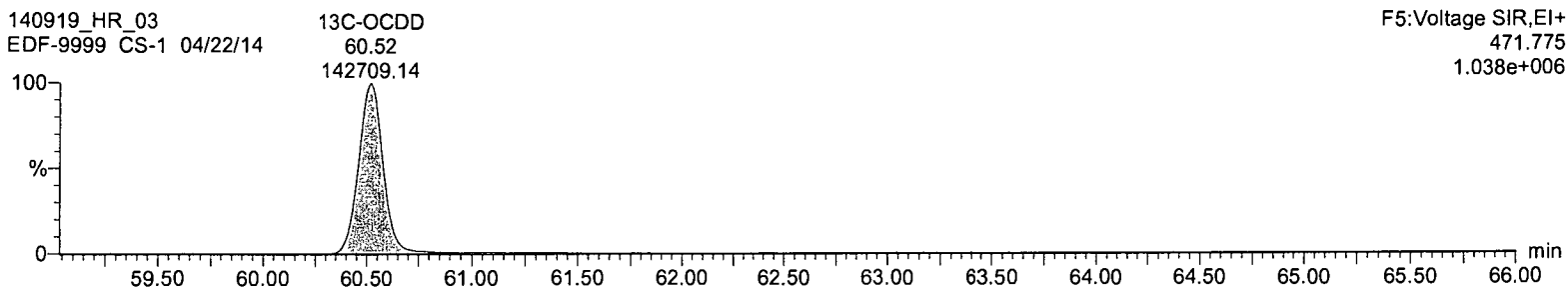
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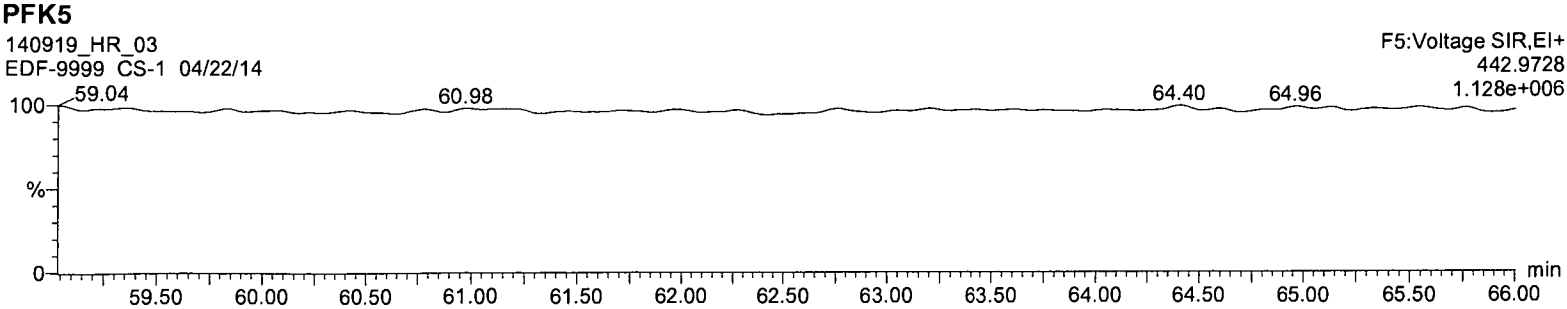
13C-OCDD



13C-OCDD

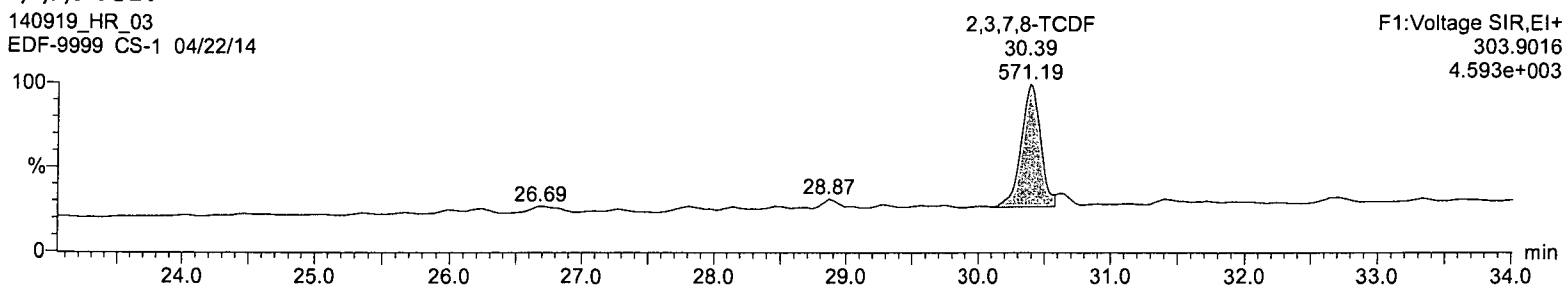


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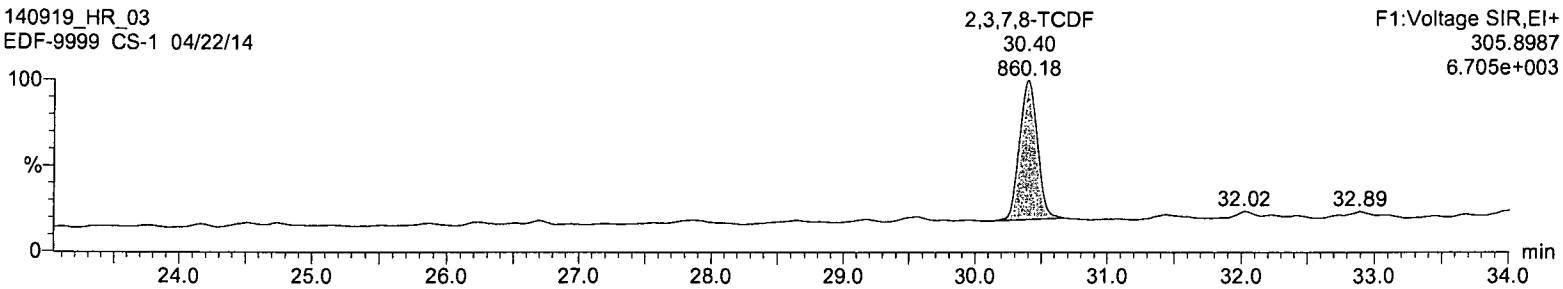


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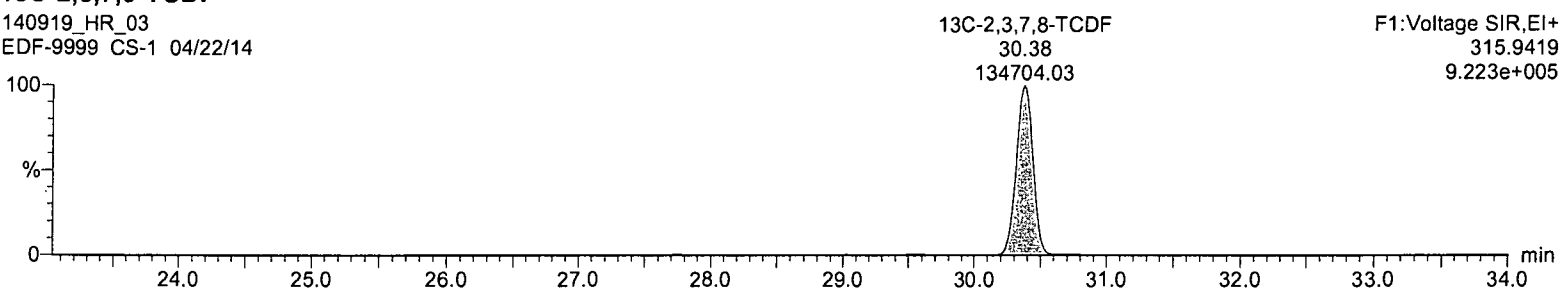
2,3,7,8-TCDF



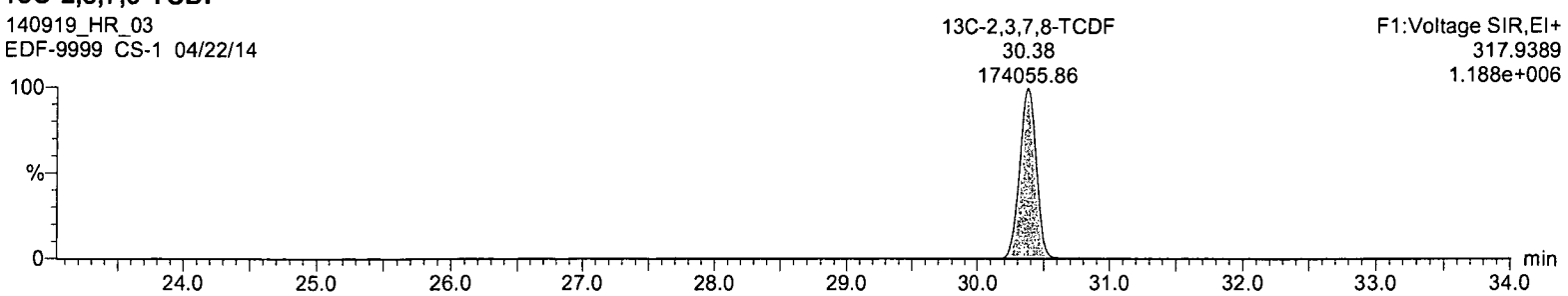
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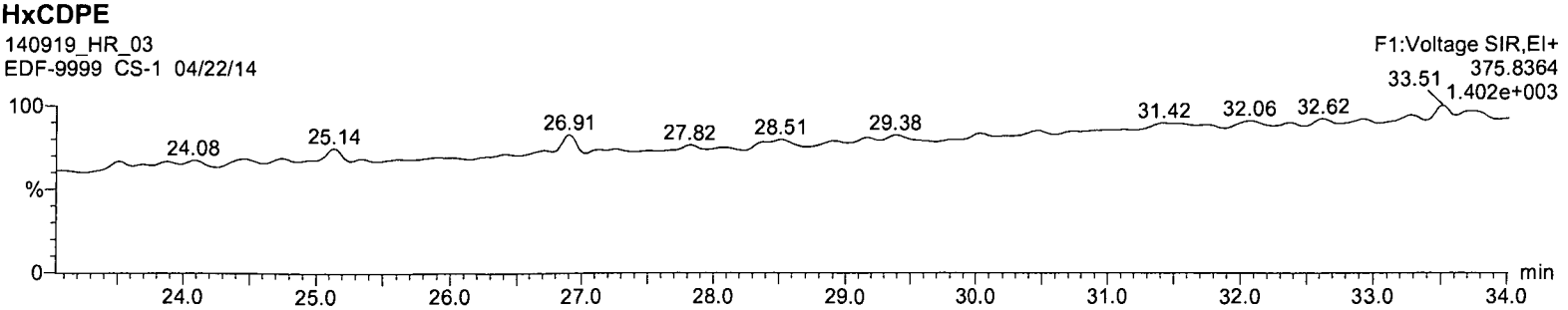
13C-2,3,7,8-TCDF



13C-2,3,7,8-TCDF

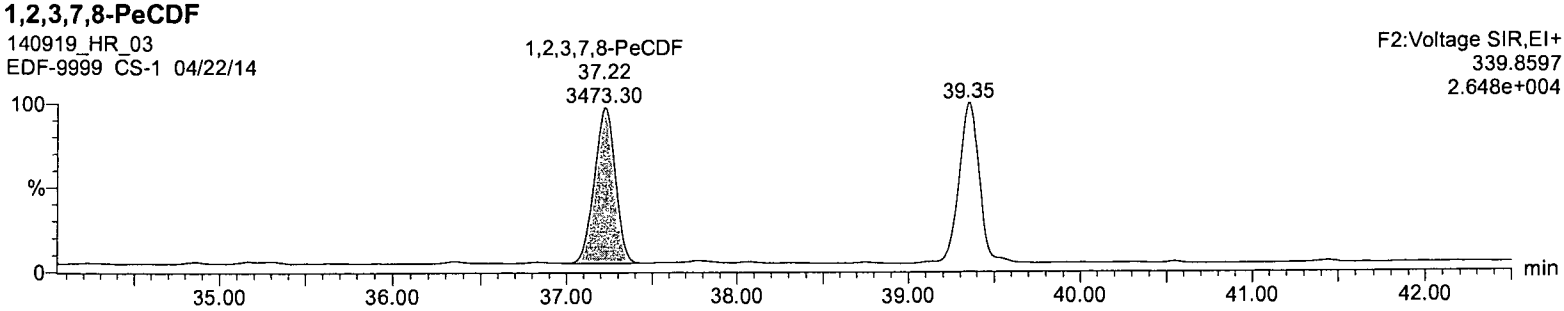


HxCDPE

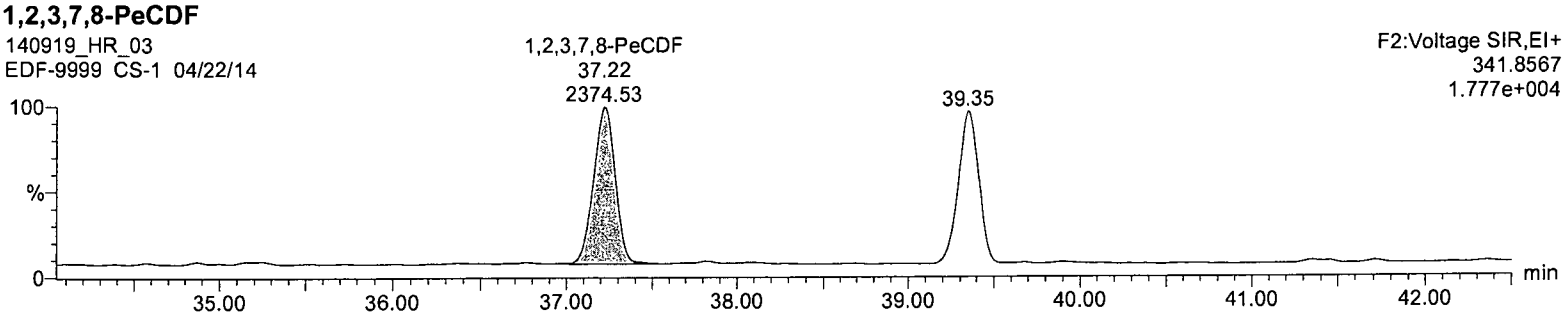


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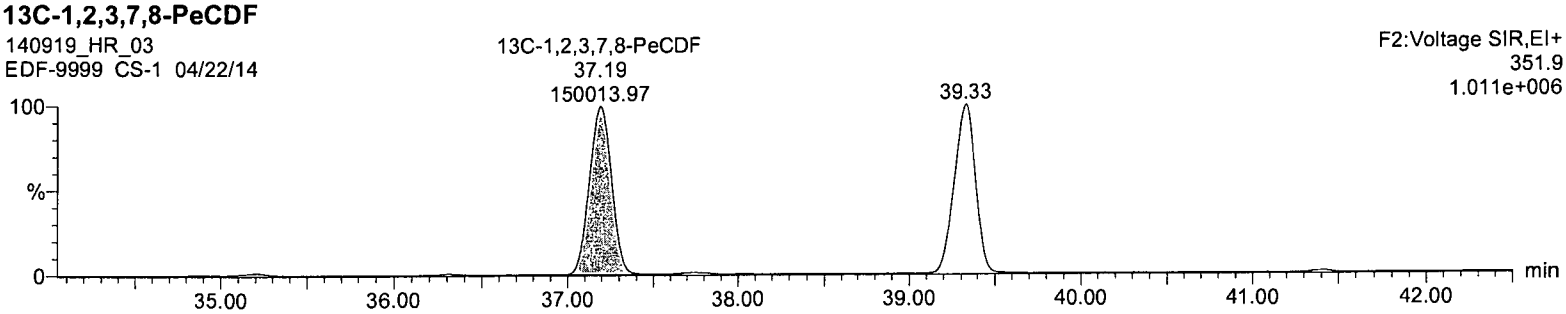
1,2,3,7,8-PeCDF



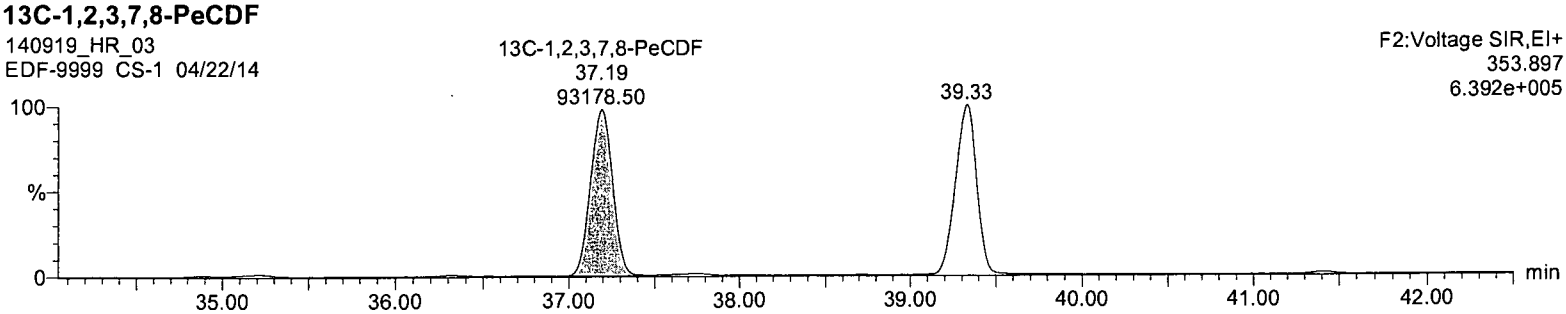
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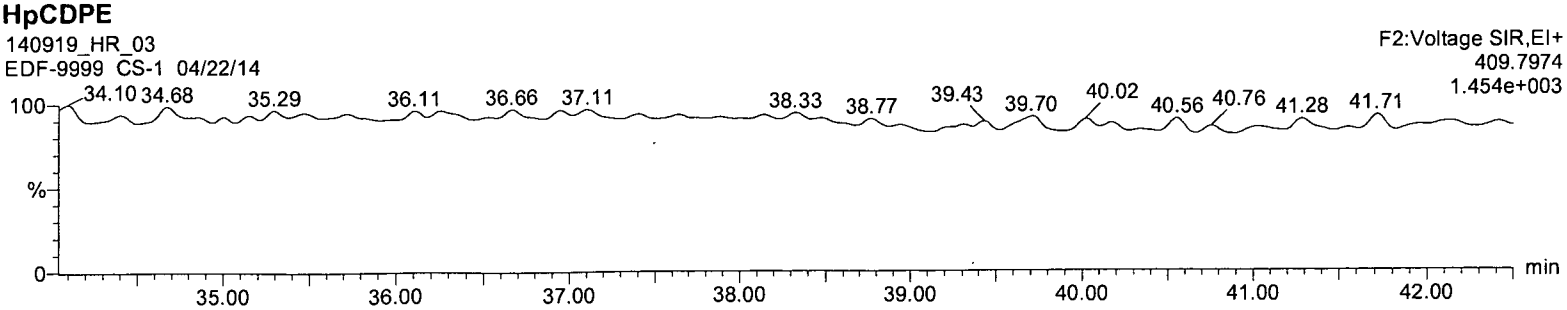
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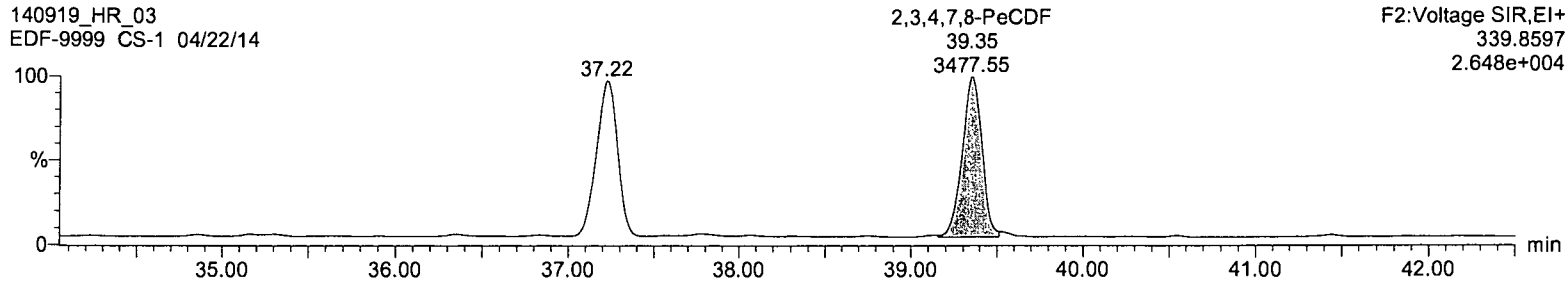


HpCDPE

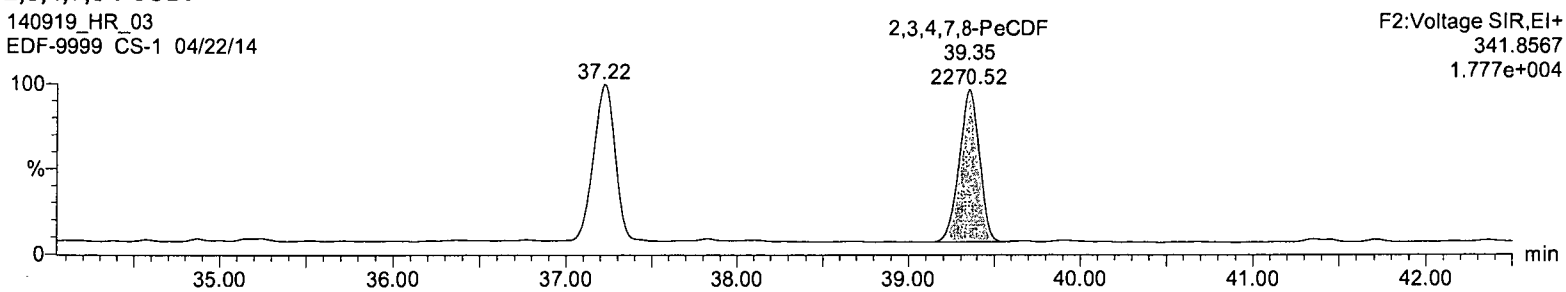


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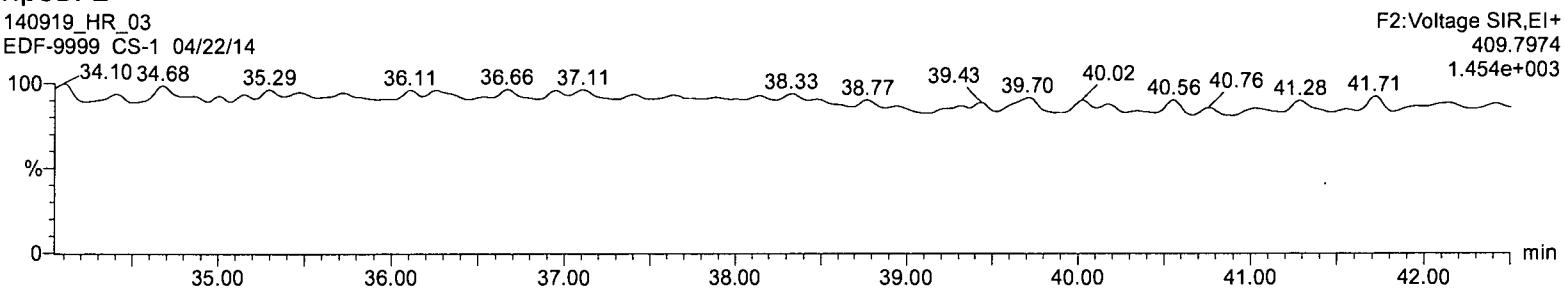
2,3,4,7,8-PeCDF



2,3,4,7,8-PeCDF

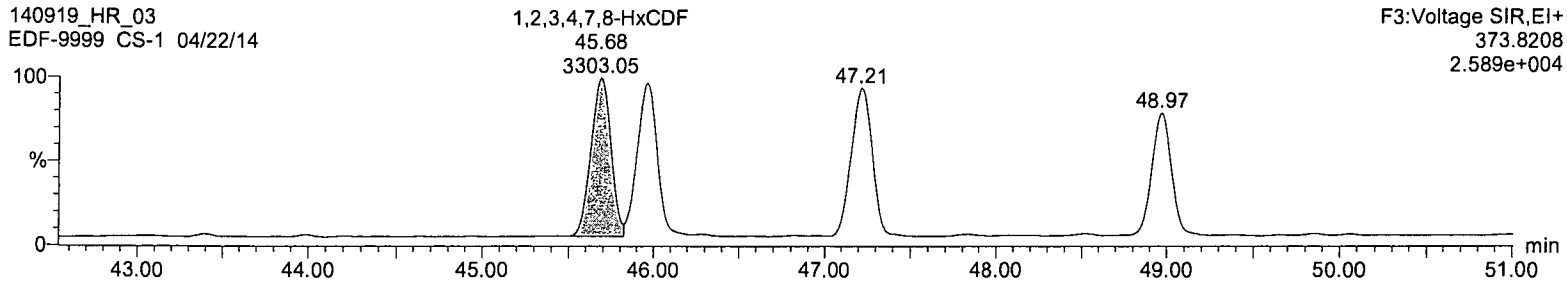


HpCDPE

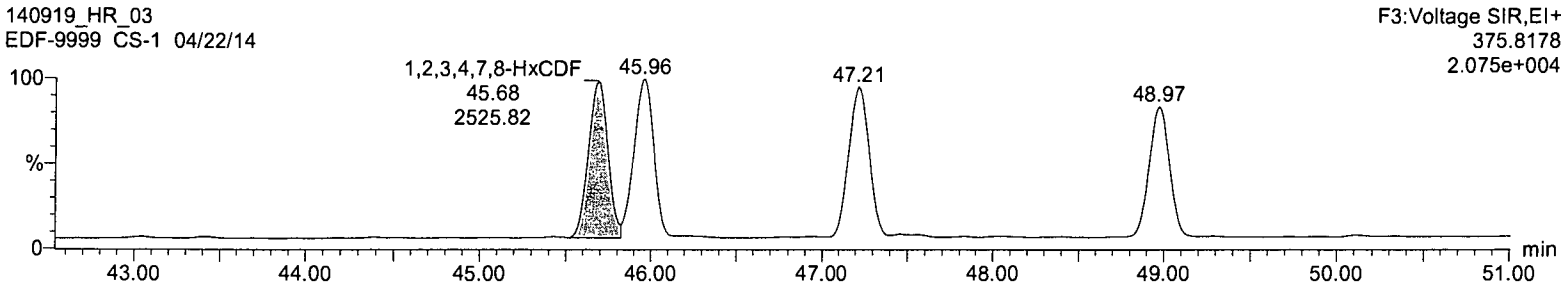


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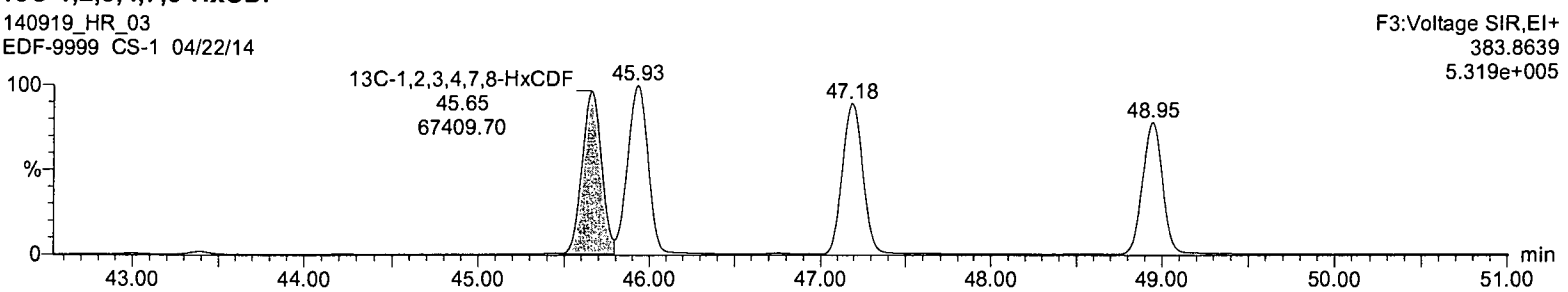
1,2,3,4,7,8-HxCDF



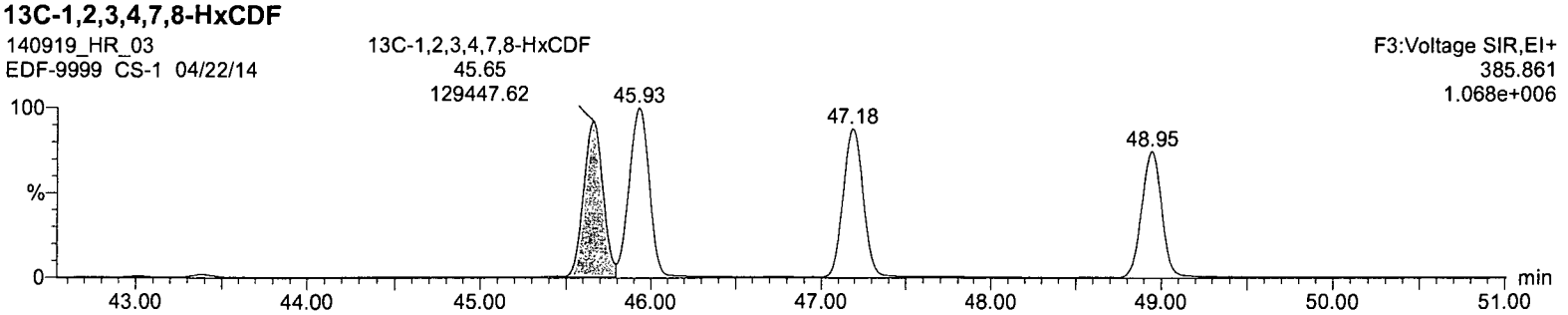
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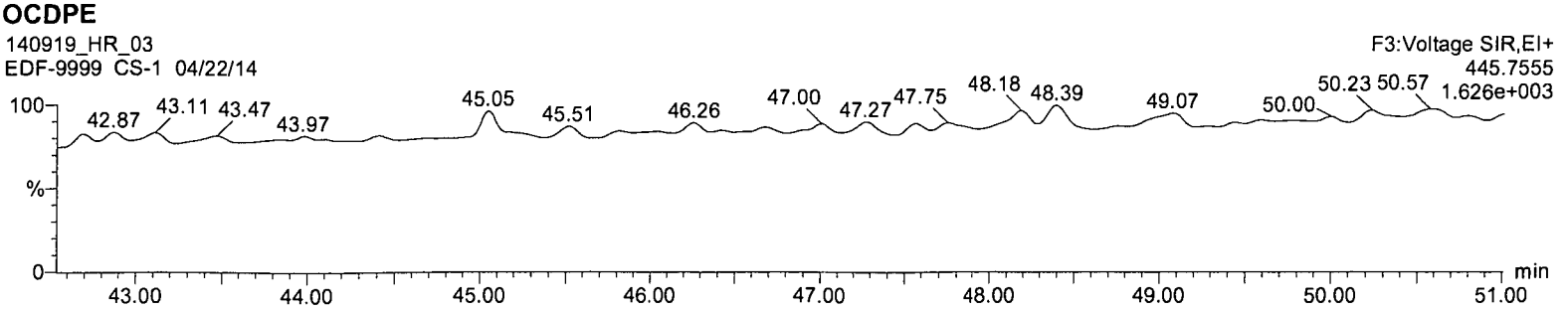
13C-1,2,3,4,7,8-HxCDF



13C-1,2,3,4,7,8-HxCDF

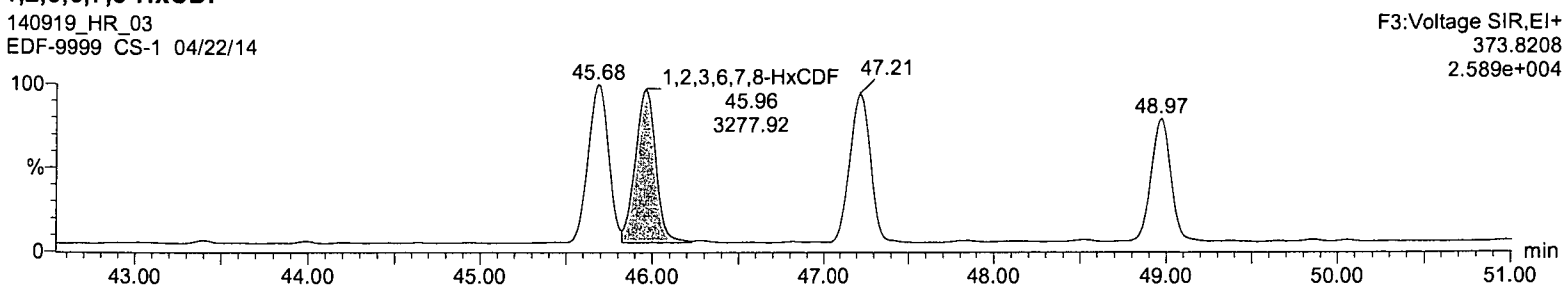


OCDPE

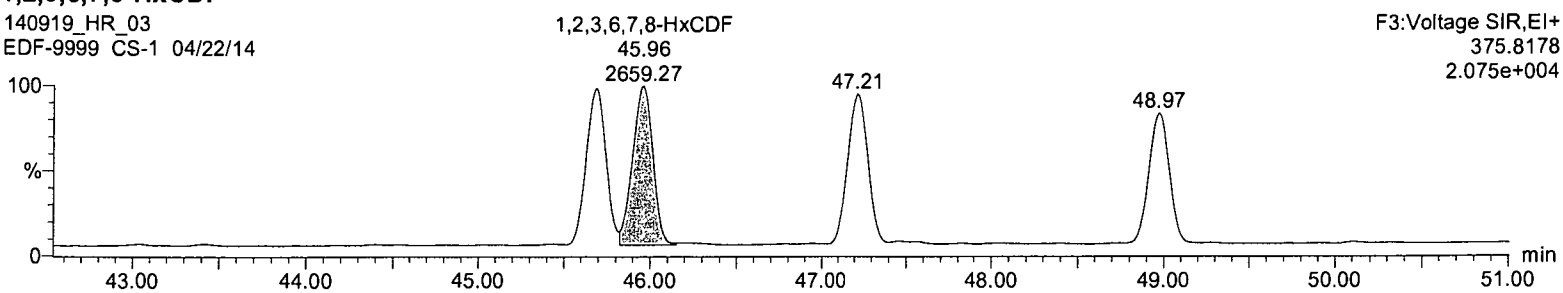


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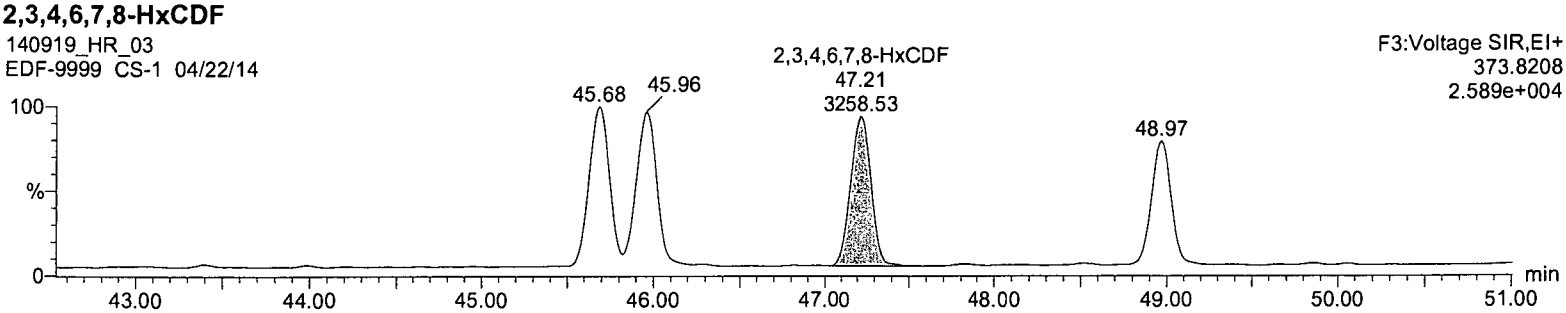
1,2,3,6,7,8-HxCDF



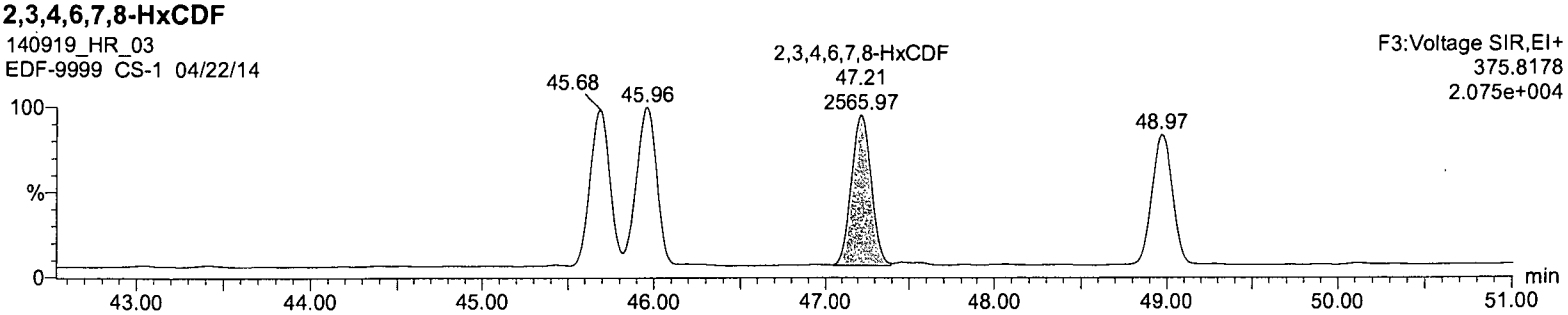
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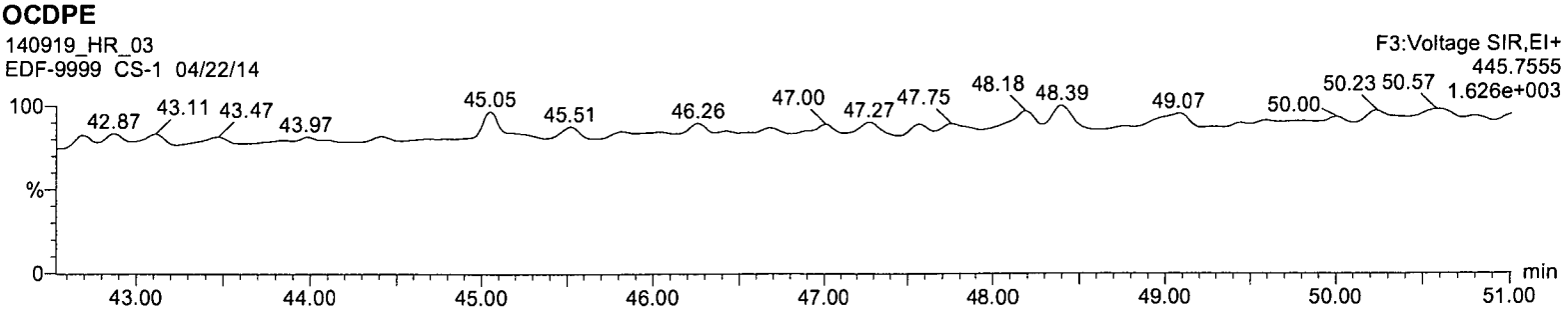
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2,3,4,6,7,8-HxCDF

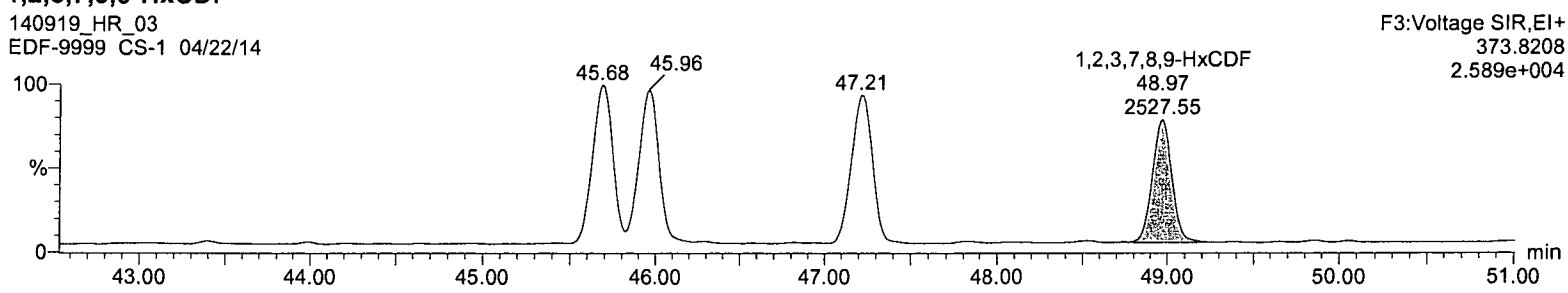


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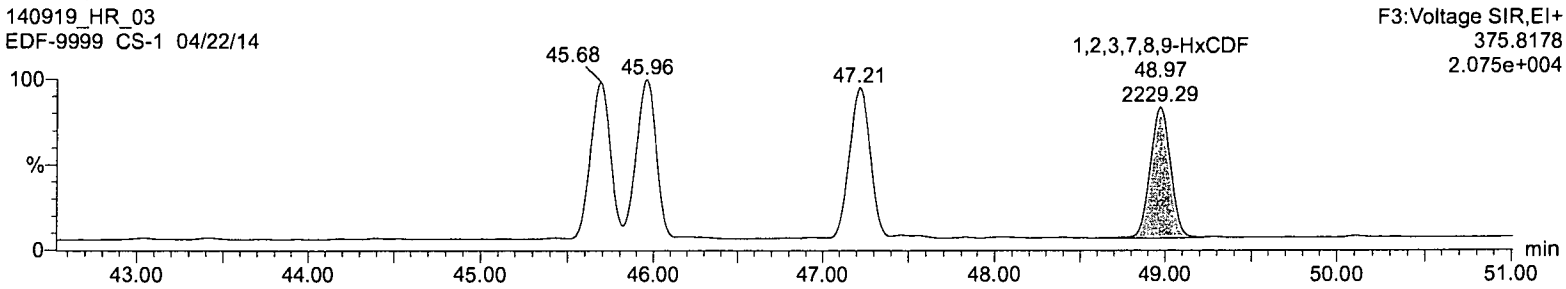


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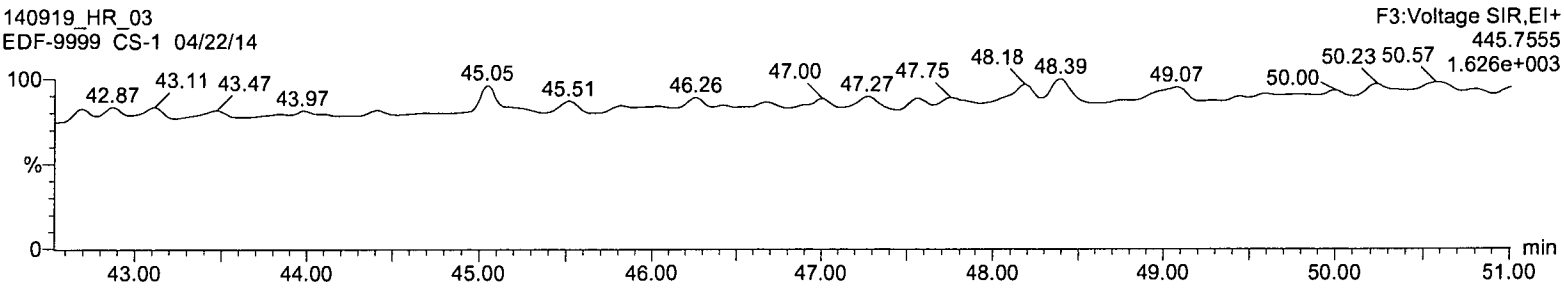
1,2,3,7,8,9-HxCDF



1,2,3,7,8,9-HxCDF

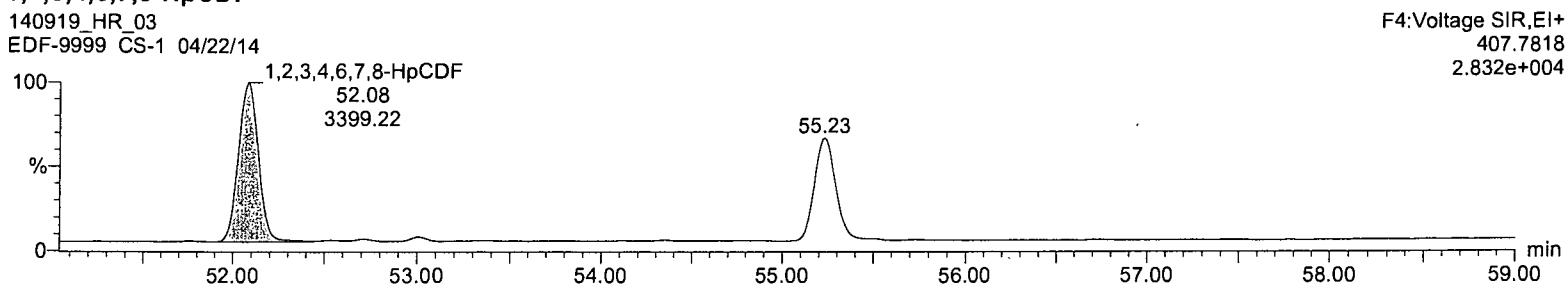


OCDPE

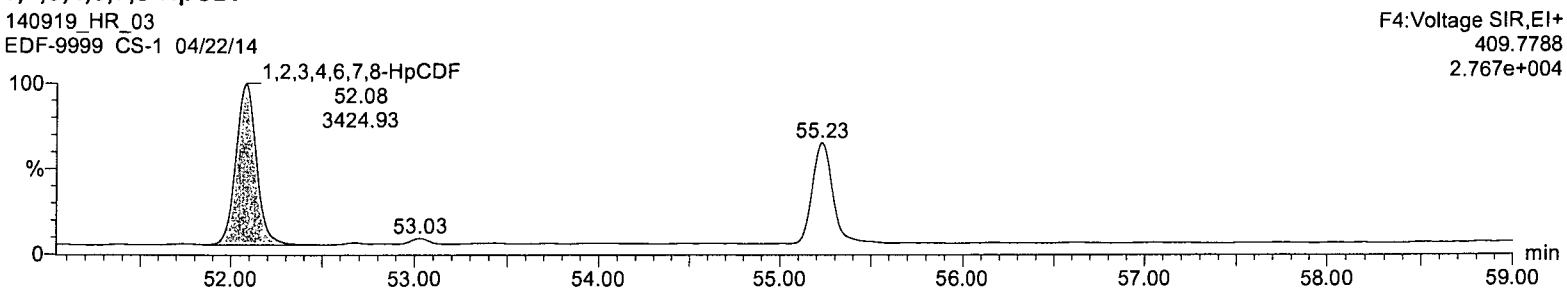


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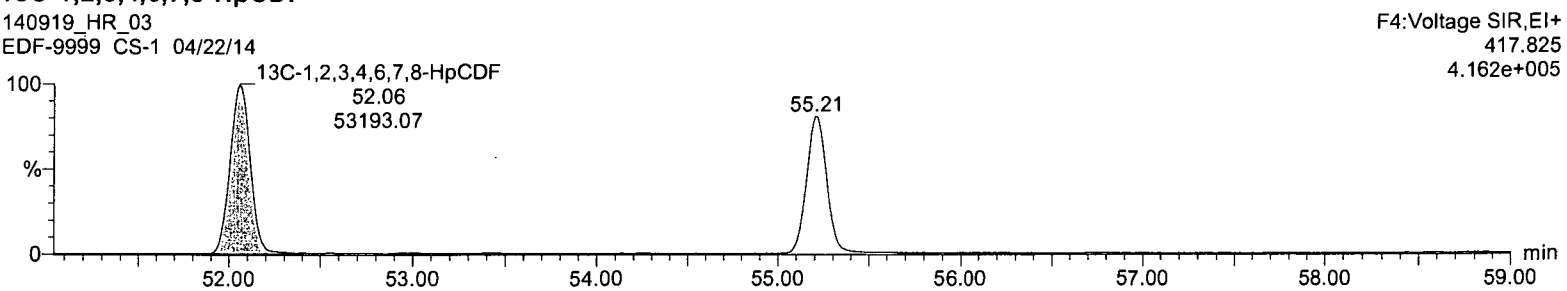
1,2,3,4,6,7,8-HpCDF



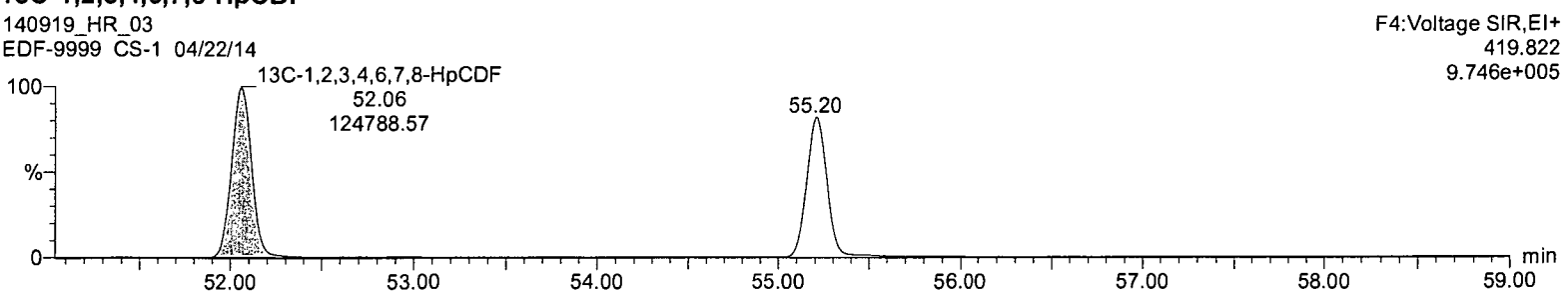
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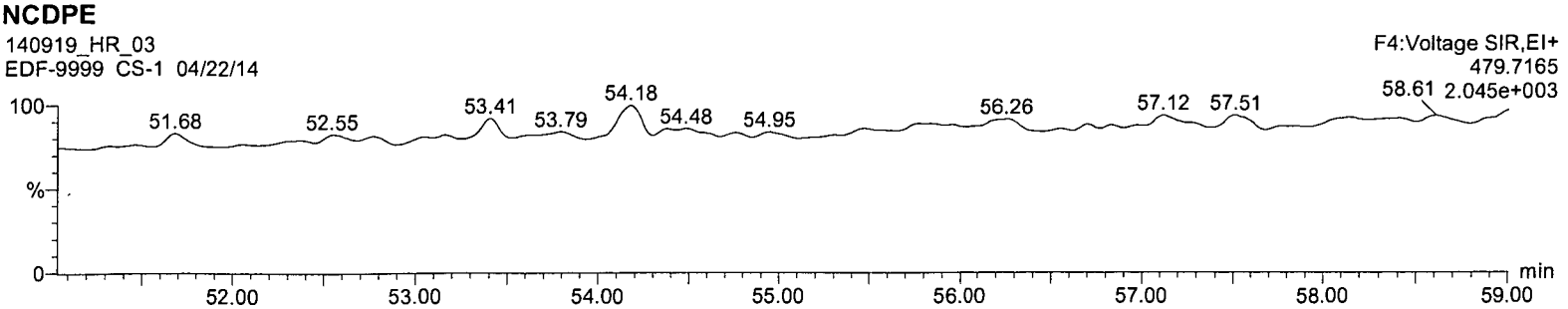
13C-1,2,3,4,6,7,8-HpCDF



13C-1,2,3,4,6,7,8-HpCDF

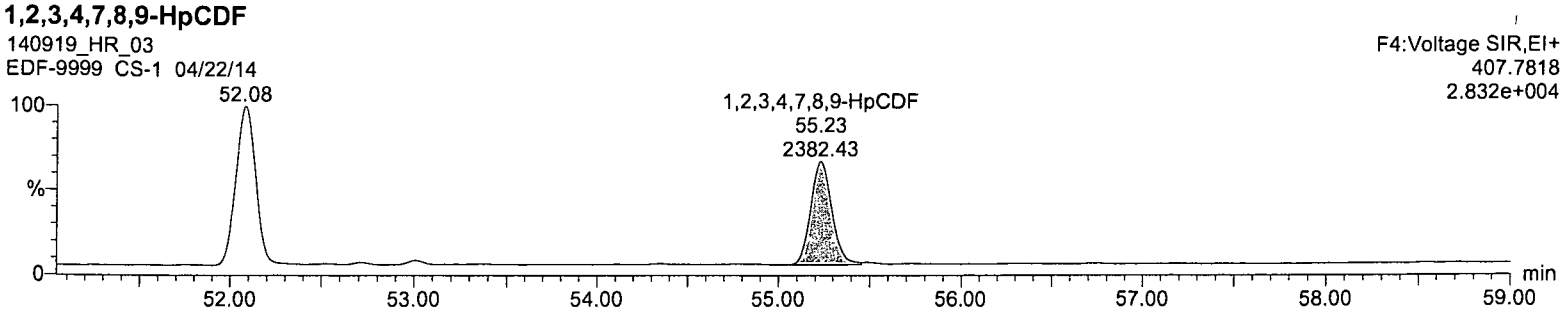


NCDPE

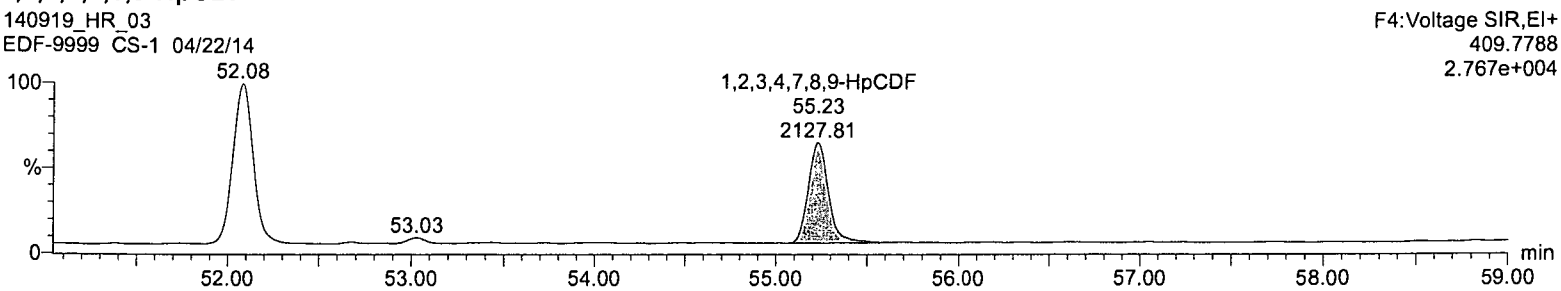


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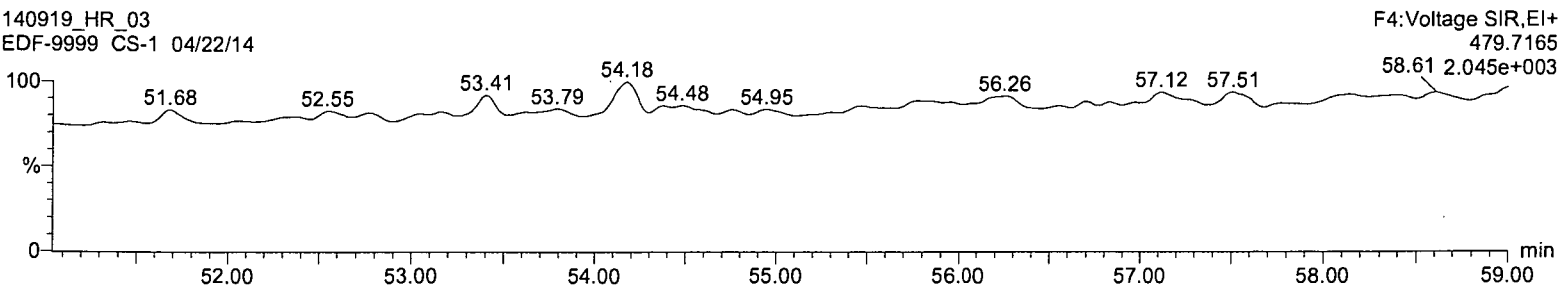
1,2,3,4,7,8,9-HpCDF



1,2,3,4,7,8,9-HpCDF

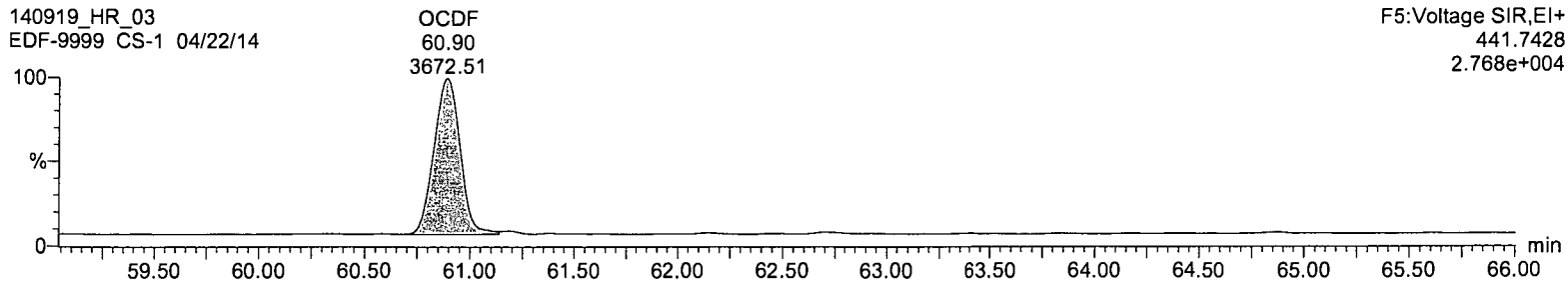


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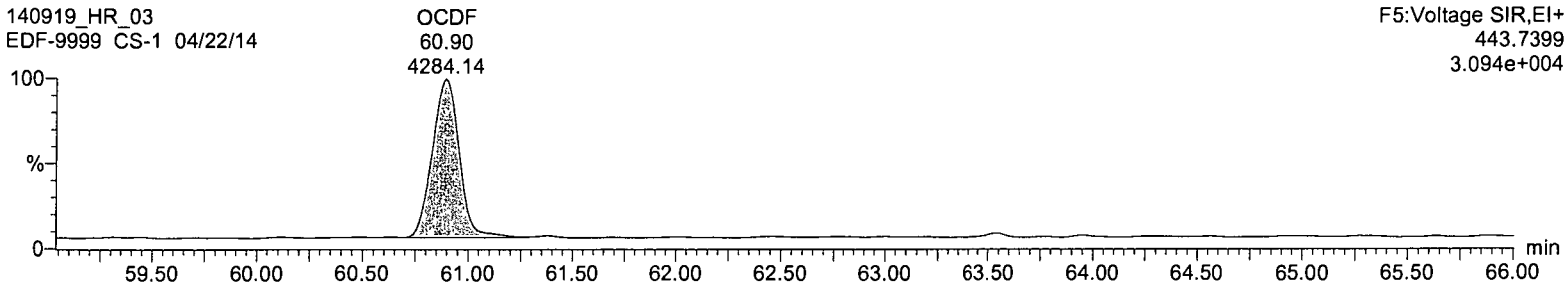


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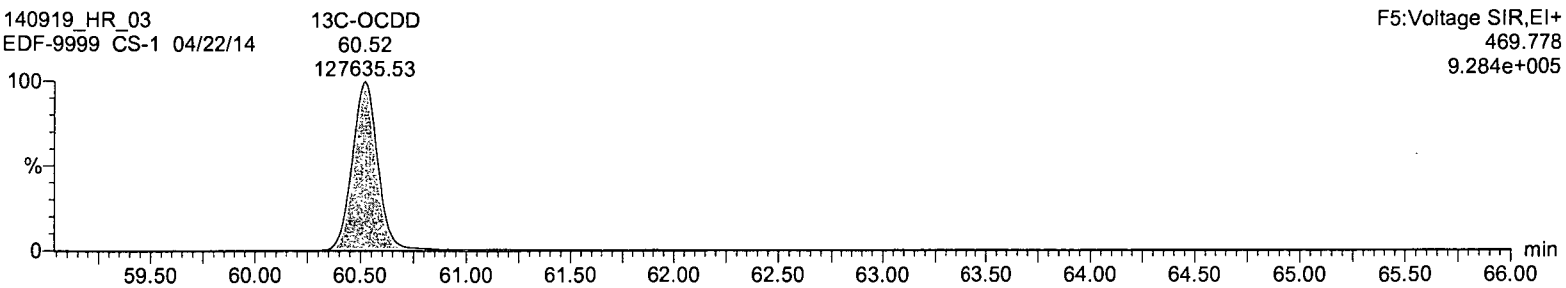
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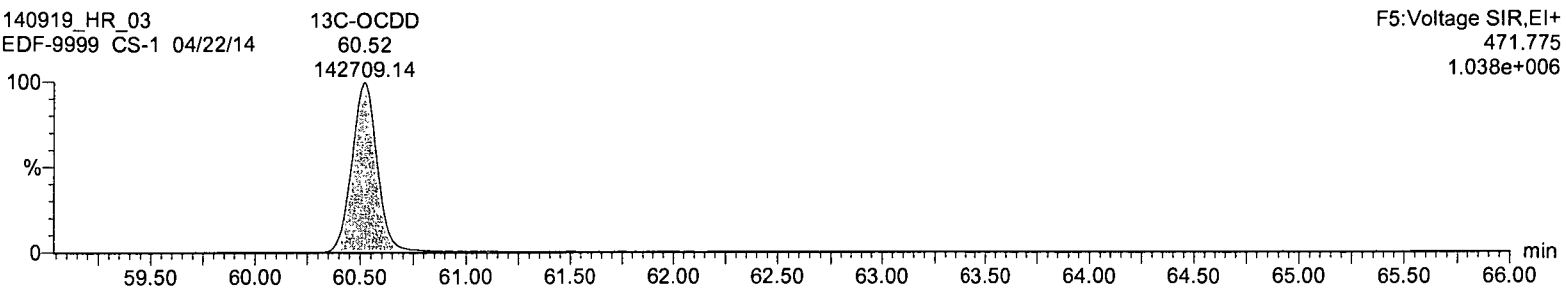
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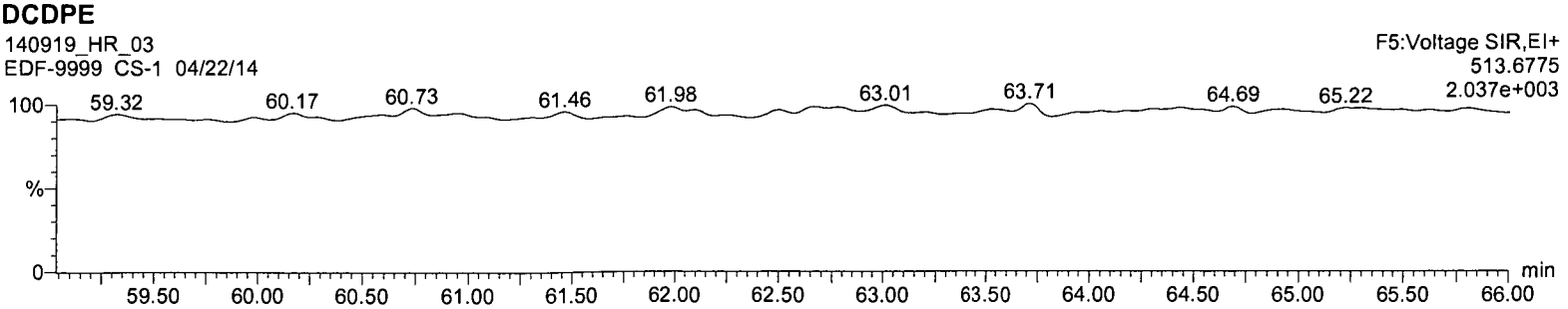
13C-OCDD



13C-OCDD

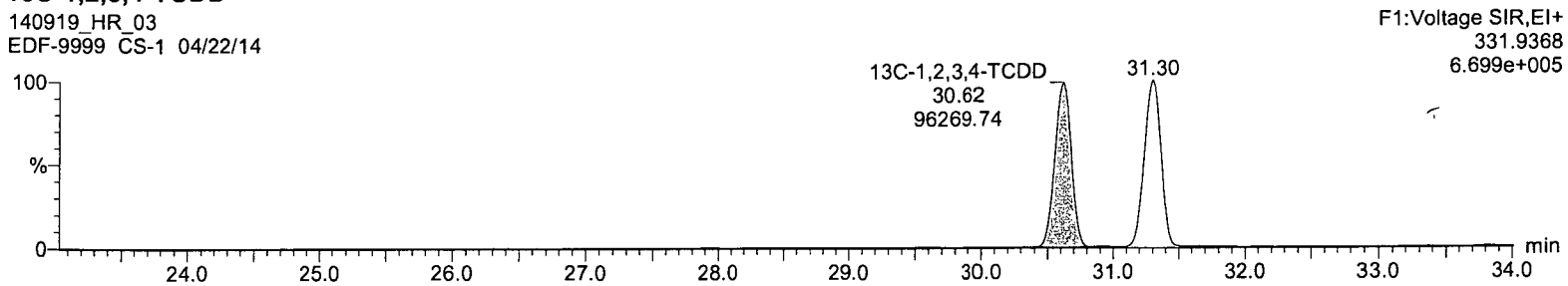


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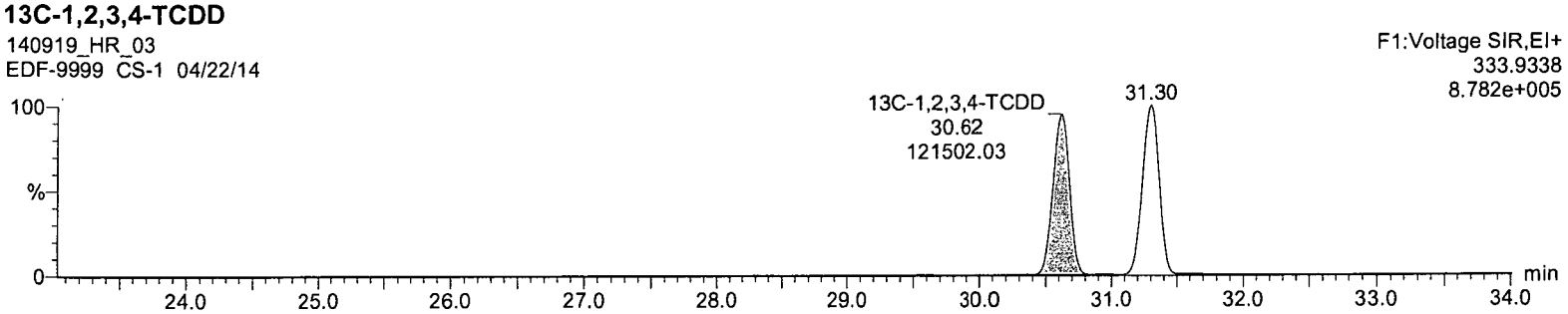


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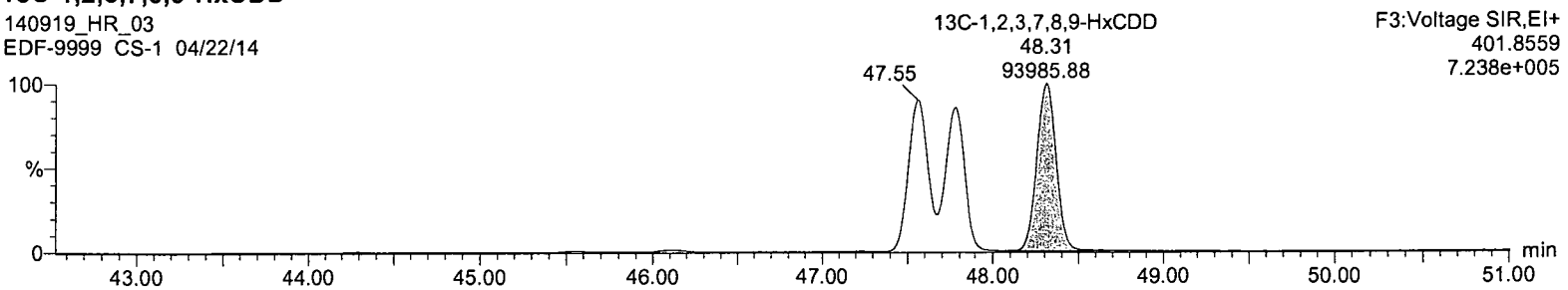
13C-1,2,3,4-TCDD



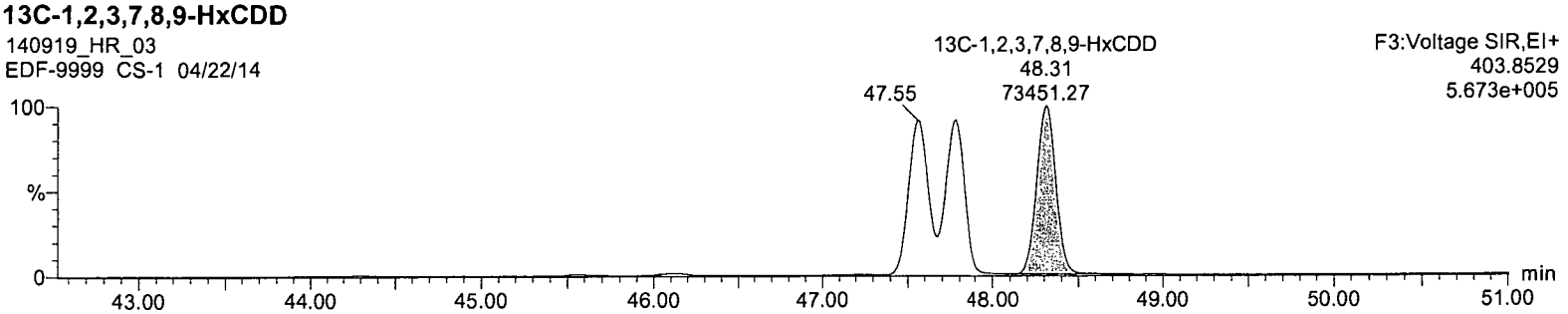
13C-1,2,3,4-TCDD



13C-1,2,3,7,8,9-HxCDD



13C-1,2,3,7,8,9-HxCDD



Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: 22 Sep 2014 12:13:12

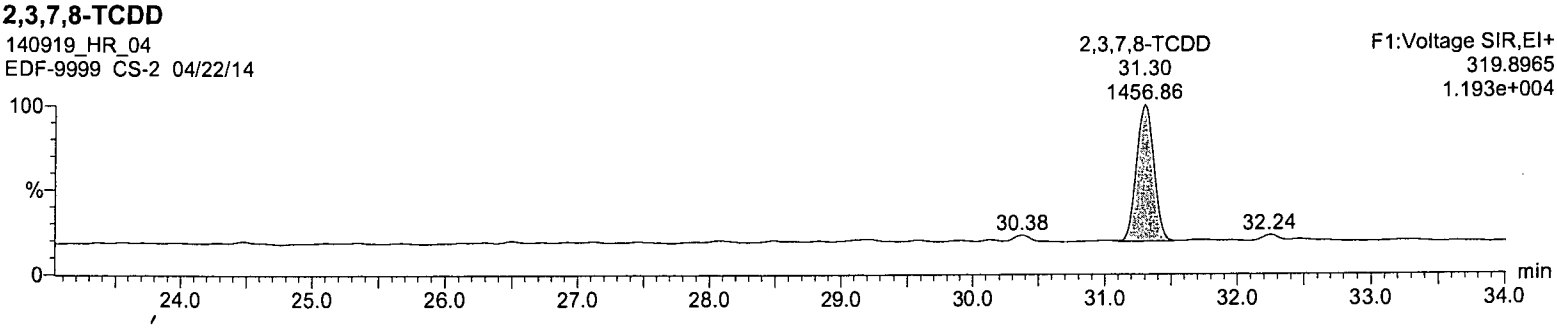
Name: 140919_HR_04, Date: 19-Sep-2014, Time: 20:09:27, ID: , Description: EDF-9999 CS-2 04/22/14, User:

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1	2,3,7,8-TCDD	9.6710000e3	4.4004784e1	219.57	NO	1.2084000e4	3.2521740e1	371.57	NO
2	1,2,3,7,8-PeCDD	5.4101000e4	1.0155777e2	532.51	NO	3.6470000e4	2.5074194e2	145.45	NO
3	1,2,3,4,7,8-HxCDD	4.9887000e4	7.4915977e1	663.71	NO	4.1327000e4	1.9465259e2	212.31	NO
4	1,2,3,6,7,8-HxCDD	5.6262000e4	7.4915977e1	748.88	NO	4.2600000e4	1.9465259e2	218.85	NO
5	1,2,3,7,8,9-HxCDD	5.0997000e4	7.4915977e1	678.81	NO	4.2383000e4	1.9465259e2	217.74	NO
6	1,2,3,4,6,7,8-HpCDD	4.9558000e4	6.7932251e1	728.65	NO	4.5078000e4	7.0545387e1	638.99	NO
7	OCDD	7.6369000e4	1.4236587e3	52.62	NO	8.2456000e4	9.2924347e1	887.35	NO
8	2,3,7,8-TCDF	1.3053000e4	2.5499039e1	515.97	NO	1.5511000e4	5.0735367e1	305.72	NO
9	1,2,3,7,8-PeCDF	8.5904000e4	1.3526001e2	633.69	NO	5.3984000e4	7.1127487e1	758.98	NO
10	2,3,4,7,8-PeCDF	8.2424000e4	1.3526001e2	608.36	NO	5.5702000e4	7.1127487e1	783.13	NO
11	1,2,3,4,7,8-HxCDF	7.0888000e4	9.3085617e1	759.73	NO	5.4542000e4	7.5251472e1	724.80	NO
12	1,2,3,6,7,8-HxCDF	7.3020000e4	9.3085617e1	782.75	NO	6.2634000e4	7.5251472e1	832.33	NO
13	2,3,4,6,7,8-HxCDF	6.8943000e4	9.3085617e1	738.74	NO	5.9362000e4	7.5251472e1	788.85	NO
14	1,2,3,7,8,9-HxCDF	6.3516000e4	9.3085617e1	680.17	NO	4.9229000e4	7.5251472e1	654.19	NO
15	1,2,3,4,6,7,8-HpCDF	7.3361000e4	2.0818805e2	351.45	NO	6.7554000e4	9.6137810e1	702.68	NO
16	1,2,3,4,7,8,9-HpCDF	5.5971000e4	2.0818805e2	267.84	NO	5.5235000e4	9.6137810e1	574.54	NO
17	OCDF	7.2100000e4	5.6280194e2	125.94	NO	8.3676000e4	6.9742447e1	1199.79	NO
18	13C-2,3,7,8-TCDD	5.0826000e5	1.5256699e2	3334.49	NO	6.4554100e5	6.9291748e1	9316.28	NO
19	13C-1,2,3,7,8-PeCDD	6.7112900e5	1.5840770e2	4235.39	NO	4.1591000e5	5.5609502e3	74.79	NO
20	13C-1,2,3,6,7,8-HxCDD	5.1361700e5	2.4896082e2	2062.34	NO	4.2128900e5	1.8091180e2	2328.70	NO
21	13C-1,2,3,4,6,7,8-HpCDD	5.0147700e5	2.0913885e2	2396.98	NO	4.6796500e5	5.5587547e1	8418.52	NO
22	13C-OCDD	6.7666600e5	1.3050221e2	5182.37	NO	7.6045800e5	1.0979813e2	6925.97	NO
23	13C-2,3,7,8-TCDF	7.3134200e5	7.5696884e1	9664.27	NO	9.3964700e5	7.5432281e1	12456.83	NO
24	13C-1,2,3,7,8-PeCDF	8.8202300e5	3.1828442e2	2767.92	NO	5.4765400e5	3.2459631e2	1687.18	NO
25	13C-1,2,3,4,7,8-HxCDF	3.6643300e5	1.5055396e2	2431.71	NO	7.0086900e5	5.8147449e2	1205.33	NO
26	13C-1,2,3,4,6,7,8-HpCDF	3.1042300e5	1.0186250e2	3046.40	NO	7.2369000e5	2.4648207e2	2936.08	NO
27	13C-1,2,3,4-TCDD	5.1798400e5	1.5256699e2	3396.71	NO	6.8702600e5	6.9291748e1	9914.98	NO
28	13C-1,2,3,7,8,9-HxCDD	5.1650500e5	2.4896082e2	2080.55	NO	4.0078400e5	1.8091180e2	2215.36	NO

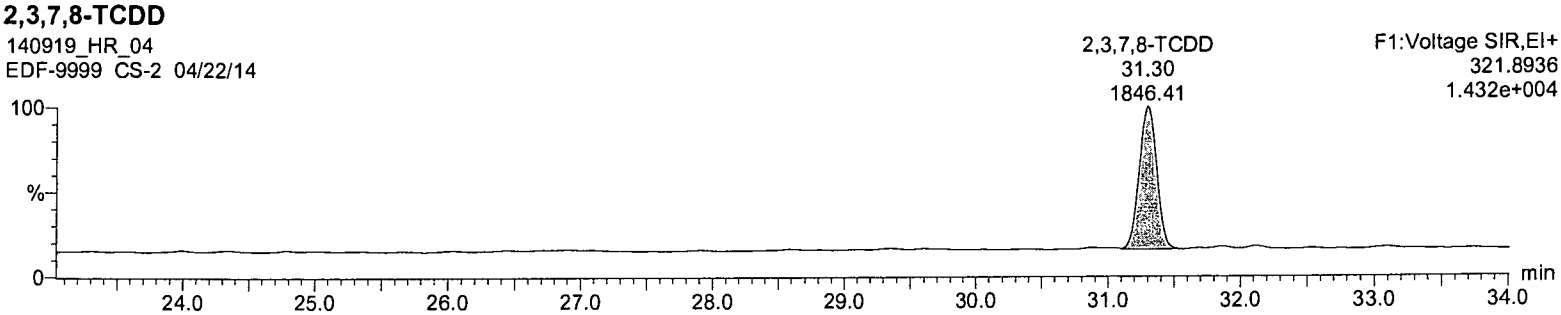
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Calibration: 22 Sep 2014 12:13:12

Name: 140919_HR_04, Date: 19-Sep-2014, Time: 20:09:27, Description: EDF-9999 CS-2 04/22/14, User:

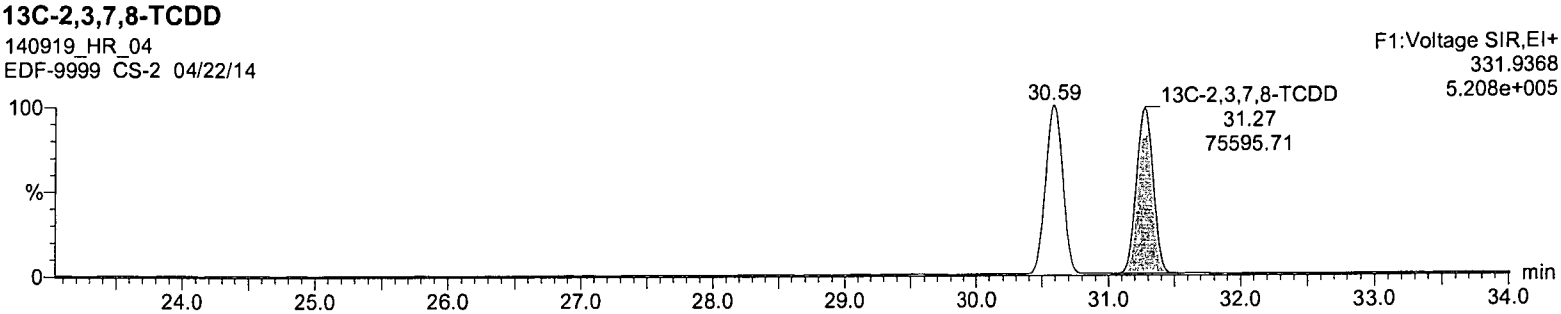
2,3,7,8-TCDD



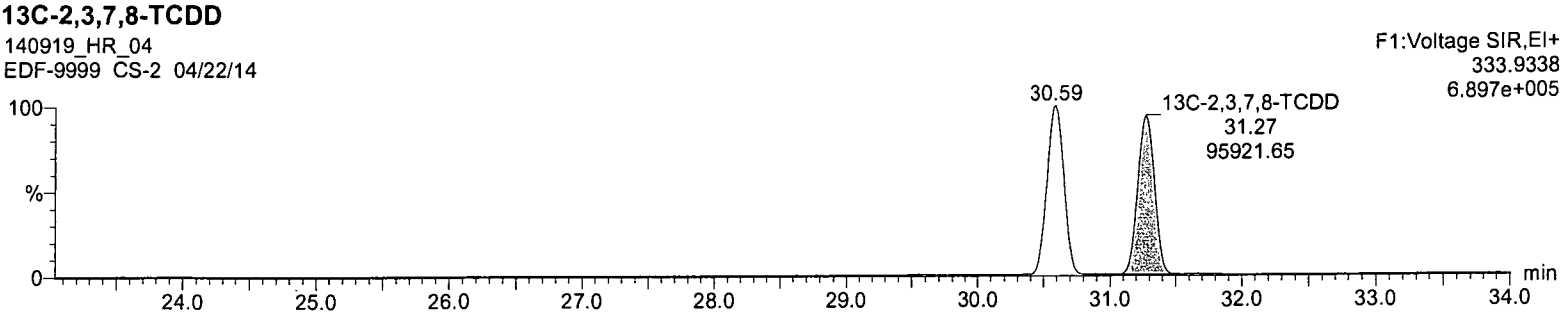
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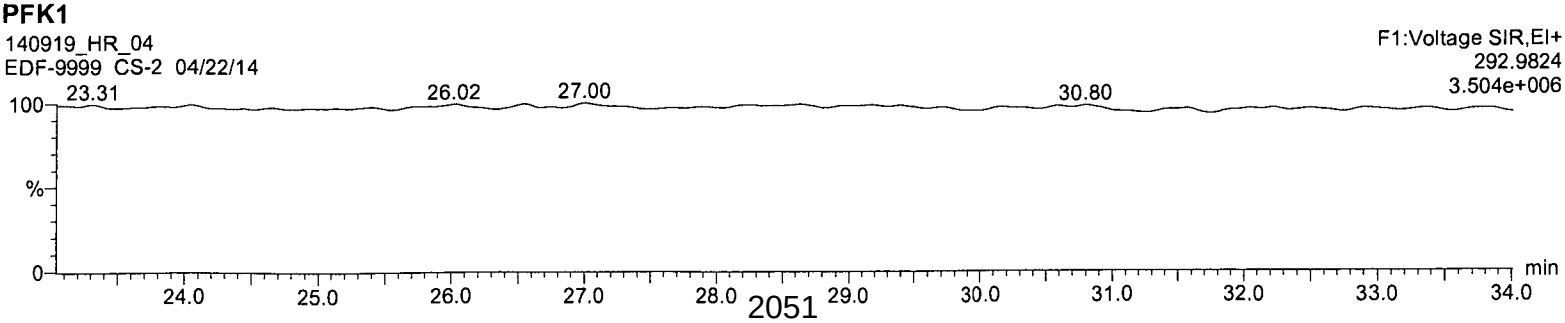
13C-2,3,7,8-TCDD



13C-2,3,7,8-TCDD

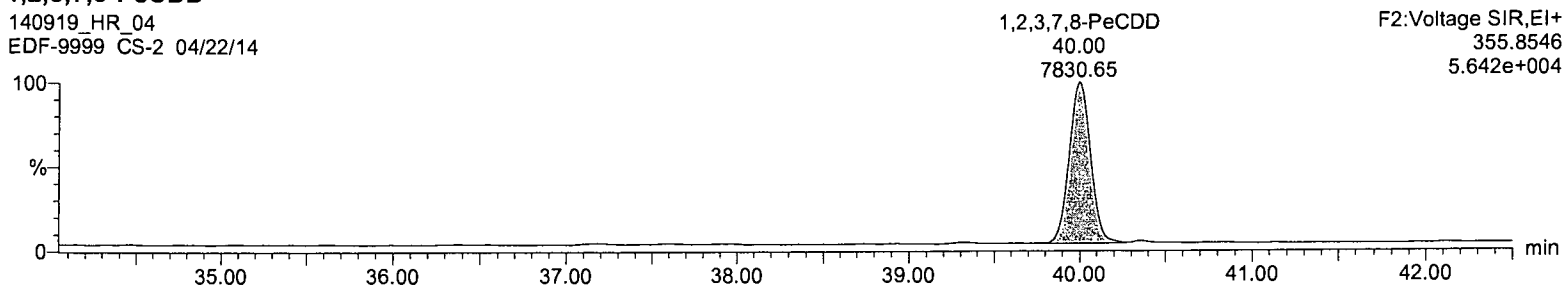


PFK1

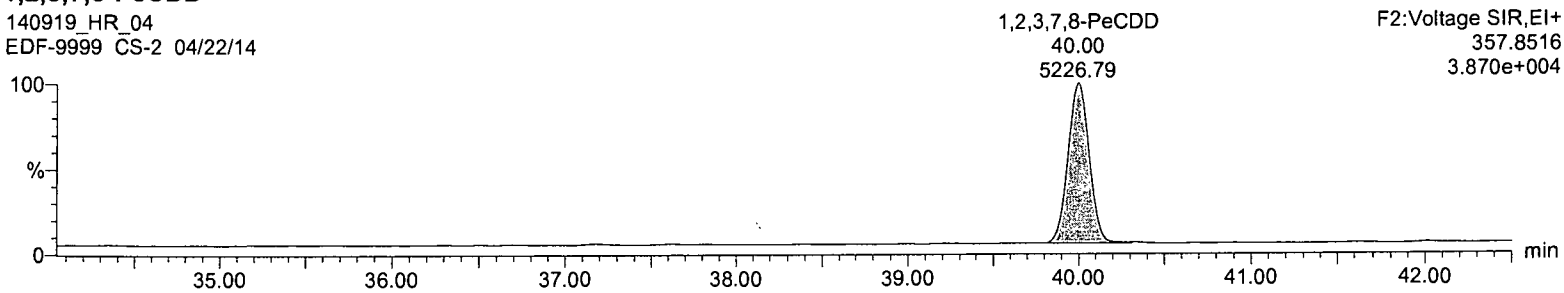


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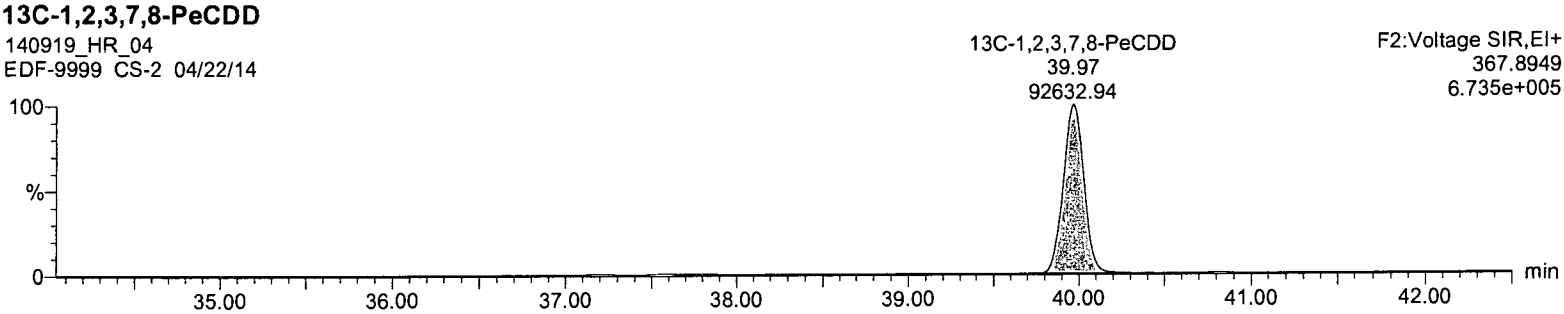
1,2,3,7,8-PeCDD



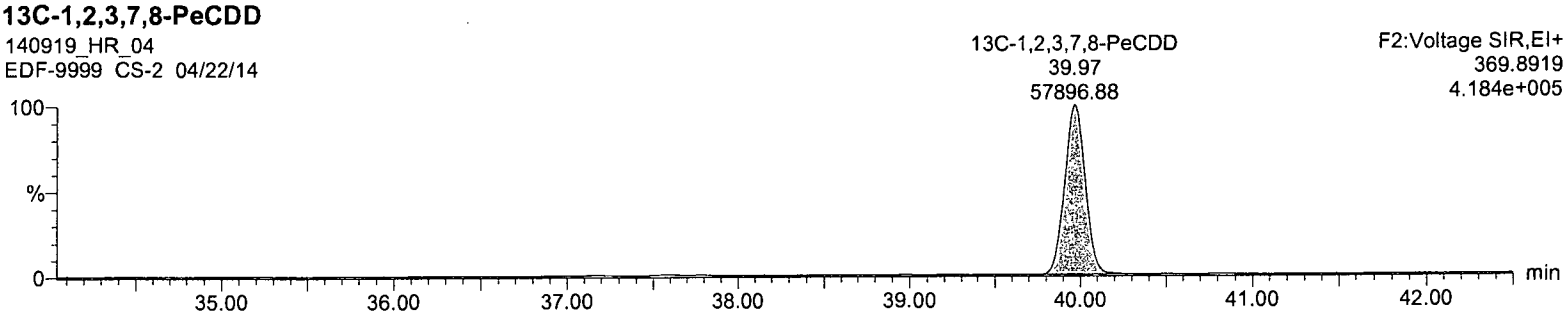
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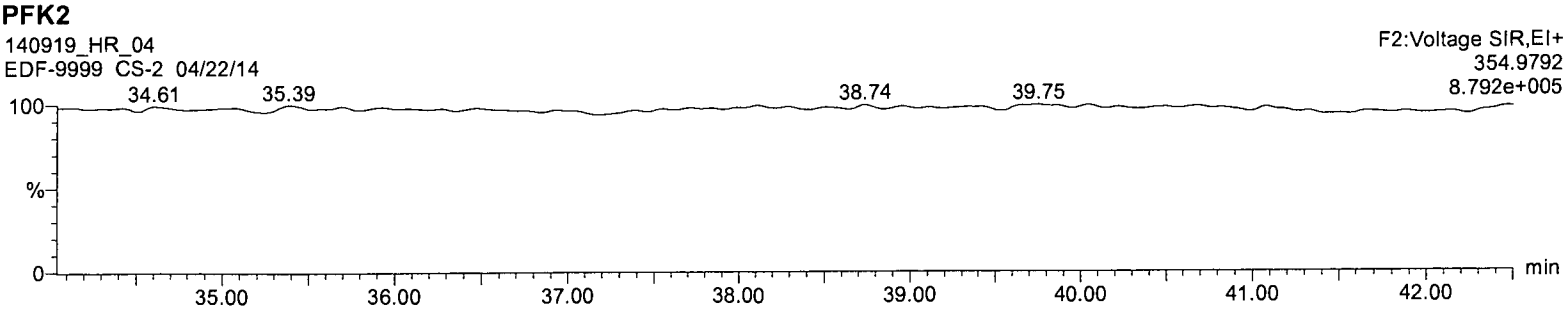
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13C-1,2,3,7,8-PeCDD

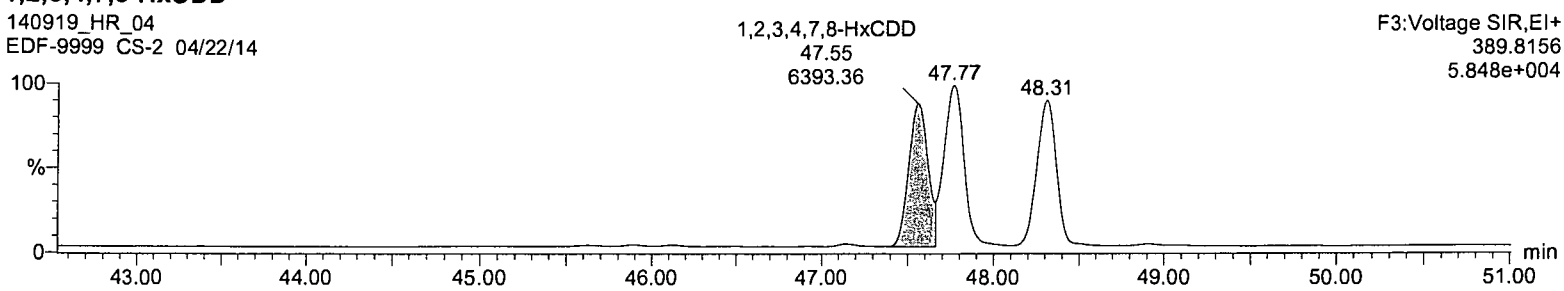


PFK2

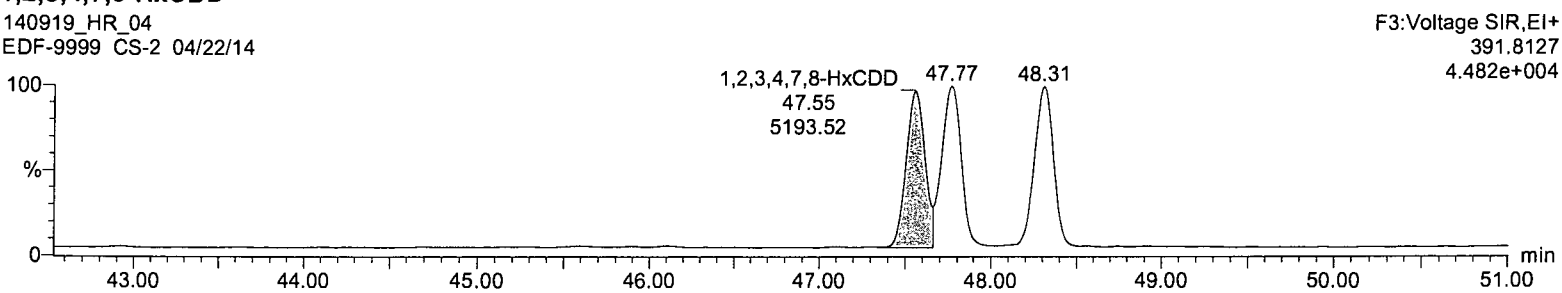


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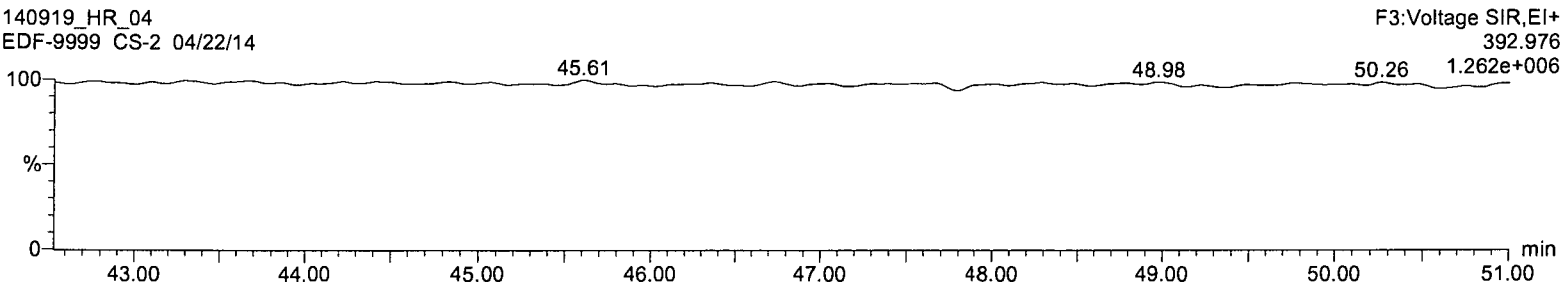
1,2,3,4,7,8-HxCDD



1,2,3,4,7,8-HxCDD

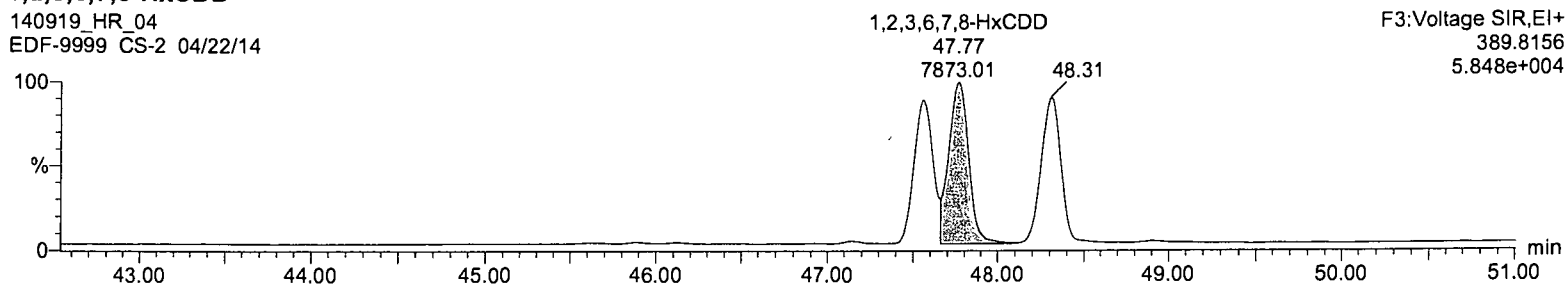


PFK3

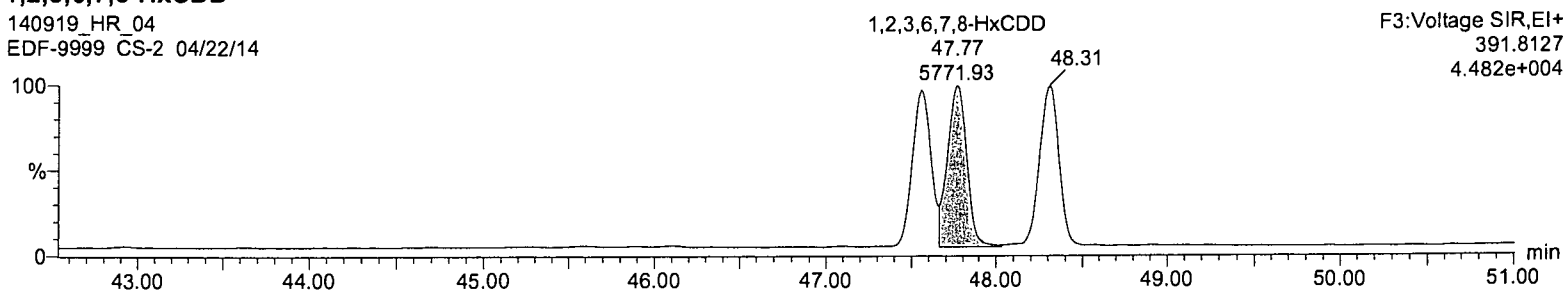


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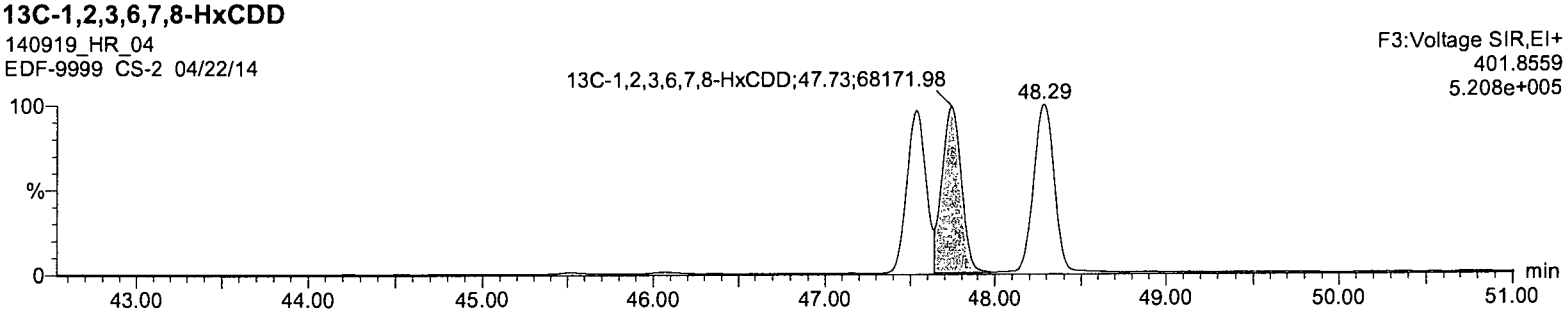
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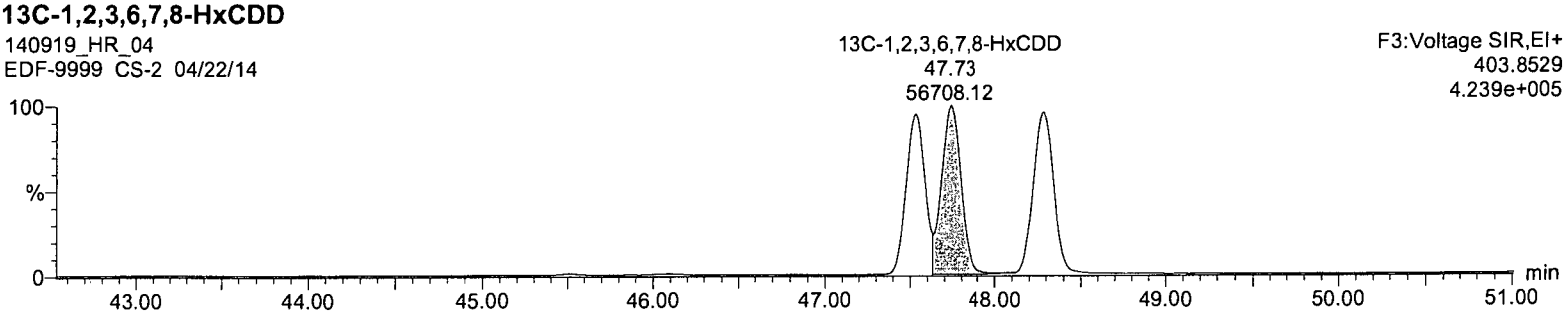
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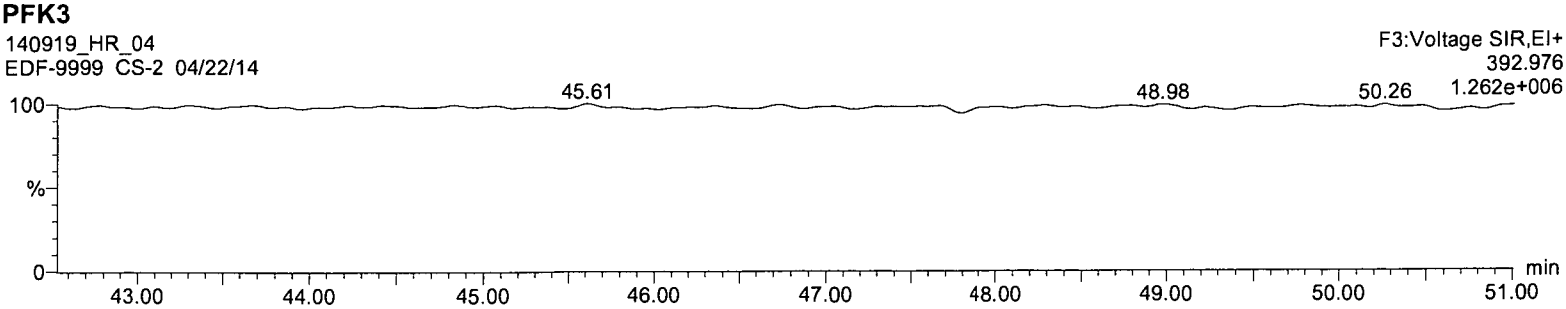
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13C-1,2,3,6,7,8-HxCDD

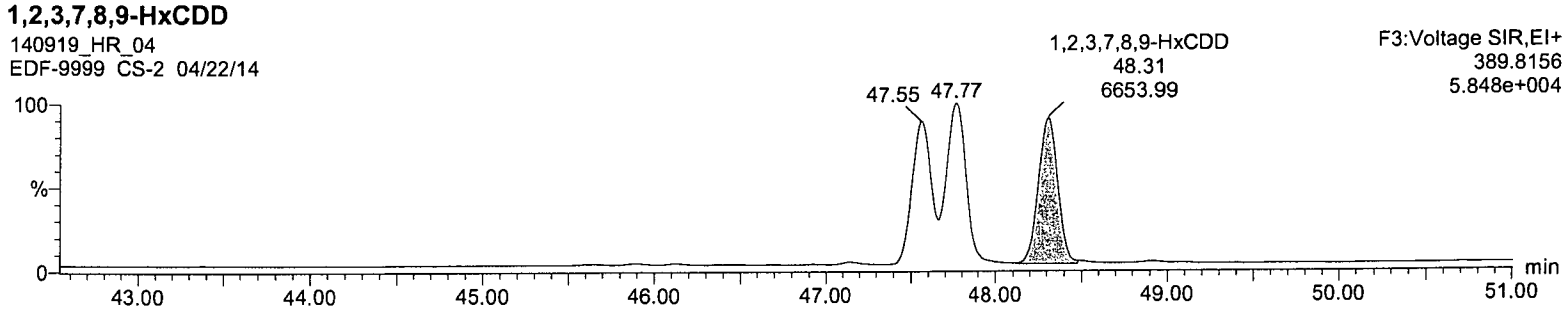


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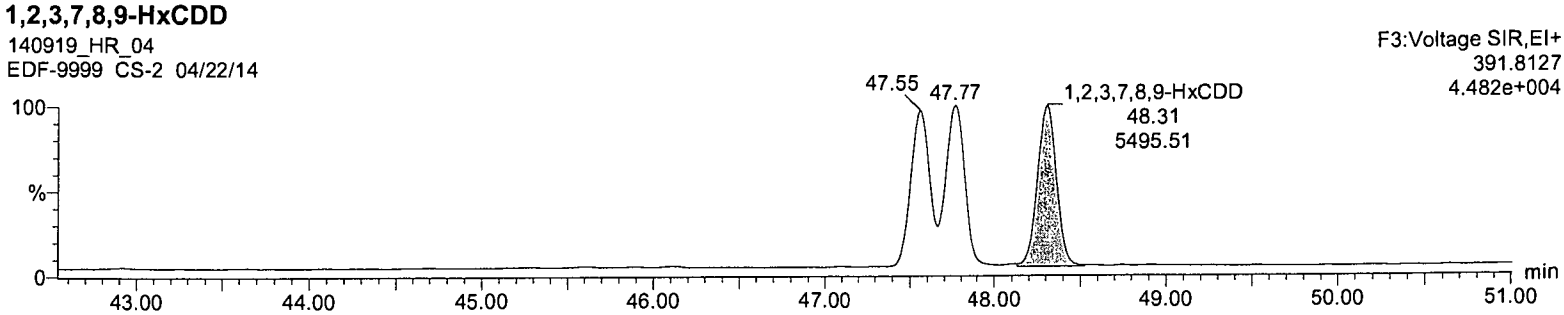


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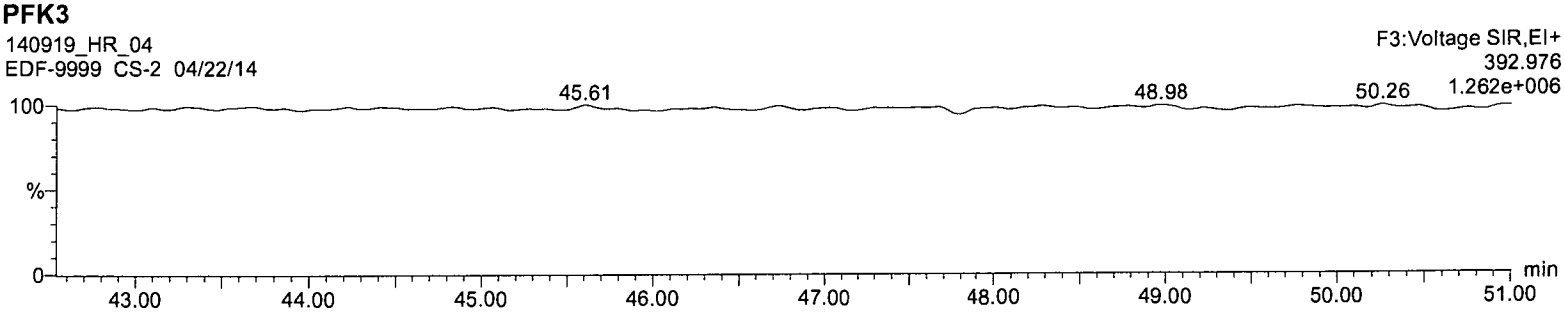
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1,2,3,7,8,9-HxCDD

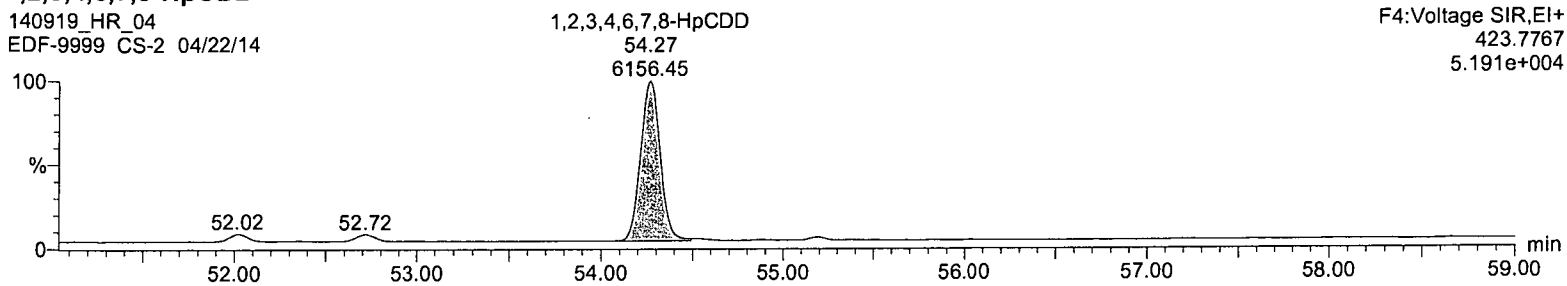


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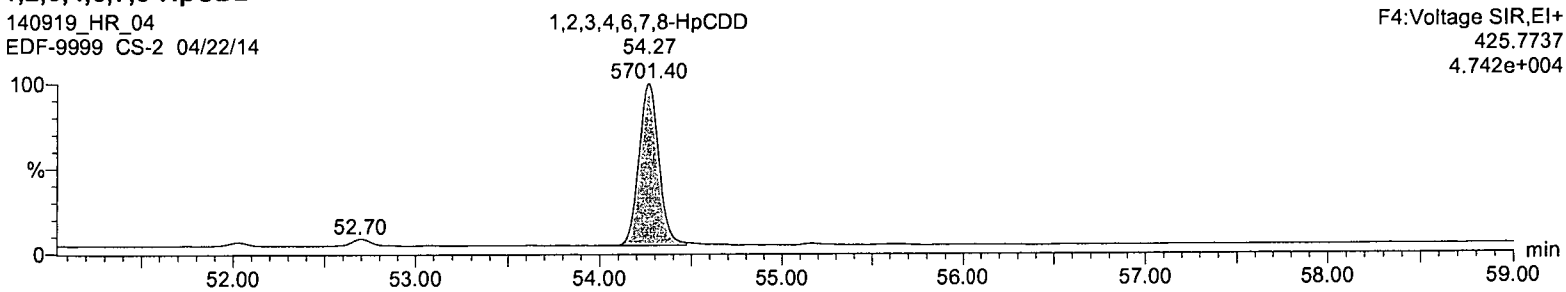


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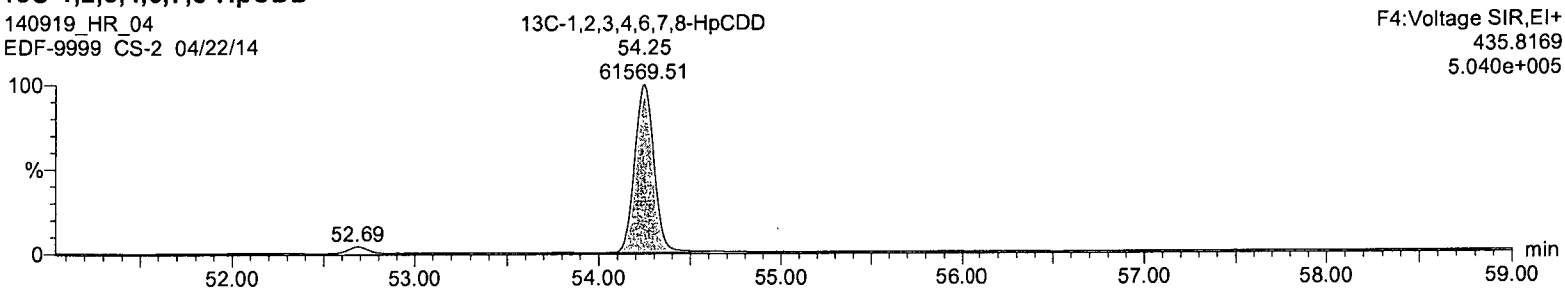
1,2,3,4,6,7,8-HpCDD



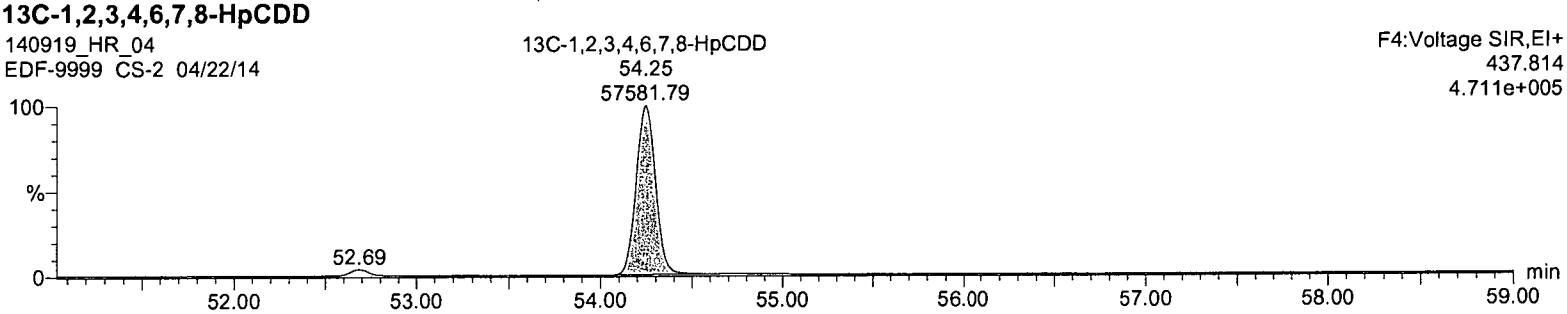
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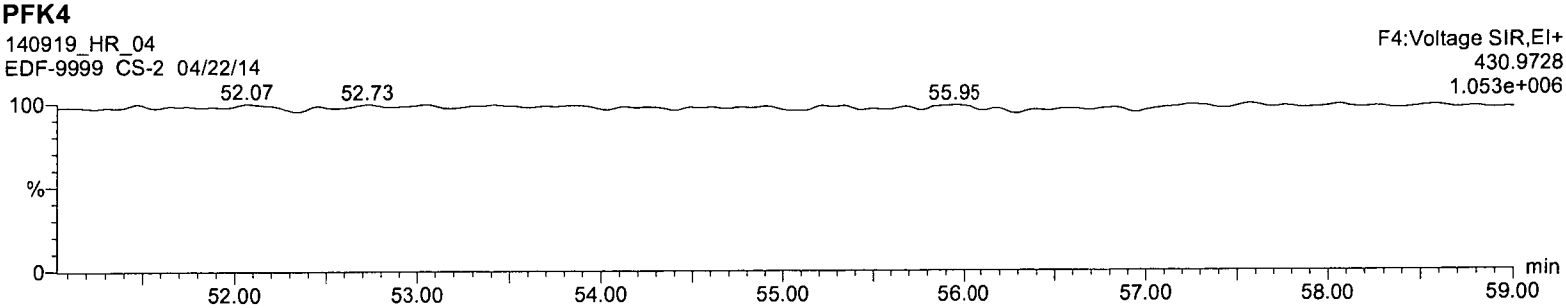
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13C-1,2,3,4,6,7,8-HpCDD

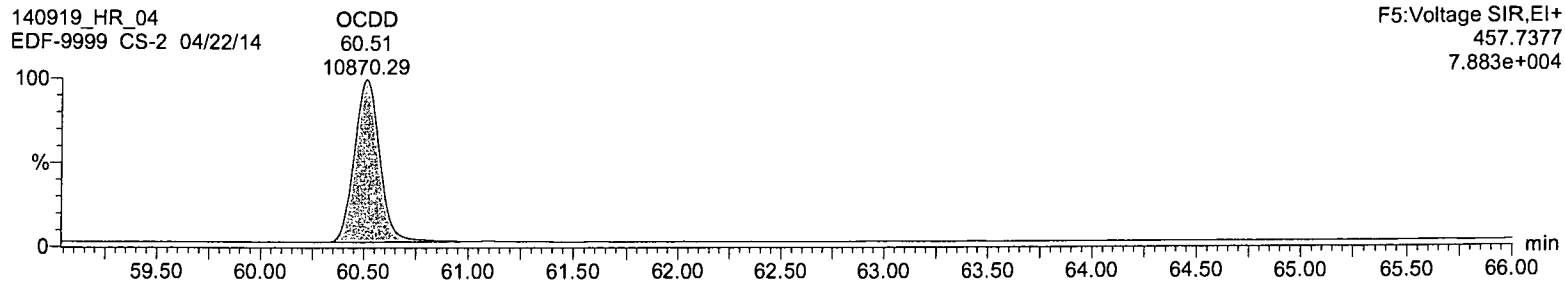


PFK4

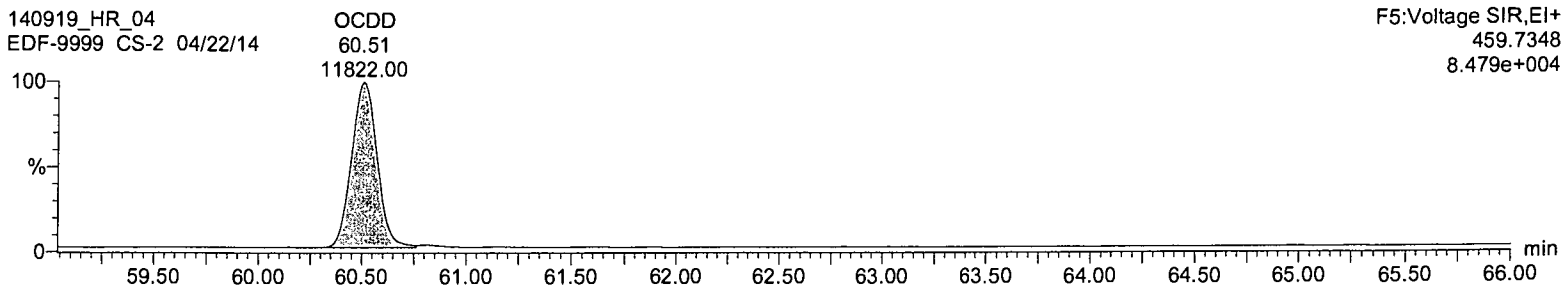


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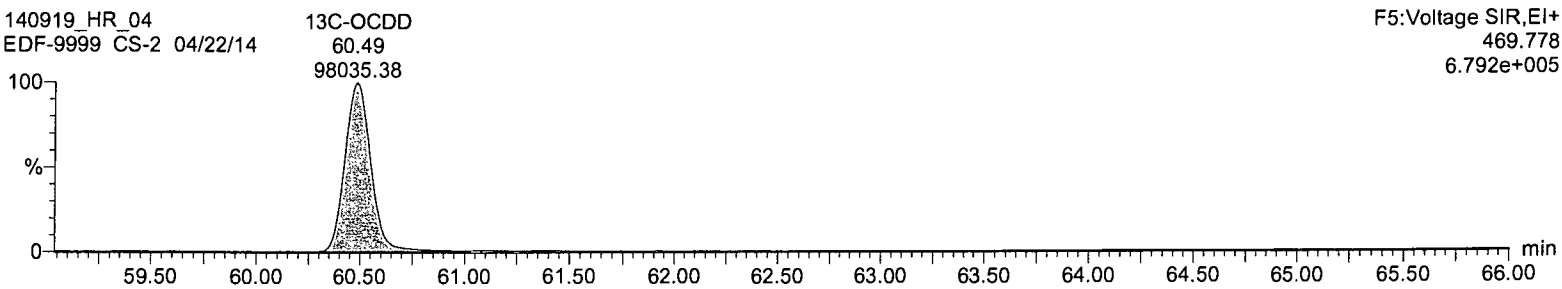
OCDD



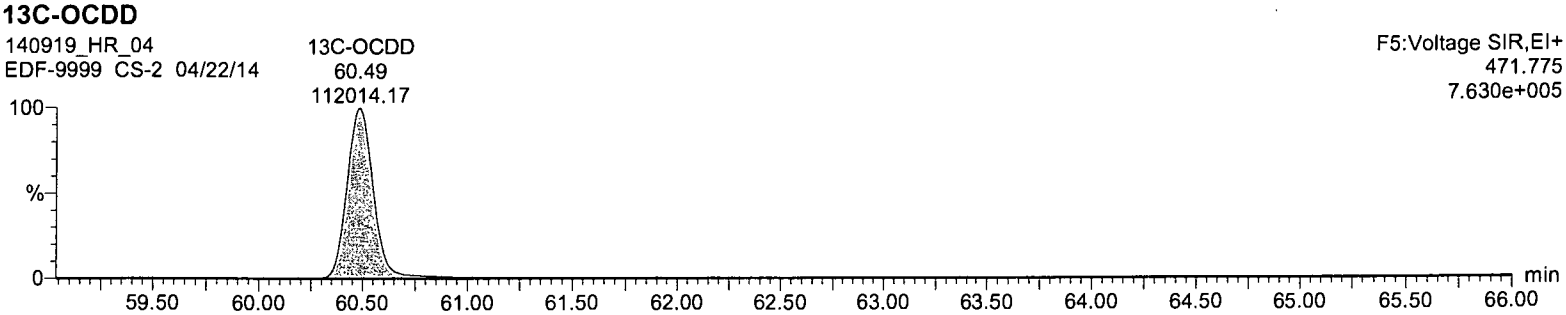
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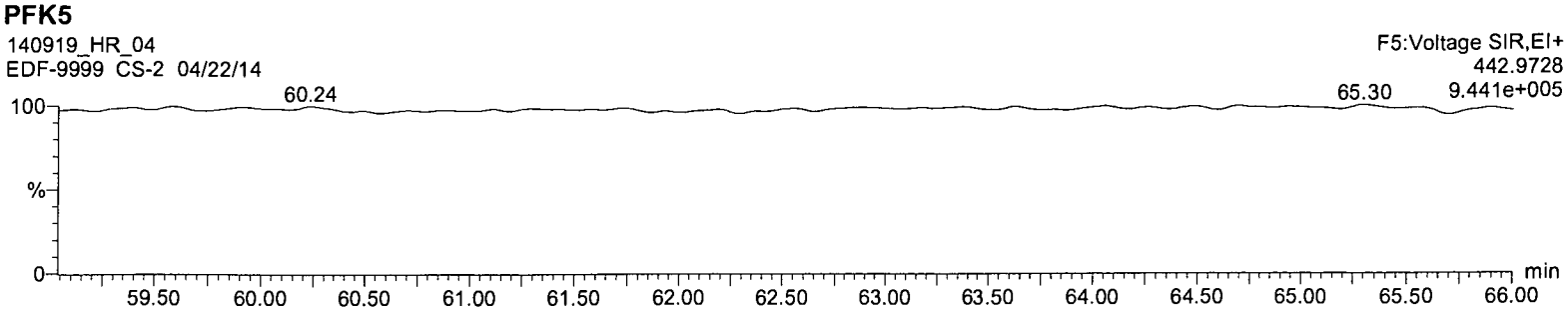
13C-OCDD



13C-OCDD

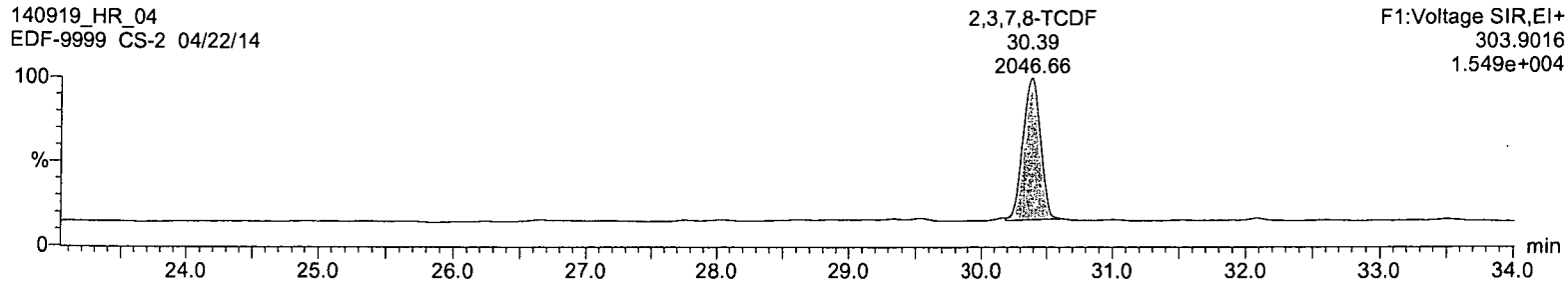


PFK5

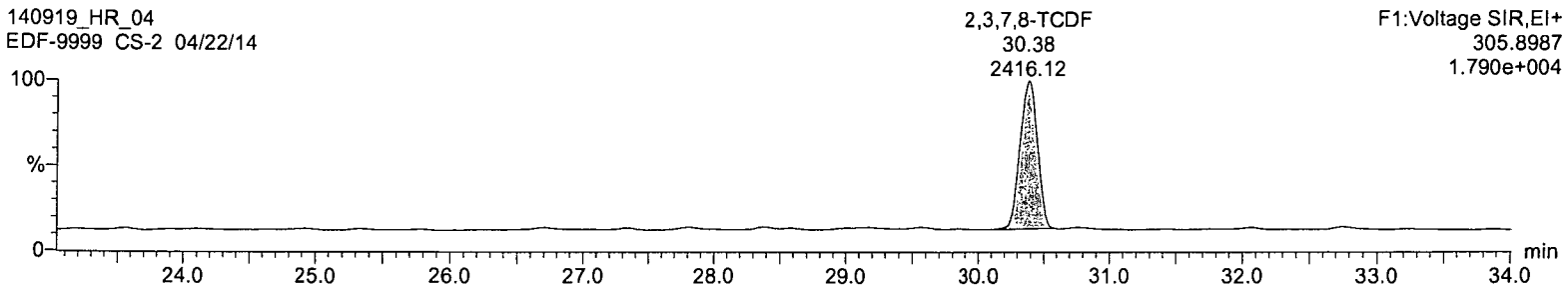


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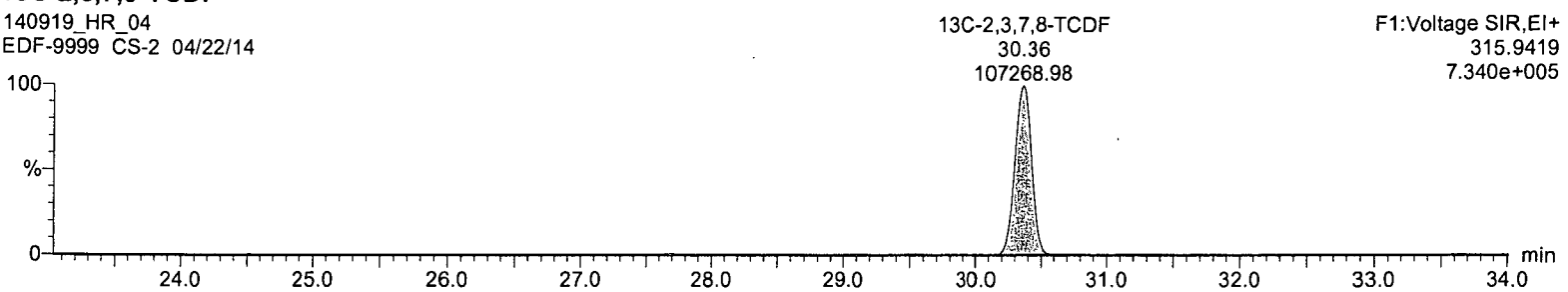
2,3,7,8-TCDF



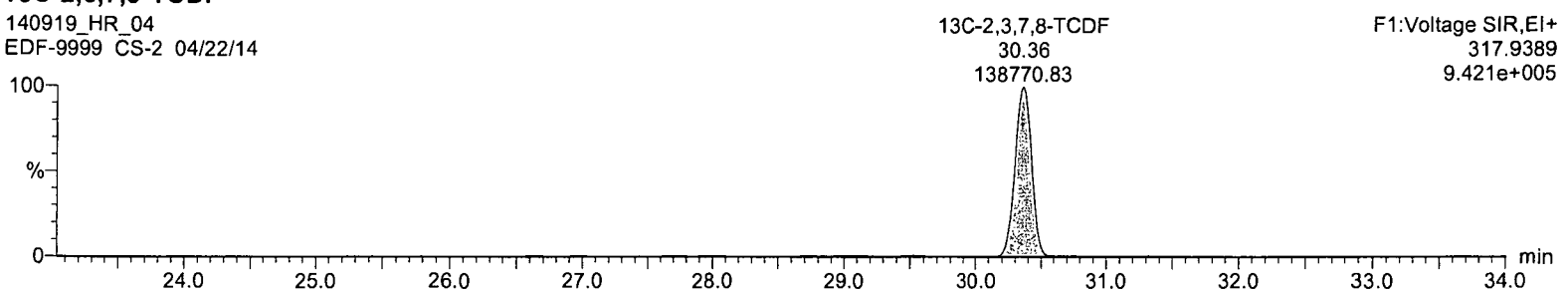
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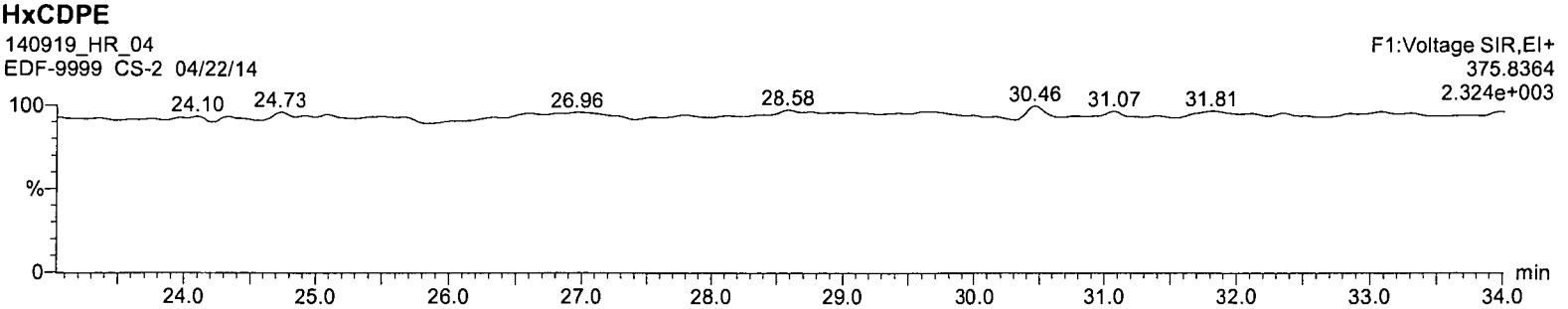
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13C-2,3,7,8-TCDF

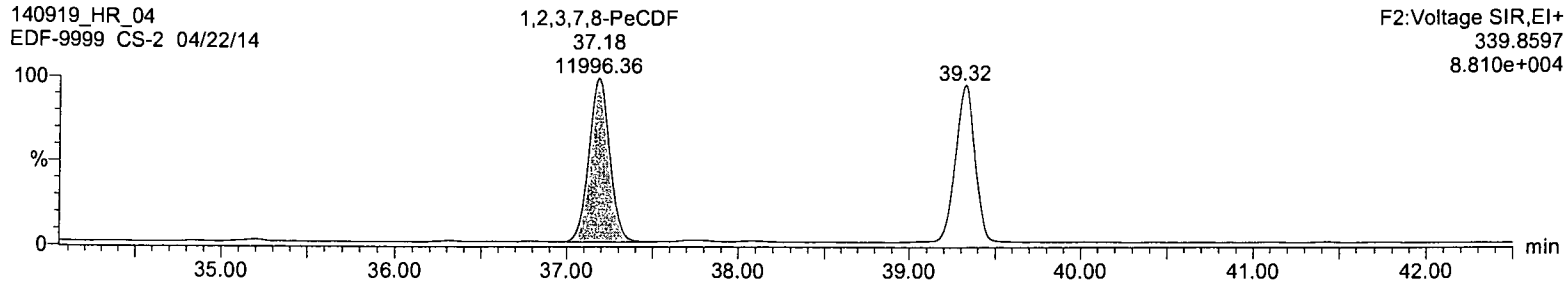


HxCDPE

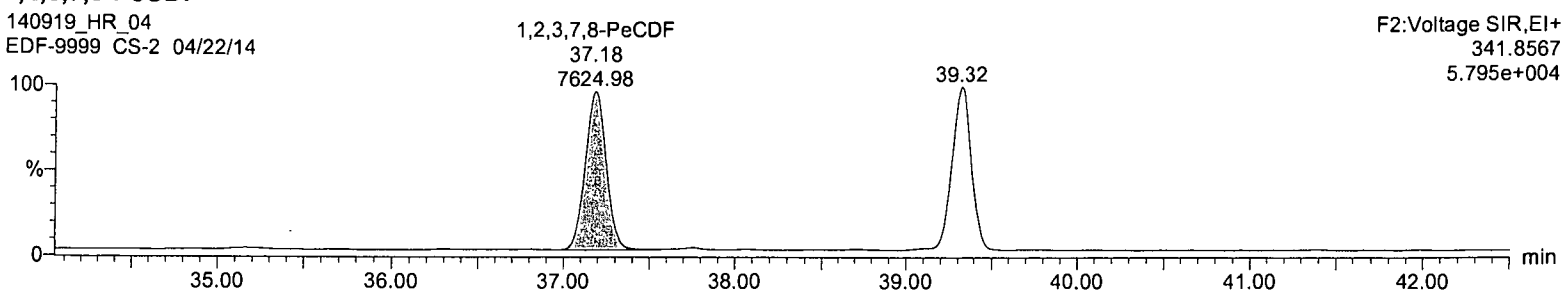


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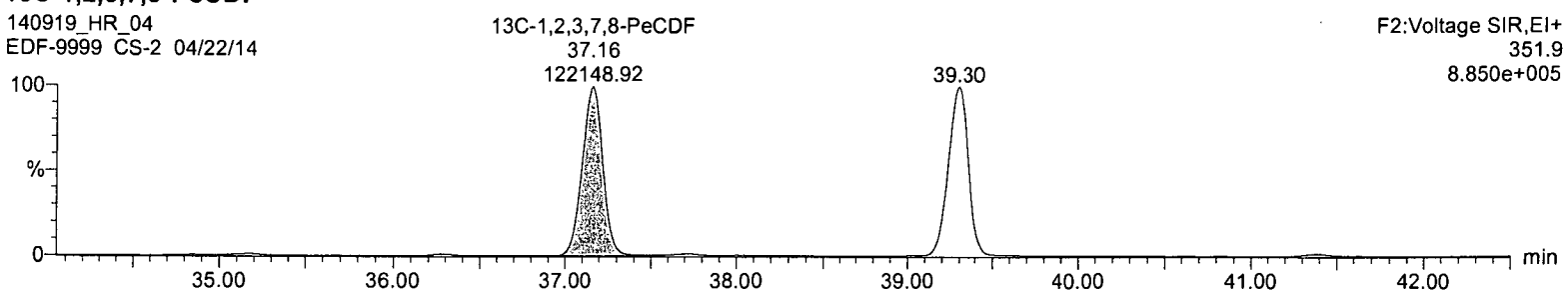
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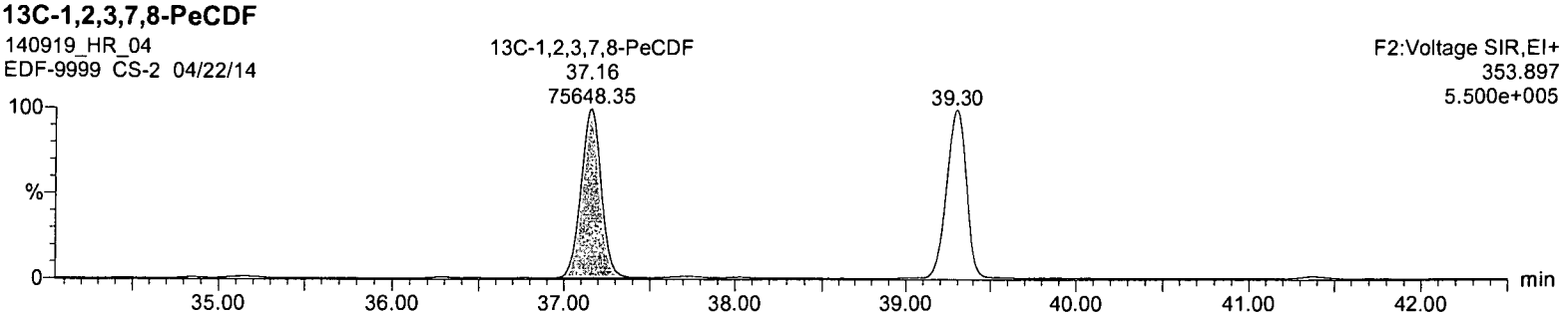
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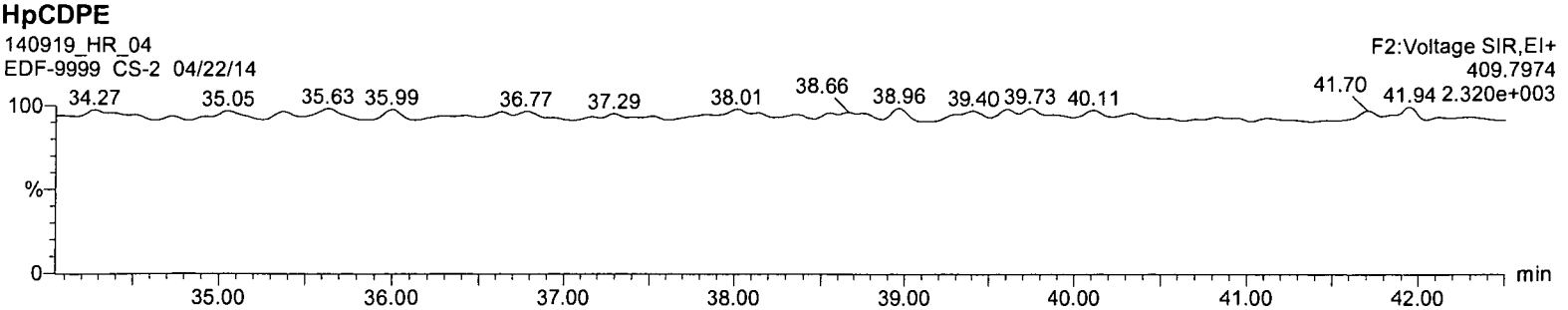
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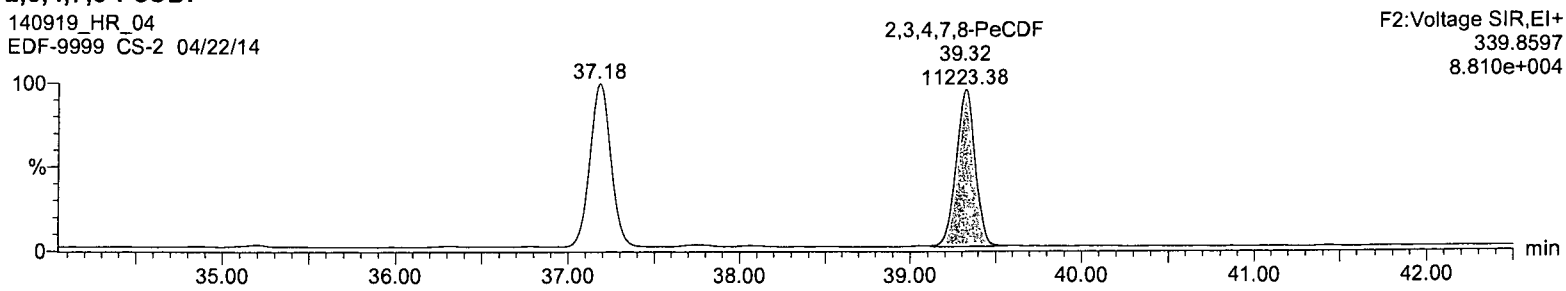


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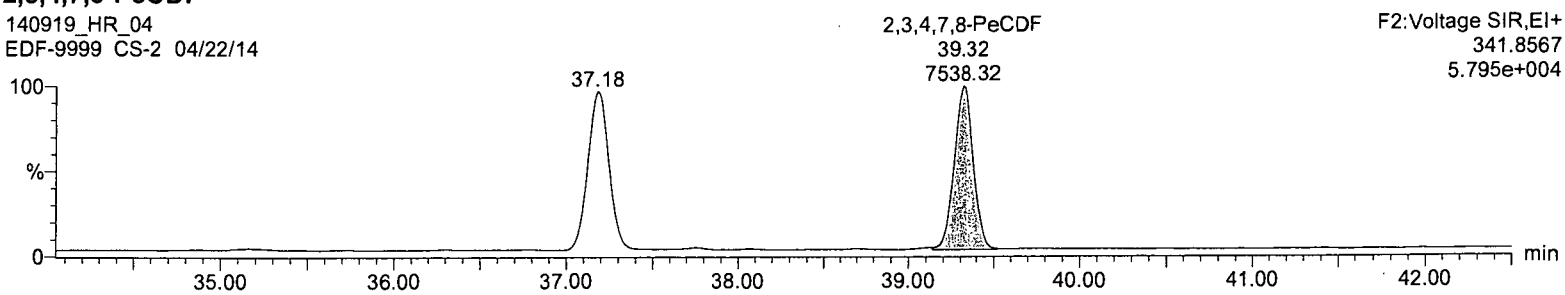


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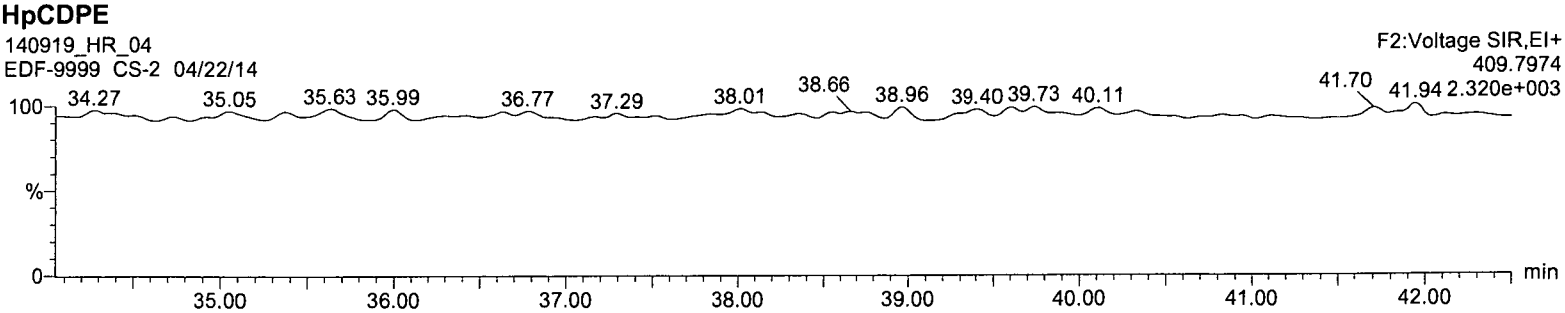
2,3,4,7,8-PeCDF



2,3,4,7,8-PeCDF

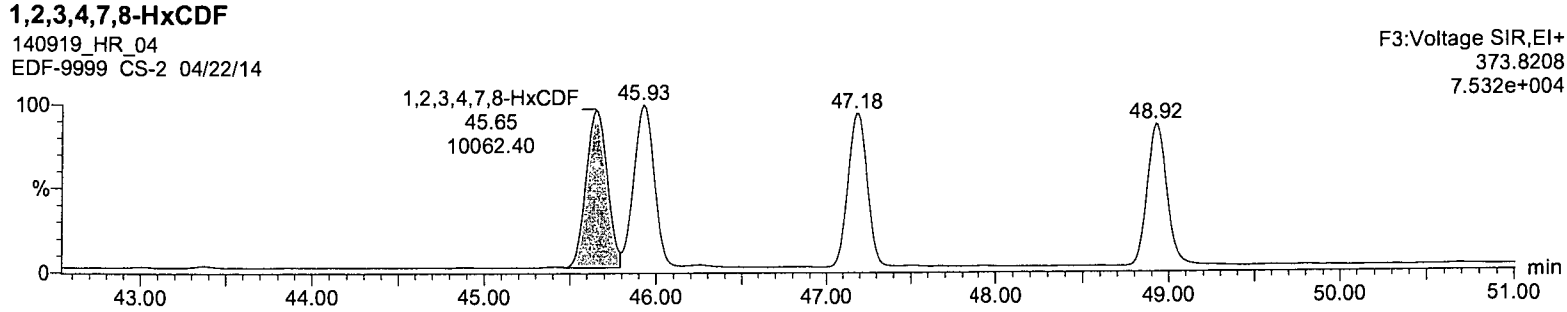


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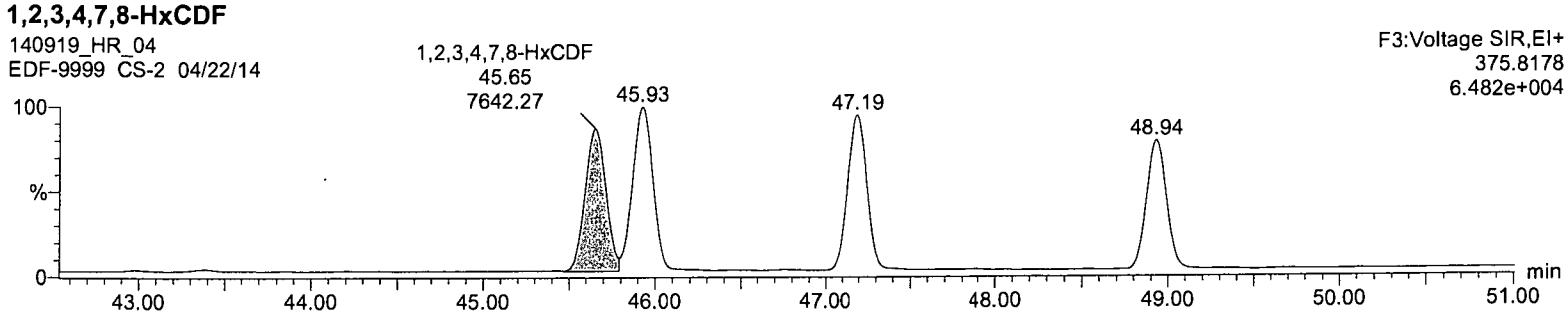


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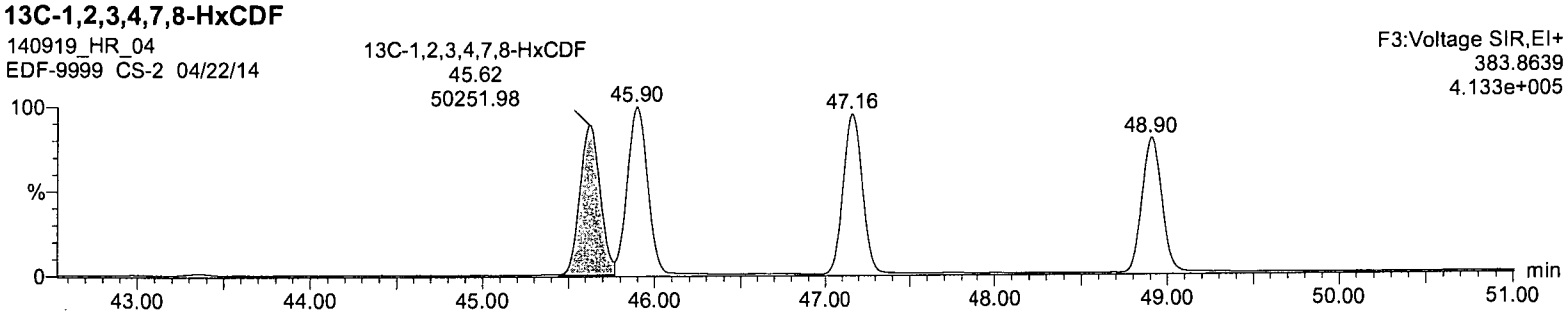
1,2,3,4,7,8-HxCDF



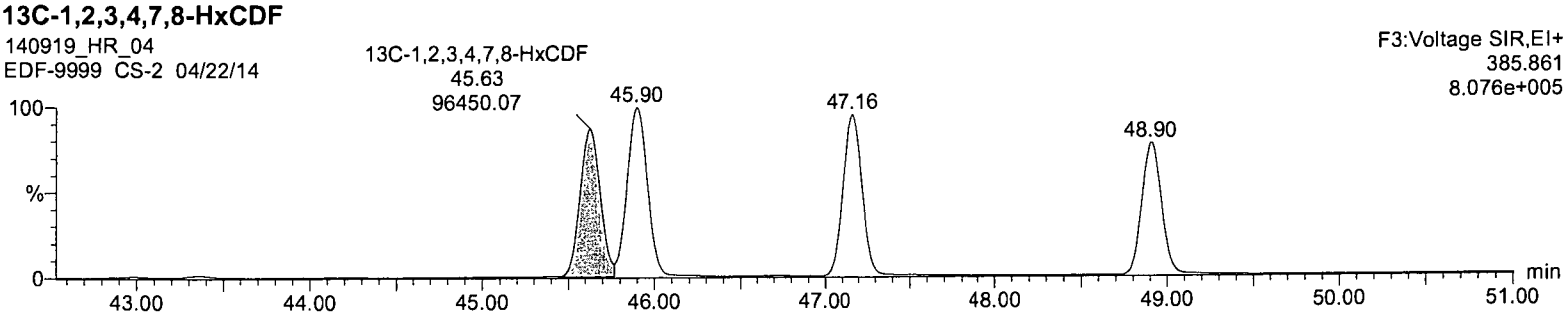
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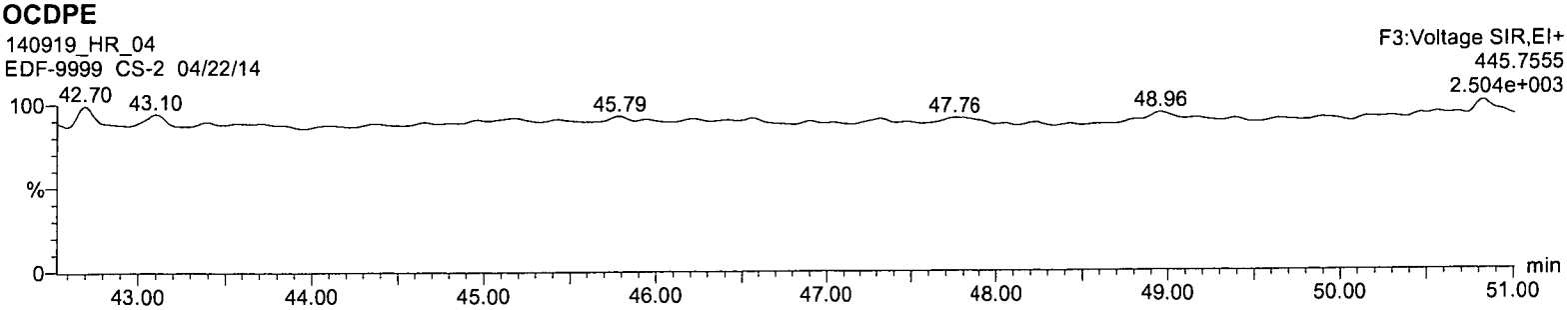
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13C-1,2,3,4,7,8-HxCDF

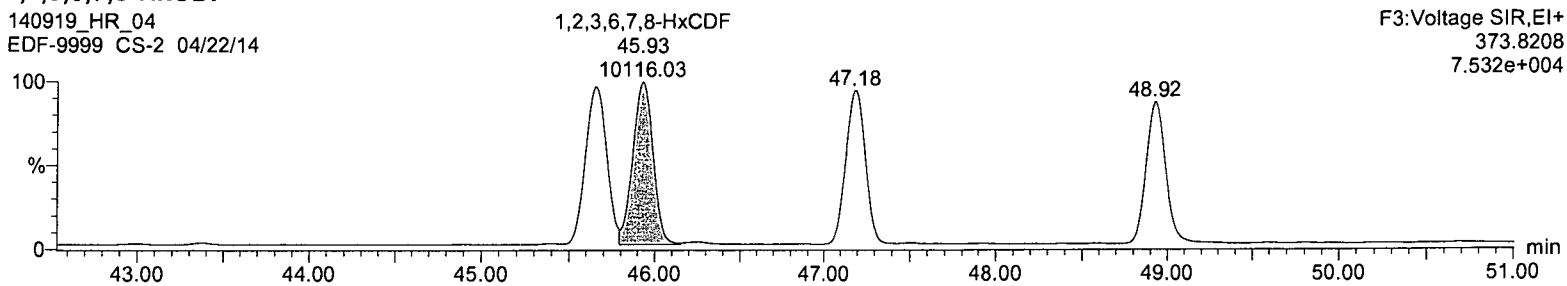


OCDPE

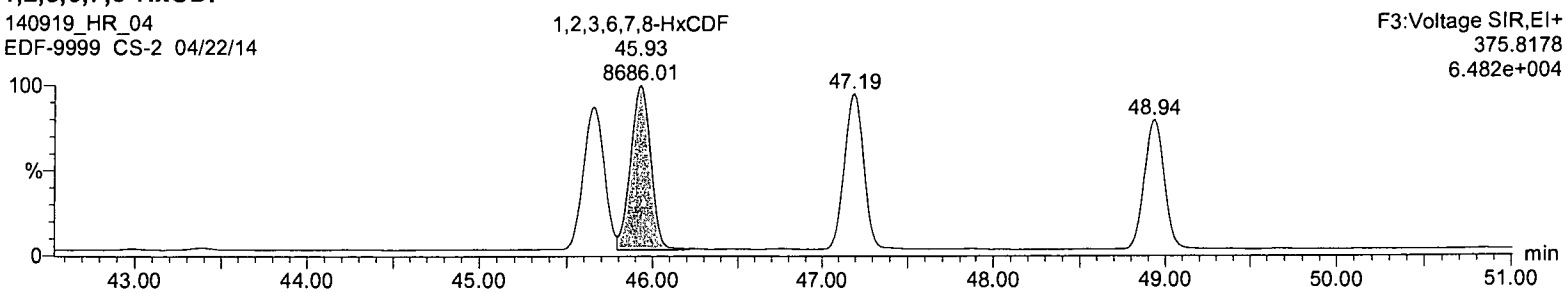


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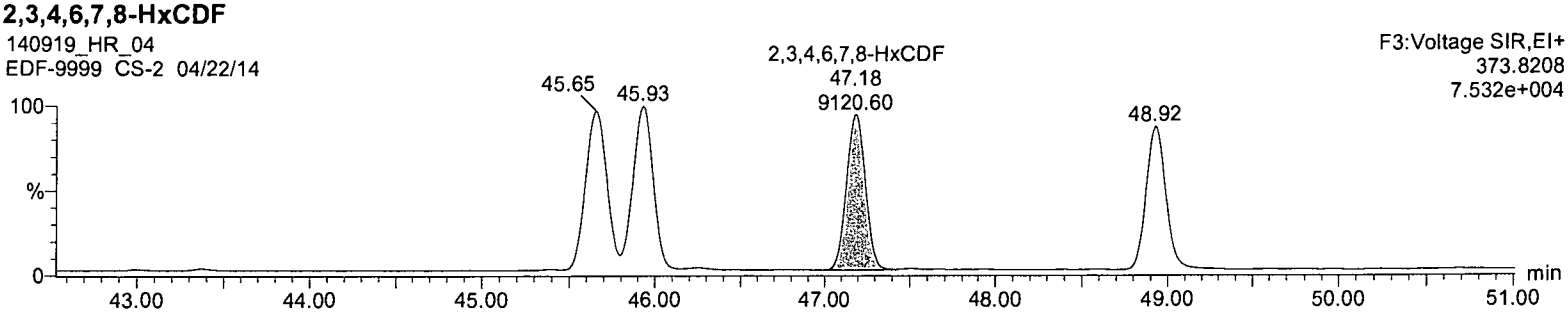
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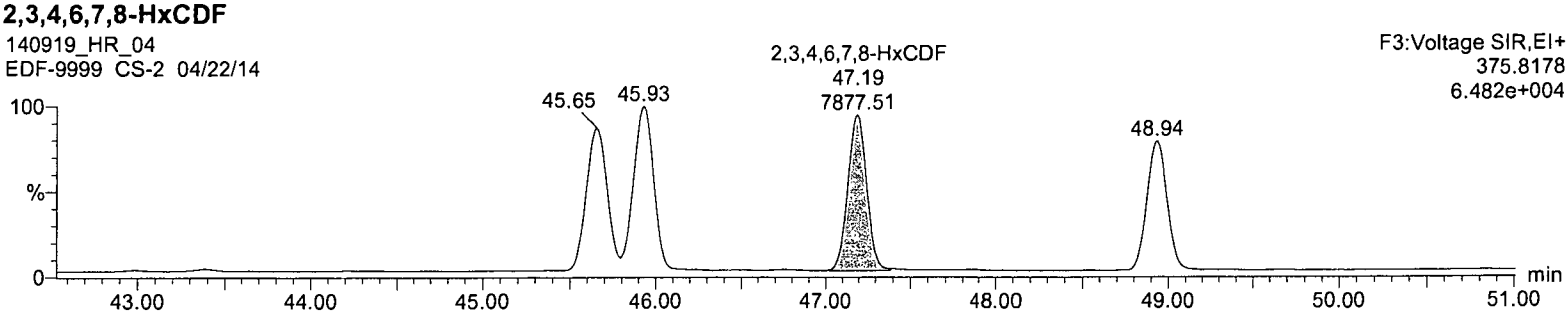
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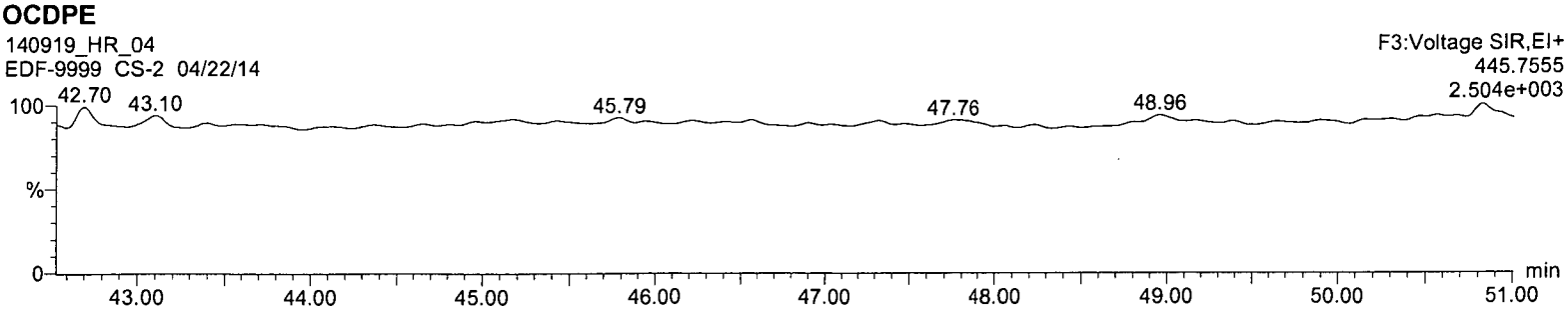
2,3,4,6,7,8-HxCDF



2,3,4,6,7,8-HxCDF

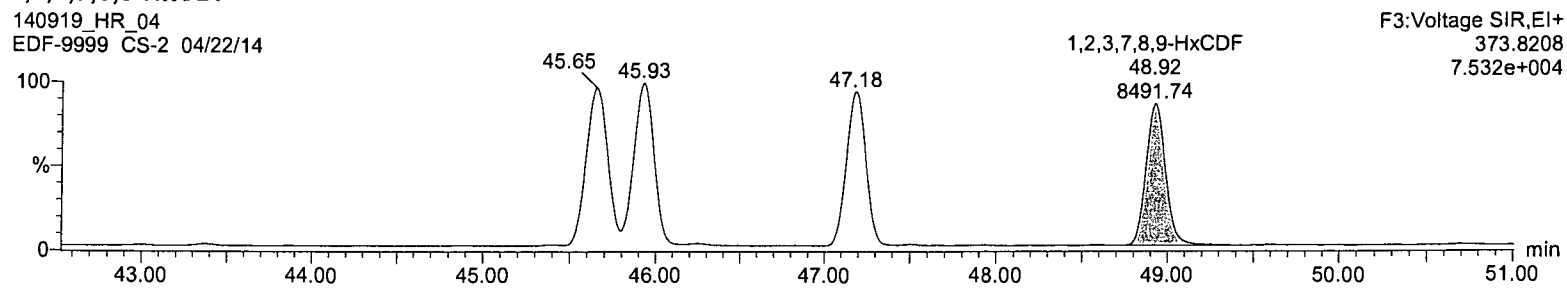


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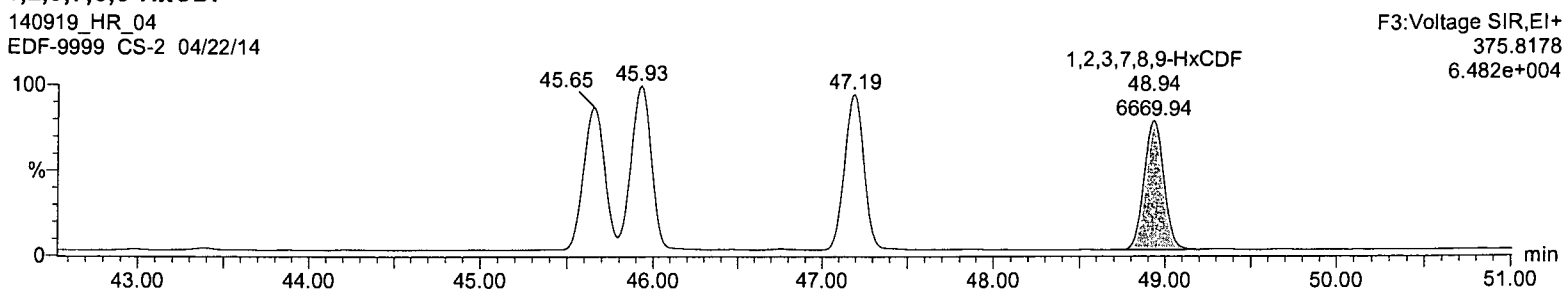


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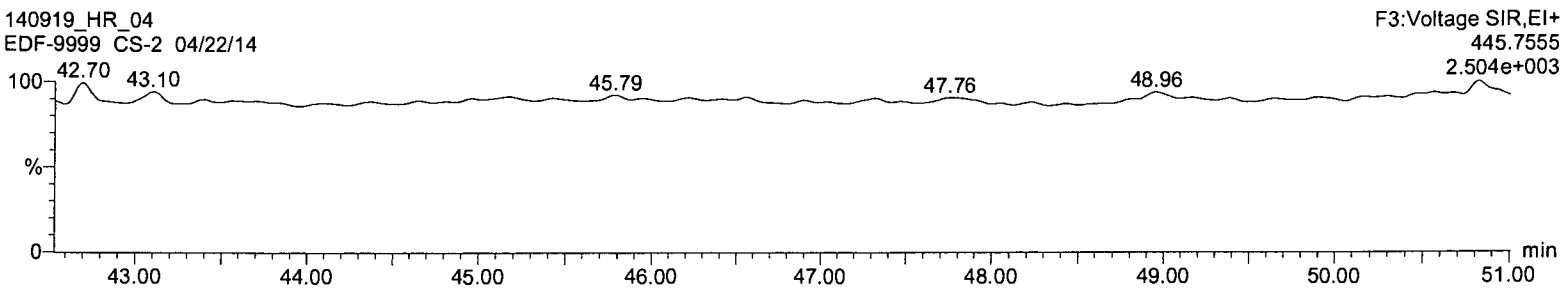
1,2,3,7,8,9-HxCDF



1,2,3,7,8,9-HxCDF

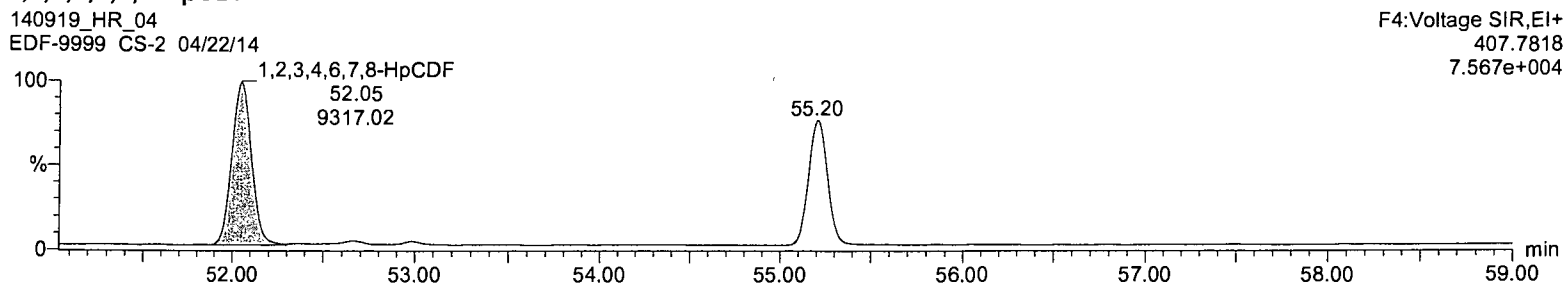


OCDPE

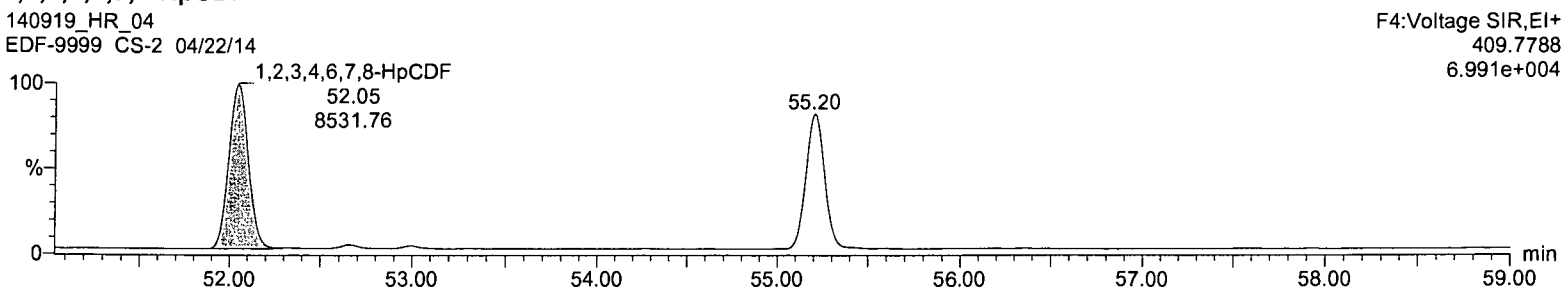


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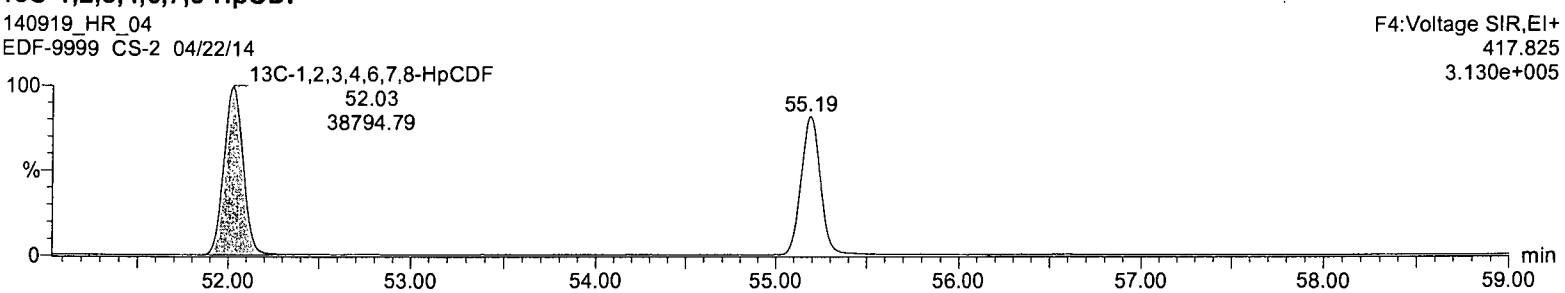
1,2,3,4,6,7,8-HpCDF



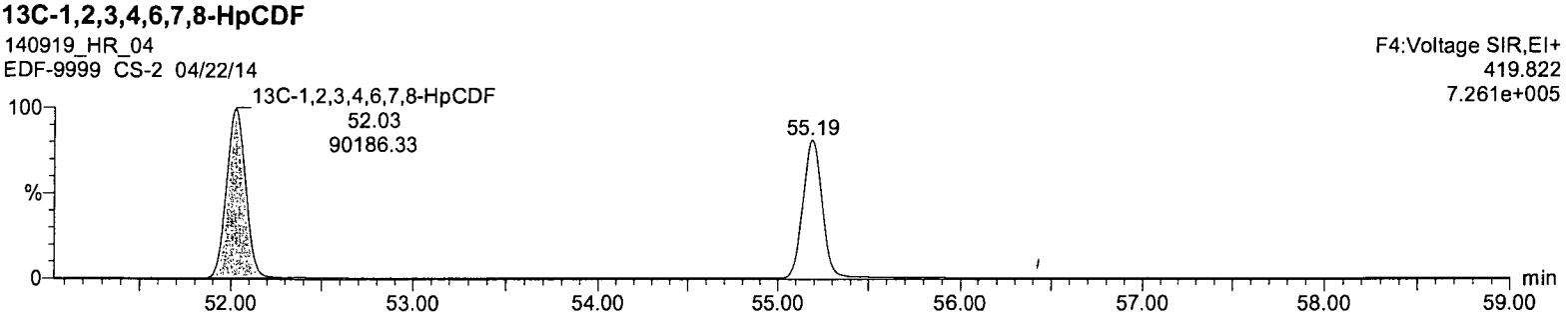
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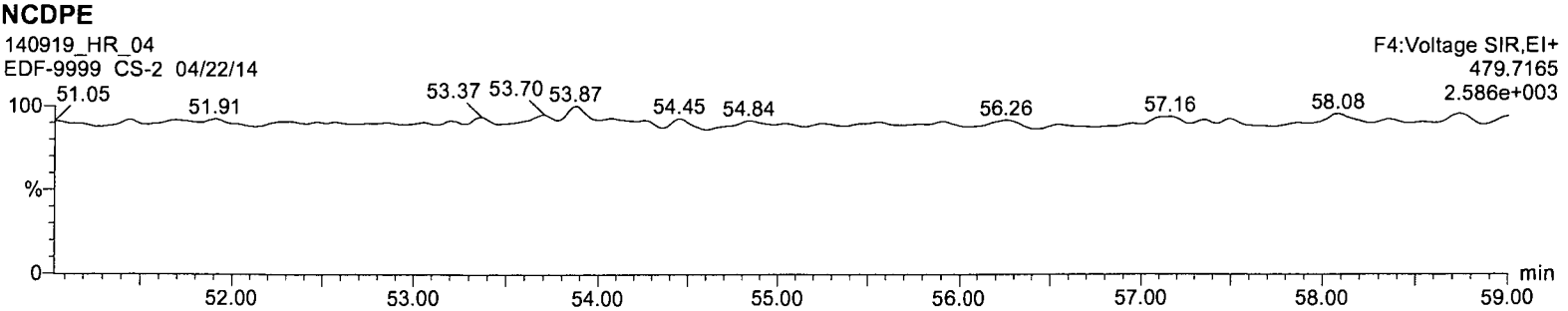
13C-1,2,3,4,6,7,8-HpCDF



13C-1,2,3,4,6,7,8-HpCDF

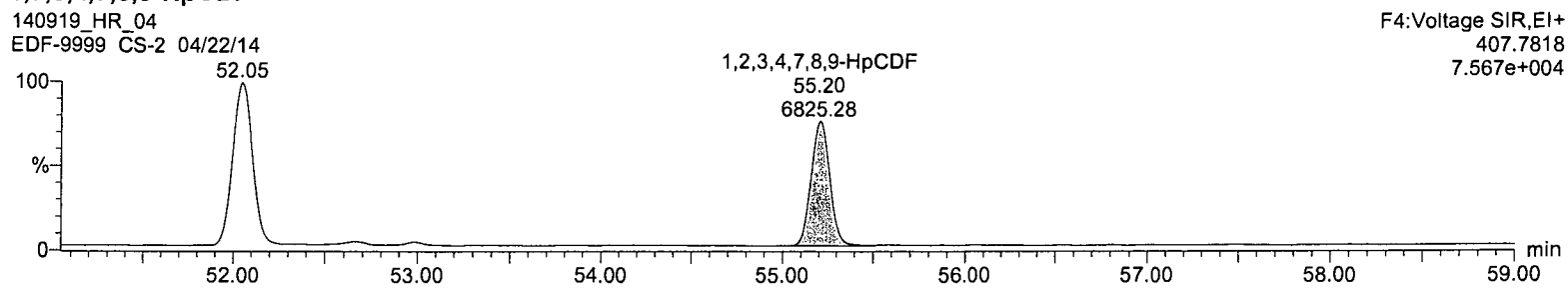


NCDPE

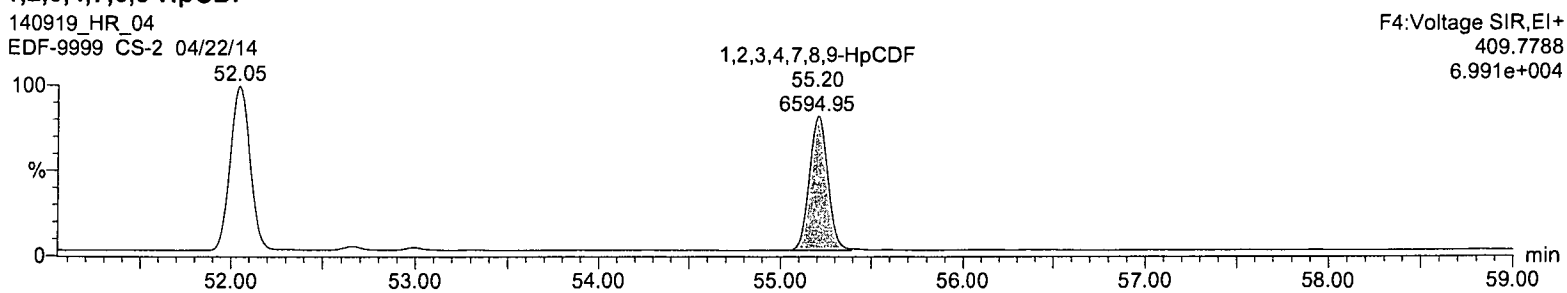


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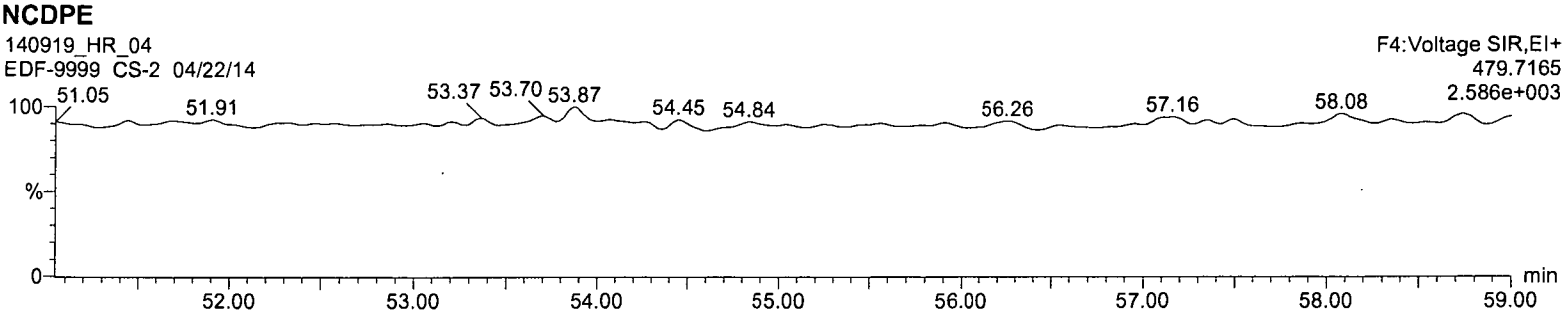
1,2,3,4,7,8,9-HpCDF



1,2,3,4,7,8,9-HpCDF

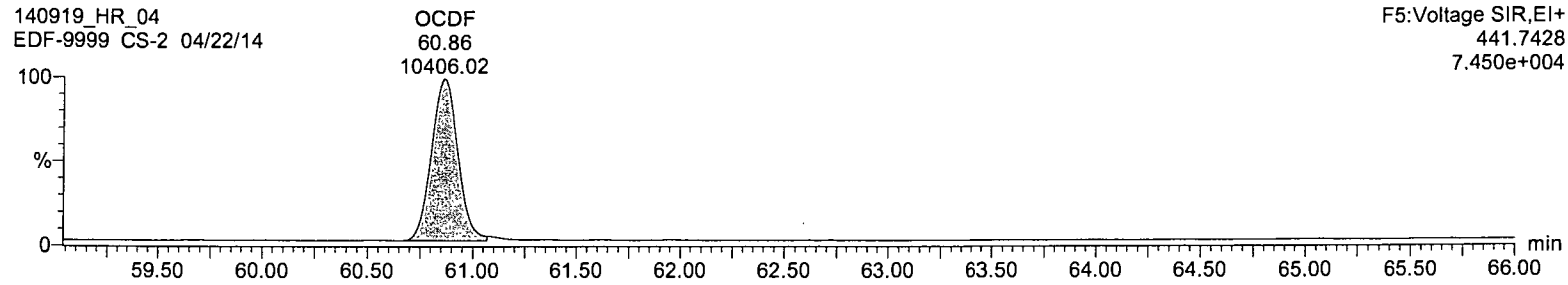


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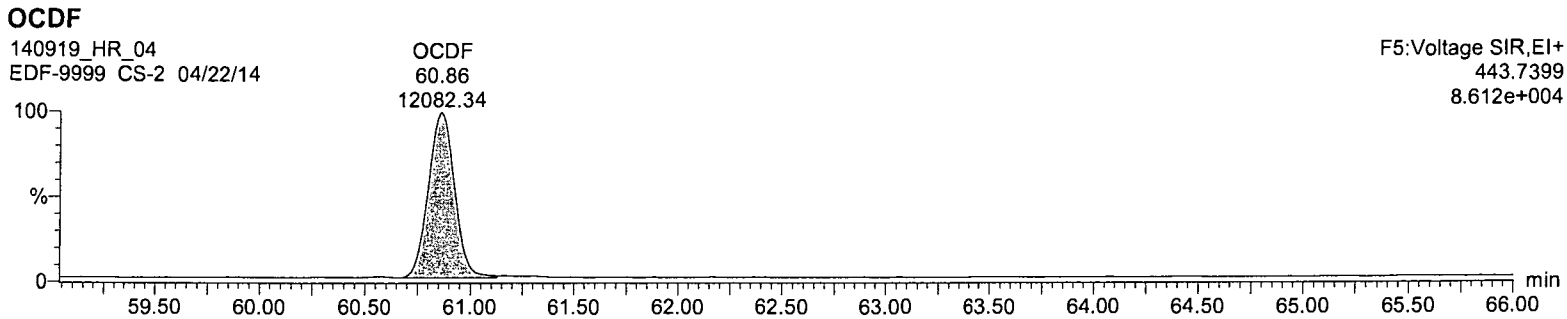


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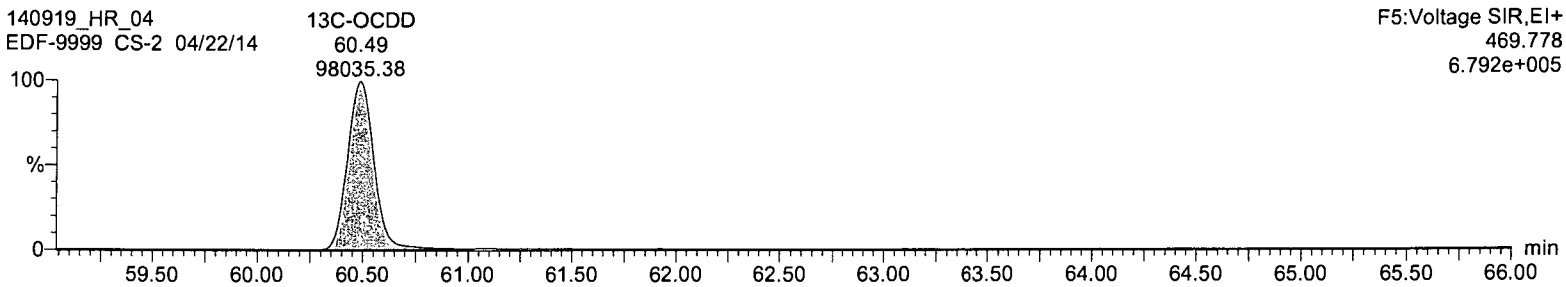
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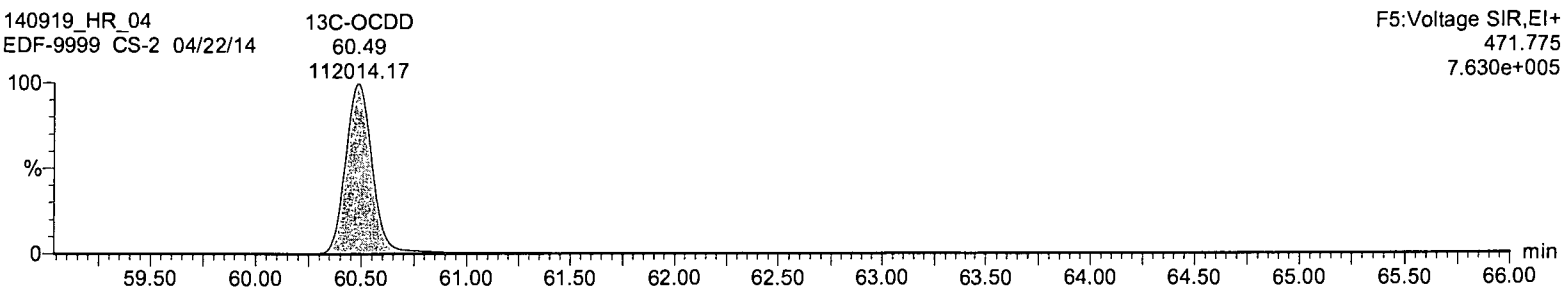
OCDF



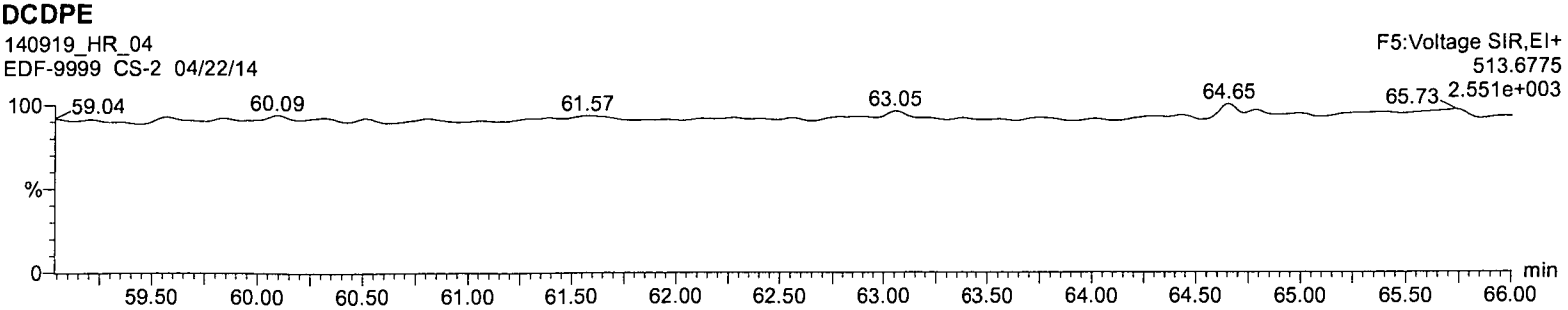
13C-OCDD



13C-OCDD

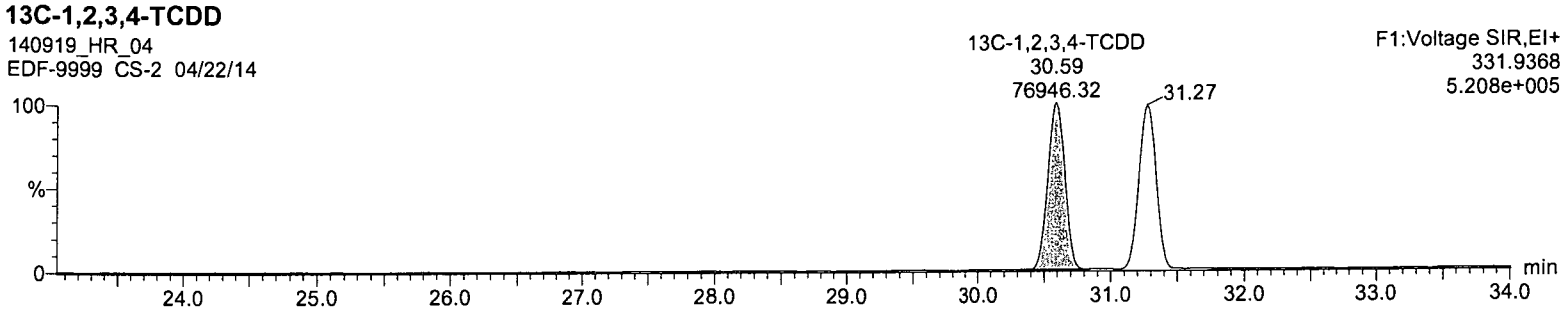


DCDPE

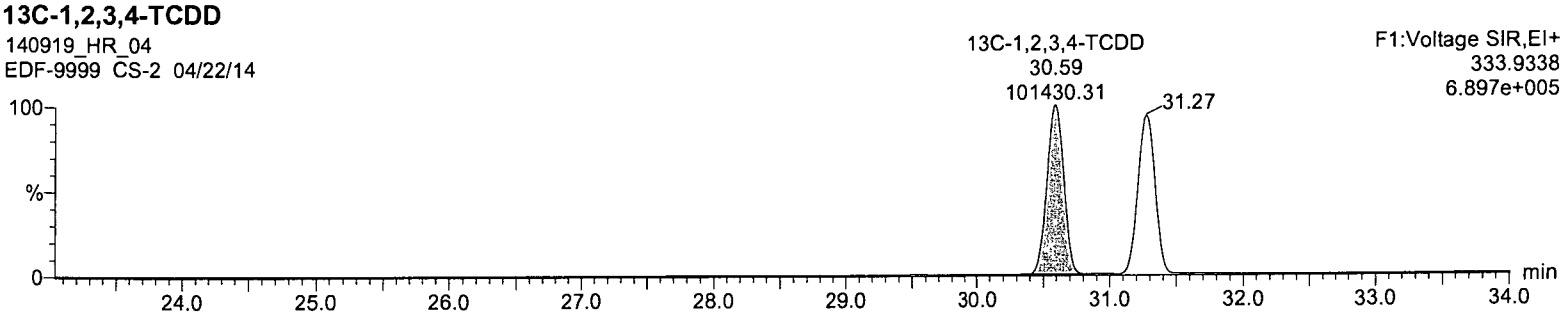


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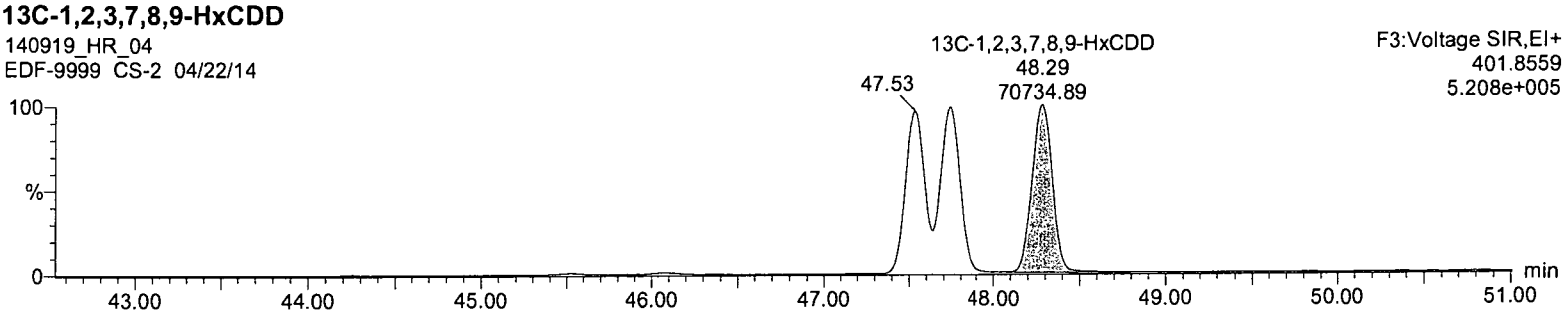
13C-1,2,3,4-TCDD



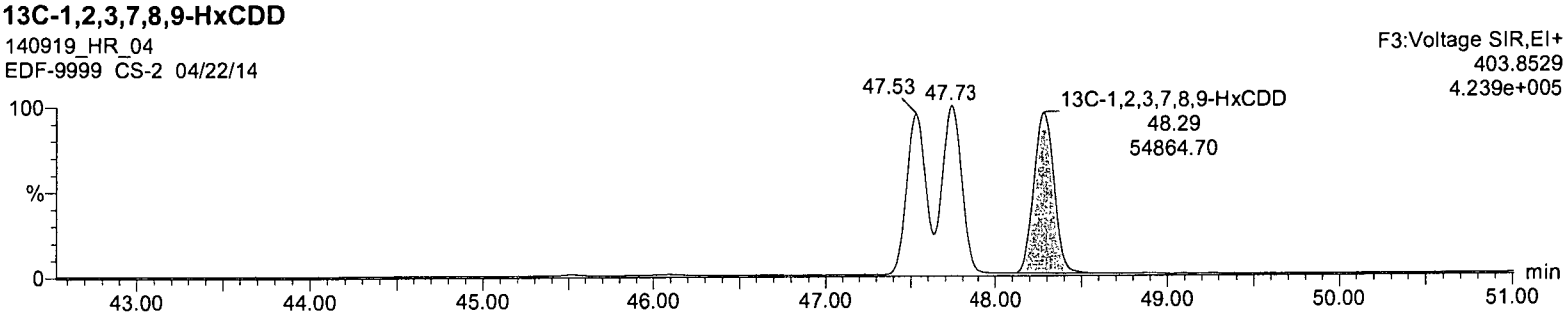
13C-1,2,3,4-TCDD



13C-1,2,3,7,8,9-HxCDD



13C-1,2,3,7,8,9-HxCDD



Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: 22 Sep 2014 12:13:12

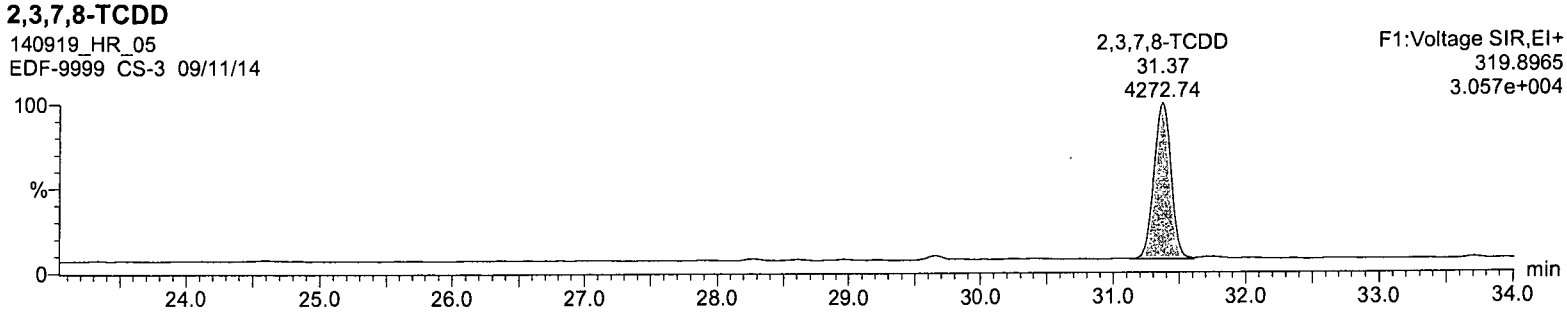
Name: 140919_HR_05, Date: 19-Sep-2014, Time: 21:18:15, ID: , Description: EDF-9999 CS-3 09/11/14, User:

#	Name	Signal	Noise 1	S/N 1	Flag S/N..	Signal 2	Noise 2	S/N 2	Flag S/N..
1	2,3,7,8-TCDD	2.8332000e4	3.8922825e1	725.55	NO	3.4487000e4	1.1766176e2	293.10	NO
2	1,2,3,7,8-PeCDD	1.4191000e5	1.2558061e2	1128.30	NO	9.2150000e4	4.8950806e1	1882.50	NO
3	1,2,3,4,7,8-HxCDD	1.6122600e5	1.2486363e2	1289.23	NO	1.2173000e5	1.3016385e2	935.21	NO
4	1,2,3,6,7,8-HxCDD	1.3854200e5	1.2486363e2	1107.66	NO	1.1198200e5	1.3016385e2	860.32	NO
5	1,2,3,7,8,9-HxCDD	1.4588200e5	1.2486363e2	1166.70	NO	1.2010400e5	1.3016385e2	922.71	NO
6	1,2,3,4,6,7,8-HpCDD	1.4206900e5	1.0032877e2	1413.02	NO	1.3174700e5	3.6327263e1	3626.67	NO
7	OCDD	2.3253000e5	5.1571175e1	4505.11	NO	2.5907000e5	1.5128738e2	1712.44	NO
8	2,3,7,8-TCDF	3.7198000e4	7.4220833e1	503.39	NO	4.6261000e4	7.4985725e1	616.93	NO
9	1,2,3,7,8-PeCDF	2.3196500e5	1.7617200e2	1314.49	NO	1.5575300e5	1.2784052e2	1218.34	NO
10	2,3,4,7,8-PeCDF	2.1540300e5	1.7617200e2	1220.78	NO	1.4118500e5	1.2784052e2	1104.38	NO
11	1,2,3,4,7,8-HxCDF	2.2036300e5	2.2246129e2	988.76	NO	1.7601500e5	3.2198138e2	546.66	NO
12	1,2,3,6,7,8-HxCDF	2.3782200e5	2.2246129e2	1067.39	NO	1.8733000e5	3.2198138e2	581.80	NO
13	2,3,4,6,7,8-HxCDF	2.1128600e5	2.2246129e2	948.17	NO	1.7201100e5	3.2198138e2	534.23	NO
14	1,2,3,7,8,9-HxCDF	1.7902900e5	2.2246129e2	802.96	NO	1.4436800e5	3.2198138e2	448.37	NO
15	1,2,3,4,6,7,8-HpCDF	2.2334100e5	1.7007323e2	1311.38	NO	2.1322600e5	1.0056026e2	2120.38	NO
16	1,2,3,4,7,8,9-HpCDF	1.6201200e5	1.7007323e2	950.46	NO	1.5562300e5	1.0056026e2	1547.56	NO
17	OCDF	2.3257000e5	9.8067146e1	2368.36	NO	2.7290000e5	2.5221472e2	1082.01	NO
18	13C-2,3,7,8-TCDD	2.8790000e5	1.2896075e2	2233.33	NO	3.7242000e5	5.9576237e1	6251.15	NO
19	13C-1,2,3,7,8-PeCDD	3.2956700e5	9.0704758e1	3631.53	NO	2.0584200e5	6.5888318e2	312.41	NO
20	13C-1,2,3,6,7,8-HxCDD	2.8521400e5	3.4342413e2	830.59	NO	2.3346300e5	3.6352859e2	642.21	NO
21	13C-1,2,3,4,6,7,8-HpCDD	3.0124300e5	9.4102501e1	3198.50	NO	2.8751300e5	1.0242935e2	2806.94	NO
22	13C-OCDD	4.2144100e5	1.9044064e2	2210.87	NO	4.7529200e5	1.2616901e2	3767.11	NO
23	13C-2,3,7,8-TCDF	4.0828200e5	1.0167570e2	4014.01	NO	5.3453200e5	2.1089186e2	2534.63	NO
24	13C-1,2,3,7,8-PeCDF	4.9553000e5	4.8000259e3	101.41	NO	3.0665800e5	1.9089104e2	1606.46	NO
25	13C-1,2,3,4,7,8-HxCDF	2.2207400e5	1.2700153e2	1745.70	NO	4.4167100e5	1.9660257e2	2246.52	NO
26	13C-1,2,3,4,6,7,8-HpCDF	1.8472200e5	1.5239749e2	1211.34	NO	4.4044800e5	1.3381343e2	3291.51	NO
27	13C-1,2,3,4-TCDD	2.9634200e5	1.2896075e2	2298.36	NO	3.8637700e5	5.9576237e1	6485.42	NO
28	13C-1,2,3,7,8,9-HxCDD	2.9779000e5	3.4342413e2	868.81	NO	2.3870100e5	3.6352859e2	656.62	NO

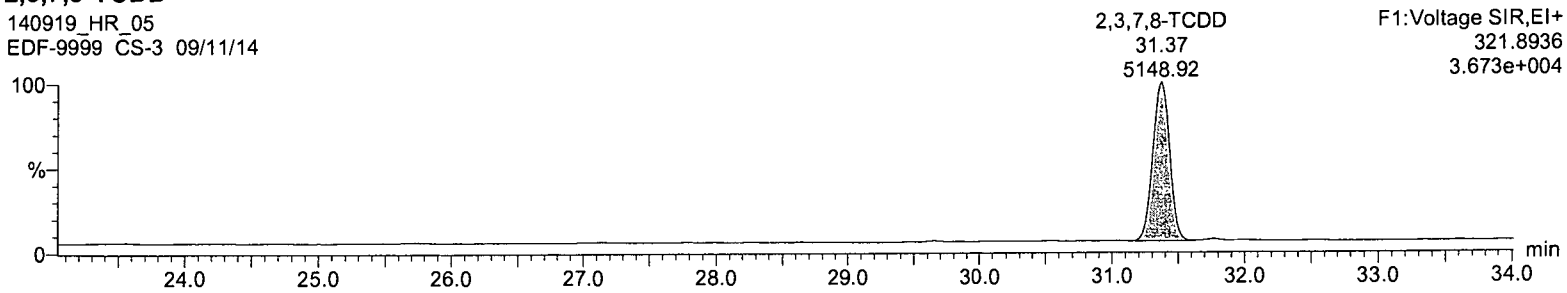
Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: 22 Sep 2014 12:13:12

Name: 140919_HR_05, Date: 19-Sep-2014, Time: 21:18:15, Description: EDF-9999 CS-3 09/11/14, User:

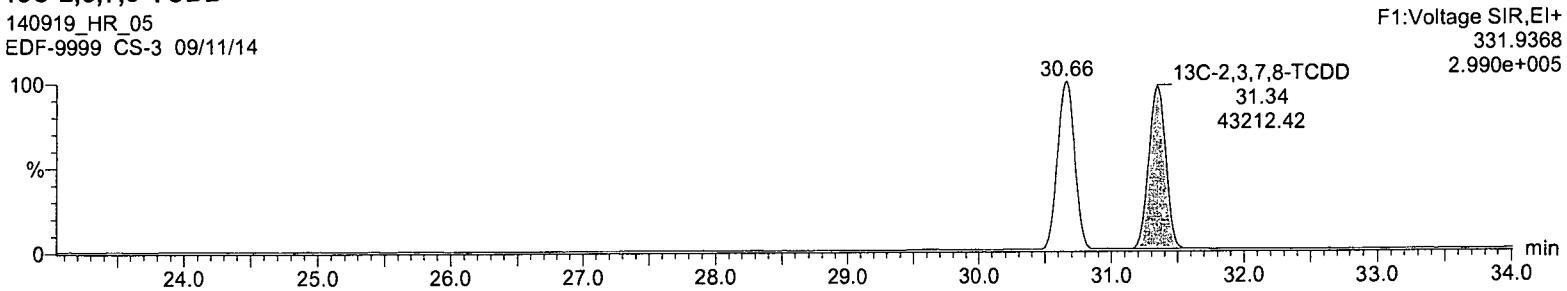
2,3,7,8-TCDD



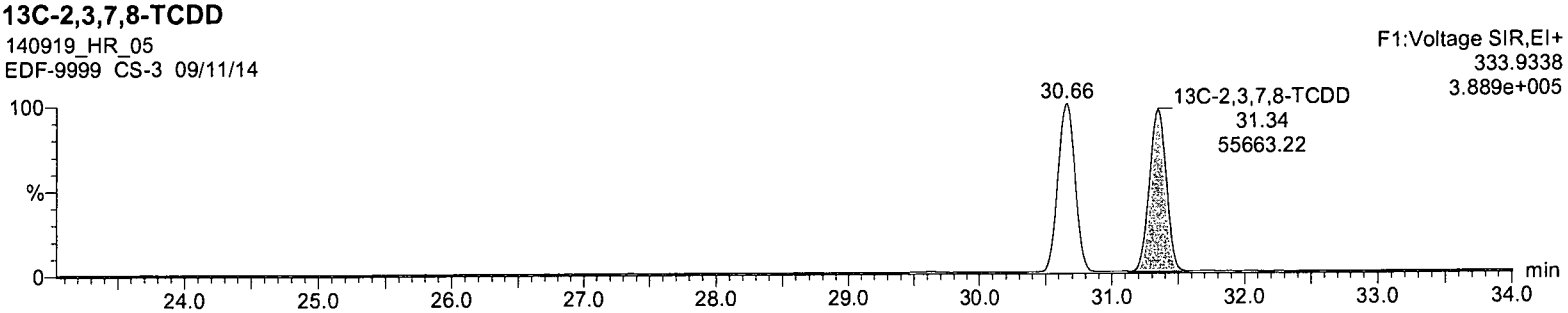
2,3,7,8-TCDD



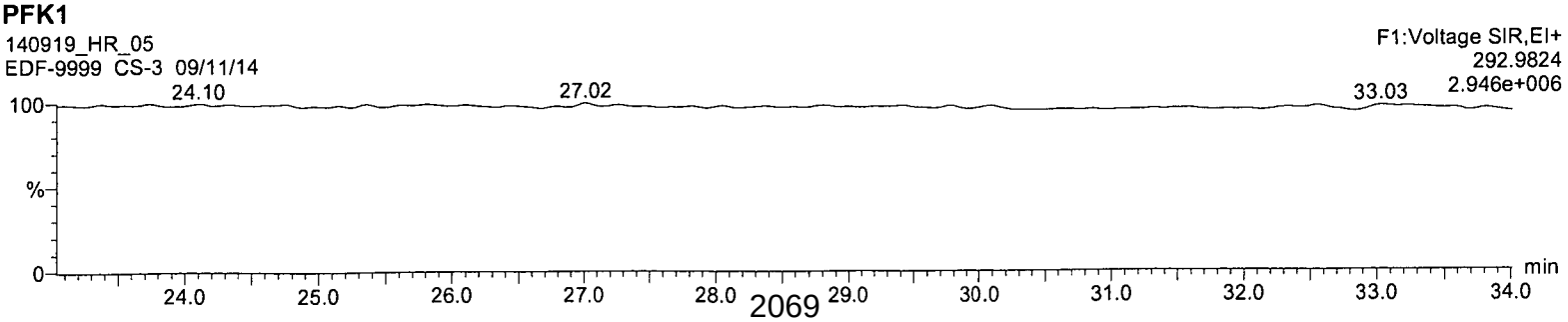
13C-2,3,7,8-TCDD



13C-2,3,7,8-TCDD

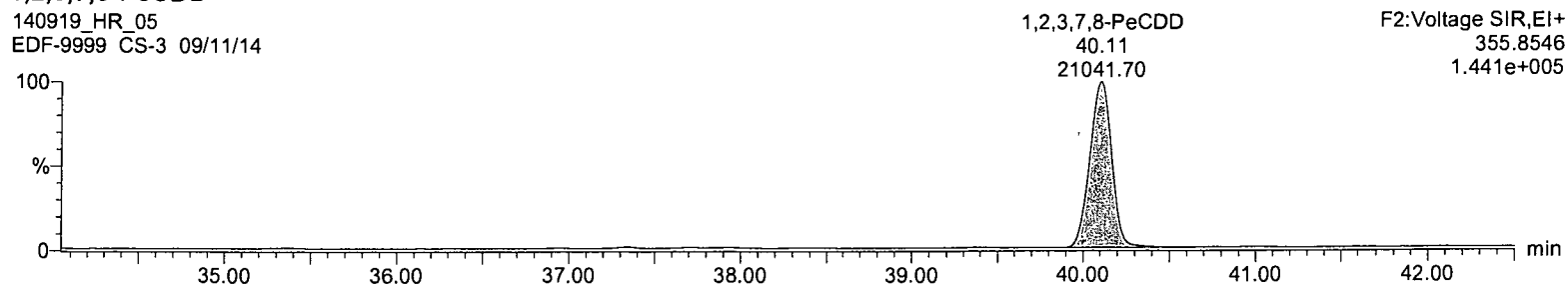


PFK1

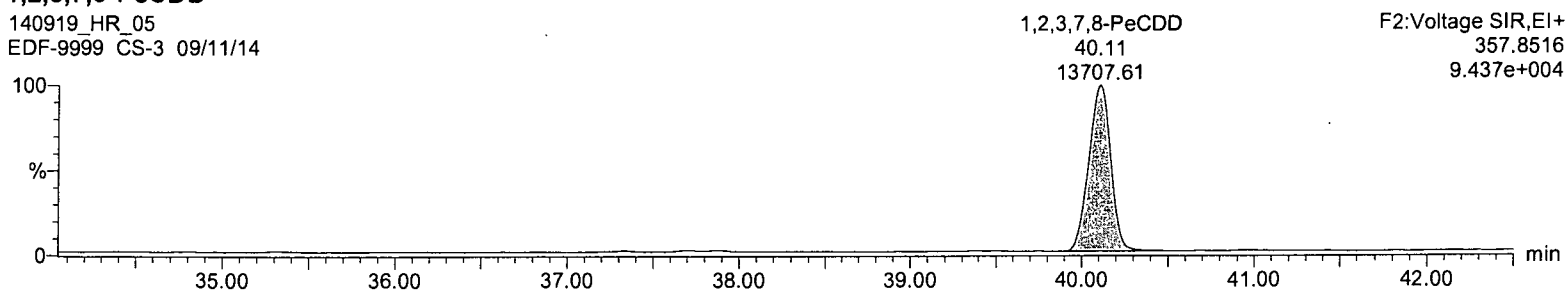


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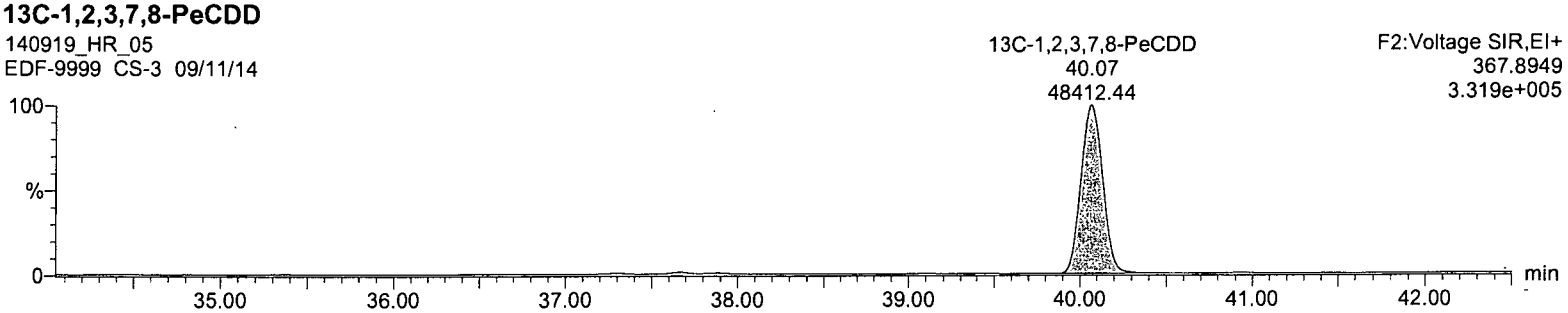
1,2,3,7,8-PeCDD



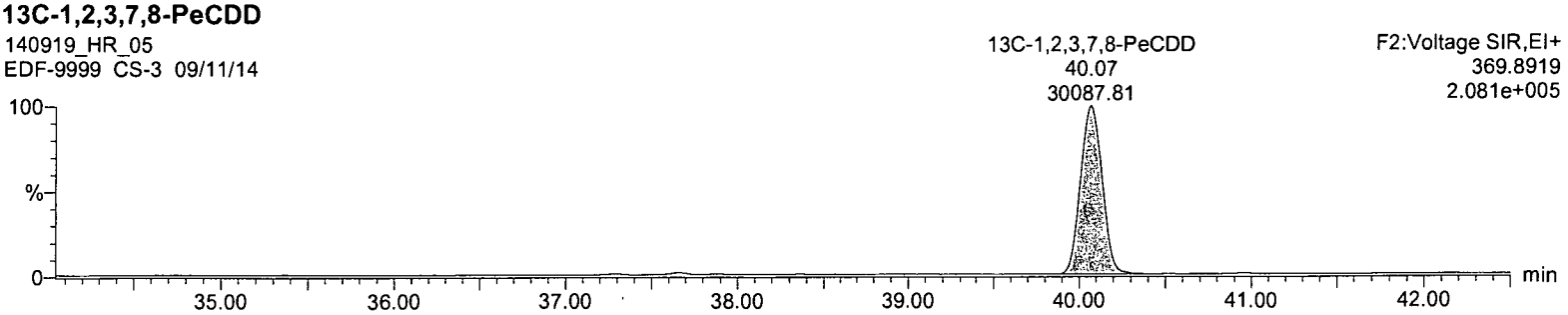
1,2,3,7,8-PeCDD



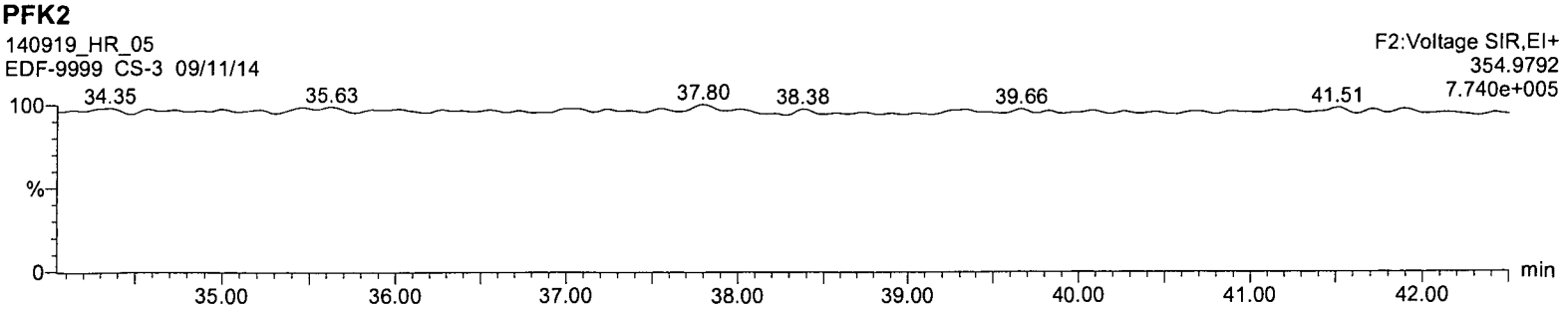
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13C-1,2,3,7,8-PeCDD

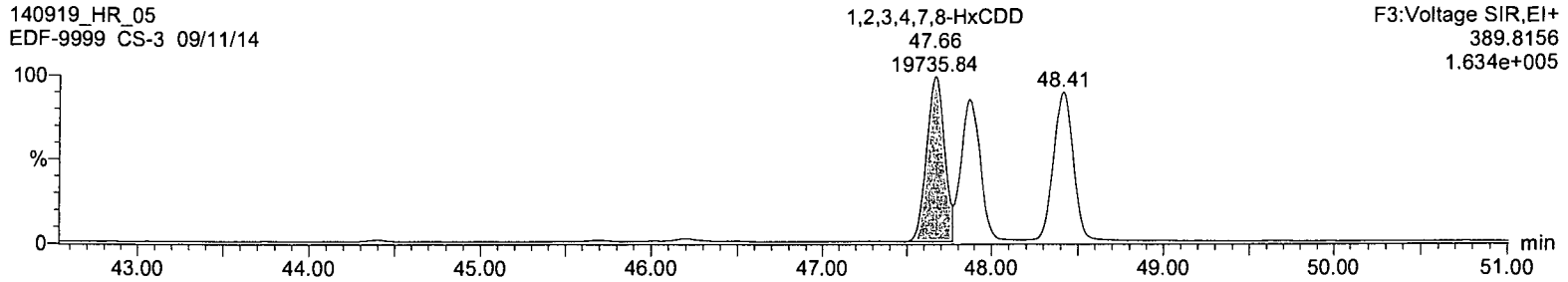


PFK2

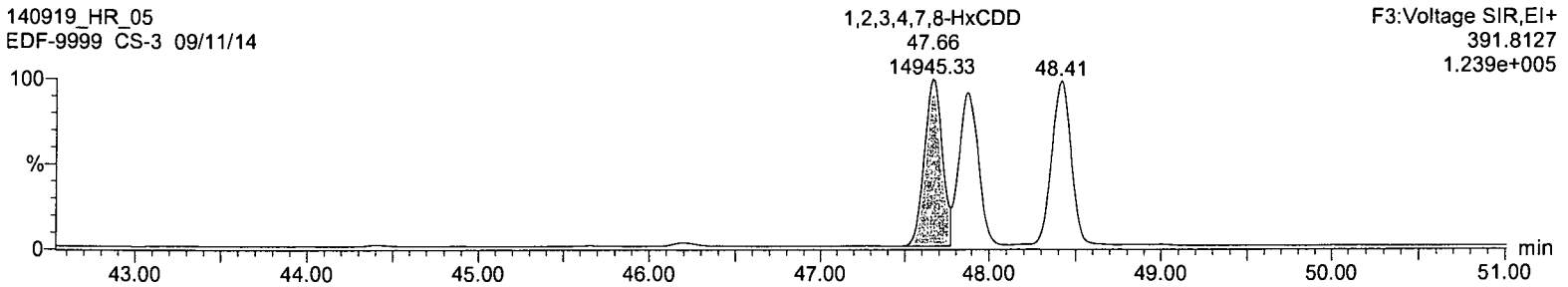


Name: 140919_HR_05, Date: 19-Sep-2014, Time: 21:18:15, Description: EDF-9999 CS-3 09/11/14, User:

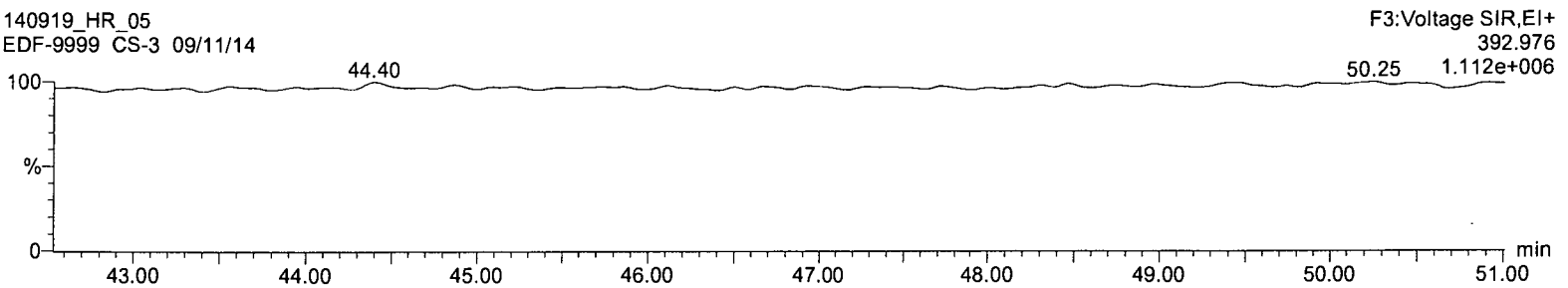
1,2,3,4,7,8-HxCDD



1,2,3,4,7,8-HxCDD

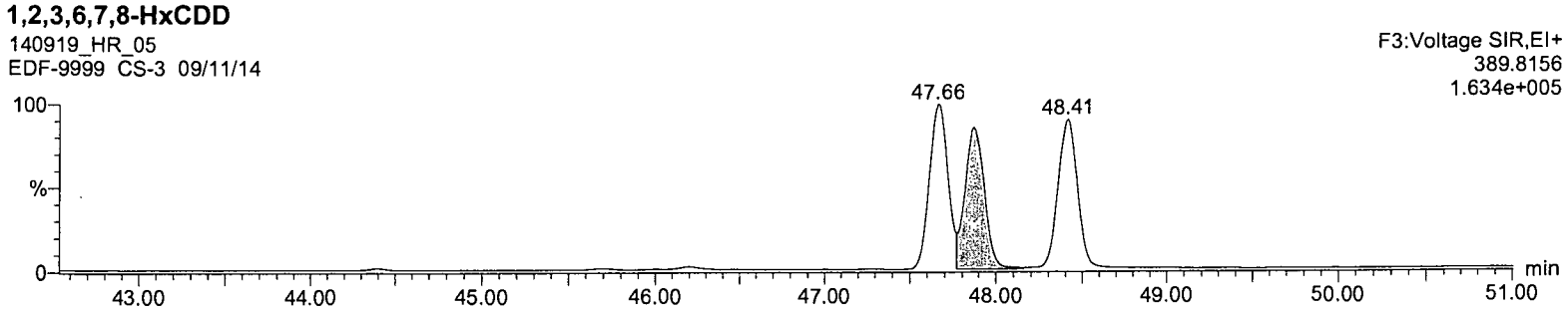


PFK3

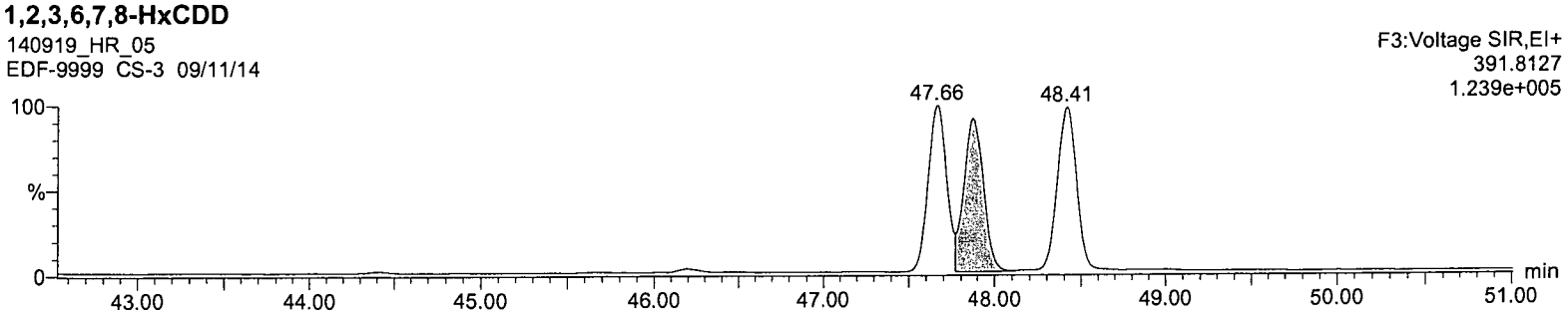


Name: 140919_HR_05, Date: 19-Sep-2014, Time: 21:18:15, Description: EDF-9999 CS-3 09/11/14, User:

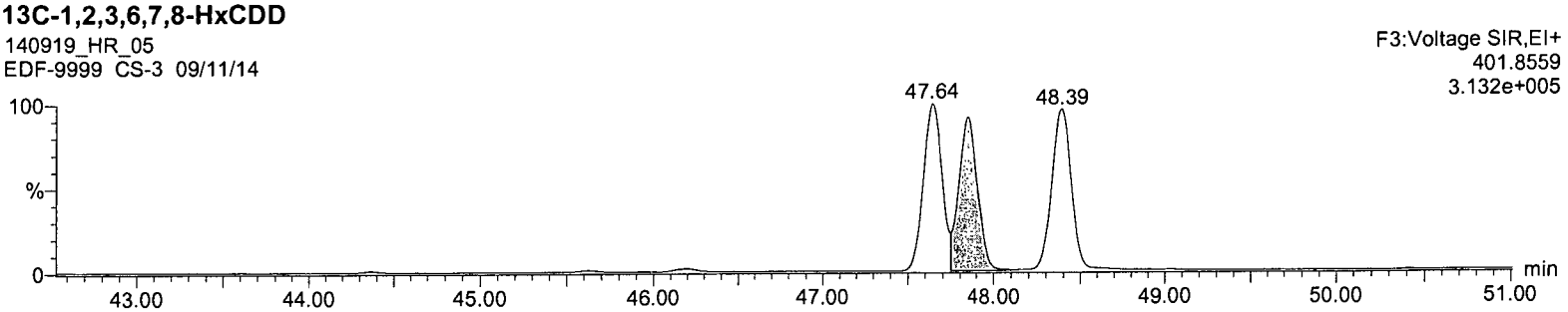
1,2,3,6,7,8-HxCDD



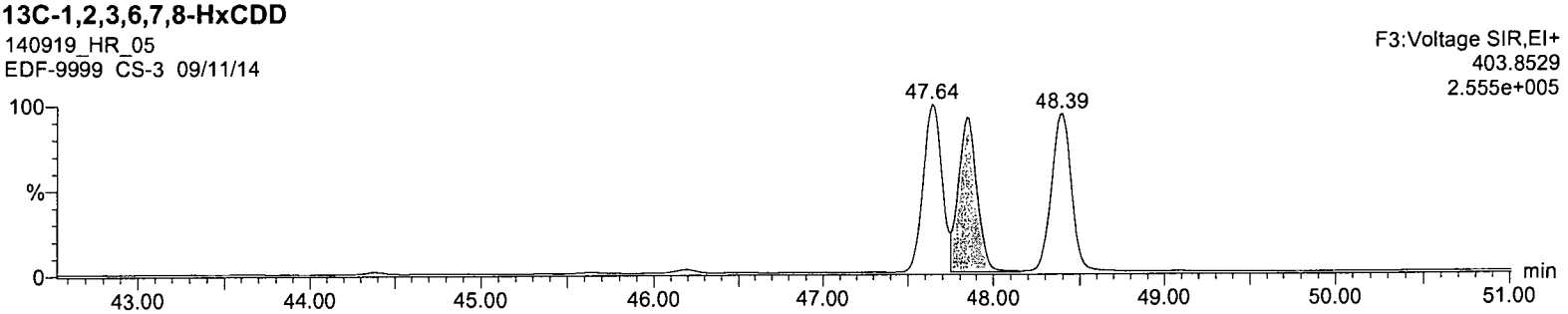
1,2,3,6,7,8-HxCDD



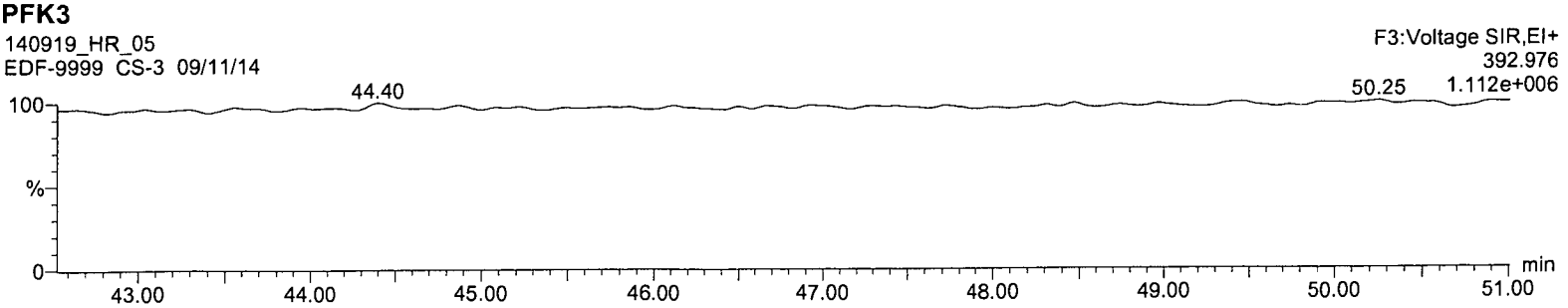
13C-1,2,3,6,7,8-HxCDD



13C-1,2,3,6,7,8-HxCDD

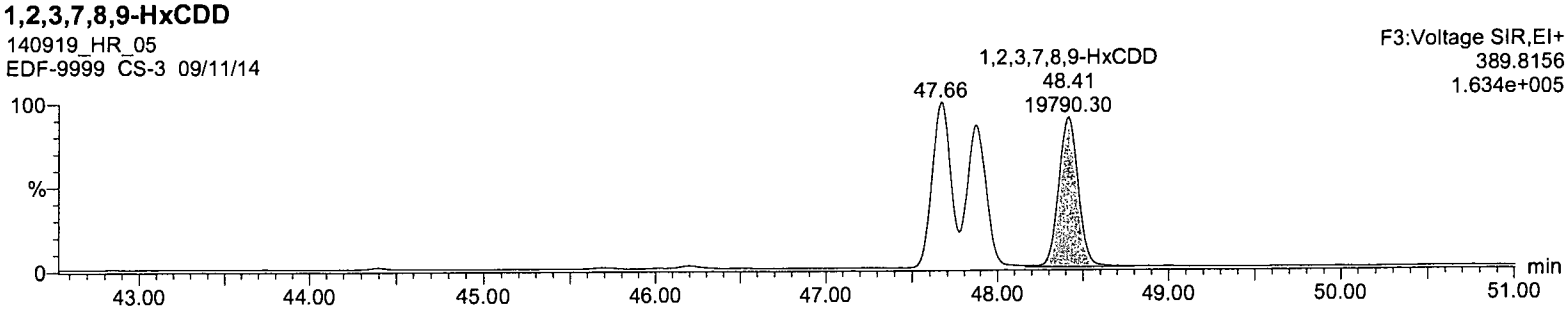


PFK3

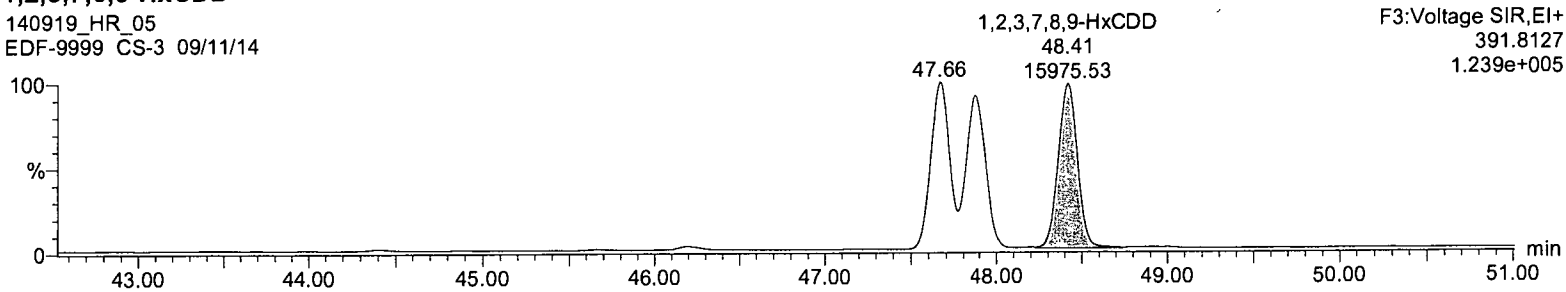


Name: 140919_HR_05, Date: 19-Sep-2014, Time: 21:18:15, Description: EDF-9999 CS-3 09/11/14, User:

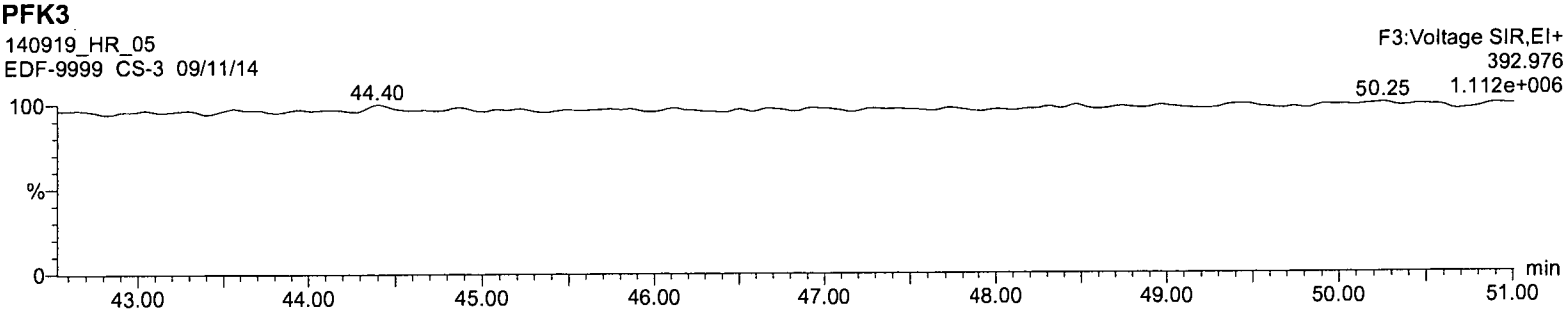
1,2,3,7,8,9-HxCDD



1,2,3,7,8,9-HxCDD

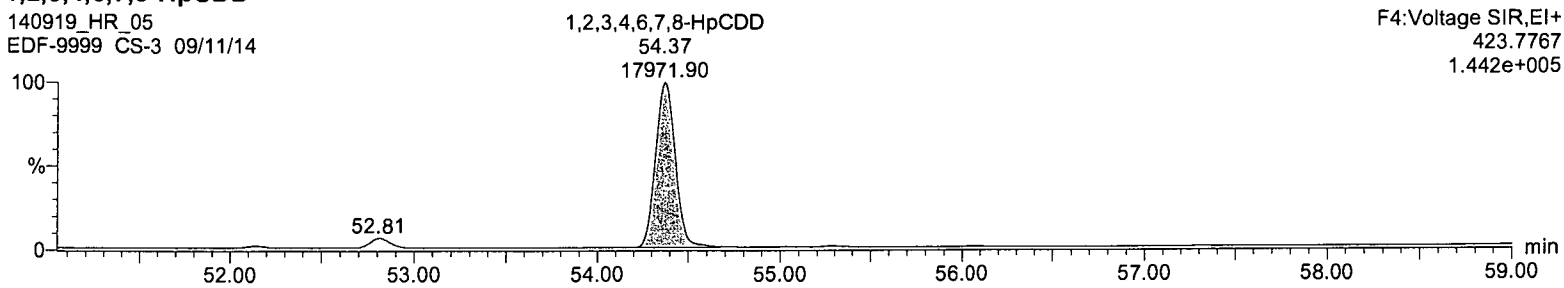


PFK3

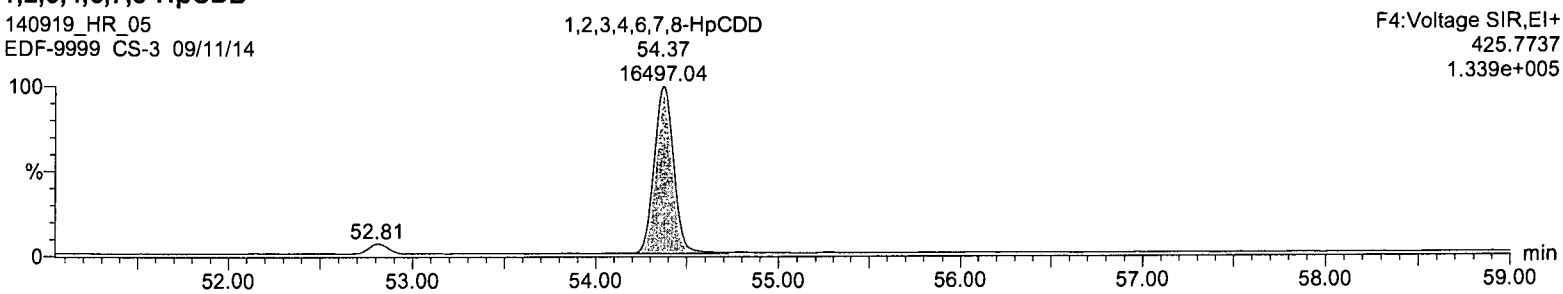


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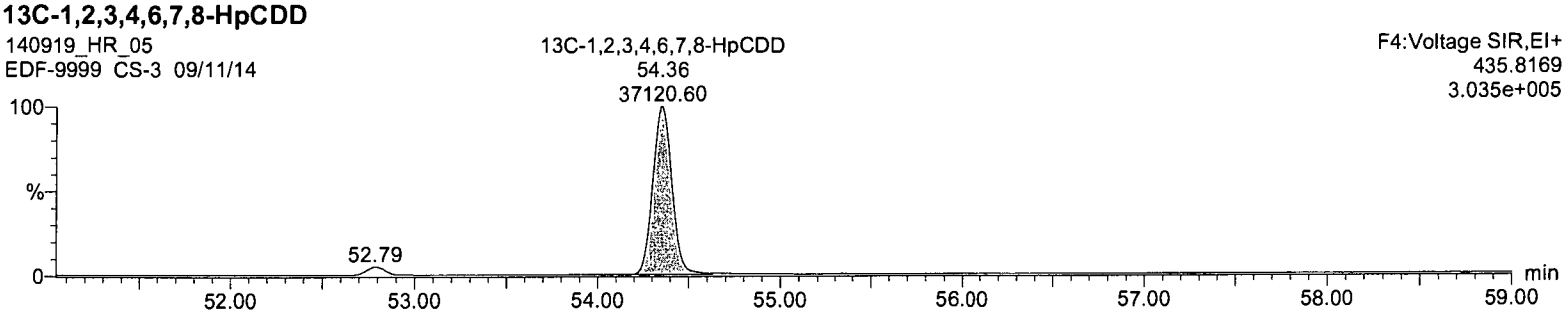
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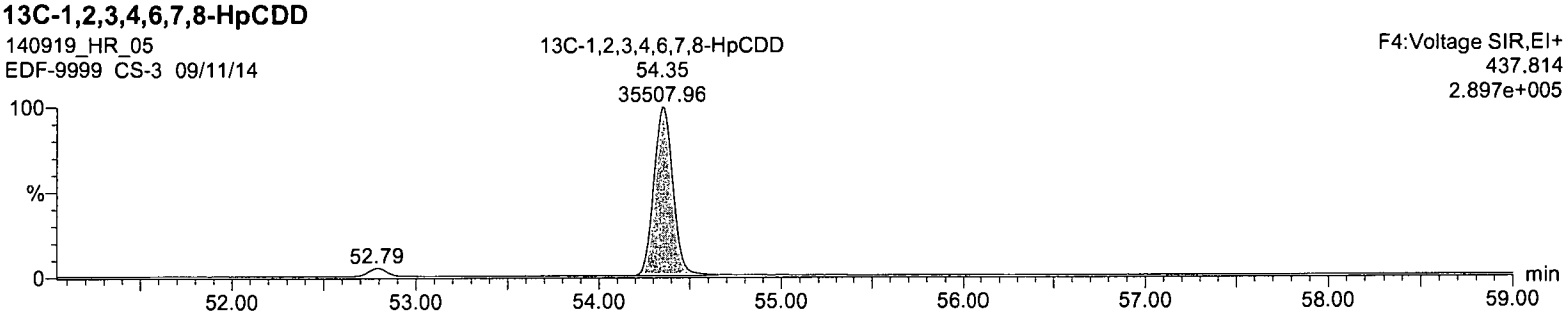
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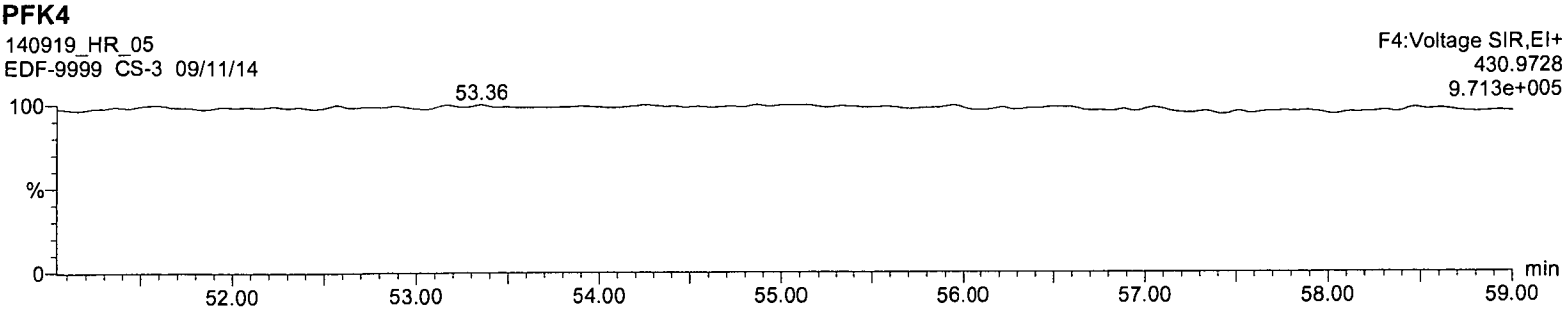
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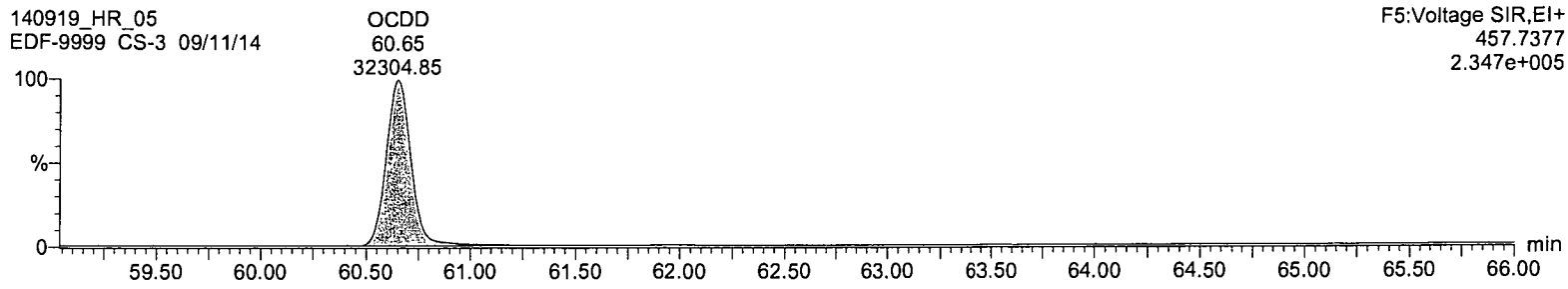


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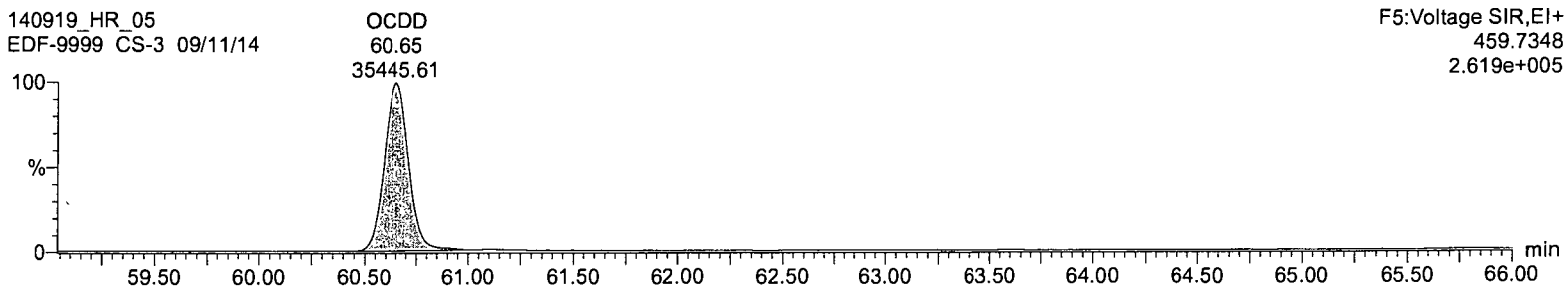


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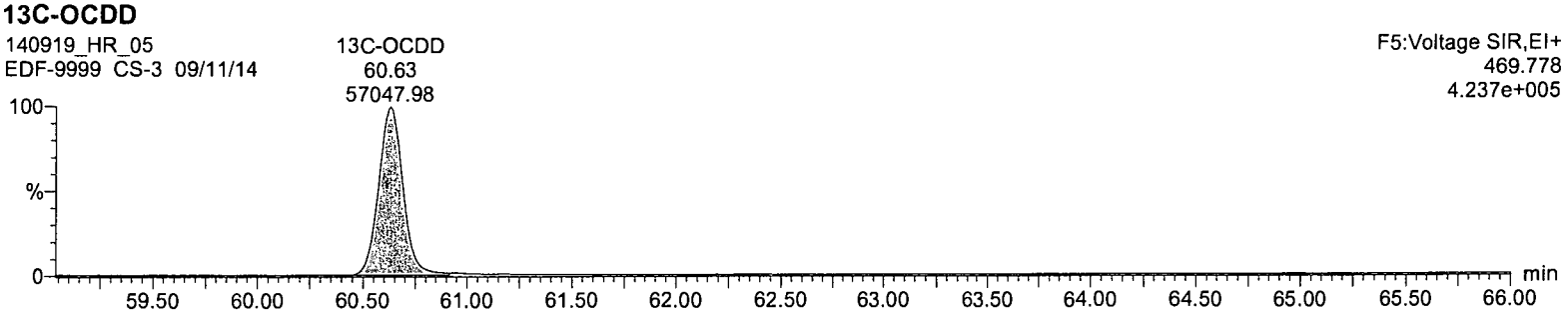
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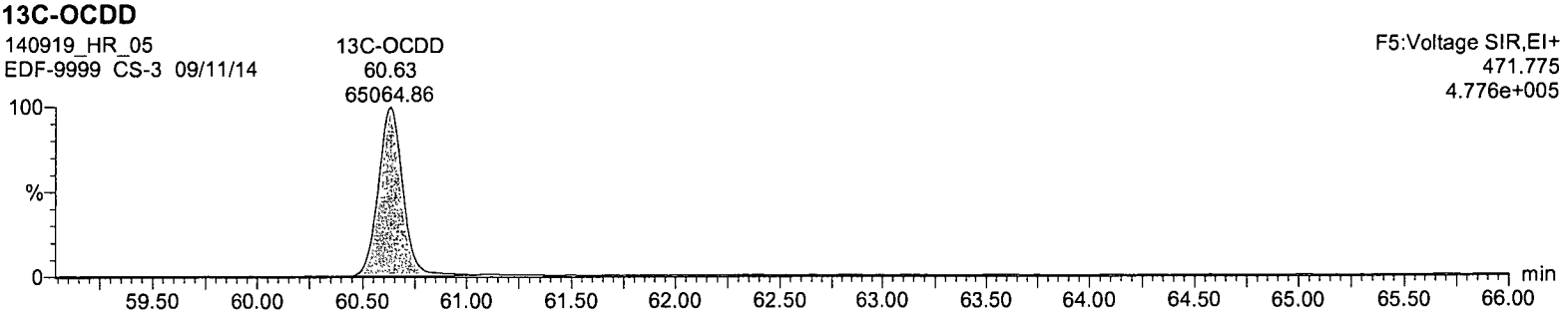
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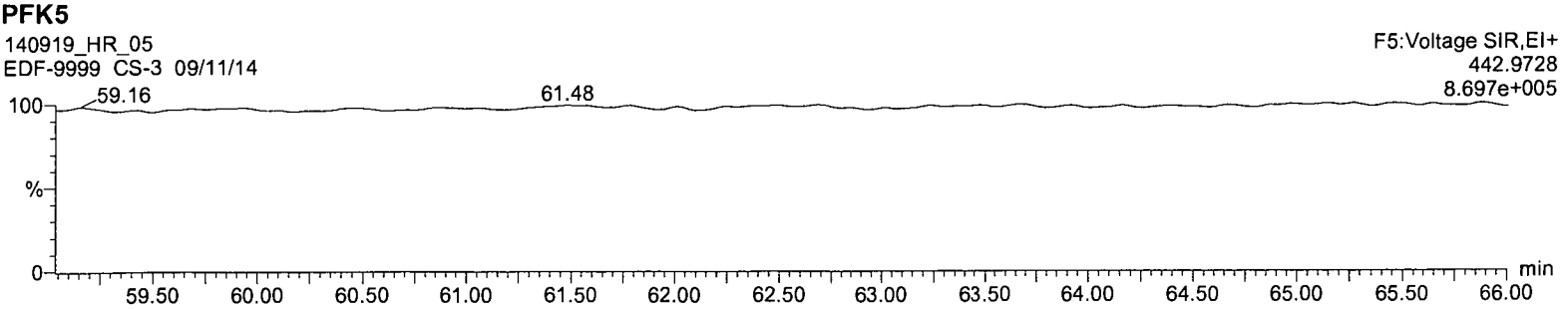
13C-OCDD



13C-OCDD

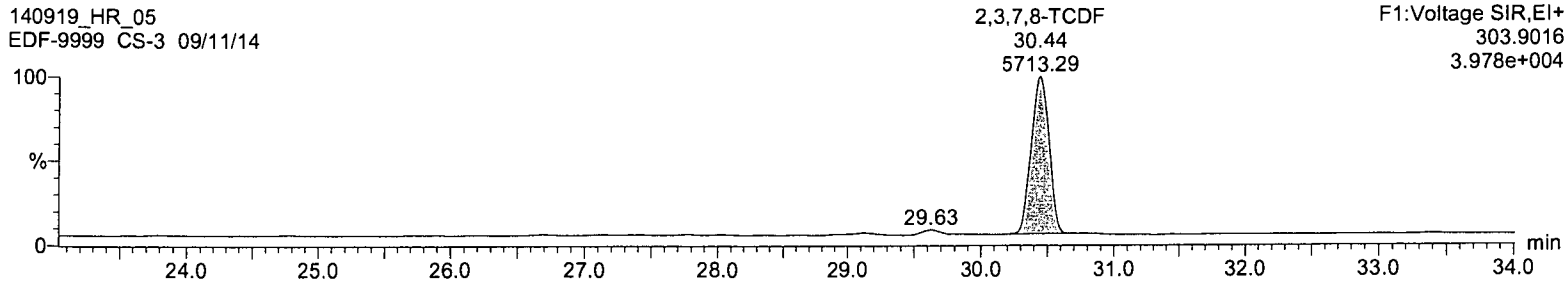


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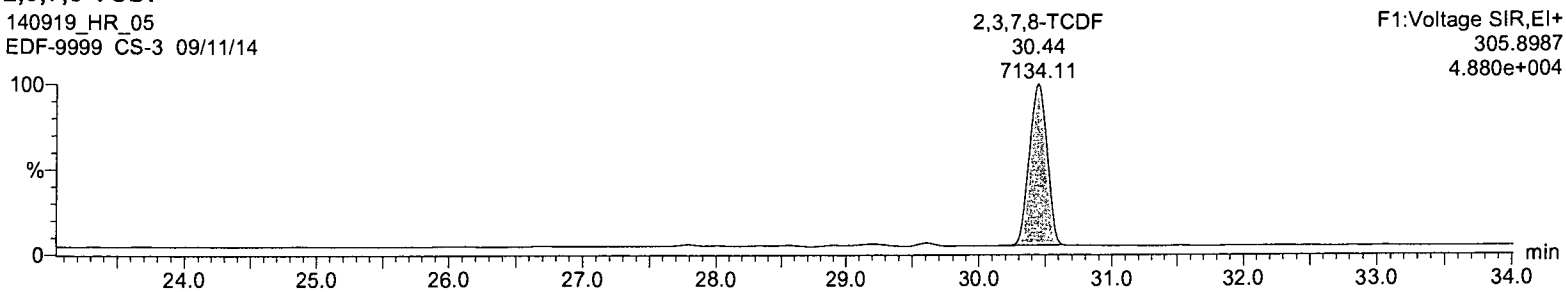


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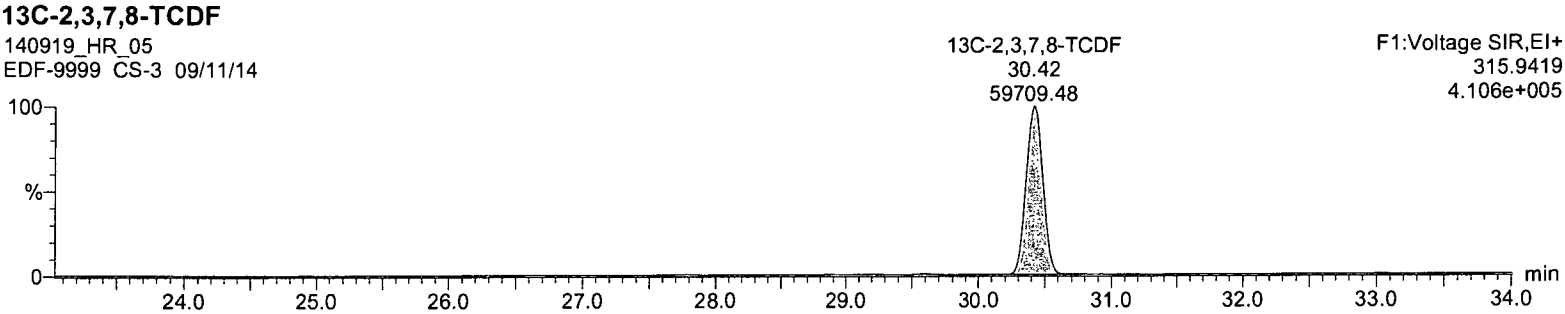
2,3,7,8-TCDF



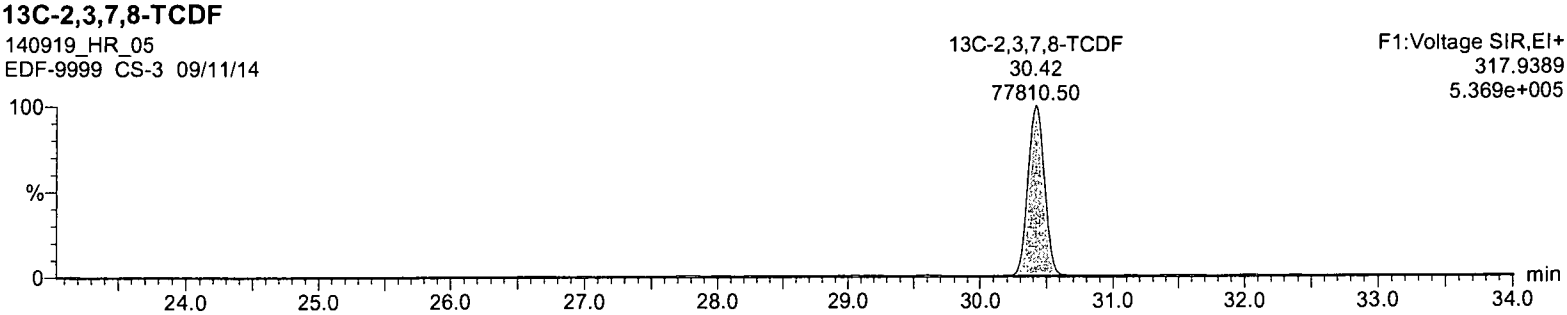
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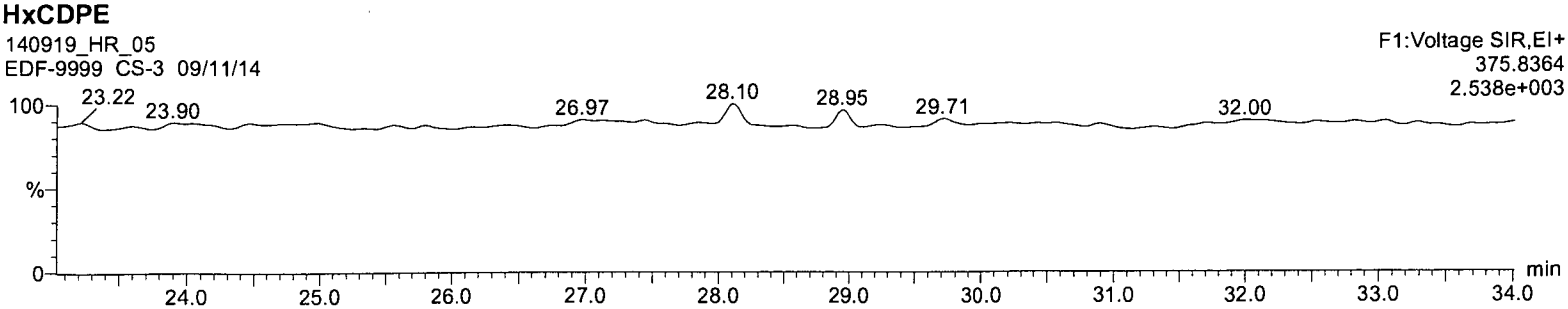
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13C-2,3,7,8-TCDF

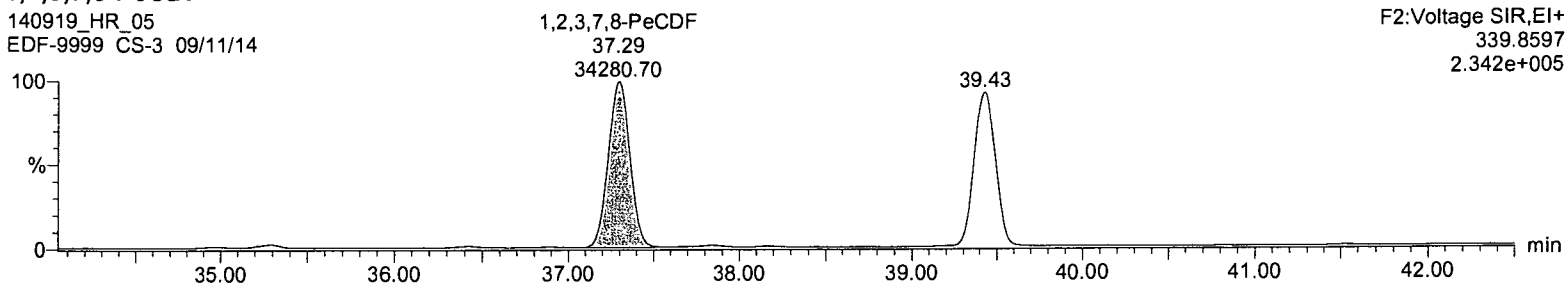


HxCDPE

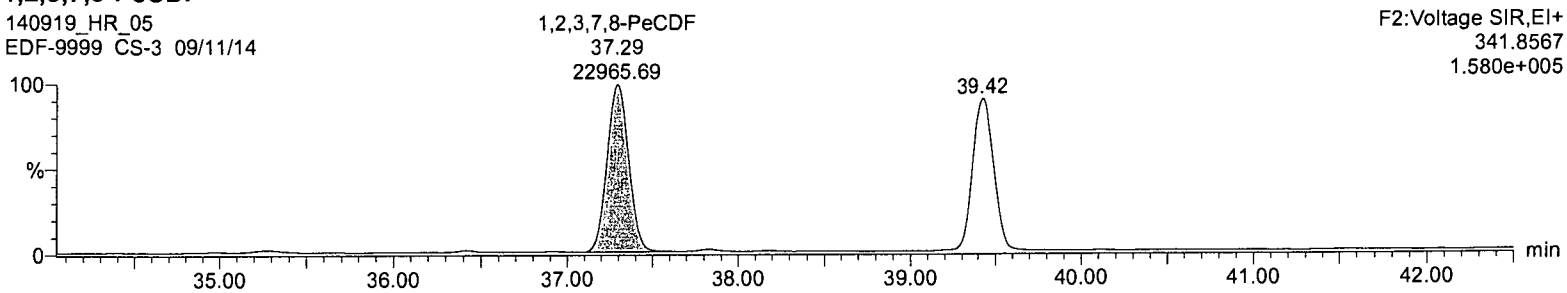


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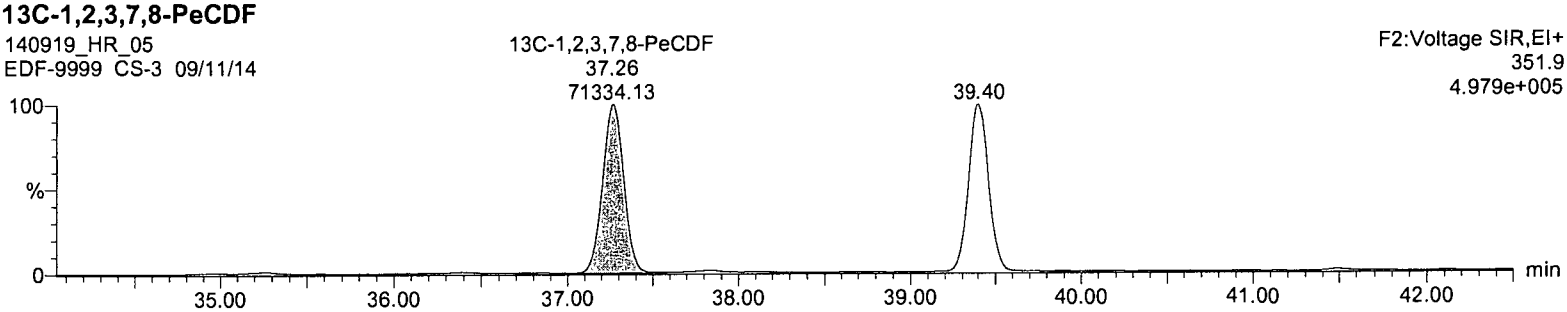
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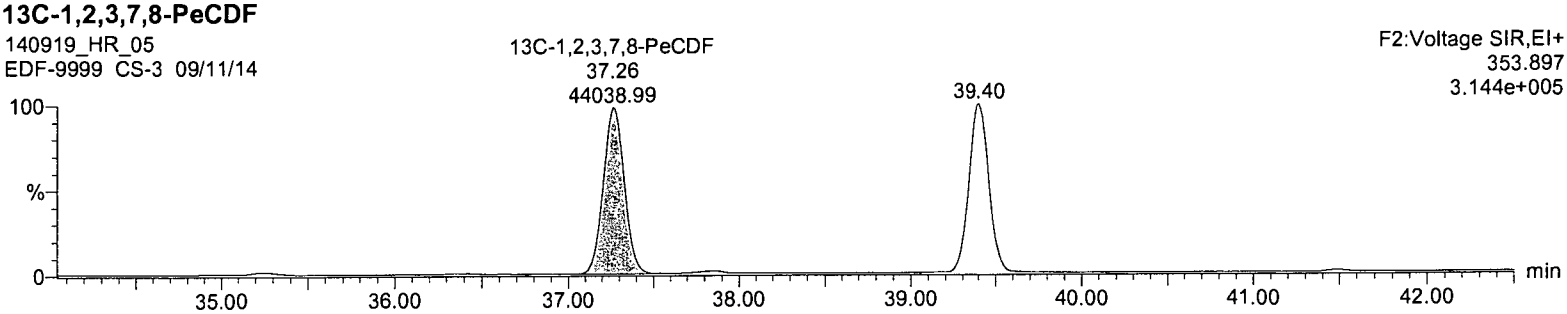
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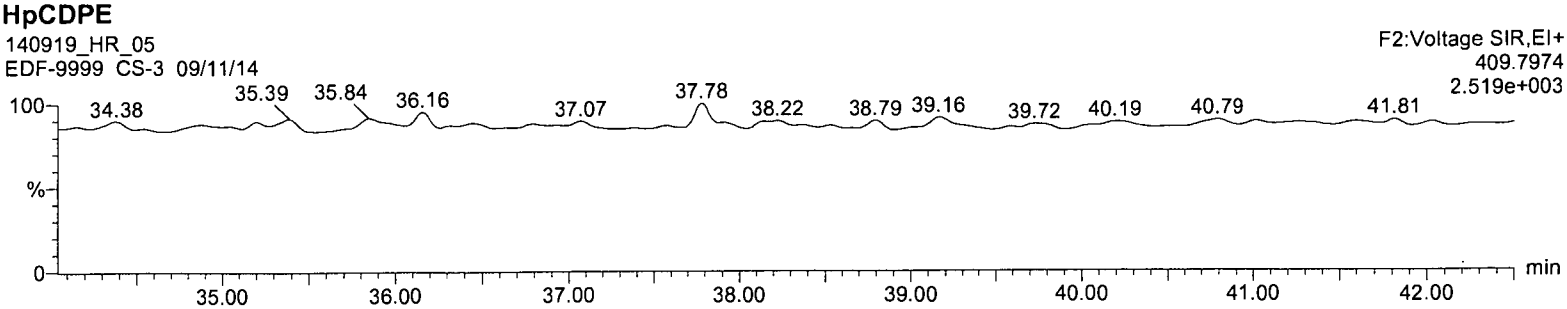
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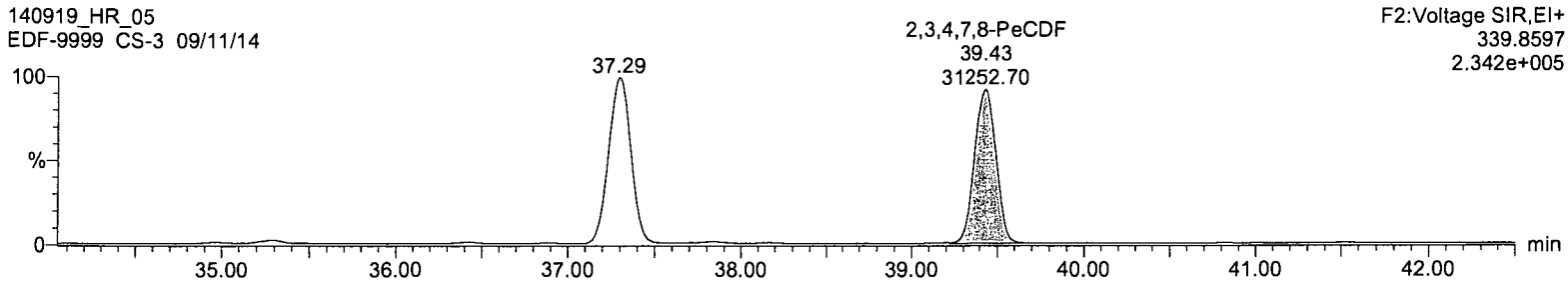


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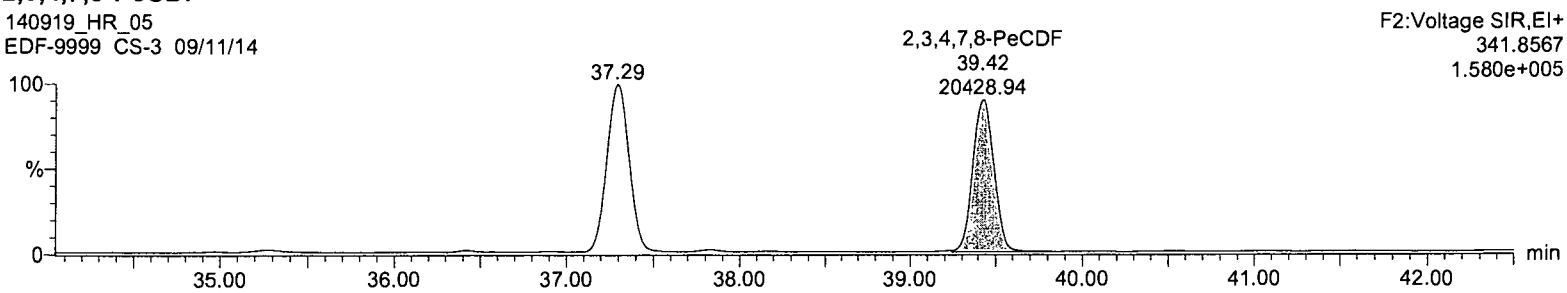


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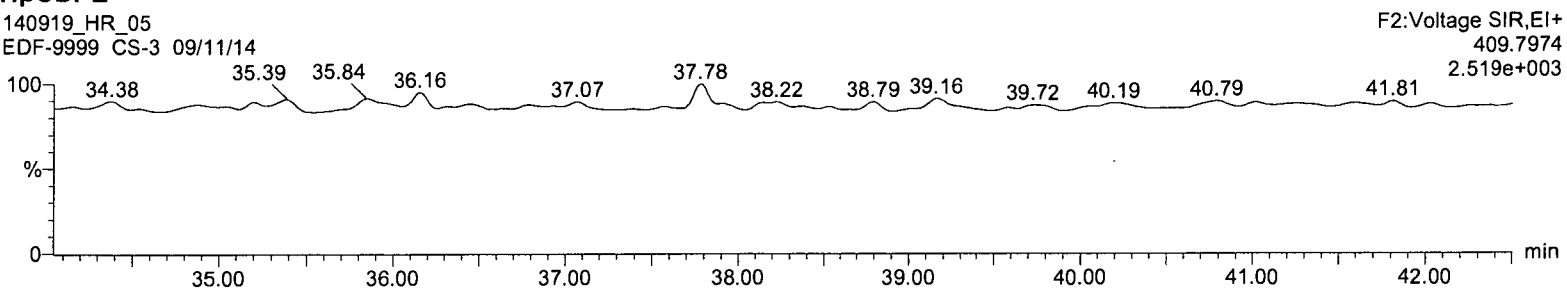
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2,3,4,7,8-PeCDF

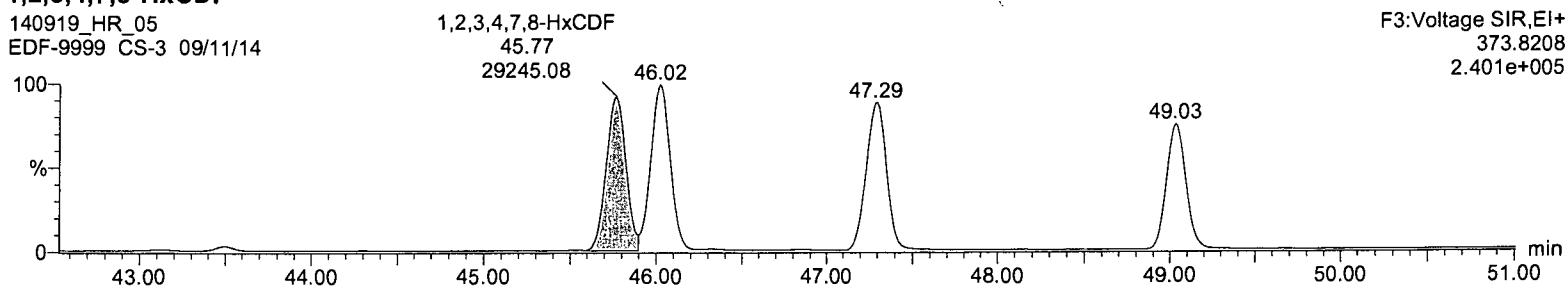


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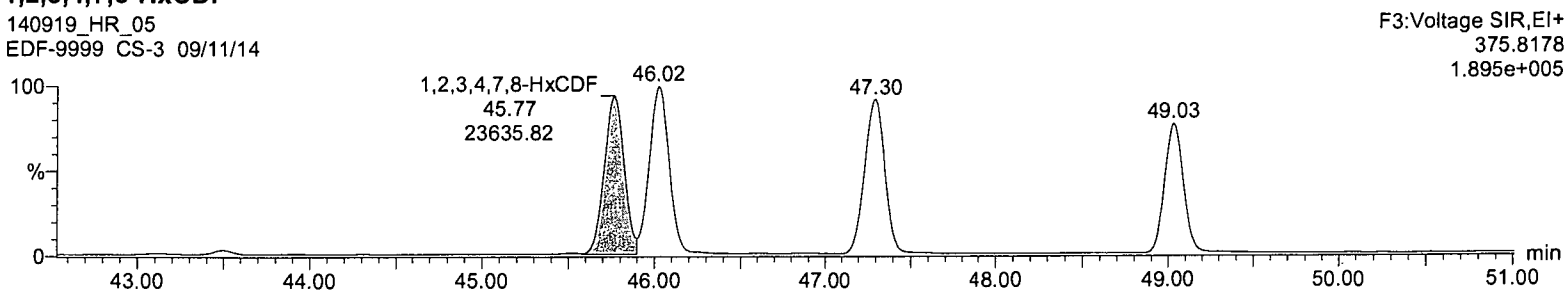


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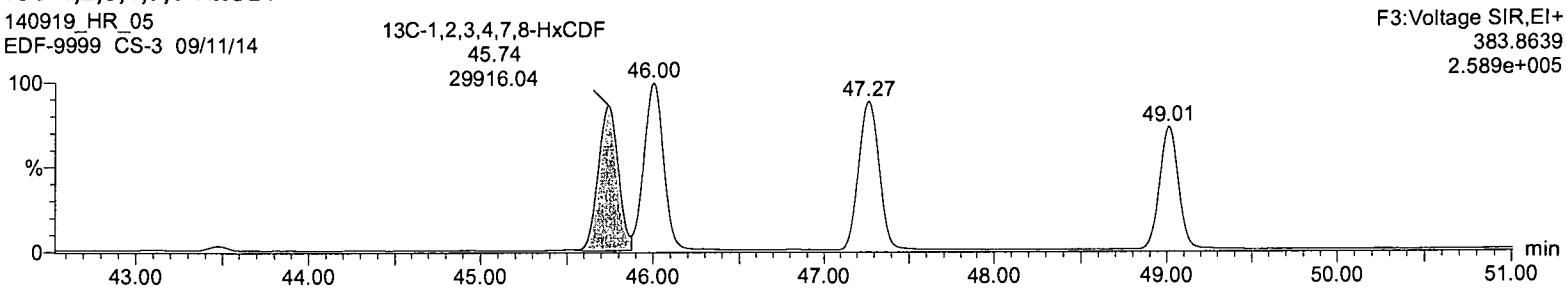
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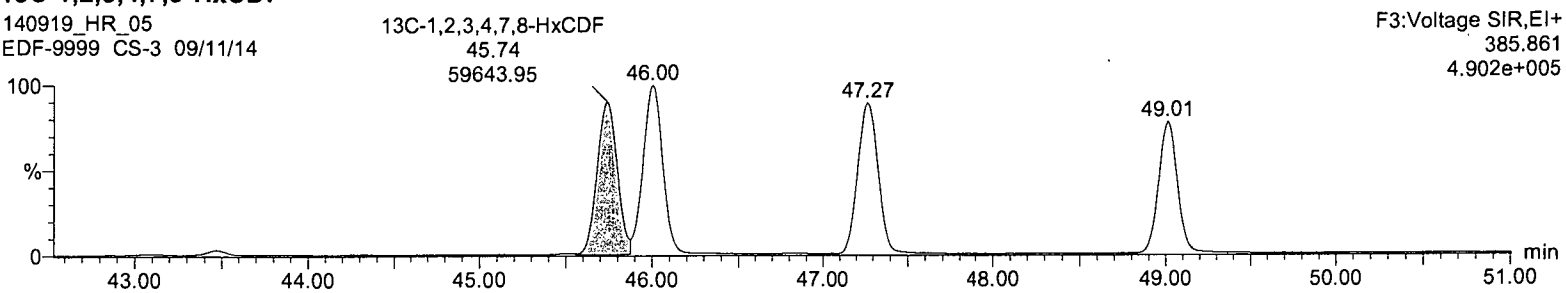
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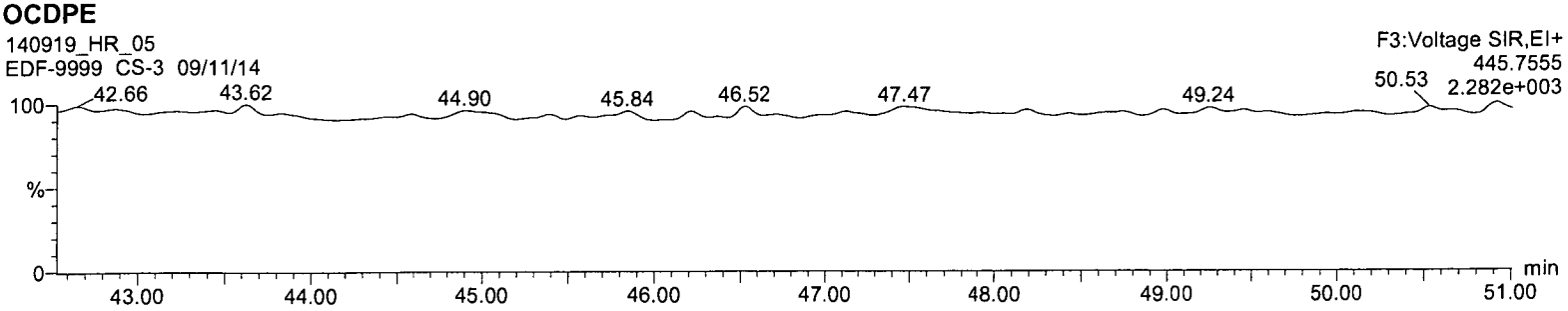
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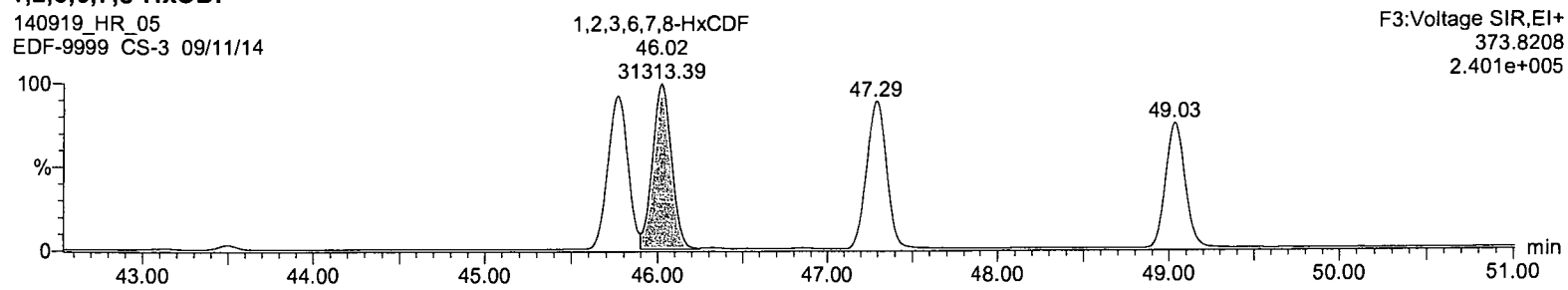


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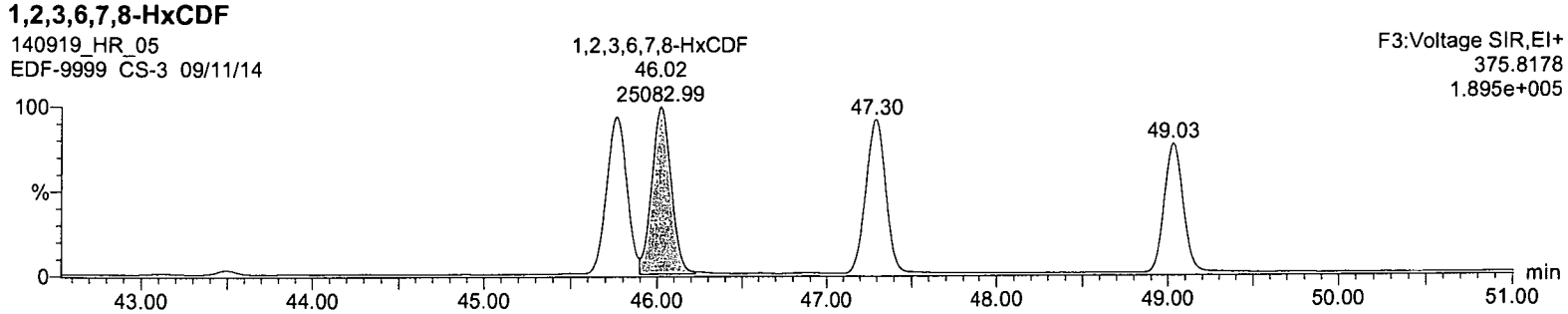


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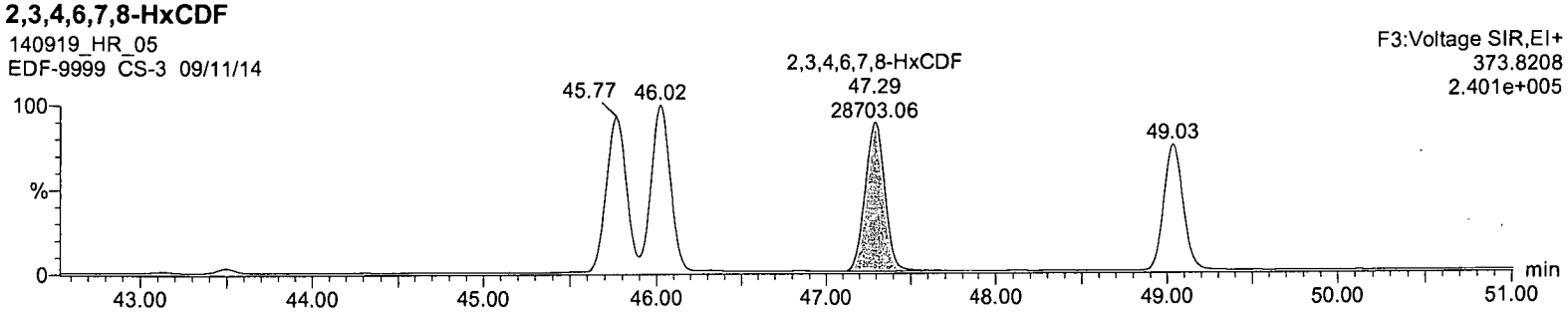
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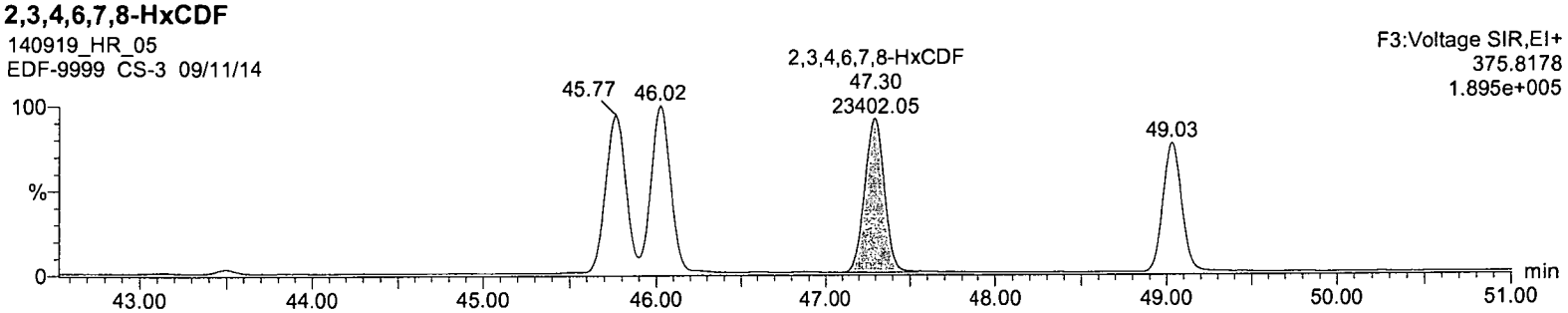
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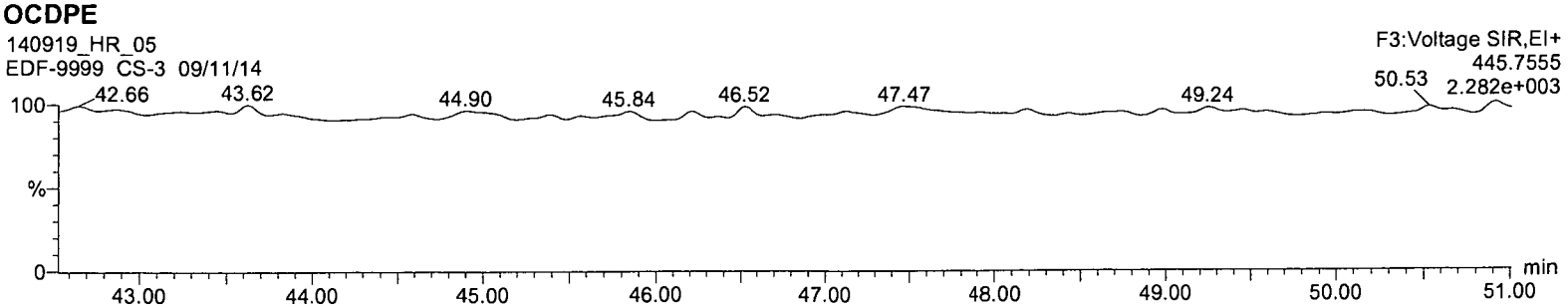
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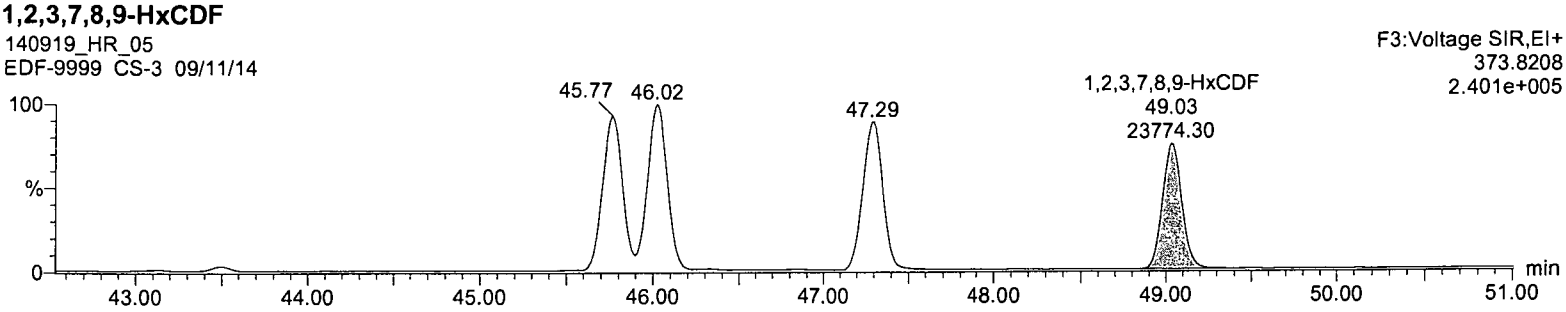


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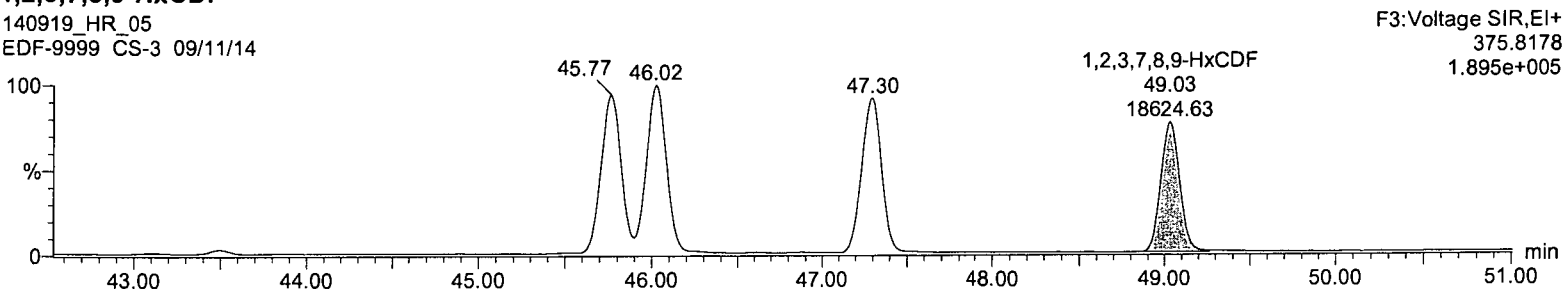


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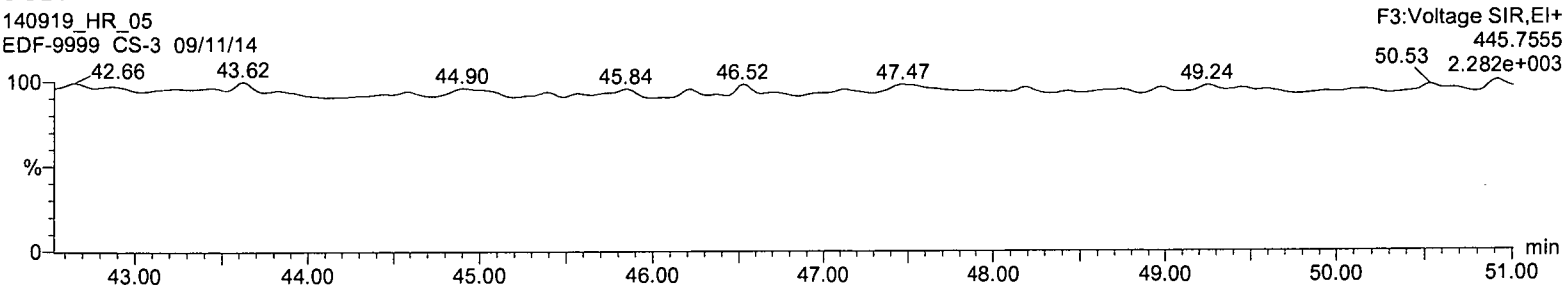
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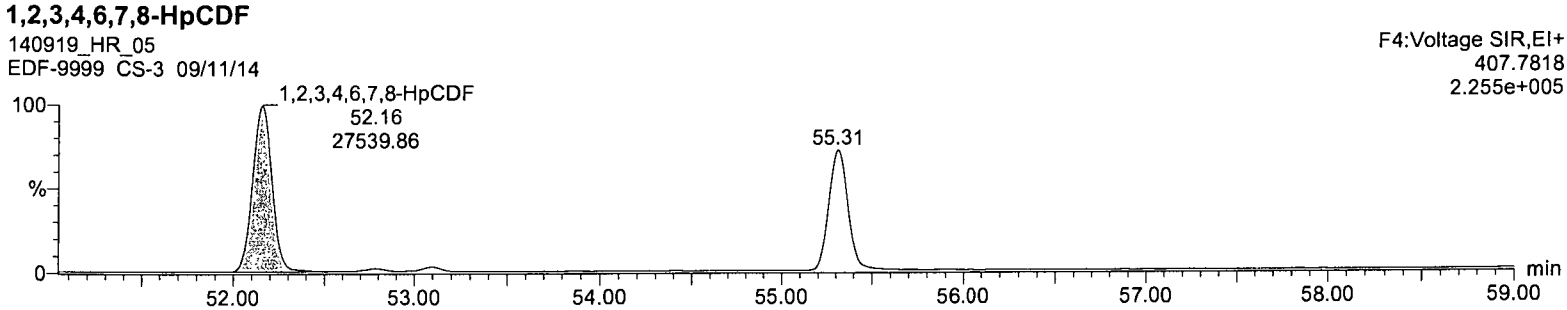


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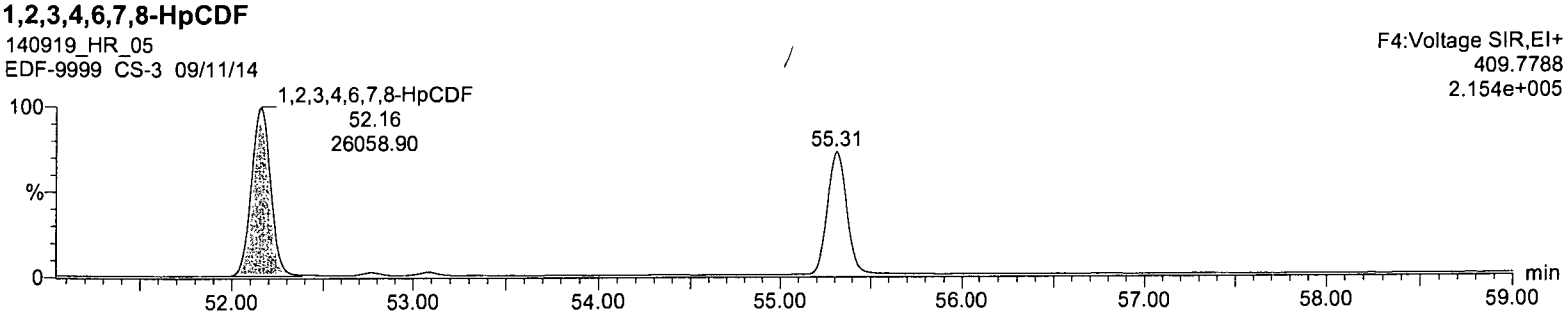


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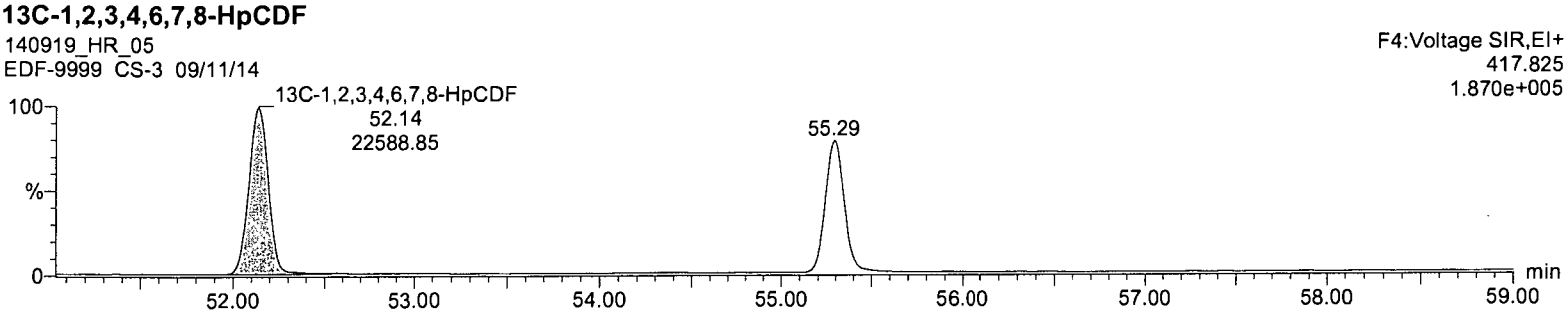
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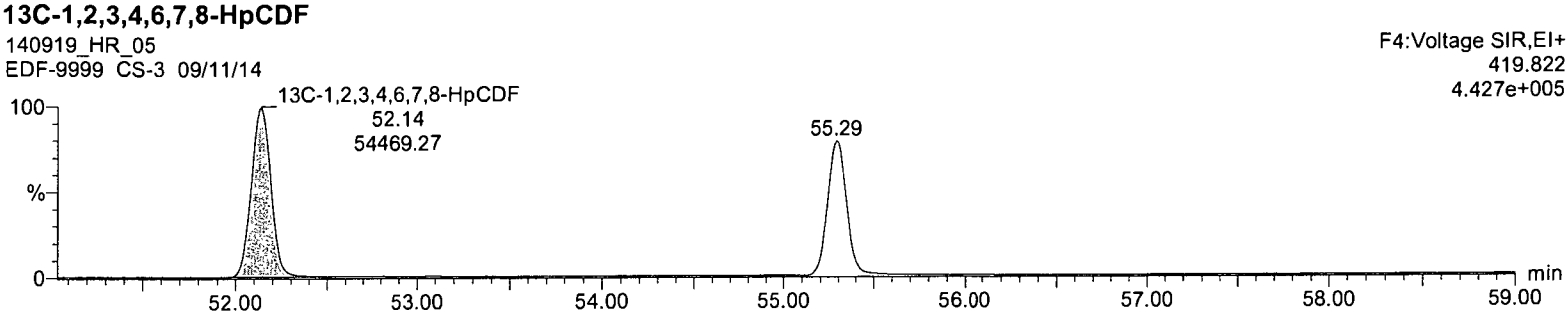
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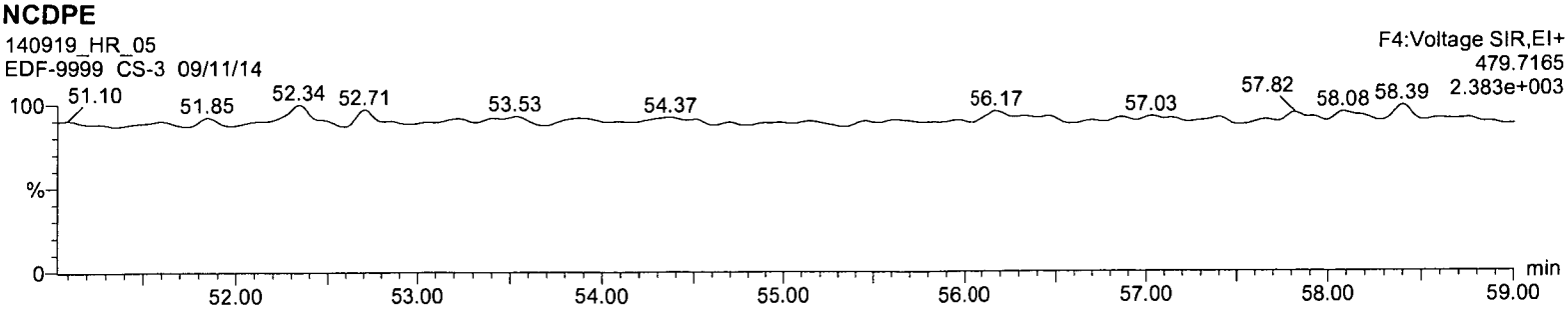
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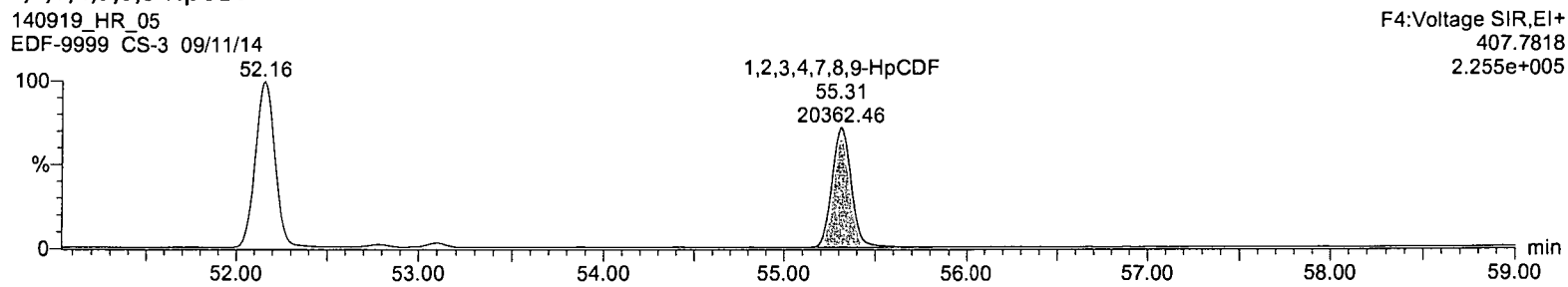


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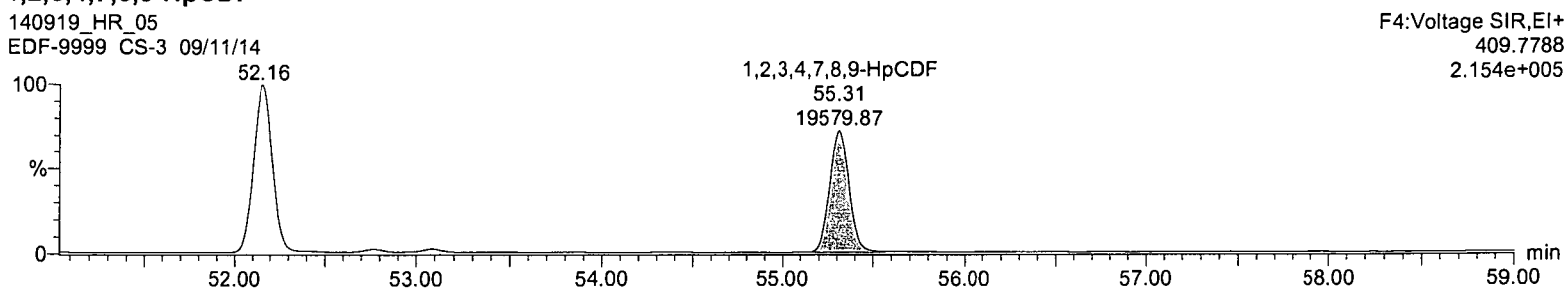


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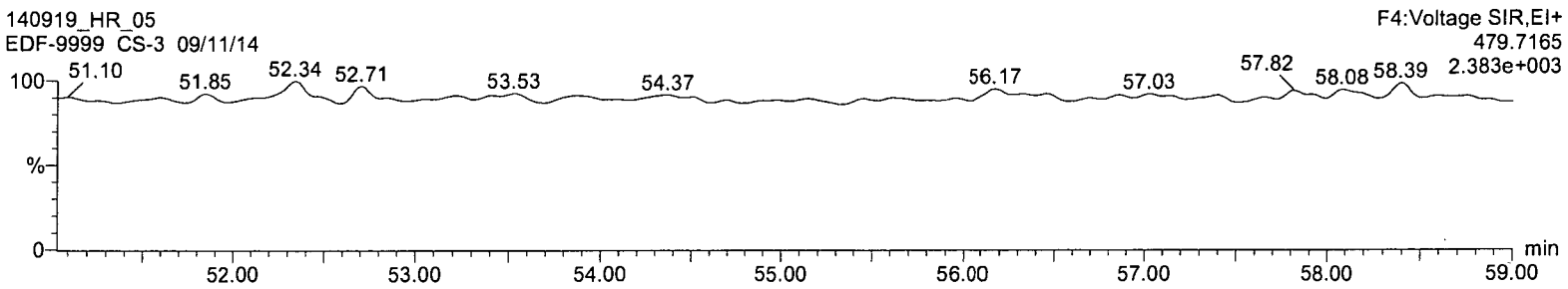
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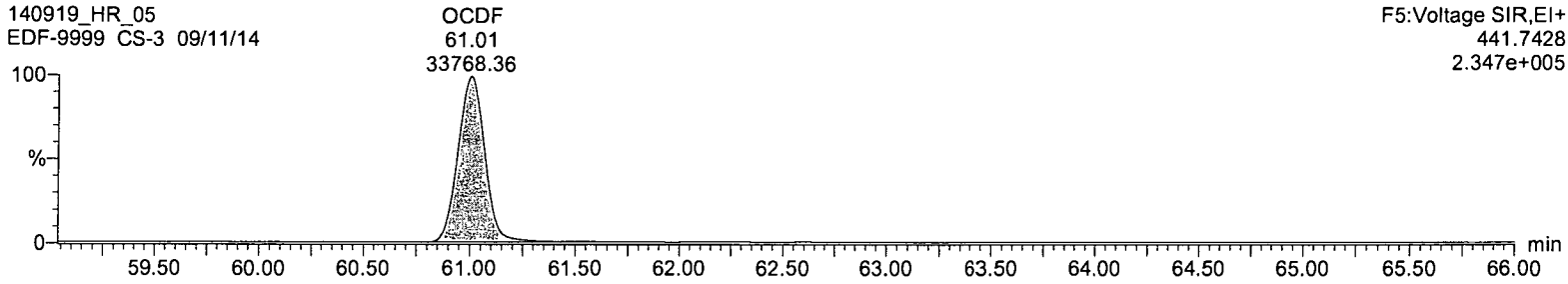


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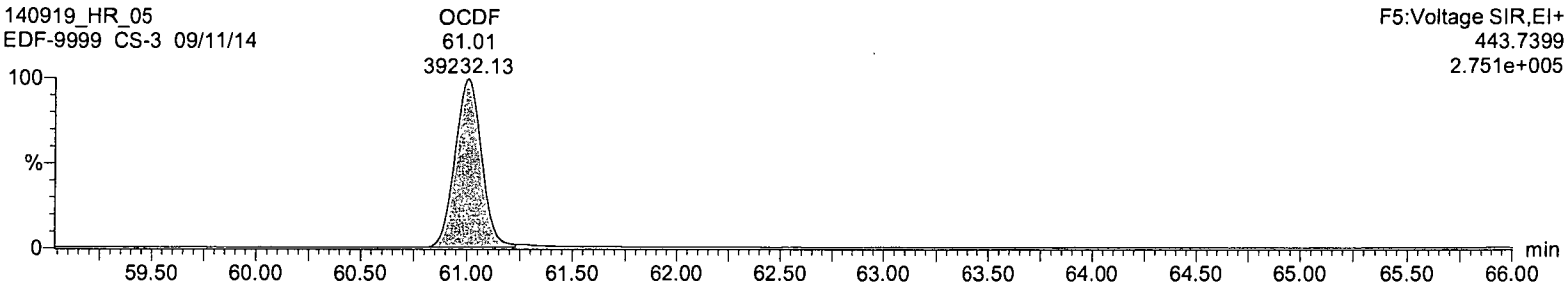


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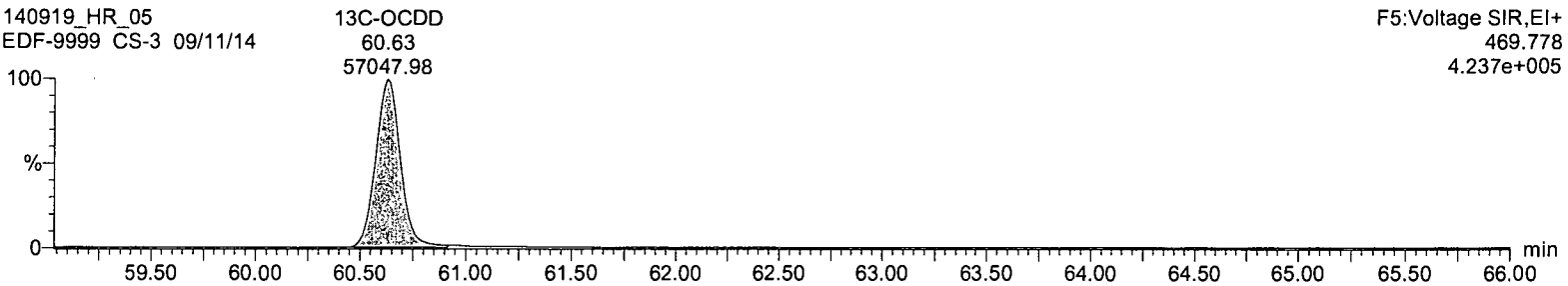
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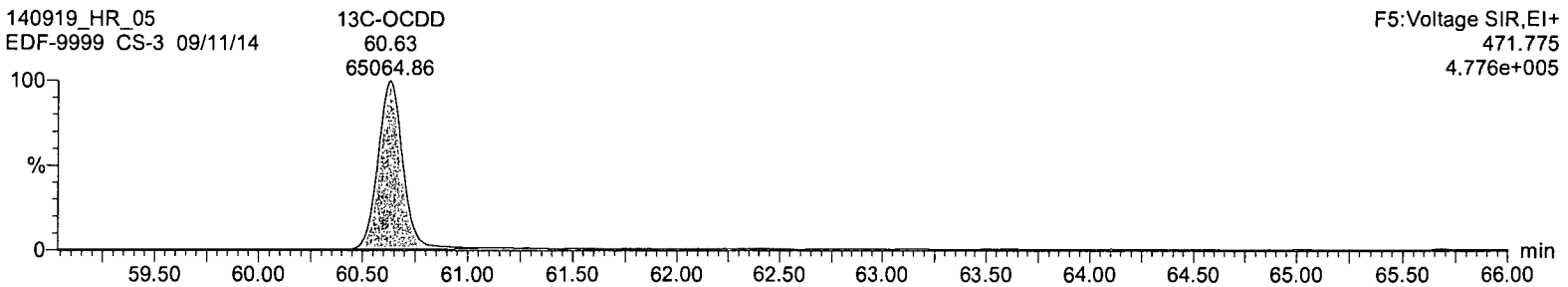
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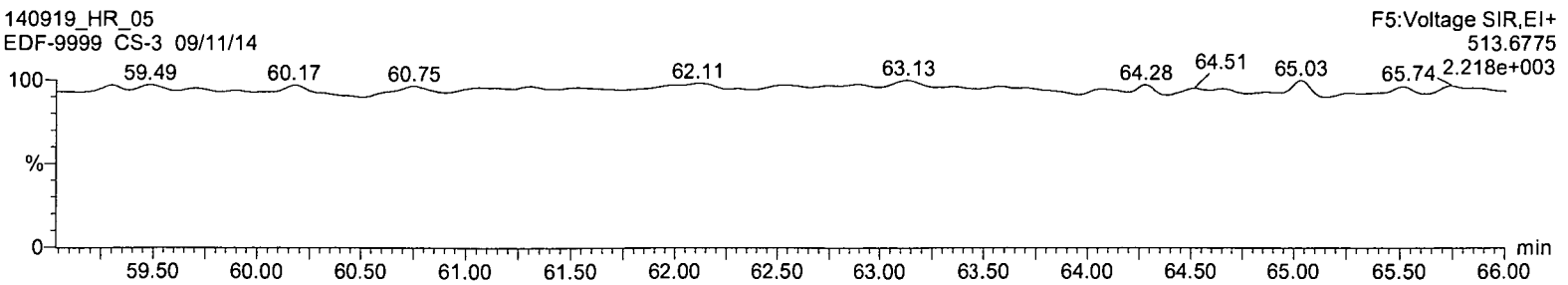
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13C-OCDD

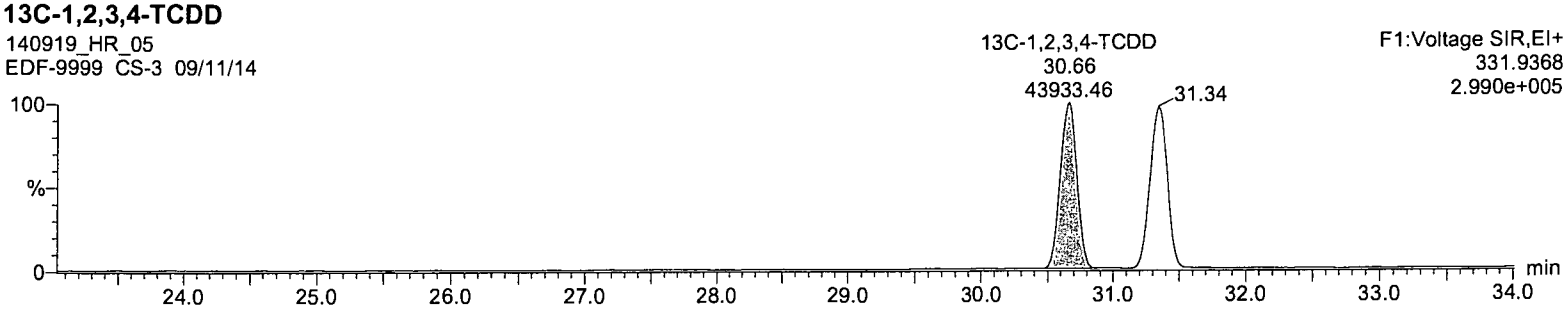


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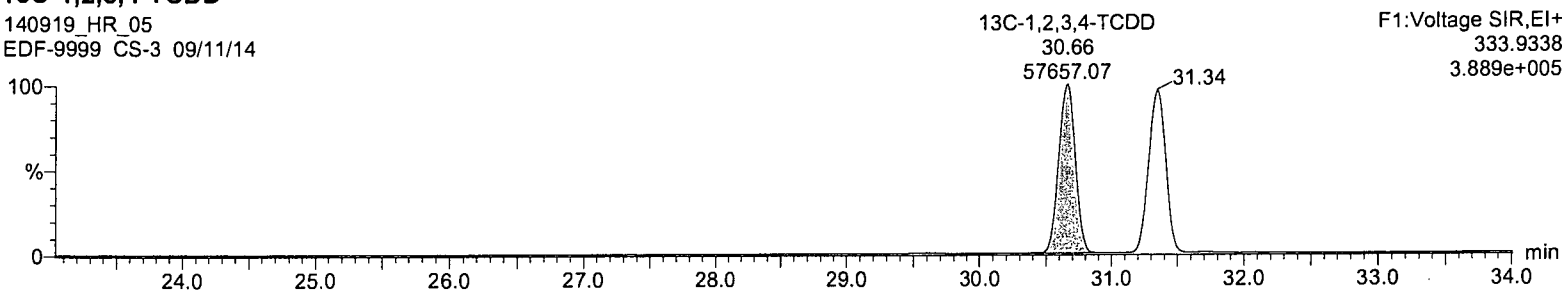


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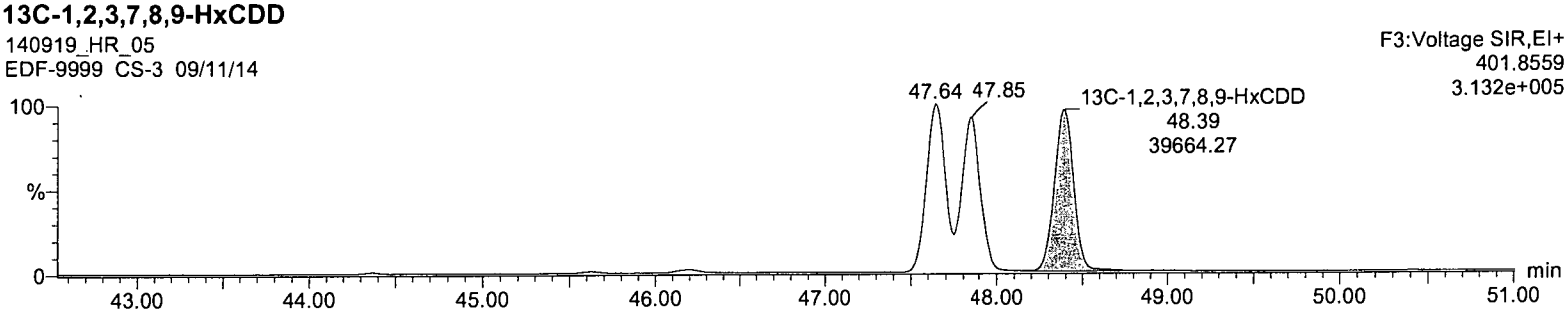
13C-1,2,3,4-TCDD



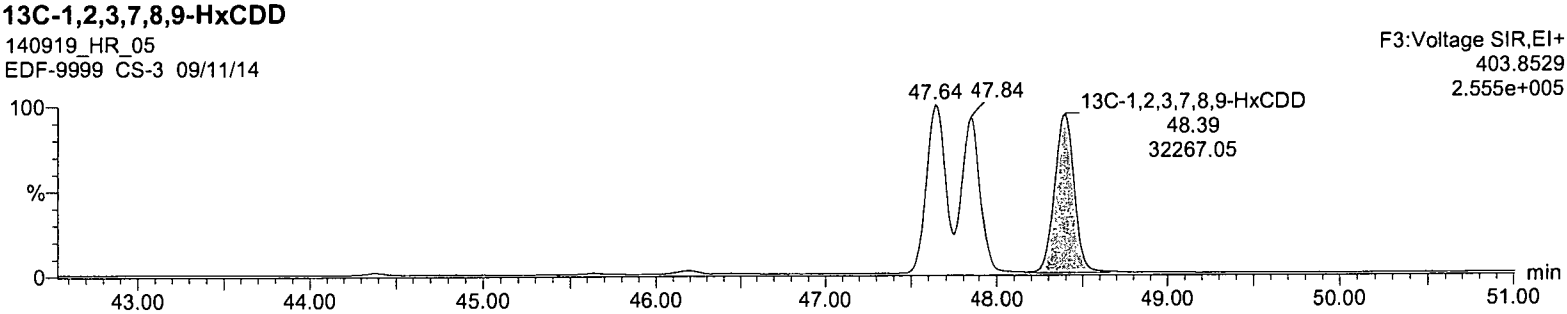
13C-1,2,3,4-TCDD



13C-1,2,3,7,8,9-HxCDD



13C-1,2,3,7,8,9-HxCDD



Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: 22 Sep 2014 12:13:12

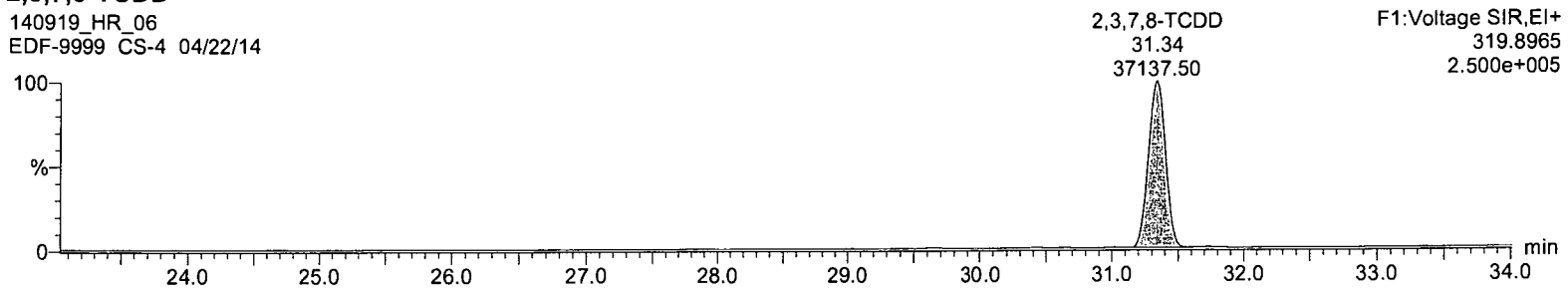
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#	Name	Signal	Noise 1	S/N 1	Flag S/N...	Signal 2	Noise 2	S/N 2	Flag S/N...
1	2,3,7,8-TCDD	2.4772700e5	8.5320671e1	2902.06	NO	3.3984800e5	4.8409119e1	7020.33	NO
2	1,2,3,7,8-PeCDD	1.5058750e6	4.5749203e2	3290.44	NO	9.5334600e5	1.0140405e2	9401.46	NO
3	1,2,3,4,7,8-HxCDD	1.4363770e6	4.5503872e3	311.44	NO	1.1596370e6	3.6656748e3	316.35	NO
4	1,2,3,6,7,8-HxCDD	1.3594280e6	4.5503872e3	294.54	NO	1.0838810e6	3.6656748e3	295.68	NO
5	1,2,3,7,8,9-HxCDD	1.5909300e6	4.5503872e3	345.43	NO	1.2711690e6	3.6656748e3	346.78	NO
6	1,2,3,4,6,7,8-HpCDD	1.4790760e6	2.9849512e2	4952.50	NO	1.3862690e6	2.3158133e2	5986.10	NO
7	OCDD	2.3060470e6	3.0906488e2	7459.30	NO	2.5542090e6	2.9861090e2	8553.64	NO
8	2,3,7,8-TCDF	3.4394800e5	9.6079353e1	3595.05	NO	4.4348000e5	6.3589428e1	6974.12	NO
9	1,2,3,7,8-PeCDF	2.5055290e6	6.1274451e2	4087.44	NO	1.6156900e6	3.8923013e2	4150.99	NO
10	2,3,4,7,8-PeCDF	2.0835460e6	6.1274451e2	3398.92	NO	1.3331560e6	3.8923013e2	3425.11	NO
11	1,2,3,4,7,8-HxCDF	2.4348170e6	2.5076355e2	9704.44	NO	1.9262580e6	3.3846338e2	5691.19	NO
12	1,2,3,6,7,8-HxCDF	2.3749600e6	2.5076355e2	9466.60	NO	1.9162280e6	3.3846338e2	5661.55	NO
13	2,3,4,6,7,8-HxCDF	2.3659040e6	2.5076355e2	9433.35	NO	1.8890930e6	3.3846338e2	5581.38	NO
14	1,2,3,7,8,9-HxCDF	1.8671400e6	2.5076355e2	7442.75	NO	1.4965930e6	3.3846338e2	4421.73	NO
15	1,2,3,4,6,7,8-HpCDF	2.3690430e6	5.7321228e2	4130.64	NO	2.2834490e6	2.3841037e2	9577.81	NO
16	1,2,3,4,7,8,9-HpCDF	1.7246250e6	5.7321228e2	3006.68	NO	1.6875720e6	2.3841037e2	7078.43	NO
17	OCDF	2.5309740e6	1.4126959e2	17911.14	NO	2.7654090e6	2.3715302e2	11660.86	NO
18	13C-2,3,7,8-TCDD	6.6943000e5	1.3628313e2	4918.44	NO	8.5059500e5	1.7405946e2	4886.81	NO
19	13C-1,2,3,7,8-PeCDD	7.9658200e5	1.5096500e2	5273.79	NO	5.0316700e5	1.9763797e2	2545.90	NO
20	13C-1,2,3,6,7,8-HxCDD	6.8769700e5	4.8821820e2	1408.23	NO	5.4210700e5	2.6674579e2	2032.30	NO
21	13C-1,2,3,4,6,7,8-HpCDD	7.1731100e5	1.8594391e2	3856.40	NO	6.7063900e5	1.4241324e2	4709.11	NO
22	13C-OCDD	1.0063100e6	1.5151929e2	6638.20	NO	1.1185020e6	1.9340549e2	5783.20	NO
23	13C-2,3,7,8-TCDF	9.8997200e5	6.6153397e1	14962.62	NO	1.2550060e6	9.0802254e1	13821.31	NO
24	13C-1,2,3,7,8-PeCDF	1.1342680e6	5.5189972e2	2053.89	NO	7.1236300e5	4.7252759e2	1507.56	NO
25	13C-1,2,3,4,7,8-HxCDF	5.6531600e5	2.2747549e2	2483.12	NO	1.0981480e6	3.5911481e2	3057.93	NO
26	13C-1,2,3,4,6,7,8-HpCDF	4.9766300e5	1.6613132e2	2993.87	NO	1.1389690e6	1.6045763e3	709.83	NO
27	13C-1,2,3,4-TCDD	6.9661000e5	1.3628313e2	5112.22	NO	9.2393800e5	1.7405946e2	5308.17	NO
28	13C-1,2,3,7,8,9-HxCDD	7.2543600e5	4.8821820e2	1484.97	NO	5.8662500e5	2.6674579e2	2199.19	NO

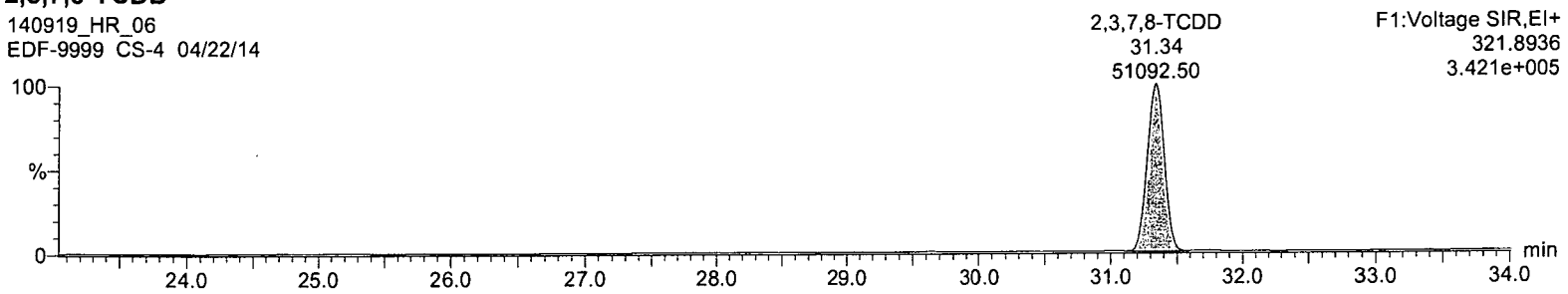
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Calibration: 22 Sep 2014 12:13:12

Name: 140919_HR_06, Date: 19-Sep-2014, Time: 22:35:19, Description: EDF-9999 CS-4 04/22/14, User:

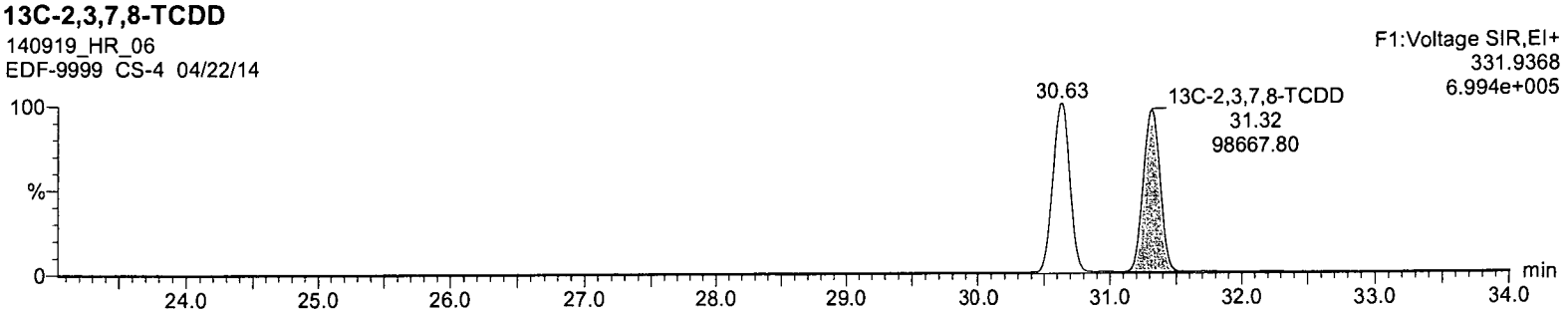
2,3,7,8-TCDD



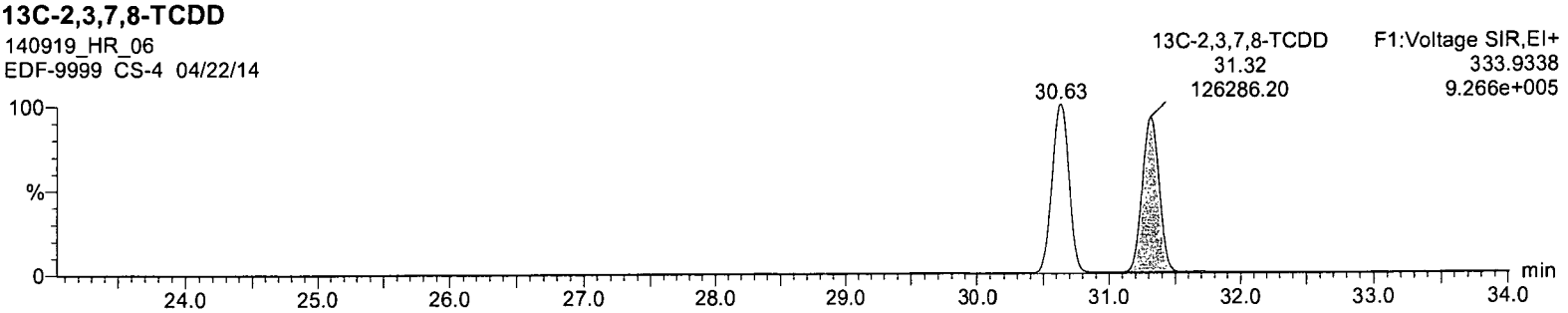
2,3,7,8-TCDD



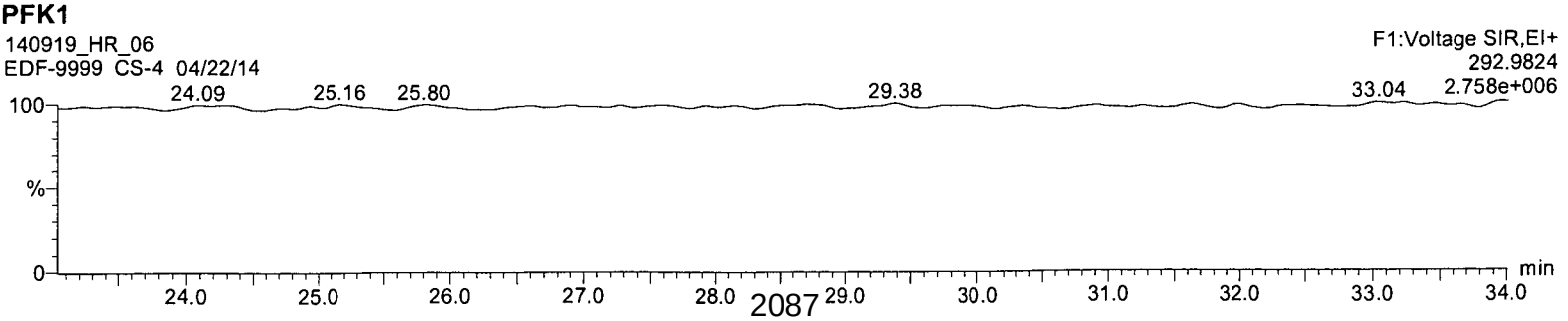
13C-2,3,7,8-TCDD



13C-2,3,7,8-TCDD

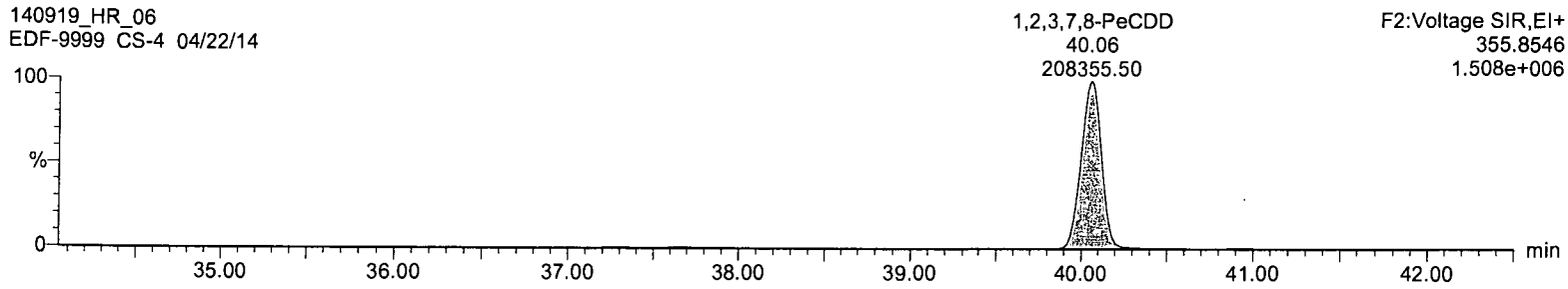


PFK1

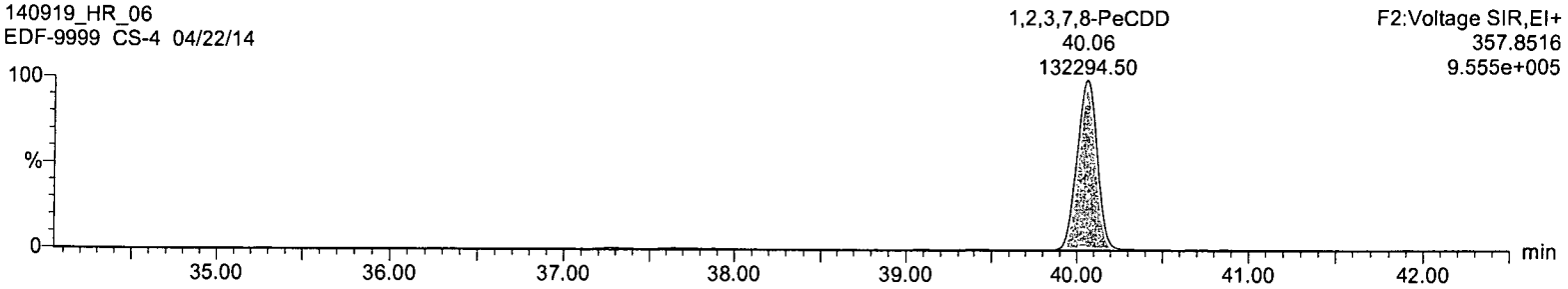


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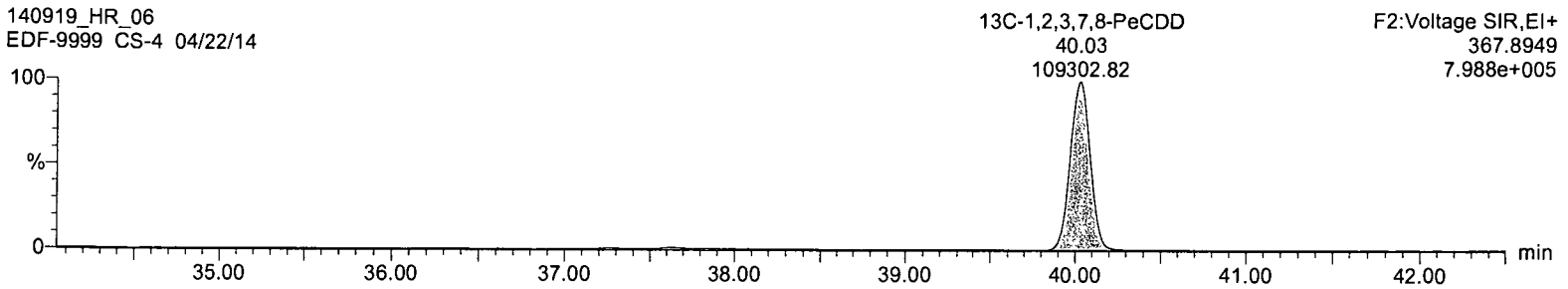
1,2,3,7,8-PeCDD



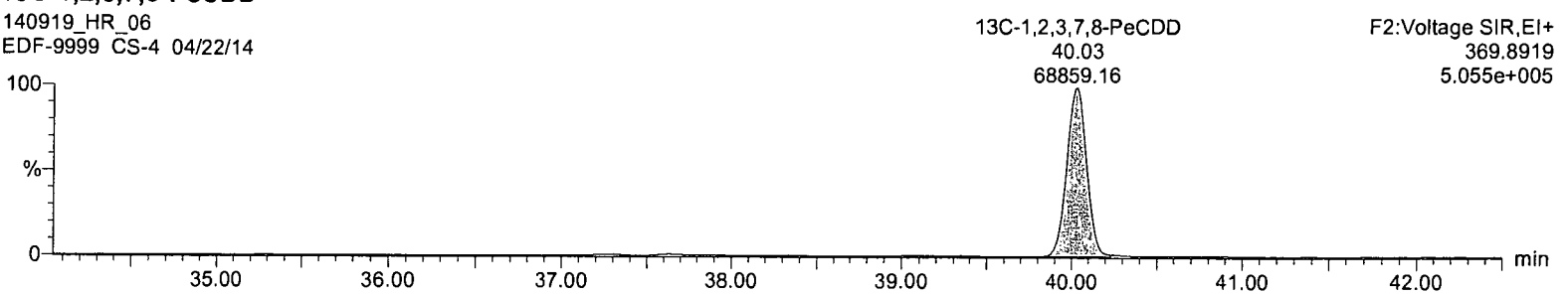
1,2,3,7,8-PeCDD



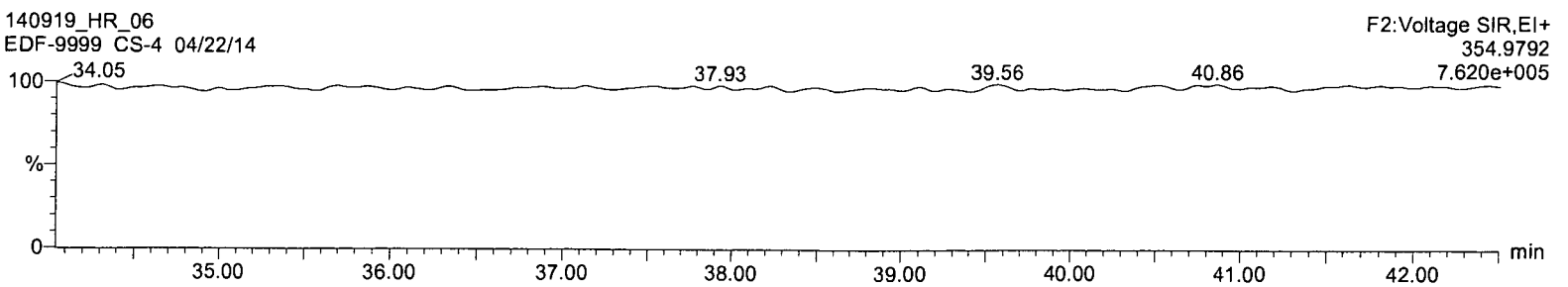
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13C-1,2,3,7,8-PeCDD

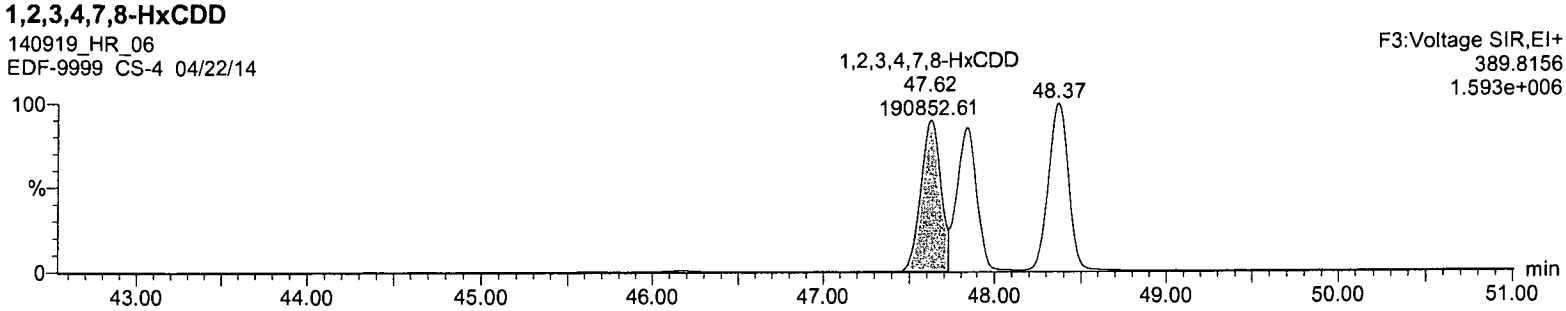


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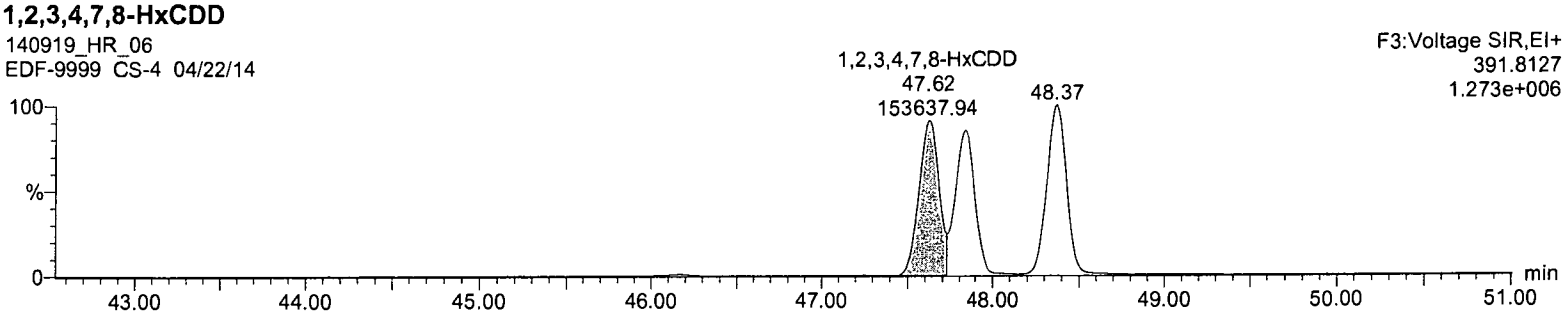


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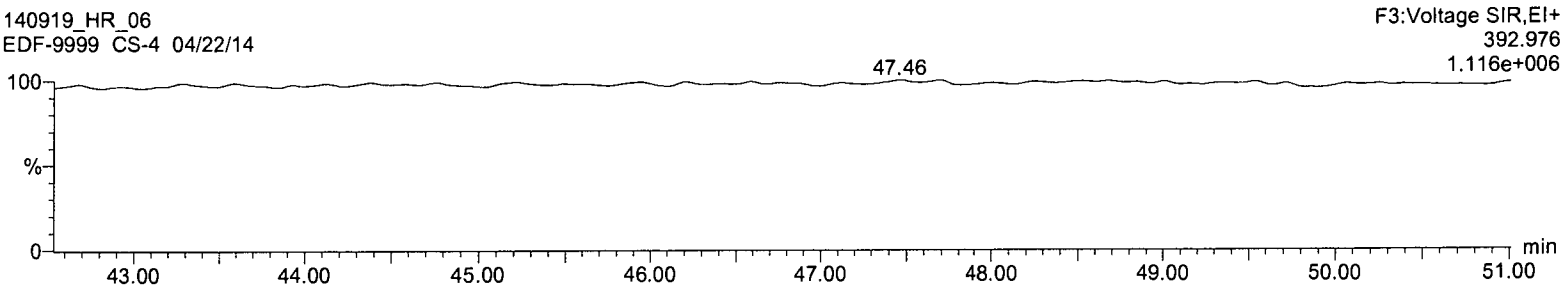
1,2,3,4,7,8-HxCDD



1,2,3,4,7,8-HxCDD

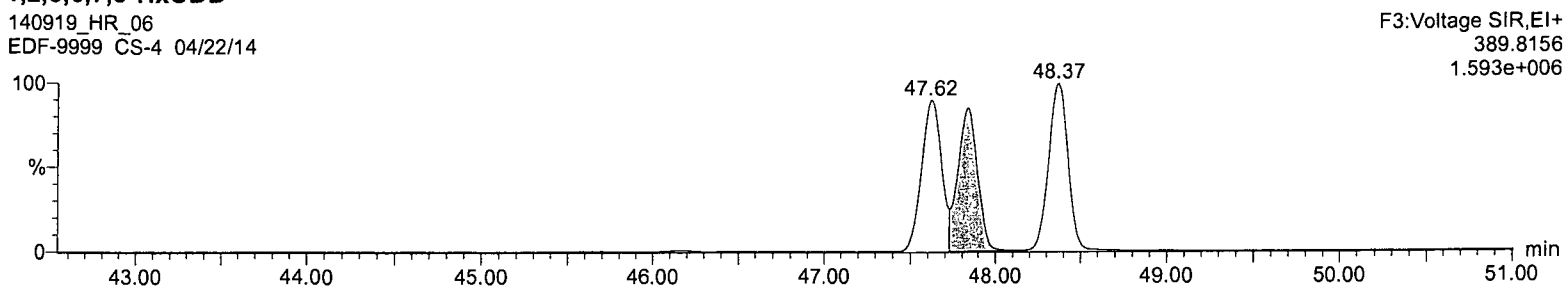


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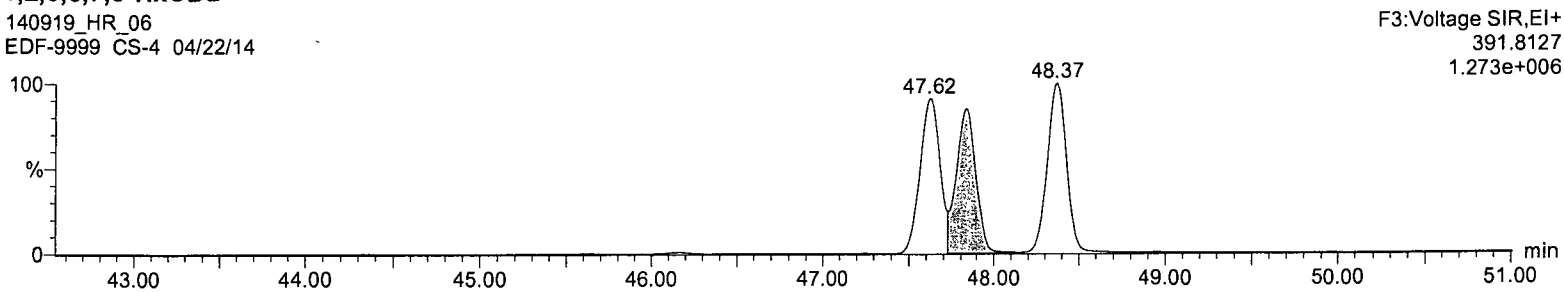


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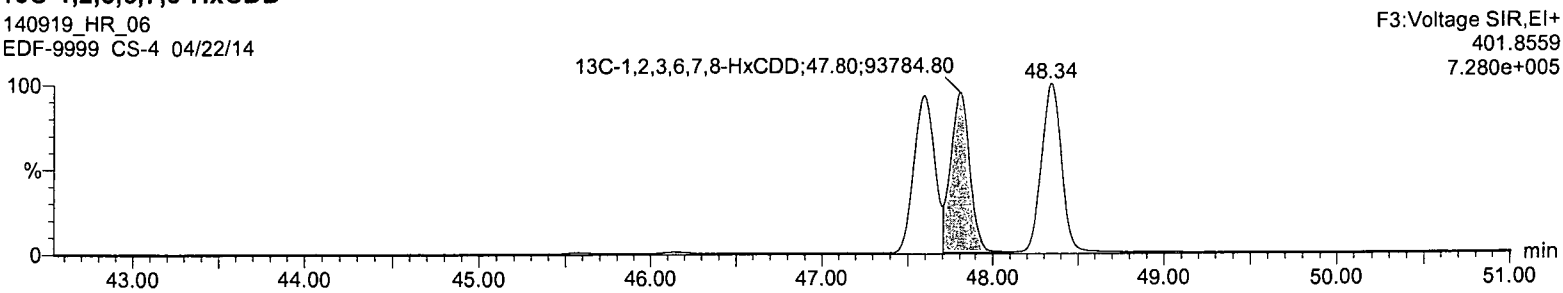
1,2,3,6,7,8-HxCDD



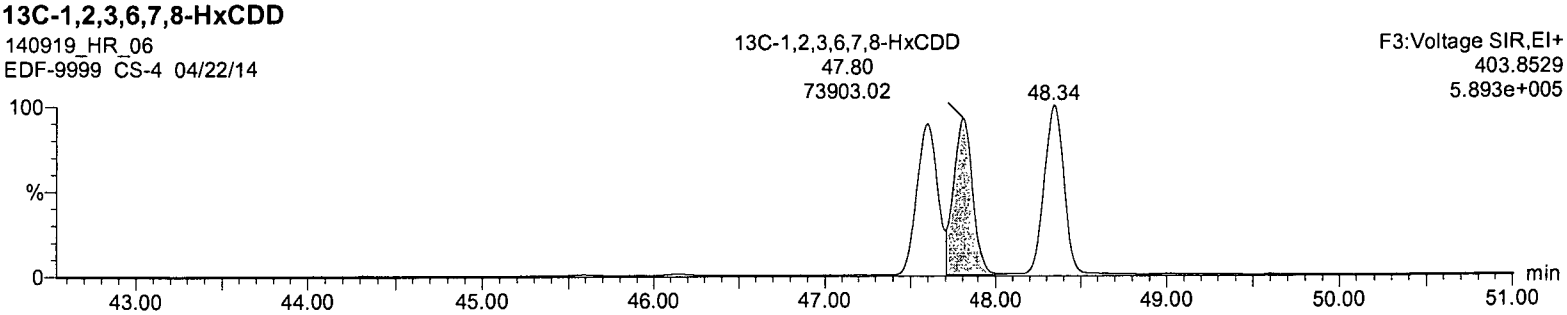
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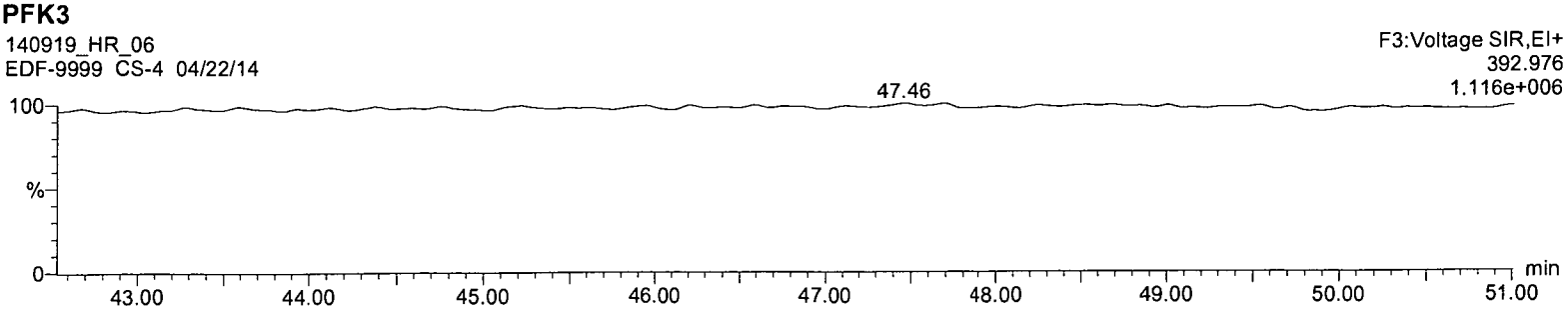
13C-1,2,3,6,7,8-HxCDD



13C-1,2,3,6,7,8-HxCDD

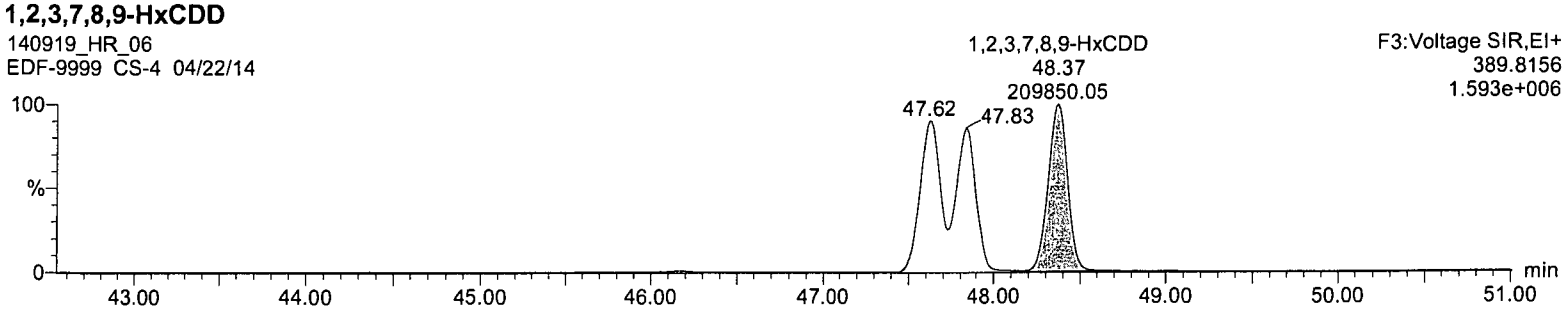


PFK3

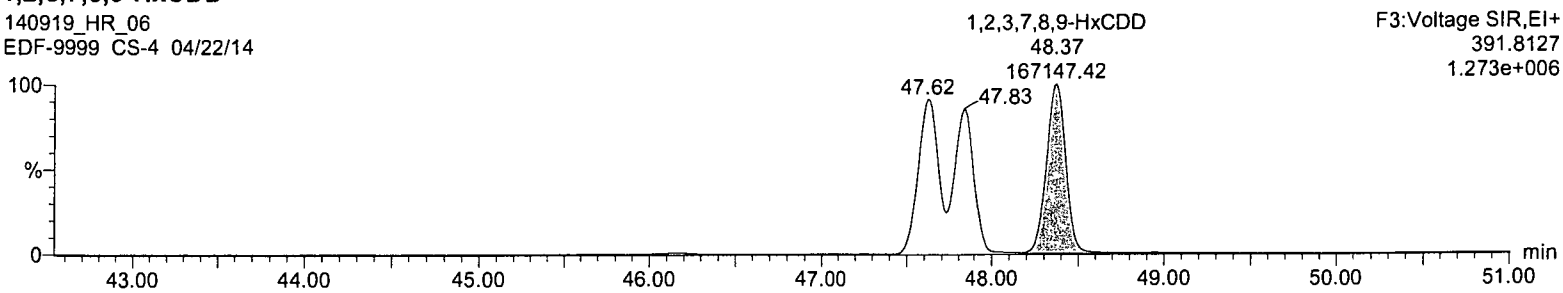


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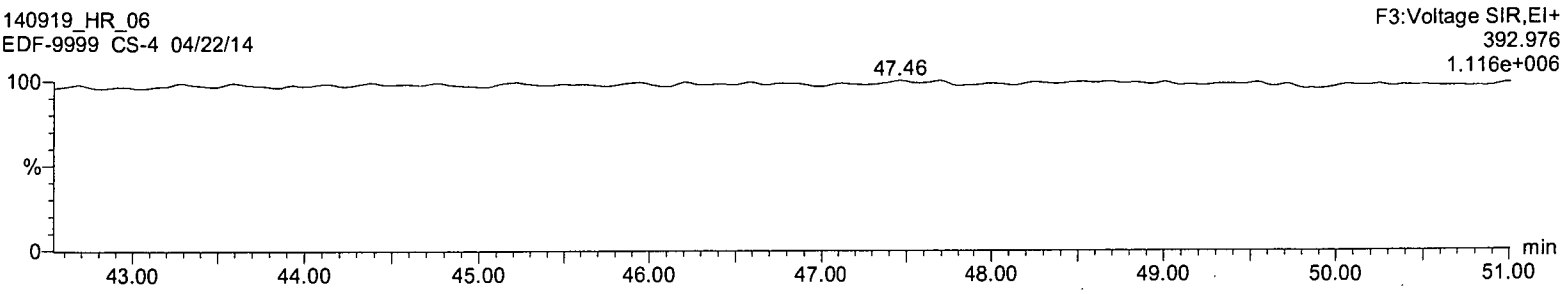
1,2,3,7,8,9-HxCDD



1,2,3,7,8,9-HxCDD

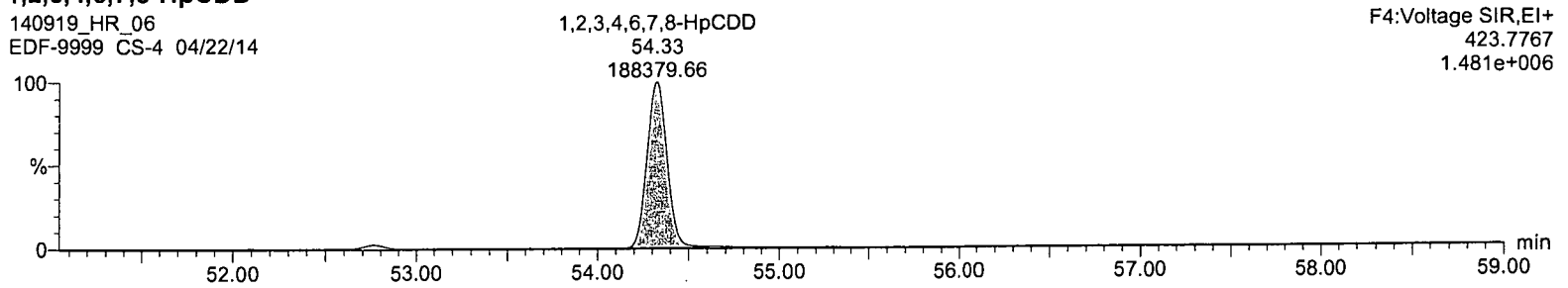


PFK3

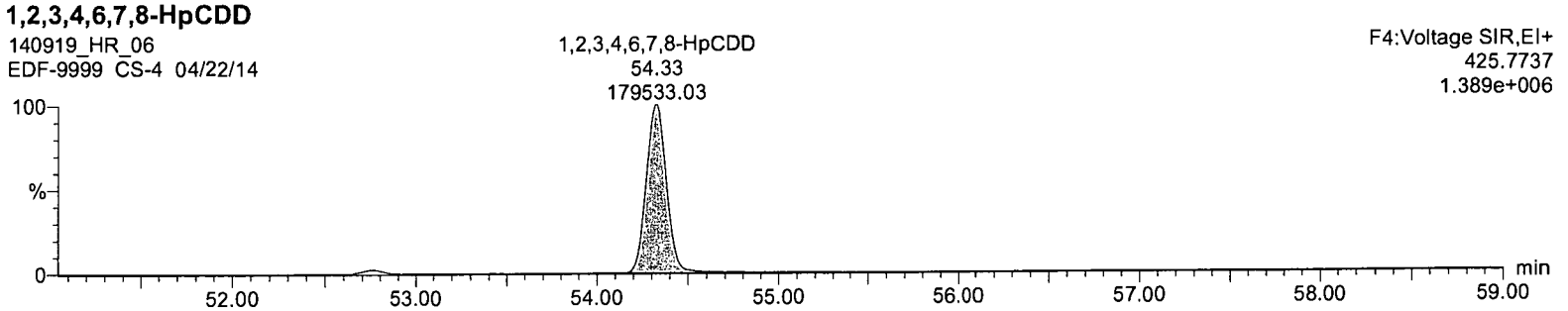


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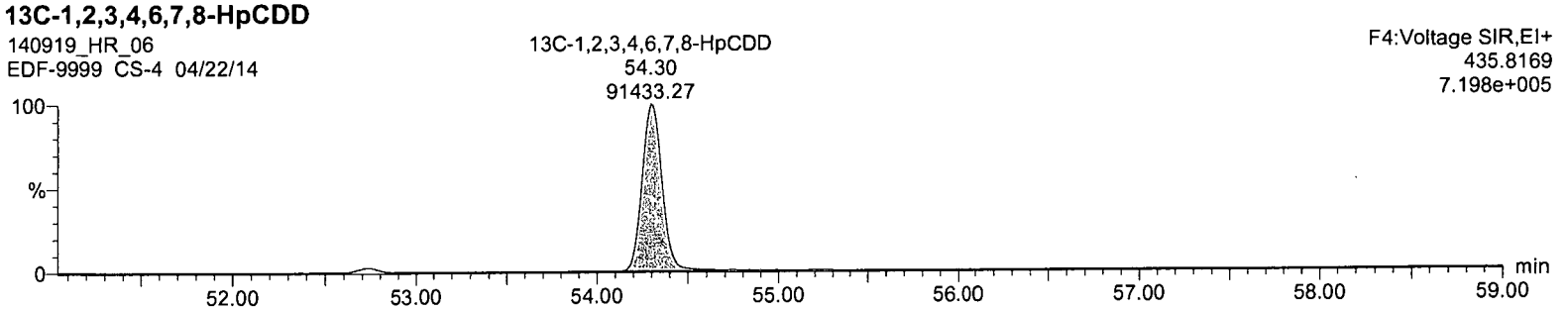
1,2,3,4,6,7,8-HpCDD



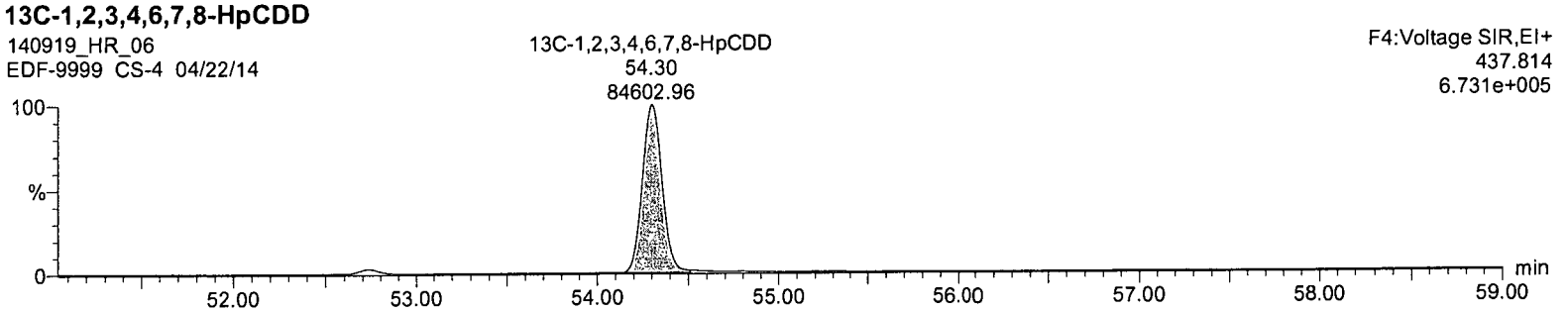
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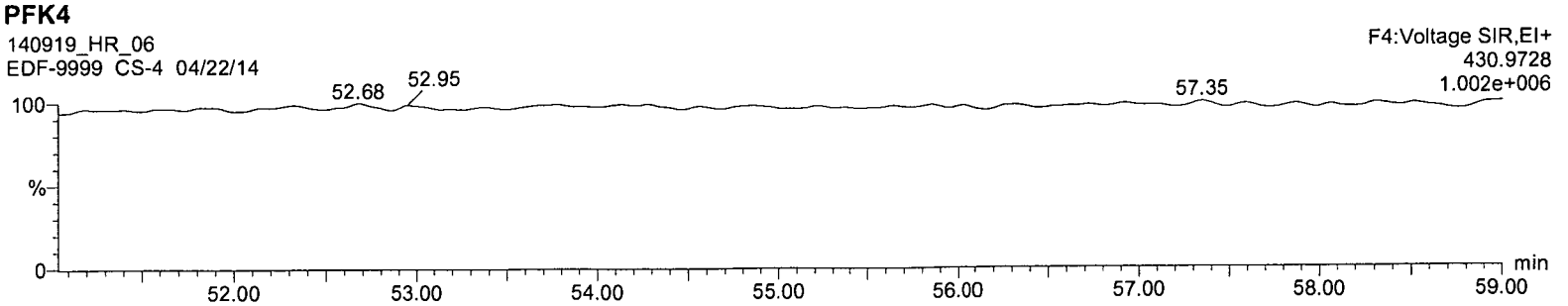
13C-1,2,3,4,6,7,8-HpCDD



13C-1,2,3,4,6,7,8-HpCDD

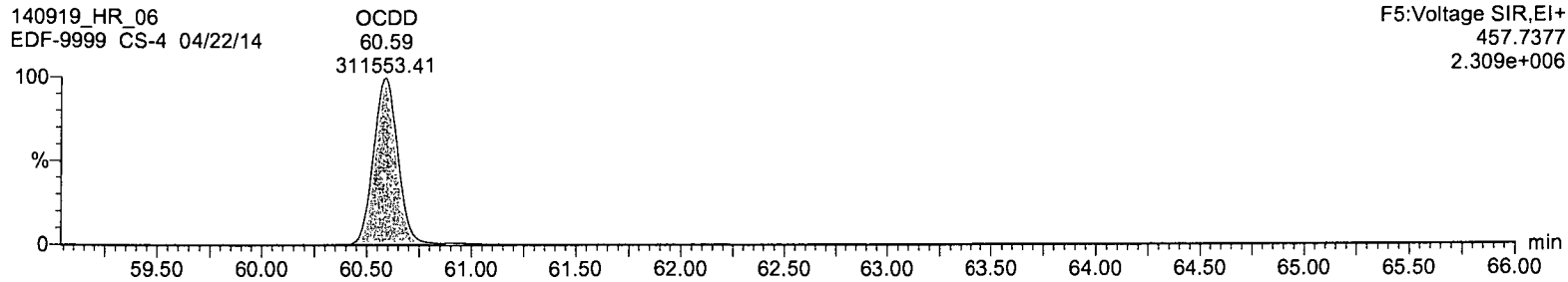


PFK4

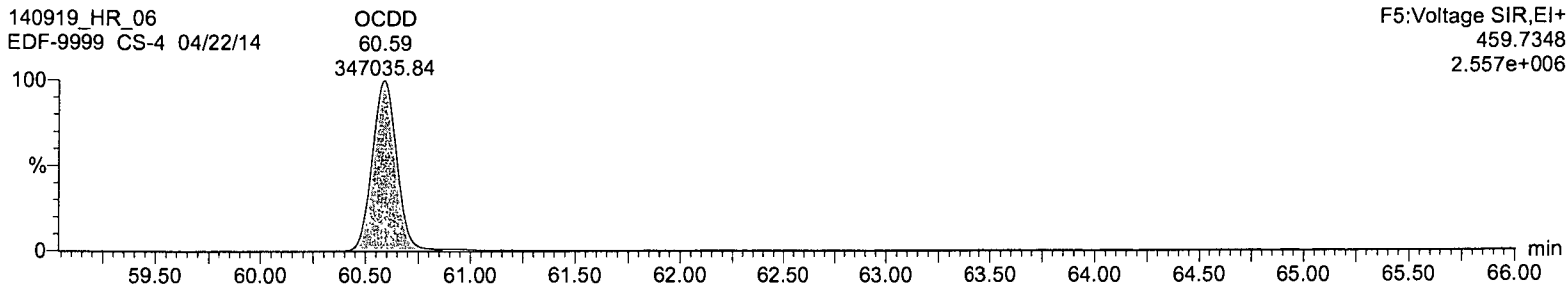


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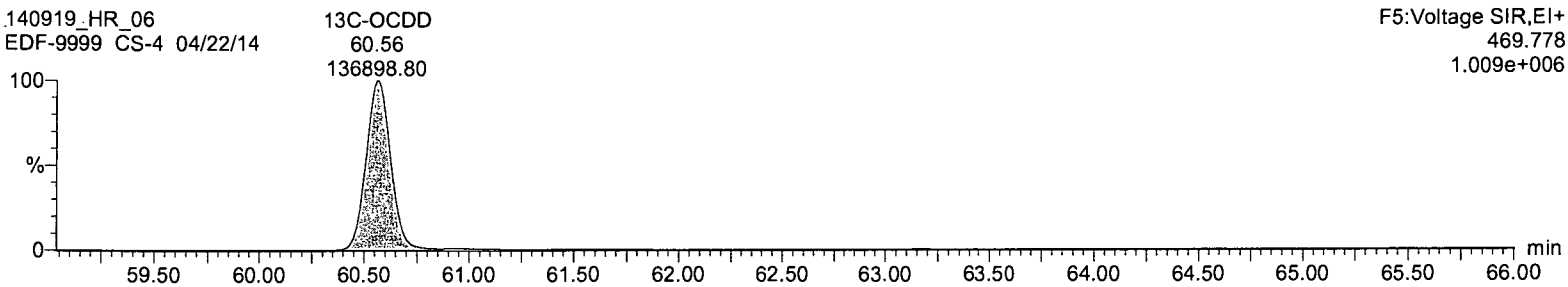
OCDD



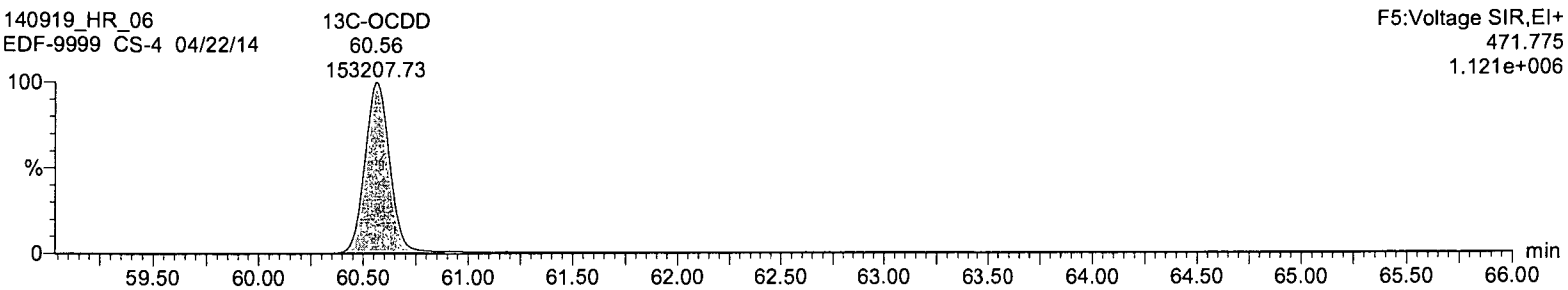
OCDD



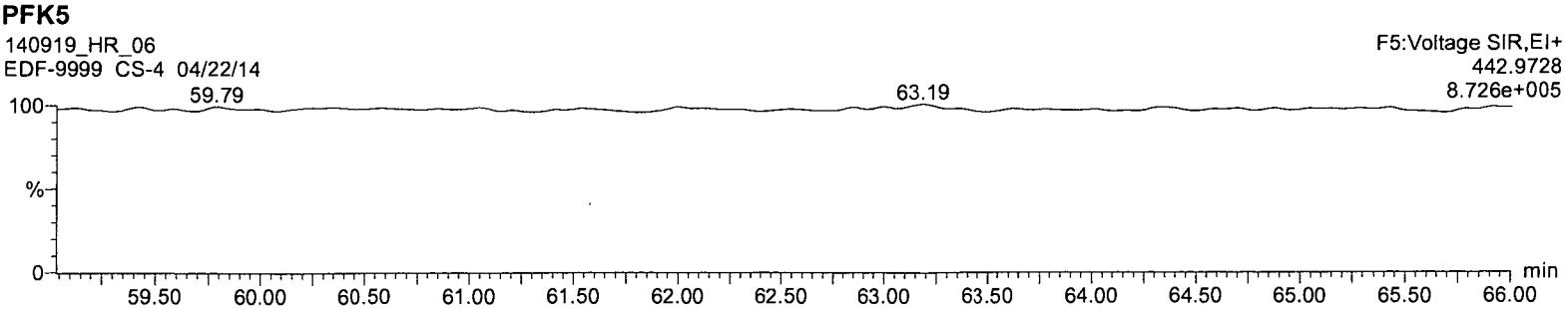
13C-OCDD



13C-OCDD

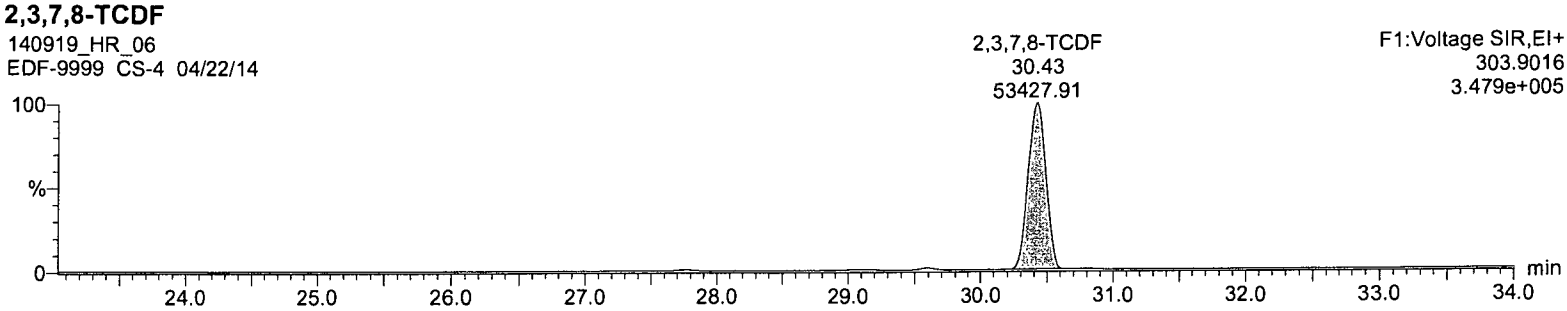


PFK5

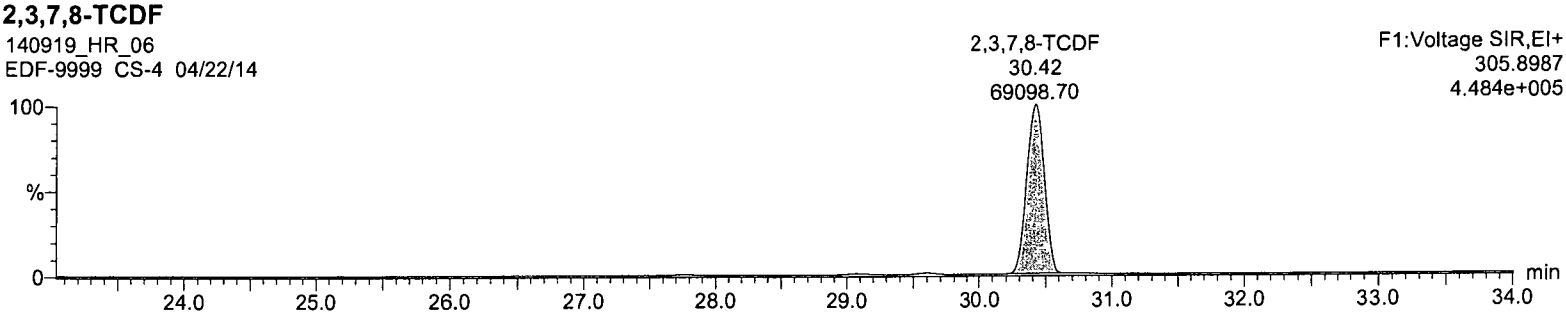


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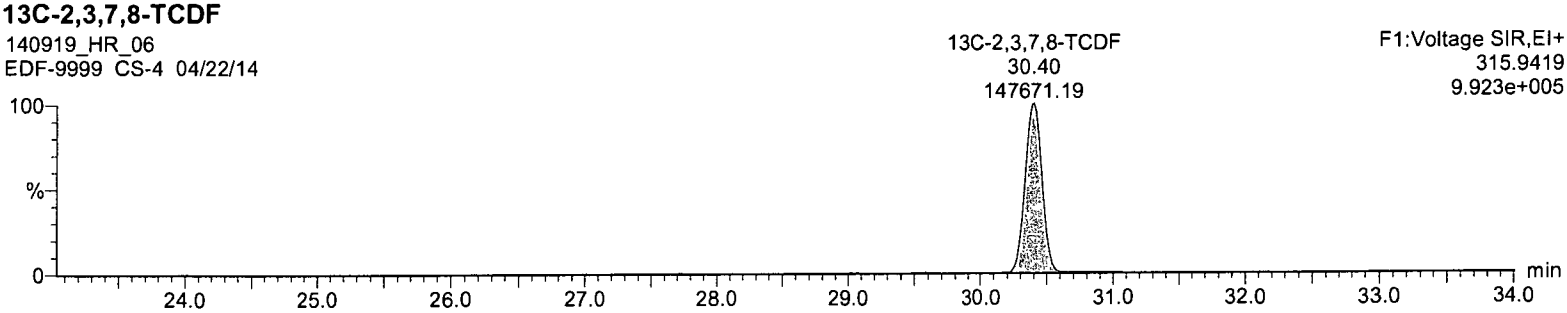
2,3,7,8-TCDF



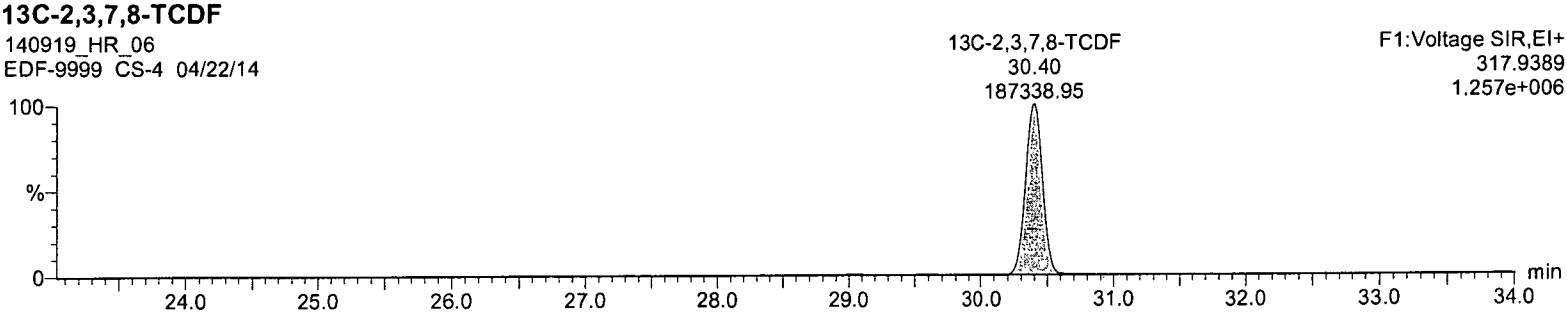
2,3,7,8-TCDF



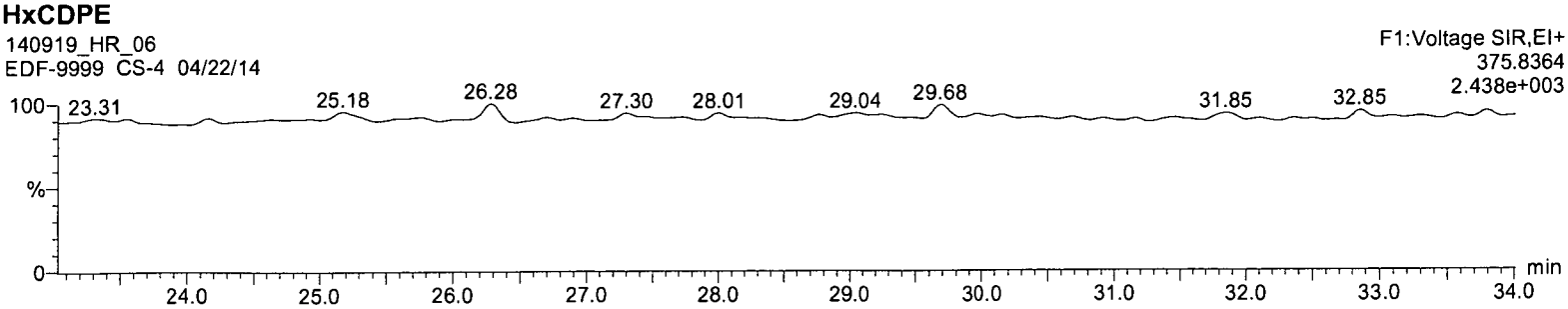
13C-2,3,7,8-TCDF



13C-2,3,7,8-TCDF

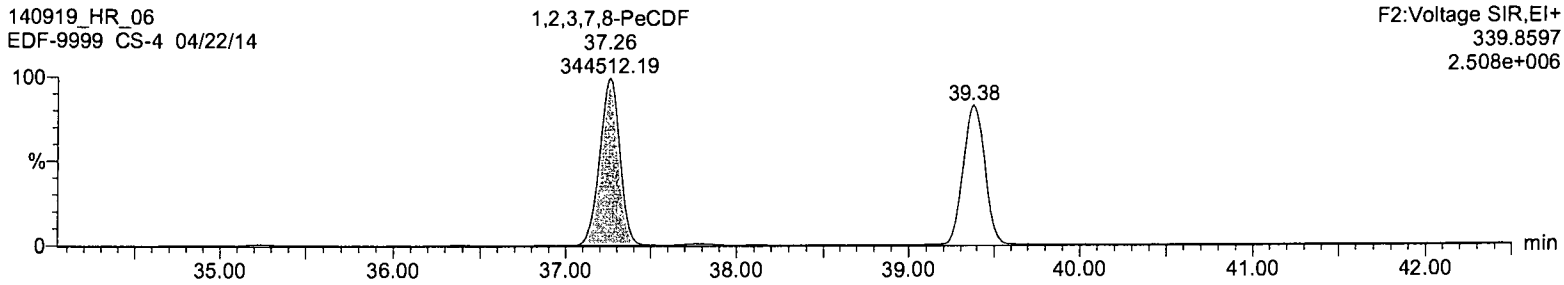


HxCDPE

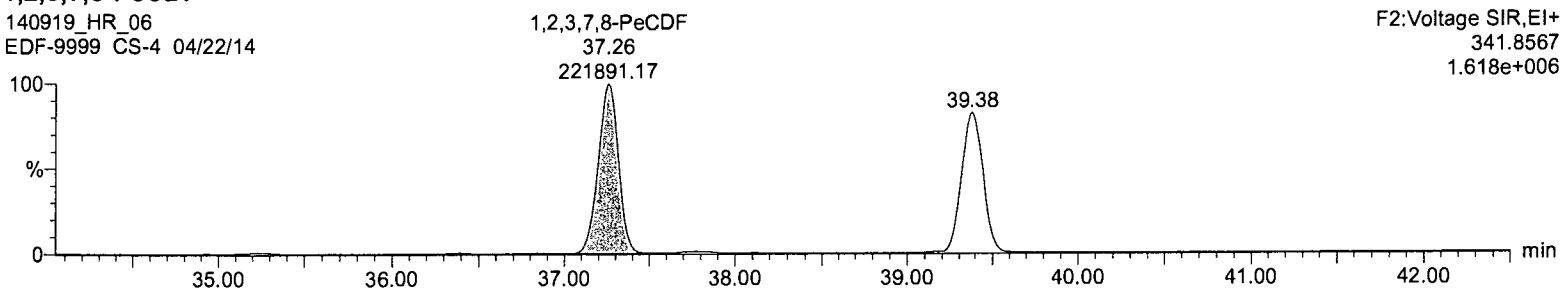


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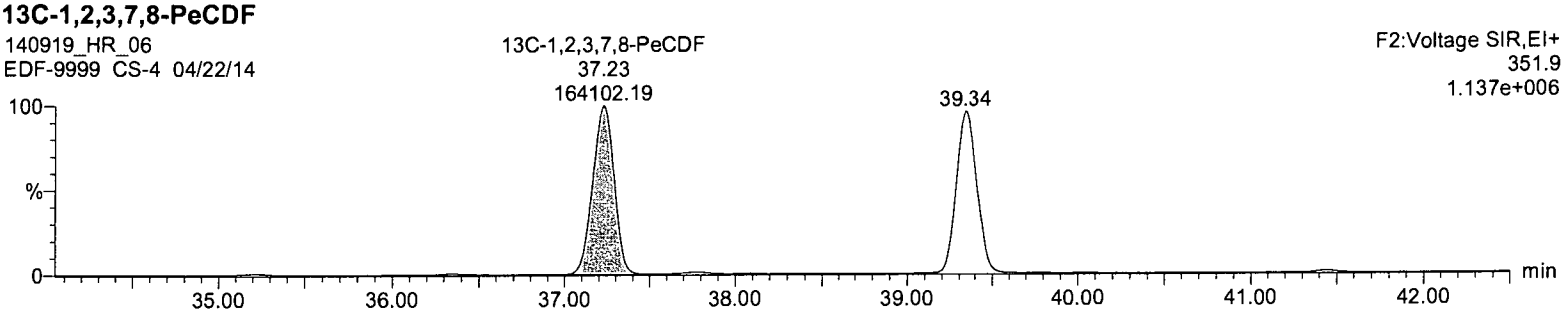
1,2,3,7,8-PeCDF



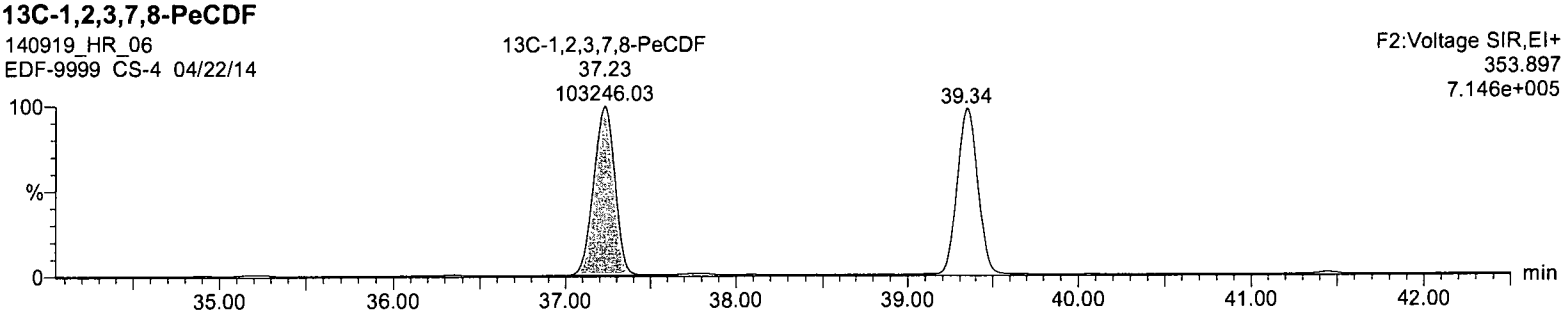
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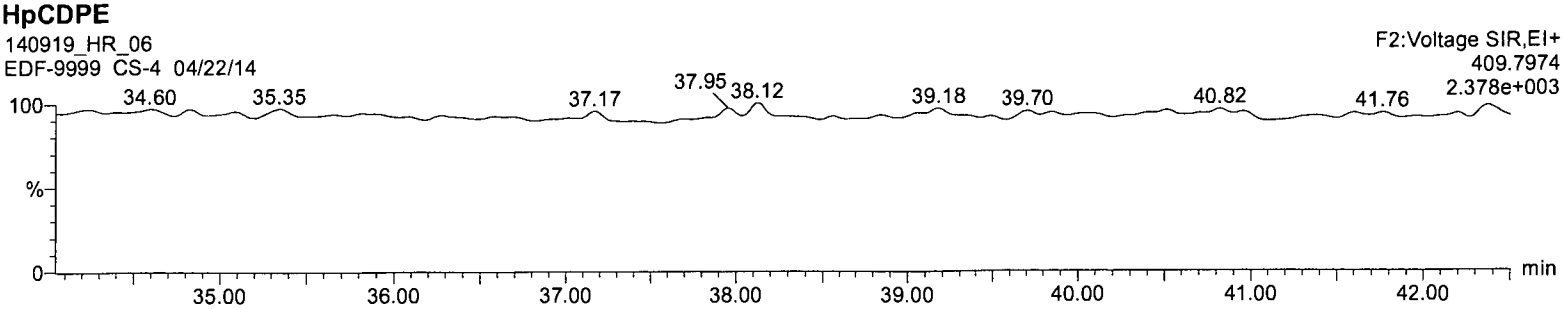
13C-1,2,3,7,8-PeCDF



13C-1,2,3,7,8-PeCDF

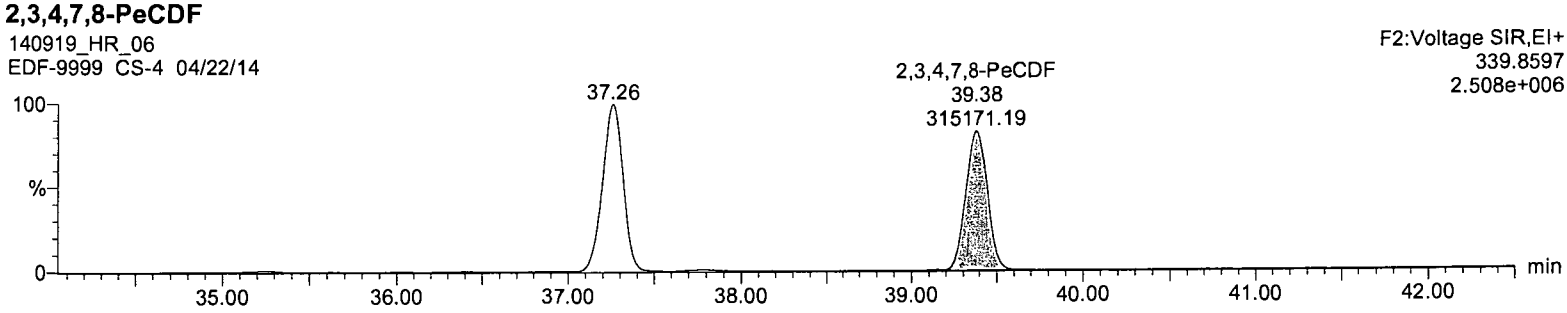


HpCDPE

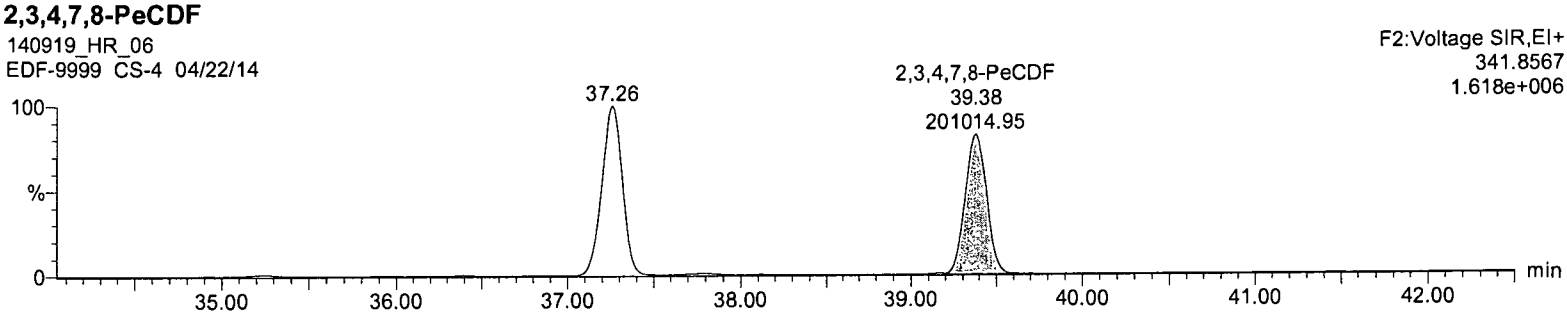


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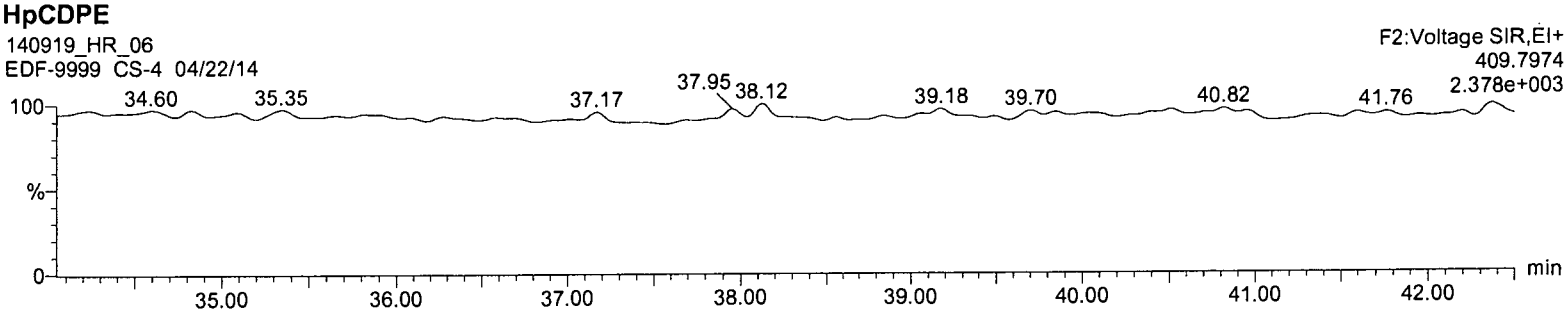
2,3,4,7,8-PeCDF



2,3,4,7,8-PeCDF

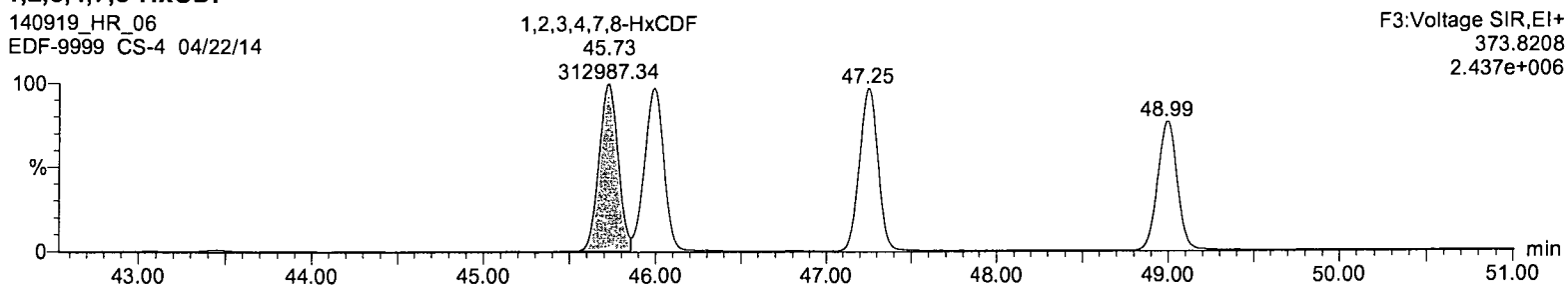


HpCDPE

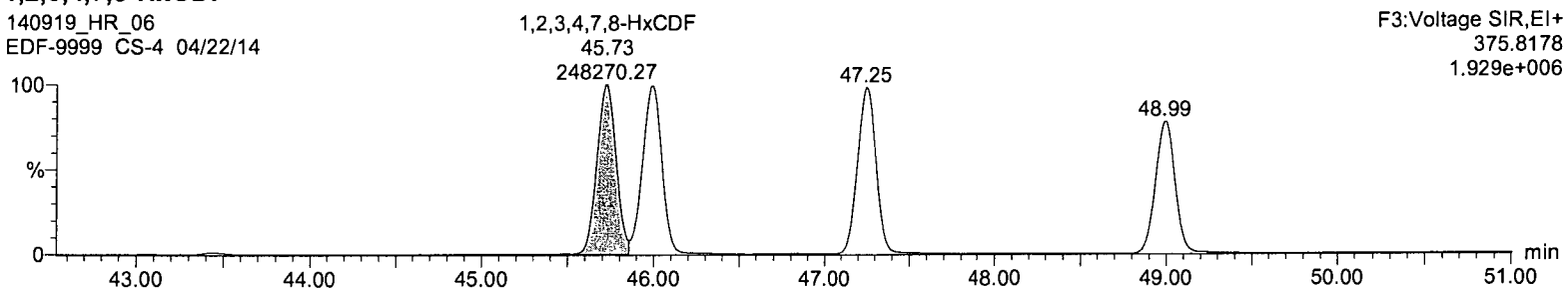


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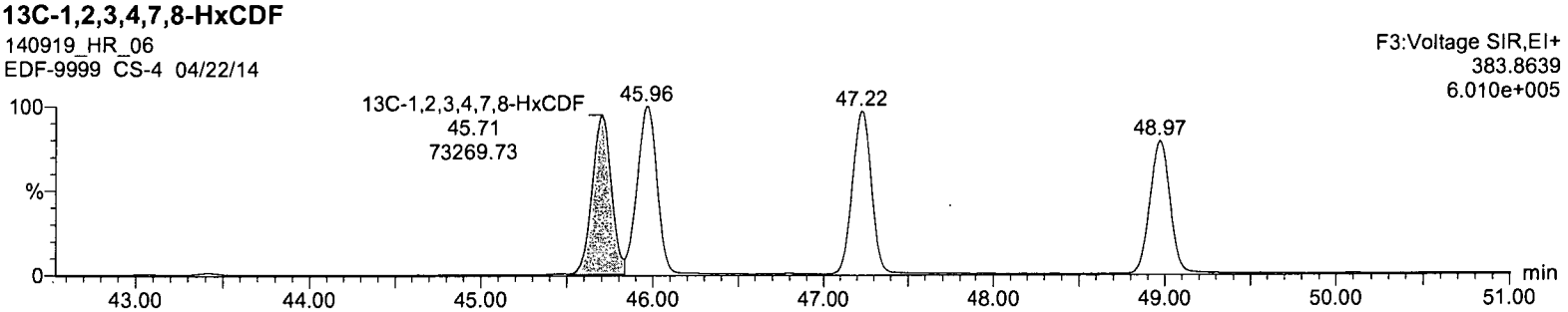
1,2,3,4,7,8-HxCDF



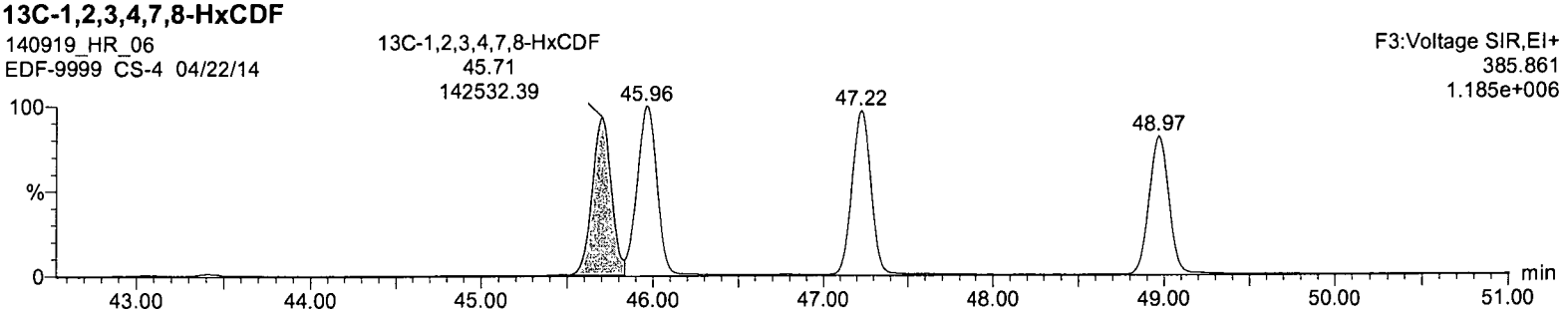
1,2,3,4,7,8-HxCDF



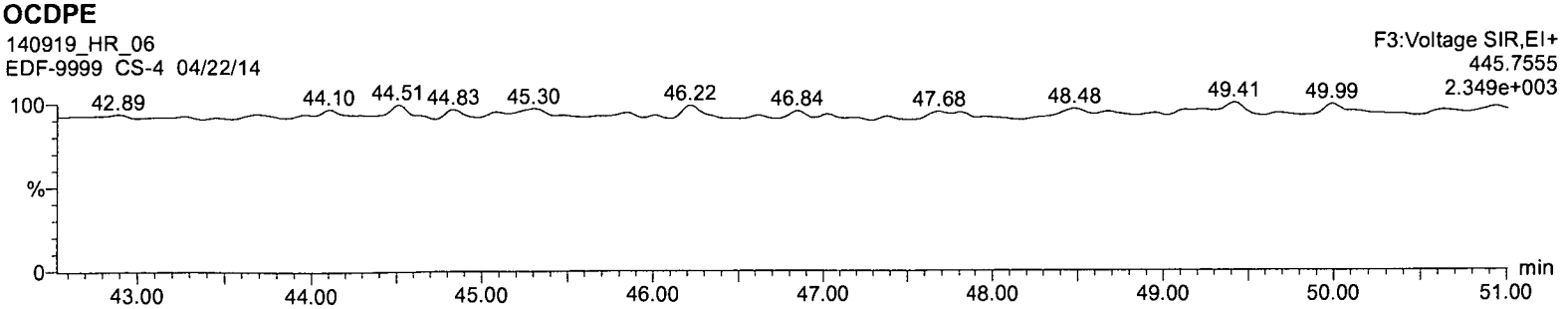
13C-1,2,3,4,7,8-HxCDF



13C-1,2,3,4,7,8-HxCDF

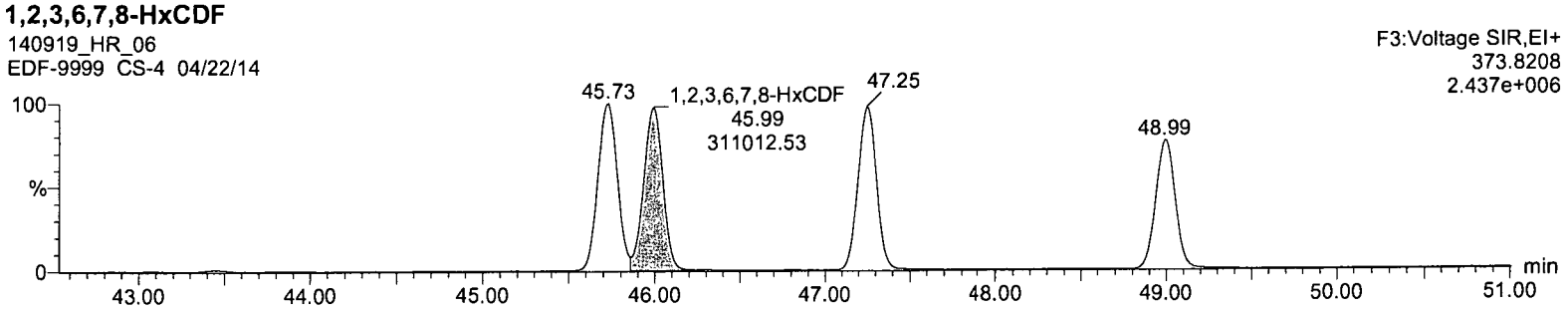


OCDPE

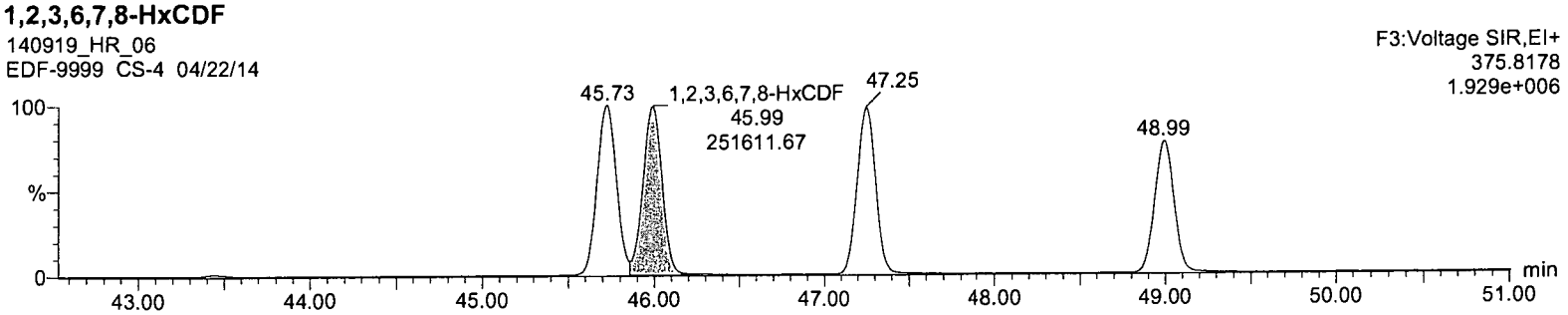


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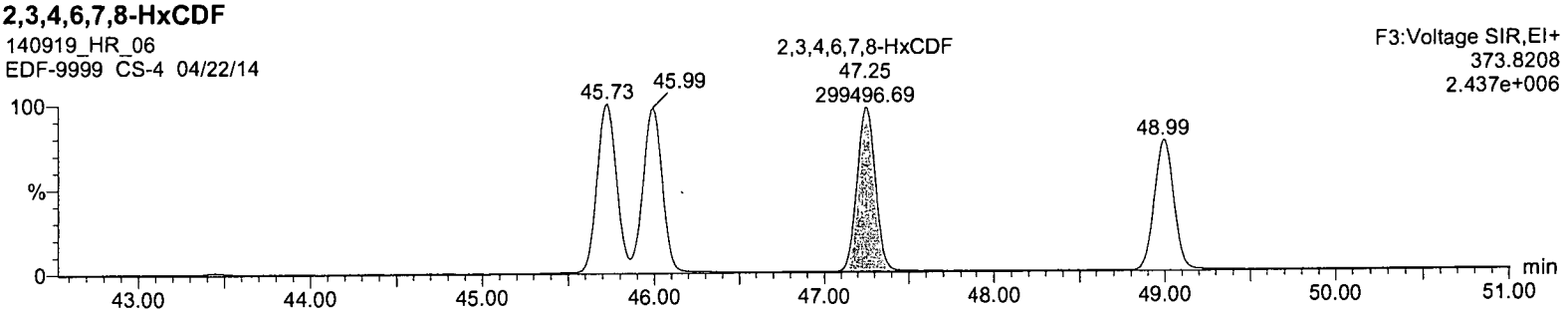
1,2,3,6,7,8-HxCDF



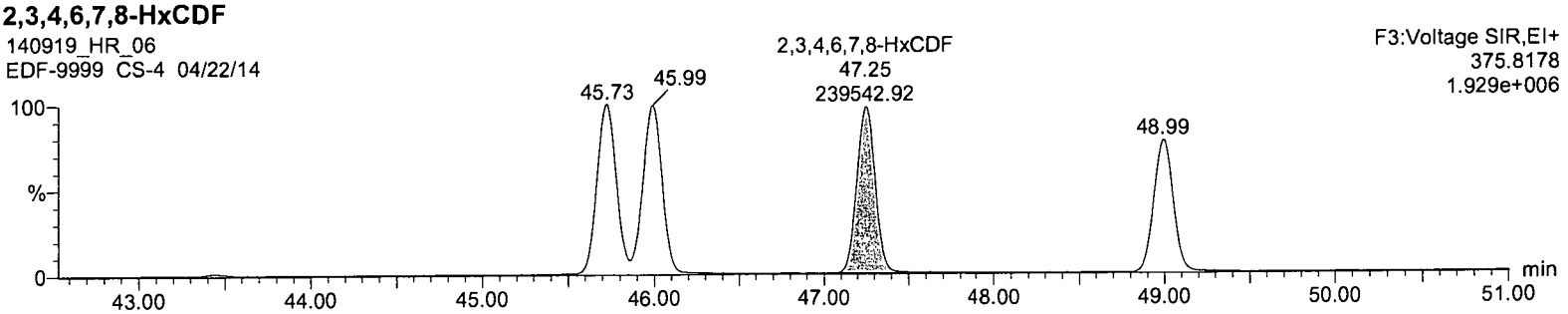
1,2,3,6,7,8-HxCDF



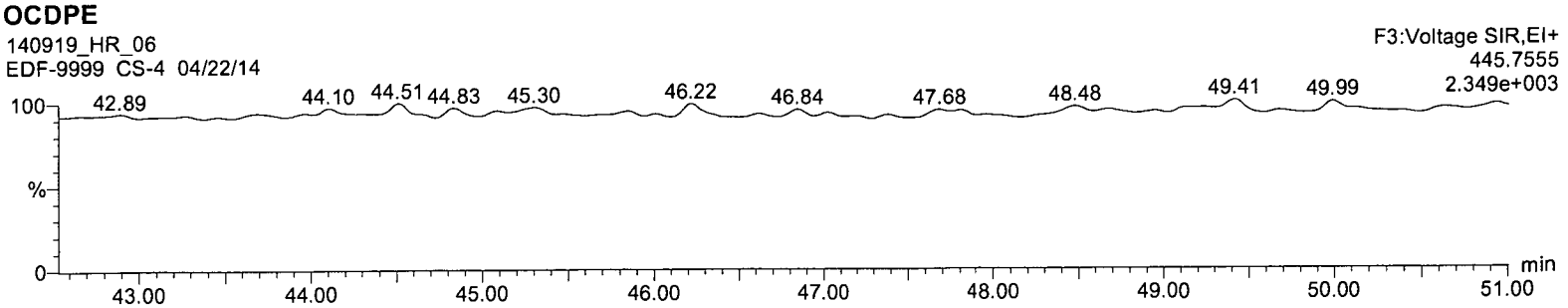
2,3,4,6,7,8-HxCDF



2,3,4,6,7,8-HxCDF

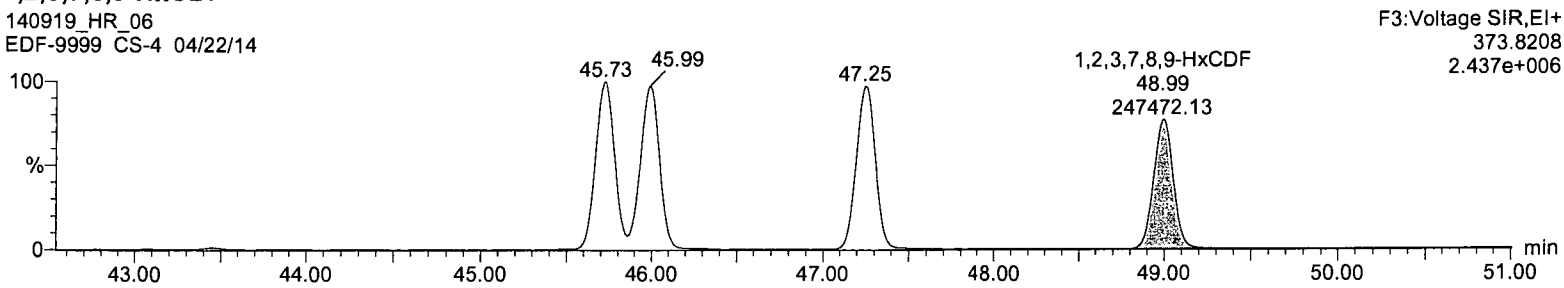


OCDPE

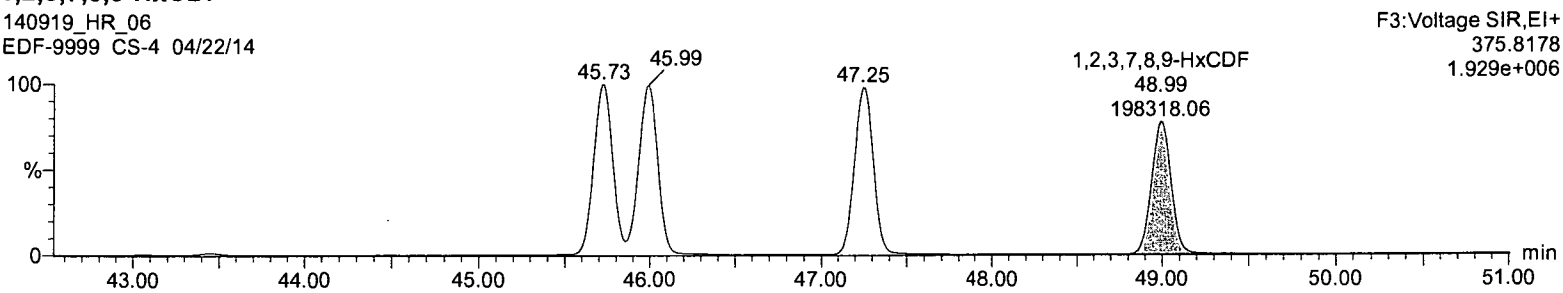


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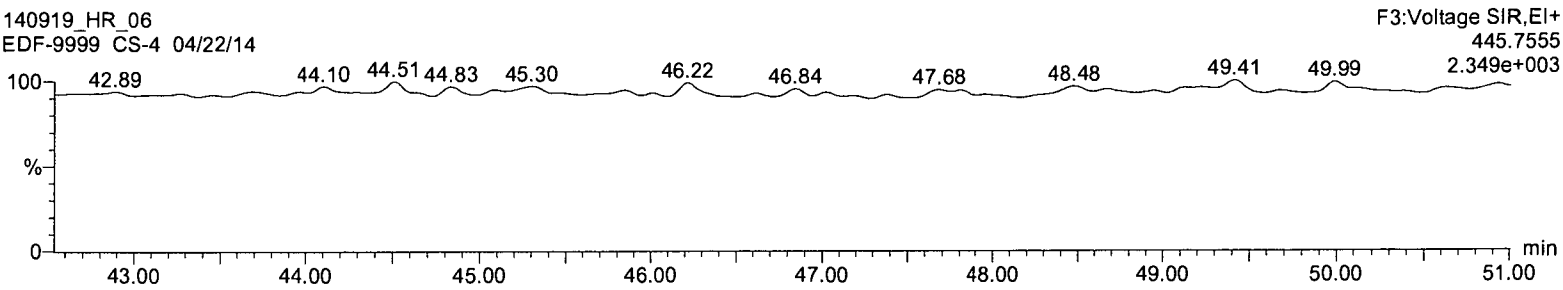
1,2,3,7,8,9-HxCDF



1,2,3,7,8,9-HxCDF

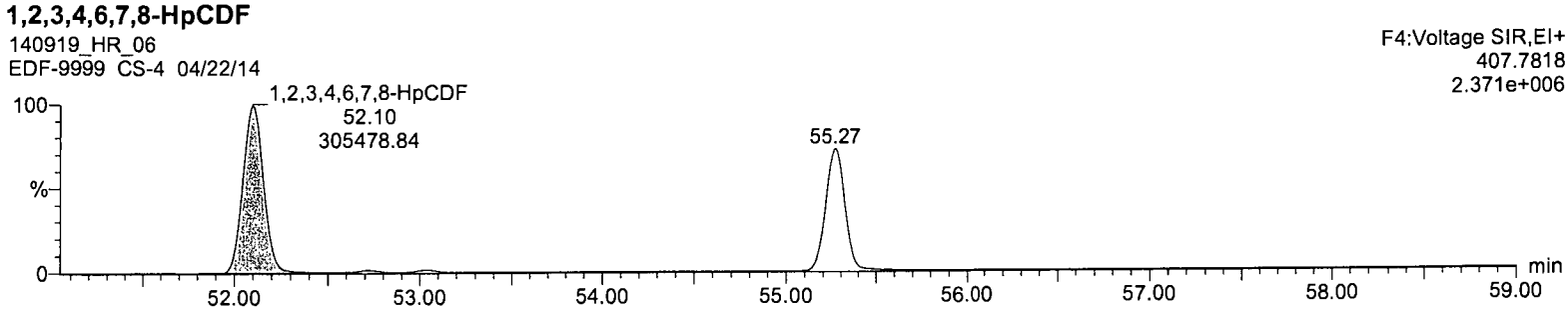


OCDPE

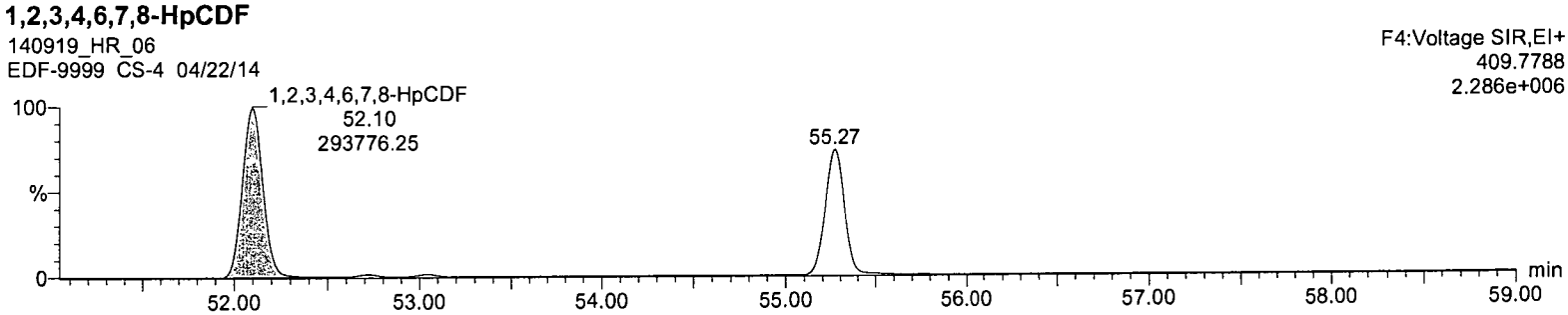


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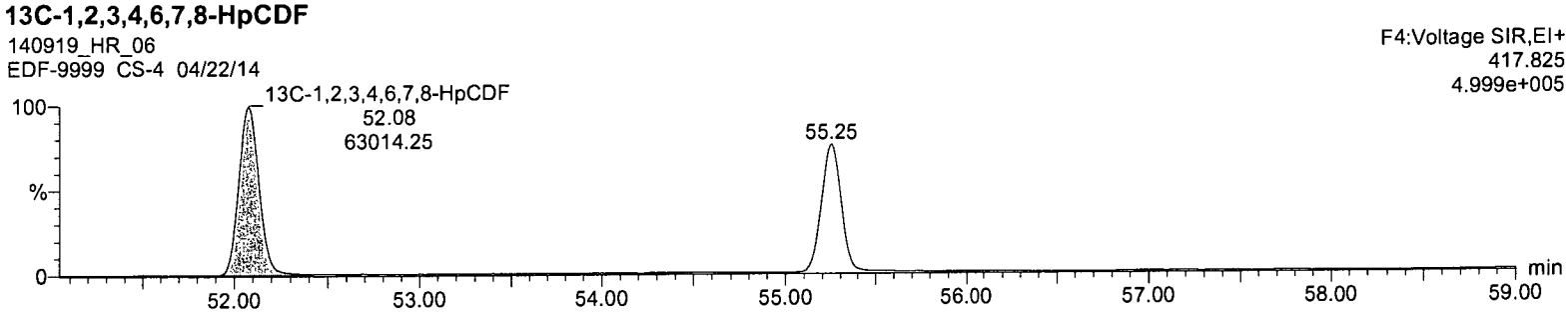
1,2,3,4,6,7,8-HpCDF



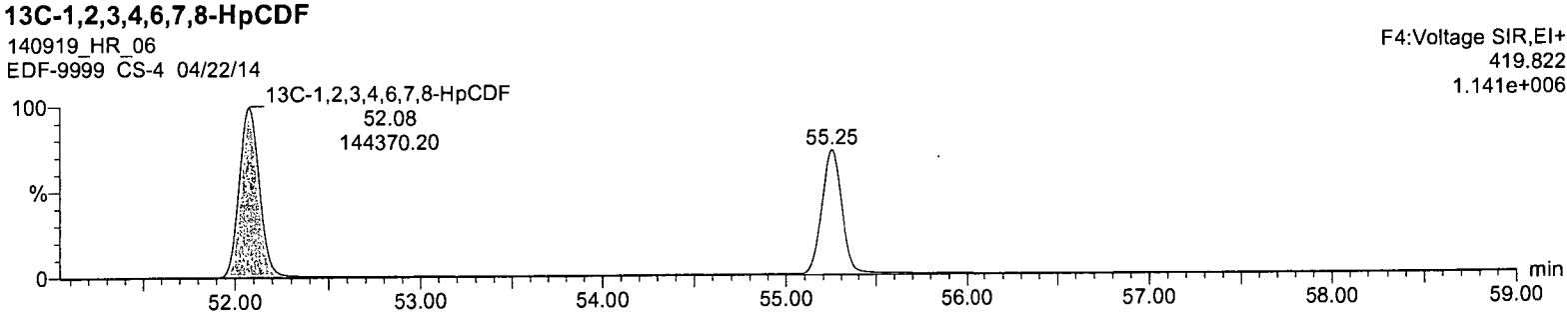
1,2,3,4,6,7,8-HpCDF



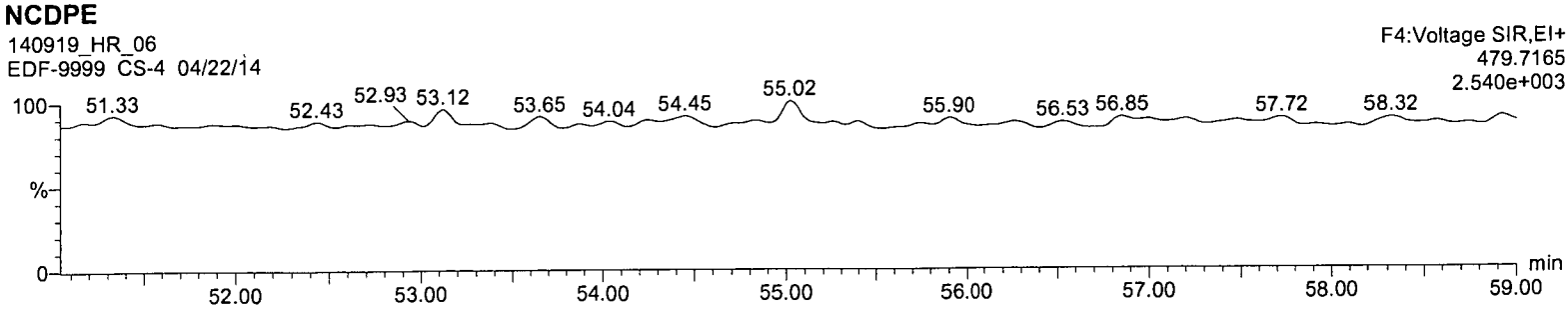
13C-1,2,3,4,6,7,8-HpCDF



13C-1,2,3,4,6,7,8-HpCDF

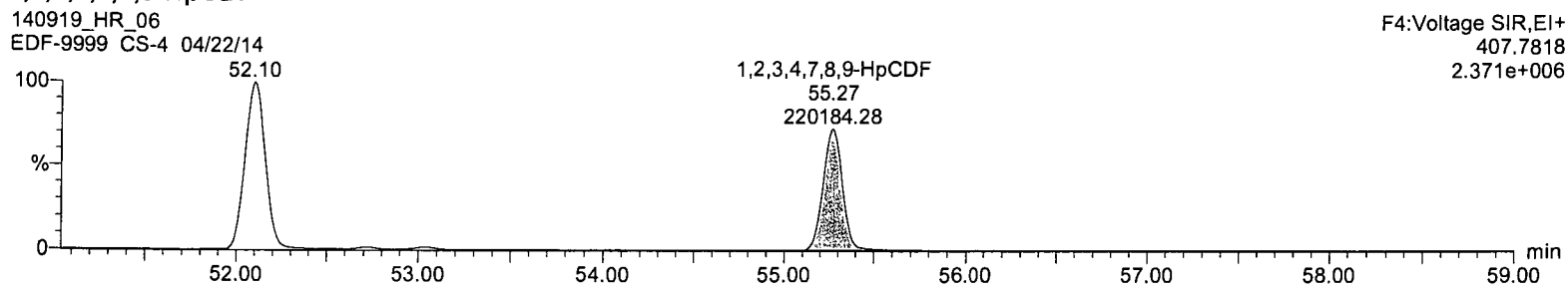


NCDPE

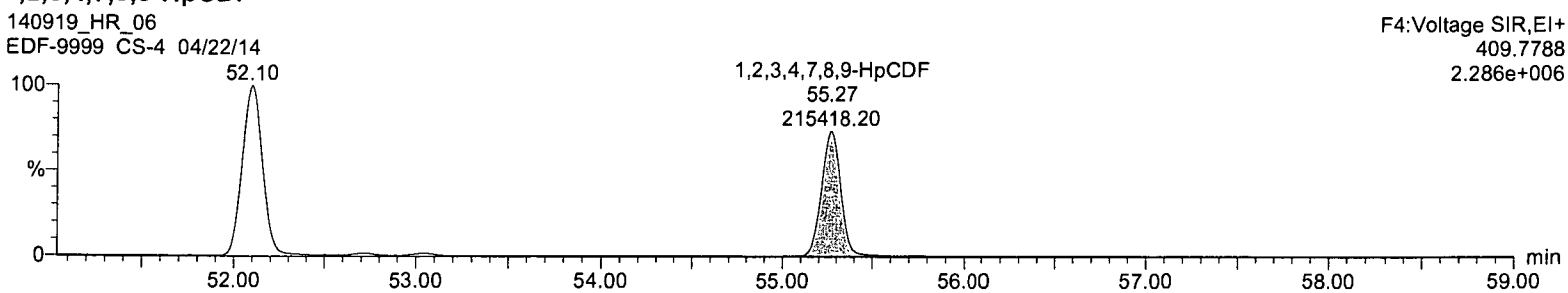


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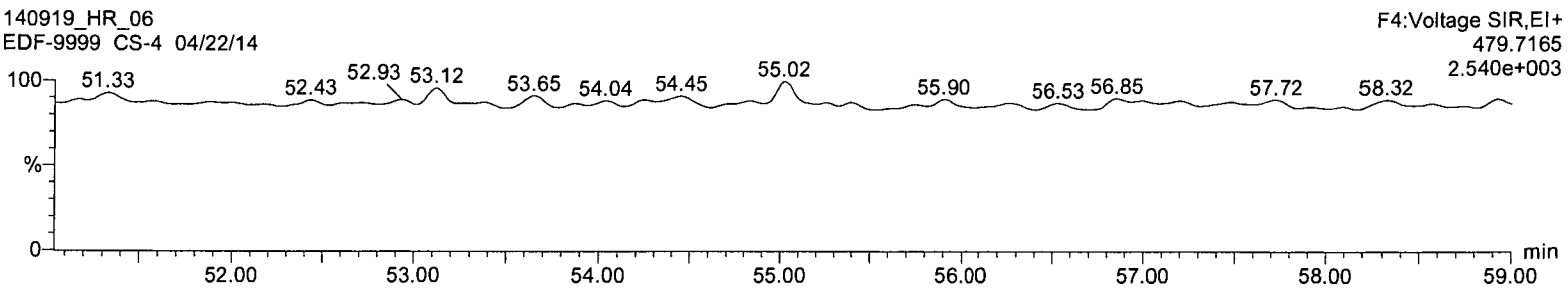
1,2,3,4,7,8,9-HpCDF



1,2,3,4,7,8,9-HpCDF

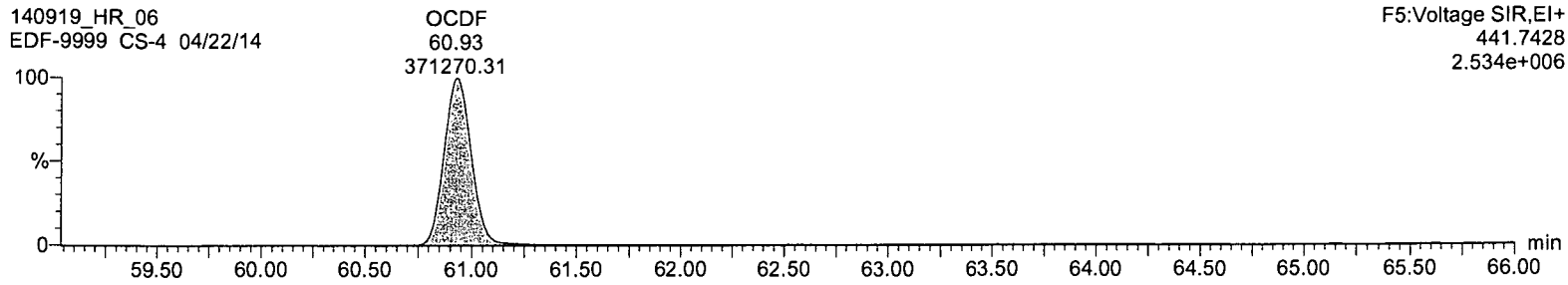


NCDPE

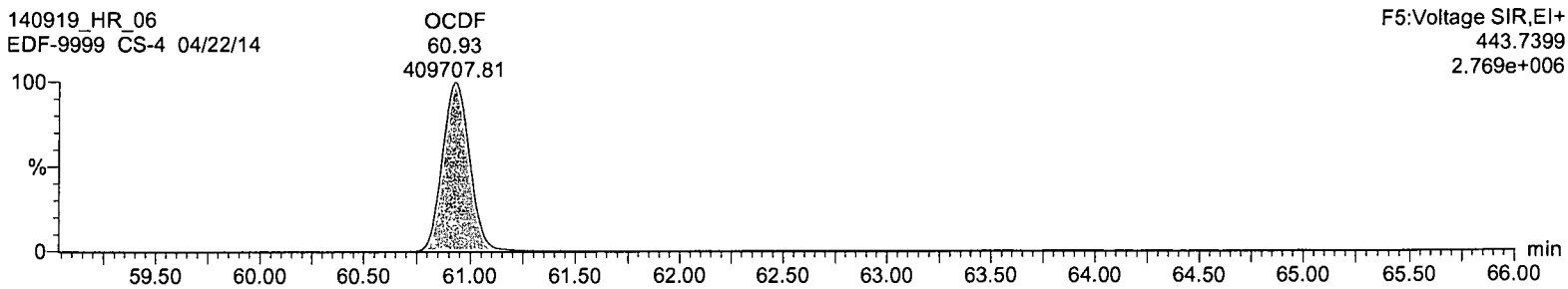


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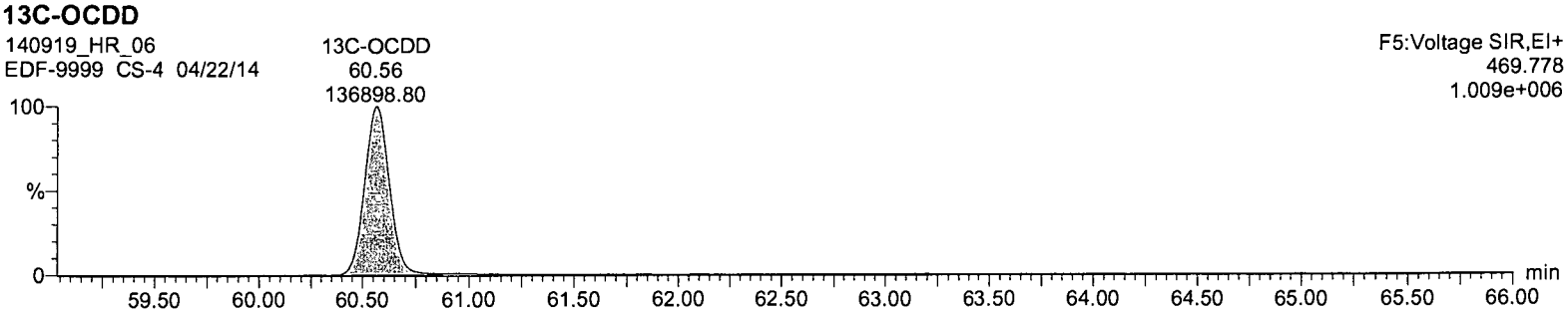
OCDF



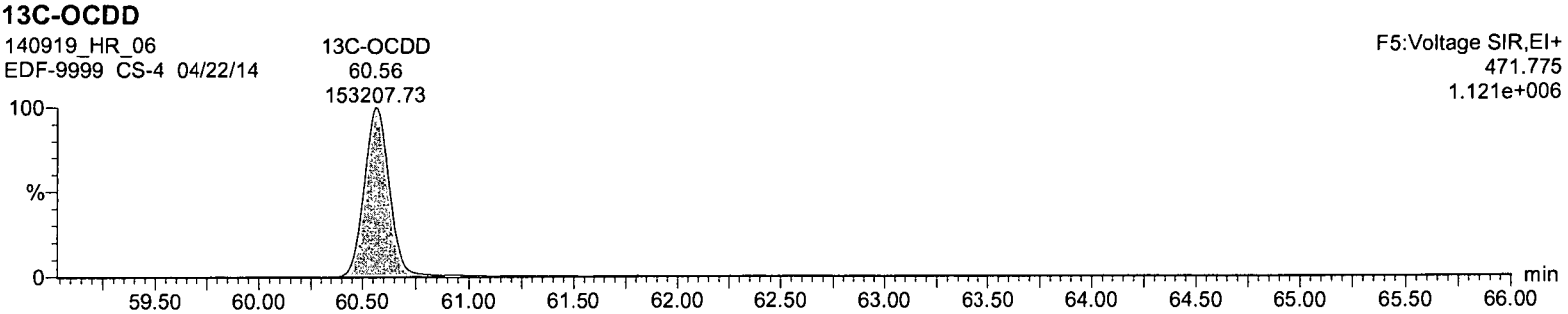
OCDF



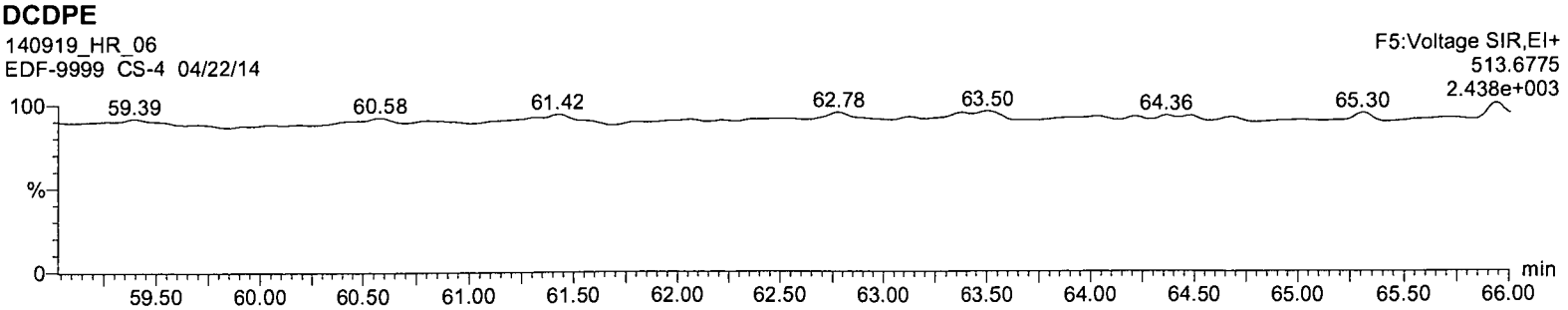
13C-OCDD



13C-OCDD

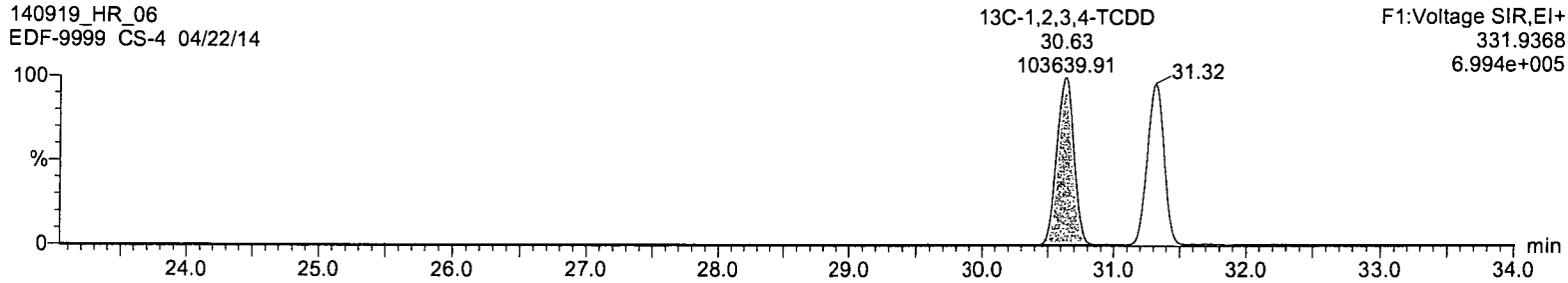


DCDPE

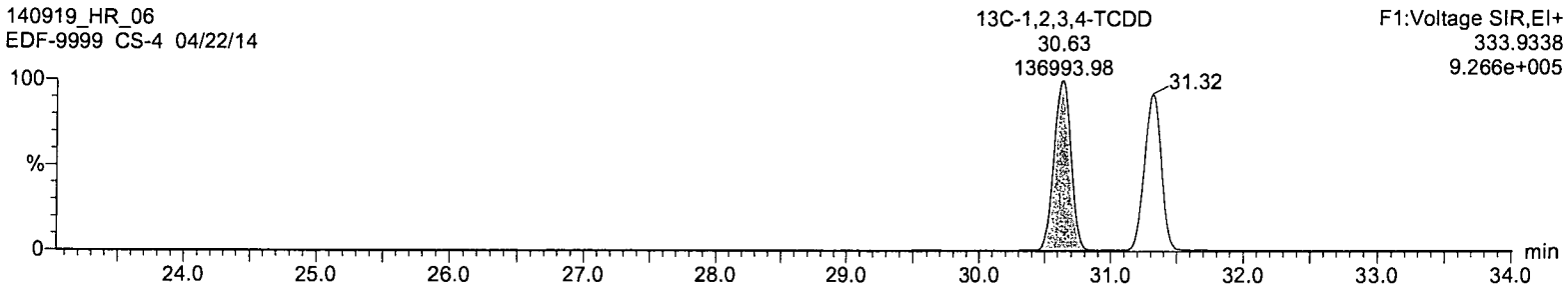


Name: 140919_HR_06, Date: 19-Sep-2014, Time: 22:35:19, Description: EDF-9999 CS-4 04/22/14, User:

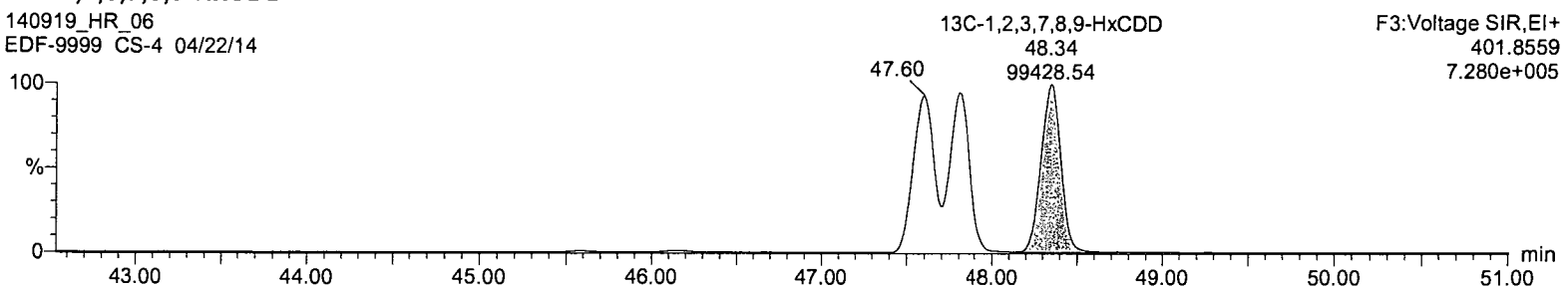
13C-1,2,3,4-TCDD



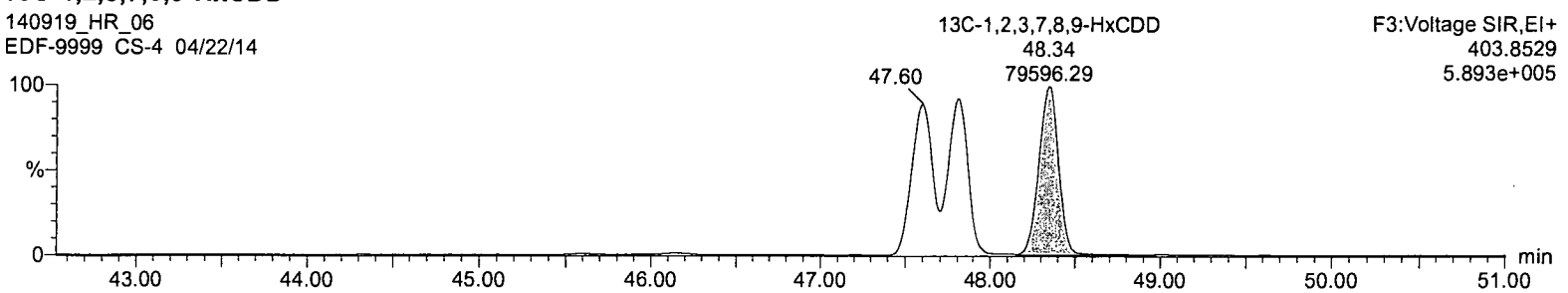
13C-1,2,3,4-TCDD



13C-1,2,3,7,8,9-HxCDD



13C-1,2,3,7,8,9-HxCDD



Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: 22 Sep 2014 12:13:12

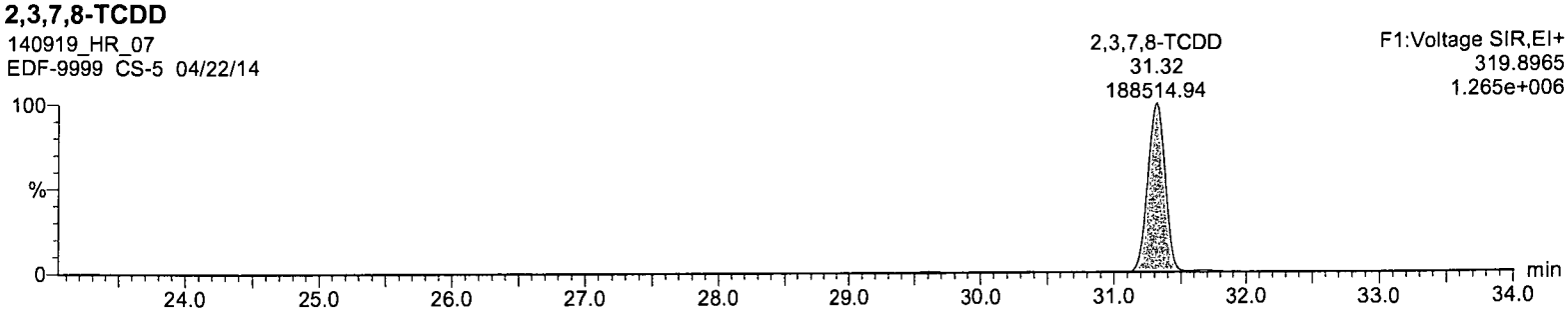
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#	Name	Signal	Noise 1	S/N 1	Flag S/N	Signal 2	Noise 2	S/N 2	Flag S/N
1	2,3,7,8-TCDD	1.2633480e6	1.3354901e2	9458.23	NO	1.5852920e6	2.7026309e2	5865.74	NO
2	1,2,3,7,8-PeCDD	8.4021090e6	7.2289697e2	11621.05	NO	5.3505190e6	9.8856018e2	5412.44	NO
3	1,2,3,4,7,8-HxCDD	7.4293000e6	2.9897458e2	24843.96	NO	5.9558200e6	3.9860620e2	14941.61	NO
4	1,2,3,6,7,8-HxCDD	7.4137780e6	2.9897458e2	24792.13	NO	5.8751510e6	3.9860620e2	14739.24	NO
5	1,2,3,7,8,9-HxCDD	7.5472290e6	2.9897458e2	25238.70	NO	5.9255390e6	3.9860620e2	14865.65	NO
6	1,2,3,4,6,7,8-HpCDD	7.1829770e6	4.2517374e2	16891.14	NO	6.7798670e6	4.8744458e2	13909.00	NO
7	OCDD	1.1094787e7	2.8219101e2	39313.46	NO	1.2428256e7	3.8230917e2	32508.39	NO
8	2,3,7,8-TCDF	1.5176540e6	6.1973701e1	24604.46	NO	1.9938090e6	1.3736440e2	14514.74	NO
9	1,2,3,7,8-PeCDF	1.2332525e7	1.3576433e3	9079.63	NO	7.8102560e6	4.1962781e2	18612.34	NO
10	2,3,4,7,8-PeCDF	1.2442216e7	1.3576433e3	9160.96	NO	8.0325160e6	4.1962781e2	19142.00	NO
11	1,2,3,4,7,8-HxCDF	1.0897935e7	1.3316425e5	79.76	NO	8.7534070e6	5.5579266e2	15749.41	NO
12	1,2,3,6,7,8-HxCDF	1.2446585e7	1.3316425e5	91.39	NO	1.0119731e7	5.5579266e2	18207.74	NO
13	2,3,4,6,7,8-HxCDF	1.0799944e7	1.3316425e5	79.03	NO	8.7756950e6	5.5579266e2	15789.51	NO
14	1,2,3,7,8,9-HxCDF	9.8468440e6	1.3316425e5	71.88	NO	7.8086790e6	5.5579266e2	14049.63	NO
15	1,2,3,4,6,7,8-HpCDF	1.0235204e7	6.4191534e2	15940.32	NO	1.0278627e7	6.3860406e2	16095.46	NO
16	1,2,3,4,7,8,9-HpCDF	8.8845580e6	6.4191534e2	13837.39	NO	8.3616250e6	6.3860406e2	13093.60	NO
17	OCDF	1.3456895e7	4.5471204e2	29593.65	NO	1.4881024e7	2.5674396e2	57960.56	NO
18	13C-2,3,7,8-TCDD	5.9023000e5	1.6914323e2	3490.68	NO	7.5020200e5	9.4278442e1	7957.30	NO
19	13C-1,2,3,7,8-PeCDD	8.4941500e5	3.0569287e2	2777.41	NO	5.3119300e5	9.2802872e1	5723.89	NO
20	13C-1,2,3,6,7,8-HxCDD	6.6103300e5	4.5057468e2	1466.89	NO	5.2429000e5	1.8722737e2	2800.29	NO
21	13C-1,2,3,4,6,7,8-HpCDD	6.1326600e5	2.2439764e2	2731.85	NO	5.8180000e5	1.6975697e2	3427.25	NO
22	13C-OCDD	9.1263700e5	1.5167625e2	6014.42	NO	1.0152960e6	5.8125698e1	17467.25	NO
23	13C-2,3,7,8-TCDF	8.3139100e5	1.6416051e2	5063.42	NO	1.0758020e6	1.3366574e2	8048.45	NO
24	13C-1,2,3,7,8-PeCDF	1.0153320e6	2.7817803e3	360.46	NO	6.3425100e5	1.5690552e2	4042.25	NO
25	13C-1,2,3,4,7,8-HxCDF	4.9342300e5	1.1988714e2	4112.71	NO	9.7506600e5	5.0182233e2	1943.05	NO
26	13C-1,2,3,4,6,7,8-HpCDF	4.1258800e5	1.2061105e2	3418.97	NO	9.4928700e5	1.2915274e2	7350.11	NO
27	13C-1,2,3,4-TCDD	6.4585300e5	1.6914323e2	3818.51	NO	8.2344600e5	9.4278442e1	8734.19	NO
28	13C-1,2,3,7,8,9-HxCDD	7.2339000e5	4.5057468e2	1606.84	NO	5.8193900e5	1.8722737e2	3108.19	NO

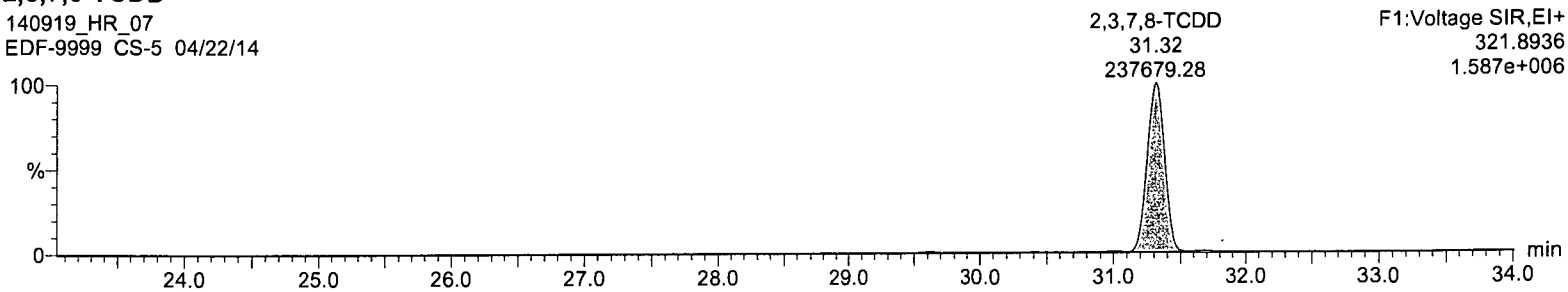
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Name: 140919_HR_07, Date: 19-Sep-2014, Time: 23:43:01, Description: EDF-9999 CS-5 04/22/14, User:

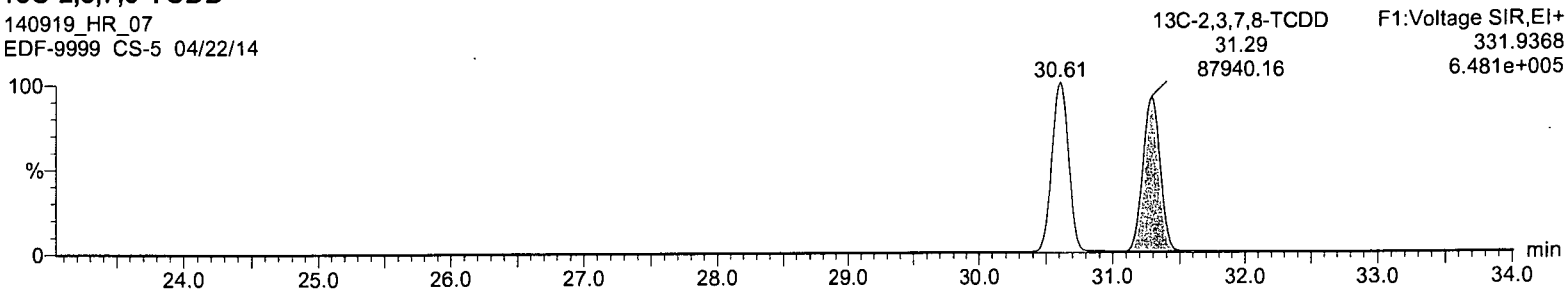
2,3,7,8-TCDD



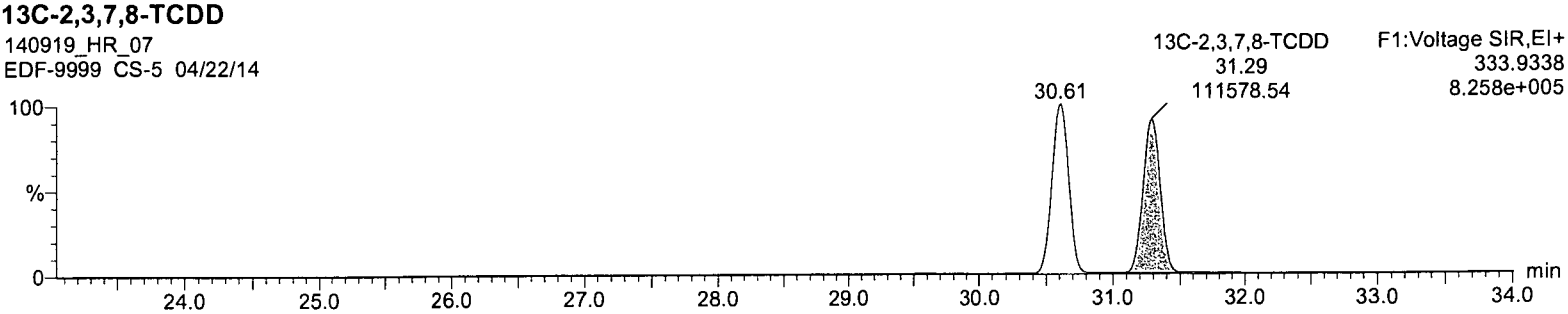
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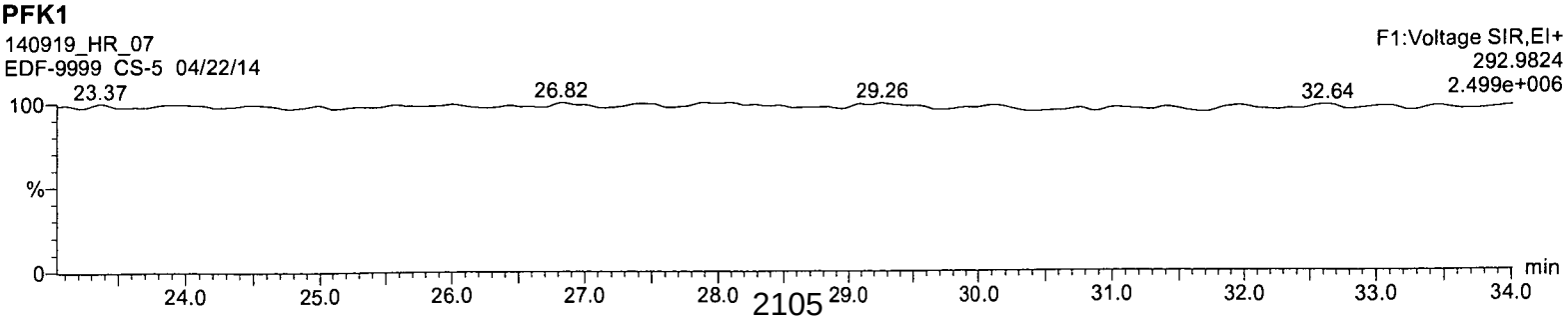
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13C-2,3,7,8-TCDD

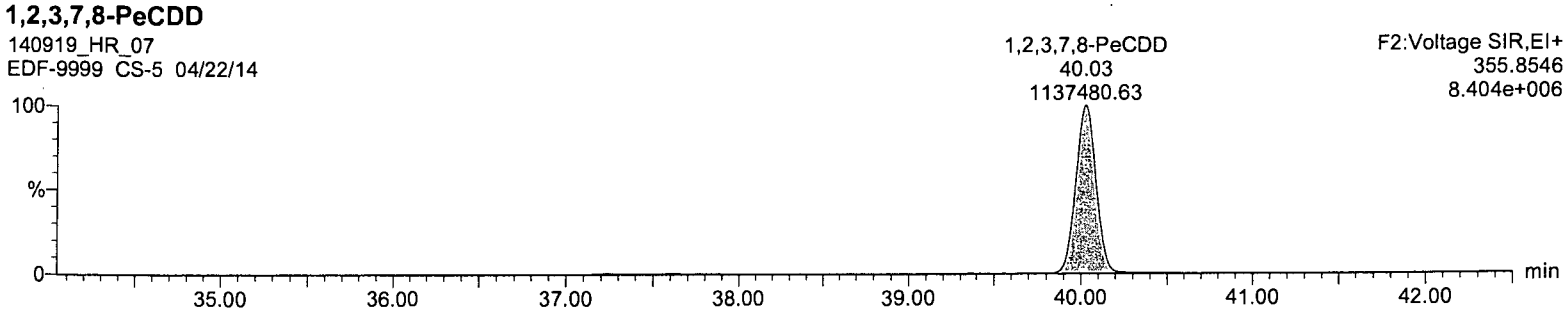


PFK1

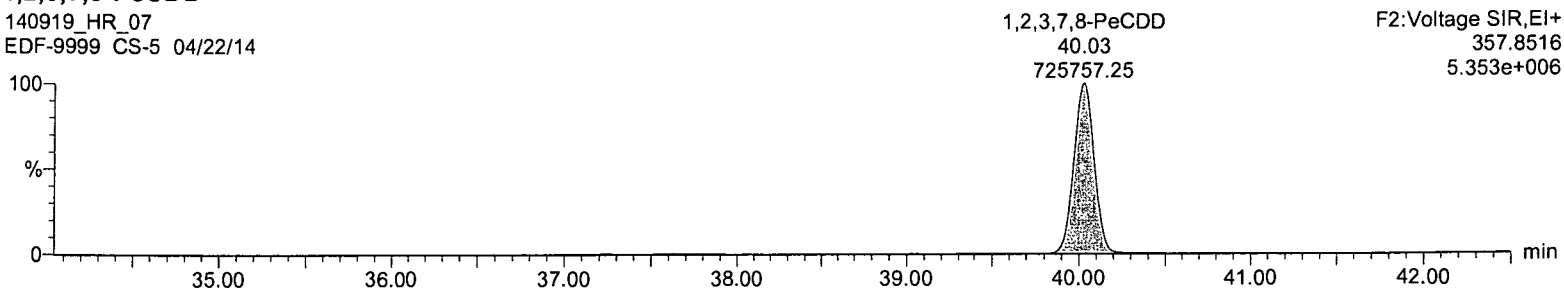


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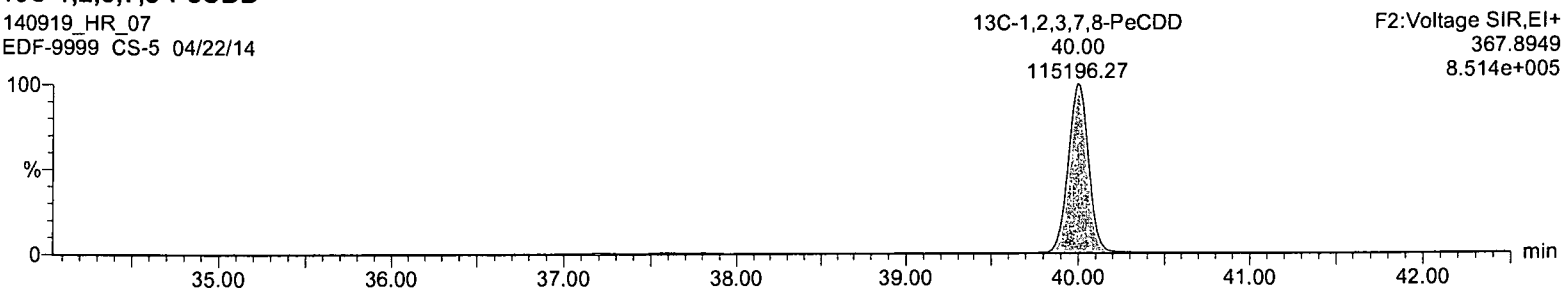
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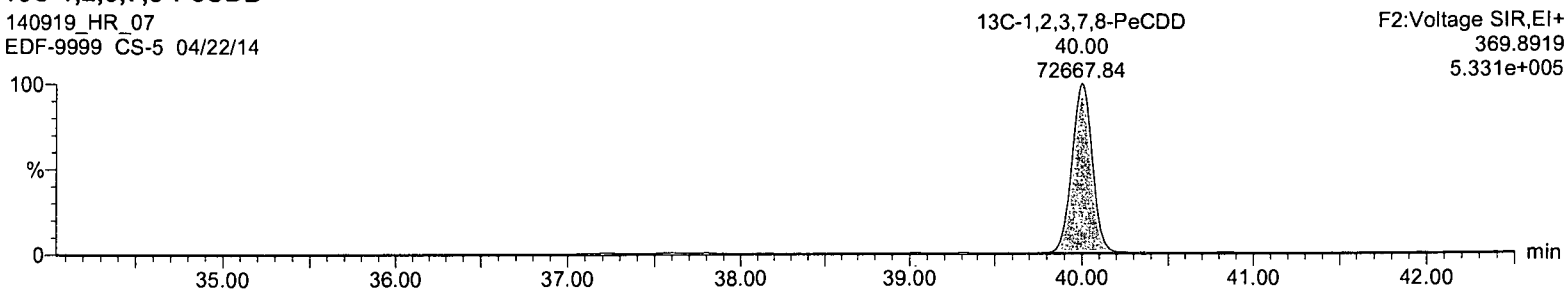
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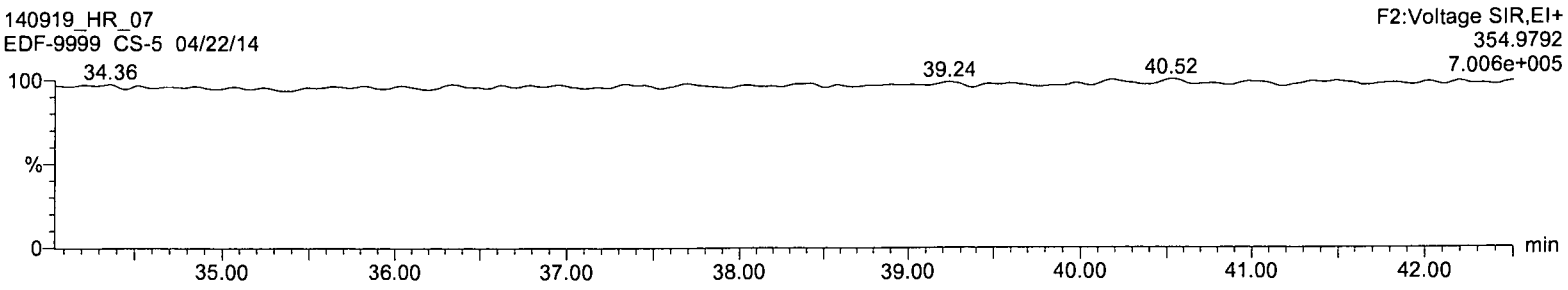
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13C-1,2,3,7,8-PeCDD

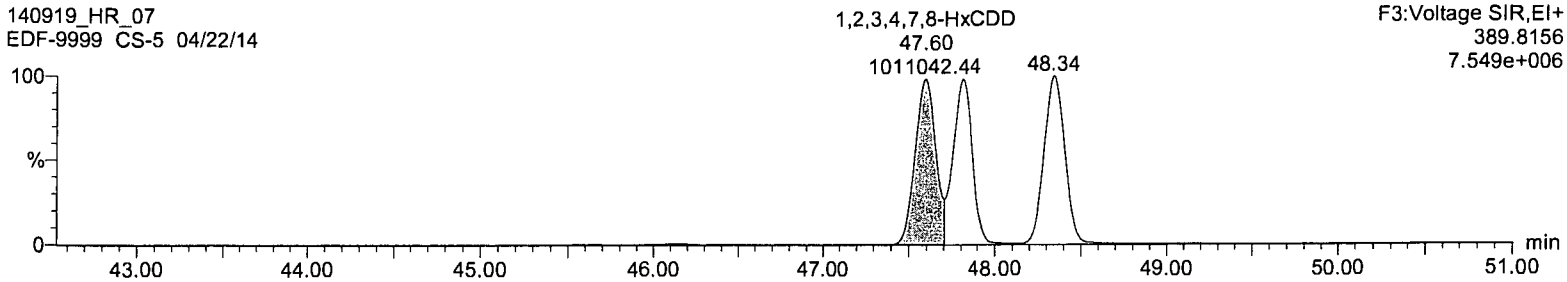


PFK2

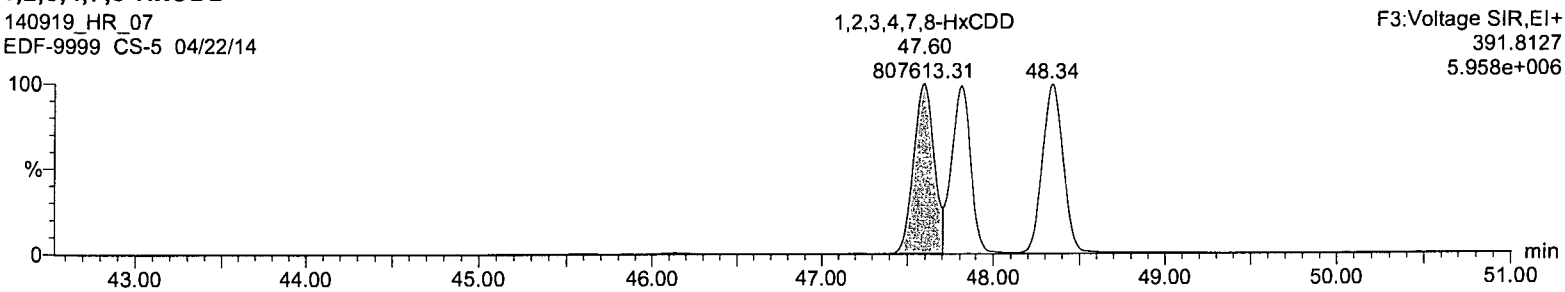


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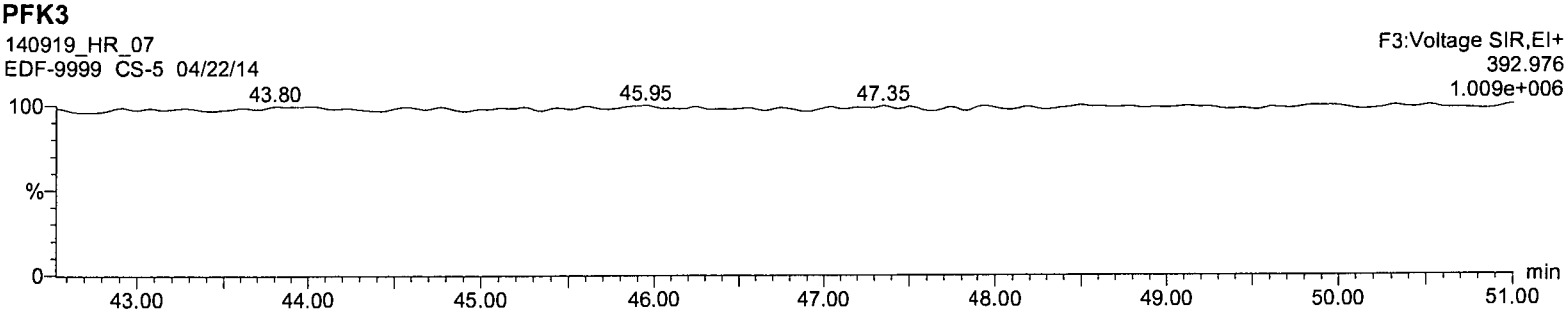
1,2,3,4,7,8-HxCDD



1,2,3,4,7,8-HxCDD

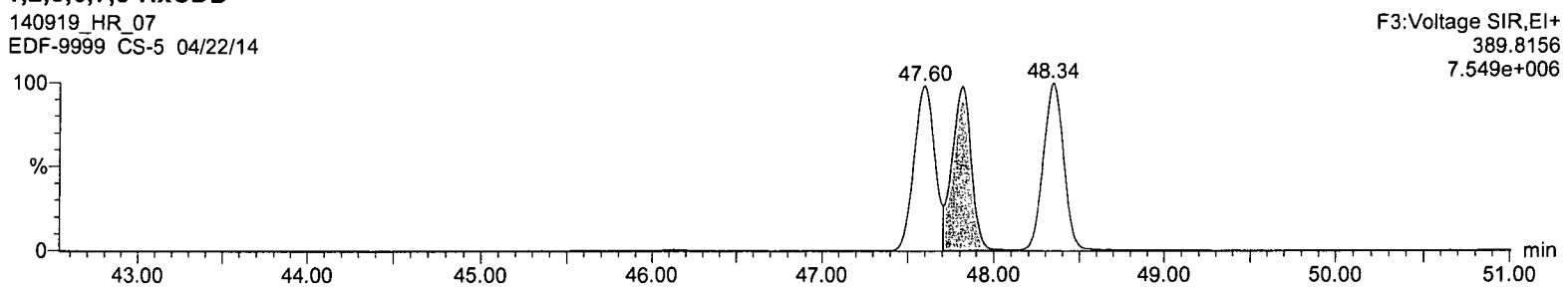


PFK3

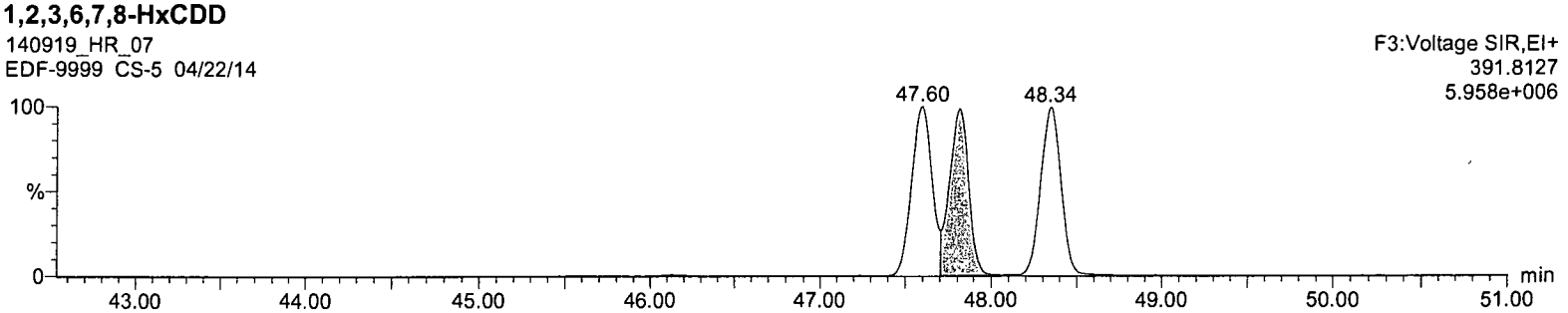


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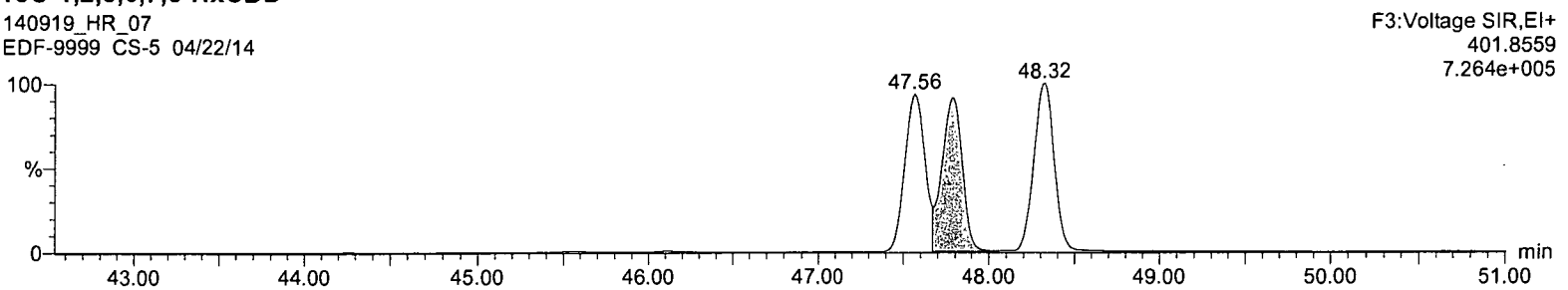
1,2,3,6,7,8-HxCDD



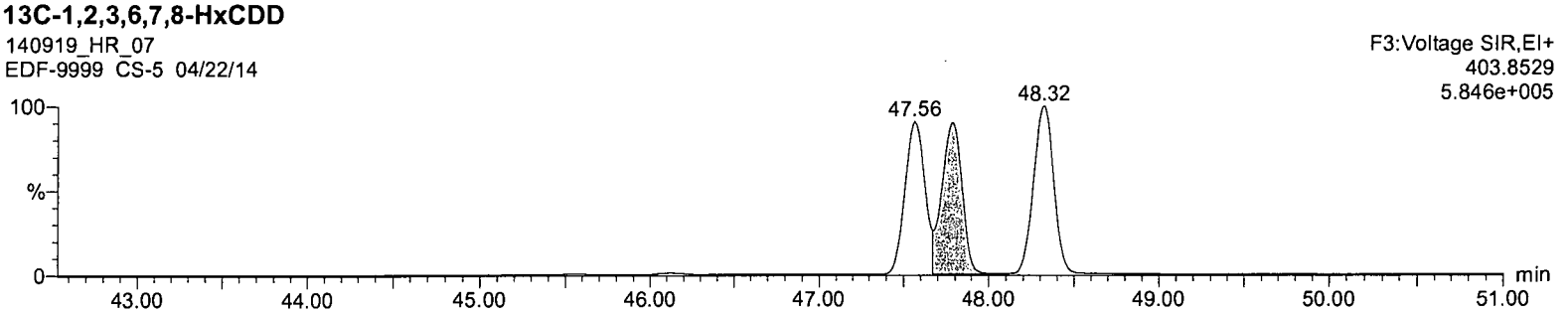
1,2,3,6,7,8-HxCDD



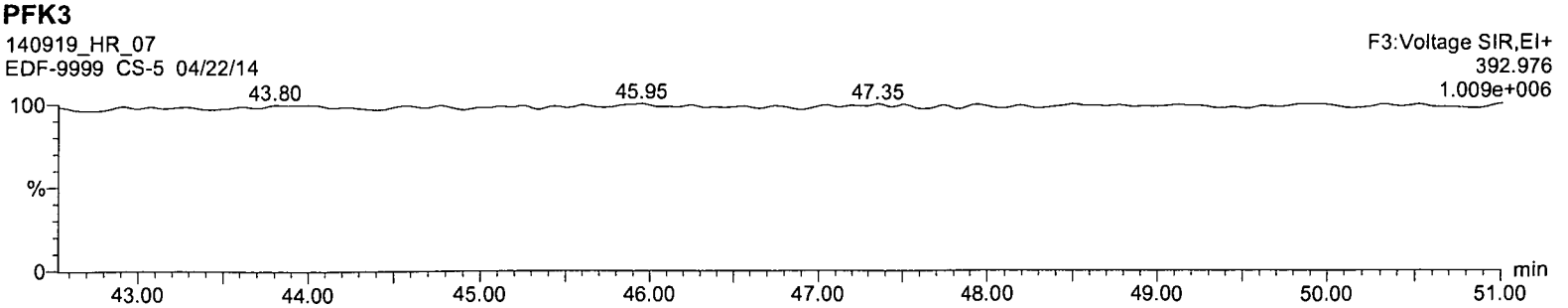
13C-1,2,3,6,7,8-HxCDD



13C-1,2,3,6,7,8-HxCDD

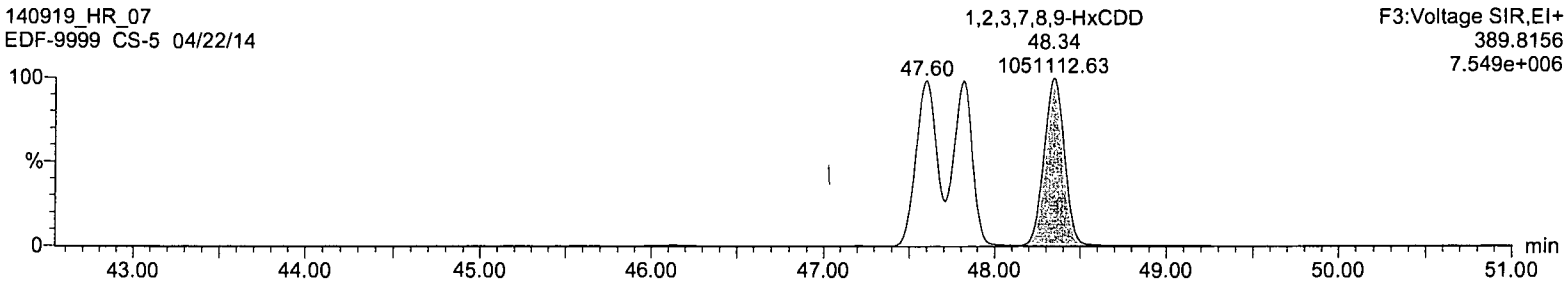


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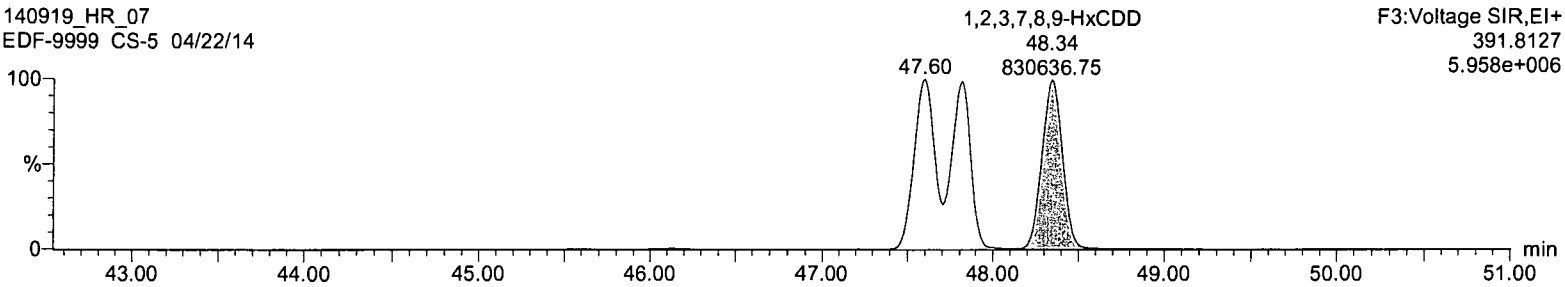


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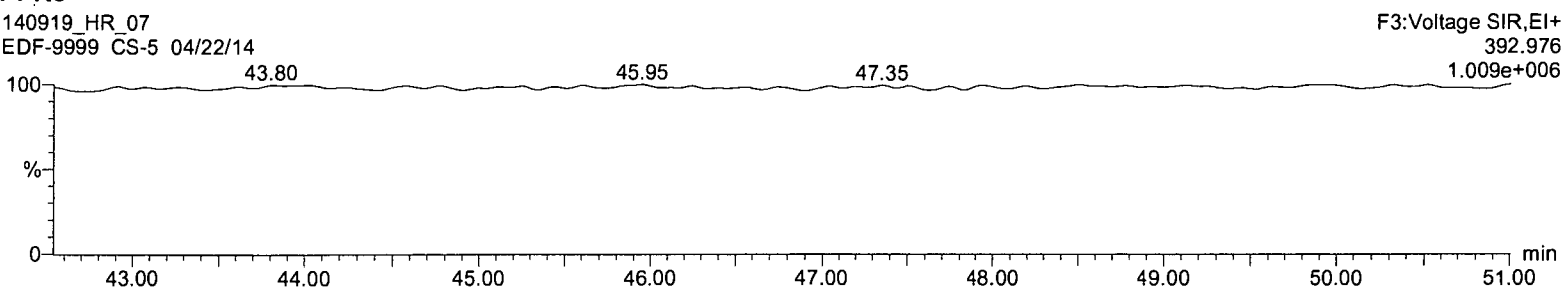
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1,2,3,7,8,9-HxCDD

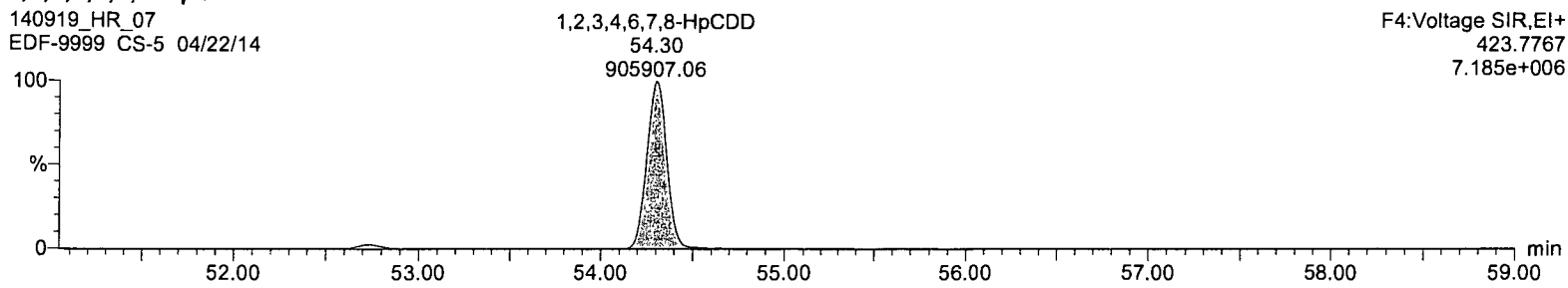


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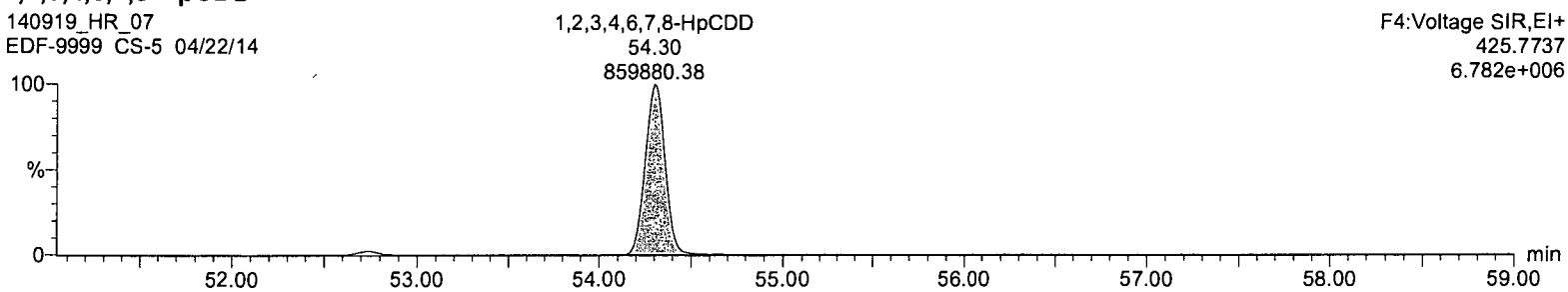


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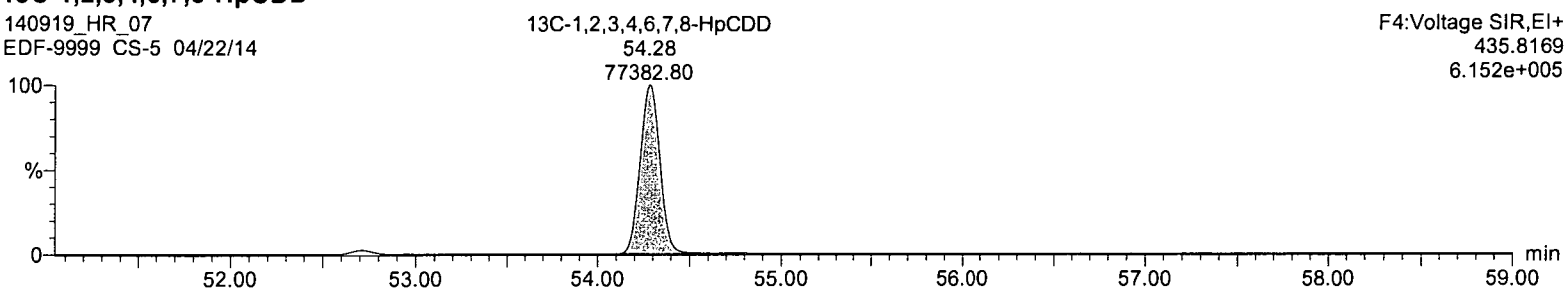
1,2,3,4,6,7,8-HpCDD



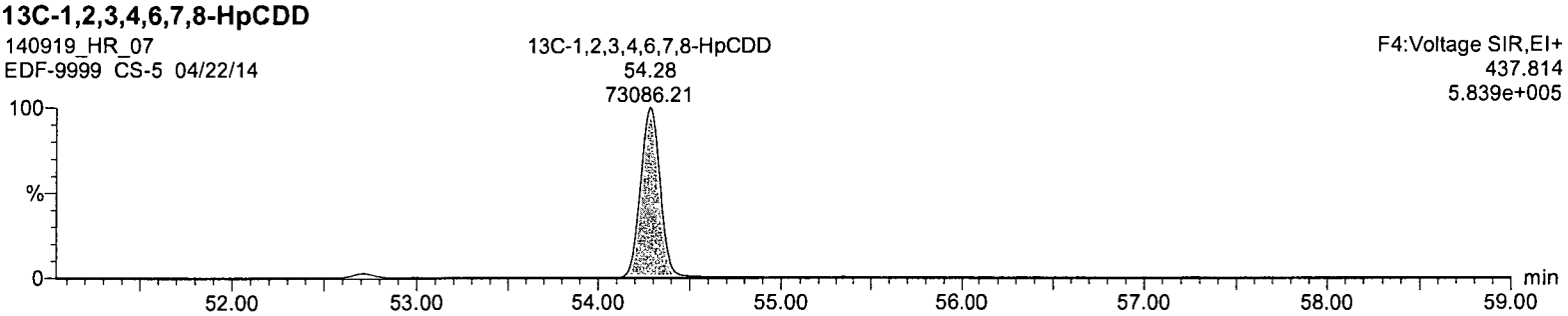
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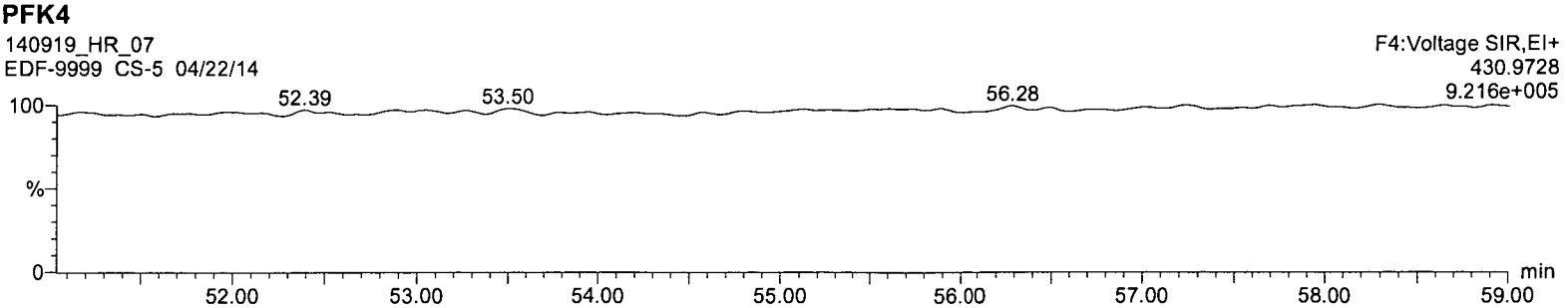
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13C-1,2,3,4,6,7,8-HpCDD

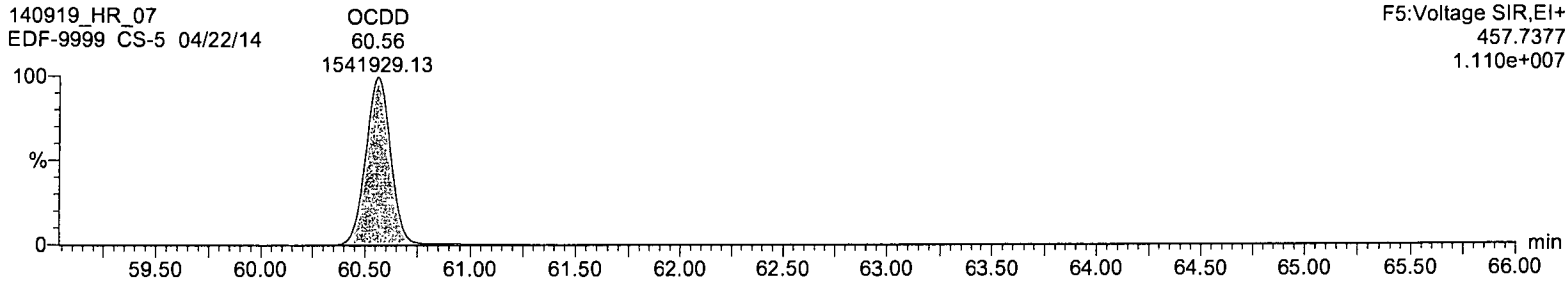


PFK4

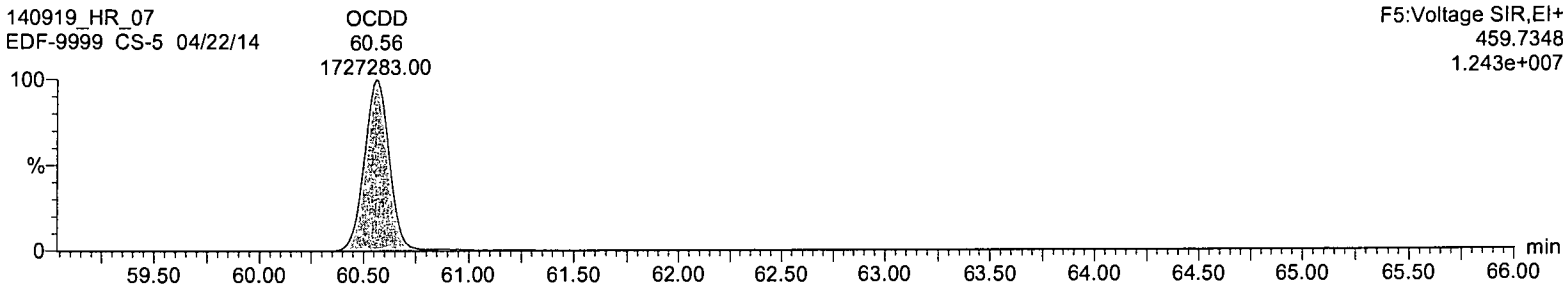


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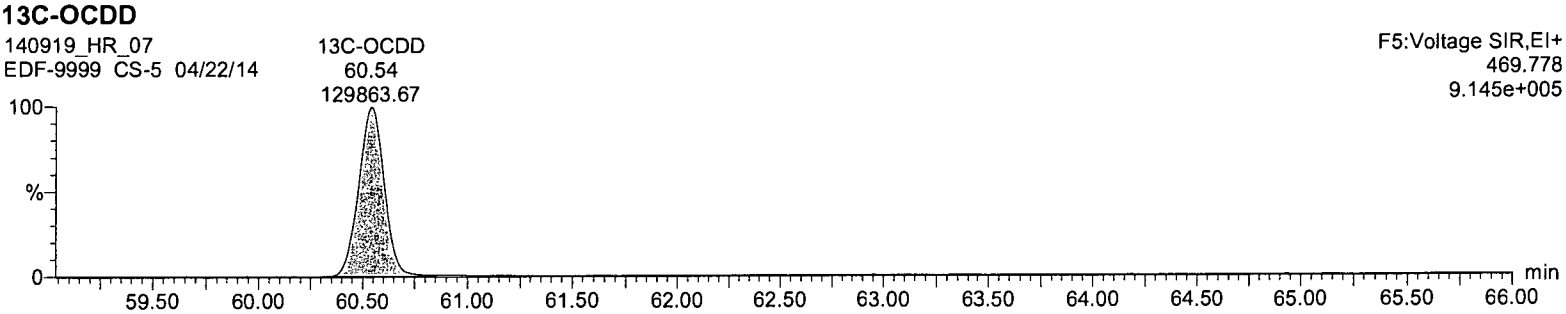
OCDD



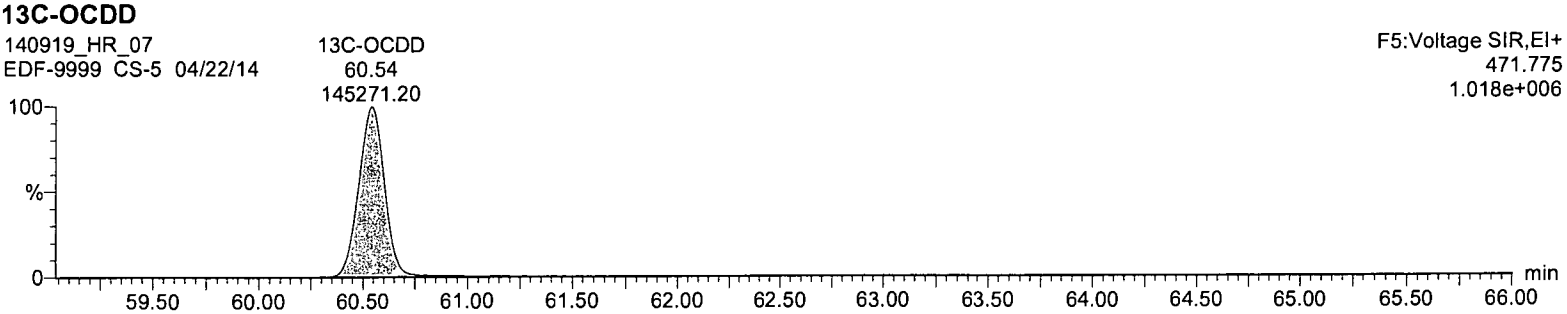
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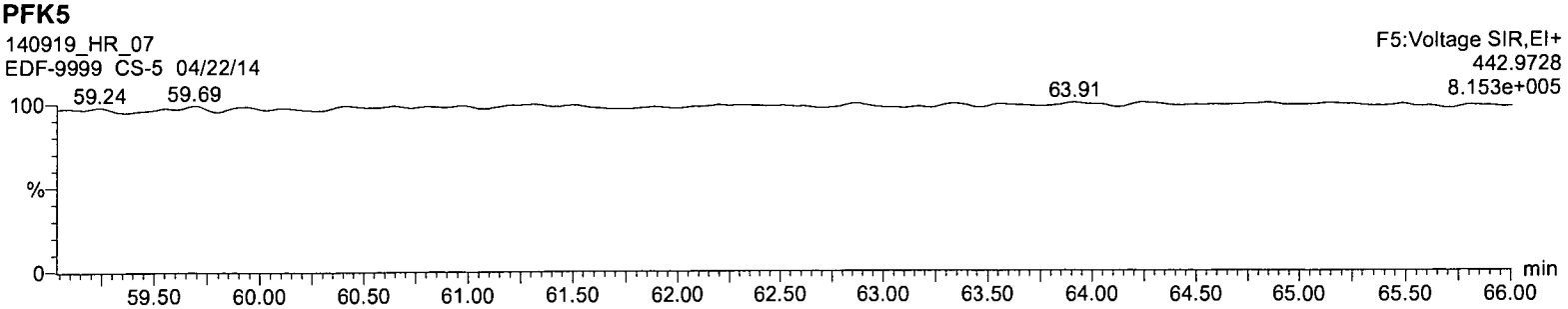
13C-OCDD



13C-OCDD

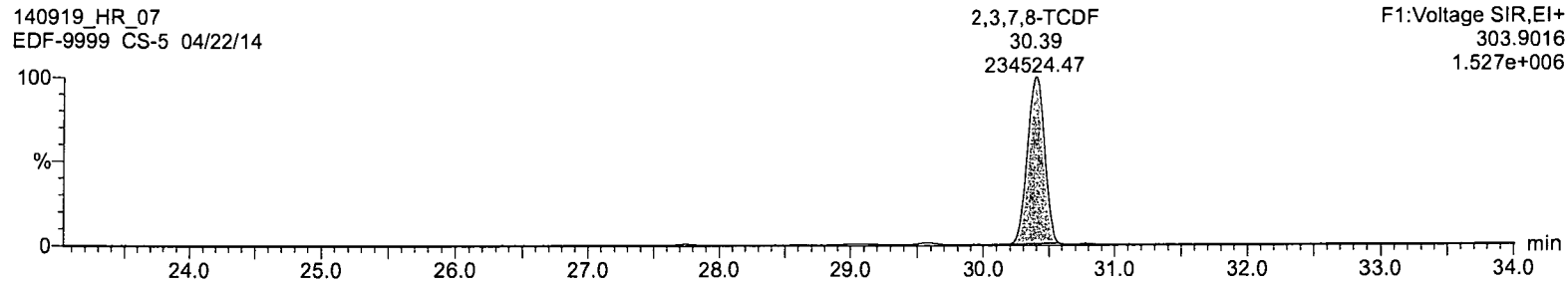


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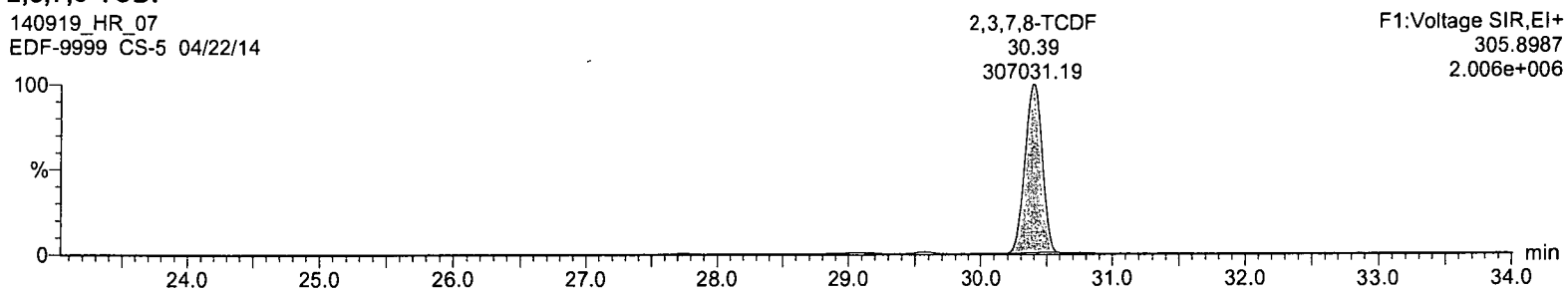


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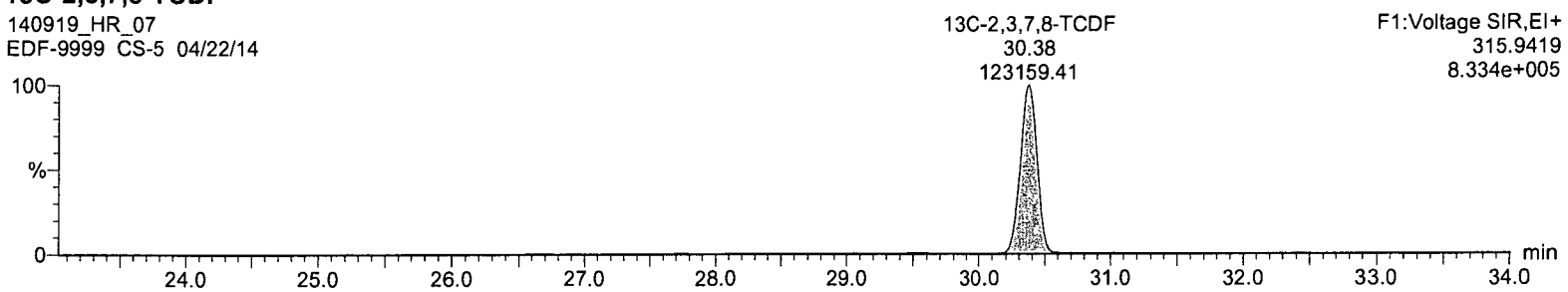
2,3,7,8-TCDF



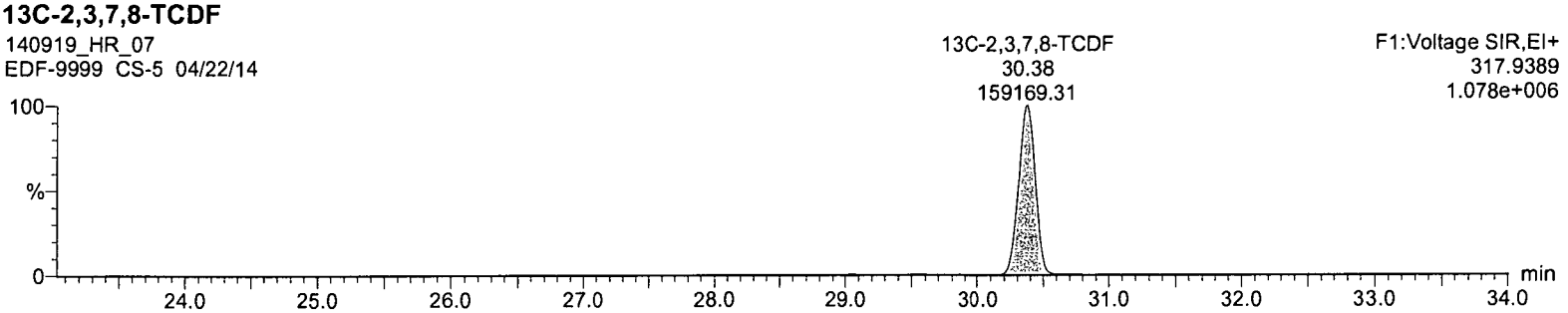
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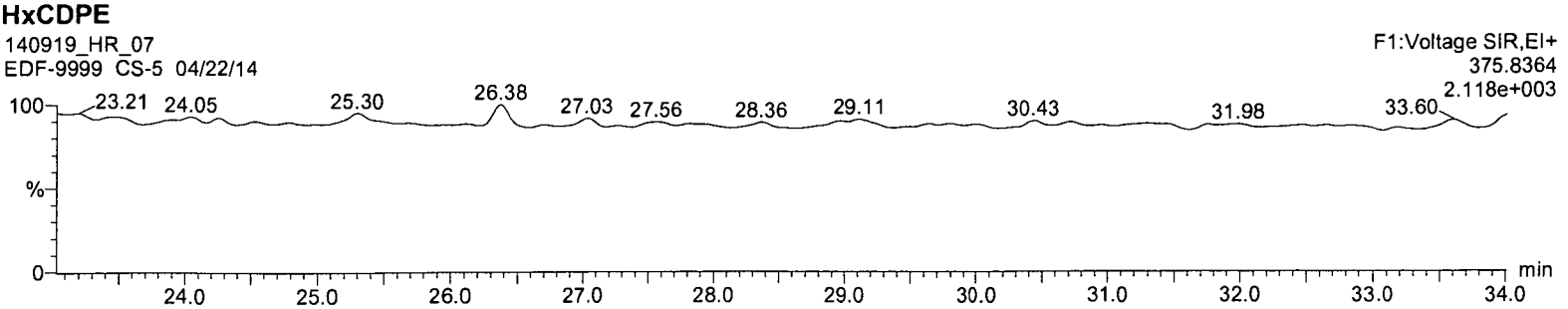
13C-2,3,7,8-TCDF



13C-2,3,7,8-TCDF

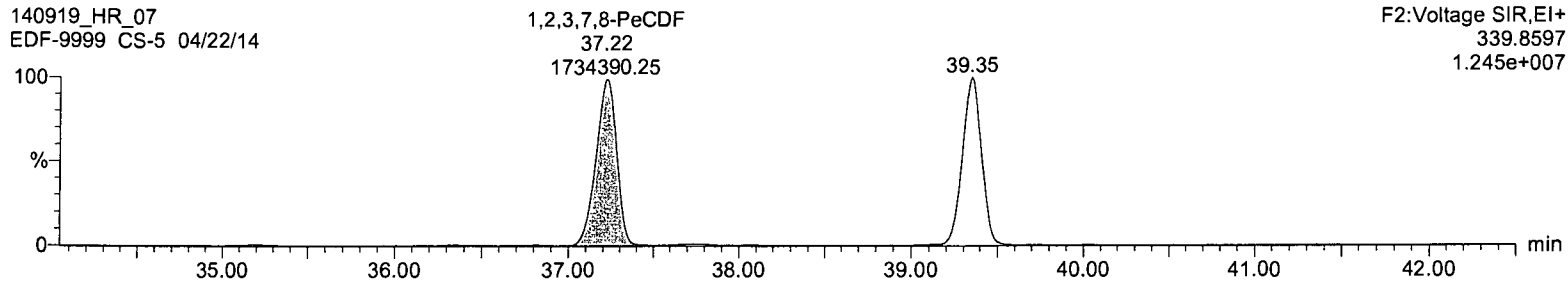


HxCDPE

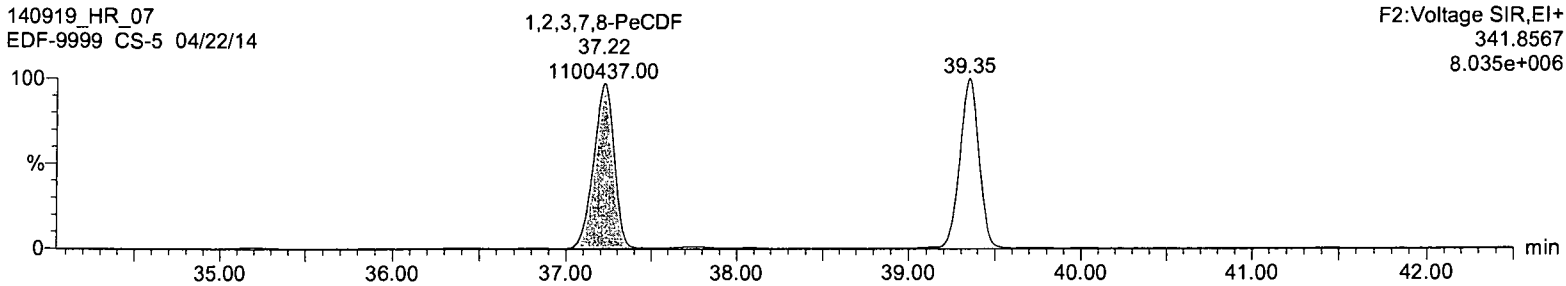


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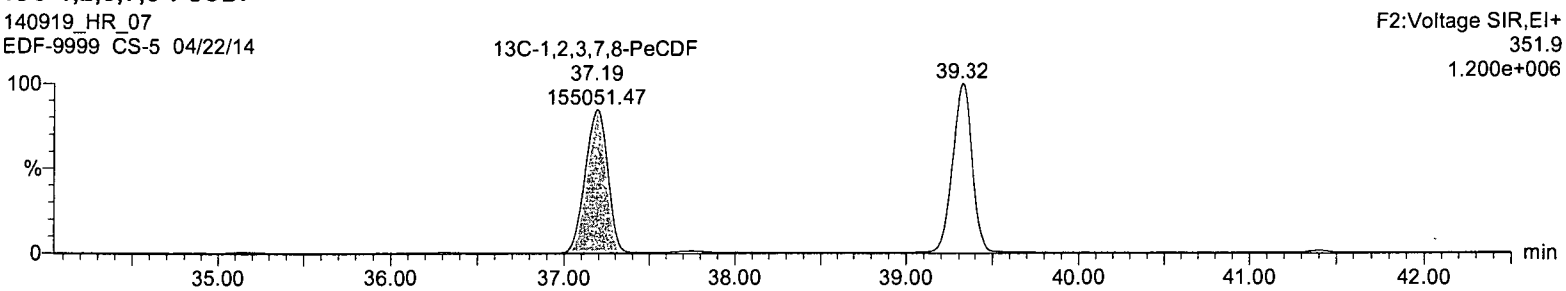
1,2,3,7,8-PeCDF



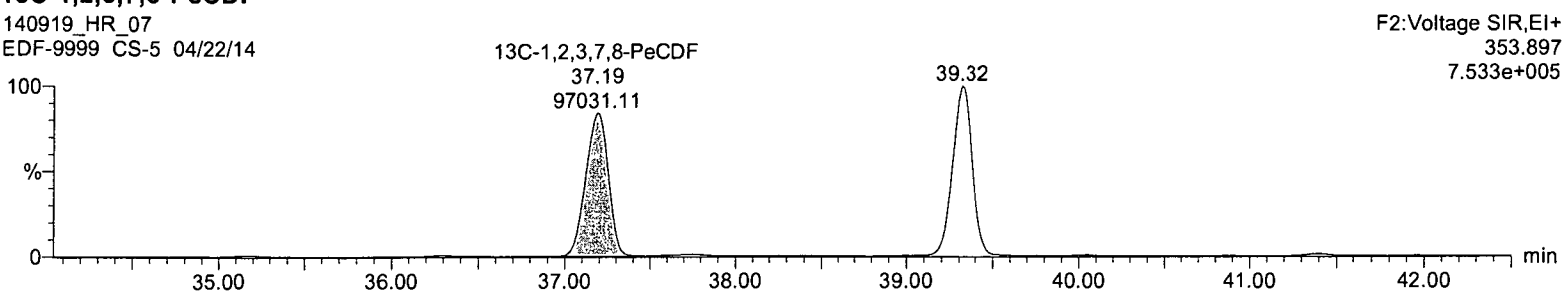
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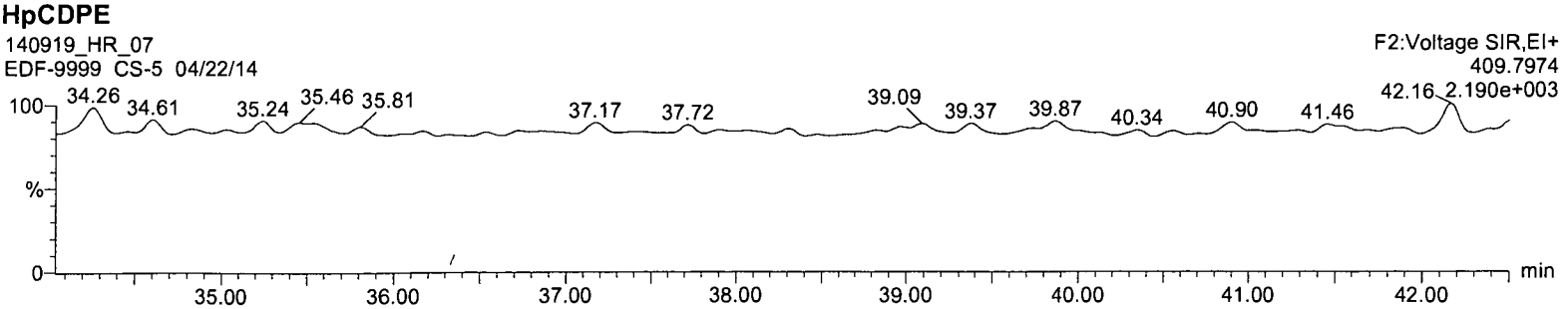
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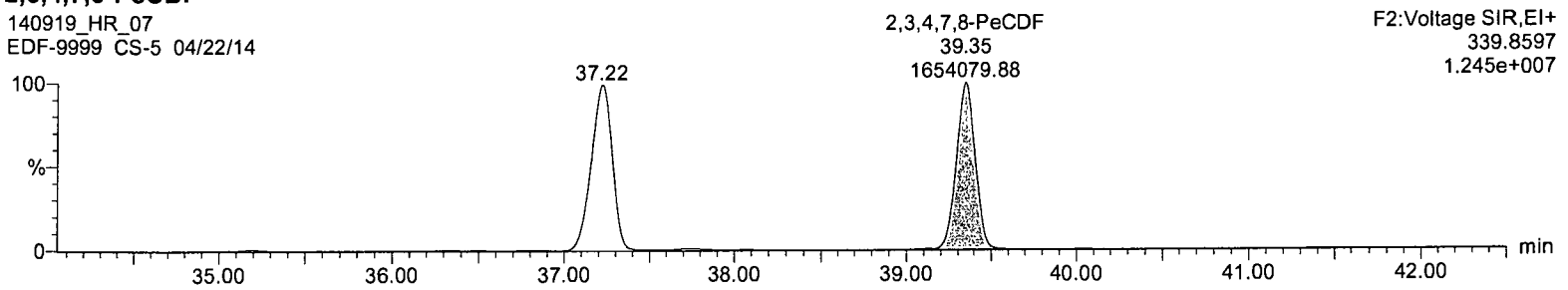


HpCDPE

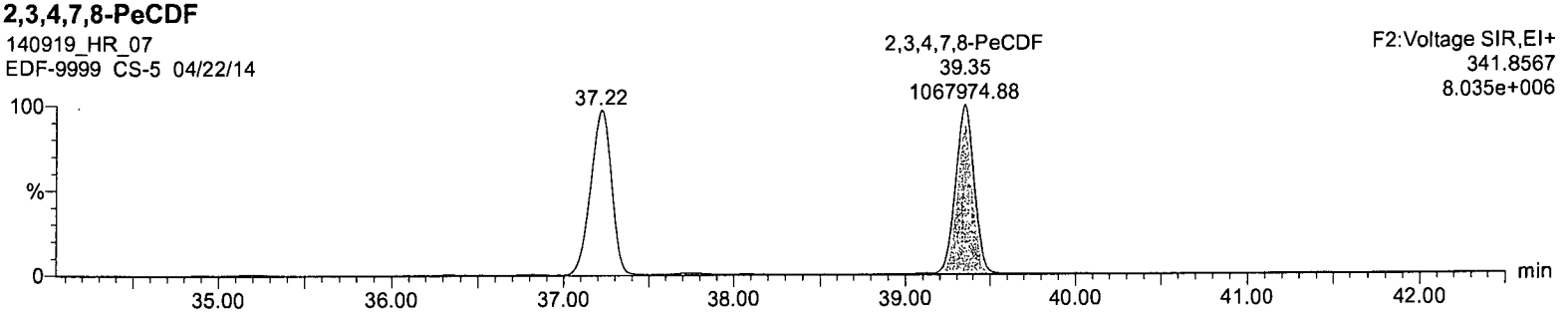


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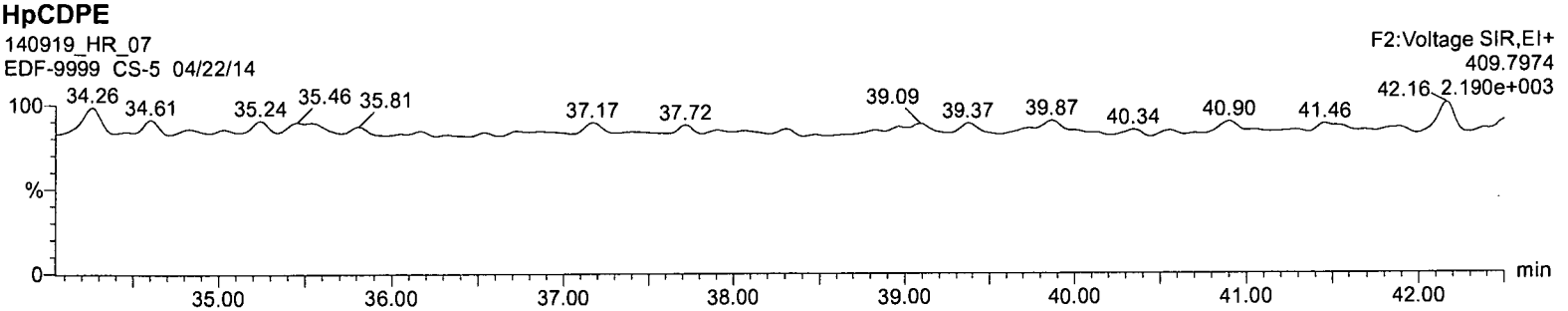
2,3,4,7,8-PeCDF



2,3,4,7,8-PeCDF

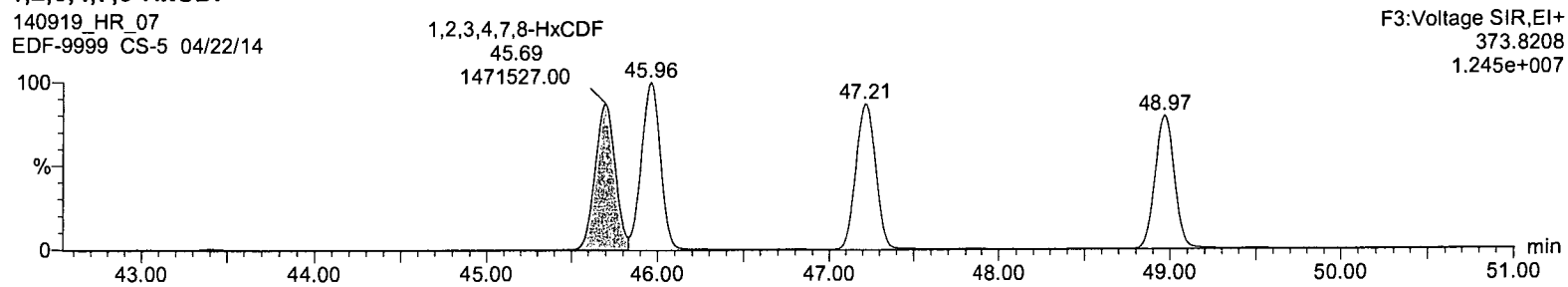


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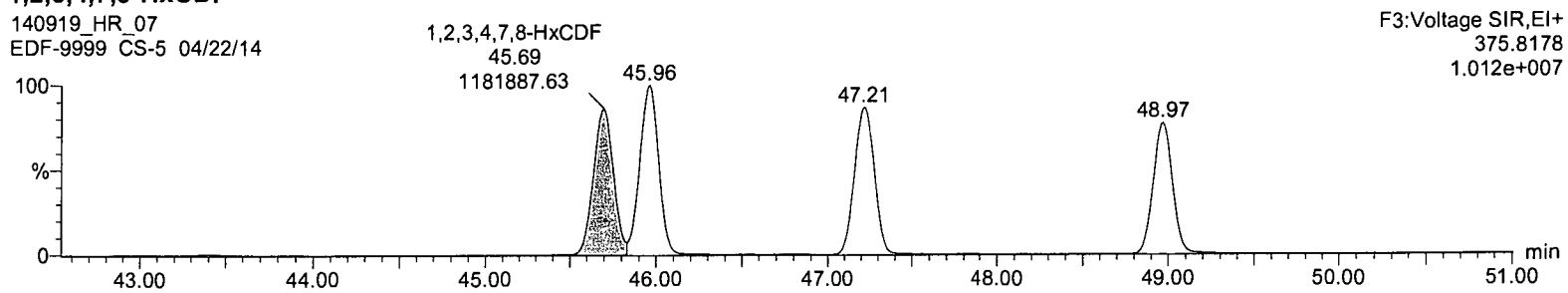


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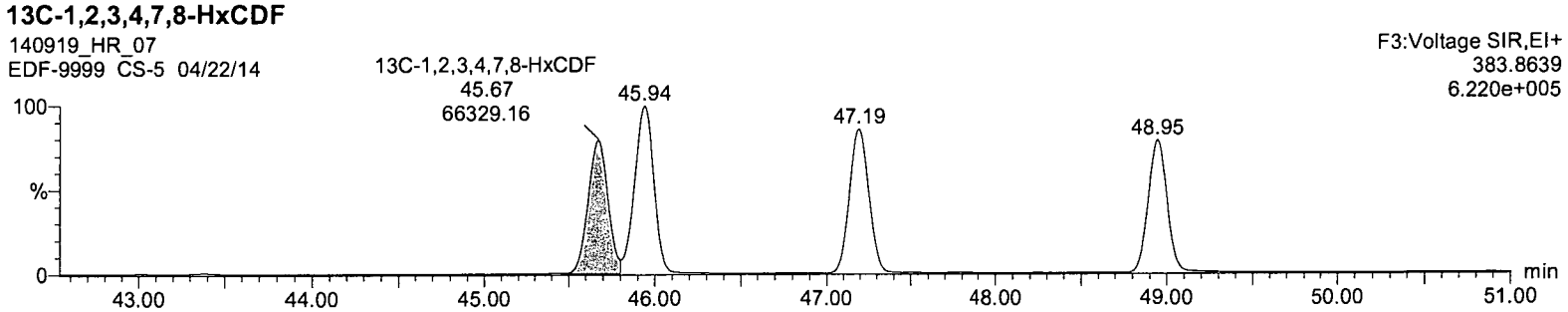
1,2,3,4,7,8-HxCDF



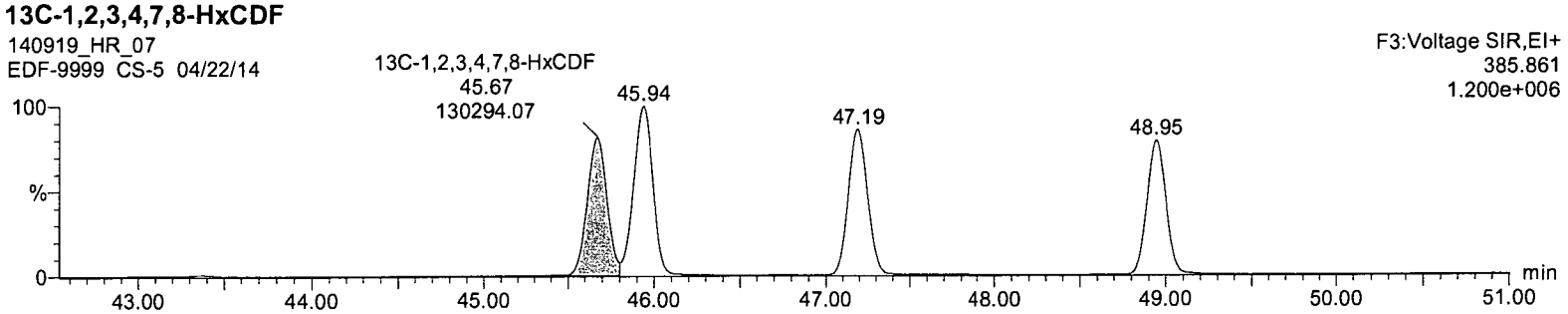
1,2,3,4,7,8-HxCDF



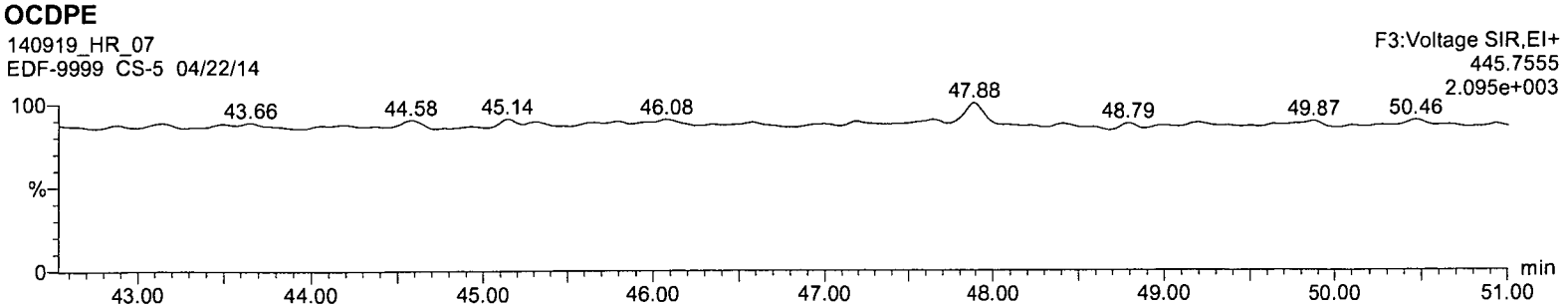
13C-1,2,3,4,7,8-HxCDF



13C-1,2,3,4,7,8-HxCDF

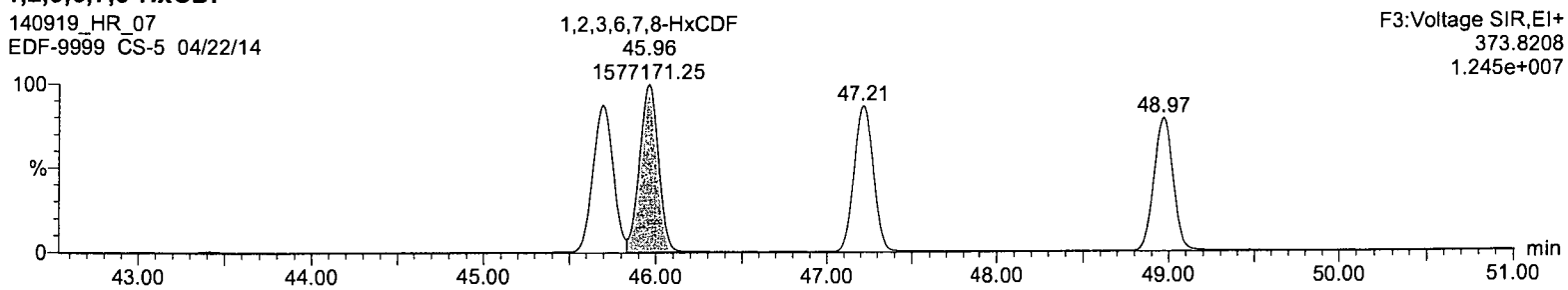


OCDPE

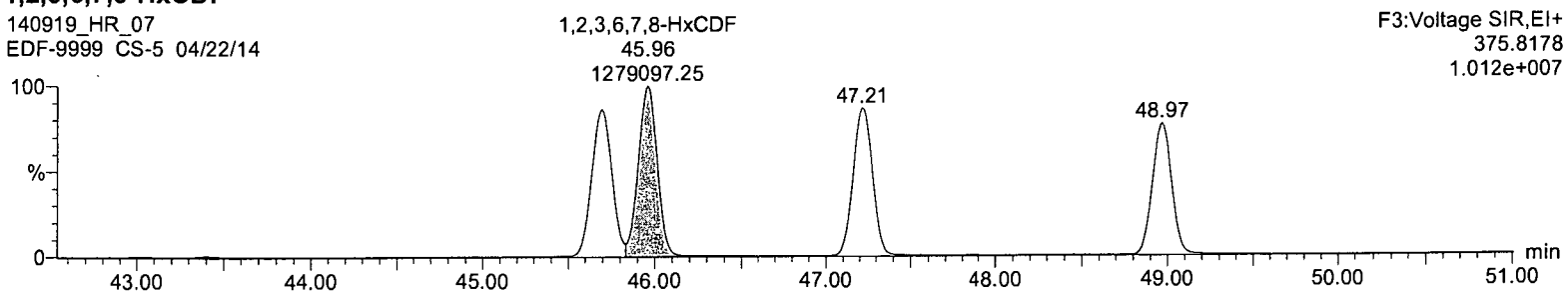


Name: 140919_HR_07, Date: 19-Sep-2014, Time: 23:43:01, Description: EDF-9999 CS-5 04/22/14, User:

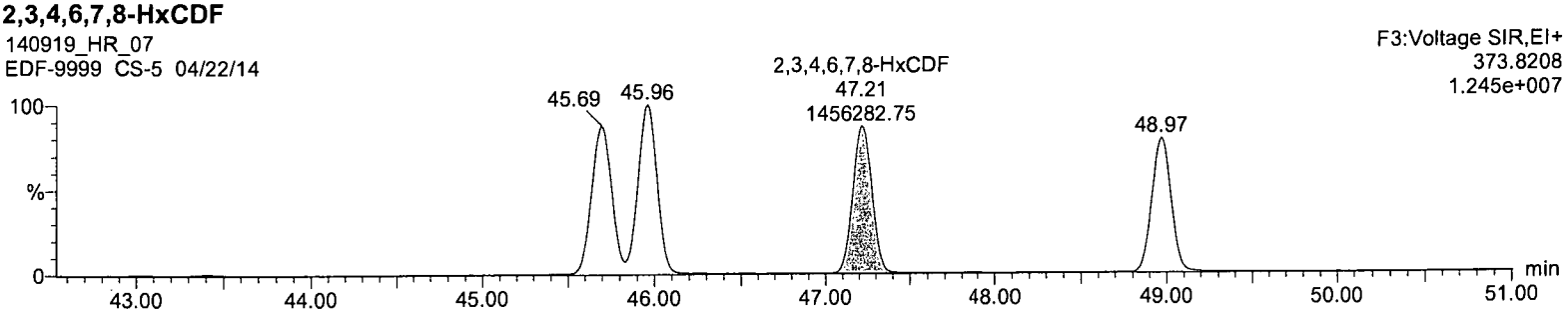
1,2,3,6,7,8-HxCDF



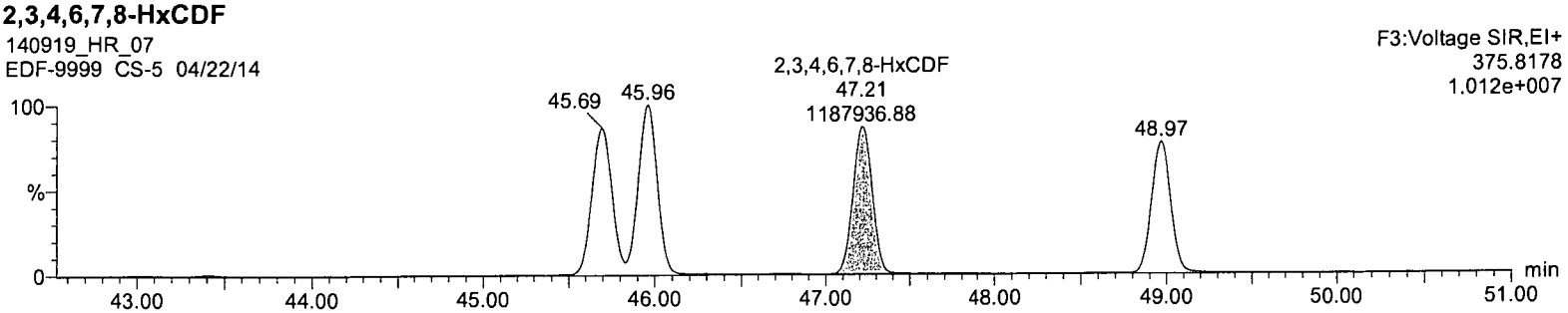
1,2,3,6,7,8-HxCDF



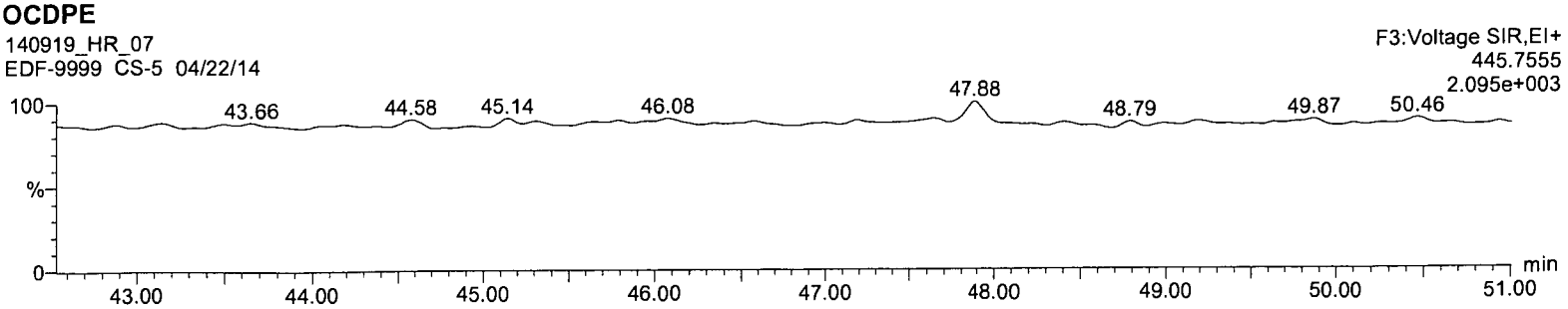
2,3,4,6,7,8-HxCDF



2,3,4,6,7,8-HxCDF

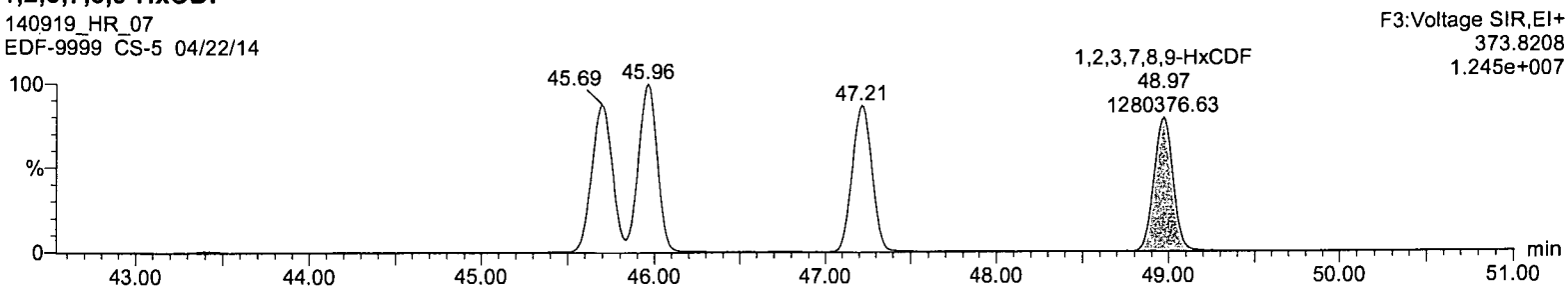


OCDPE

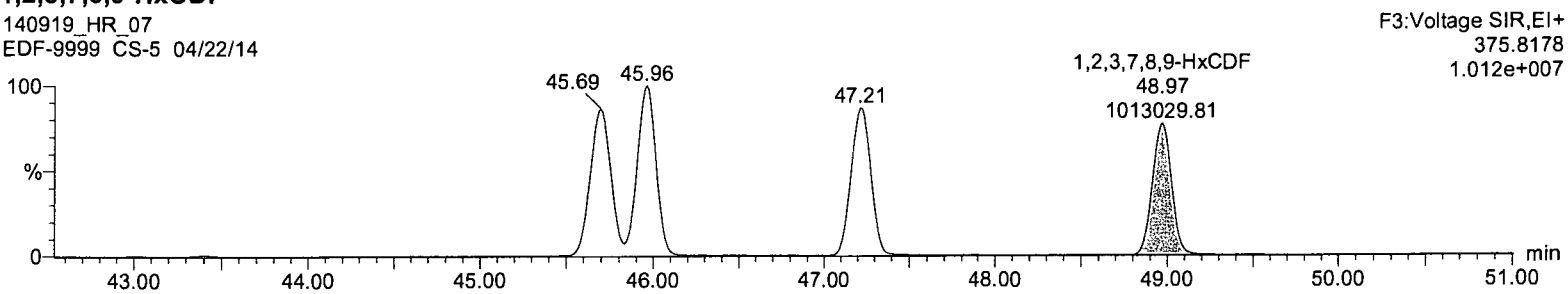


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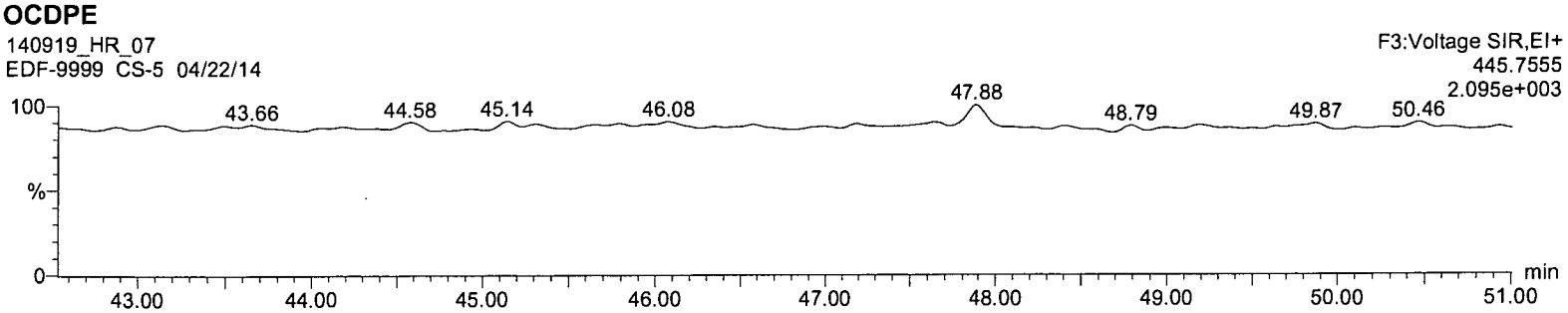
1,2,3,7,8,9-HxCDF



1,2,3,7,8,9-HxCDF

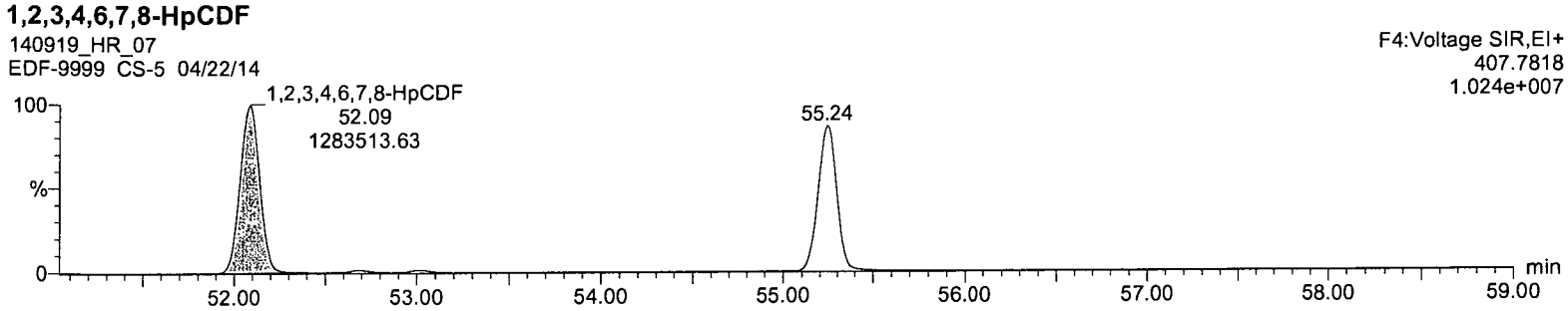


OCDPE

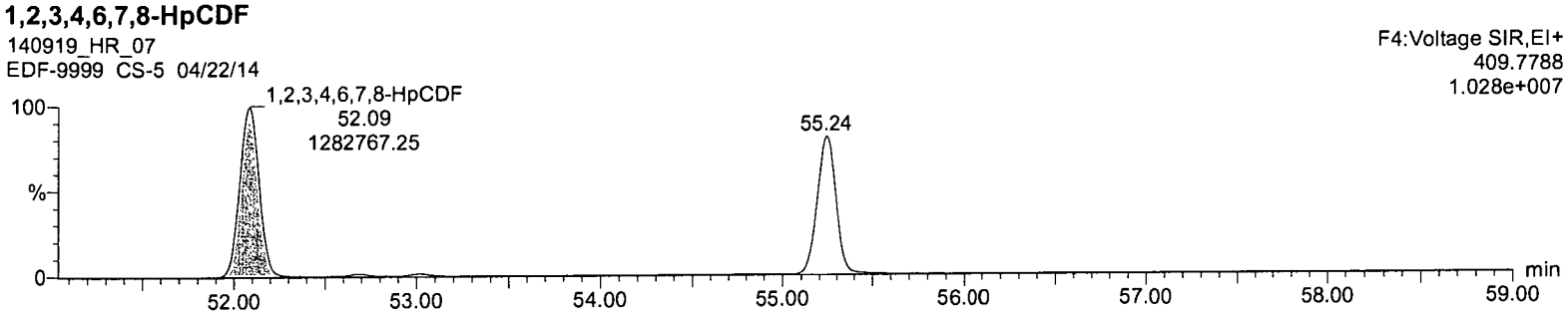


Name: 140919_HR_07, Date: 19-Sep-2014, Time: 23:43:01, Description: EDF-9999 CS-5 04/22/14, User:

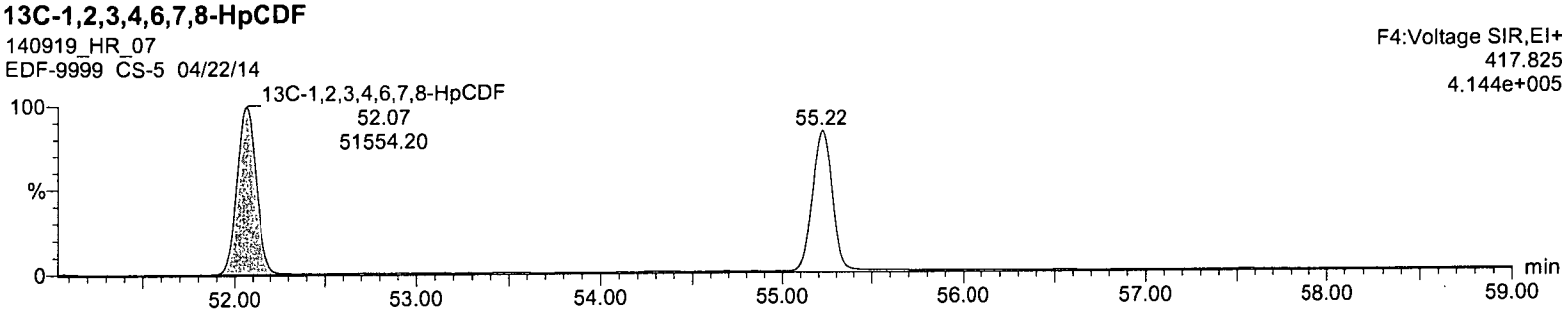
1,2,3,4,6,7,8-HpCDF



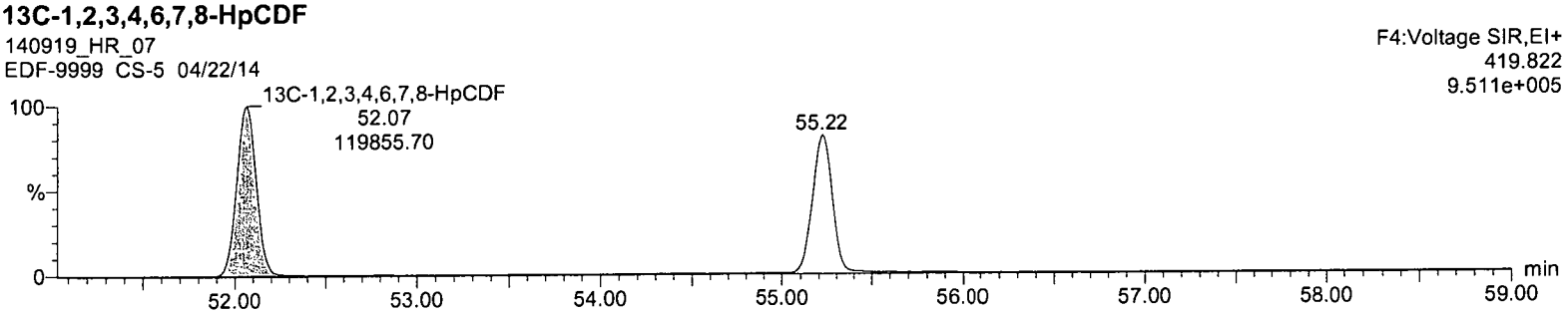
1,2,3,4,6,7,8-HpCDF



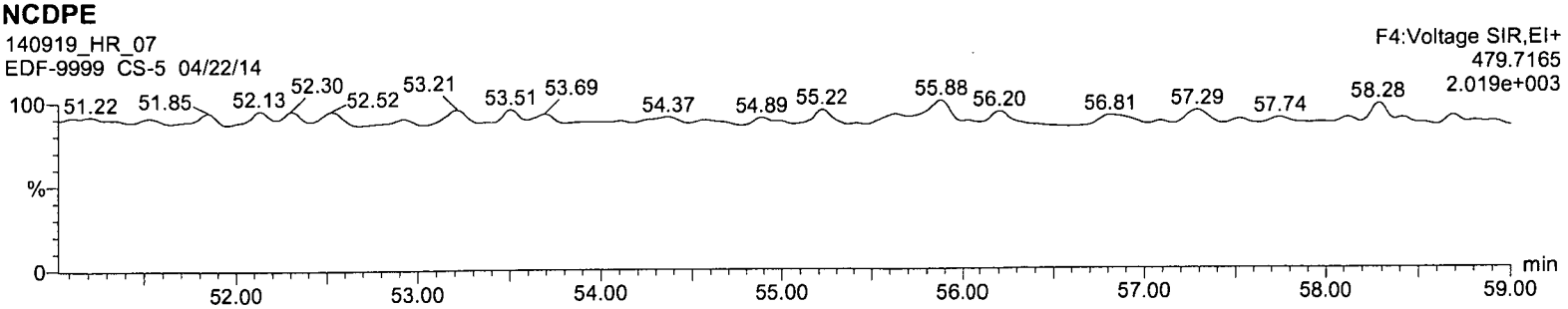
13C-1,2,3,4,6,7,8-HpCDF



13C-1,2,3,4,6,7,8-HpCDF

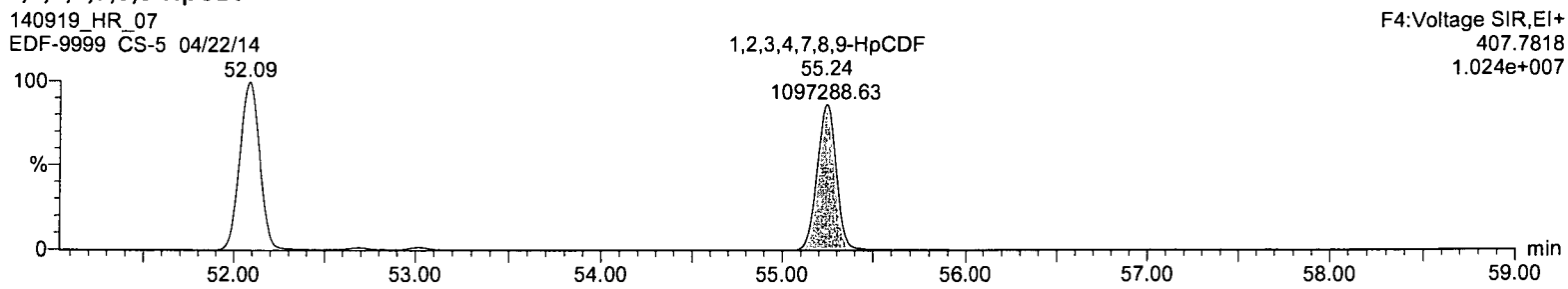


NCDPE

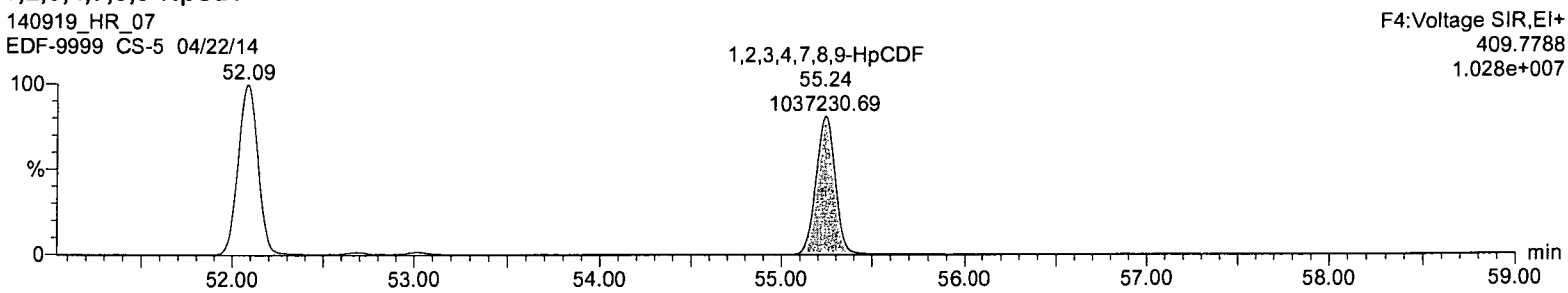


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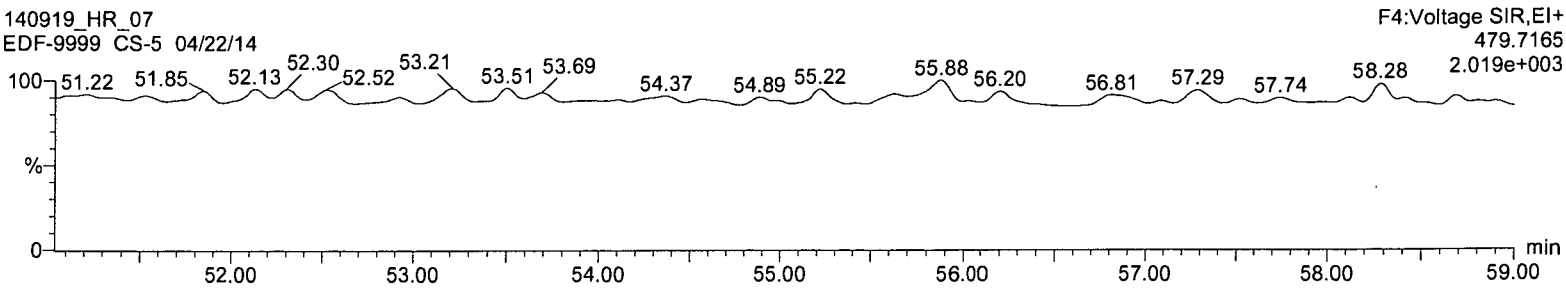
1,2,3,4,7,8,9-HpCDF



1,2,3,4,7,8,9-HpCDF

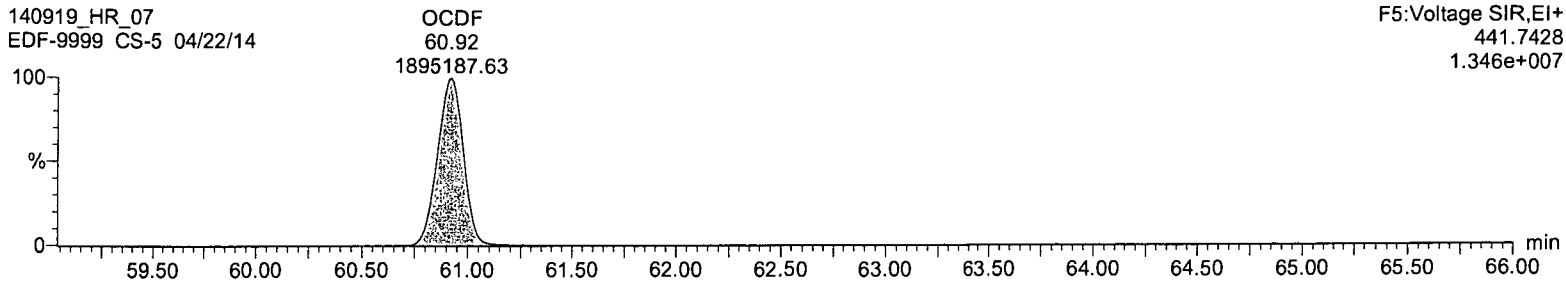


NCDPE

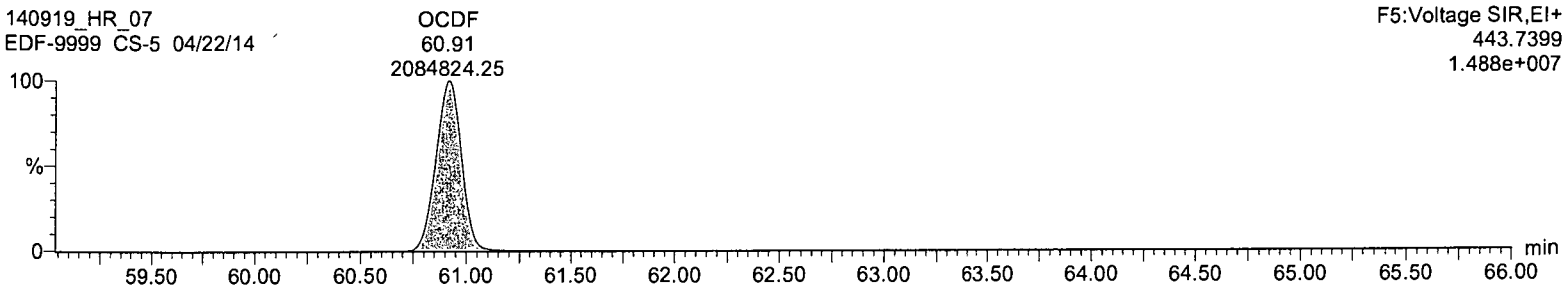


Name: 140919_HR_07, Date: 19-Sep-2014, Time: 23:43:01, Description: EDF-9999 CS-5 04/22/14, User:

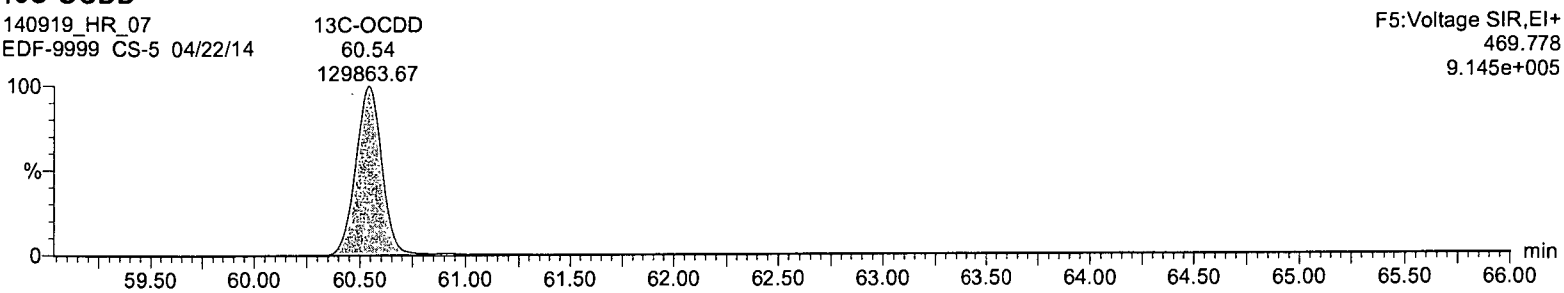
OCDF



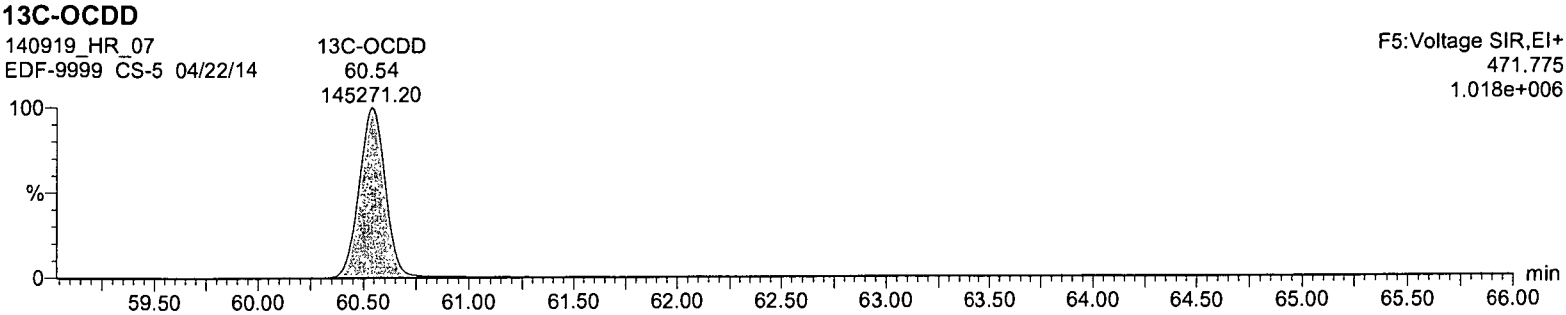
OCDF



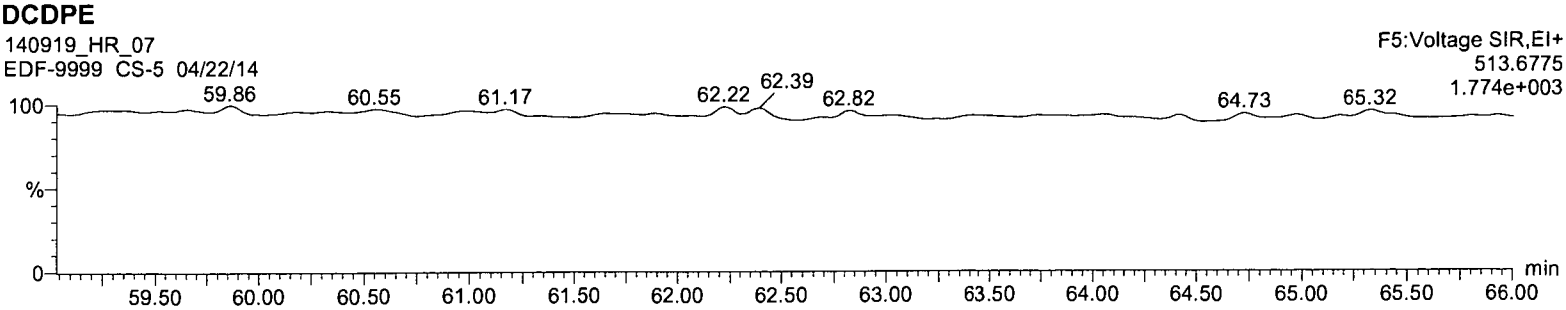
13C-OCDD



13C-OCDD

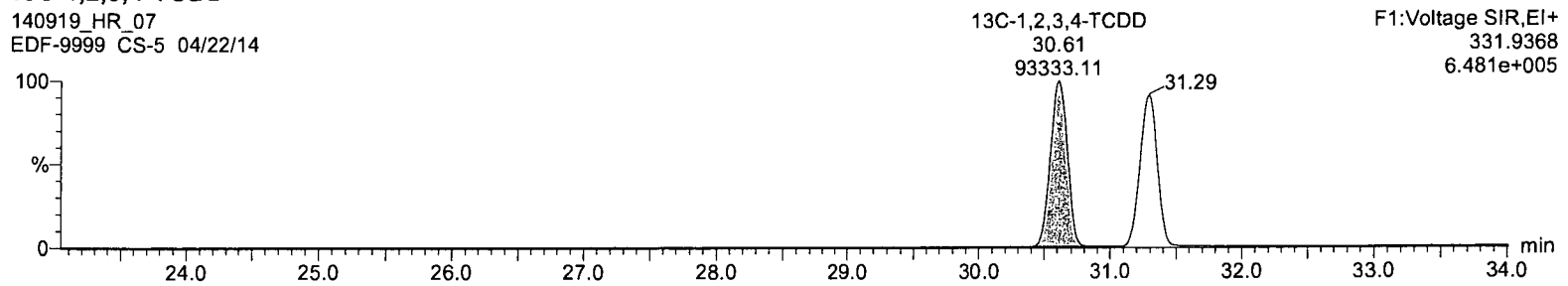


DCDPE

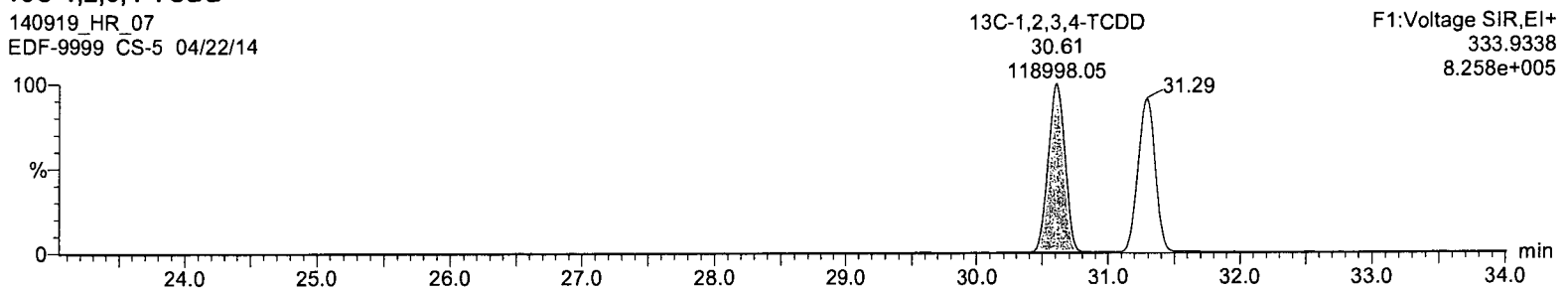


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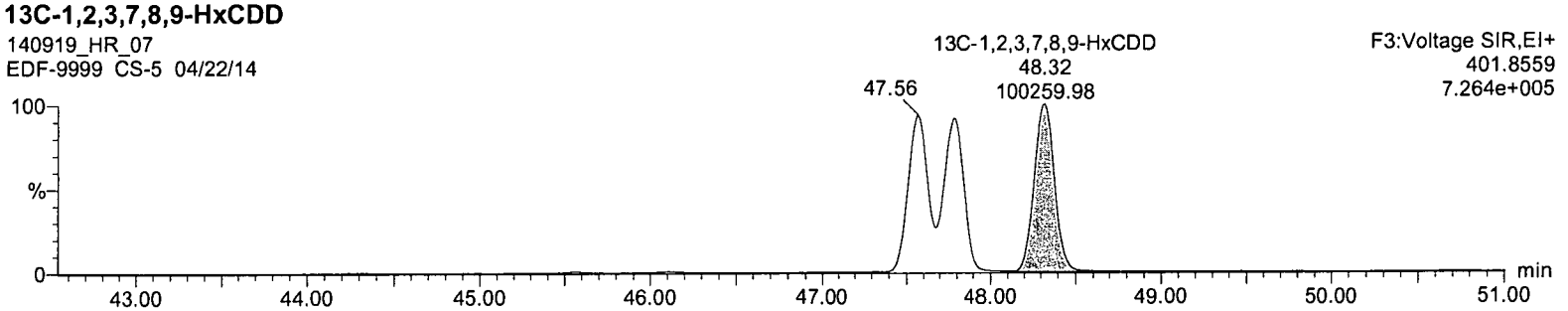
13C-1,2,3,4-TCDD



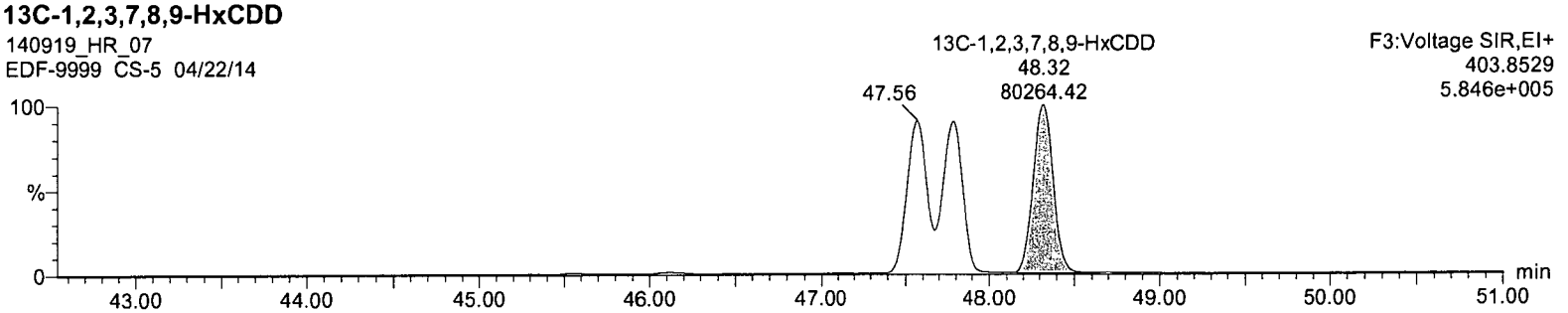
13C-1,2,3,4-TCDD



13C-1,2,3,7,8,9-HxCDD



13C-1,2,3,7,8,9-HxCDD



Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

Name: 140919_HR_10, Date: 20-Sep-2014, Time: 03:09:23, ID: , Description: EDF-9999 CS-3 09/11/14

#	Name	Peak Area	1° Area	RT	Ion Ab	Ion Fail?	S/N1	S/N2	Conc	%Rec	RRF	%Dev
1	2,3,7,8-TCDD	4.377932e3	6.061973e3	31.33	0.7222	NO	NO	NO	9.870	98.70	1.015	-1.3
2	1,2,3,7,8-PeCDD	2.084875e4	1.368162e4	40.05	1.5239	NO	NO	NO	50.268	100.54	0.925	0.5
3	1,2,3,4,7,8-HxCDD	1.770265e4	1.449356e4	47.62	1.2214	NO	NO	NO	47.585	95.17	0.980	-4.8
4	1,2,3,6,7,8-HxCDD	1.780514e4	1.339680e4	47.83	1.3291	NO	NO	NO	45.867	91.73	0.950	-8.3
5	1,2,3,7,8,9-HxCDD	1.858797e4	1.492313e4	48.36	1.2456	NO	NO	NO	47.301	94.60	1.021	-5.4
6	1,2,3,4,6,7,8-HpCDD	1.546654e4	1.495899e4	54.32	1.0339	NO	NO	NO	49.607	99.21	1.043	-0.8
7	OCDD	2.508309e4	2.814235e4	60.59	0.8913	NO	NO	NO	97.243	97.24	1.088	-2.8
8	2,3,7,8-TCDF	5.334769e3	7.158542e3	30.40	0.7452	NO	NO	NO	9.239	92.39	0.858	-7.6
9	1,2,3,7,8-PeCDF	3.363192e4	2.149823e4	37.25	1.5644	NO	NO	NO	46.615	93.23	0.957	-6.8
10	2,3,4,7,8-PeCDF	3.314036e4	2.044511e4	39.37	1.6209	NO	NO	NO	48.073	96.15	0.930	-3.9
11	1,2,3,4,7,8-HxCDF	2.971255e4	2.437309e4	45.72	1.2191	NO	NO	NO	50.827	101.65	1.265	1.7
12	1,2,3,6,7,8-HxCDF	3.016138e4	2.400626e4	45.98	1.2564	NO	NO	NO	48.700	97.40	1.267	-2.6
13	2,3,4,6,7,8-HxCDF	2.801518e4	2.221817e4	47.25	1.2609	NO	NO	NO	48.155	96.31	1.175	-3.7
14	1,2,3,7,8,9-HxCDF	2.343373e4	1.898784e4	48.99	1.2341	NO	NO	NO	48.200	96.40	0.992	-3.6
15	1,2,3,4,6,7,8-HpCDF	2.390855e4	2.287469e4	52.10	1.0452	NO	NO	NO	47.852	95.70	1.388	-4.3
16	1,2,3,4,7,8,9-HpCDF	1.877452e4	1.663634e4	55.25	1.1285	NO	NO	NO	48.756	97.51	1.050	-2.5
17	OCDF	2.918584e4	3.356129e4	60.94	0.8696	NO	NO	NO	102.882	102.88	1.283	2.9
18	13C-2,3,7,8-TCDD	4.577845e4	5.709500e4	31.30	0.8018	NO	NO	NO	102.806	102.81	0.997	2.8
19	13C-1,2,3,7,8-PeCDD	4.585762e4	2.881616e4	40.02	1.5914	NO	NO	NO	90.045	90.04	0.724	-10.0
20	13C-1,2,3,6,7,8-HxCDD	3.617016e4	2.950396e4	47.80	1.2259	NO	NO	NO	101.417	101.42	0.950	1.4
21	13C-1,2,3,4,6,7,8-HpCDD	2.929402e4	2.907138e4	54.30	1.0077	NO	NO	NO	89.356	89.36	0.844	-10.6
22	13C-OCDD	4.603249e4	5.176864e4	60.56	0.8892	NO	NO	NO	173.951	86.98	0.707	-13.0
23	13C-2,3,7,8-TCDF	6.246938e4	8.319238e4	30.39	0.7509	NO	NO	NO	102.707	102.71	1.412	2.7
24	13C-1,2,3,7,8-PeCDF	7.076388e4	4.450576e4	37.22	1.5900	NO	NO	NO	98.700	98.70	1.117	-1.3
25	13C-1,2,3,4,7,8-HxCDF	2.959592e4	5.591559e4	45.70	0.5293	NO	NO	NO	105.074	105.07	1.236	5.1
26	13C-1,2,3,4,6,7,8-HpCDF	2.058240e4	4.683732e4	52.08	0.4394	NO	NO	NO	92.502	92.50	0.975	-7.5
27	13C-1,2,3,4-TCDD	4.517958e4	5.799922e4	30.62	0.7790	NO	NO	NO	100.000	100.00	1.000	0.0
28	13C-1,2,3,7,8,9-HxCDD	3.867207e4	3.049027e4	48.34	1.2683	NO	NO	NO	100.000	100.00	1.000	0.0

Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

Name: 140919_HR_10, Date: 20-Sep-2014, Time: 03:09:23, ID: , Description: EDF-9999 CS-3 09/11/14, User:

#	Name	RT	RRT
1	2,3,7,8-TCDD	31.329000	1.000869
2	1,2,3,7,8-PeCDD	40.048302	1.000762
3	1,2,3,4,7,8-HxCDD	47.618198	0.996224
4	1,2,3,6,7,8-HxCDD	47.830700	1.000669
5	1,2,3,7,8,9-HxCDD	48.361698	1.000439
6	1,2,3,4,6,7,8-HpCDD	54.319000	1.000372
7	OCDD	60.590698	1.000504
8	2,3,7,8-TCDF	30.403700	1.000451
9	1,2,3,7,8-PeCDF	37.250801	1.000814
10	2,3,4,7,8-PeCDF	39.369202	1.057729
11	1,2,3,4,7,8-HxCDF	45.716499	1.000466
12	1,2,3,6,7,8-HxCDF	45.981998	1.006276
13	2,3,4,6,7,8-HxCDF	47.246201	1.033942
14	1,2,3,7,8,9-HxCDF	48.988499	1.072071
15	1,2,3,4,6,7,8-HpCDF	52.099300	1.000390
16	1,2,3,4,7,8,9-HpCDF	55.251499	1.060917
17	OCDF	60.935200	1.006192
18	13C-2,3,7,8-TCDD	31.301800	1.022223
19	13C-1,2,3,7,8-PeCDD	40.017799	1.306862
20	13C-1,2,3,6,7,8-HxCDD	47.798698	0.988792
21	13C-1,2,3,4,6,7,8-HpCDD	54.298801	1.123257
22	13C-OCDD	60.560200	1.252784
23	13C-2,3,7,8-TCDF	30.389999	0.992446
24	13C-1,2,3,7,8-PeCDF	37.220501	1.215510
25	13C-1,2,3,4,7,8-HxCDF	45.695202	0.945278
26	13C-1,2,3,4,6,7,8-HpCDF	52.078999	1.077337
27	13C-1,2,3,4-TCDD	30.621300	1.000000
28	13C-1,2,3,7,8,9-HxCDD	48.340500	1.000000

Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

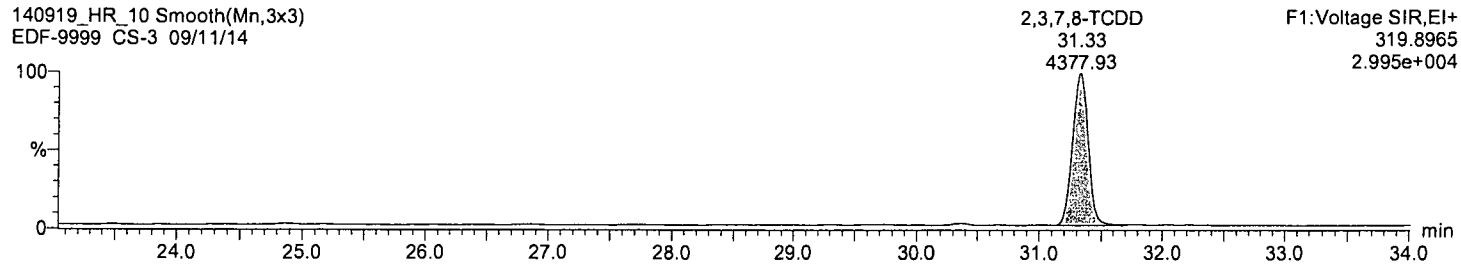
Name: 140919_HR_10, Date: 20-Sep-2014, Time: 03:09:23, ID: , Description: EDF-9999 CS-3 09/11/14, User:

#	Name	Signal	Noise 1	S/N 1	Flag S/N	Signal 2	Noise 2	S/N 2	Flag S/N
1	2,3,7,8-TCDD	2.9153000e4	8.3411522e1	348.63	NO	4.0344000e4	2.6978413e1	1495.42	NO
2	1,2,3,7,8-PeCDD	1.5092100e5	1.3007639e2	1159.08	NO	9.8946000e4	3.3869846e1	2921.36	NO
3	1,2,3,4,7,8-HxCDD	1.3551600e5	1.1247786e3	118.64	NO	1.1057400e5	5.9726784e1	1851.33	NO
4	1,2,3,6,7,8-HxCDD	1.3295300e5	1.1247786e3	116.37	NO	9.9135000e4	5.9726784e1	1659.81	NO
5	1,2,3,7,8,9-HxCDD	1.4063000e5	1.1247786e3	123.20	NO	1.1240800e5	5.9726784e1	1882.04	NO
6	1,2,3,4,6,7,8-HpCDD	1.1918600e5	9.2965340e1	1279.44	NO	1.1484300e5	2.6756372e2	429.22	NO
7	OCDD	1.7846800e5	1.0646816e2	1673.45	NO	2.0011900e5	7.0920815e1	2821.72	NO
8	2,3,7,8-TCDF	3.4492000e4	1.8361904e1	1896.50	NO	4.5907000e4	4.5855133e1	1001.13	NO
9	1,2,3,7,8-PeCDF	2.2926400e5	8.3125313e1	2754.61	NO	1.4559200e5	9.7502029e1	1493.22	NO
10	2,3,4,7,8-PeCDF	2.3930500e5	8.3125313e1	2879.22	NO	1.4467800e5	9.7502029e1	1483.85	NO
11	1,2,3,4,7,8-HxCDF	2.1957000e5	1.3055264e2	1678.66	NO	1.8303700e5	1.1152899e2	1641.16	NO
12	1,2,3,6,7,8-HxCDF	2.3323700e5	1.3055264e2	1783.44	NO	1.8203000e5	1.1152899e2	1632.13	NO
13	2,3,4,6,7,8-HxCDF	2.0873100e5	1.3055264e2	1596.20	NO	1.6522700e5	1.1152899e2	1481.47	NO
14	1,2,3,7,8,9-HxCDF	1.7574800e5	1.3055264e2	1343.60	NO	1.4284100e5	1.1152899e2	1280.75	NO
15	1,2,3,4,6,7,8-HpCDF	1.8339500e5	6.8440997e2	264.47	NO	1.7618700e5	2.5832428e2	682.04	NO
16	1,2,3,4,7,8,9-HpCDF	1.4632800e5	6.8440997e2	210.30	NO	1.2828500e5	2.5832428e2	496.60	NO
17	OCDF	2.0749600e5	5.1810825e1	4001.08	NO	2.3748400e5	6.0931870e1	3897.53	NO
18	13C-2,3,7,8-TCDD	3.1290700e5	1.6051526e2	1950.87	NO	3.8932800e5	4.5447731e1	8566.50	NO
19	13C-1,2,3,7,8-PeCDD	3.3768800e5	1.9114438e2	1765.69	NO	2.1078900e5	1.2172919e2	1731.62	NO
20	13C-1,2,3,6,7,8-HxCDD	2.6477200e5	4.4346014e2	596.95	NO	2.1667300e5	1.4456325e2	1498.81	NO
21	13C-1,2,3,4,6,7,8-HpCDD	2.3085200e5	9.0389648e1	2551.30	NO	2.2474700e5	4.4552362e2	504.46	NO
22	13C-OCDD	3.1465100e5	1.3545538e2	2318.51	NO	3.5704100e5	2.2862085e2	1561.72	NO
23	13C-2,3,7,8-TCDF	4.2149600e5	6.9585876e1	6056.29	NO	5.6537400e5	7.1860153e1	7867.70	NO
24	13C-1,2,3,7,8-PeCDF	4.7747600e5	2.6779486e2	1781.48	NO	2.9576900e5	9.2296973e2	320.45	NO
25	13C-1,2,3,4,7,8-HxCDF	2.2414400e5	1.1998972e2	1865.01	NO	4.2423700e5	2.5978448e2	1633.03	NO
26	13C-1,2,3,4,6,7,8-HpCDF	1.5804800e5	8.5412407e1	1847.35	NO	3.5950100e5	7.9625867e2	451.49	NO
27	13C-1,2,3,4-TCDD	3.1301300e5	1.6051526e2	1951.53	NO	4.0294400e5	4.5447731e1	8866.10	NO
28	13C-1,2,3,7,8,9-HxCDD	2.9015900e5	4.4346014e2	655.19	NO	2.2974500e5	1.4456325e2	1589.24	NO

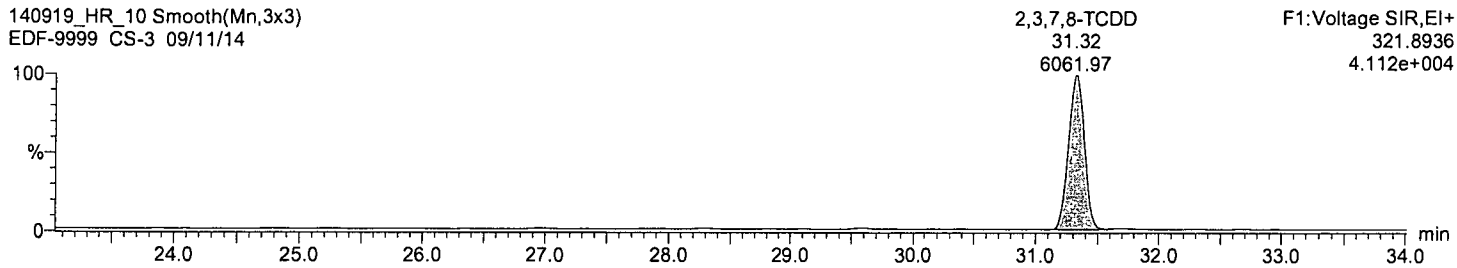
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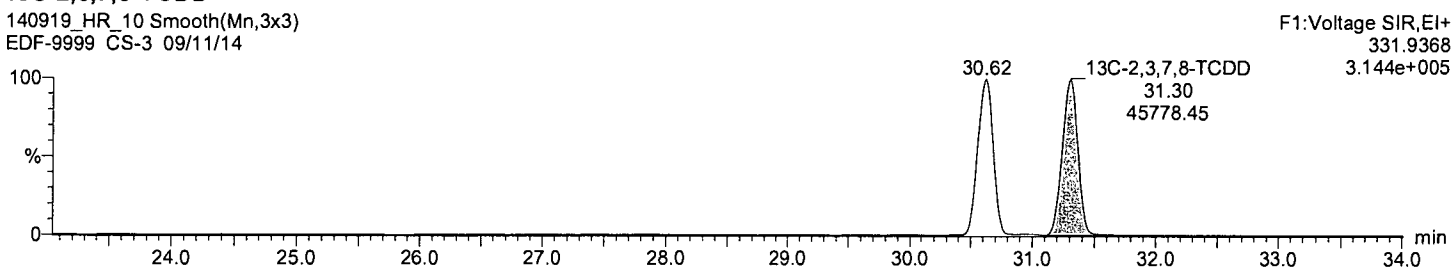
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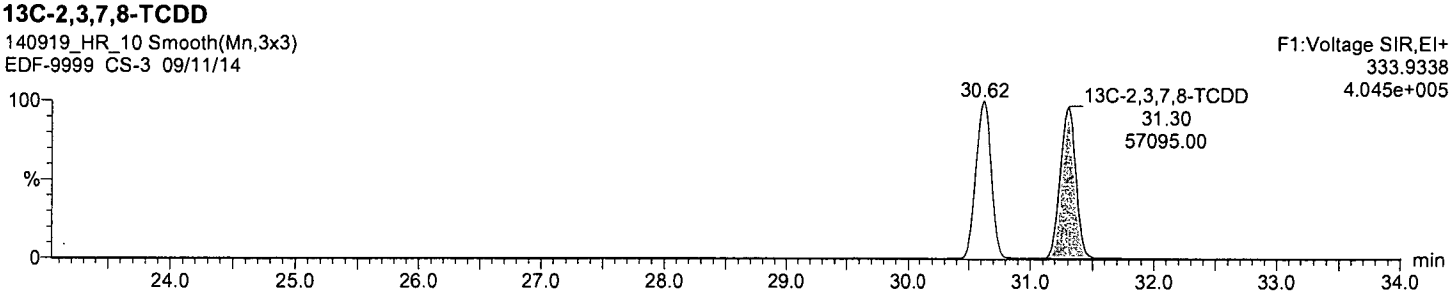
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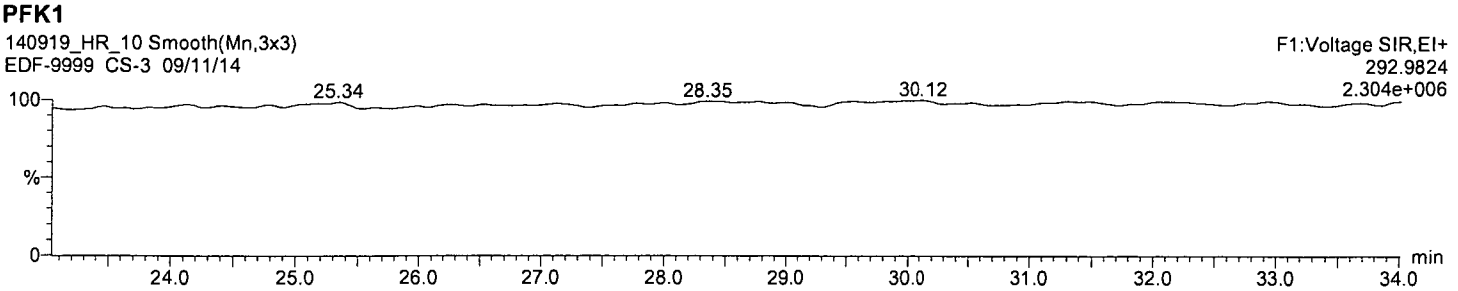
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13C-2,3,7,8-TCDD

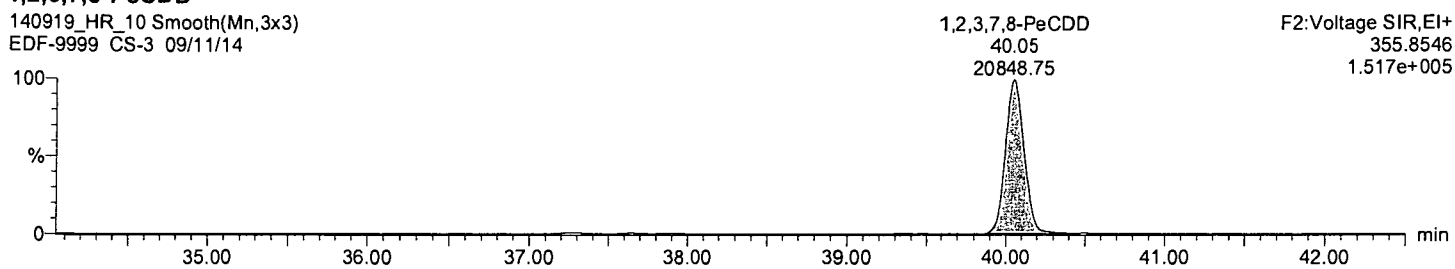


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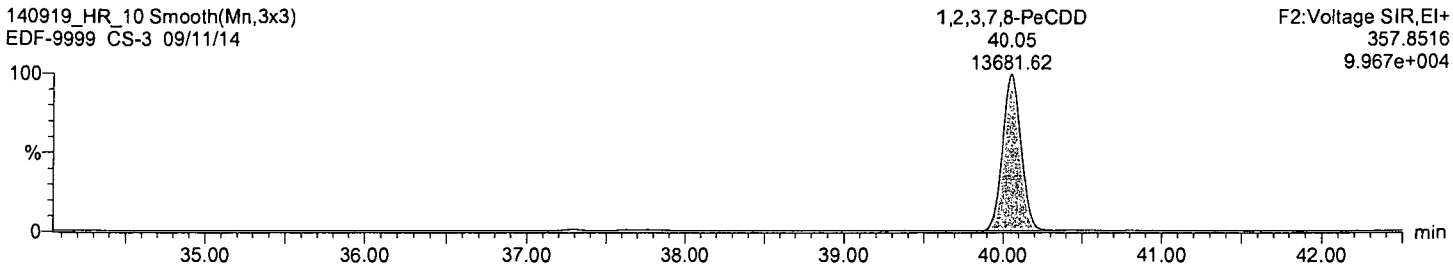


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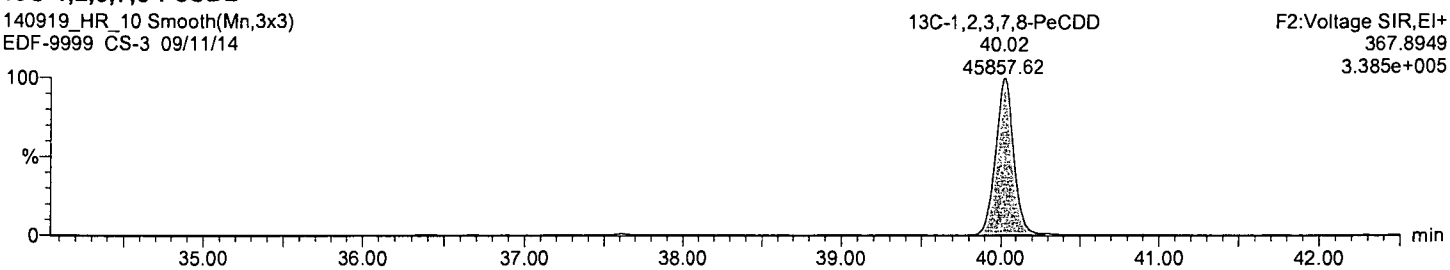
1,2,3,7,8-PeCDD



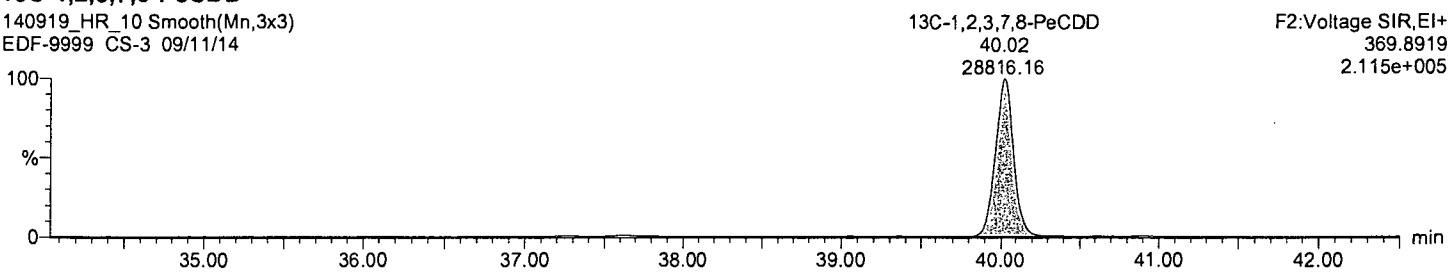
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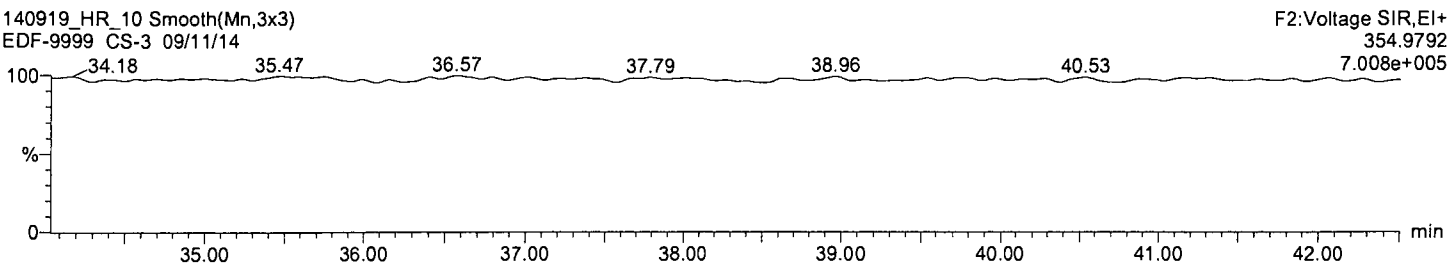
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13C-1,2,3,7,8-PeCDD

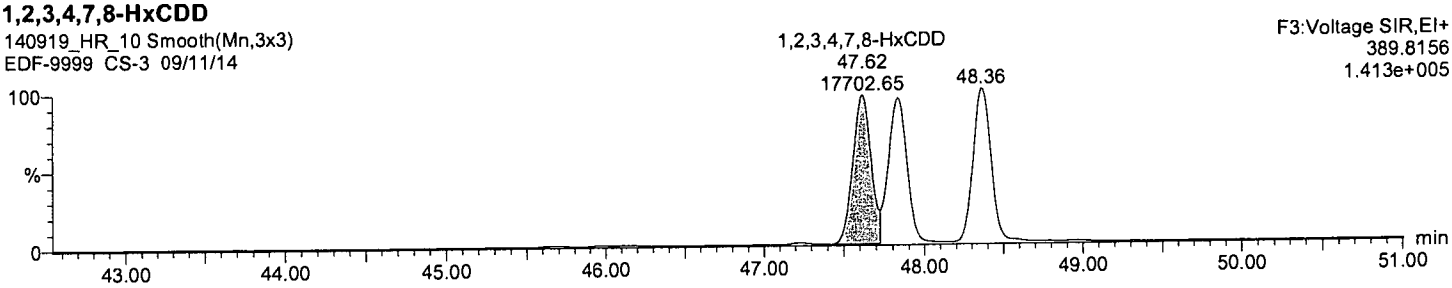


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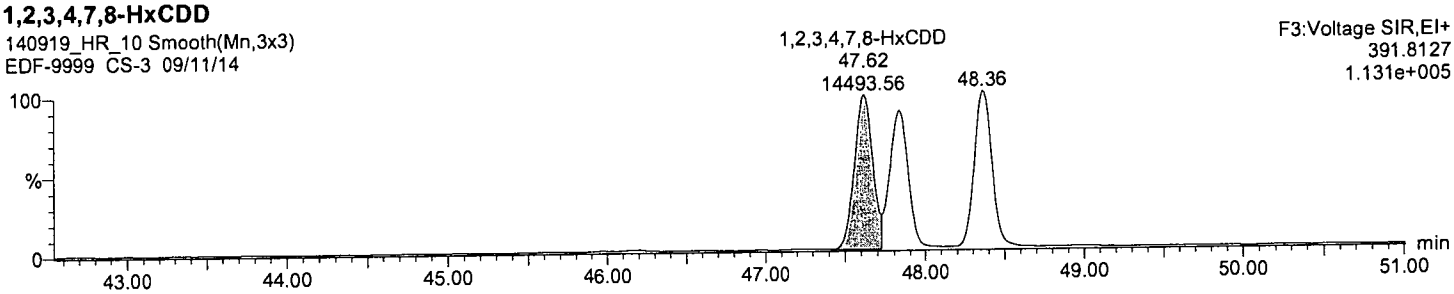


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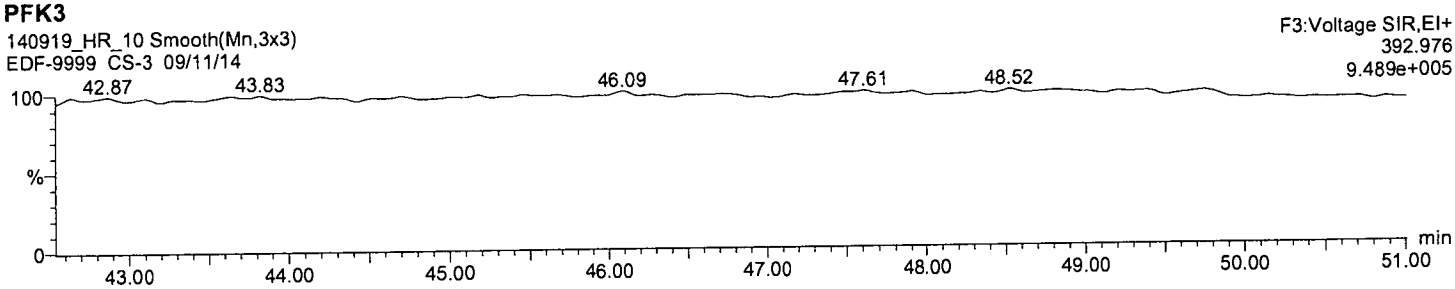
1,2,3,4,7,8-HxCDD



1,2,3,4,7,8-HxCDD

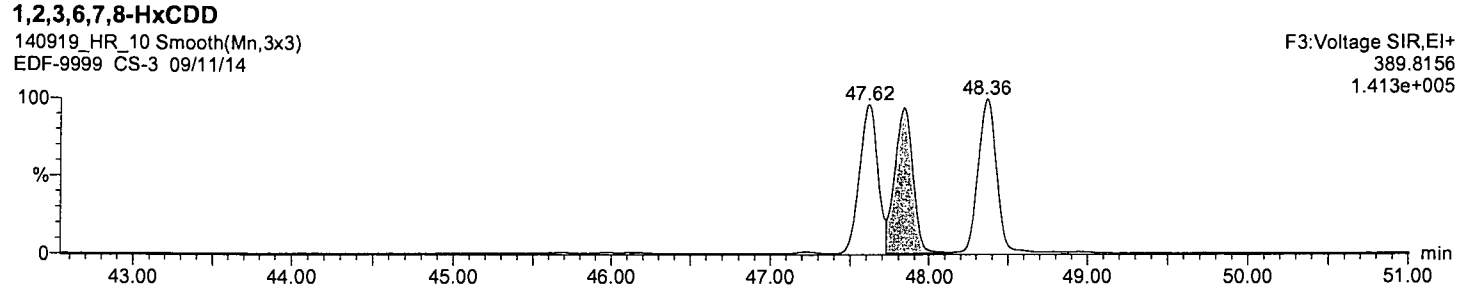


PFK3

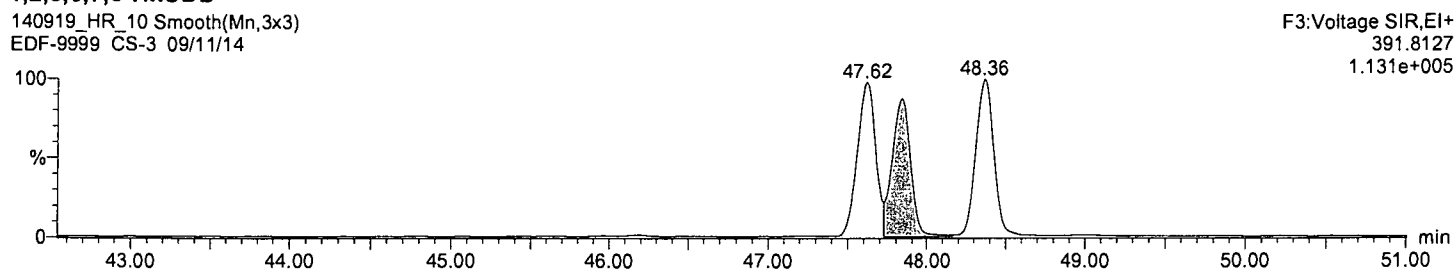


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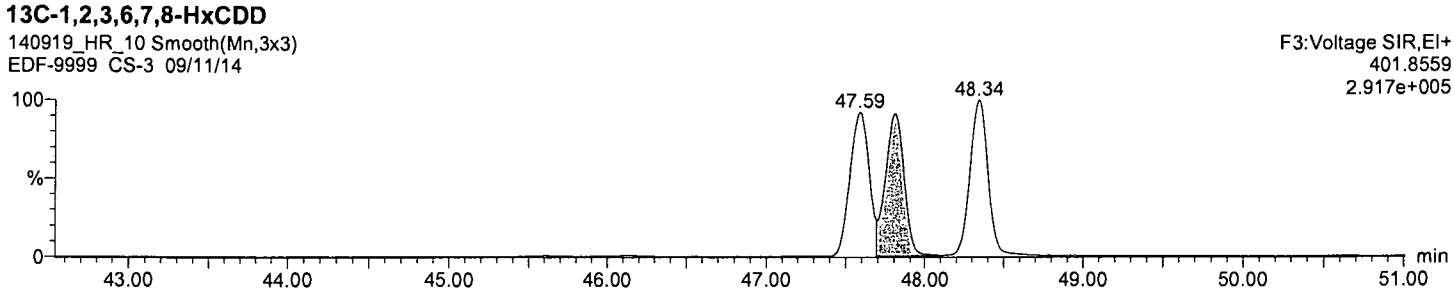
1,2,3,6,7,8-HxCDD



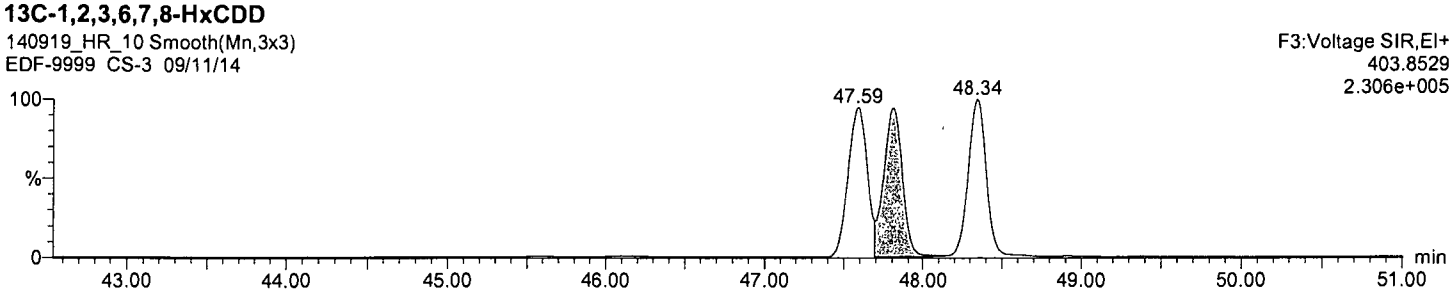
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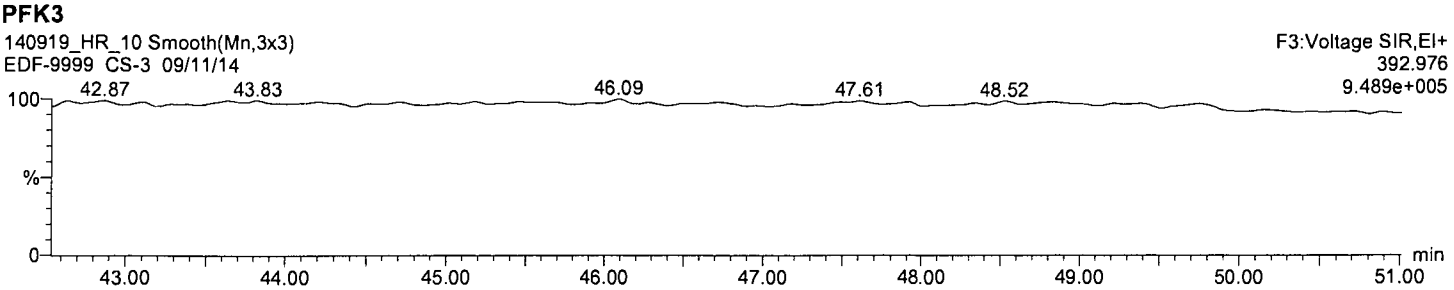
13C-1,2,3,6,7,8-HxCDD



13C-1,2,3,6,7,8-HxCDD

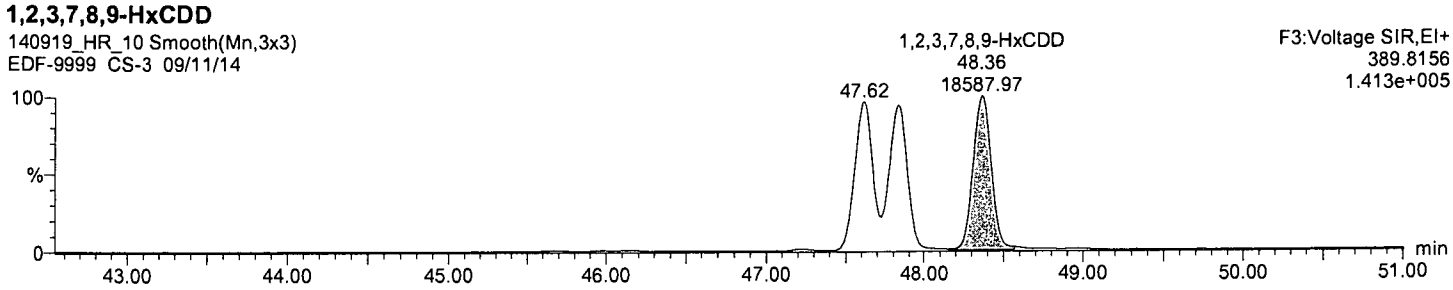


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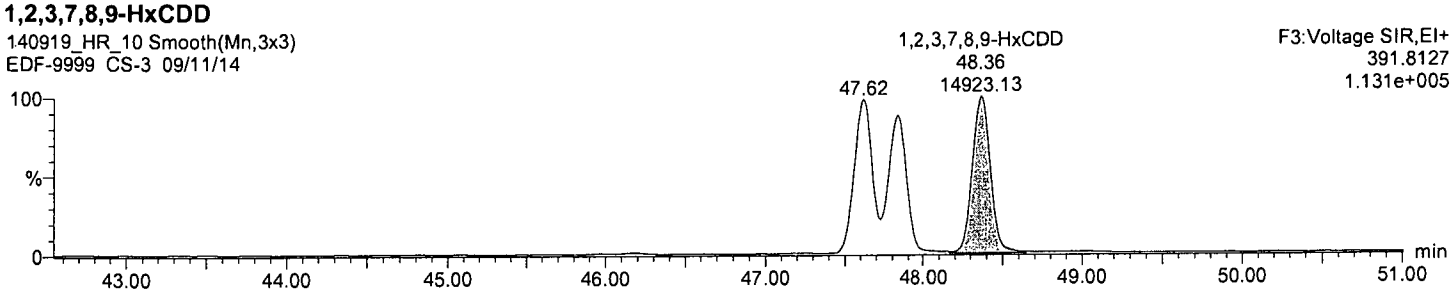


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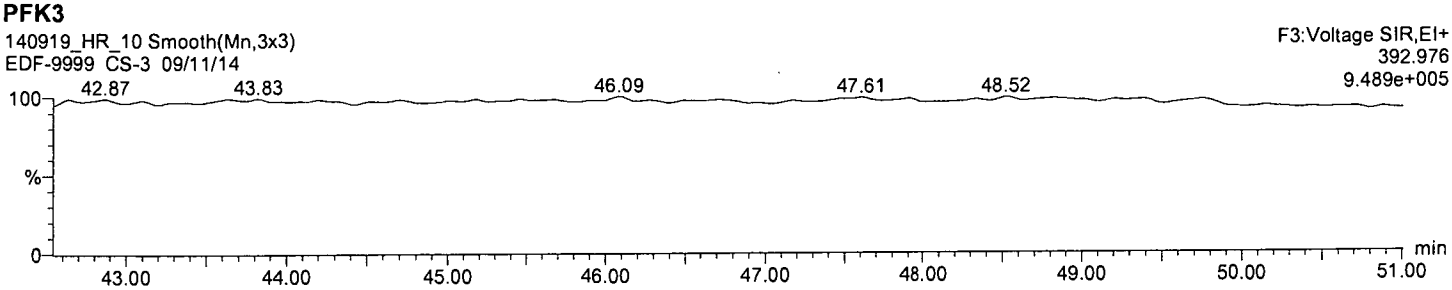
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1,2,3,7,8,9-HxCDD

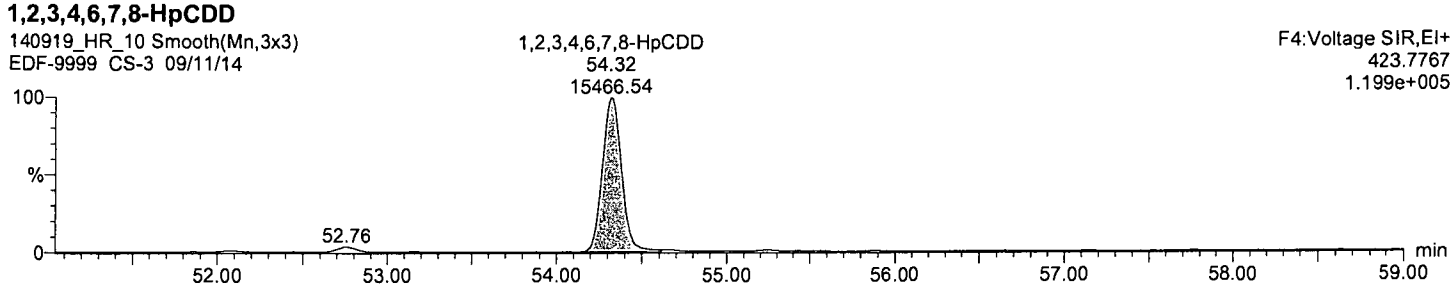


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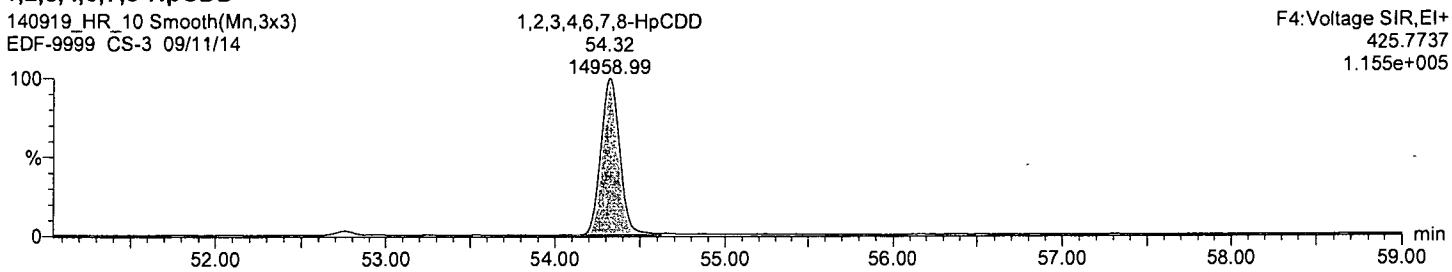


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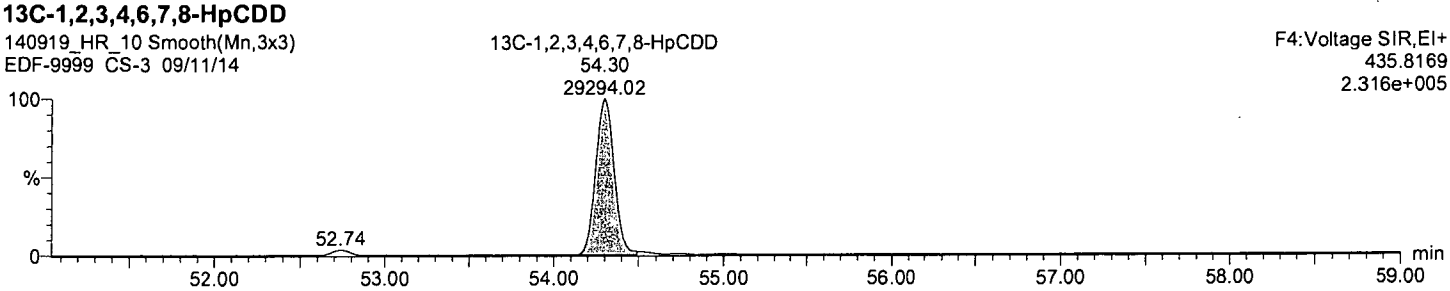
1,2,3,4,6,7,8-HpCDD



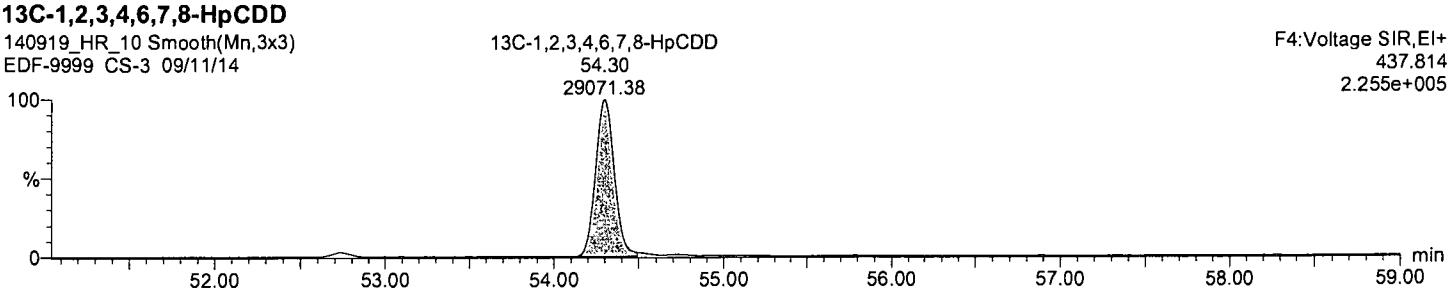
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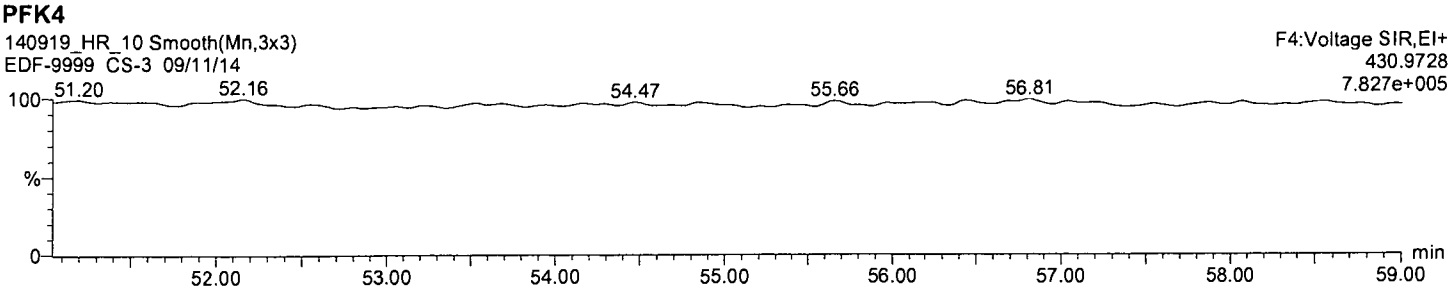
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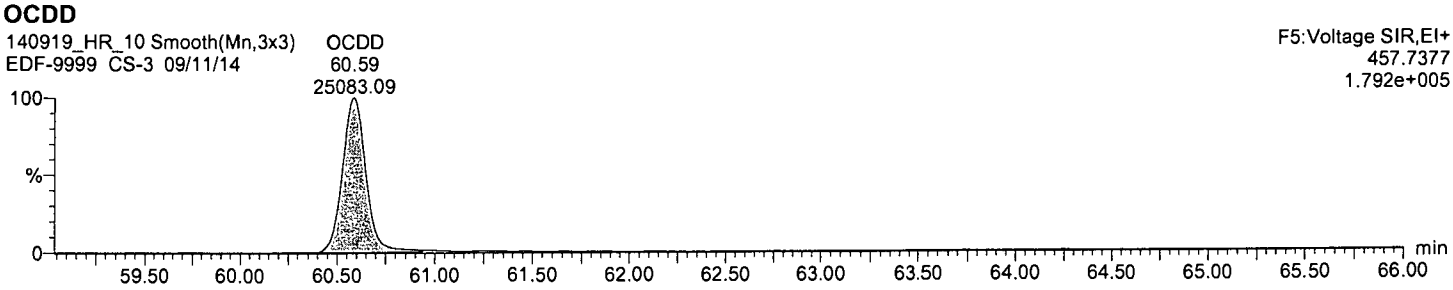


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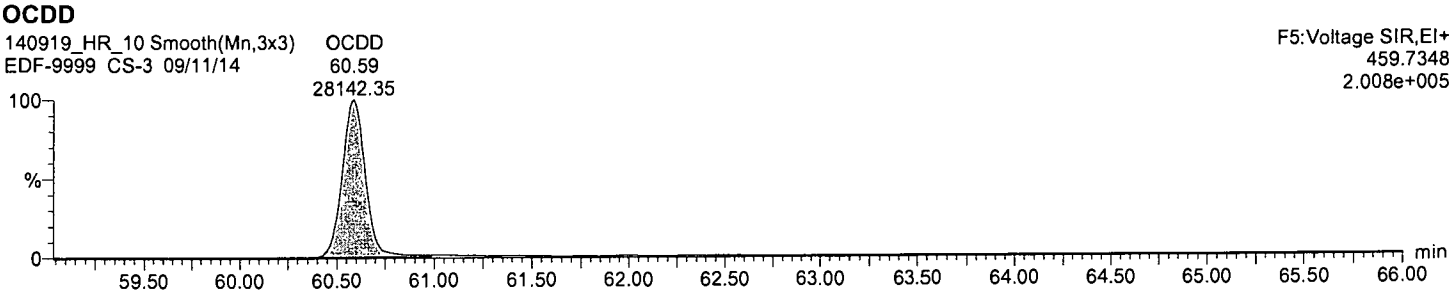


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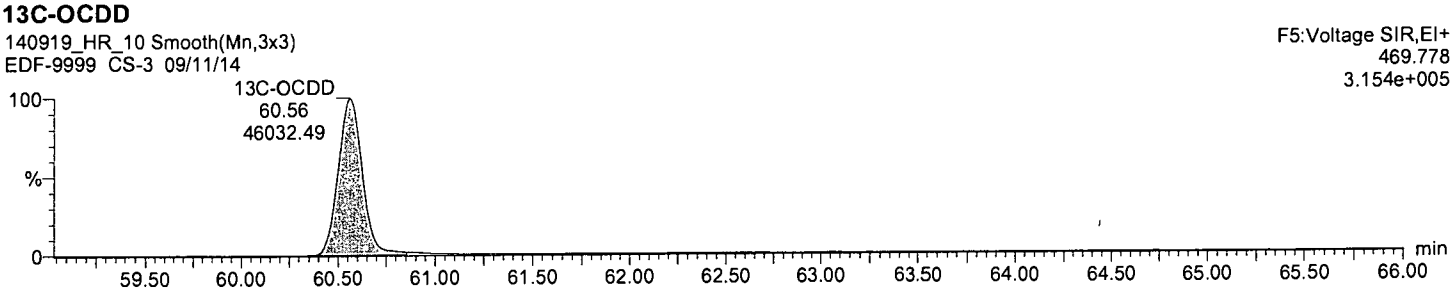
OCDD



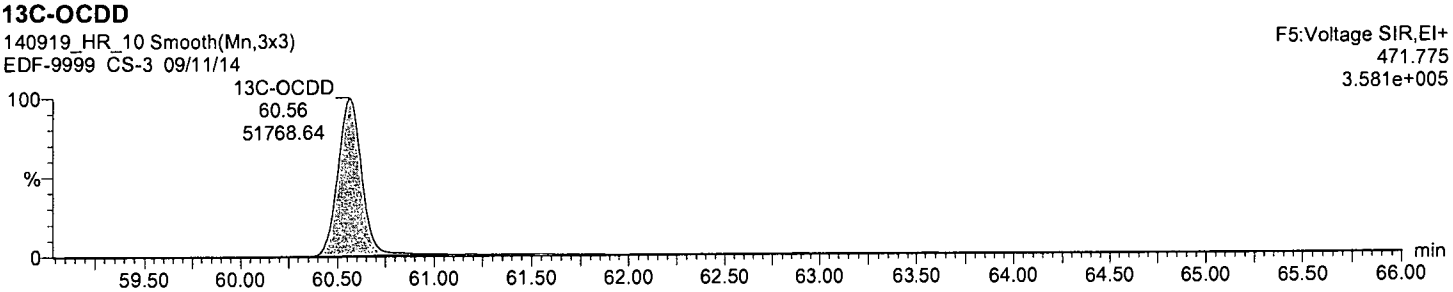
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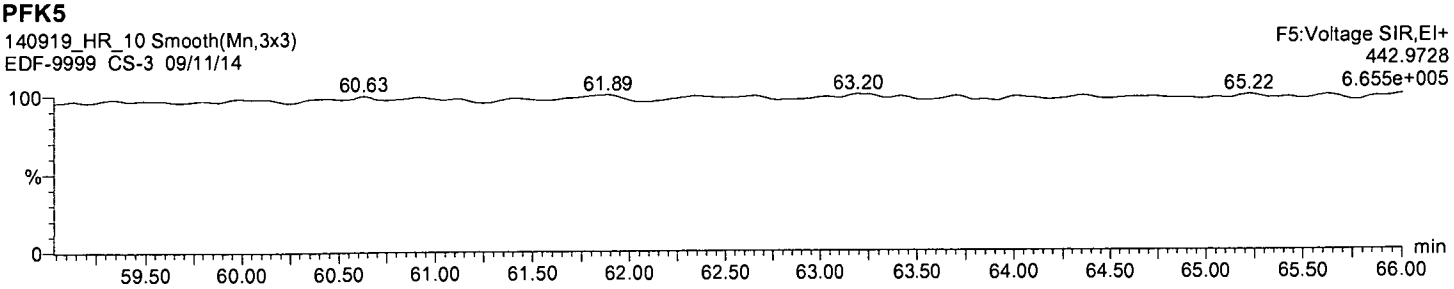
13C-OCDD



13C-OCDD

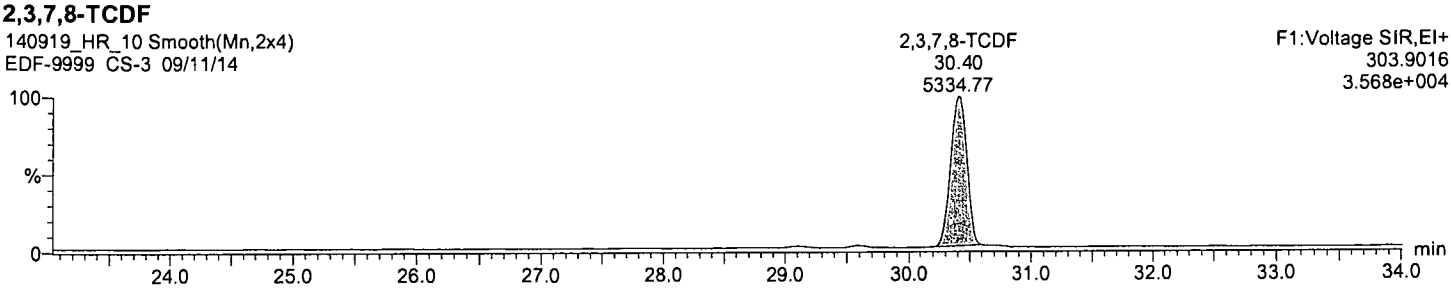


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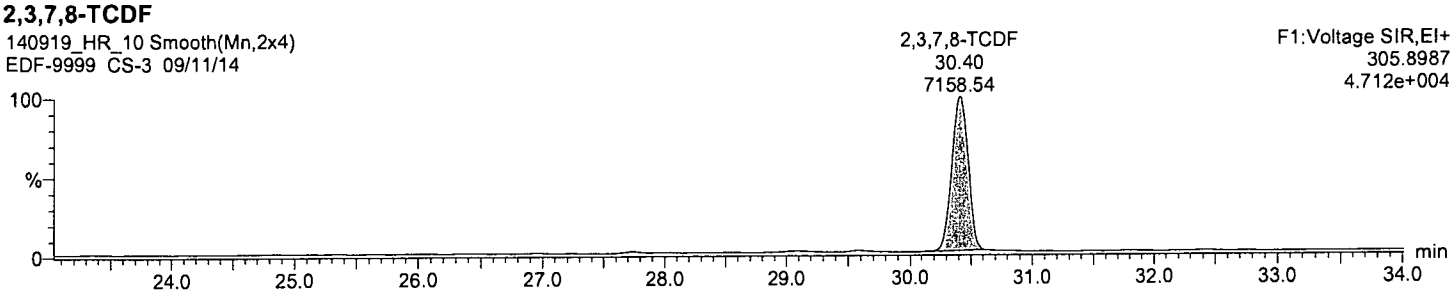


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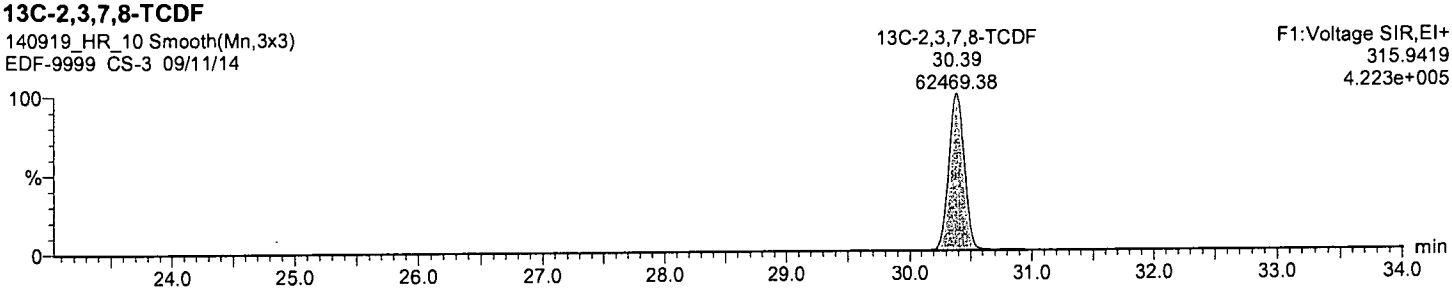
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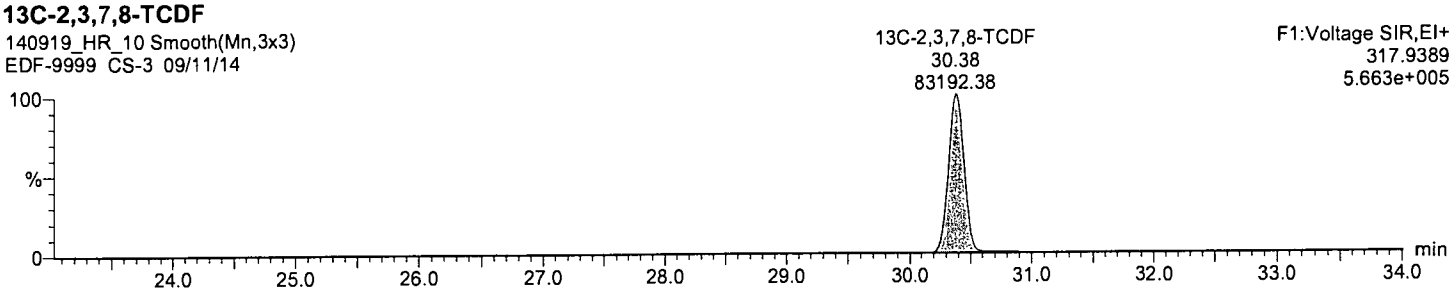
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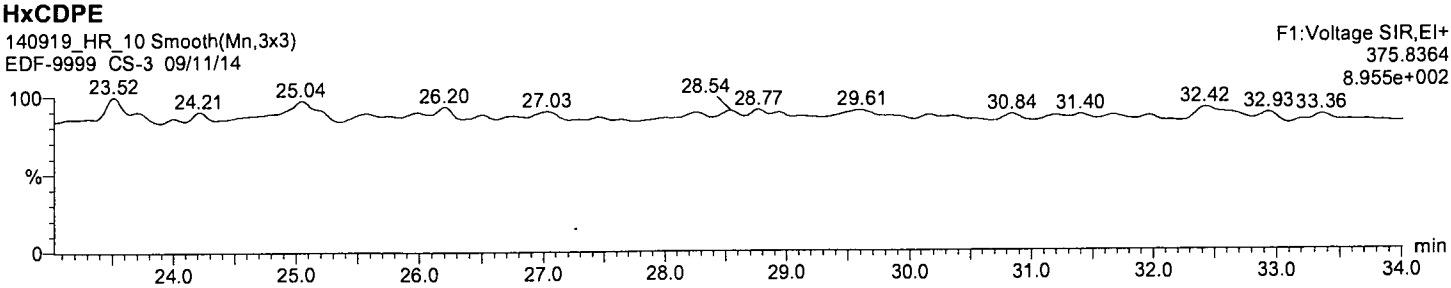
13C-2,3,7,8-TCDF



13C-2,3,7,8-TCDF

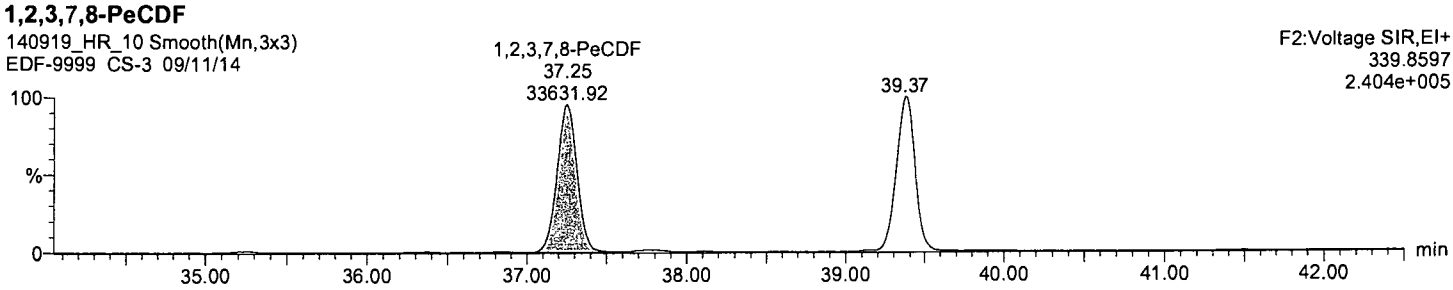


HxCDPE

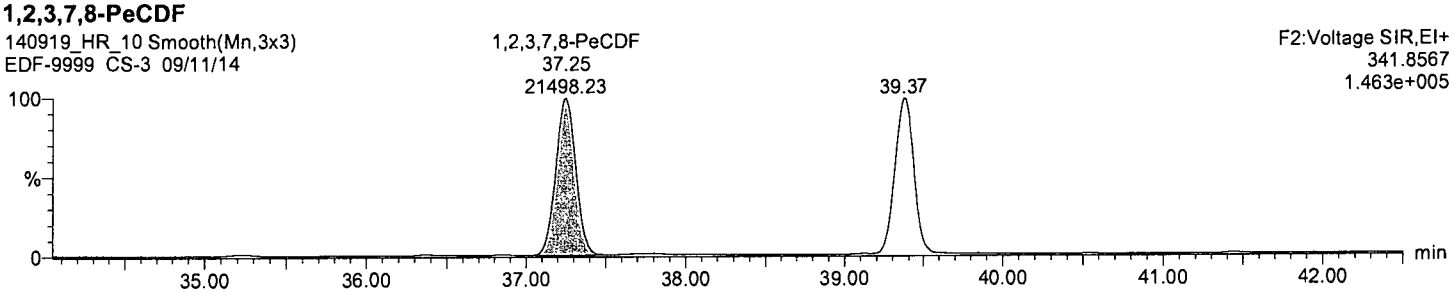


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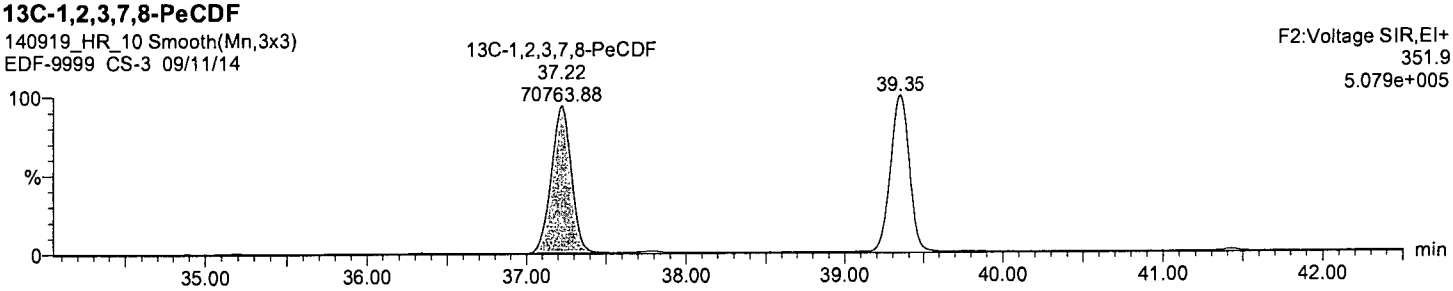
1,2,3,7,8-PeCDF



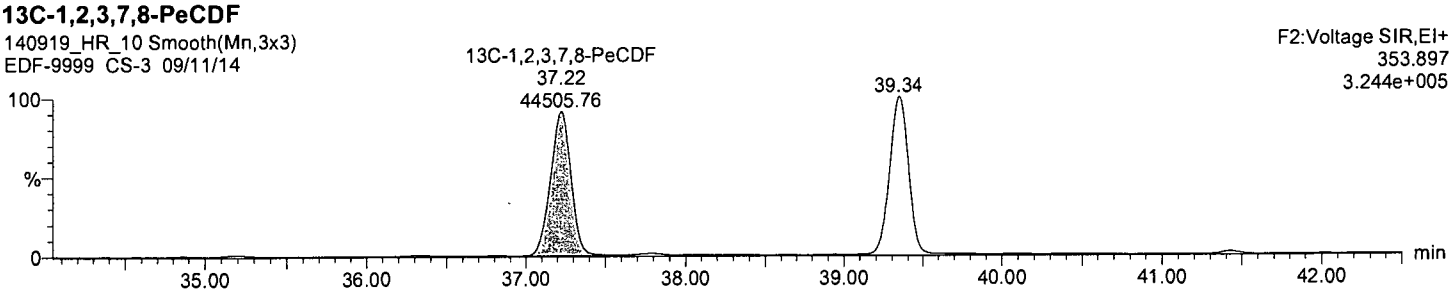
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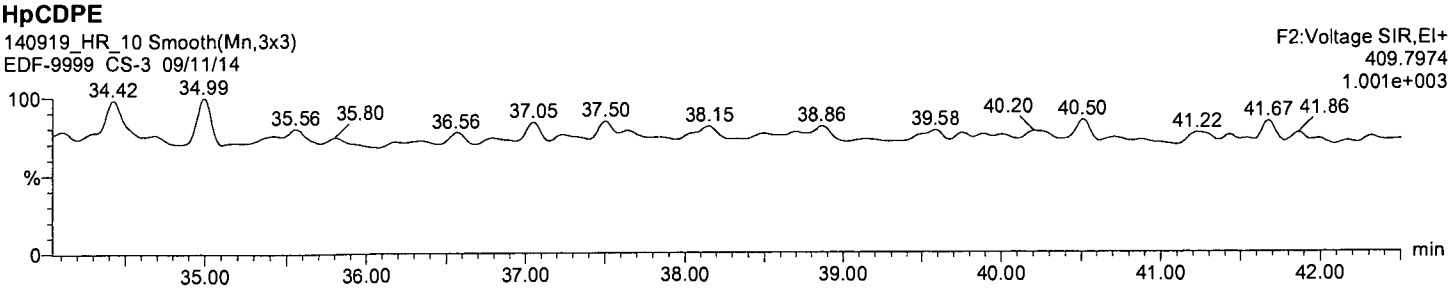
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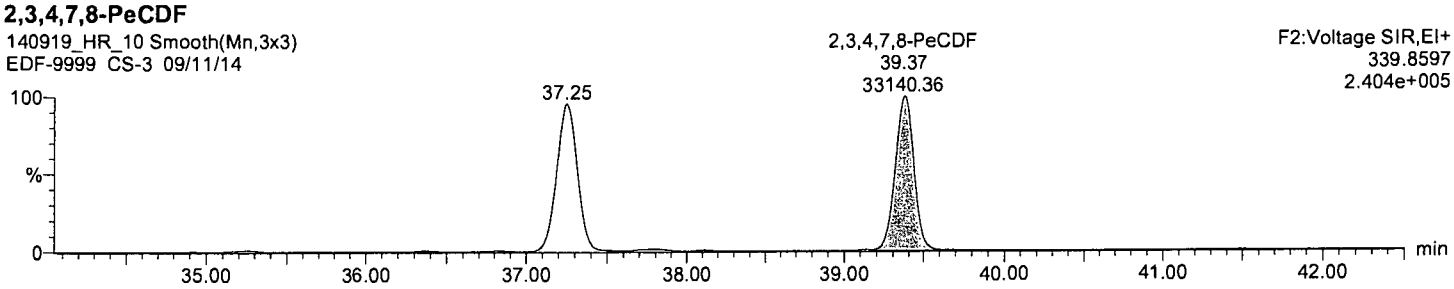


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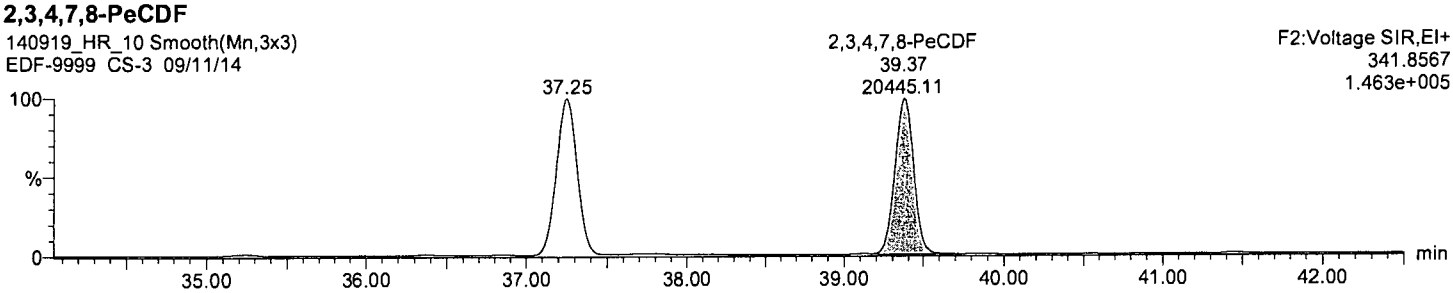


Name: 140919_HR_10, Date: 20-Sep-2014, Time: 03:09:23, ID: , Description: EDF-9999 CS-3 09/11/14, User:

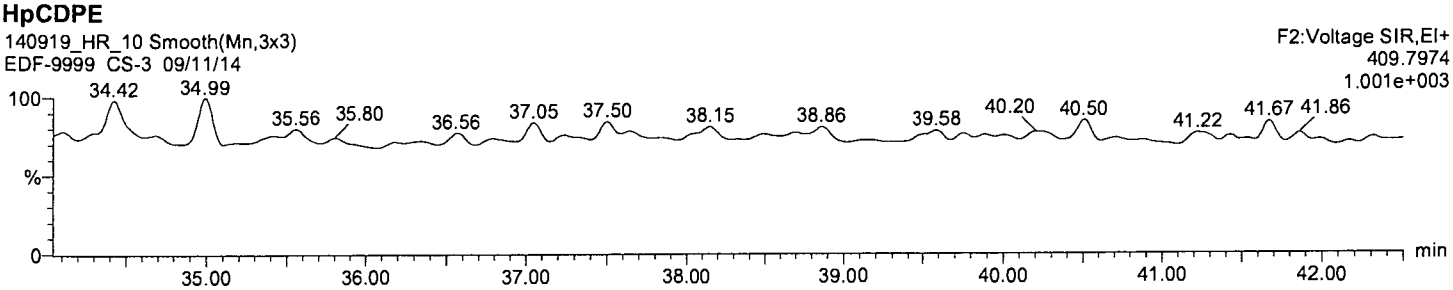
2,3,4,7,8-PeCDF



2,3,4,7,8-PeCDF

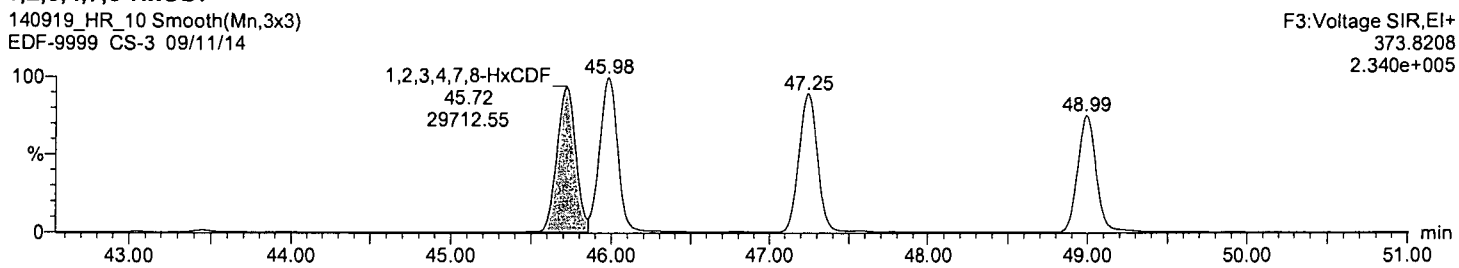


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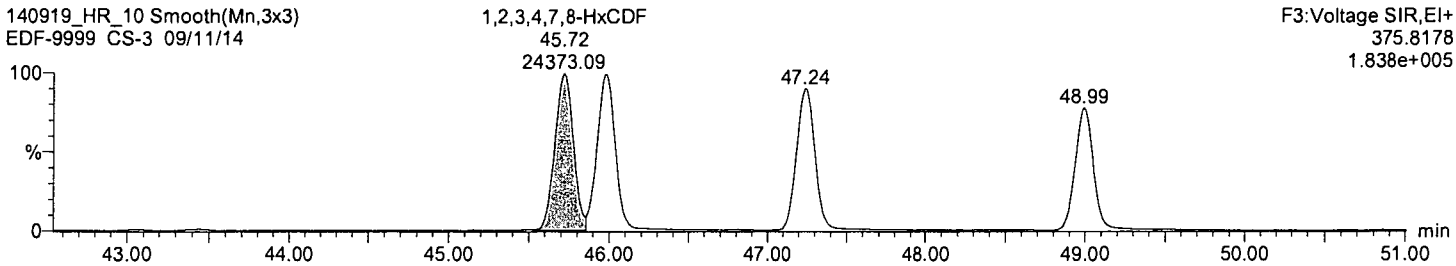


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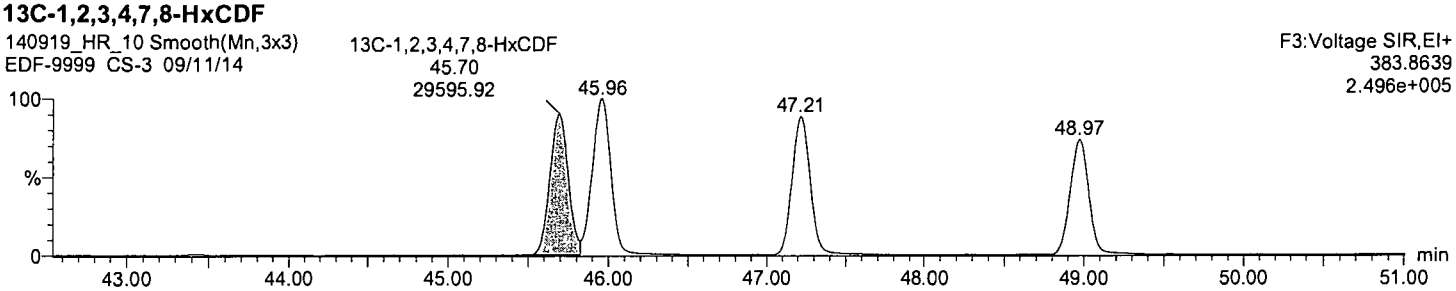
1,2,3,4,7,8-HxCDF



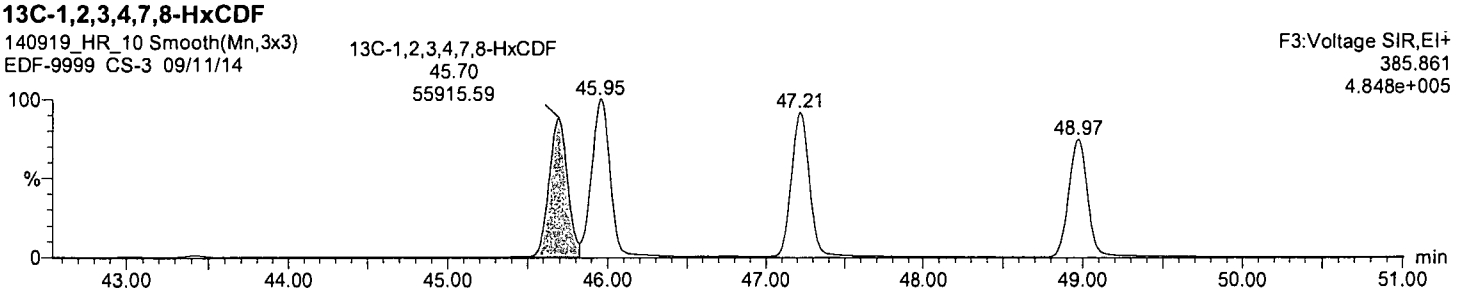
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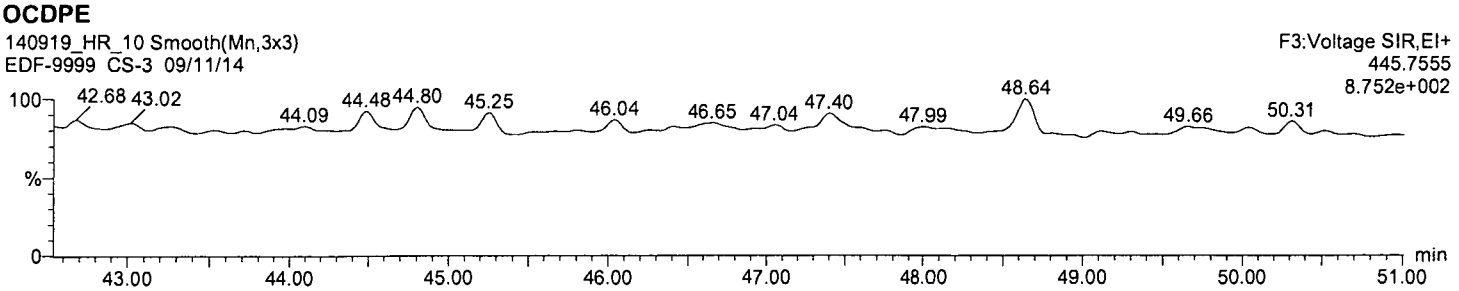
13C-1,2,3,4,7,8-HxCDF



13C-1,2,3,4,7,8-HxCDF

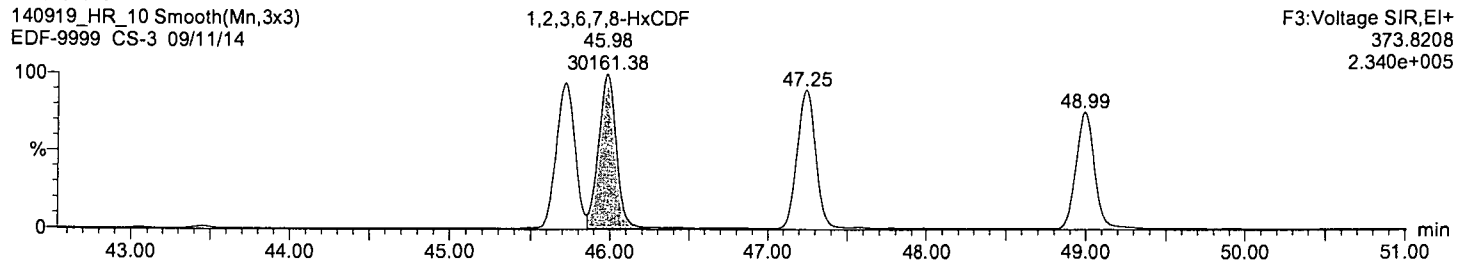


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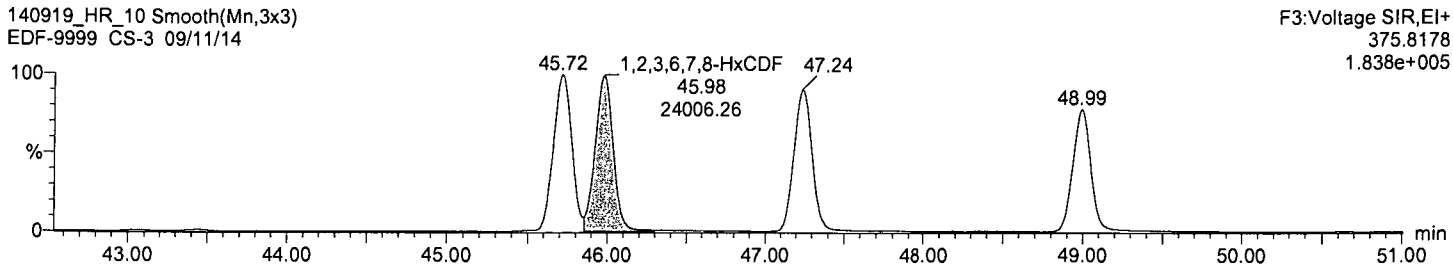


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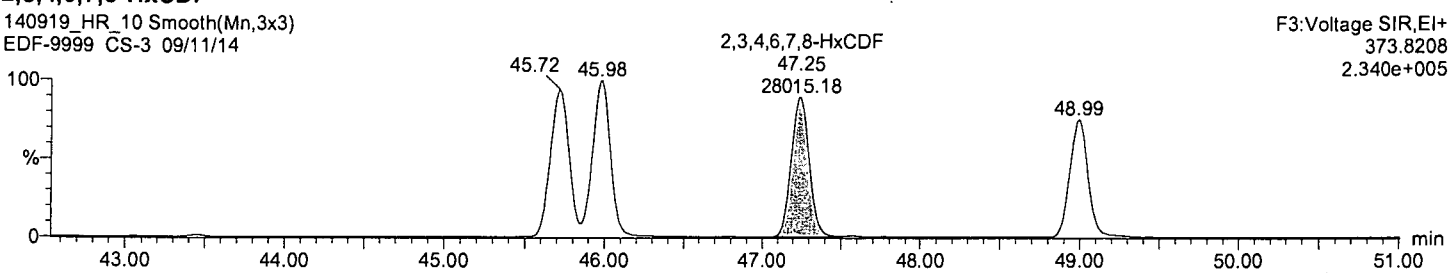
1,2,3,6,7,8-HxCDF



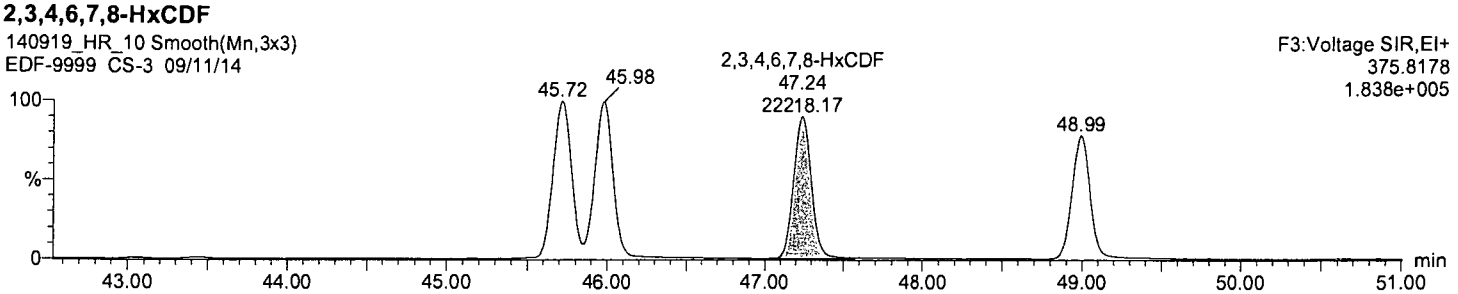
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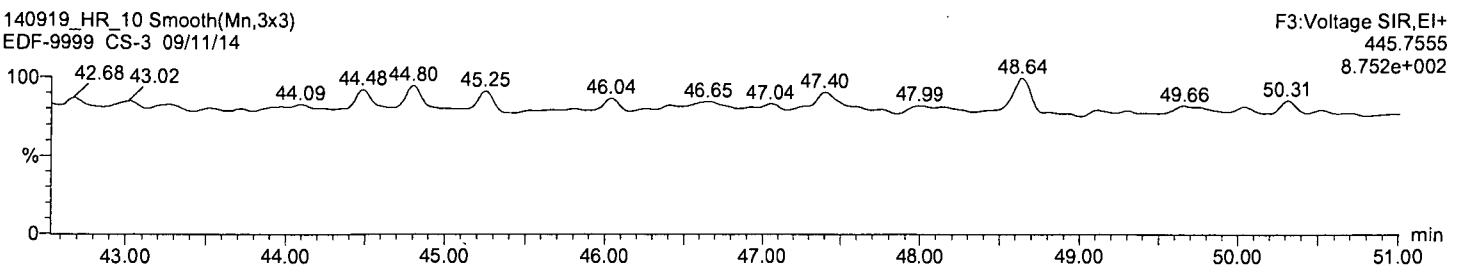
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2,3,4,6,7,8-HxCDF

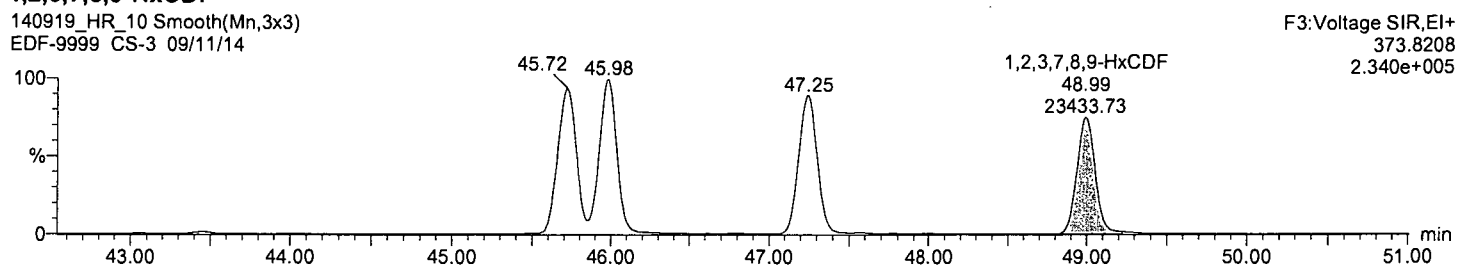


OCDPE

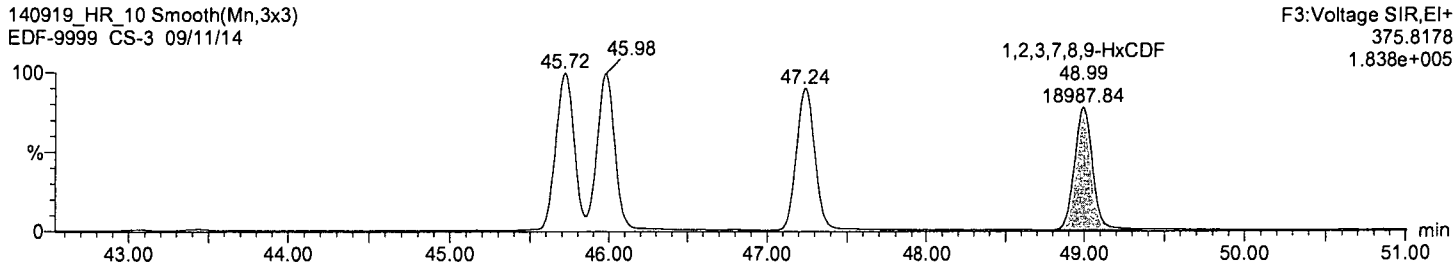


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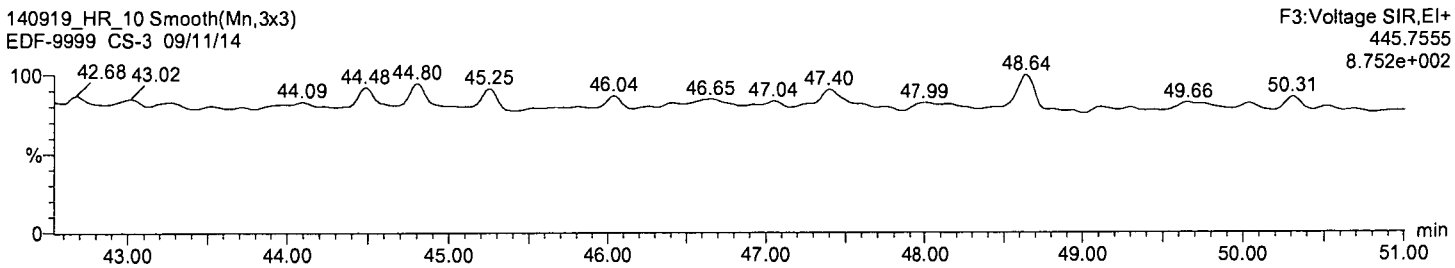
1,2,3,7,8,9-HxCDF



1,2,3,7,8,9-HxCDF

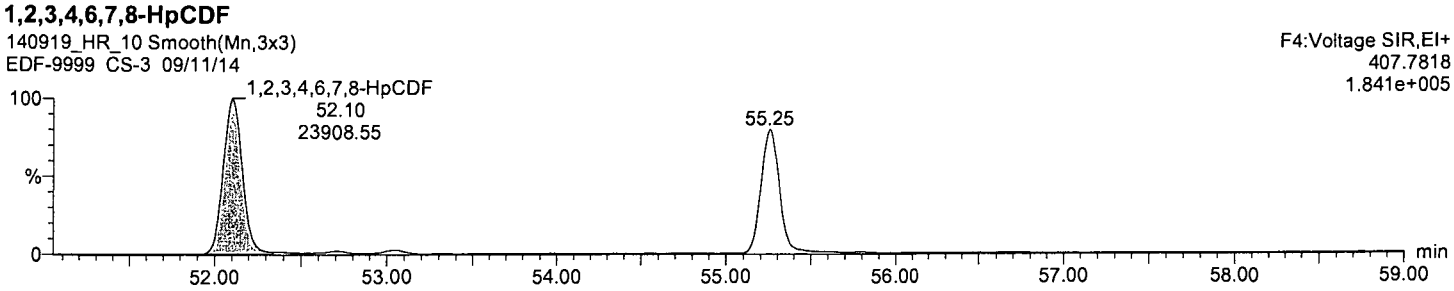


OCDPE

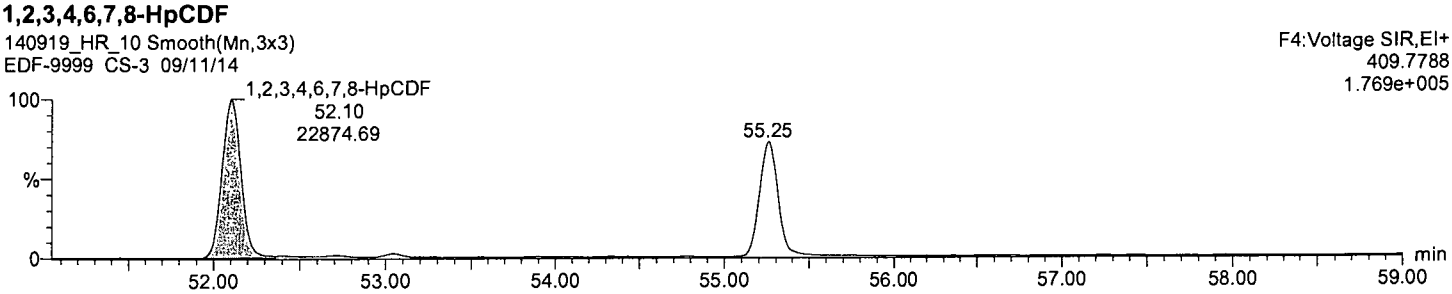


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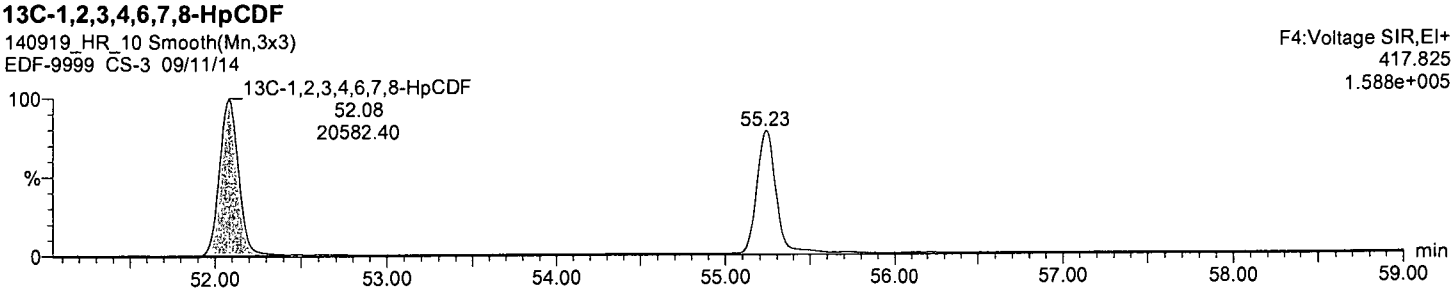
1,2,3,4,6,7,8-HpCDF



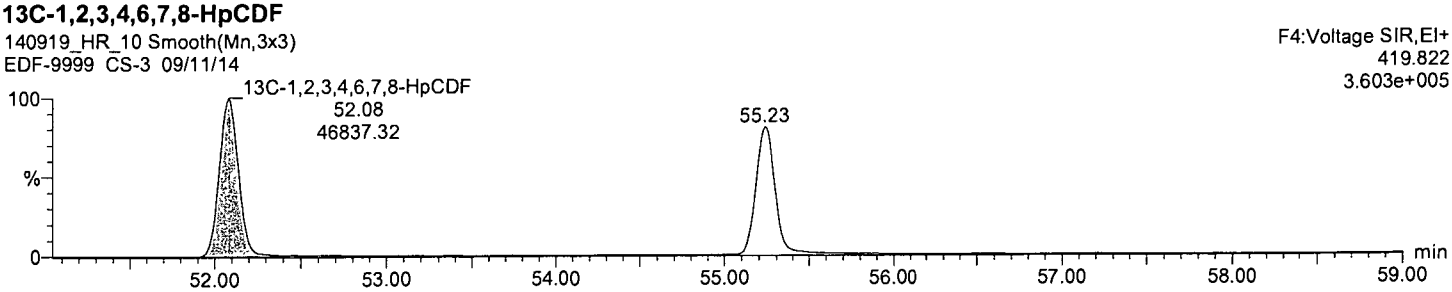
1,2,3,4,6,7,8-HpCDF



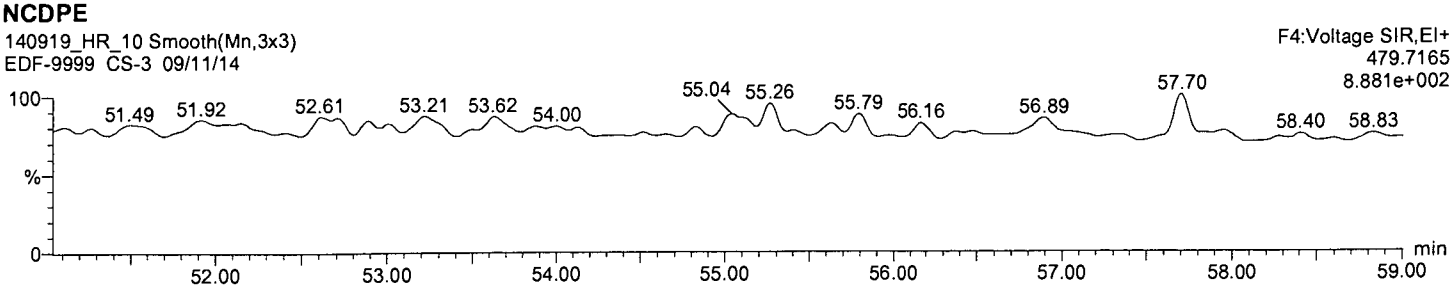
13C-1,2,3,4,6,7,8-HpCDF



13C-1,2,3,4,6,7,8-HpCDF

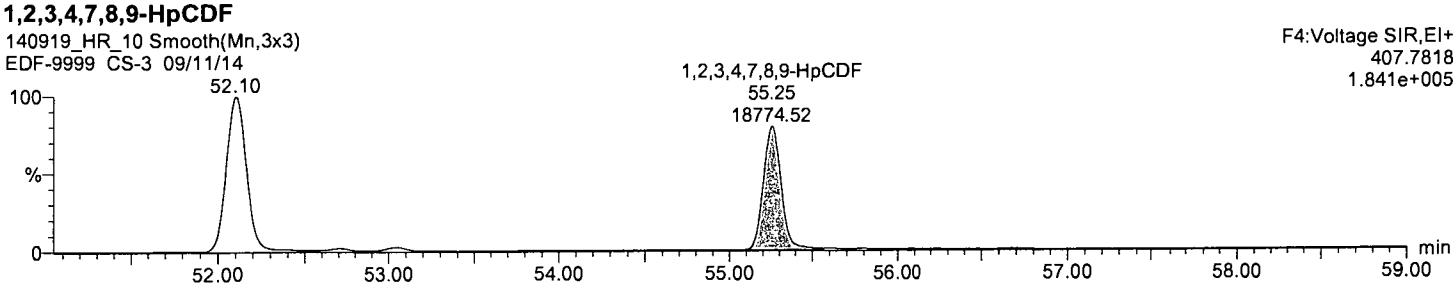


NCDPE

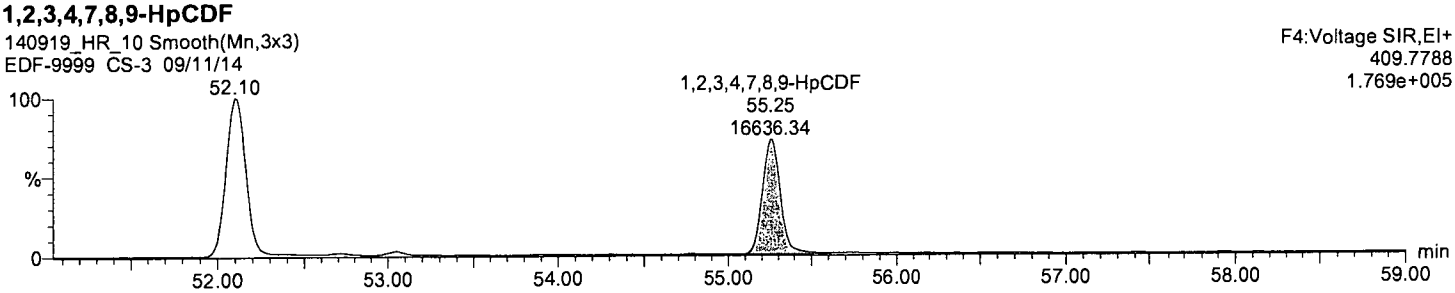


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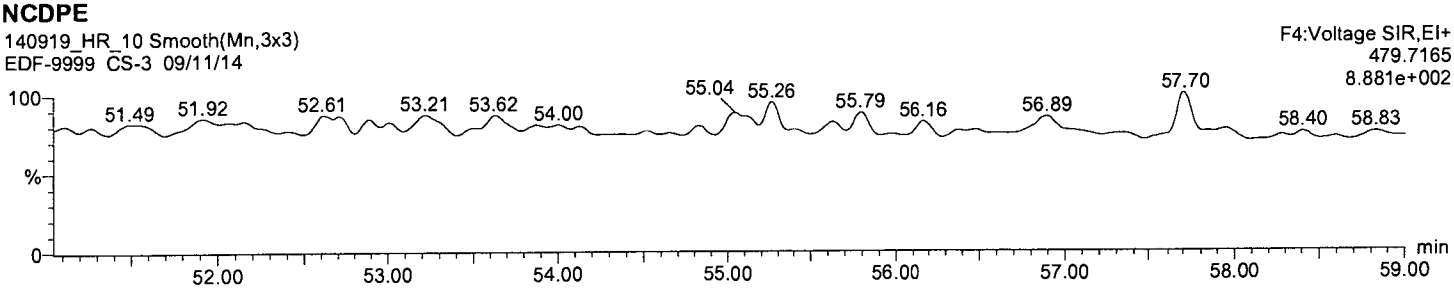
1,2,3,4,7,8,9-HpCDF



1,2,3,4,7,8,9-HpCDF

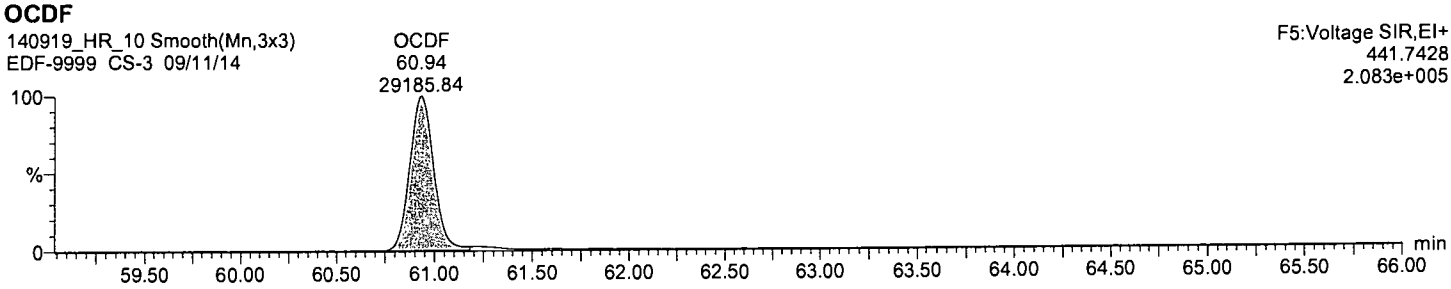


NCDPE

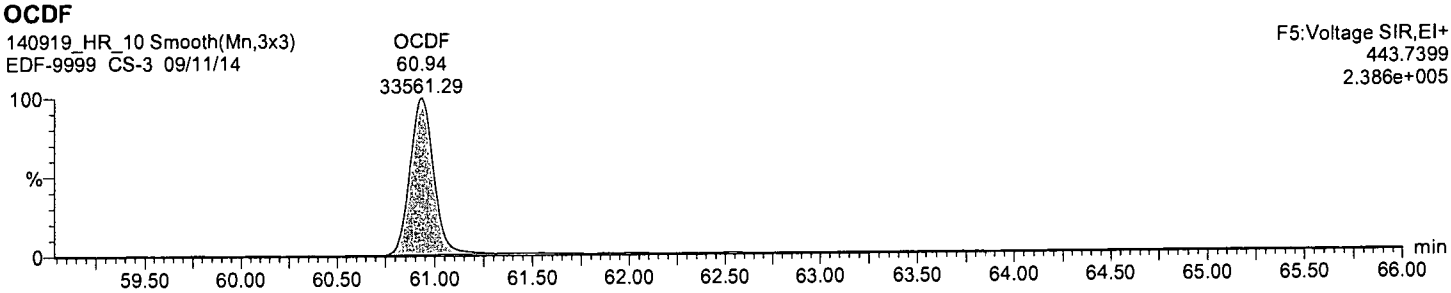


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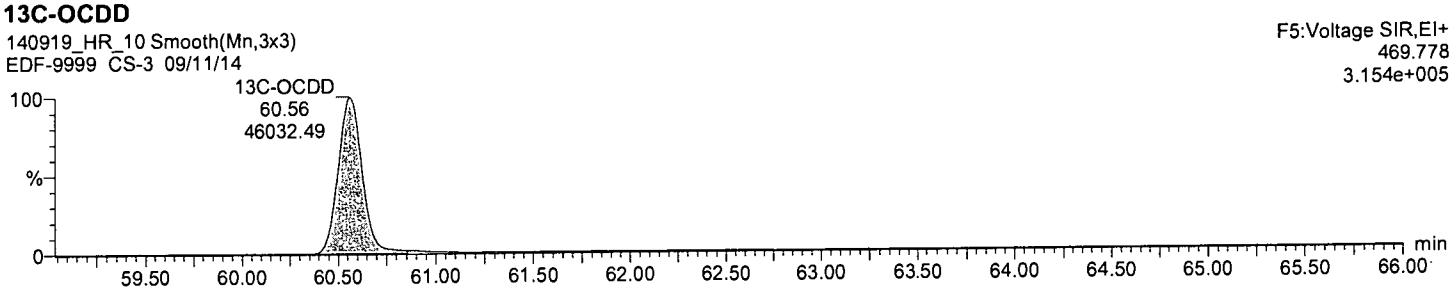
OCDF



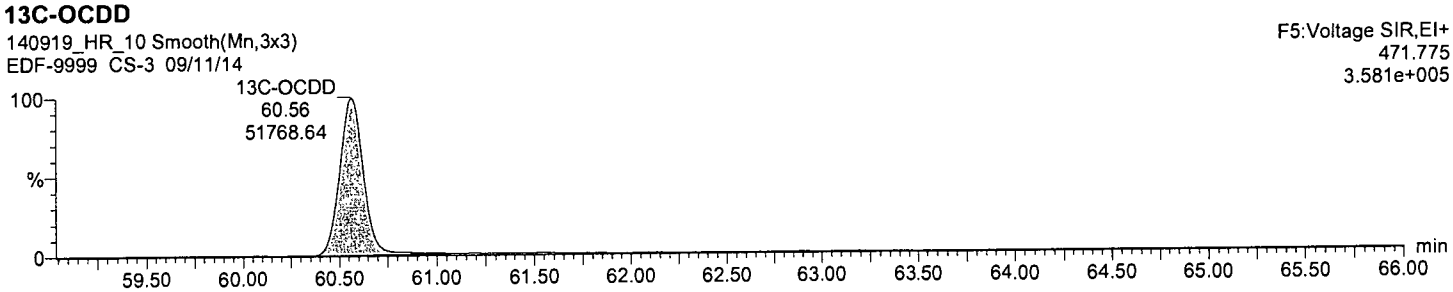
OCDF



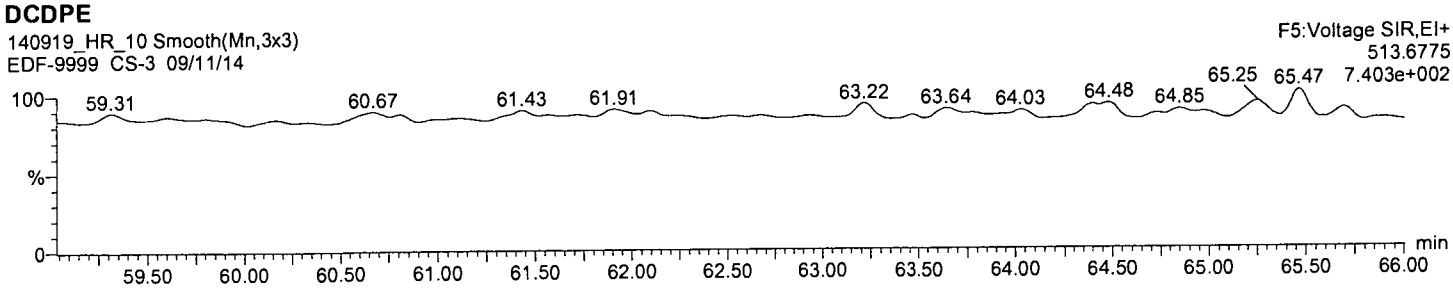
13C-OCDD



13C-OCDD

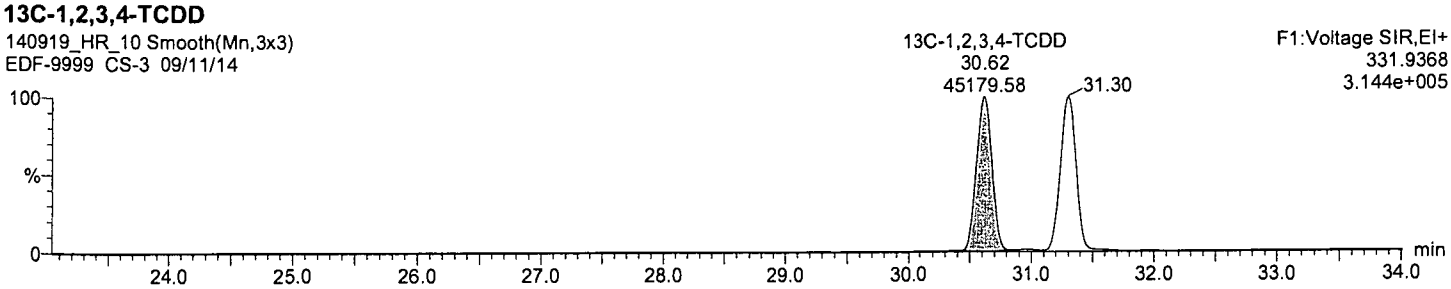


DCDPE

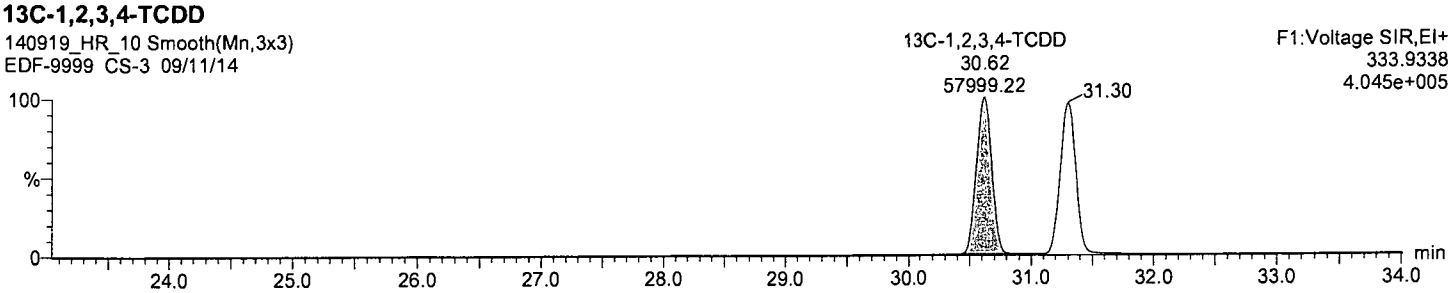


Name: 140919_HR_10, Date: 20-Sep-2014, Time: 03:09:23, ID: , Description: EDF-9999 CS-3 09/11/14, User:

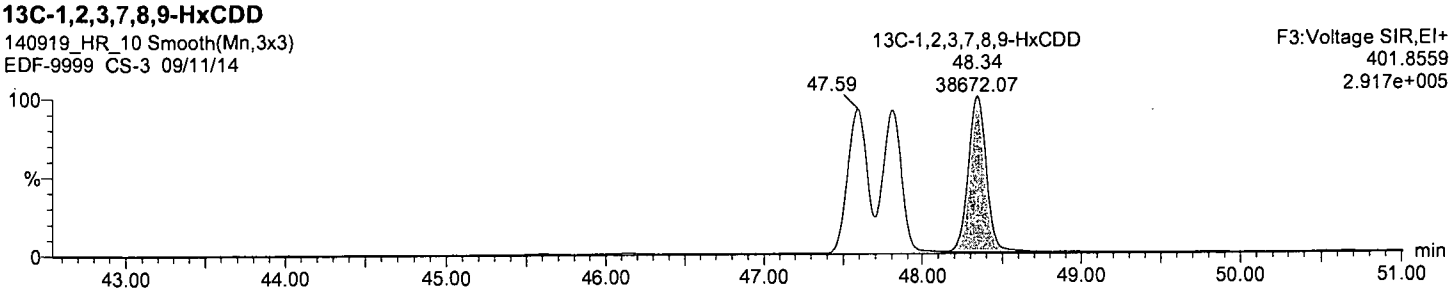
13C-1,2,3,4-TCDD



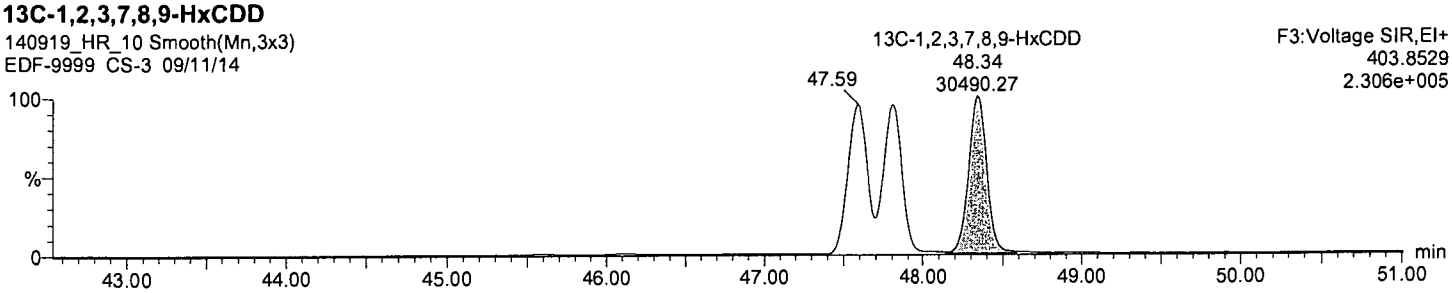
13C-1,2,3,4-TCDD



13C-1,2,3,7,8,9-HxCDD



13C-1,2,3,7,8,9-HxCDD



Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

Name: 140919_HR_20, Date: 20-Sep-2014, Time: 14:52:16, ID: , Description: EDF-9999 CS-3 09/11/14

#	Name	Peak Area	1° Area	RT	Ion Ab	Ion Fail?	S/N1	S/N2	Conc	%Rec	RRF	%Dev
1	2,3,7,8-TCDD	8.549620e3	1.070892e4	31.37	0.7984	NO	NO	NO	9.481	94.81	0.975	-5.2
2	1,2,3,7,8-PeCDD	4.282156e4	2.792859e4	40.12	1.5333	NO	NO	NO	47.510	95.02	0.874	-5.0
3	1,2,3,4,7,8-HxCDD	4.399109e4	3.593798e4	47.68	1.2241	NO	NO	NO	50.655	101.31	1.044	1.3
4	1,2,3,6,7,8-HxCDD	4.086870e4	3.349205e4	47.88	1.2203	NO	NO	NO	46.872	93.74	0.971	-6.3
5	1,2,3,7,8,9-HxCDD	4.769132e4	3.770225e4	48.42	1.2649	NO	NO	NO	51.685	103.37	1.115	3.4
6	1,2,3,4,6,7,8-HpCDD	3.902403e4	3.724761e4	54.39	1.0477	NO	NO	NO	47.922	95.84	1.007	-4.2
7	OCDD	6.531296e4	7.428292e4	60.66	0.8792	NO	NO	NO	97.007	97.01	1.086	-3.0
8	2,3,7,8-TCDF	9.511360e3	1.311196e4	30.44	0.7254	NO	NO	NO	9.255	92.55	0.859	-7.4
9	1,2,3,7,8-PeCDF	6.455801e4	4.078826e4	37.31	1.5828	NO	NO	NO	47.991	95.98	0.985	-4.0
10	2,3,4,7,8-PeCDF	6.156736e4	3.908214e4	39.44	1.5753	NO	NO	NO	48.649	97.30	0.941	-2.7
11	1,2,3,4,7,8-HxCDF	5.987400e4	4.831051e4	45.78	1.2394	NO	NO	NO	46.995	93.99	1.170	-6.0
12	1,2,3,6,7,8-HxCDF	6.043469e4	4.939494e4	46.06	1.2235	NO	NO	NO	45.644	91.29	1.187	-8.7
13	2,3,4,6,7,8-HxCDF	5.938536e4	4.594752e4	47.31	1.2925	NO	NO	NO	46.676	93.35	1.139	-6.6
14	1,2,3,7,8,9-HxCDF	5.183759e4	4.206505e4	49.05	1.2323	NO	NO	NO	49.319	98.64	1.015	-1.4
15	1,2,3,4,6,7,8-HpCDF	5.399917e4	5.225614e4	52.16	1.0334	NO	NO	NO	46.734	93.47	1.355	-6.5
16	1,2,3,4,7,8,9-HpCDF	4.436779e4	4.254554e4	55.31	1.0428	NO	NO	NO	51.458	102.92	1.109	2.9
17	OCDF	7.412359e4	8.300722e4	61.01	0.8930	NO	NO	NO	97.994	97.99	1.222	-2.0
18	13C-2,3,7,8-TCDD	8.654990e4	1.109948e5	31.34	0.7798	NO	NO	NO	103.598	103.60	1.005	3.6
19	13C-1,2,3,7,8-PeCDD	9.845540e4	6.342766e4	40.09	1.5522	NO	NO	NO	102.439	102.44	0.823	2.4
20	13C-1,2,3,6,7,8-HxCDD	8.649970e4	6.665934e4	47.86	1.2976	NO	NO	NO	93.092	93.09	0.872	-6.9
21	13C-1,2,3,4,6,7,8-HpCDD	7.693499e4	7.452245e4	54.36	1.0324	NO	NO	NO	91.266	91.27	0.862	-8.7
22	13C-OCDD	1.203225e5	1.368063e5	60.63	0.8795	NO	NO	NO	180.006	90.00	0.732	-10.0
23	13C-2,3,7,8-TCDF	1.167058e5	1.466003e5	30.43	0.7961	NO	NO	NO	97.429	97.43	1.339	-2.6
24	13C-1,2,3,7,8-PeCDF	1.315464e5	8.240009e4	37.28	1.5964	NO	NO	NO	96.134	96.13	1.088	-3.9
25	13C-1,2,3,4,7,8-HxCDF	6.147515e4	1.235151e5	45.76	0.4977	NO	NO	NO	89.469	89.47	1.053	-10.5
26	13C-1,2,3,4,6,7,8-HpCDF	4.772925e4	1.090582e5	52.14	0.4376	NO	NO	NO	84.670	84.67	0.892	-15.3
27	13C-1,2,3,4-TCDD	8.644805e4	1.101674e5	30.66	0.7847	NO	NO	NO	100.000	100.00	1.000	0.0
28	13C-1,2,3,7,8,9-HxCDD	9.805867e4	7.765969e4	48.40	1.2627	NO	NO	NO	100.000	100.00	1.000	0.0

Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

Name: 140919_HR_20, Date: 20-Sep-2014, Time: 14:52:16, ID: , Description: EDF-9999 CS-3 09/11/14, User:

#	Name	RT	RRT
1	2,3,7,8-TCDD	31.369801	1.000865
2	1,2,3,7,8-PeCDD	40.118801	1.000761
3	1,2,3,4,7,8-HxCDD	47.681301	0.996229
4	1,2,3,6,7,8-HxCDD	47.883202	1.000447
5	1,2,3,7,8,9-HxCDD	48.424801	1.000436
6	1,2,3,4,6,7,8-HpCDD	54.389500	1.000557
7	OCDD	60.661301	1.000503
8	2,3,7,8-TCDF	30.444500	1.000450
9	1,2,3,7,8-PeCDF	37.311501	1.000818
10	2,3,4,7,8-PeCDF	39.439800	1.057906
11	1,2,3,4,7,8-HxCDF	45.779701	1.000463
12	1,2,3,6,7,8-HxCDF	46.055801	1.006497
13	2,3,4,6,7,8-HxCDF	47.309502	1.033895
14	1,2,3,7,8,9-HxCDF	49.051701	1.071969
15	1,2,3,4,6,7,8-HpCDF	52.159698	1.000387
16	1,2,3,4,7,8,9-HpCDF	55.311798	1.060843
17	OCDF	61.005798	1.006185
18	13C-2,3,7,8-TCDD	31.342699	1.022193
19	13C-1,2,3,7,8-PeCDD	40.088299	1.307418
20	13C-1,2,3,6,7,8-HxCDD	47.861801	0.988805
21	13C-1,2,3,4,6,7,8-HpCDD	54.359200	1.123038
22	13C-OCDD	60.630798	1.252607
23	13C-2,3,7,8-TCDF	30.430799	0.992453
24	13C-1,2,3,7,8-PeCDF	37.280998	1.215862
25	13C-1,2,3,4,7,8-HxCDF	45.758499	0.945351
26	13C-1,2,3,4,6,7,8-HpCDF	52.139500	1.077180
27	13C-1,2,3,4-TCDD	30.662201	1.000000
28	13C-1,2,3,7,8,9-HxCDD	48.403702	1.000000

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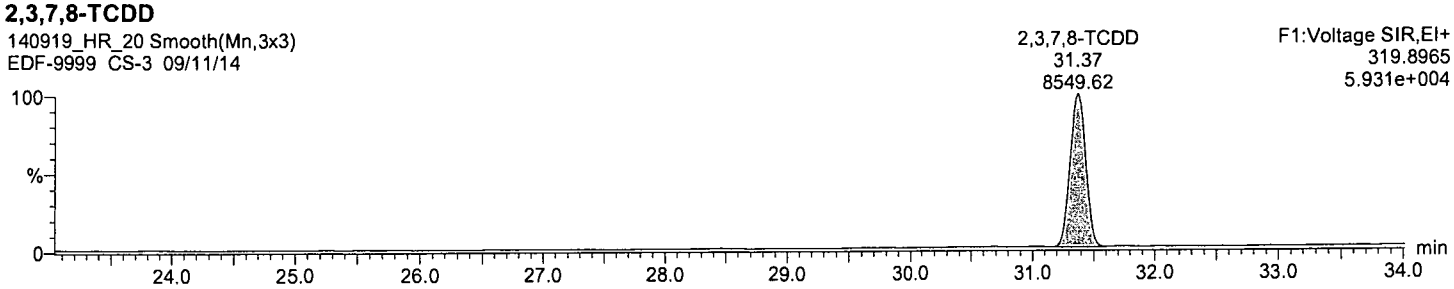
Name: 140919_HR_20, Date: 20-Sep-2014, Time: 14:52:16, ID: , Description: EDF-9999 CS-3 09/11/14, User:

#	Name	Signal	Noise 1	S/N 1	Flag S/N	Signal 2	Noise 2	S/N 2	Flag S/N
1	2,3,7,8-TCDD	5.8238000e4	3.4996017e1	1665.03	NO	7.3113000e4	5.7884552e1	1263.08	NO
2	1,2,3,7,8-PeCDD	3.0859200e5	3.7728500e1	8171.04	NO	2.0053300e5	1.1225043e2	1786.48	NO
3	1,2,3,4,7,8-HxCDD	3.4801100e5	6.6882523e1	5201.07	NO	2.8045600e5	1.5949760e2	1758.37	NO
4	1,2,3,6,7,8-HxCDD	3.1565400e5	6.6882523e1	4717.60	NO	2.5629800e5	1.5949760e2	1606.91	NO
5	1,2,3,7,8,9-HxCDD	3.7508900e5	6.6882523e1	5607.11	NO	2.9532300e5	1.5949760e2	1851.58	NO
6	1,2,3,4,6,7,8-HpCDD	3.1508700e5	5.1475697e1	6121.83	NO	3.0196300e5	8.0306274e1	3760.14	NO
7	OCDD	4.5065200e5	3.2133377e1	14022.81	NO	5.1264700e5	4.9739044e1	10306.73	NO
8	2,3,7,8-TCDF	6.1839000e4	9.0736649e1	684.94	NO	8.4595000e4	6.9816132e1	1211.68	NO
9	1,2,3,7,8-PeCDF	4.3811700e5	1.4187100e2	3085.73	NO	2.7626000e5	1.7738397e2	1557.41	NO
10	2,3,4,7,8-PeCDF	4.2720300e5	1.4187100e2	3007.48	NO	2.7534100e5	1.7738397e2	1552.23	NO
11	1,2,3,4,7,8-HxCDF	4.7199700e5	2.2313092e2	2113.14	NO	3.8059100e5	1.1255559e2	3381.36	NO
12	1,2,3,6,7,8-HxCDF	4.7052900e5	2.2313092e2	2106.63	NO	3.8289300e5	1.1255559e2	3401.81	NO
13	2,3,4,6,7,8-HxCDF	4.5244600e5	2.2313092e2	2025.92	NO	3.5034600e5	1.1255559e2	3112.65	NO
14	1,2,3,7,8,9-HxCDF	3.8634700e5	2.2313092e2	1730.18	NO	3.1848600e5	1.1255559e2	2829.59	NO
15	1,2,3,4,6,7,8-HpCDF	4.1860700e5	2.1491461e2	1946.36	NO	4.0876100e5	1.1180683e2	3655.96	NO
16	1,2,3,4,7,8,9-HpCDF	3.5630800e5	2.1491461e2	1656.32	NO	3.3994300e5	1.1180683e2	3040.45	NO
17	OCDF	5.5042800e5	5.0435829e1	10909.93	NO	6.0703400e5	7.5421478e1	8048.56	NO
18	13C-2,3,7,8-TCDD	5.9412800e5	1.4175072e2	4192.71	NO	7.6050900e5	1.5974908e2	4760.65	NO
19	13C-1,2,3,7,8-PeCDD	7.1647800e5	8.0585564e1	8888.97	NO	4.6491700e5	1.3474179e2	3450.43	NO
20	13C-1,2,3,6,7,8-HxCDD	6.6448400e5	9.6374985e1	6896.86	NO	5.1469800e5	2.8319250e2	1817.48	NO
21	13C-1,2,3,4,6,7,8-HpCDD	6.2010800e5	1.3859801e2	4473.66	NO	5.9958700e5	5.7649052e1	10400.64	NO
22	13C-OCDD	8.2457000e5	4.7522461e3	170.41	NO	9.4056200e5	5.3886450e3	174.55	NO
23	13C-2,3,7,8-TCDF	7.9775800e5	6.6492569e1	11998.15	NO	9.9509100e5	1.0421075e2	9548.83	NO
24	13C-1,2,3,7,8-PeCDF	9.0269500e5	1.1460307e4	77.25	NO	5.6915600e5	7.5728955e3	75.16	NO
25	13C-1,2,3,4,7,8-HxCDF	4.9448500e5	9.6204872e1	5136.00	NO	1.0031920e6	3.7842987e2	2650.93	NO
26	13C-1,2,3,4,6,7,8-HpCDF	3.7661500e5	6.1246651e1	6148.17	NO	8.7055700e5	9.3710938e1	9289.81	NO
27	13C-1,2,3,4-TCDD	6.0439400e5	1.4175072e2	4265.67	NO	7.6917000e5	1.5974908e2	4814.86	NO
28	13C-1,2,3,7,8,9-HxCDD	7.5082200e5	9.6374985e1	7791.23	NO	5.9585700e5	2.8319250e2	2104.07	NO

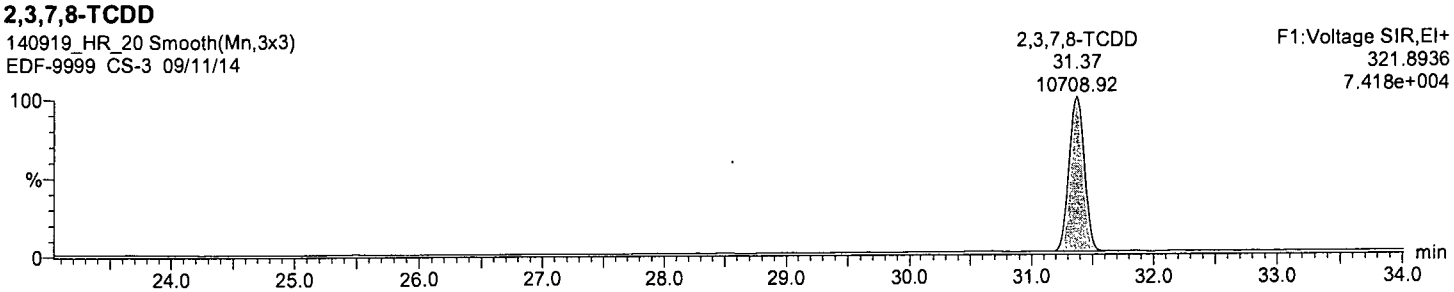
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Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

Name: 140919_HR_20, Date: 20-Sep-2014, Time: 14:52:16, ID: , Description: EDF-9999 CS-3 09/11/14, User:

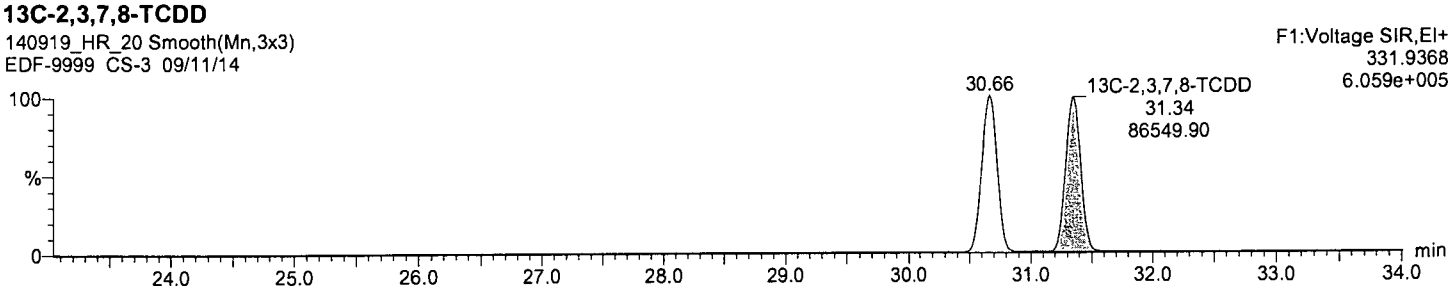
2,3,7,8-TCDD



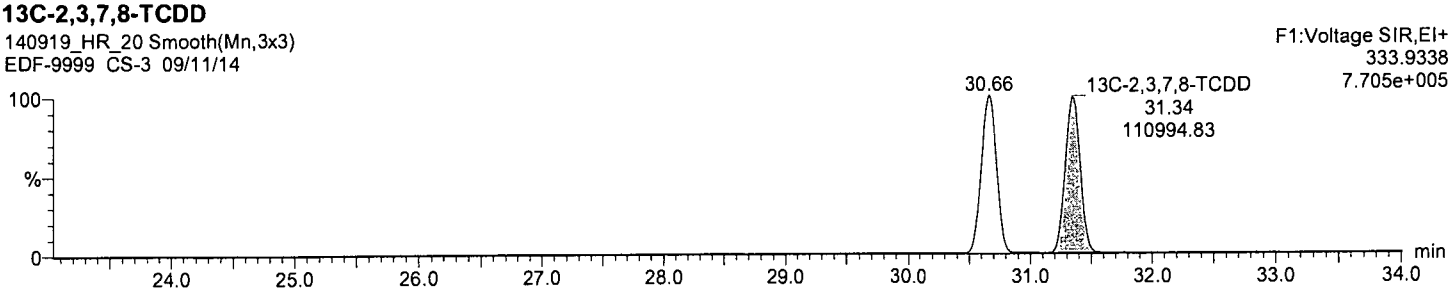
2,3,7,8-TCDD



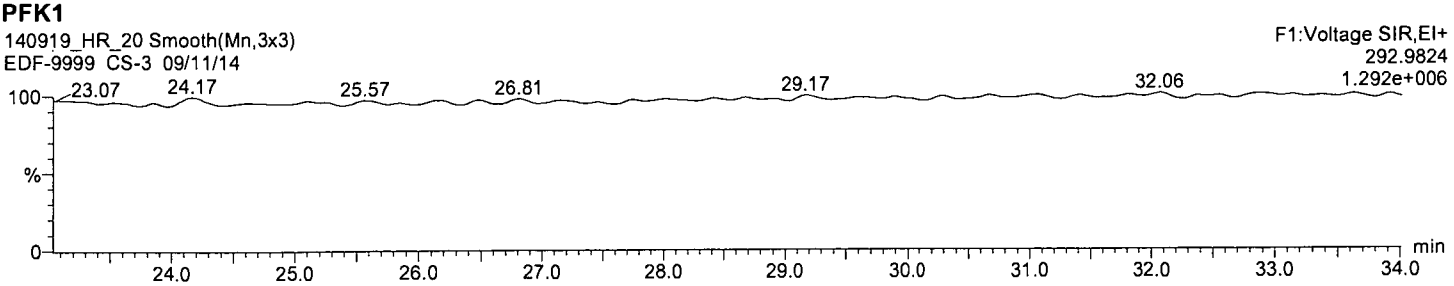
13C-2,3,7,8-TCDD



13C-2,3,7,8-TCDD

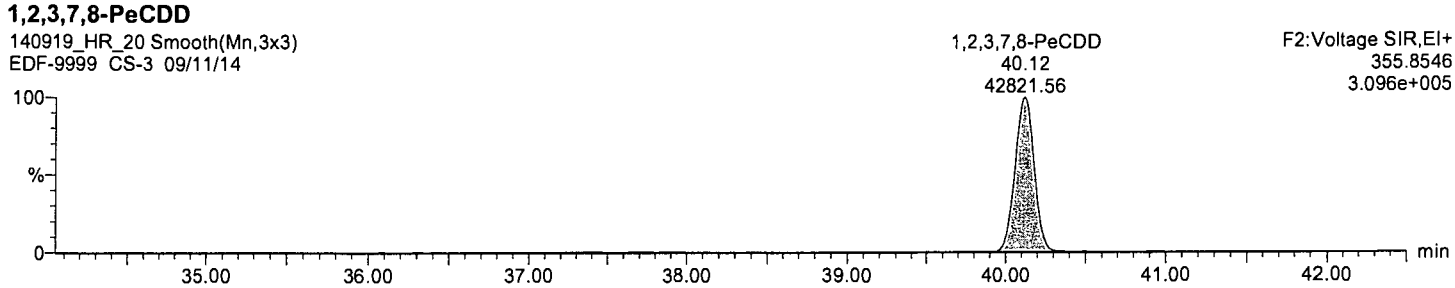


PFK1

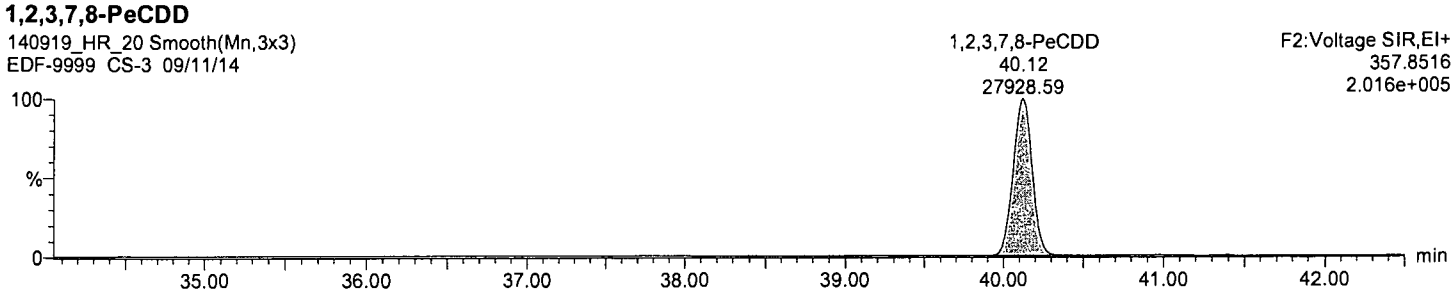


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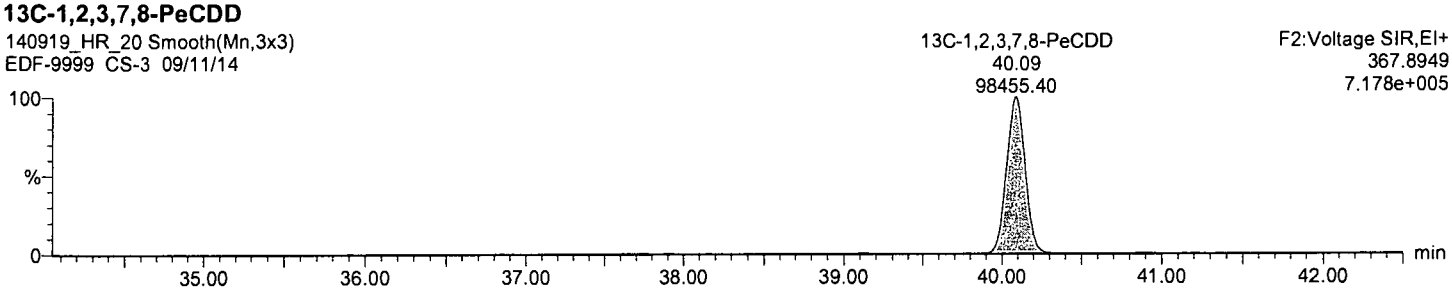
1,2,3,7,8-PeCDD



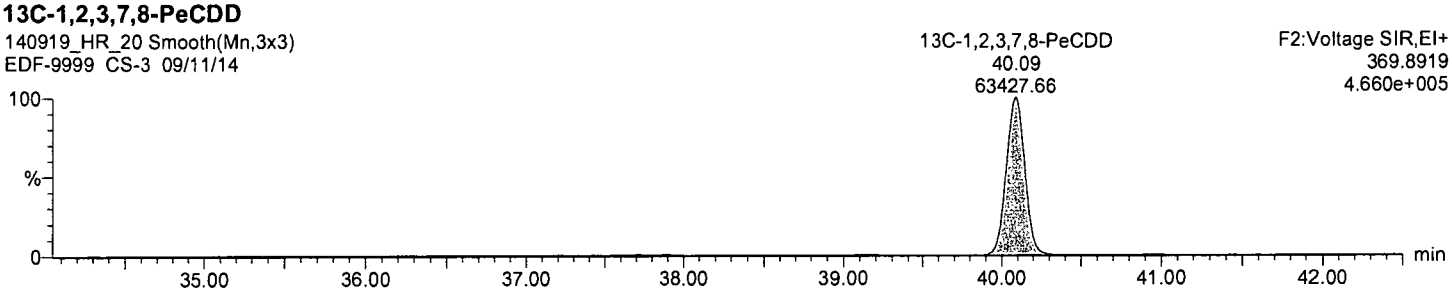
1,2,3,7,8-PeCDD



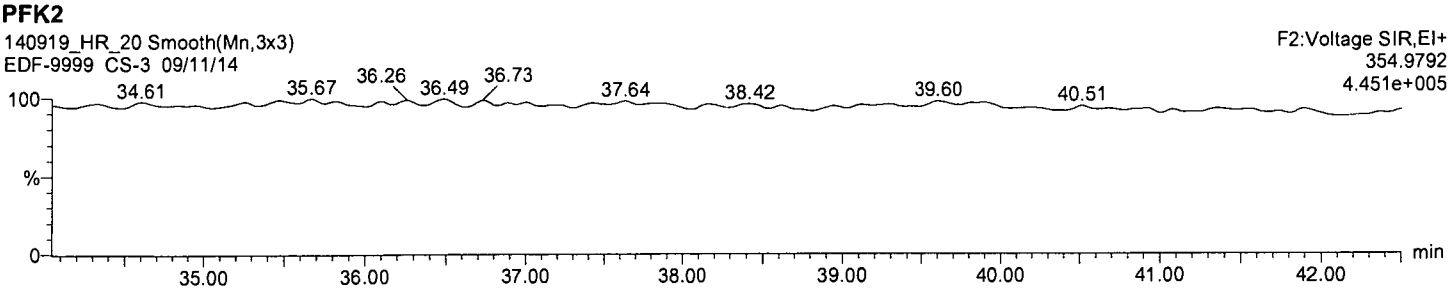
13C-1,2,3,7,8-PeCDD



13C-1,2,3,7,8-PeCDD

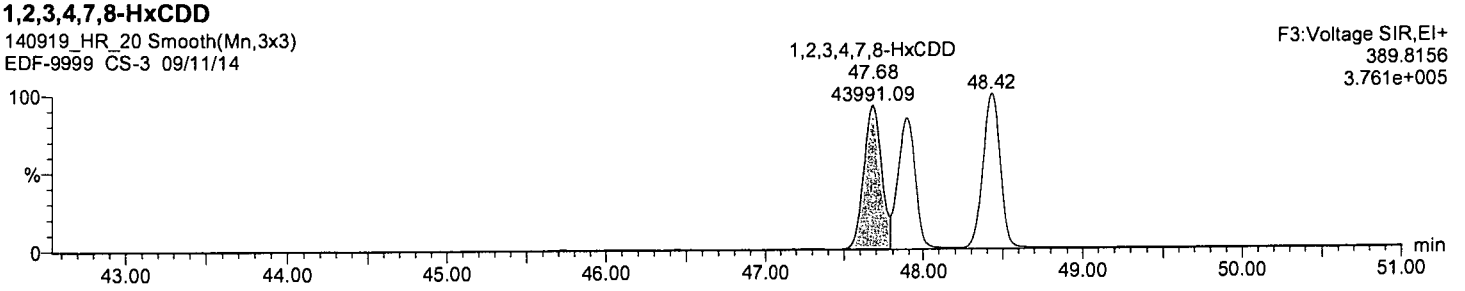


PFK2

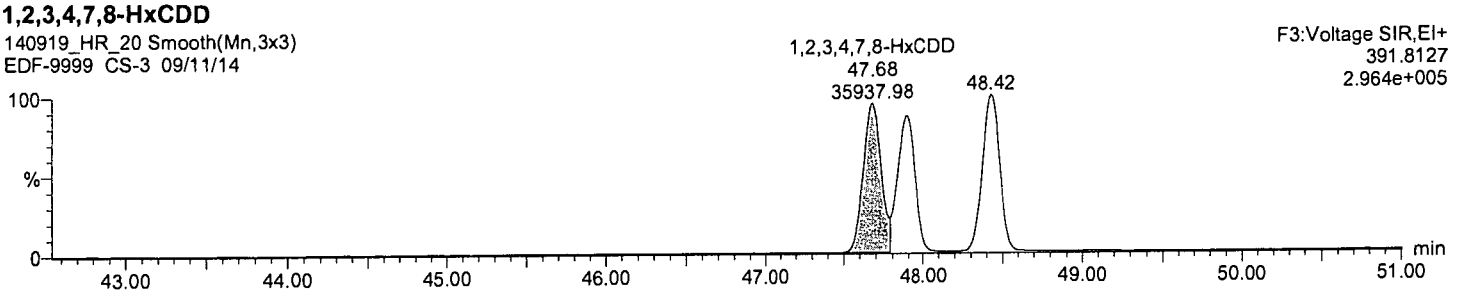


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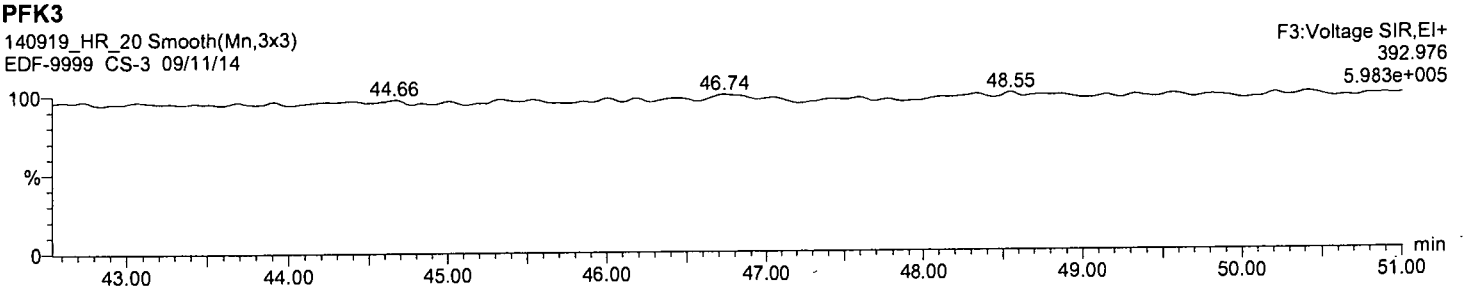
1,2,3,4,7,8-HxCDD



1,2,3,4,7,8-HxCDD

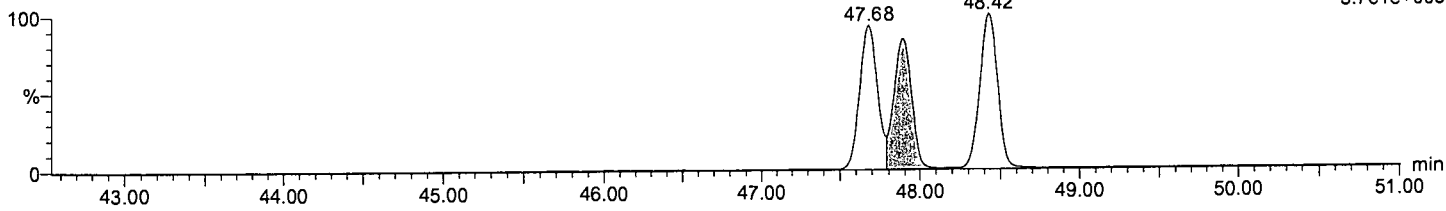


PFK3

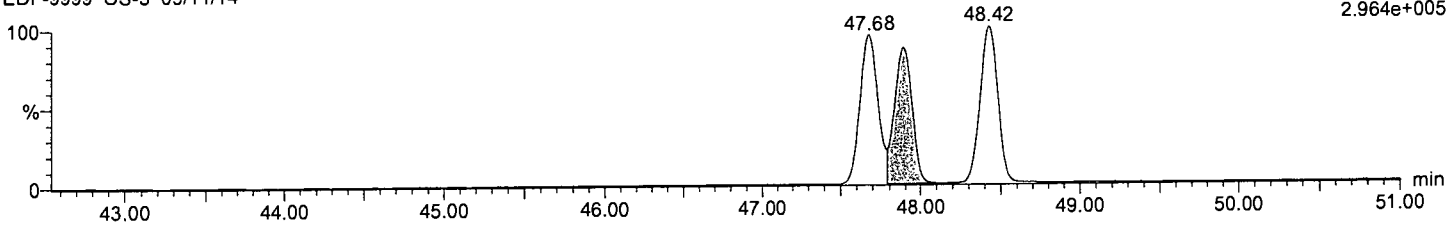


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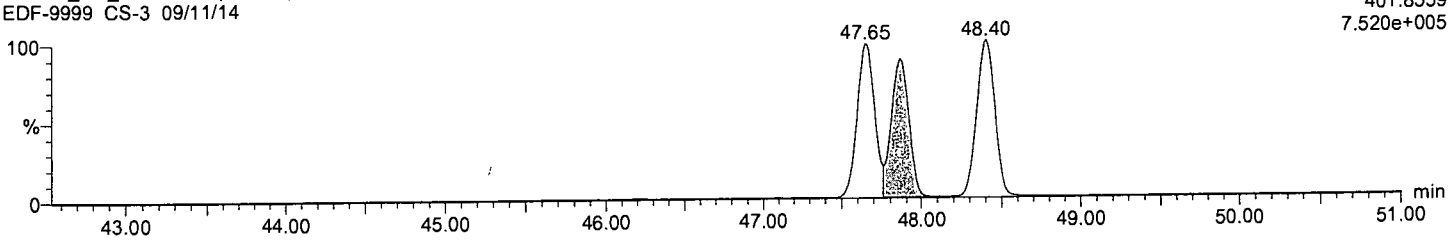
1,2,3,6,7,8-HxCDD
140919_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 09/11/14
F3:Voltage SIR,EI+
389.8156
3.761e+005



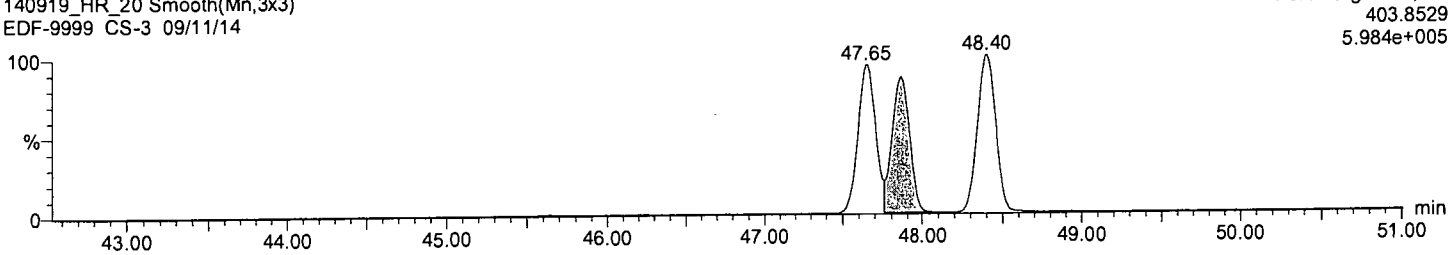
1,2,3,6,7,8-HxCDD
140919_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 09/11/14
F3:Voltage SIR,EI+
391.8127
2.964e+005



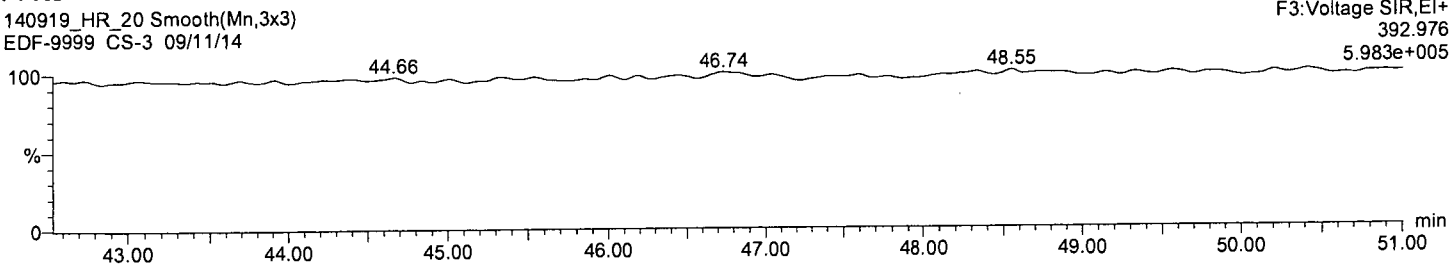
13C-1,2,3,6,7,8-HxCDD
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EDF-9999 CS-3 09/11/14
F3:Voltage SIR,EI+
401.8559
7.520e+005



13C-1,2,3,6,7,8-HxCDD
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EDF-9999 CS-3 09/11/14
F3:Voltage SIR,EI+
403.8529
5.984e+005

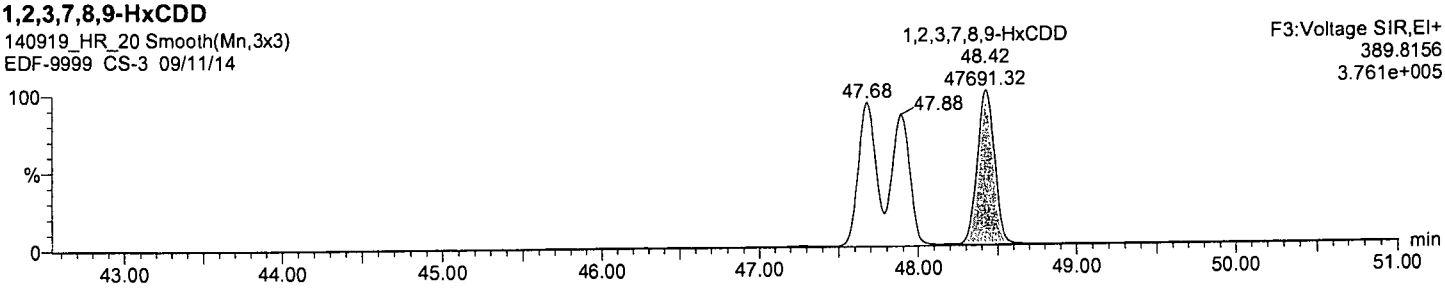


PFK3
140919_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 09/11/14
F3:Voltage SIR,EI+
392.976
5.983e+005

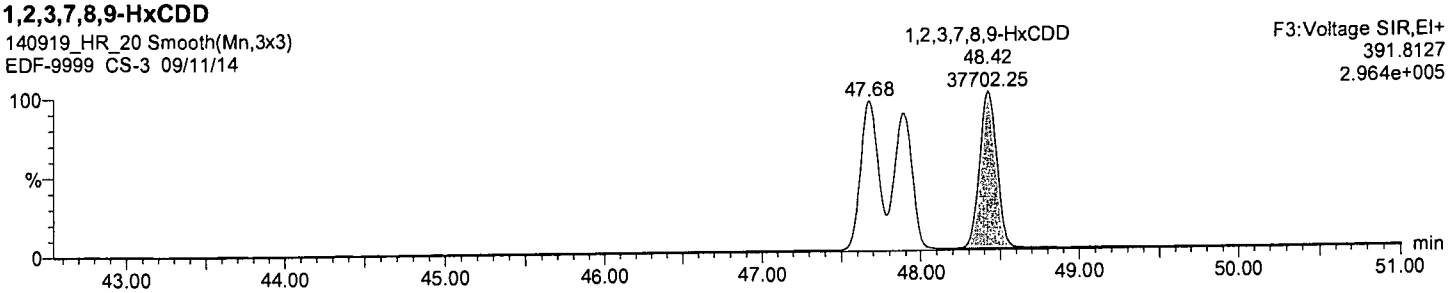


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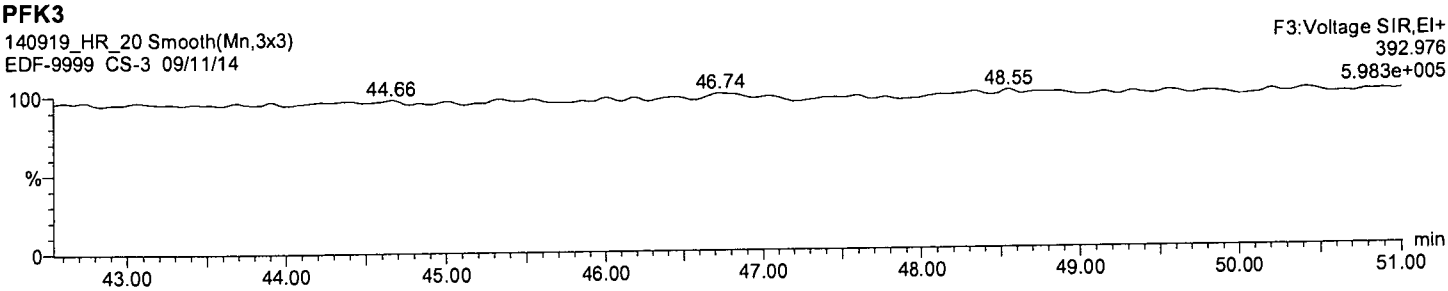
1,2,3,7,8,9-HxCDD
140919_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 09/11/14



1,2,3,7,8,9-HxCDD
140919_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 09/11/14

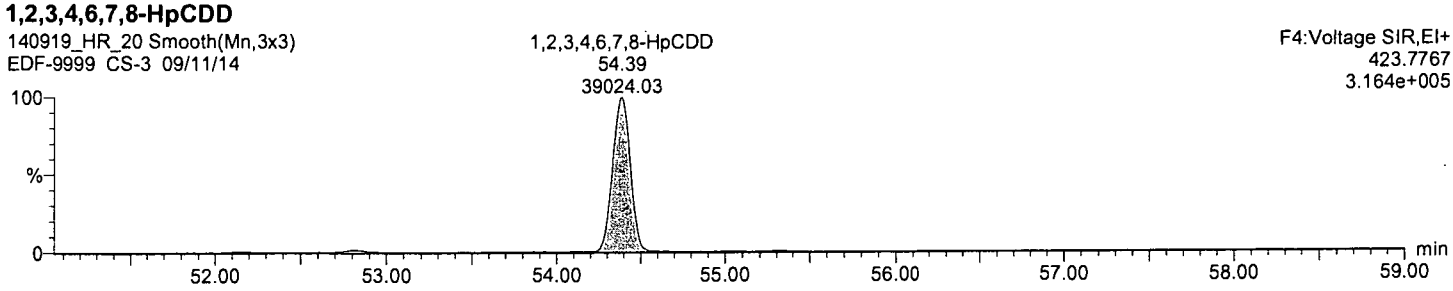


PFK3
140919_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 09/11/14

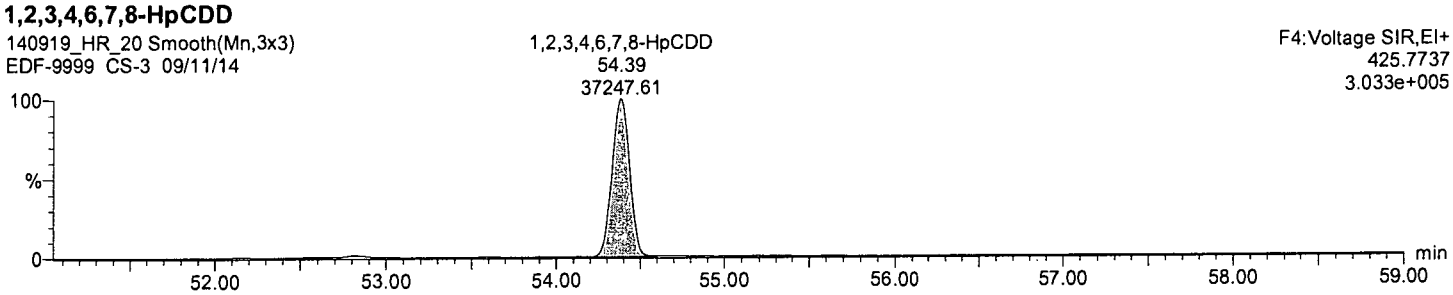


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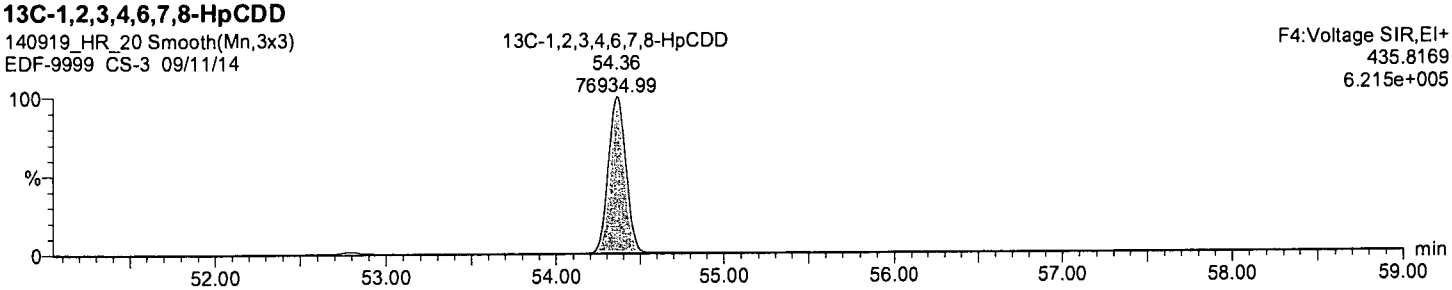
1,2,3,4,6,7,8-HpCDD



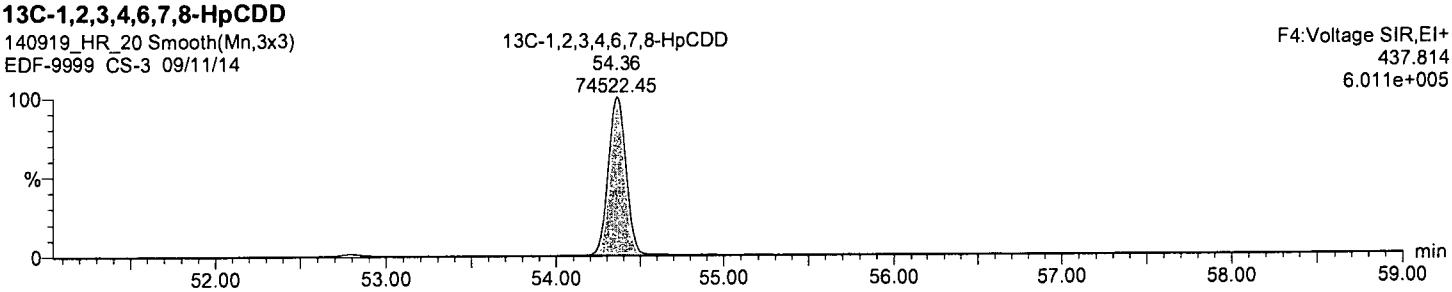
1,2,3,4,6,7,8-HpCDD



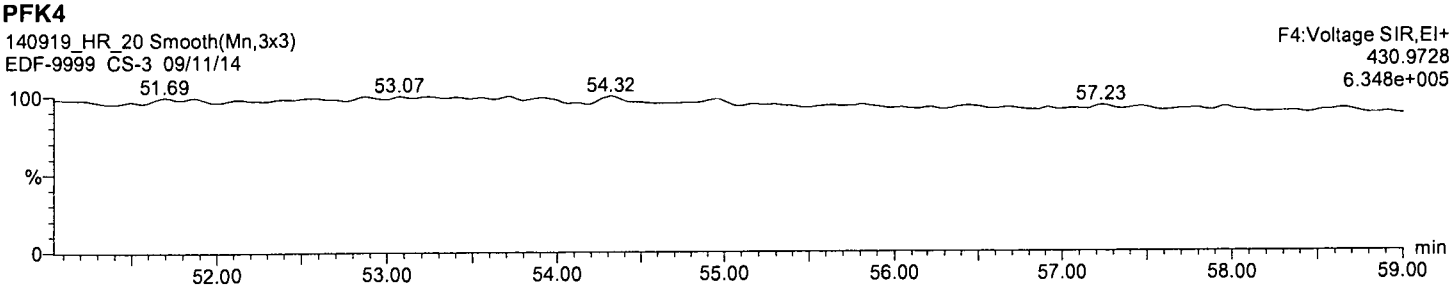
13C-1,2,3,4,6,7,8-HpCDD



13C-1,2,3,4,6,7,8-HpCDD

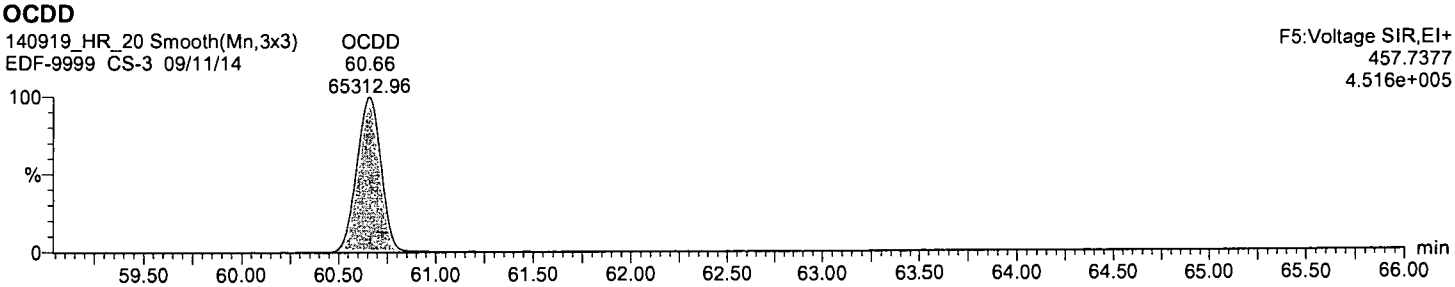


PFK4

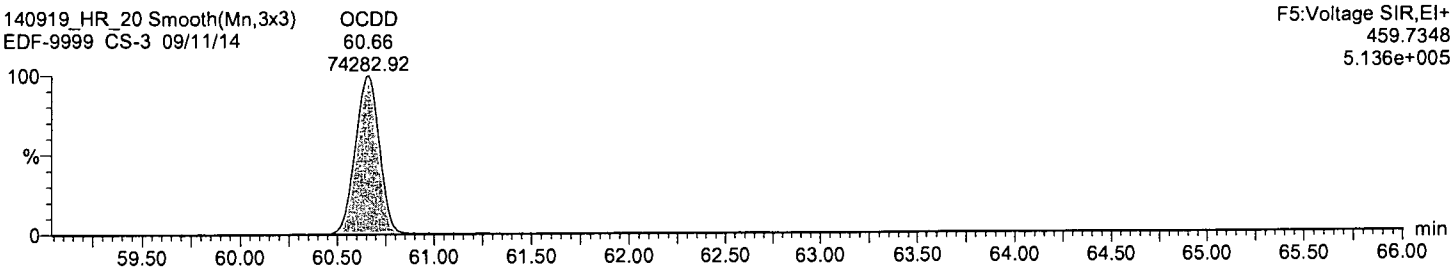


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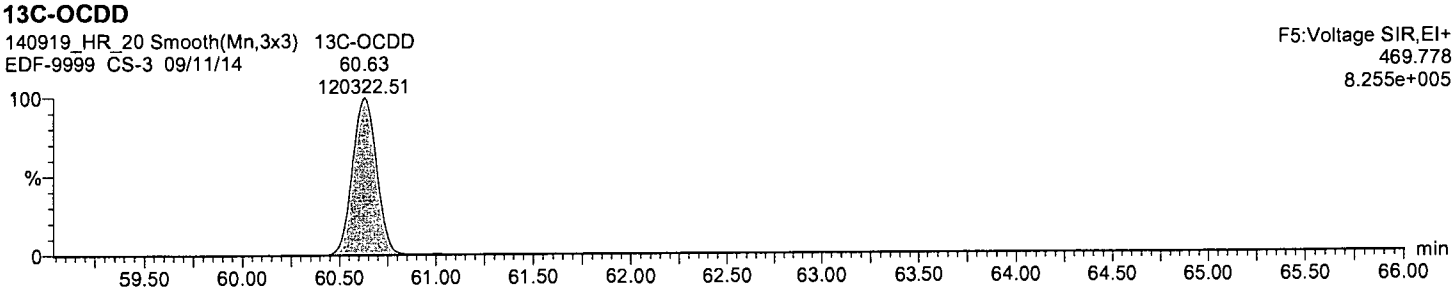
OCDD



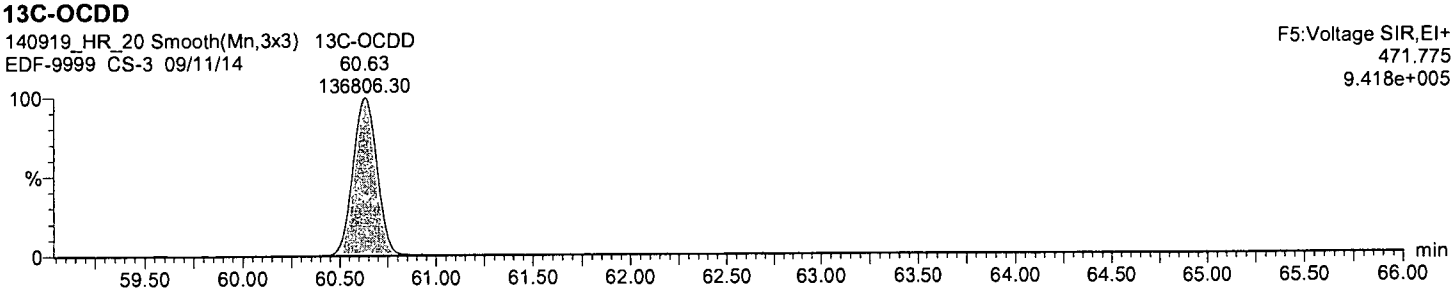
OCDD



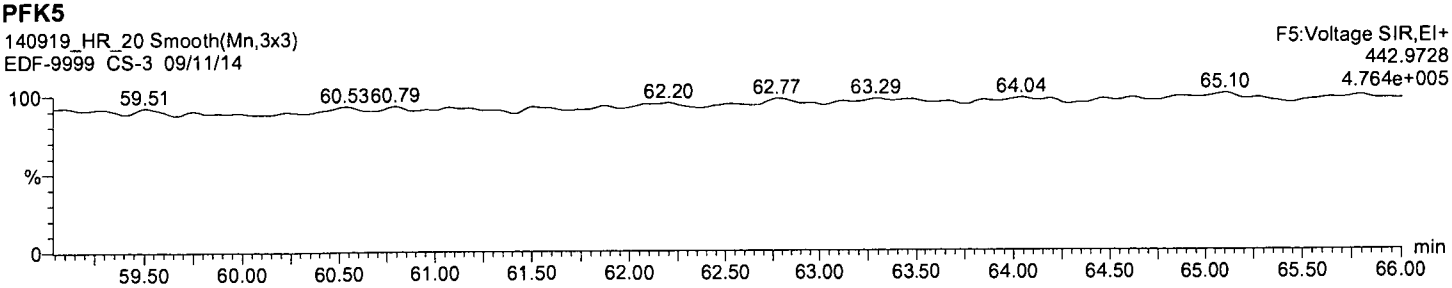
13C-OCDD



13C-OCDD

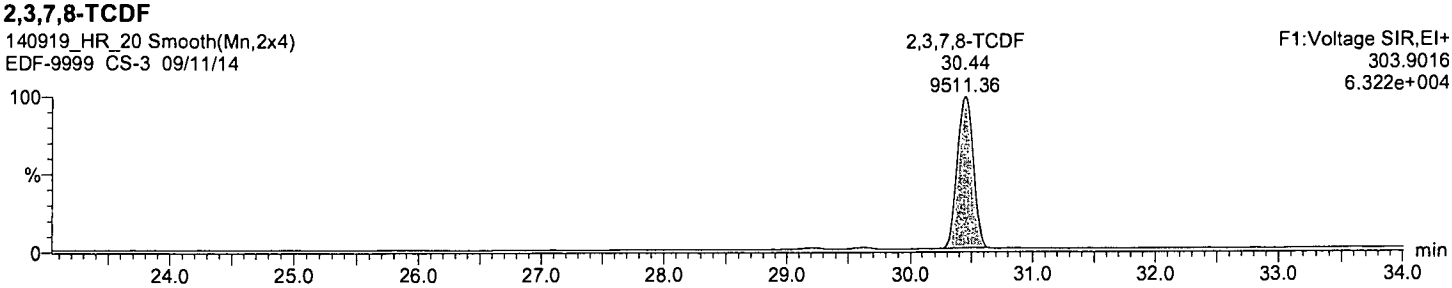


PFK5

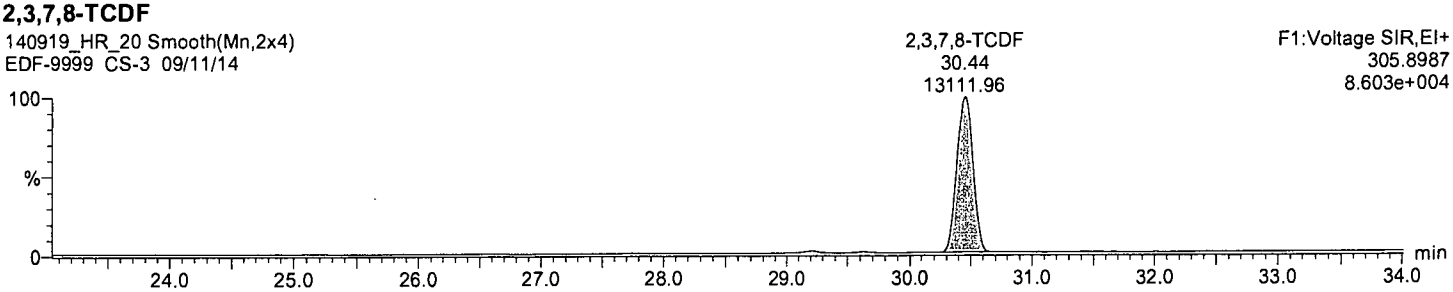


Name: 140919_HR_20, Date: 20-Sep-2014, Time: 14:52:16, ID: , Description: EDF-9999 CS-3 09/11/14, User:

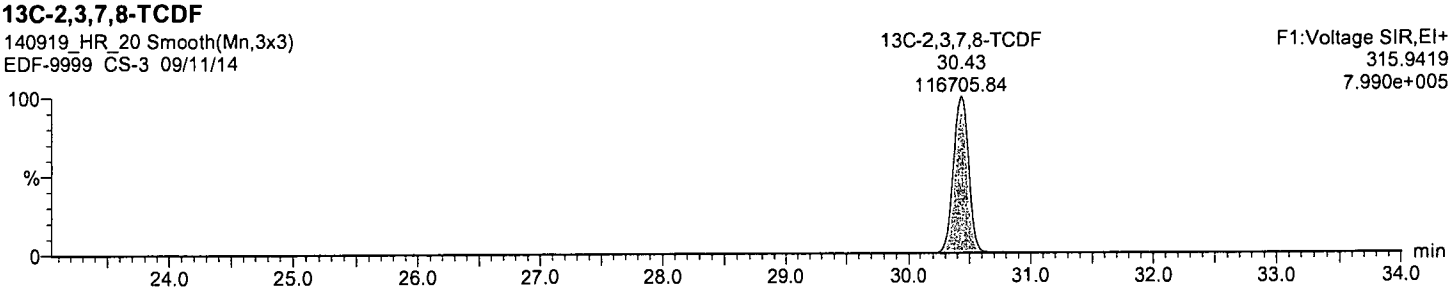
2,3,7,8-TCDF



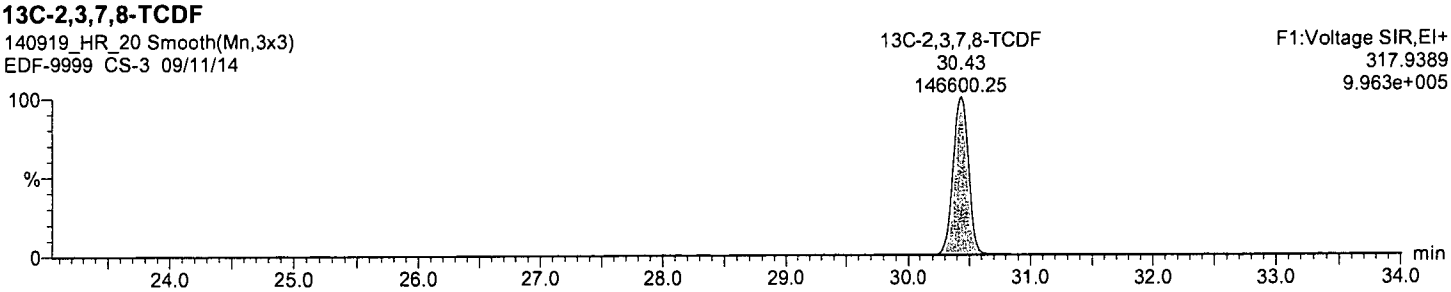
2,3,7,8-TCDF



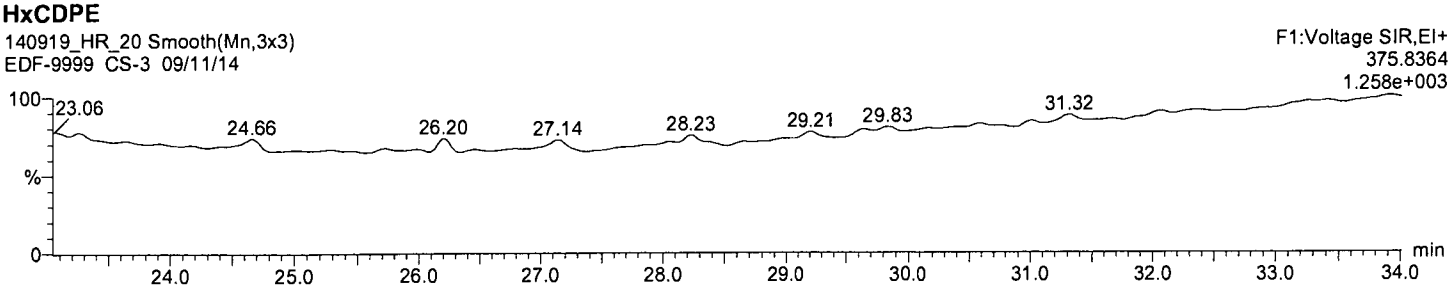
13C-2,3,7,8-TCDF



13C-2,3,7,8-TCDF

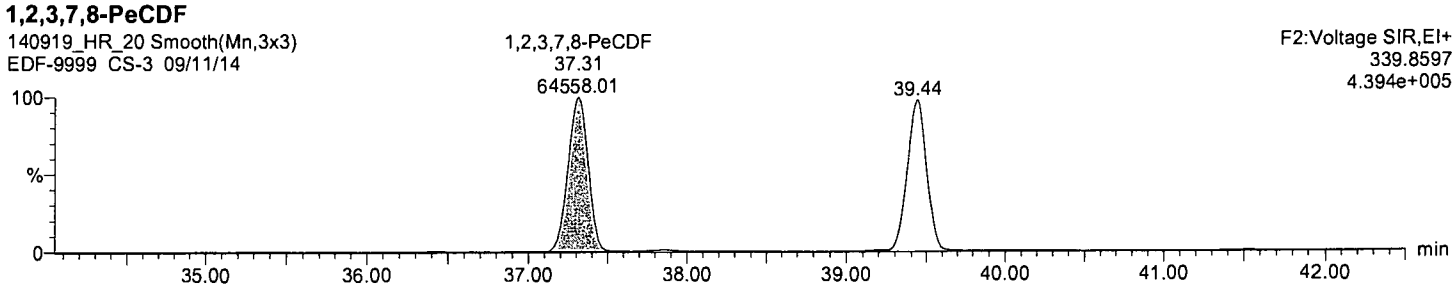


HxCDPE

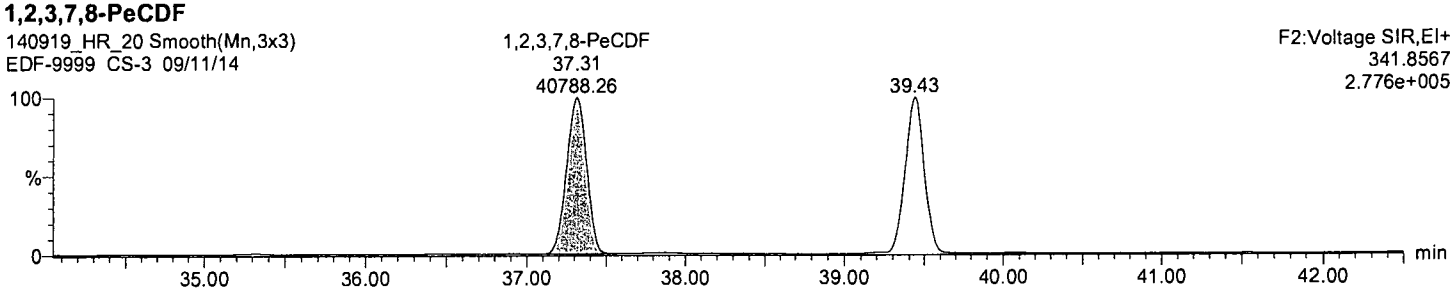


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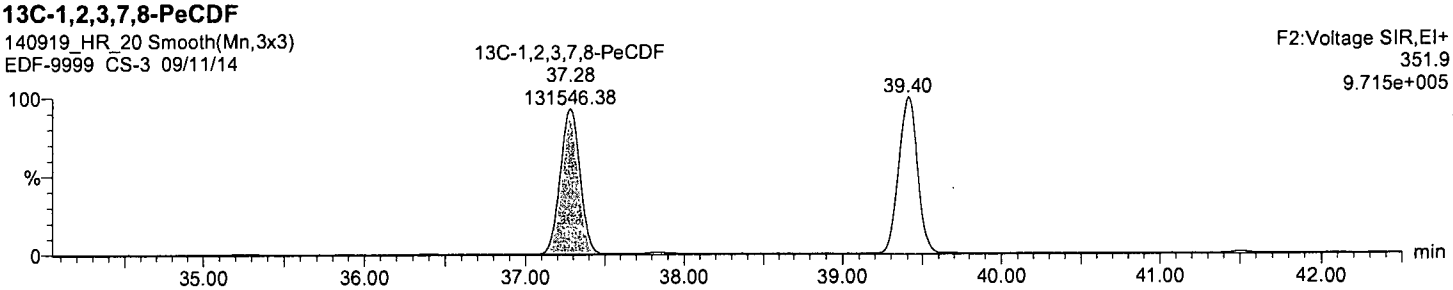
1,2,3,7,8-PeCDF



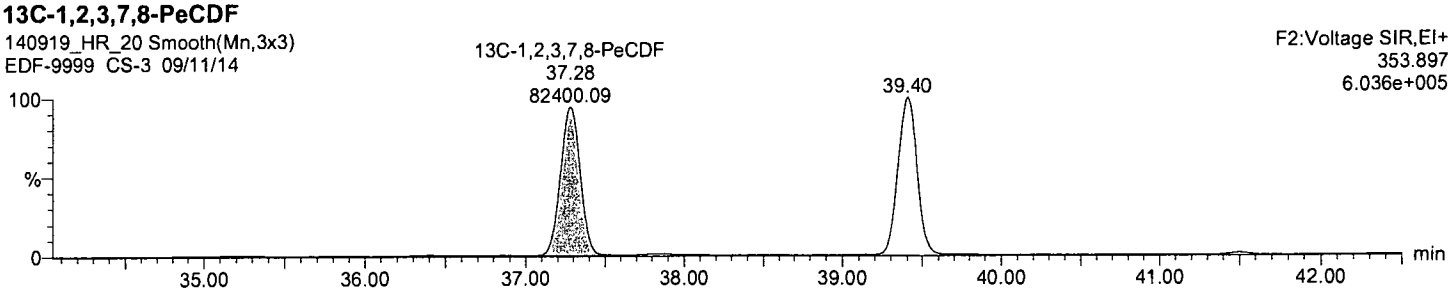
1,2,3,7,8-PeCDF



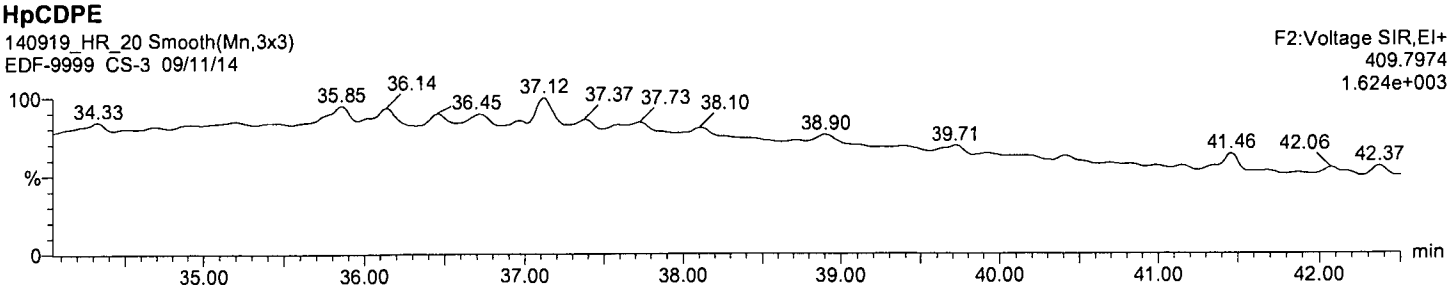
13C-1,2,3,7,8-PeCDF



13C-1,2,3,7,8-PeCDF

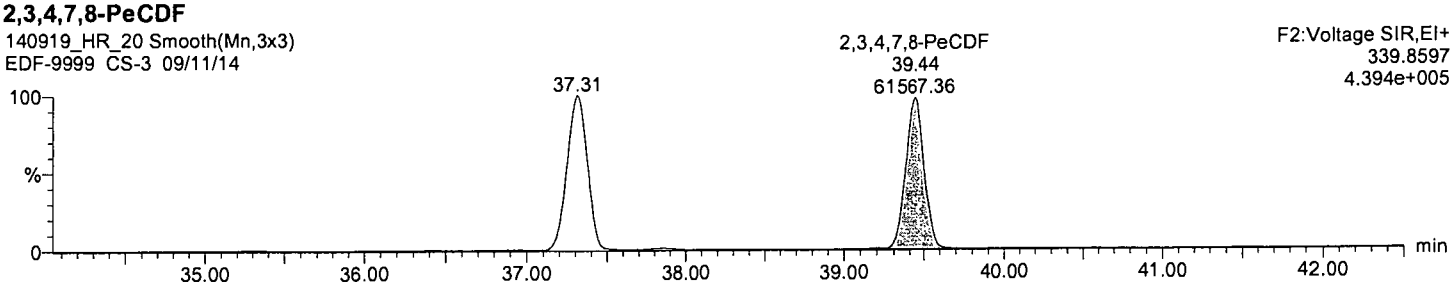


HpCDPE

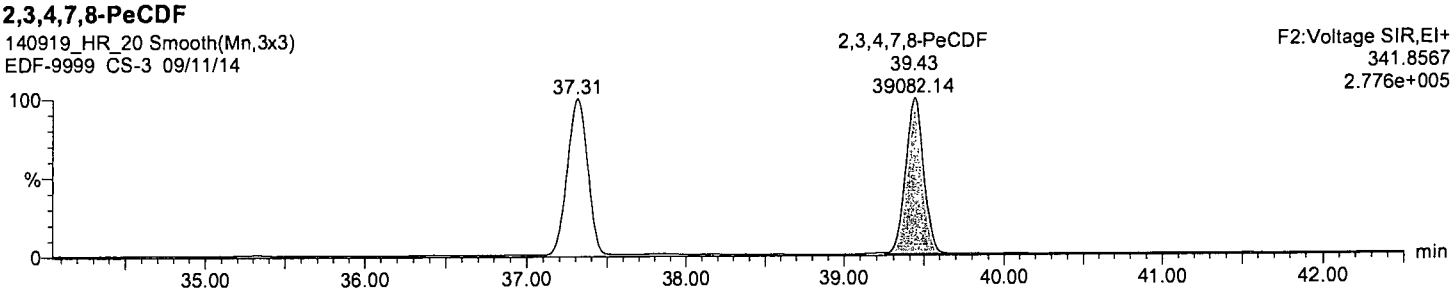


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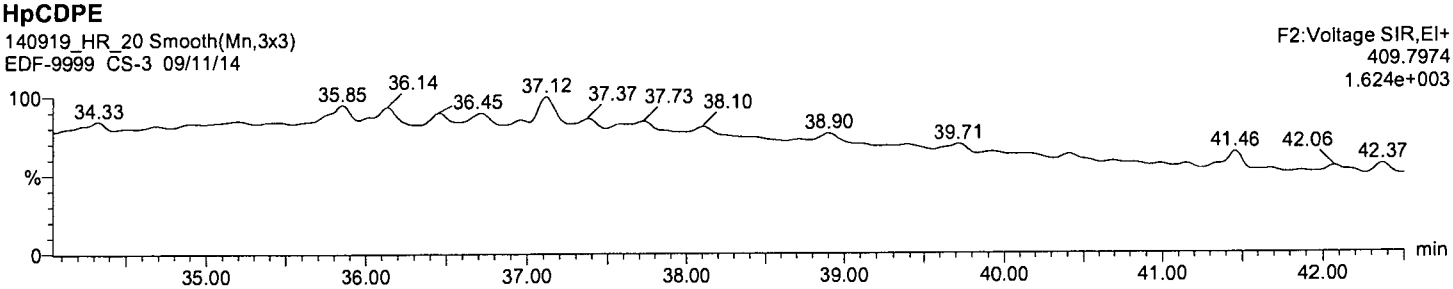
2,3,4,7,8-PeCDF



2,3,4,7,8-PeCDF

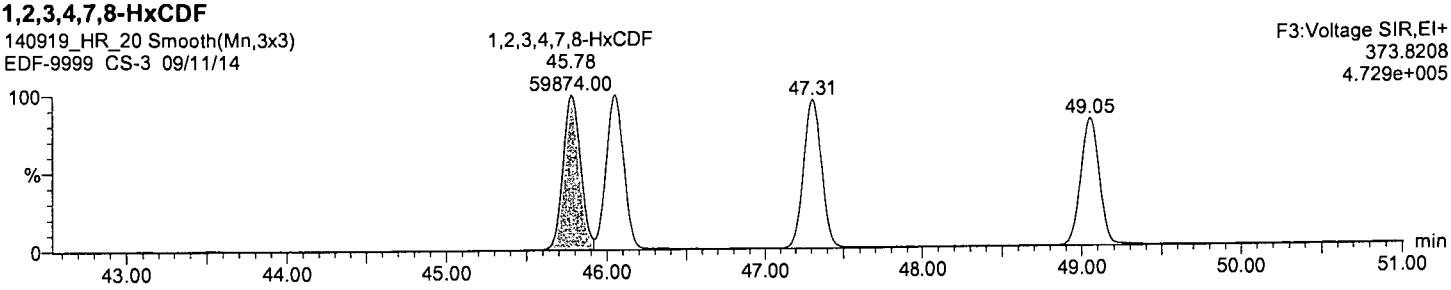


HpCDPE

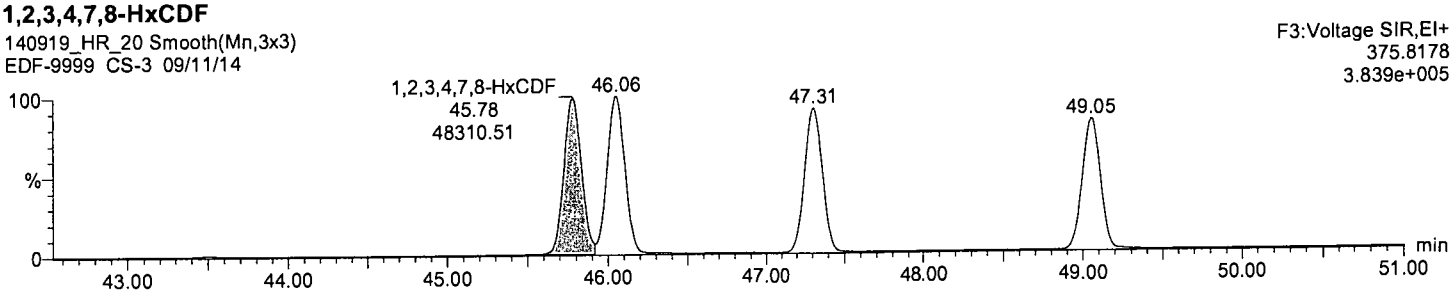


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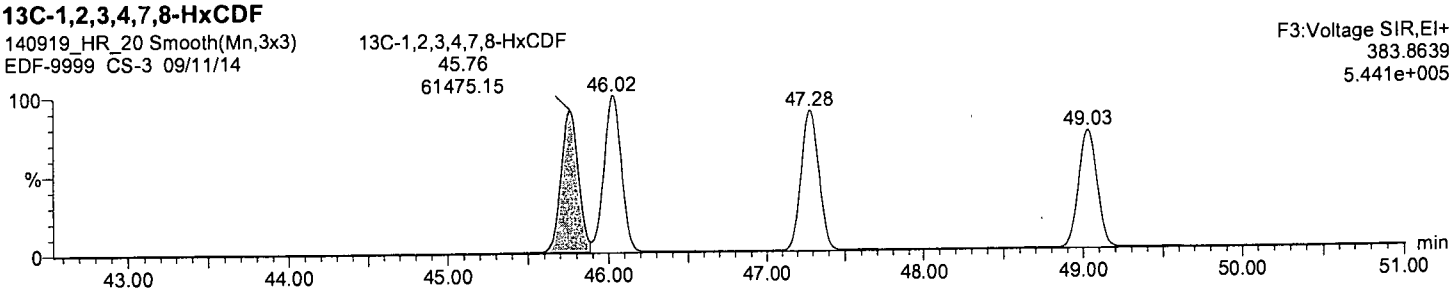
1,2,3,4,7,8-HxCDF



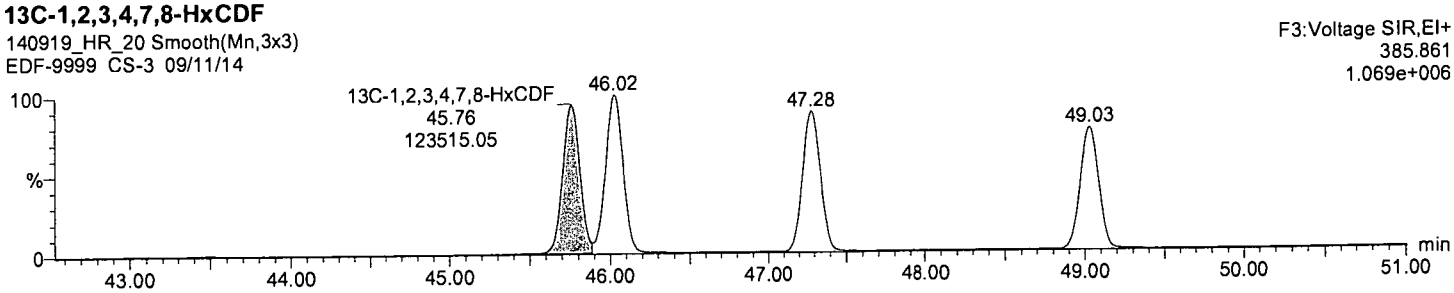
1,2,3,4,7,8-HxCDF



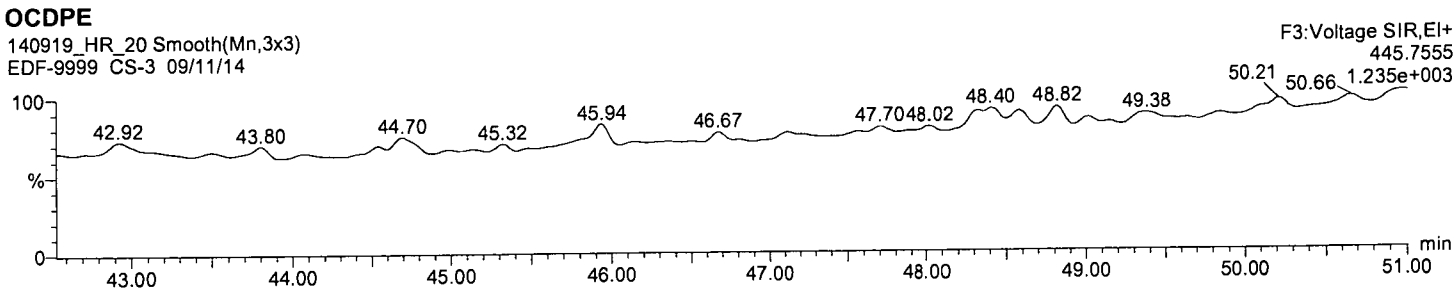
13C-1,2,3,4,7,8-HxCDF



13C-1,2,3,4,7,8-HxCDF

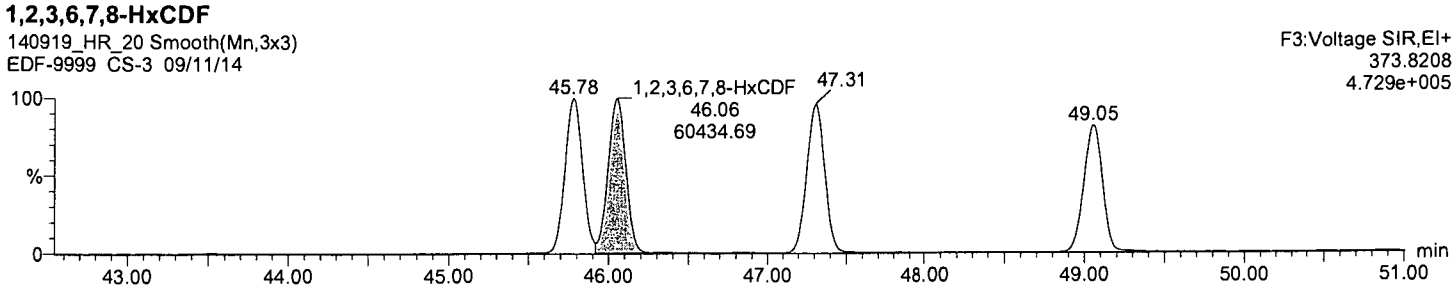


OCDPE

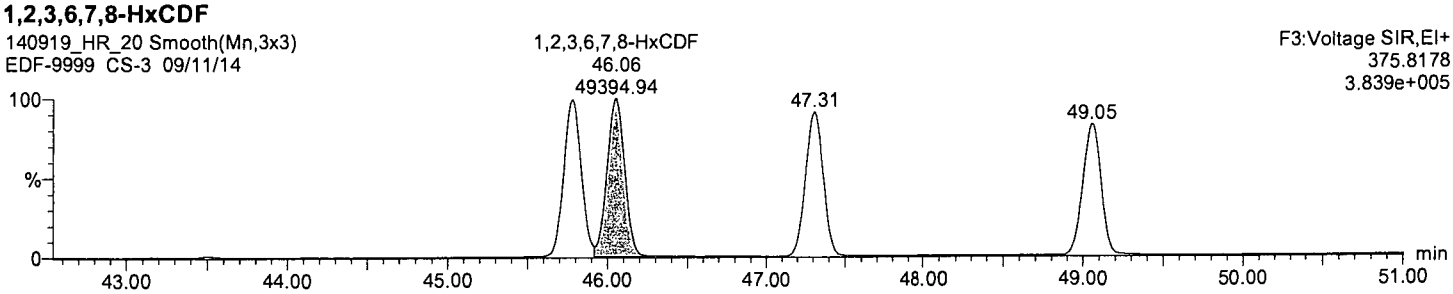


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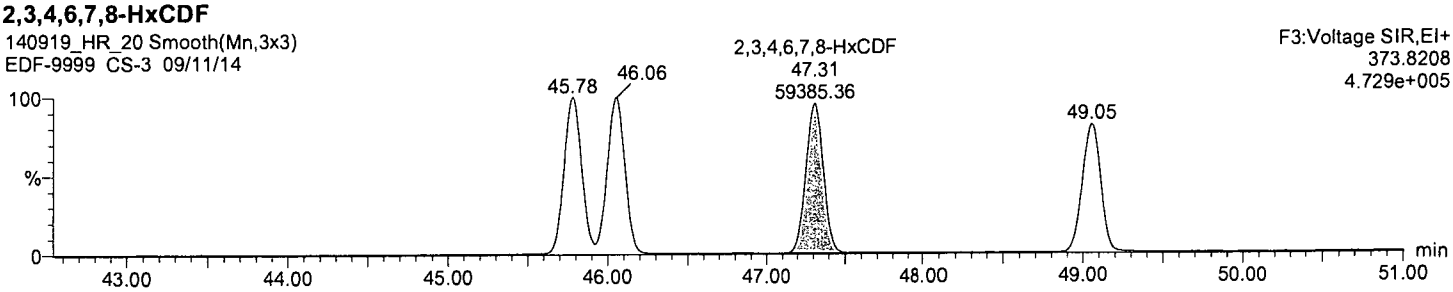
1,2,3,6,7,8-HxCDF



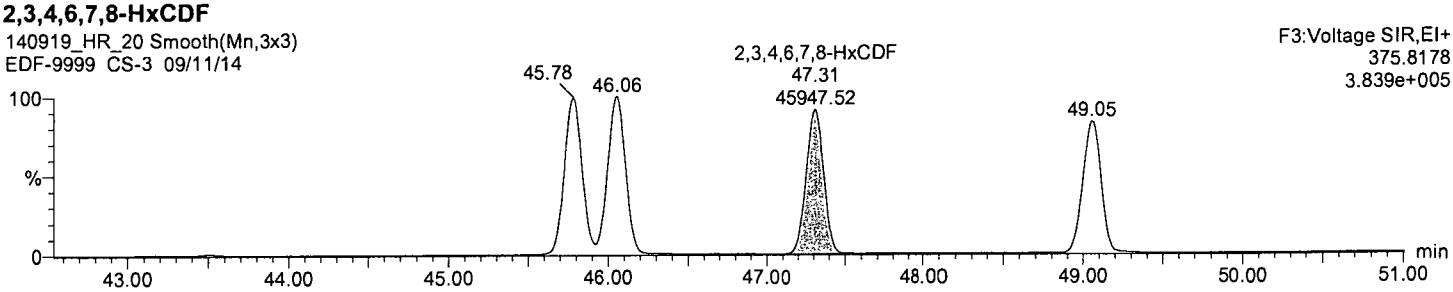
1,2,3,6,7,8-HxCDF



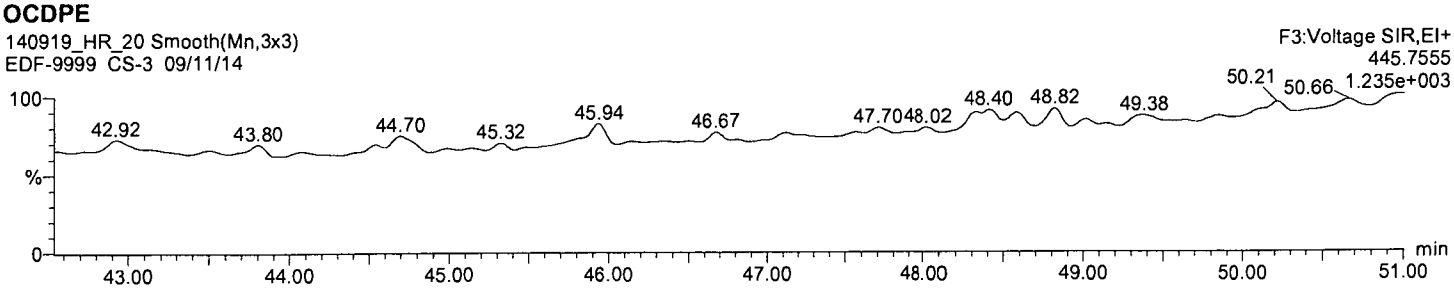
2,3,4,6,7,8-HxCDF



2,3,4,6,7,8-HxCDF

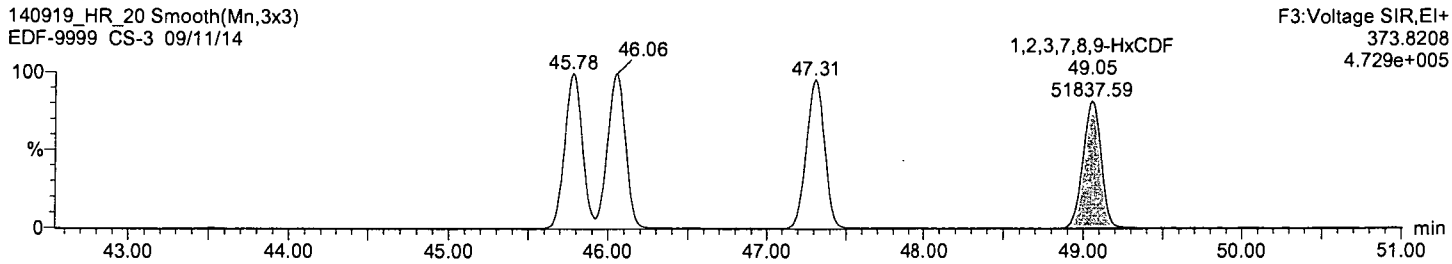


OCDPE

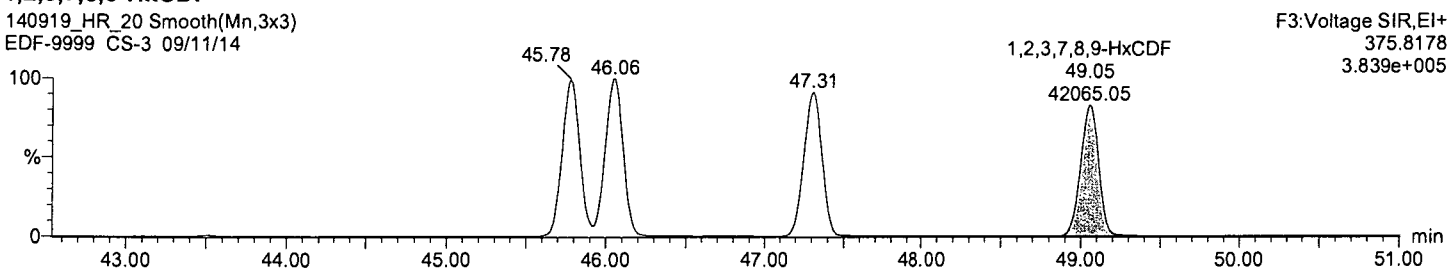


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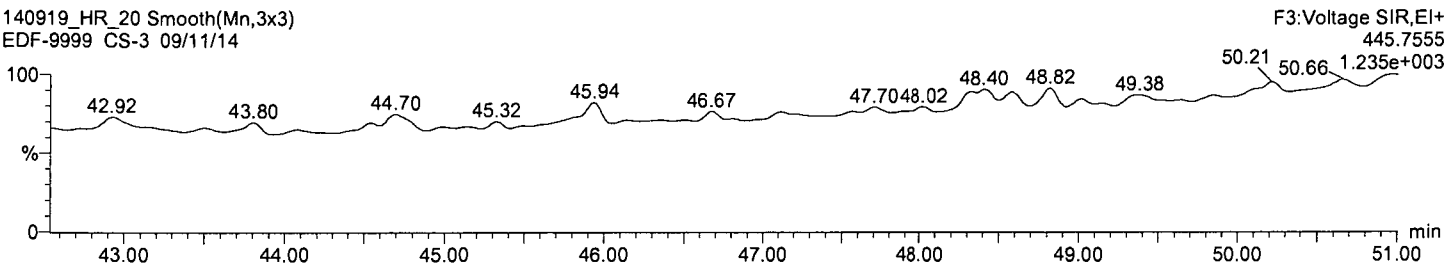
1,2,3,7,8,9-HxCDF



1,2,3,7,8,9-HxCDF

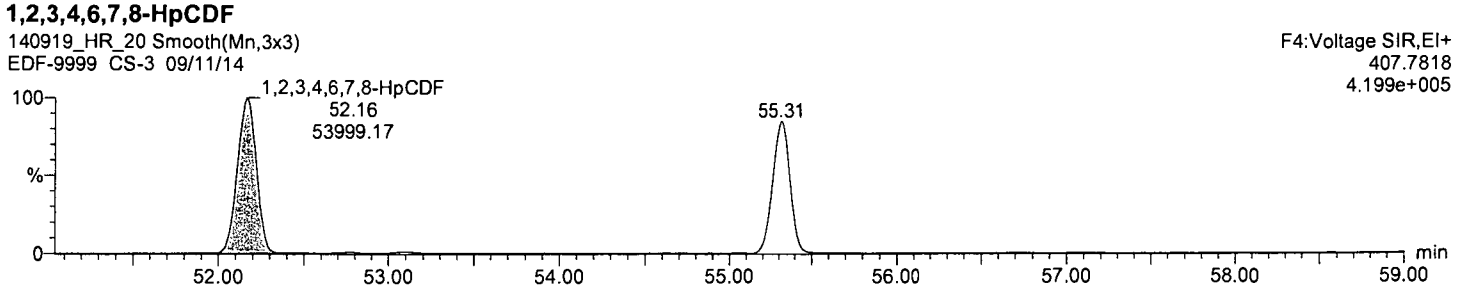


OCDPE

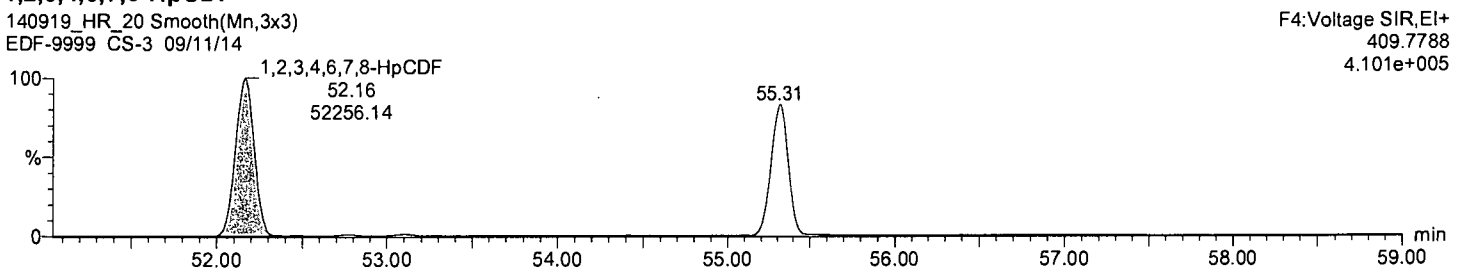


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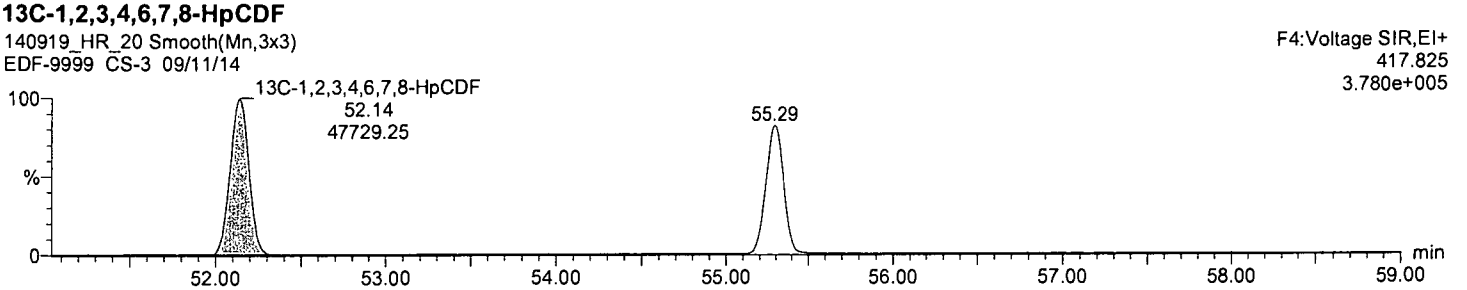
1,2,3,4,6,7,8-HpCDF



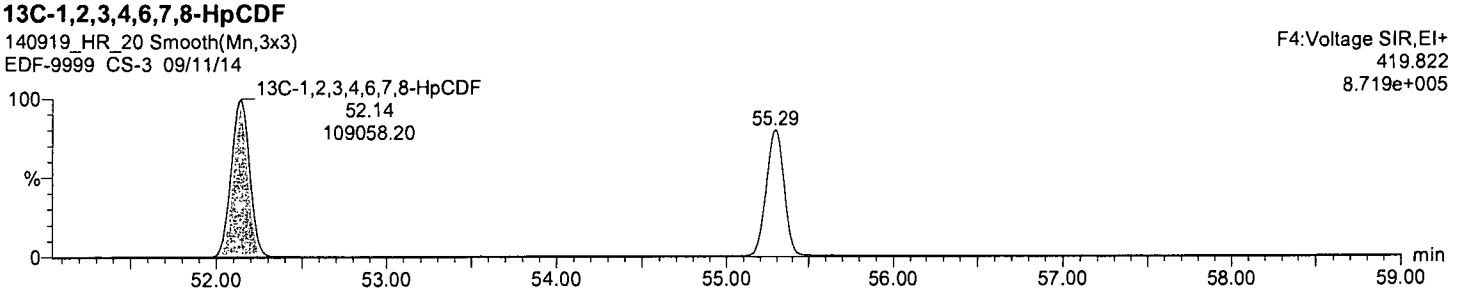
1,2,3,4,6,7,8-HpCDF



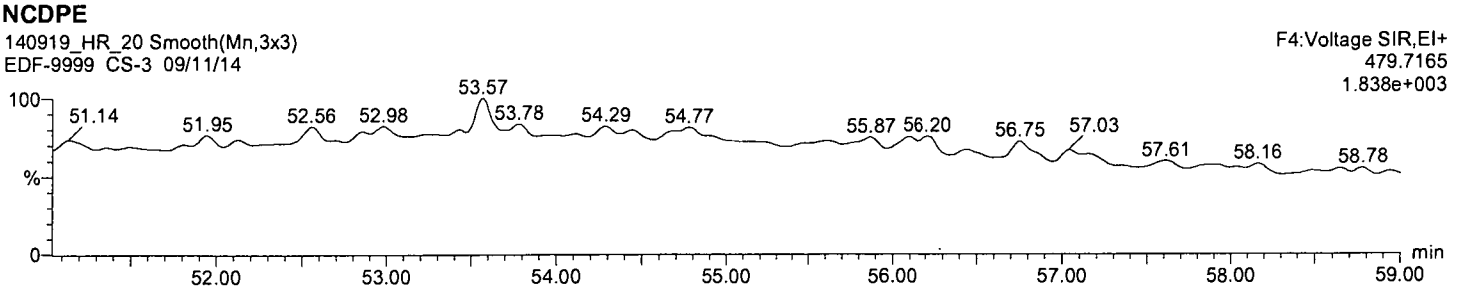
13C-1,2,3,4,6,7,8-HpCDF



13C-1,2,3,4,6,7,8-HpCDF

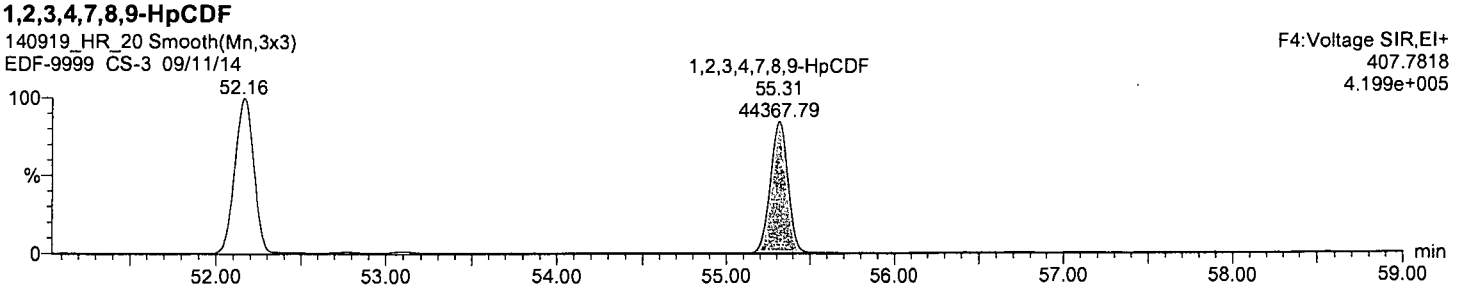


NCDPE

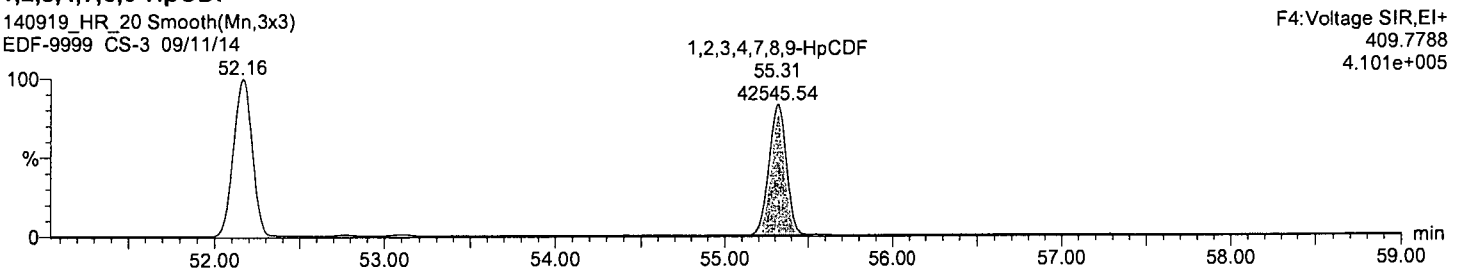


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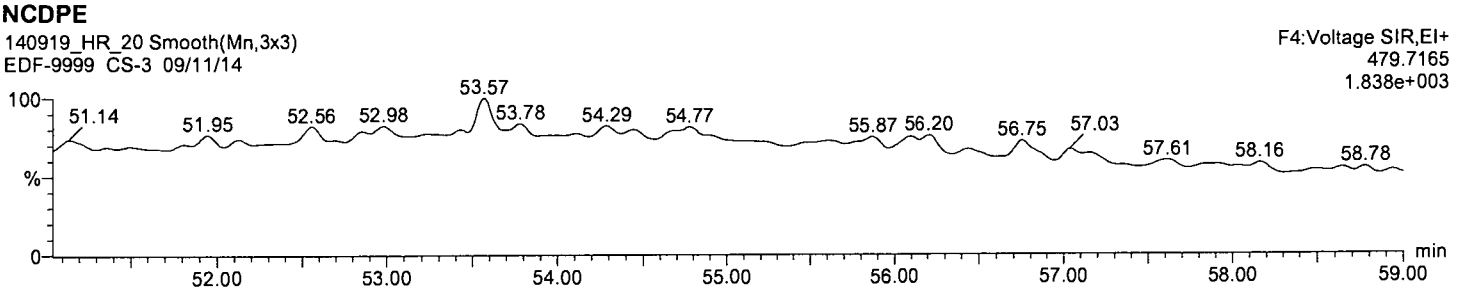
1,2,3,4,7,8,9-HpCDF



1,2,3,4,7,8,9-HpCDF

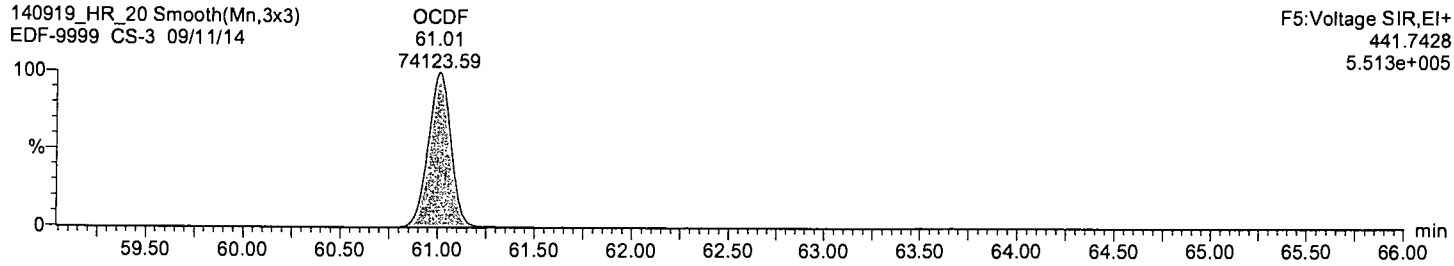


NCDPE

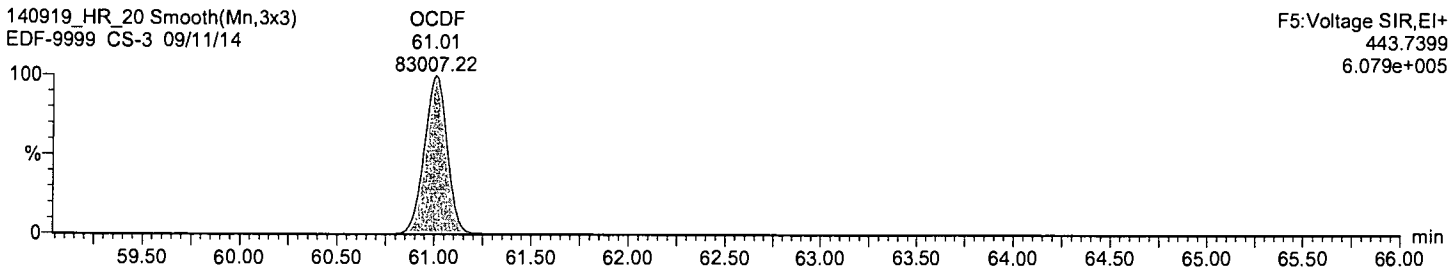


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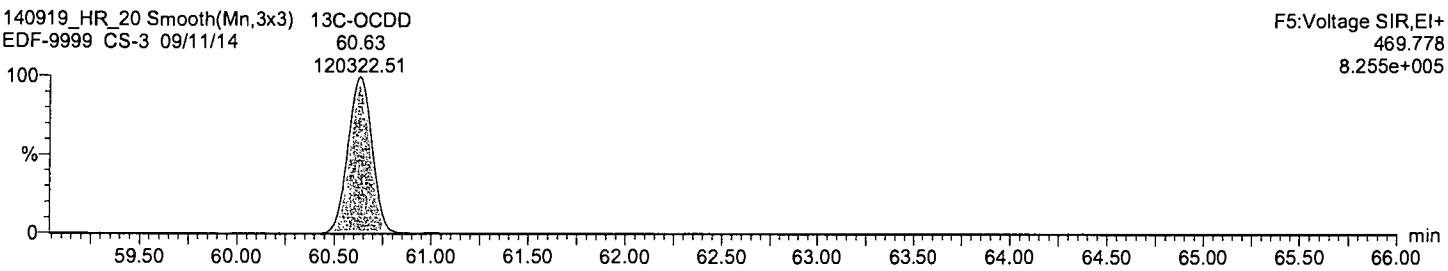
OCDF



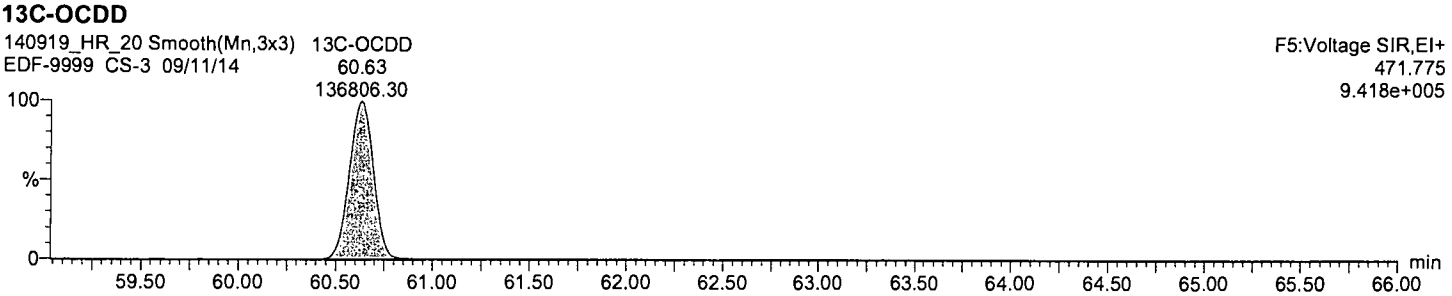
OCDF



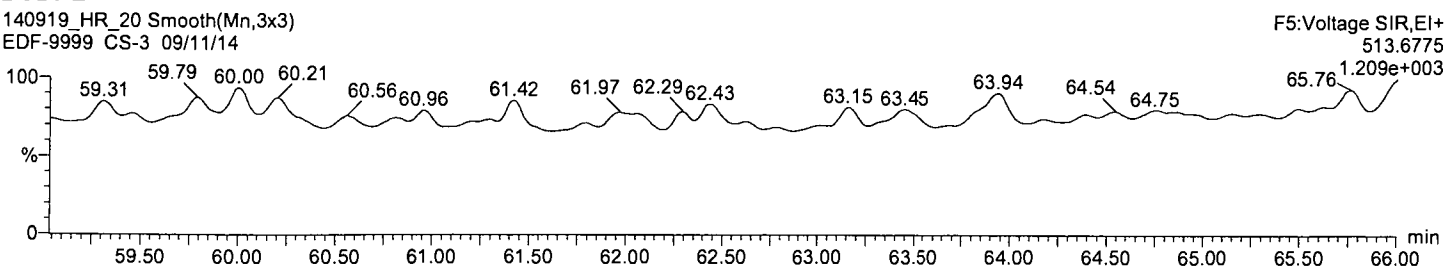
13C-OCDD



13C-OCDD

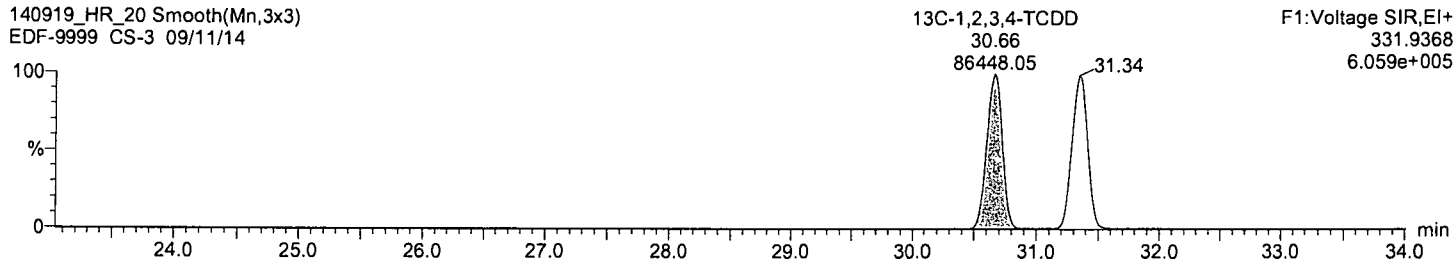


DCDPE

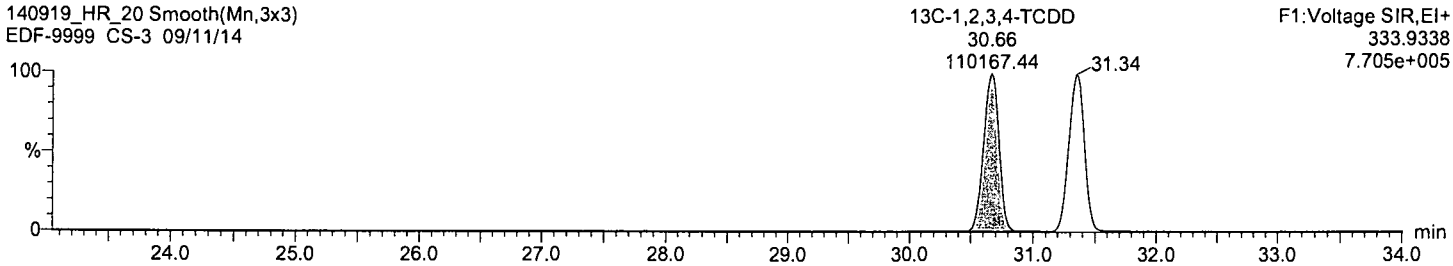


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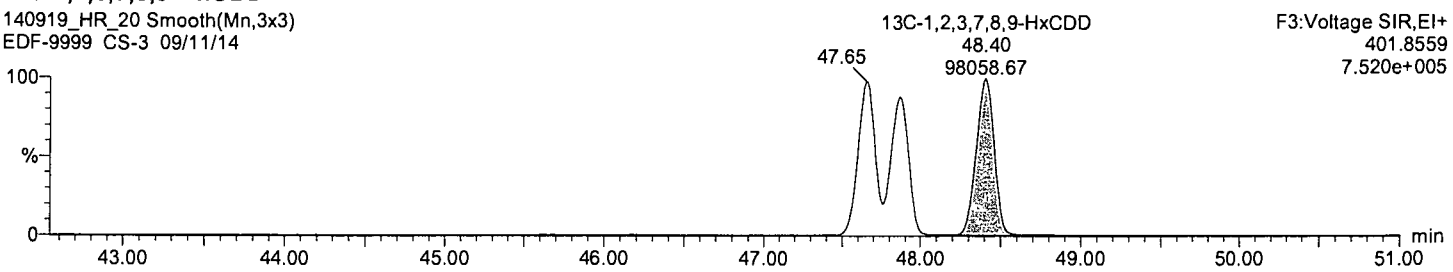
13C-1,2,3,4-TCDD



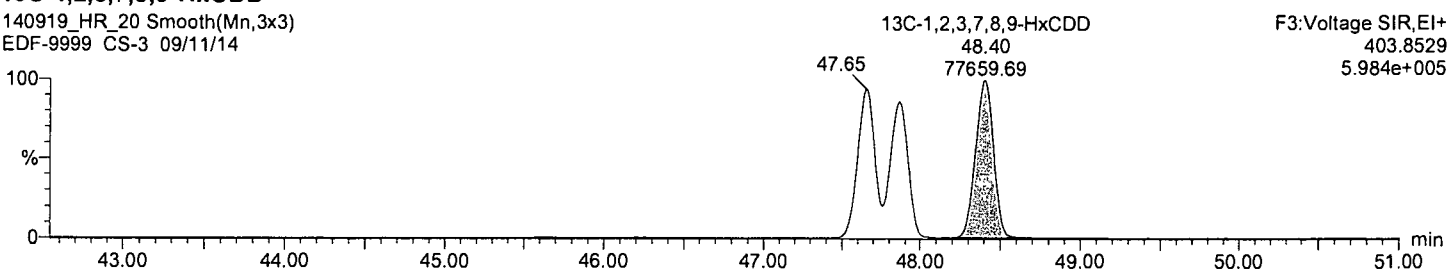
13C-1,2,3,4-TCDD



13C-1,2,3,7,8,9-HxCDD



13C-1,2,3,7,8,9-HxCDD



EPA METHOD 8290
Dioxins/Furans

Raw Data

APPL, INC.

Dataset: C:\MassLynx\Default.pro\Quanted Data\140919_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

Name: 140919_HR_17, Date: 20-Sep-2014, Time: 11:25:54, ID: , Description: 140917SBLKA 4.990 DF 09/17/14, User:

Name	Peak Area	1º Area	RT	Ion Ab	Ion Fail?	S/N1	S/N2	Conc.	%Rec	LOD	EMPC	Multiplier
2,3,7,8-TCDD	2.473200e1	1.637700e1	31.38	1.51	YES	NO	NO	~~0.190~~		~~0.165~~	0.134 ✓	4.99
1,2,3,7,8-PeCDD										0.124		4.99
1,2,3,4,7,8-HxCDD										0.084		4.99
1,2,3,6,7,8-HxCDD										0.084		4.99
1,2,3,7,8,9-HxCDD	1.379900e1	2.246500e1	48.40	0.61	YES	NO	NO	~~0.210~~		~~0.080~~	0.144	4.99
1,2,3,4,6,7,8-HpCDD										0.106		4.99
OCDD	1.043200e2	2.844500e1	60.63	3.67	YES	NO	NO	~~0.870~~		~~0.147~~	0.352	4.99
2,3,7,8-TCDF	1.096700e1	2.162500e1	30.74	0.51	YES	NO	NO	~~0.133~~		0.098	~~0.103~~	4.99
1,2,3,7,8-PeCDF	3.059500e1	2.166200e1	37.27	1.41	NO	NO	NO	~~0.238~~		~~0.120~~	0.238	4.99
2,3,4,7,8-PeCDF	4.347000e0	1.130800e1	39.27	0.38	YES	YES	NO	~~0.076~~		0.135 ✓	~~0.035~~	4.99
1,2,3,4,7,8-HxCDF	1.391400e1	2.164200e1	45.70	0.64	YES	YES	NO	~~0.167~~		0.083	~~0.118~~	4.99
1,2,3,6,7,8-HxCDF	9.933000e0	6.971000e0	46.01	1.42	NO	YES	YES	~~0.070~~		0.080	~~0.076~~	4.99
2,3,4,6,7,8-HxCDF	5.671000e0	1.615300e1	47.44	0.35	YES	NO	NO	~~0.104~~		~~0.085~~	0.049	4.99
1,2,3,7,8,9-HxCDF	2.891900e1	1.941000e0	49.13	14.90	YES	YES	YES	~~0.175~~		0.101	~~0.025~~	4.99
1,2,3,4,6,7,8-HpCDF	1.411900e1	7.608000e0	52.39	1.86	YES	NO	NO	~~0.112~~		0.095	~~0.080~~	4.99
1,2,3,4,7,8,9-HpCDF										0.128		4.99
OCDF	1.702500e1	1.018500e1	60.99	1.67	YES	YES	NO	~~0.160~~		0.105	~~0.113~~	4.99
13C-2,3,7,8-TCDD	1.819663e4	2.371733e4	31.36	0.77	NO	NO	NO	180.713	90.54	0.279		4.99
13C-1,2,3,7,8-PeCDD	2.208338e4	1.436340e4	40.08	1.54	NO	NO	NO	189.613	95.00	0.204		4.99
13C-1,2,3,6,7,8-HxCDD	4.437621e4	3.548359e4	47.84	1.25	NO	NO	NO	442.619	88.70	0.346		4.99
13C-1,2,3,4,6,7,8-HpCDD	3.953068e4	3.824010e4	54.34	1.03	NO	NO	NO	427.335	85.64	0.386		4.99
13C-OCDD	6.492831e4	7.107838e4	60.61	0.91	NO	NO	NO	868.218	87.00	0.340		4.99
13C-2,3,7,8-TCDF	2.336364e4	2.916009e4	30.43	0.80	NO	NO	NO	159.782	80.05	0.267		4.99
13C-1,2,3,7,8-PeCDF	2.661494e4	1.611546e4	37.26	1.65	NO	NO	NO	157.854	79.09	0.117		4.99
13C-1,2,3,4,7,8-HxCDF	2.904662e4	5.647225e4	45.74	0.51	NO	NO	NO	377.153	75.58	0.331		4.99
13C-1,2,3,4,6,7,8-HpCDF	2.037295e4	4.657664e4	52.12	0.44	NO	NO	NO	329.683	66.07	0.296		4.99
13C-1,2,3,4-TCDD	2.151776e4	2.621681e4	30.68	0.82	NO	NO	NO	199.600	100.00	0.271		4.99
13C-1,2,3,7,8,9-HxCDD	2.122914e4	1.723407e4	48.37	1.23	NO	NO	NO	199.600	100.00	0.324		4.99
Total Tetra-Dioxins	7.948640e2							7.204		0.165	4.605	4.99
Total Penta-Dioxins	1.488140e2							2.837		0.124	1.457	4.99
Total Hexa-Dioxins	3.074360e2							3.909		0.083	2.398	4.99
Total Hepta-Dioxins	1.476460e2							1.444		0.106	0.913	4.99
Total Tetra-Furans	2.701180e2							2.239		0.098	1.566	4.99
Total Penta-Furans	2.040240e2							2.201		0.131	1.345	4.99
Total Hexa-Furans	2.987020e2							2.772		0.087	1.977	4.99
Total Hepa-Furans	3.470730e2							2.740		0.109	1.446	4.99
PFK1	0.000000e0											1.00
PFK2	0.000000e0											1.00
PFK3	0.000000e0											1.00
PFK4	0.000000e0											1.00
PFK5	0.000000e0											1.00
HxCDPE	0.000000e0											1.00
HpCDPE	0.000000e0											1.00
OCDPE	0.000000e0											1.00
NCDPE	0.000000e0											1.00
DCDPE	0.000000e0											1.00

9/22/14 RA

EMPC TCDD = $\frac{(12.6103 + 16.377)(2000)}{(18196.63 + 23717.33)(1.02824)(10.02)} = 0.134$

EDL 23478 PeCDF = $\frac{(37.07731 + 37.33893)(2000)(2.5)}{(176760 + 110171)(0.467016)(10.02)} = 0.135$

9/22/14 RA

RETENTION TIME CHECK

140917SBLKA 4.990 DF 09/17/14 — **EPA Method 8290**

INSTRUMENT: Magneto
COLUMN: Restek DB5 - 60m
MATRIX:

ANALYSIS DATE/TIME:
EXTRACTION DATE:
SEQUENCE:
RUN FILE: 140919_HR_17

Analyte	RT of congener in sample 140919_HR_17	RT of ^{13}C congener in sample 140919_HR_17	RRT of congener in sample 140919_HR_17	RRT of congener in CCV 140919_HR_10	LCL[a]	UCL[b]	Qualifiers
2,3,7,8-TCDD	31.3833	31.3562	1.0009	1.0009	31.3395	31.4062	Pass
1,2,3,7,8-PeCDD		40.0788	0.0000	1.0008	40.0621	40.1288	Fail
1,2,3,4,7,8-HxCDD		47.8418	0.0000	0.9962	0.9912	1.0012	Fail
1,2,3,6,7,8-HxCDD		47.8418	0.0000	1.0007	47.8251	47.8918	Fail
1,2,3,7,8,9-HxCDD	48.4048	48.3730	1.0007	1.0004	48.3563	48.4230	Pass
1,2,3,4,6,7,8-HpCDD		54.3402	0.0000	1.0004	54.3235	54.3902	Fail
OCDD	60.6320	60.6117	1.0003	1.0005	60.5950	60.6617	Pass
2,3,7,8-TCDF	30.7438	30.4308	1.0103	1.0005	30.4141	30.4808	Fail
1,2,3,7,8-PeCDF	37.2712	37.2612	1.0003	1.0008	37.2445	37.3112	Pass
2,3,4,7,8-PeCDF	39.2680	37.2612	1.0539	1.0577	1.0524	1.0630	Pass
1,2,3,4,7,8-HxCDF	45.6957	45.7382	0.9991	1.0005	45.7215	45.7882	Fail
1,2,3,6,7,8-HxCDF	46.0145	45.7382	1.0060	1.0063	1.0012	1.0113	Pass
2,3,4,6,7,8-HxCDF	47.4382	45.7382	1.0372	1.0339	1.0288	1.0391	Pass
1,2,3,7,8,9-HxCDF	49.1272	45.7382	1.0741	1.0721	1.0667	1.0774	Pass
1,2,3,4,6,7,8-HpCDF	52.3942	52.1205	1.0053	1.0004	52.1038	52.1705	Fail
1,2,3,4,7,8,9-HpCDF		52.1205	0.0000	1.0609	1.0556	1.0662	Fail
OCDF	60.9865	60.6117	1.0062	1.0062	1.0012	1.0112	Pass
$^{13}C_{12}$-2,3,7,8-TCDD	31.3562	30.6758	1.0222	1.0222	1.0171	1.0273	Pass
$^{13}C_{12}$-1,2,3,7,8-PeCDD	40.0788	30.6758	1.3065	1.3069	1.3003	1.3134	Pass
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	47.8418	48.3730	0.9890	0.9888	0.9838	0.9937	Pass
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	54.3402	48.3730	1.1234	1.1233	1.1176	1.1289	Pass
$^{13}C_{12}$-OCDD	60.6117	48.3730	1.2530	1.2528	1.2465	1.2590	Pass
$^{13}C_{12}$-2,3,7,8-TCDF	30.4308	30.6758	0.9920	0.9924	0.9875	0.9974	Pass
$^{13}C_{12}$-1,2,3,7,8-PeCDF	37.2612	30.6758	1.2147	1.2155	1.2094	1.2216	Pass
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	45.7382	48.3730	0.9455	0.9453	0.9406	0.9500	Pass
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	52.1205	48.3730	1.0775	1.0773	1.0720	1.0827	Pass
$^{13}C_{12}$-1,2,3,4-TCDD	30.6758	30.6758	1.0000	1.0000	0.9950	1.0050	Pass
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	48.3730	48.3730	1.0000	1.0000	0.9950	1.0050	Pass

a. Lower control limit
b. Upper control limit

Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

Name: 140919_HR_17, Date: 20-Sep-2014, Time: 11:25:54, ID: , Description: 140917SBLKA 4.990 DF 09/17/14, User:

#	Name	RT	RRT
1	2,3,7,8-TCDD	31.383301	1.000864
2	1,2,3,7,8-PeCDD		
3	1,2,3,4,7,8-HxCDD		
4	1,2,3,6,7,8-HxCDD		
5	1,2,3,7,8,9-HxCDD	48.404800	1.000657
6	1,2,3,4,6,7,8-HpCDD		
7	OCDD	60.632000	1.000335
8	2,3,7,8-TCDF	30.743799	1.010286
9	1,2,3,7,8-PeCDF	37.271198	1.000268
10	2,3,4,7,8-PeCDF	39.268002	1.053858
11	1,2,3,4,7,8-HxCDF	45.695702	0.999071
12	1,2,3,6,7,8-HxCDF	46.014500	1.006041
13	2,3,4,6,7,8-HxCDF	47.438202	1.037168
14	1,2,3,7,8,9-HxCDF	49.127201	1.074096
15	1,2,3,4,6,7,8-HpCDF	52.394199	1.005251
16	1,2,3,4,7,8,9-HpCDF		
17	OCDF	60.986500	1.006184
18	13C-2,3,7,8-TCDD	31.356199	1.022180
19	13C-1,2,3,7,8-PeCDD	40.078800	1.306528
20	13C-1,2,3,6,7,8-HxCDD	47.841801	0.989019
21	13C-1,2,3,4,6,7,8-HpCDD	54.340199	1.123358
22	13C-OCDD	60.611698	1.253007
23	13C-2,3,7,8-TCDF	30.430799	0.992013
24	13C-1,2,3,7,8-PeCDF	37.261200	1.214677
25	13C-1,2,3,4,7,8-HxCDF	45.738201	0.945532
26	13C-1,2,3,4,6,7,8-HpCDF	52.120499	1.077471
27	13C-1,2,3,4-TCDD	30.675800	1.000000
28	13C-1,2,3,7,8,9-HxCDD	48.373001	1.000000

Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

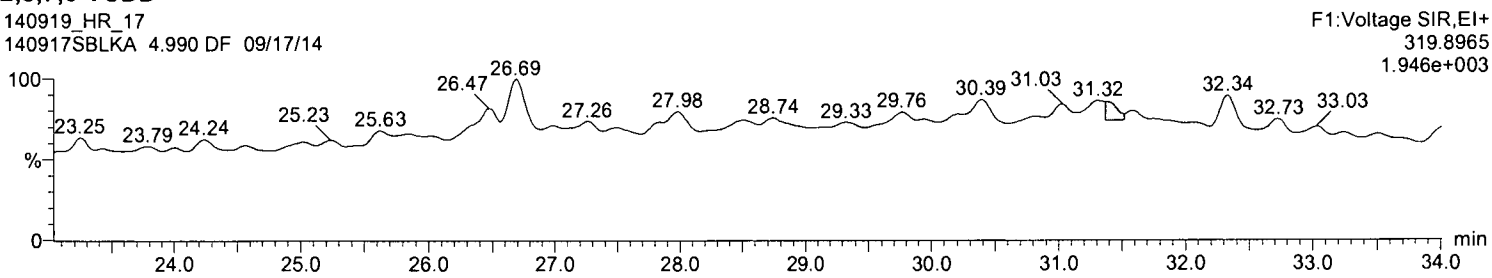
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#	Name	Signal	Noise 1	S/N 1	Flag S/N...	Signal 2	Noise 2	S/N 2	Flag S/N...
1	2,3,7,8-TCDD	2.3000000e2	5.5286972e1	5.62	NO	1.0600000e2	4.1468185e1	2.56	NO
2	1,2,3,7,8-PeCDD		3.8945816e1				2.0837151e1		
3	1,2,3,4,7,8-HxCDD		2.4093246e1				1.5422181e1		
4	1,2,3,6,7,8-HxCDD		2.4093246e1				1.5422181e1		
5	1,2,3,7,8,9-HxCDD	1.0700000e2	2.4093246e1	6.31	NO	1.0800000e2	1.5422181e1	7.00	NO
6	1,2,3,4,6,7,8-HpCDD		2.9984039e1				2.4708260e1		
7	OCDD	7.4800000e2	3.5389336e1	19.01	NO	2.7500000e2	3.2052967e1	8.58	NO
8	2,3,7,8-TCDF	8.5000000e1	3.1436821e1	7.66	NO	1.3900000e2	3.3585072e1	4.14	NO
9	1,2,3,7,8-PeCDF	2.6300000e2	3.7077312e1	4.74	NO	2.2300000e2	3.7338928e1	5.97	NO
10	2,3,4,7,8-PeCDF	6.1000000e1	3.7077312e1	-0.64	YES	1.0800000e2	3.7338928e1	2.89	NO
11	1,2,3,4,7,8-HxCDF	9.8000000e1	2.4180611e1	-0.21	YES	1.7300000e2	2.7069443e1	6.39	NO
12	1,2,3,6,7,8-HxCDF	9.7000000e1	2.4180611e1	0.46	YES	5.4000000e1	2.7069443e1	1.99	YES
13	2,3,4,6,7,8-HxCDF	5.9000000e1	2.4180611e1	3.79	NO	1.2700000e2	2.7069443e1	4.69	NO
14	1,2,3,7,8,9-HxCDF	2.5800000e2	2.4180611e1	14.25	YES	2.4000000e1	2.7069443e1	0.89	YES
15	1,2,3,4,6,7,8-HpCDF	1.3600000e2	2.4239330e1	12.81	NO	8.3000000e1	3.2222382e1	2.58	NO
16	1,2,3,4,7,8,9-HpCDF		2.4239330e1				3.2222382e1		
17	OCDF	1.4600000e2	2.6654026e1	2.13	YES	1.1700000e2	2.7024673e1	4.33	NO
18	13C-2,3,7,8-TCDD	1.2337700e5	1.4787700e2	835.52	NO	1.6206200e5	2.9484289e1	5496.55	NO
19	13C-1,2,3,7,8-PeCDD	1.5814100e5	5.4883995e1	2878.81	NO	1.0356400e5	5.2318439e1	1979.49	NO
20	13C-1,2,3,6,7,8-HxCDD	3.1623000e5	9.4039841e1	3362.62	NO	2.5266300e5	8.5842667e1	2943.33	NO
21	13C-1,2,3,4,6,7,8-HpCDD	3.1141200e5	1.4840080e2	2098.06	NO	3.0394400e5	5.4116325e1	5616.49	NO
22	13C-OCDD	4.8893300e5	6.0440239e1	8086.83	NO	5.3536200e5	9.3354263e1	5734.74	NO
23	13C-2,3,7,8-TCDF	1.5783900e5	1.1592332e2	1361.60	NO	1.9302300e5	1.2453722e2	1549.92	NO
24	13C-1,2,3,7,8-PeCDF	1.7676000e5	4.4827614e1	3940.48	NO	1.1017100e5	4.1841351e1	2633.07	NO
25	13C-1,2,3,4,7,8-HxCDF	2.0914500e5	4.8547108e1	4304.67	NO	4.0671600e5	1.6809467e2	2419.57	NO
26	13C-1,2,3,4,6,7,8-HpCDF	1.5513300e5	2.9788198e1	5213.93	NO	3.5054200e5	1.4330209e2	2446.18	NO
27	13C-1,2,3,4-TCDD	1.4740400e5	1.4787700e2	998.07	NO	1.7898500e5	2.9484289e1	6070.52	NO
28	13C-1,2,3,7,8,9-HxCDD	1.5304900e5	9.4039841e1	1628.60	NO	1.2542200e5	8.5842667e1	1461.07	NO

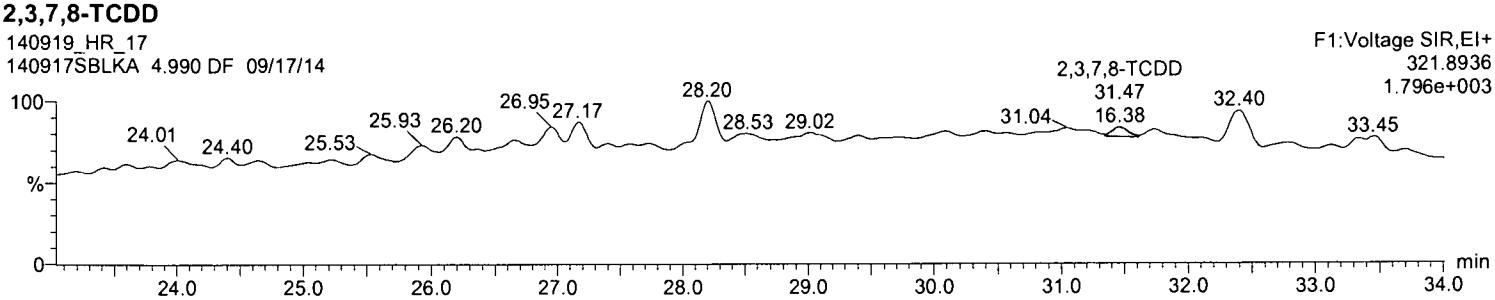
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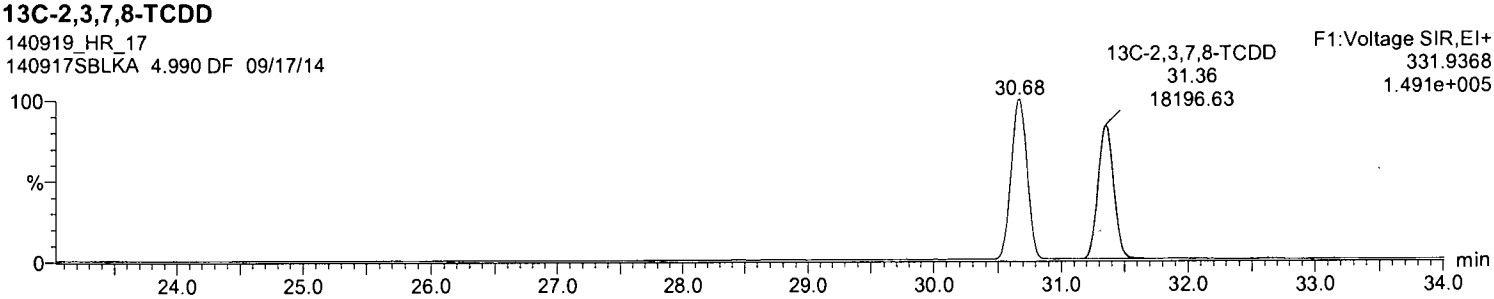
2,3,7,8-TCDD



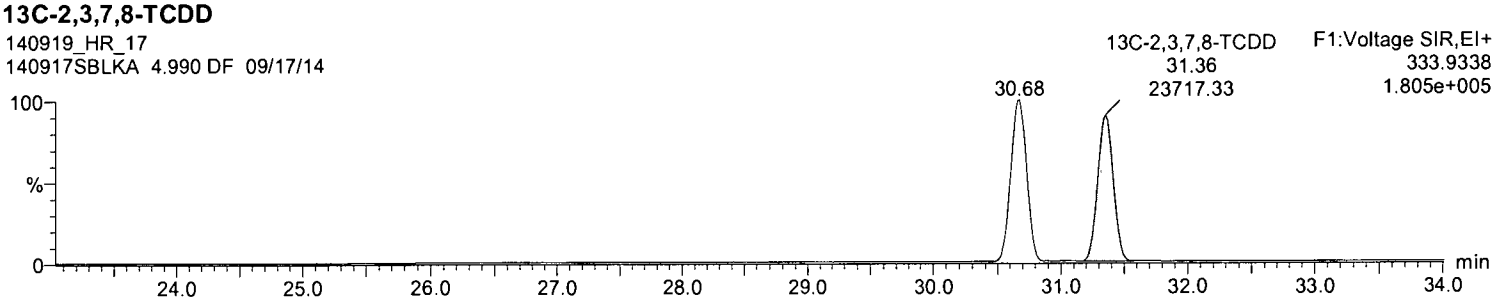
2,3,7,8-TCDD



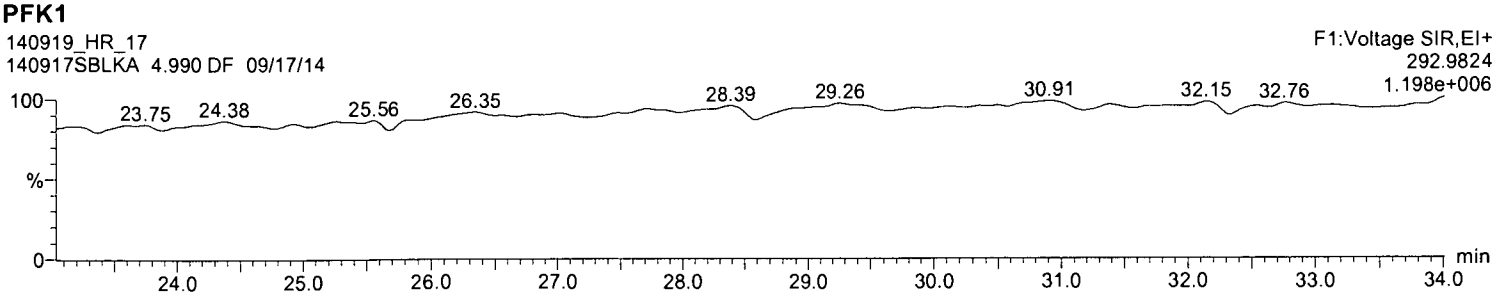
13C-2,3,7,8-TCDD



13C-2,3,7,8-TCDD

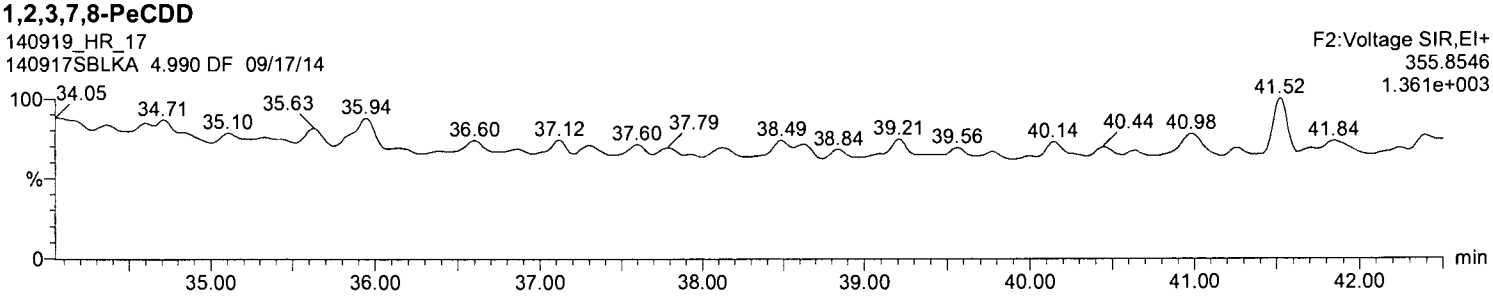


PFK1

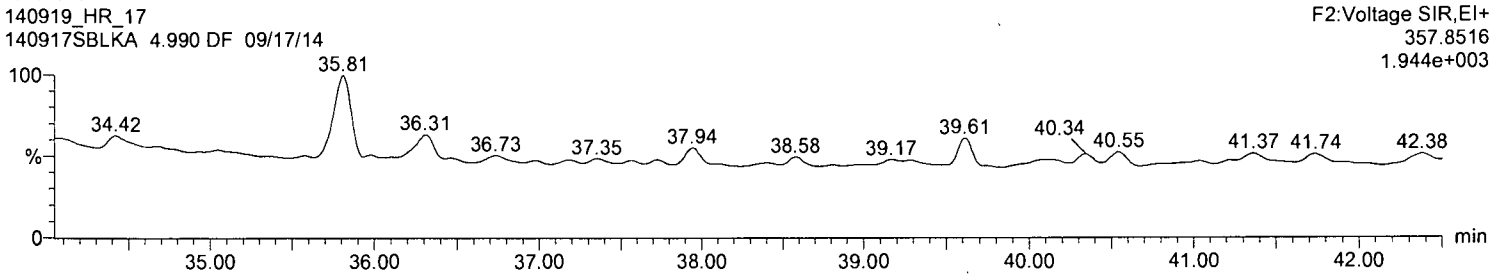


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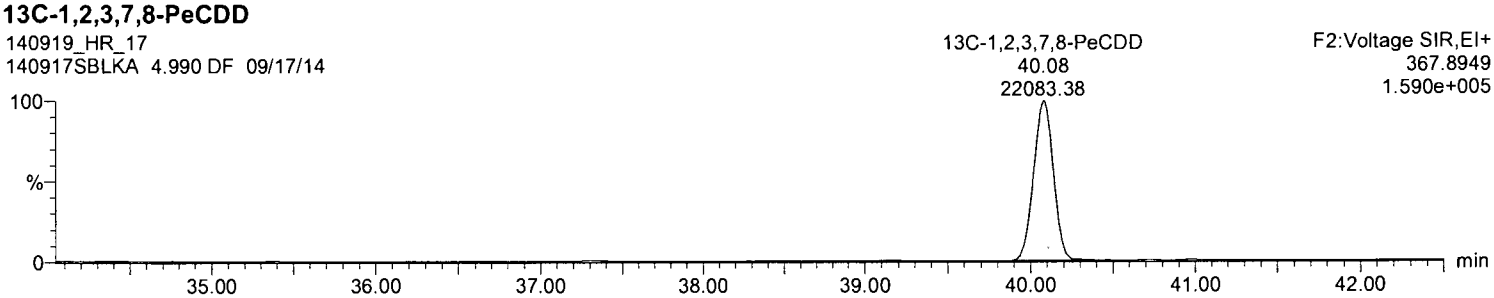
1,2,3,7,8-PeCDD



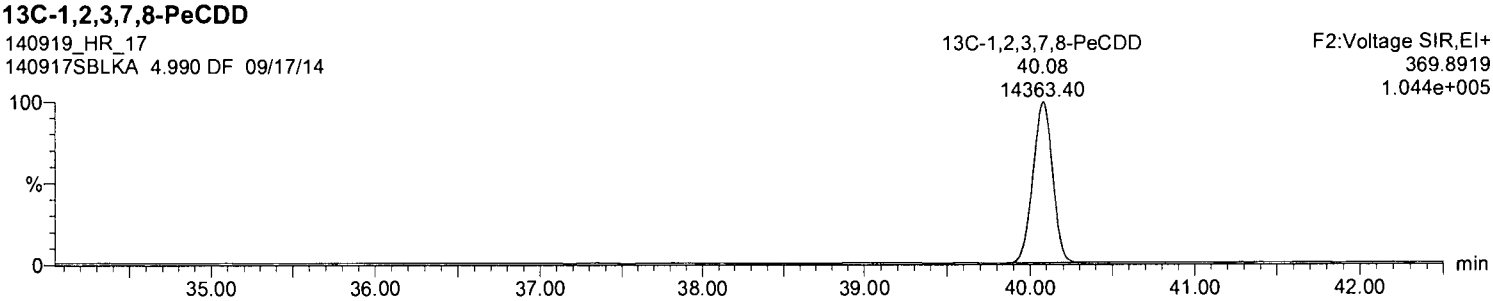
1,2,3,7,8-PeCDD



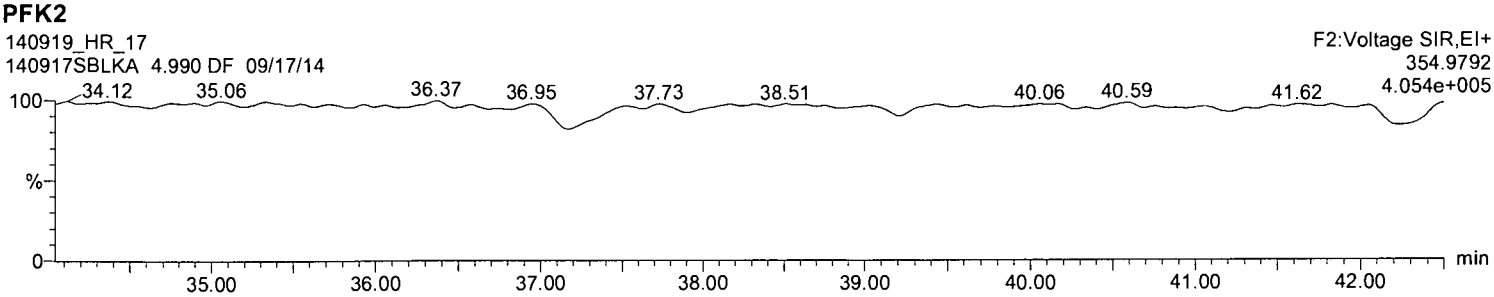
13C-1,2,3,7,8-PeCDD



13C-1,2,3,7,8-PeCDD

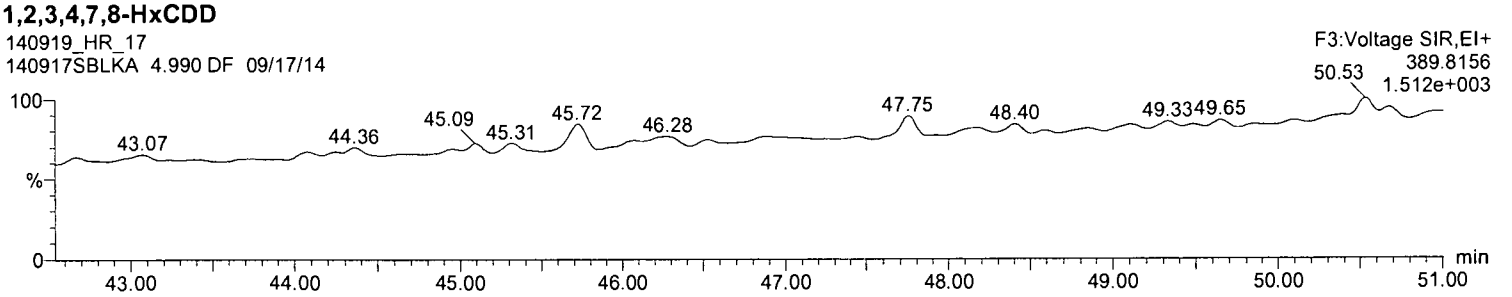


PFK2

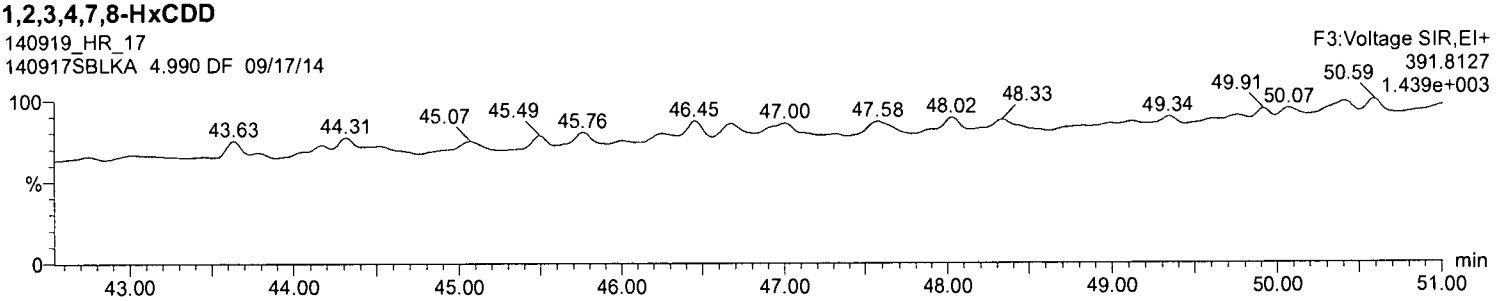


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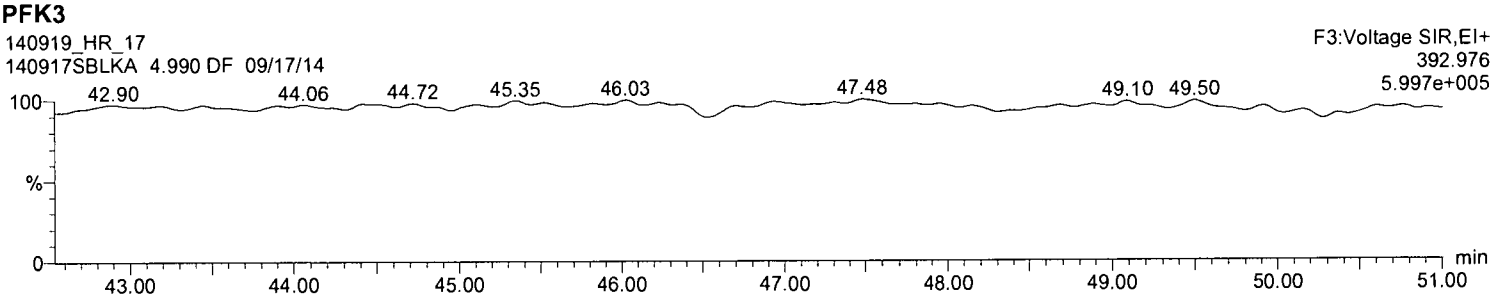
1,2,3,4,7,8-HxCDD



1,2,3,4,7,8-HxCDD

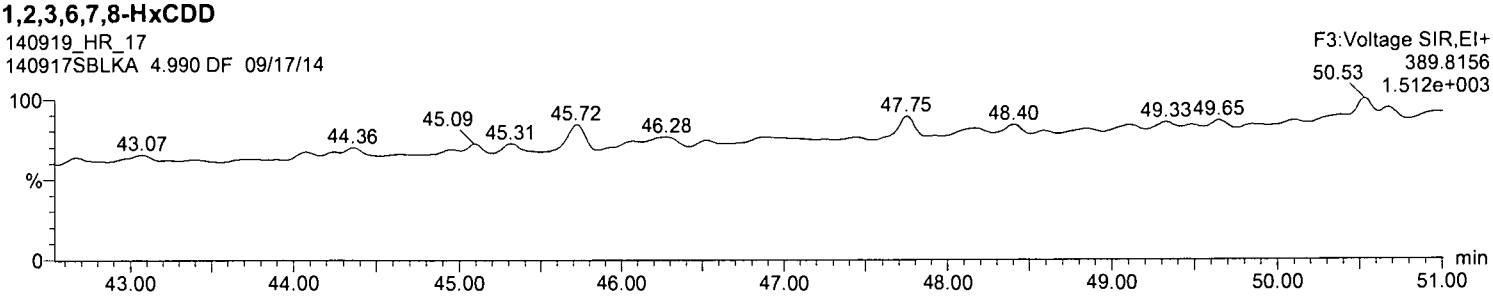


PFK3

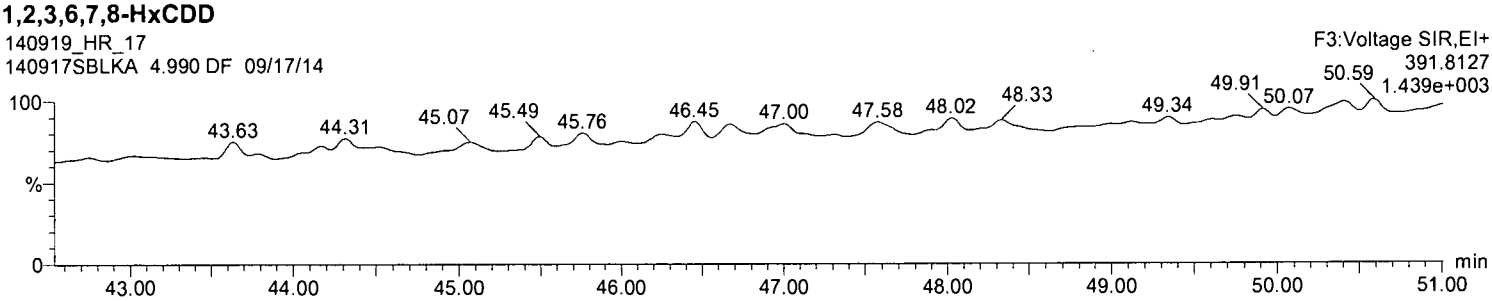


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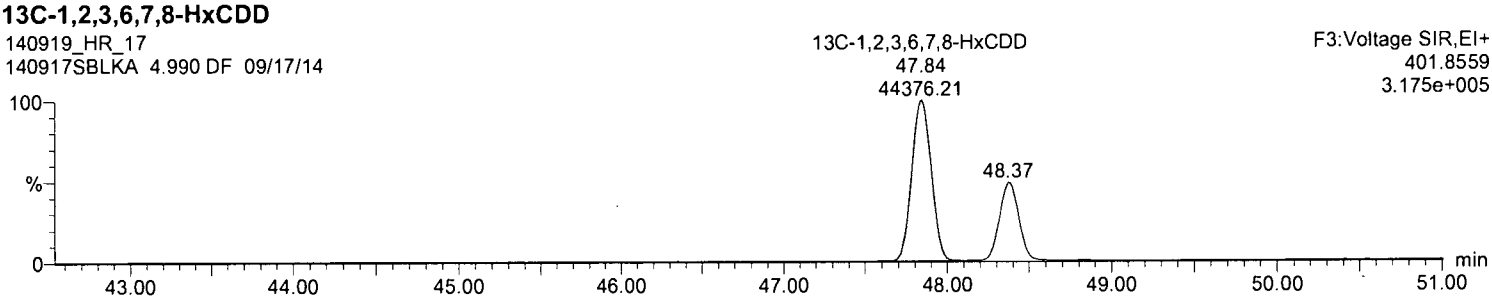
1,2,3,6,7,8-HxCDD



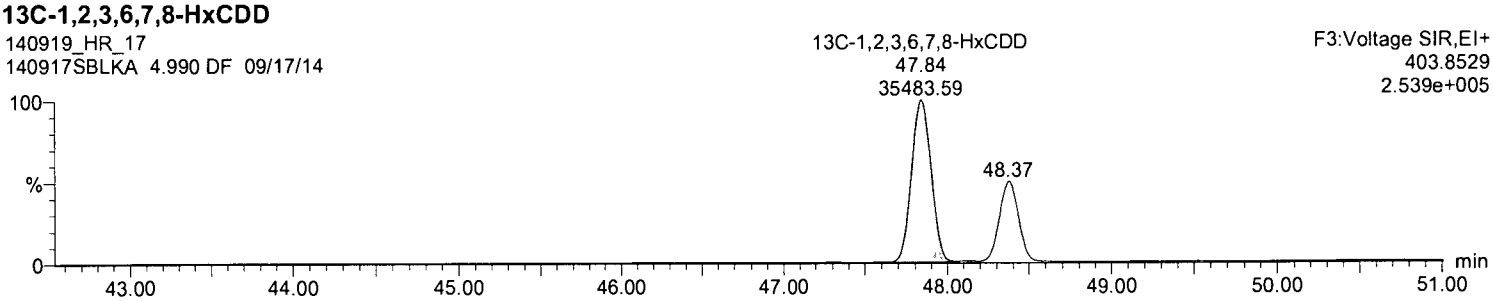
1,2,3,6,7,8-HxCDD



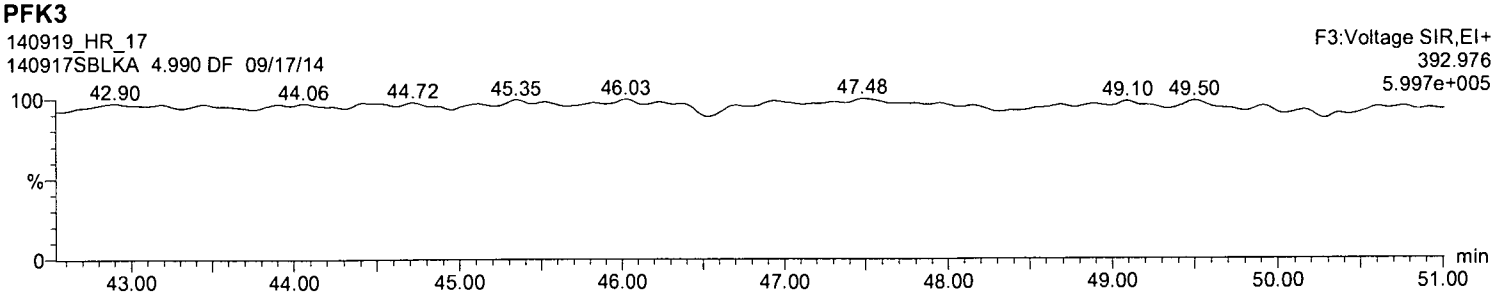
13C-1,2,3,6,7,8-HxCDD



13C-1,2,3,6,7,8-HxCDD

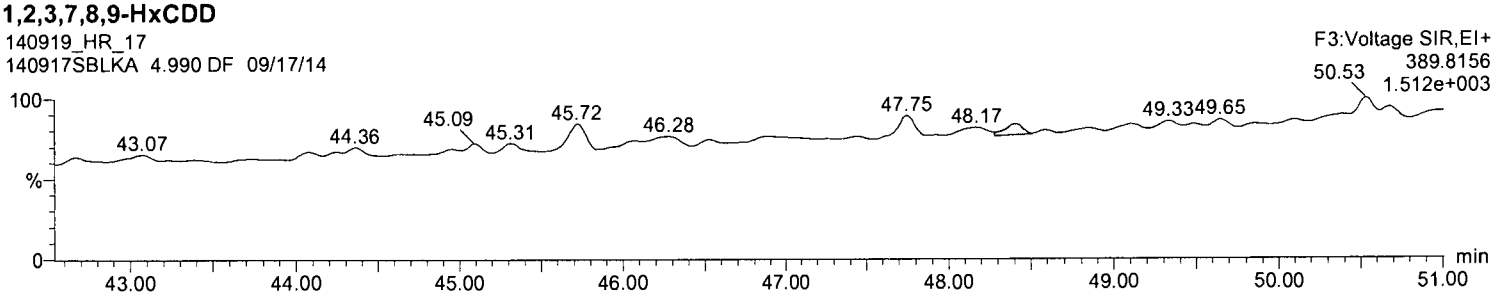


PFK3

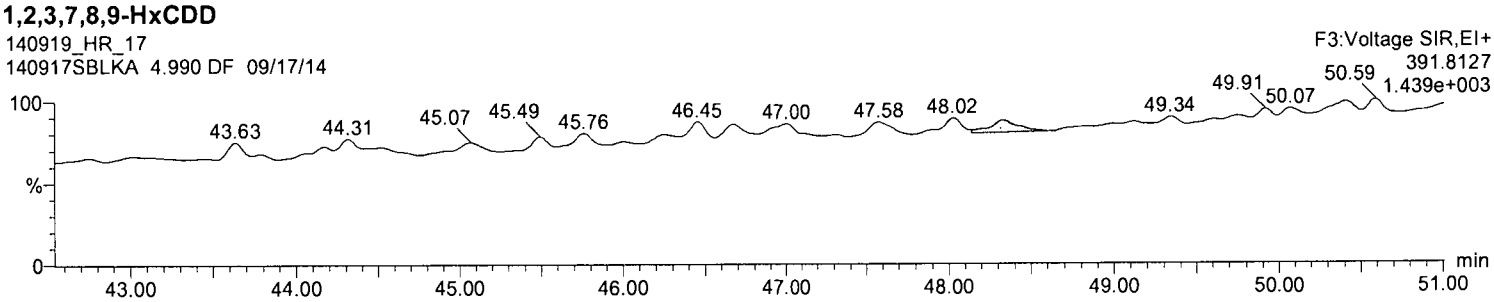


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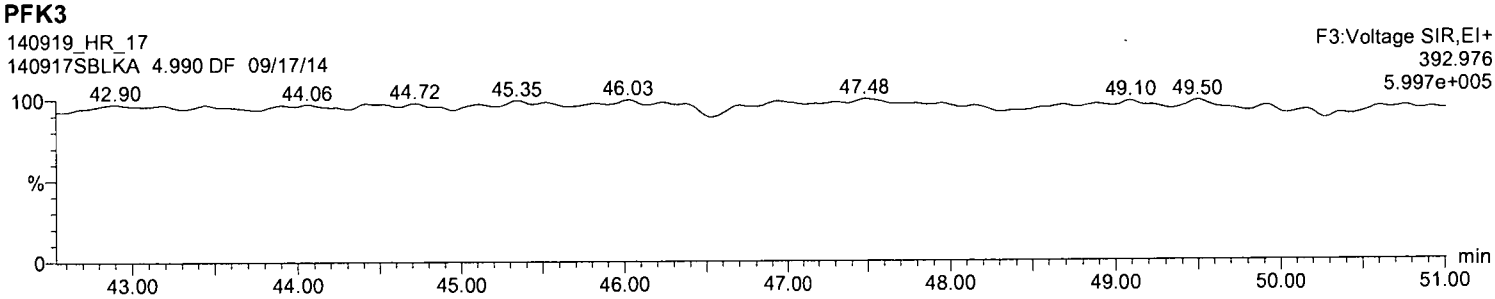
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1,2,3,7,8,9-HxCDD

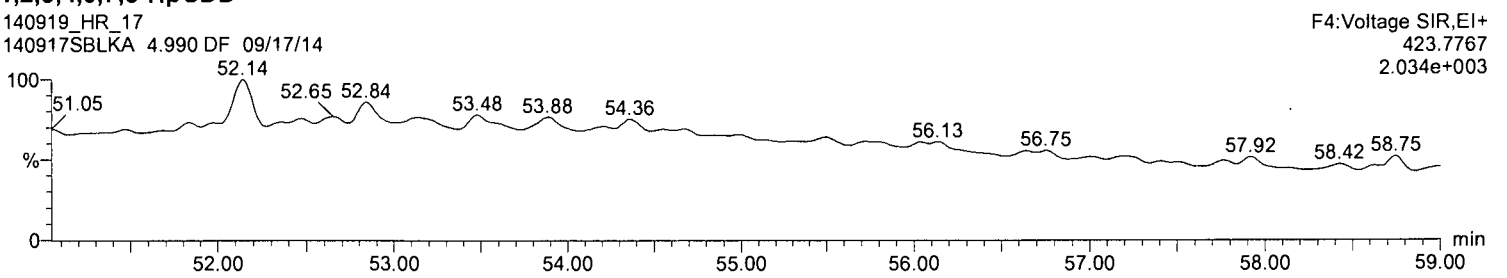


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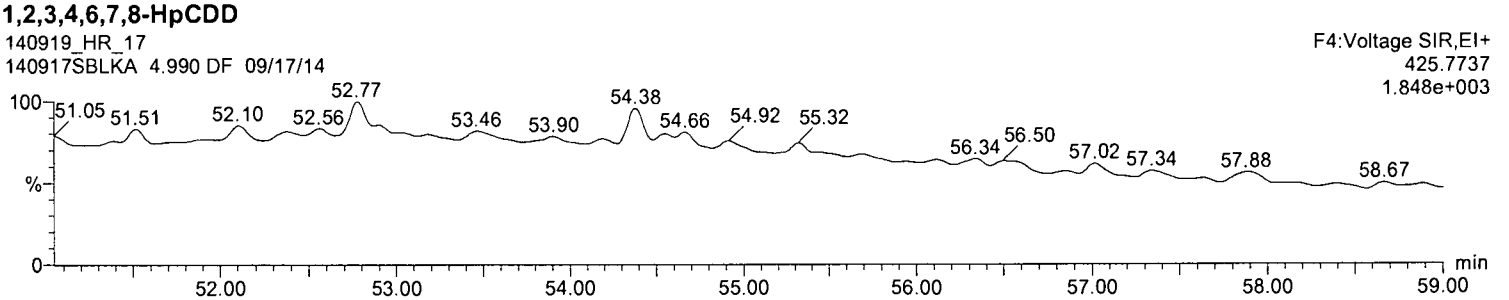


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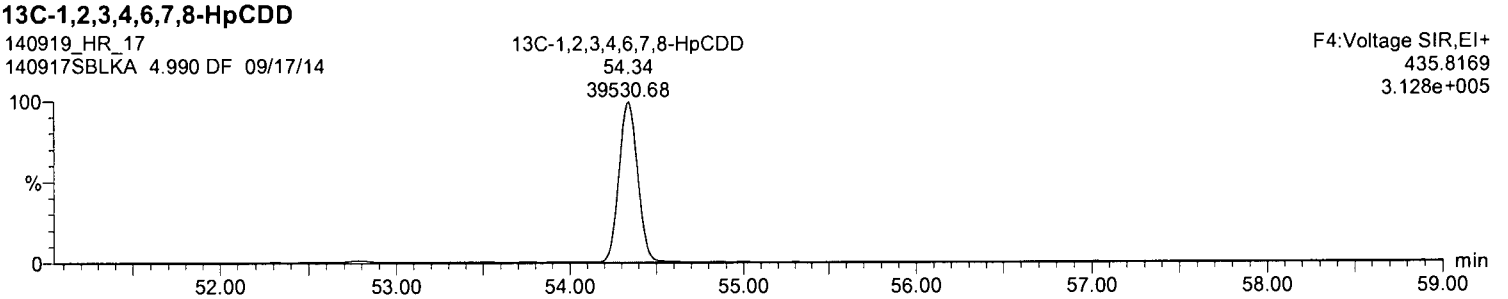
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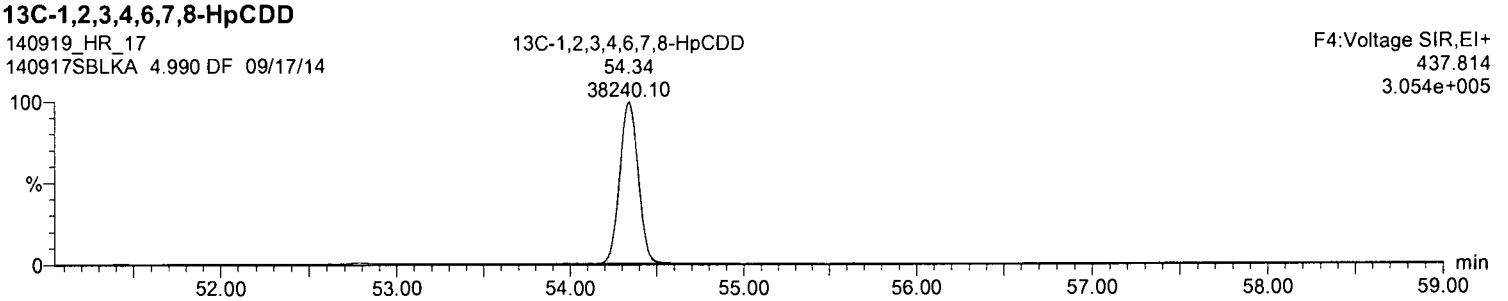
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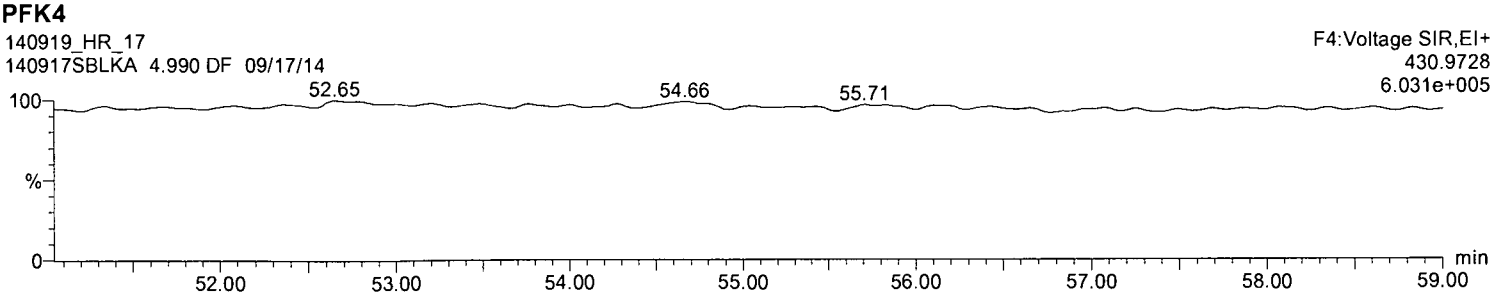
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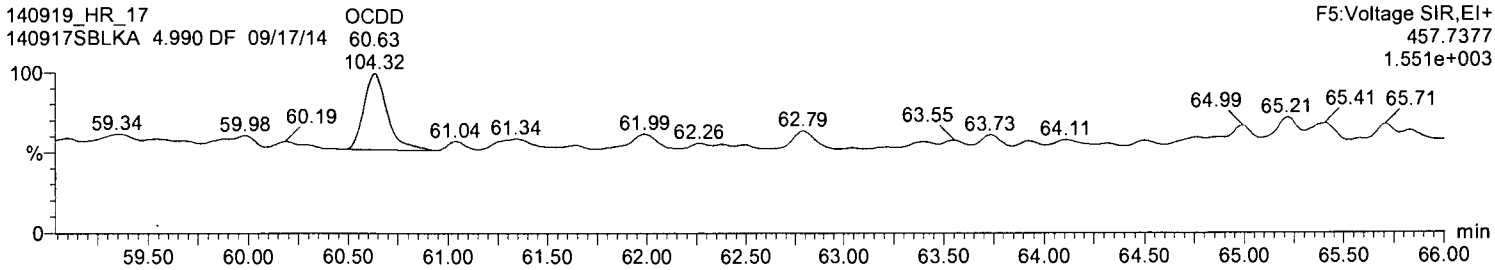


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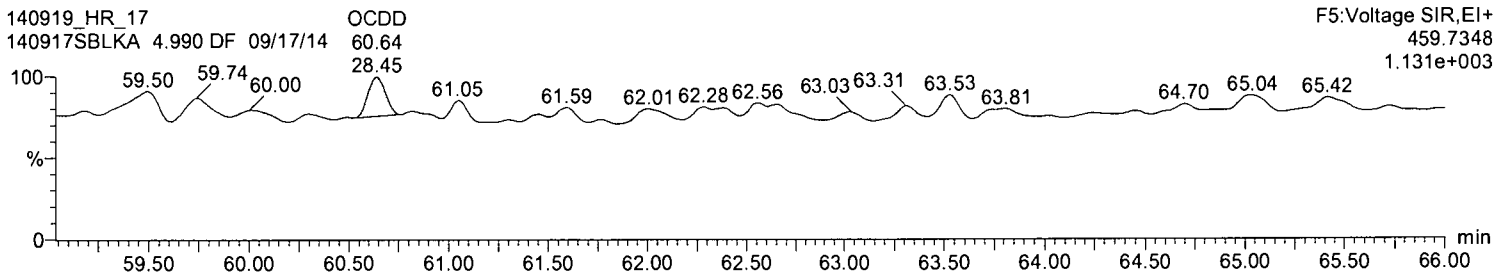


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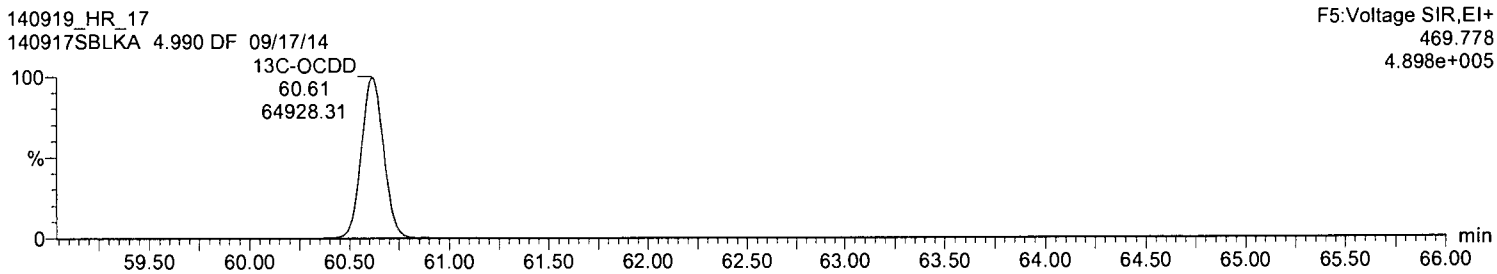
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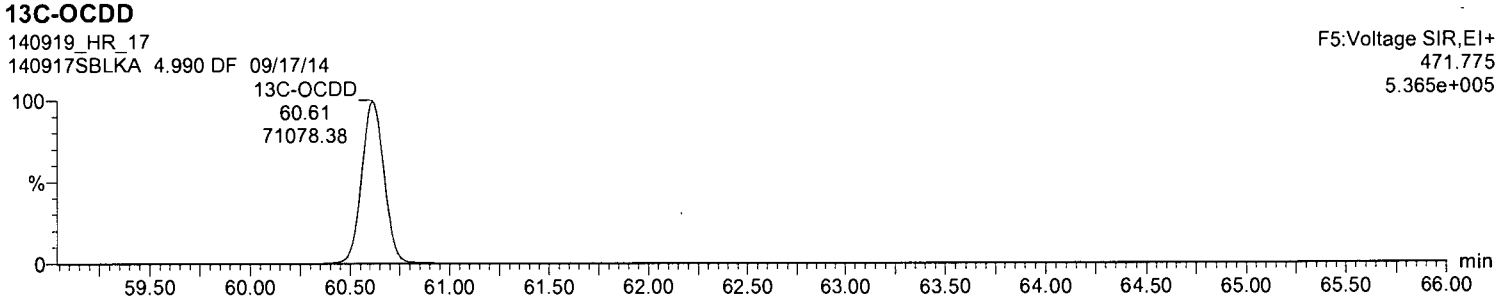
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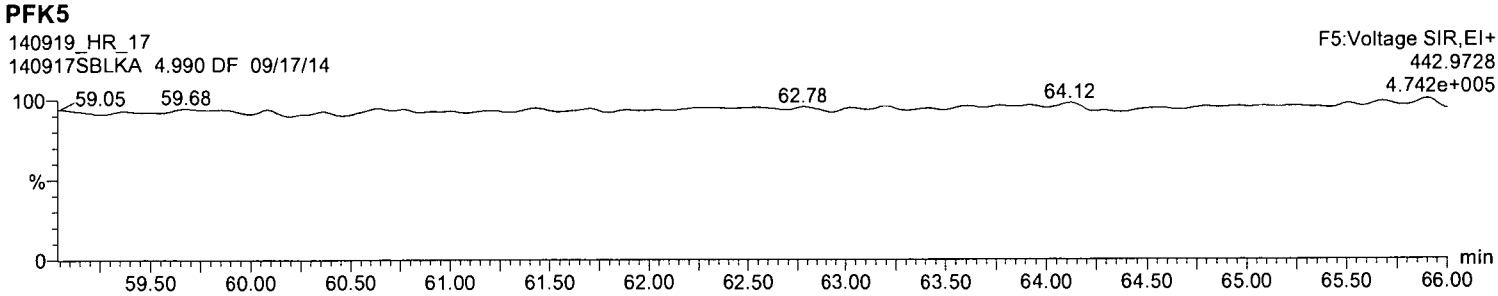
13C-OCDD



13C-OCDD

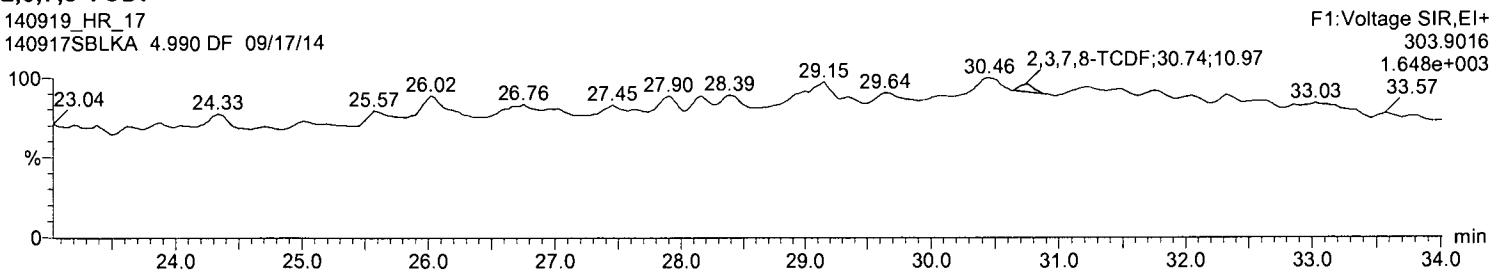


PFK5

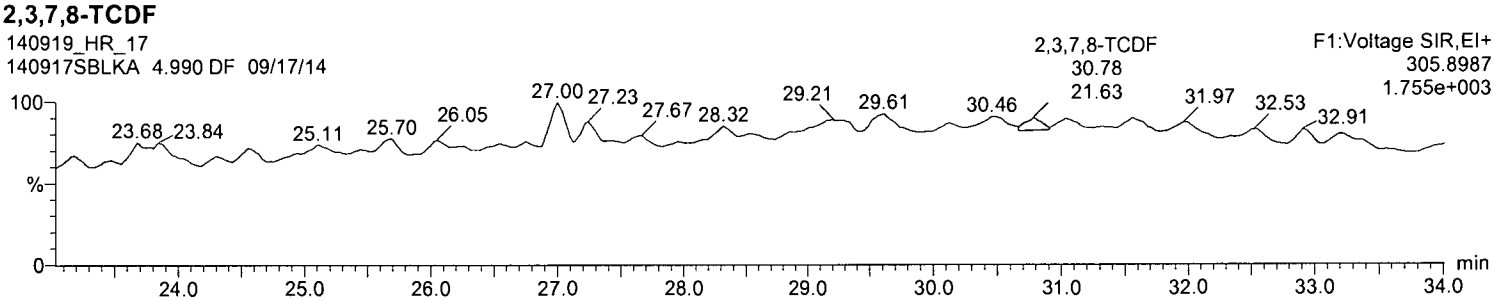


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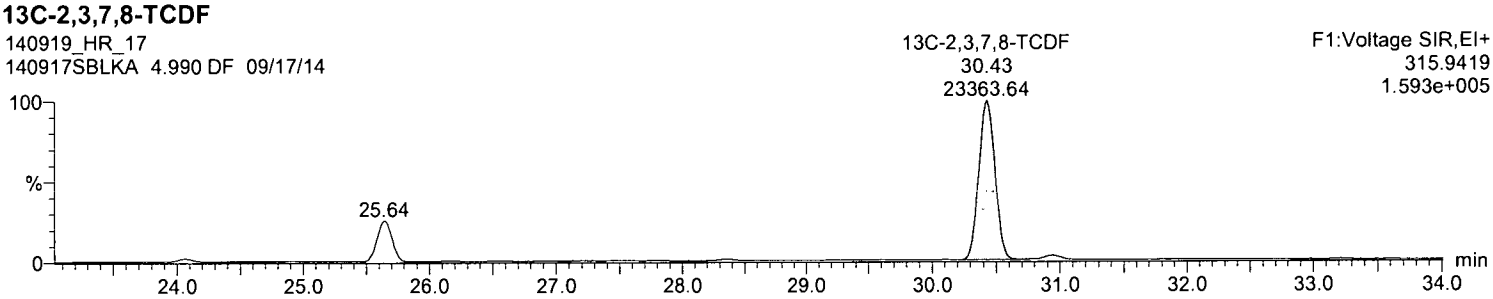
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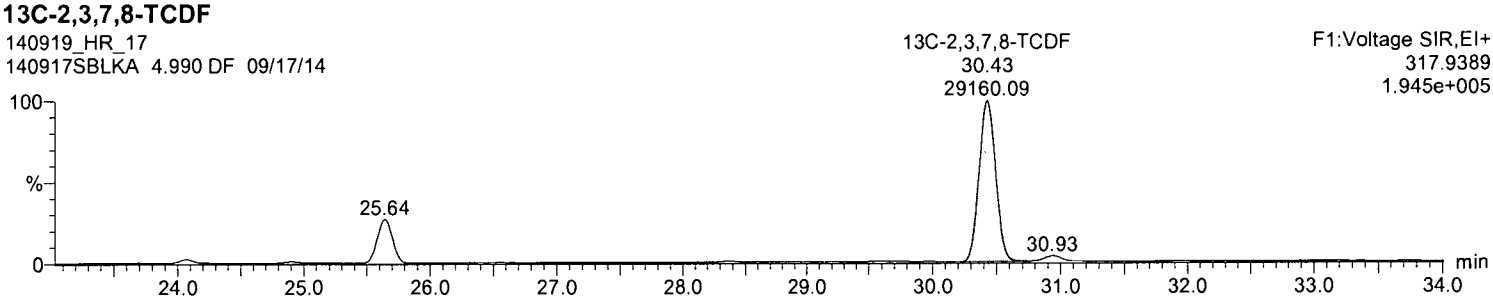
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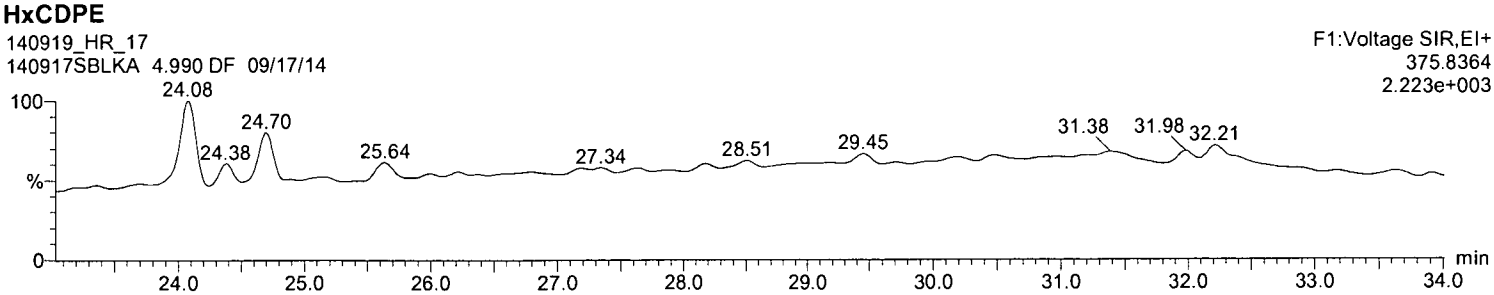
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13C-2,3,7,8-TCDF

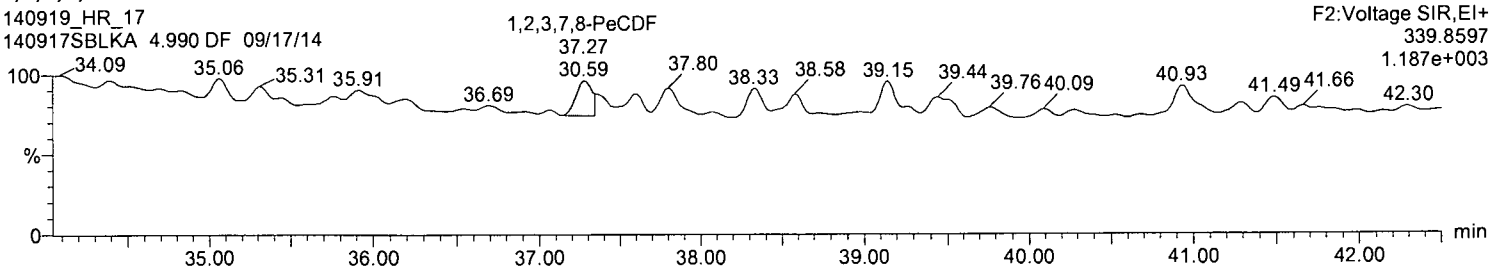


HxCDPE

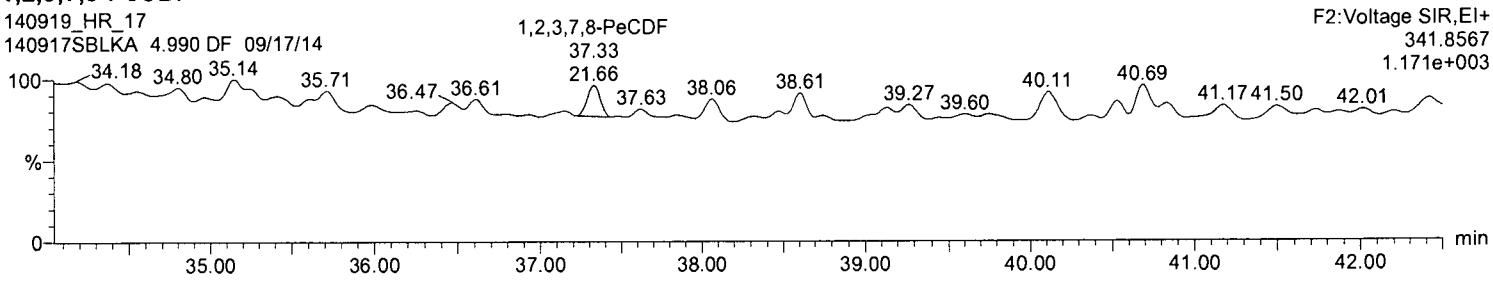


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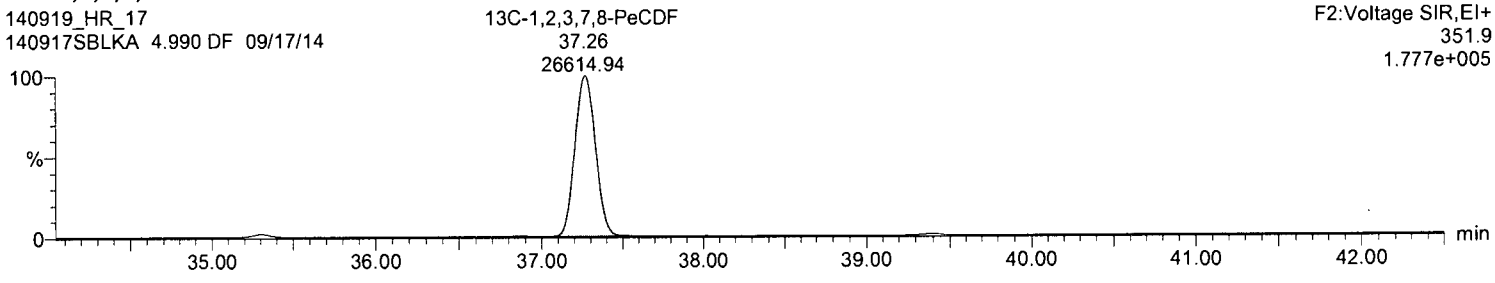
1,2,3,7,8-PeCDF



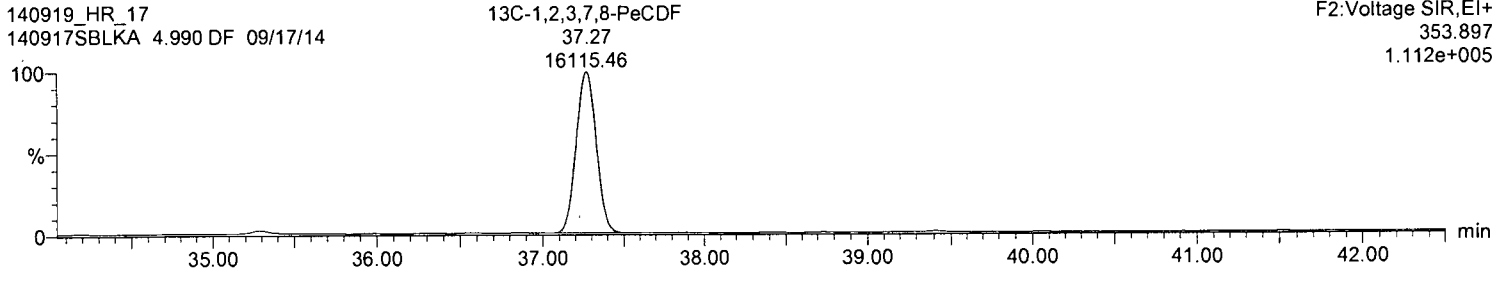
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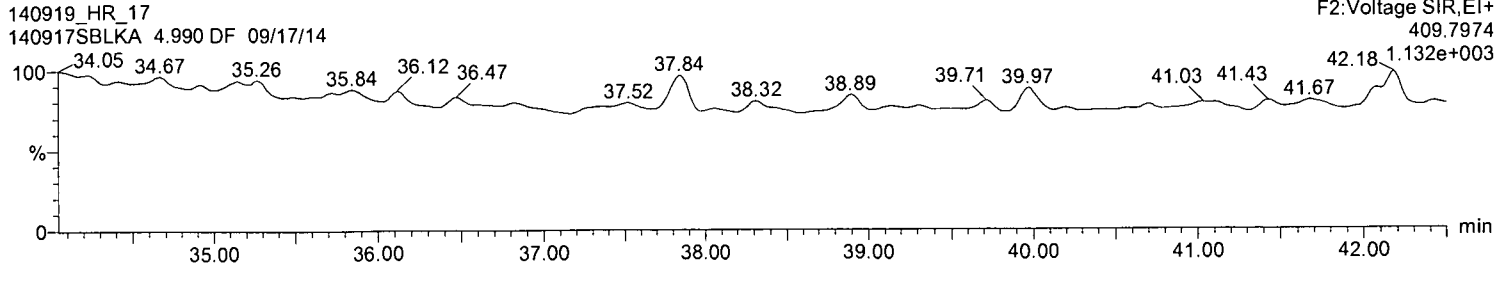
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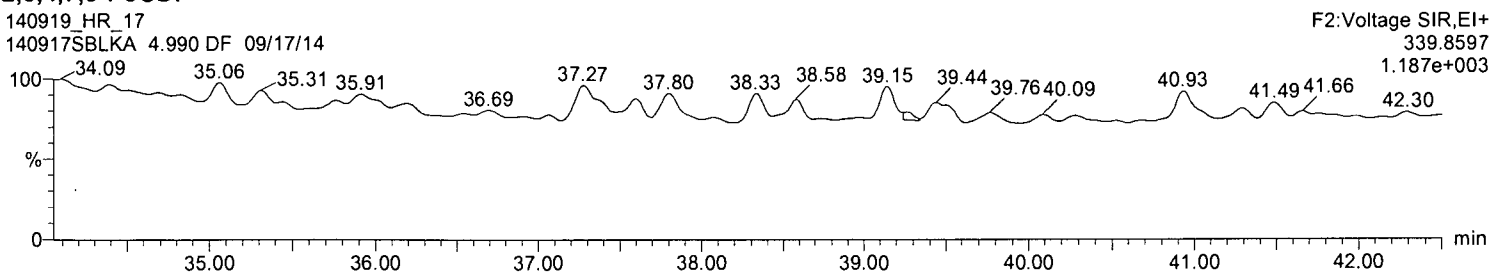


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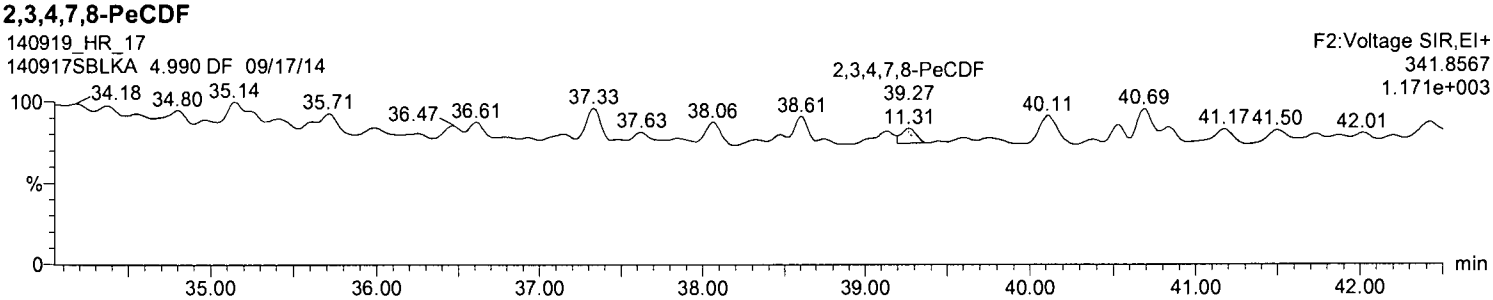


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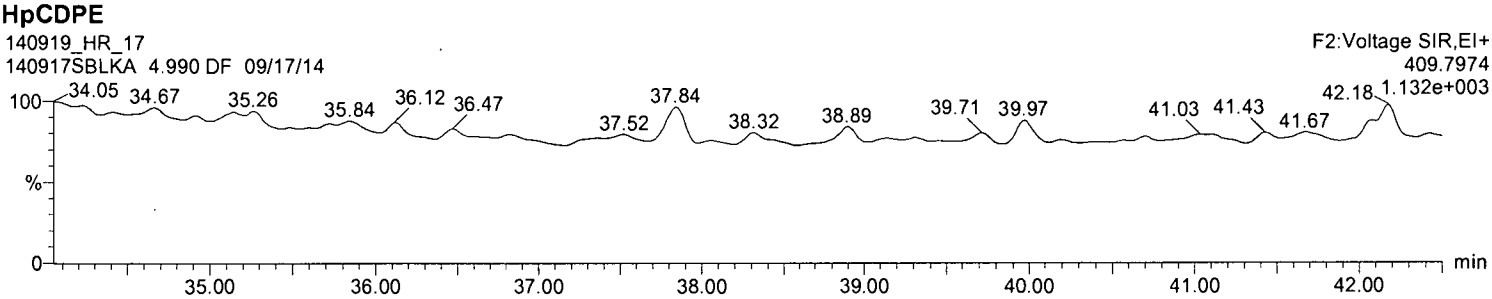
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2,3,4,7,8-PeCDF

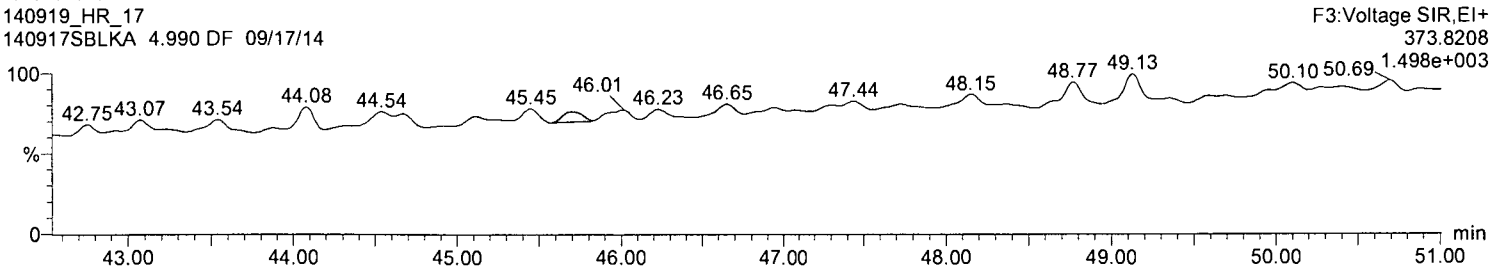


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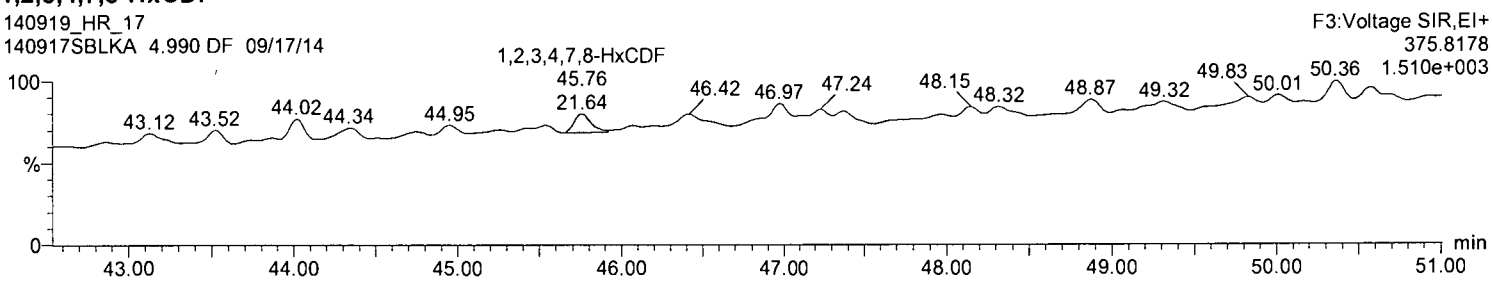


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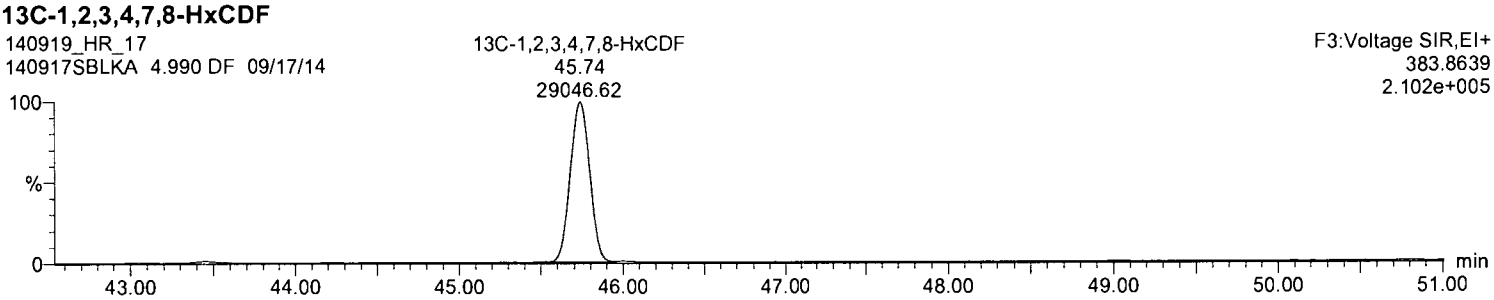
1,2,3,4,7,8-HxCDF



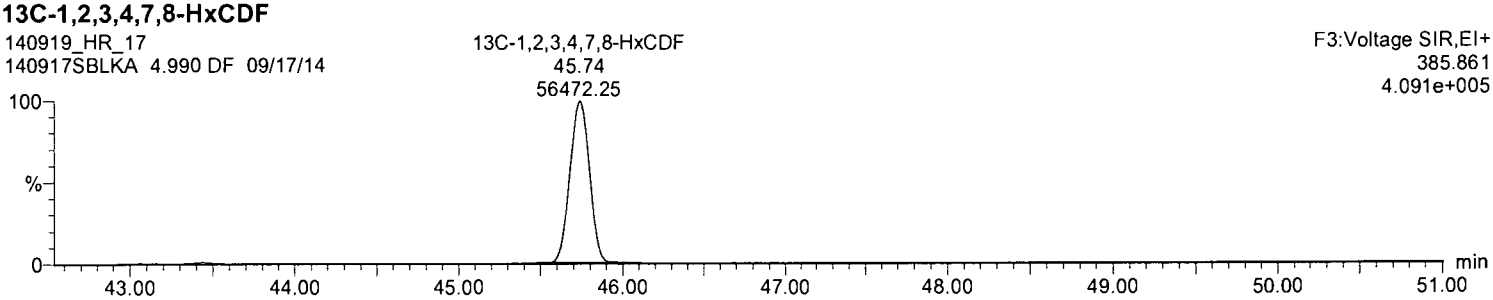
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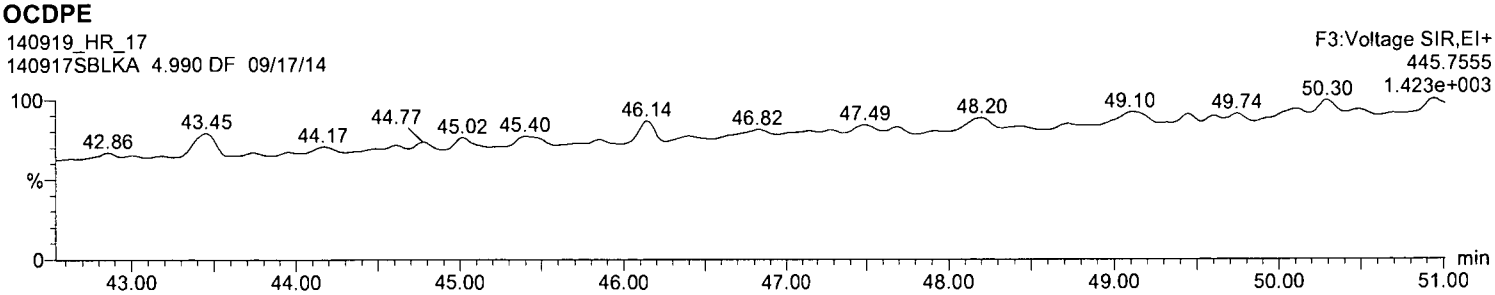
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13C-1,2,3,4,7,8-HxCDF

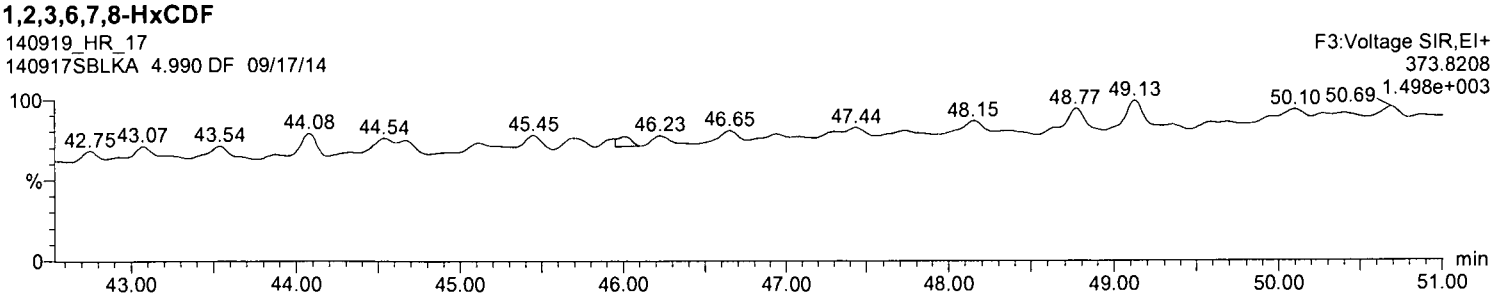


OCDPE

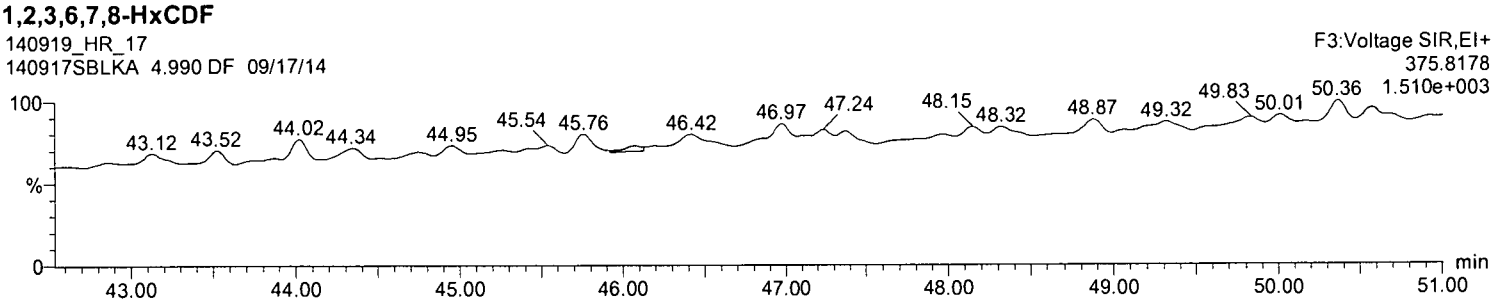


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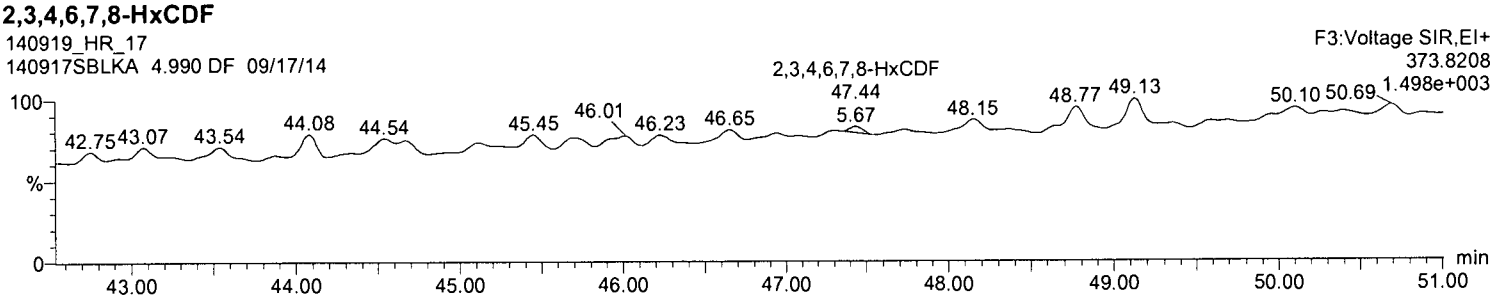
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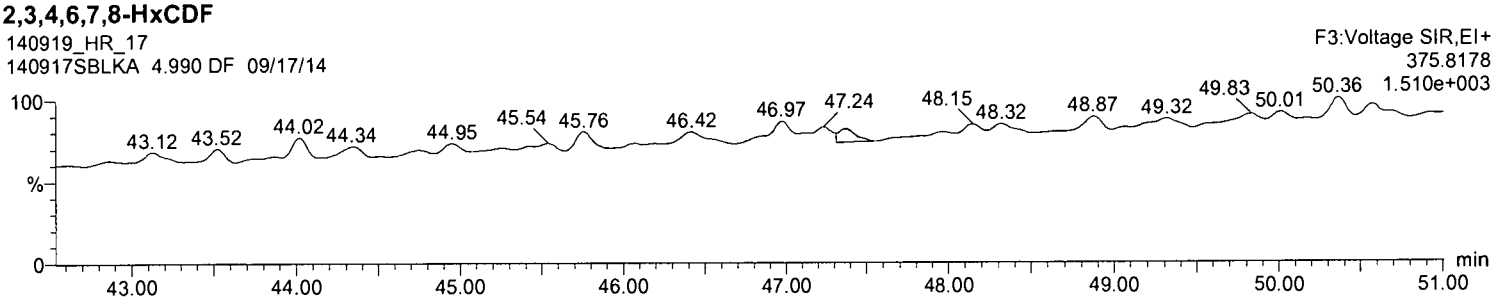
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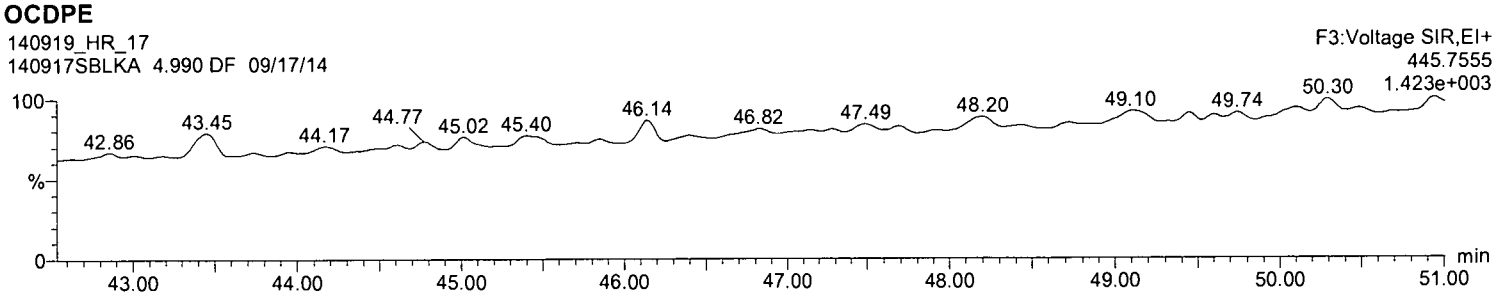
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2,3,4,6,7,8-HxCDF

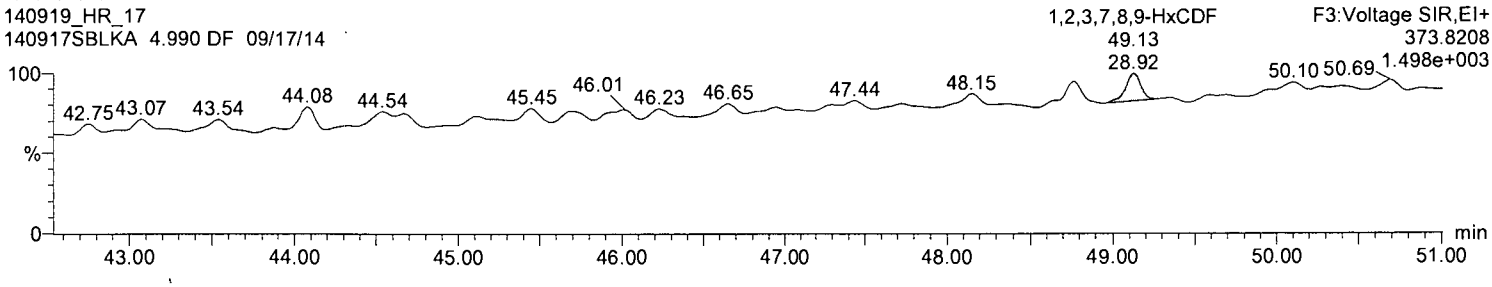


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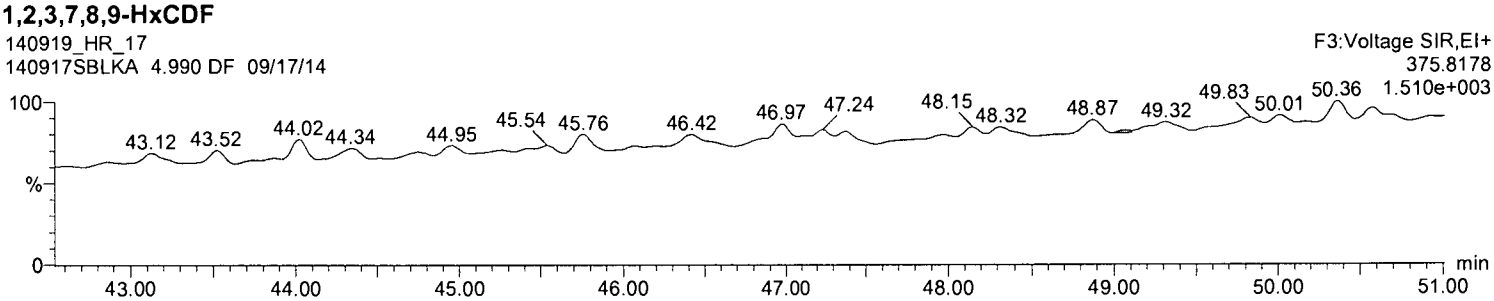


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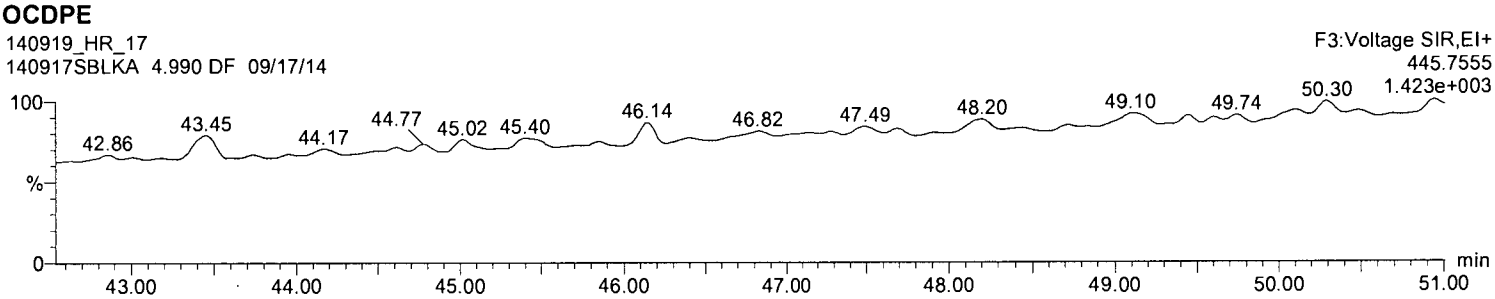
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1,2,3,7,8,9-HxCDF

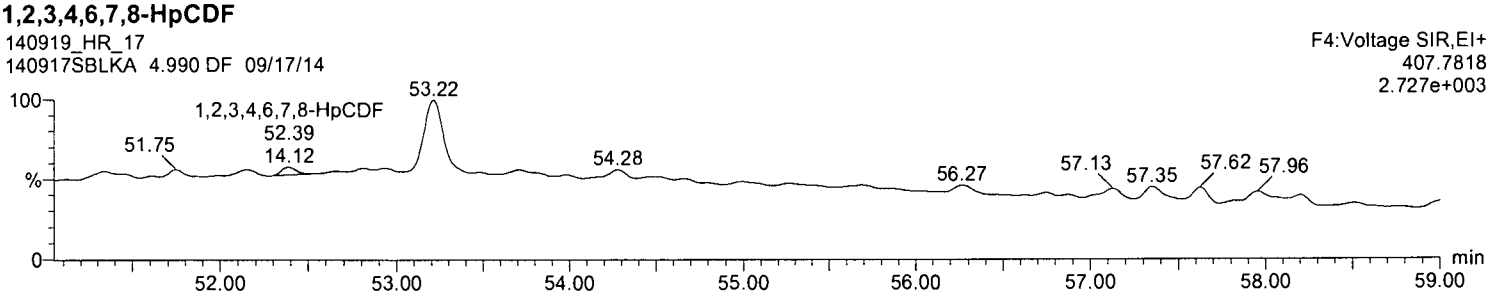


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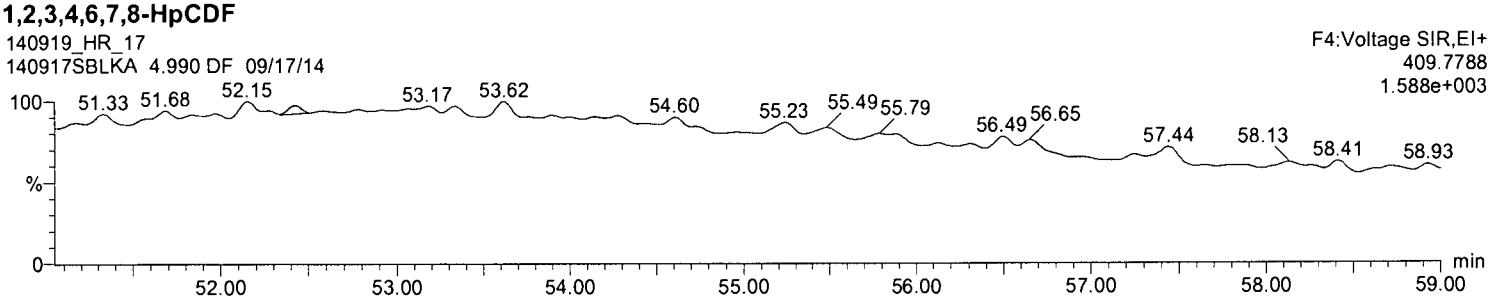


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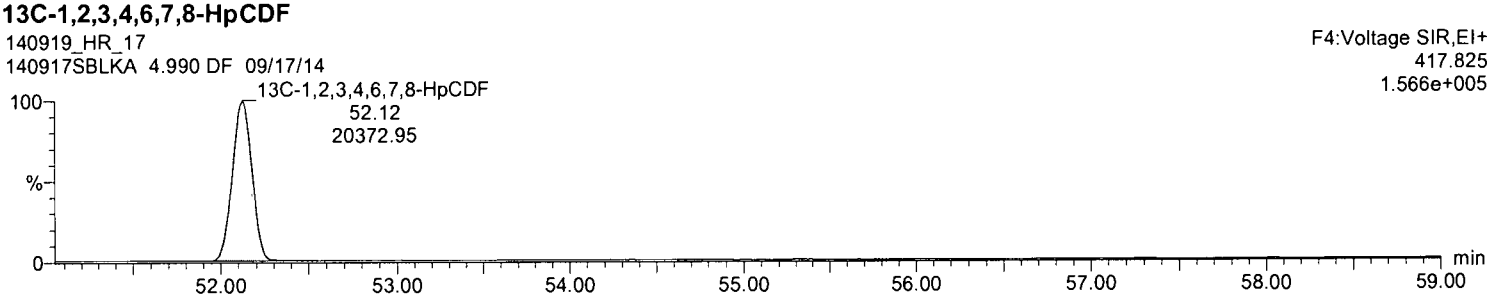
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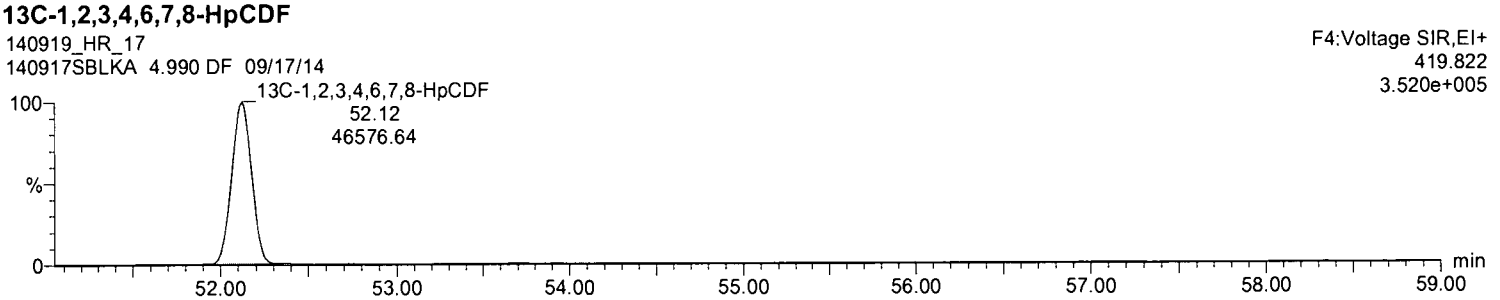
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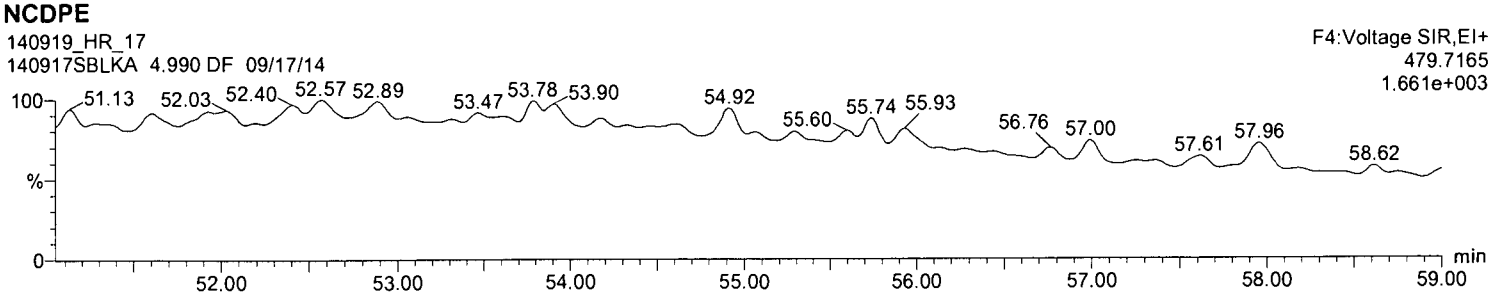
13C-1,2,3,4,6,7,8-HpCDF



13C-1,2,3,4,6,7,8-HpCDF

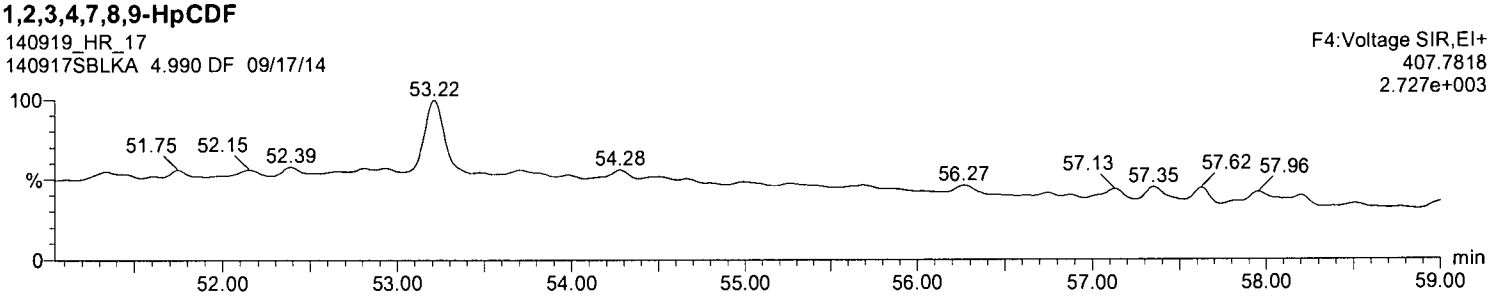


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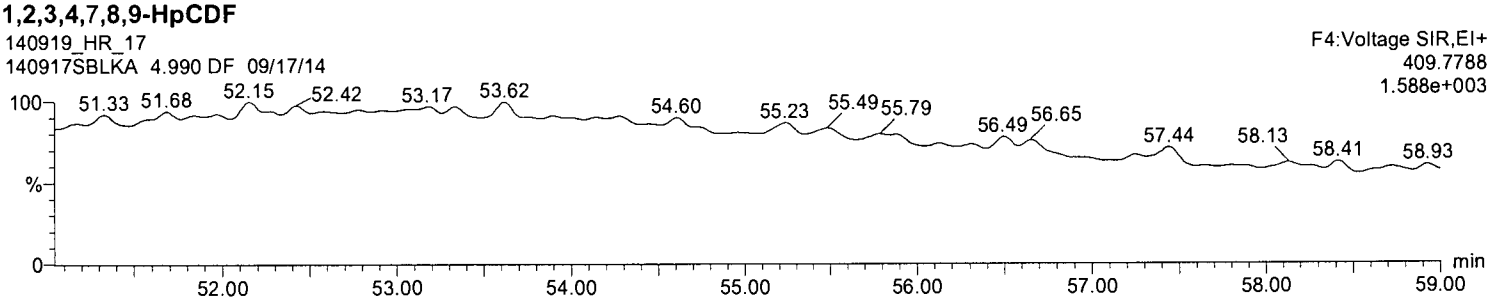


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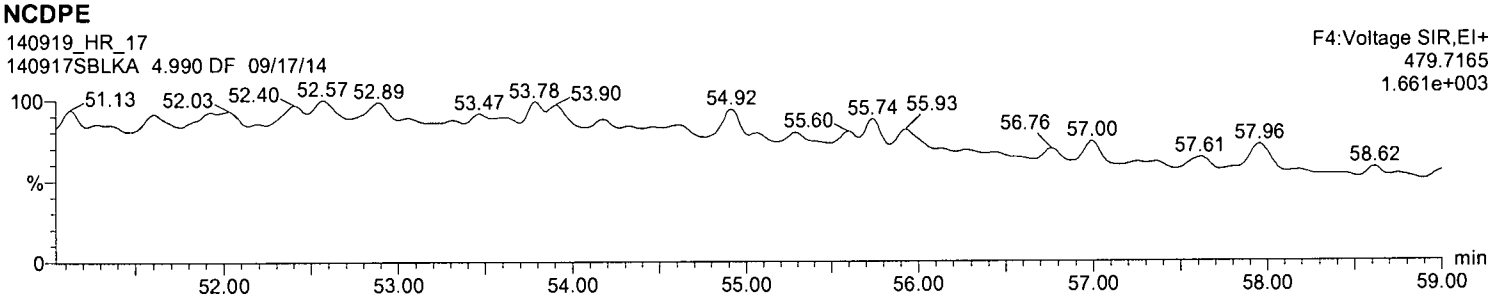
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1,2,3,4,7,8,9-HpCDF

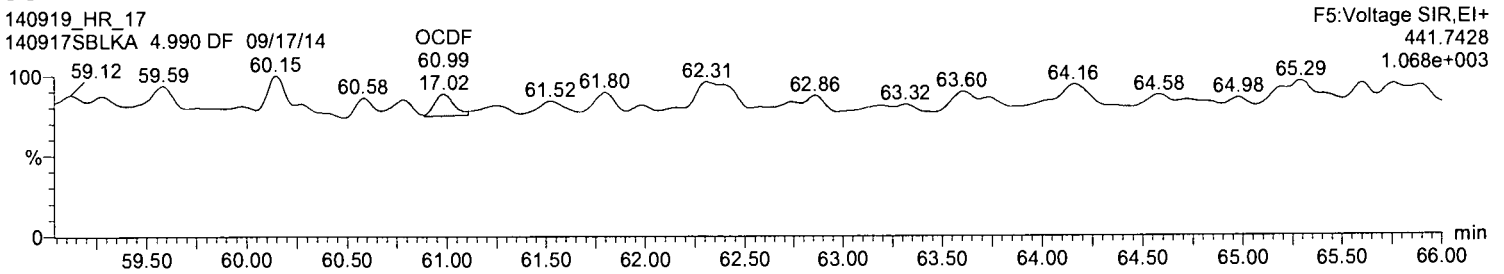


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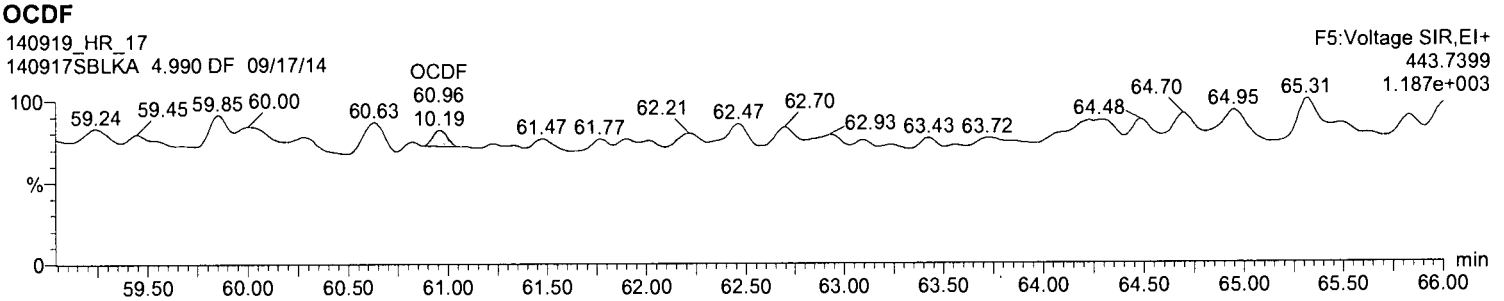


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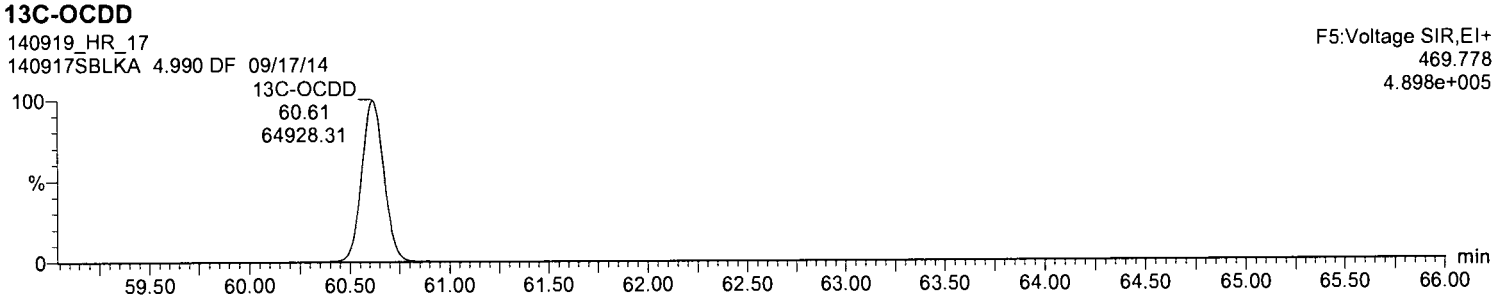
OCDF



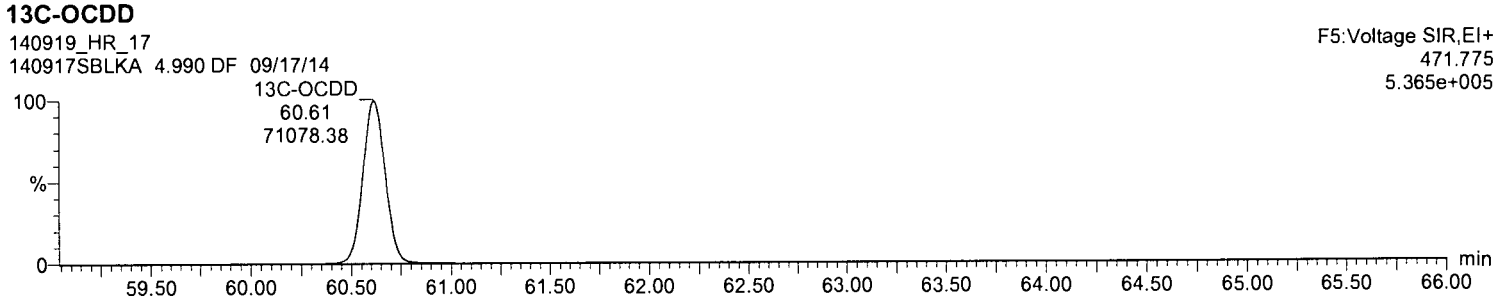
OCDF



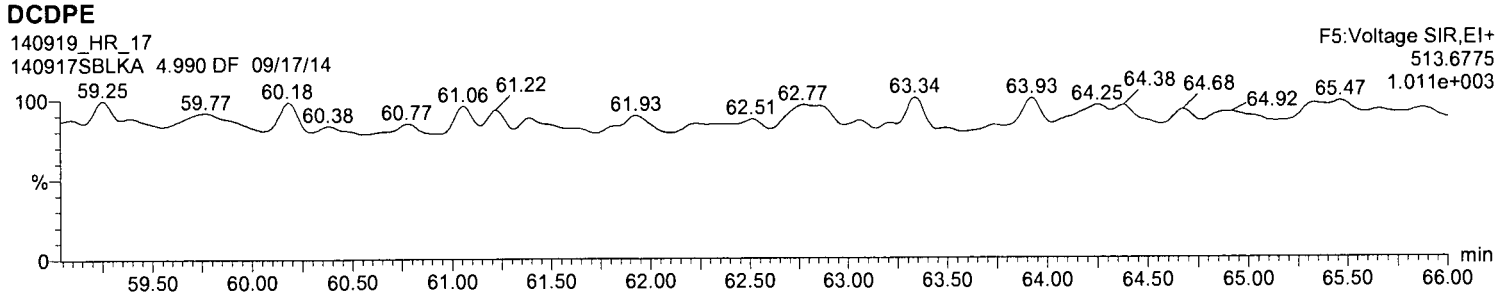
13C-OCDD



13C-OCDD

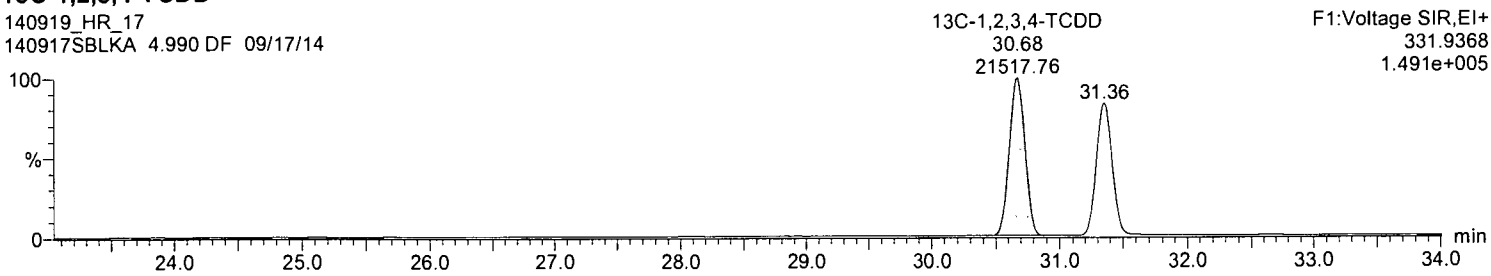


DCDPE

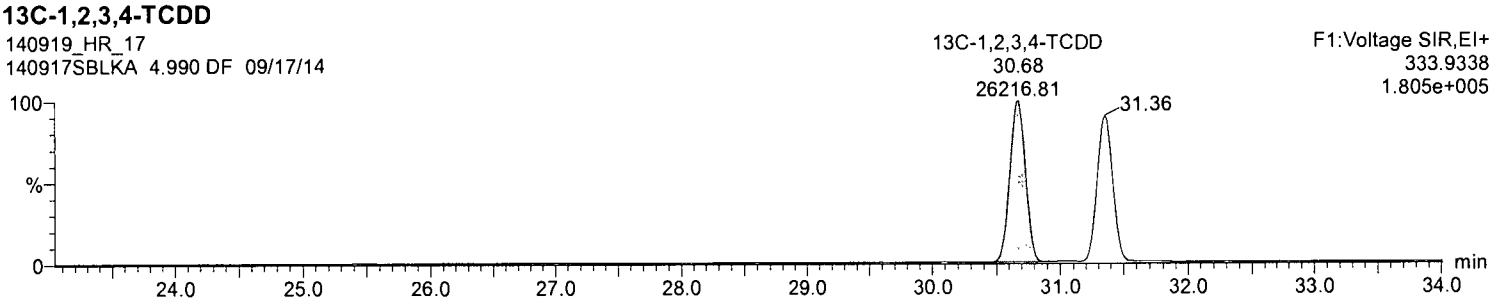


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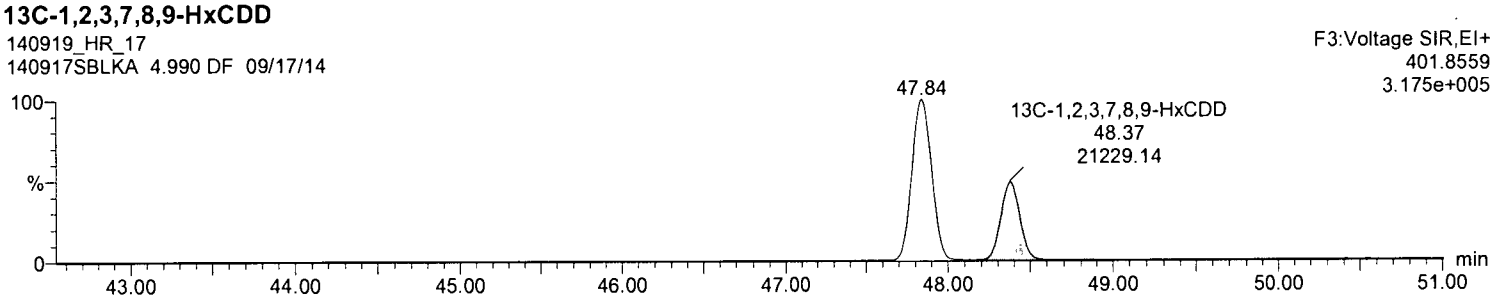
13C-1,2,3,4-TCDD



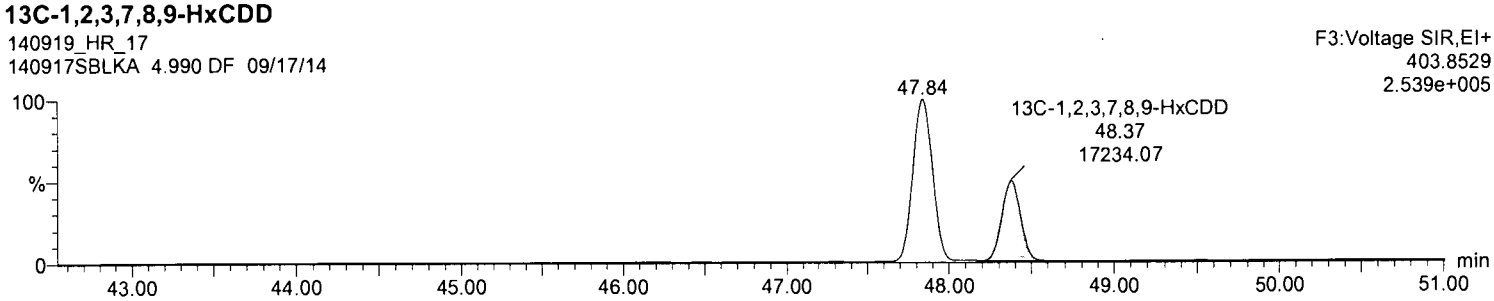
13C-1,2,3,4-TCDD



13C-1,2,3,7,8,9-HxCDD



13C-1,2,3,7,8,9-HxCDD



Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

Name: 140919_HR_13, Date: 20-Sep-2014, Time: 06:42:57, ID: , Description: 140917SA_LCS-1 4.995 DF 09/17/14, User:

Name	Peak Area	1° Area	RT	Ion Ab	Ion Fail?	S/N1	S/N2	Conc.	%Rec	LOD	EMPC	Multiplier
2,3,7,8-TCDD	5.909232e3	7.595822e3	31.38	0.78	NO	NO	NO	48.733 ✓	97.56	0.259	48.733	5.00
1,2,3,7,8-PeCDD	1.493435e4	9.873502e3	40.10	1.51	NO	NO	NO	119.282	95.52	0.310	119.282	5.00
1,2,3,4,7,8-HxCDD	1.407769e4	1.157681e4	47.66	1.22	NO	NO	NO	122.768	98.31	1.262	122.768	5.00
1,2,3,6,7,8-HxCDD	1.357562e4	1.108205e4	47.87	1.23	NO	NO	NO	117.359	93.98	1.255	117.359	5.00
1,2,3,7,8,9-HxCDD	1.552785e4	1.273058e4	48.41	1.22	NO	NO	NO	129.147	103.42	1.205	129.147	5.00
1,2,3,4,6,7,8-HpCDD	1.341714e4	1.287290e4	54.36	1.04	NO	NO	NO	118.082	94.56	0.248	118.082	5.00
OCDD	2.163890e4	2.469473e4	60.62	0.88	NO	NO	NO	224.003	89.69	0.162	224.003	5.00
2,3,7,8-TCDF	6.994549e3	8.730903e3	30.46	0.80	NO	NO	NO	48.582	97.26	0.147	48.582	5.00
1,2,3,7,8-PeCDF	2.306755e4	1.521047e4	37.31	1.52	NO	NO	NO	124.276	99.52	1.417	124.276	5.00
2,3,4,7,8-PeCDF	2.069475e4	1.391056e4	39.43	1.49	NO	NO	NO	119.207	95.46	1.503	119.207	5.00
1,2,3,4,7,8-HxCDF	1.752603e4	1.396352e4	45.76	1.26	NO	NO	NO	111.742	89.48	1.119	111.742	5.00
1,2,3,6,7,8-HxCDF	2.023053e4	1.635827e4	46.03	1.24	NO	NO	NO	124.214	99.47	1.070	124.214	5.00
2,3,4,6,7,8-HxCDF	1.844041e4	1.441040e4	47.29	1.28	NO	NO	NO	118.914	95.23	1.141	118.914	5.00
1,2,3,7,8,9-HxCDF	1.459033e4	1.168134e4	49.04	1.25	NO	NO	NO	112.716	90.26	1.353	112.716	5.00
1,2,3,4,6,7,8-HpCDF	1.697984e4	1.675122e4	52.15	1.01	NO	NO	NO	121.508	97.30	0.178	121.508	5.00
1,2,3,4,7,8,9-HpCDF	1.414796e4	1.331909e4	55.30	1.06	NO	NO	NO	133.189	106.66	0.240	133.189	5.00
OCDF	2.121629e4	2.537562e4	60.99	0.84	NO	NO	NO	202.150	80.94	0.172	202.150	5.00
13C-2,3,7,8-TCDD	2.354520e4	3.030267e4	31.36	0.78	NO	NO	NO	177.238	88.71	0.240		5.00
13C-1,2,3,7,8-PeCDD	2.726988e4	1.790210e4	40.08	1.52	NO	NO	NO	179.405	89.79	0.232		5.00
13C-1,2,3,6,7,8-HxCDD	5.687460e4	4.444154e4	47.85	1.28	NO	NO	NO	445.411	89.17	0.275		5.00
13C-1,2,3,4,6,7,8-HpCDD	5.449289e4	5.133589e4	54.34	1.06	NO	NO	NO	461.249	92.34	0.358		5.00
13C-OCDD	8.761894e4	9.699333e4	60.61	0.90	NO	NO	NO	934.778	93.57	0.385		5.00
13C-2,3,7,8-TCDF	3.074388e4	3.892040e4	30.44	0.79	NO	NO	NO	161.785	80.97	0.158		5.00
13C-1,2,3,7,8-PeCDF	3.731054e4	2.266909e4	37.28	1.65	NO	NO	NO	169.153	84.66	0.180		5.00
13C-1,2,3,4,7,8-HxCDF	3.874636e4	7.436943e4	45.74	0.52	NO	NO	NO	395.694	79.22	0.152		5.00
13C-1,2,3,4,6,7,8-HpCDF	3.008943e4	6.553292e4	52.13	0.46	NO	NO	NO	373.498	74.77	0.267		5.00
13C-1,2,3,4-TCDD	2.804305e4	3.454784e4	30.68	0.81	NO	NO	NO	199.800	100.00	0.233		5.00
13C-1,2,3,7,8,9-HxCDD	2.751465e4	2.102547e4	48.38	1.31	NO	NO	NO	199.800	100.00	0.258		5.00

$$TCDD = \frac{(5909.232 + 7595.822)(2000)}{(23545.20 + 30302.67)(1.02824)(10.01g)} = 48.733$$

9/22/14
RP

RETENTION TIME CHECK

140917SA_LCS-1 4.995 DF 09/17/14

EPA Method 8290

INSTRUMENT: Magneto
COLUMN: Restek DB5 - 60m
MATRIX:

ANALYSIS DATE/TIME:
EXTRACTION DATE:
SEQUENCE:
RUN FILE: 140919_HR_13

Analyte	RT of congener in sample 140919_HR_13	RT of ^{13}C congener in sample 140919_HR_13	RRT of congener in sample 140919_HR_13	RRT of congener in CCV 140919_HR_10	LCL[a]	UCL[b]	Qualifiers
2,3,7,8-TCDD	31.3833	31.3562	1.0009	1.0009	31.3395	31.4062	Pass
1,2,3,7,8-PeCDD	40.0990	40.0787	1.0005	1.0008	40.0620	40.1287	Pass
1,2,3,4,7,8-HxCDD	47.6605	47.8517	0.9960	0.9962	0.9912	1.0012	Pass
1,2,3,6,7,8-HxCDD	47.8728	47.8517	1.0004	1.0007	47.8350	47.9017	Pass
1,2,3,7,8,9-HxCDD	48.4147	48.3828	1.0007	1.0004	48.3661	48.4328	Pass
1,2,3,4,6,7,8-HpCDD	54.3595	54.3392	1.0004	1.0004	54.3225	54.3892	Pass
OCDD	60.6208	60.6107	1.0002	1.0005	60.5940	60.6607	Pass
2,3,7,8-TCDF	30.4580	30.4443	1.0005	1.0005	30.4276	30.4943	Pass
1,2,3,7,8-PeCDF	37.3117	37.2813	1.0008	1.0008	37.2646	37.3313	Pass
2,3,4,7,8-PeCDF	39.4300	37.2813	1.0576	1.0577	1.0524	1.0630	Pass
1,2,3,4,7,8-HxCDF	45.7587	45.7375	1.0005	1.0005	45.7208	45.7875	Pass
1,2,3,6,7,8-HxCDF	46.0348	45.7375	1.0065	1.0063	1.0012	1.0113	Pass
2,3,4,6,7,8-HxCDF	47.2885	45.7375	1.0339	1.0339	1.0288	1.0391	Pass
1,2,3,7,8,9-HxCDF	49.0413	45.7375	1.0722	1.0721	1.0667	1.0774	Pass
1,2,3,4,6,7,8-HpCDF	52.1500	52.1297	1.0004	1.0004	52.1130	52.1797	Pass
1,2,3,4,7,8,9-HpCDF	55.3020	52.1297	1.0609	1.0609	1.0556	1.0662	Pass
OCDF	60.9855	60.6107	1.0062	1.0062	1.0012	1.0112	Pass
$^{13}C_{12}$-2,3,7,8-TCDD	31.3562	30.6757	1.0222	1.0222	1.0171	1.0273	Pass
$^{13}C_{12}$-1,2,3,7,8-PeCDD	40.0787	30.6757	1.3065	1.3069	1.3003	1.3134	Pass
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	47.8517	48.3828	0.9890	0.9888	0.9838	0.9937	Pass
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	54.3392	48.3828	1.1231	1.1233	1.1176	1.1289	Pass
$^{13}C_{12}$-OCDD	60.6107	48.3828	1.2527	1.2528	1.2465	1.2590	Pass
$^{13}C_{12}$-2,3,7,8-TCDF	30.4443	30.6757	0.9925	0.9924	0.9875	0.9974	Pass
$^{13}C_{12}$-1,2,3,7,8-PeCDF	37.2813	30.6757	1.2153	1.2155	1.2094	1.2216	Pass
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	45.7375	48.3828	0.9453	0.9453	0.9406	0.9500	Pass
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	52.1297	48.3828	1.0774	1.0773	1.0720	1.0827	Pass
$^{13}C_{12}$-1,2,3,4-TCDD	30.6757	30.6757	1.0000	1.0000	0.9950	1.0050	Pass
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	48.3828	48.3828	1.0000	1.0000	0.9950	1.0050	Pass

a. Lower control limit
b. Upper control limit

Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

Name: 140919_HR_13, Date: 20-Sep-2014, Time: 06:42:57, ID: , Description: 140917SA_LCS-1 4.995 DF 09/17/14, User:

#	Name	RT	RRT
1	2,3,7,8-TCDD	31.383301	1.000864
2	1,2,3,7,8-PeCDD	40.098999	1.000506
3	1,2,3,4,7,8-HxCDD	47.660500	0.996004
4	1,2,3,6,7,8-HxCDD	47.872799	1.000441
5	1,2,3,7,8,9-HxCDD	48.414700	1.000659
6	1,2,3,4,6,7,8-HpCDD	54.359501	1.000374
7	OCDD	60.620800	1.000167
8	2,3,7,8-TCDF	30.458000	1.000450
9	1,2,3,7,8-PeCDF	37.311699	1.000815
10	2,3,4,7,8-PeCDF	39.430000	1.057635
11	1,2,3,4,7,8-HxCDF	45.758701	1.000464
12	1,2,3,6,7,8-HxCDF	46.034801	1.006500
13	2,3,4,6,7,8-HxCDF	47.288502	1.033911
14	1,2,3,7,8,9-HxCDF	49.041302	1.072234
15	1,2,3,4,6,7,8-HpCDF	52.150002	1.000389
16	1,2,3,4,7,8,9-HpCDF	55.301998	1.060854
17	OCDF	60.985500	1.006184
18	13C-2,3,7,8-TCDD	31.356199	1.022184
19	13C-1,2,3,7,8-PeCDD	40.078701	1.306529
20	13C-1,2,3,6,7,8-HxCDD	47.851700	0.989023
21	13C-1,2,3,4,6,7,8-HpCDD	54.339199	1.123110
22	13C-OCDD	60.610699	1.252732
23	13C-2,3,7,8-TCDF	30.444300	0.992457
24	13C-1,2,3,7,8-PeCDF	37.281300	1.215337
25	13C-1,2,3,4,7,8-HxCDF	45.737499	0.945326
26	13C-1,2,3,4,6,7,8-HpCDF	52.129700	1.077443
27	13C-1,2,3,4-TCDD	30.675699	1.000000
28	13C-1,2,3,7,8,9-HxCDD	48.382801	1.000000

Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

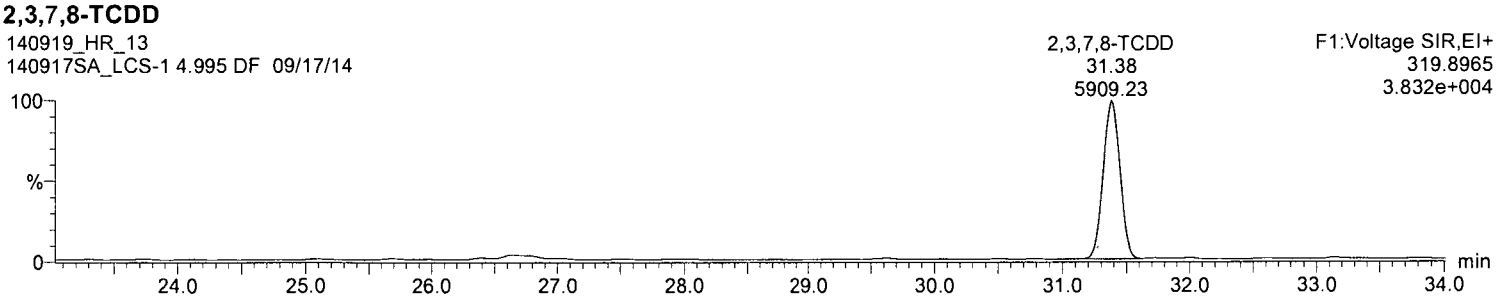
Name: 140919_HR_13, Date: 20-Sep-2014, Time: 06:42:57, ID: , Description: 140917SA_LCS-1 4.995 DF 09/17/14, User:

#	Name	Signal	Noise 1	S/N 1	Flag S/N...	Signal 2	Noise 2	S/N 2	Flag S/N...
1	2,3,7,8-TCDD	3.7745000e4	1.4604378e2	257.51	NO	4.9332000e4	4.0576351e1	1215.78	NO
2	1,2,3,7,8-PeCDD	1.1709900e5	1.4164763e2	826.40	NO	7.4321000e4	5.5780907e1	1332.37	NO
3	1,2,3,4,7,8-HxCDD	1.1439100e5	9.2631348e1	1231.93	NO	9.2154000e4	7.0714319e2	130.32	NO
4	1,2,3,6,7,8-HxCDD	1.0217100e5	9.2631348e1	1100.04	NO	8.2547000e4	7.0714319e2	116.73	NO
5	1,2,3,7,8,9-HxCDD	1.1344100e5	9.2631348e1	1221.80	NO	9.3638000e4	7.0714319e2	132.42	NO
6	1,2,3,4,6,7,8-HpCDD	1.0045300e5	9.7264099e1	1031.20	NO	9.6912000e4	7.6283791e1	1270.41	NO
7	OCDD	1.6269100e5	7.2173843e1	2253.70	NO	1.8257800e5	2.8921211e1	6312.94	NO
8	2,3,7,8-TCDF	4.4744000e4	5.7863037e1	777.62	NO	5.5831000e4	6.7875488e1	822.55	NO
9	1,2,3,7,8-PeCDF	1.5146300e5	7.7979996e1	1939.47	NO	9.9283000e4	1.0761183e3	92.26	NO
10	2,3,4,7,8-PeCDF	1.4363100e5	7.7979996e1	1839.18	NO	9.5436000e4	1.0761183e3	88.69	NO
11	1,2,3,4,7,8-HxCDF	1.3494700e5	9.1152832e2	145.74	NO	1.0873300e5	8.2278618e1	1321.52	NO
12	1,2,3,6,7,8-HxCDF	1.3988200e5	9.1152832e2	151.15	NO	1.1250300e5	8.2278618e1	1367.34	NO
13	2,3,4,6,7,8-HxCDF	1.4010700e5	9.1152832e2	151.38	NO	1.0888800e5	8.2278618e1	1323.41	NO
14	1,2,3,7,8,9-HxCDF	1.0413900e5	9.1152832e2	111.91	NO	8.4224000e4	8.2278618e1	1023.64	NO
15	1,2,3,4,6,7,8-HpCDF	1.3517200e5	7.6110931e1	1773.00	NO	1.3456700e5	7.9851624e1	1685.21	NO
16	1,2,3,4,7,8,9-HpCDF	1.0590900e5	7.6110931e1	1388.70	NO	1.0363400e5	7.9851624e1	1297.83	NO
17	OCDF	1.4792600e5	6.1689384e1	2398.47	NO	1.7905000e5	5.7647926e1	3105.92	NO
18	13C-2,3,7,8-TCDD	1.5310400e5	1.4989804e2	1023.12	NO	1.9825900e5	4.3410610e1	4567.06	NO
19	13C-1,2,3,7,8-PeCDD	2.0864900e5	9.4671371e1	2204.70	NO	1.3722900e5	5.9657997e1	2300.26	NO
20	13C-1,2,3,6,7,8-HxCDD	4.3135600e5	8.2877274e1	5205.03	NO	3.4020800e5	1.0491776e2	3242.62	NO
21	13C-1,2,3,4,6,7,8-HpCDD	4.2775000e5	1.2034642e2	3552.62	NO	3.9187000e5	1.2610229e2	3107.56	NO
22	13C-OCDD	6.6037800e5	1.3796863e2	4783.65	NO	7.2966200e5	9.0530457e1	8059.85	NO
23	13C-2,3,7,8-TCDF	2.0242400e5	9.0684891e1	2230.74	NO	2.5654500e5	8.8955780e1	2883.96	NO
24	13C-1,2,3,7,8-PeCDF	2.4670600e5	5.4576050e1	4517.86	NO	1.4875800e5	1.1439470e2	1300.39	NO
25	13C-1,2,3,4,7,8-HxCDF	3.0532700e5	3.3819950e1	9025.73	NO	5.8477900e5	9.6946625e1	6031.97	NO
26	13C-1,2,3,4,6,7,8-HpCDF	2.3693800e5	6.2866623e1	3768.30	NO	5.1988900e5	1.4230740e2	3653.28	NO
27	13C-1,2,3,4-TCDD	1.8559100e5	1.4989804e2	1238.47	NO	2.2957500e5	4.3410610e1	5288.45	NO
28	13C-1,2,3,7,8,9-HxCDD	2.0645700e5	8.2877274e1	2491.85	NO	1.5751500e5	1.0491776e2	1501.32	NO

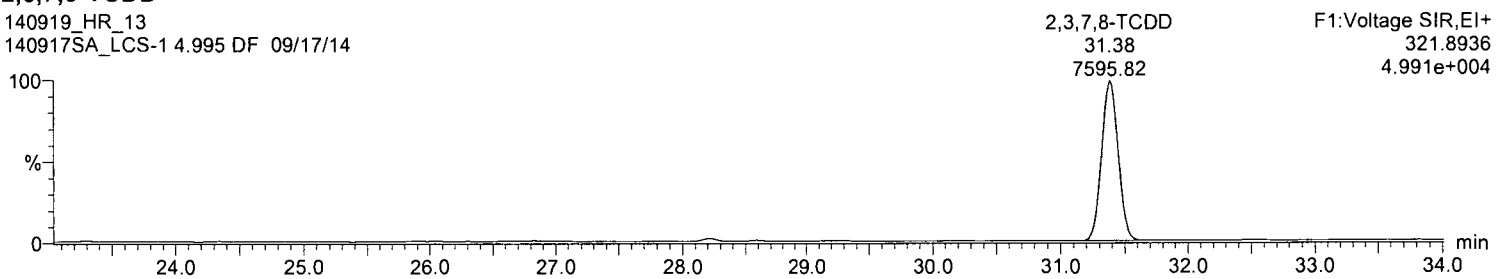
Method: C:\MassLynx\Default.pro\Methdb\140919_8290.mdb 22 Sep 2014 12:12:43
Calibration: C:\MassLynx\Default.pro\Curvedb\140919_8290.cdb 22 Sep 2014 12:13:12

Name: 140919_HR_13, Date: 20-Sep-2014, Time: 06:42:57, ID: , Description: 140917SA_LCS-1 4.995 DF 09/17/14, User:

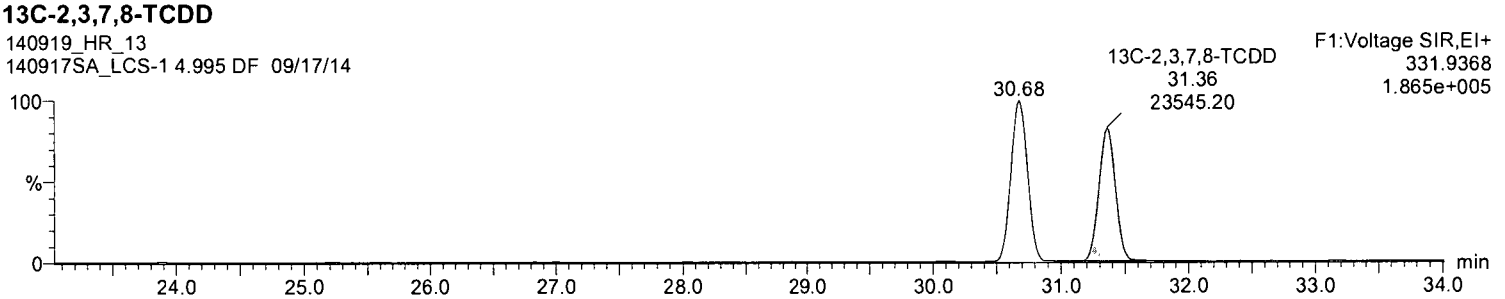
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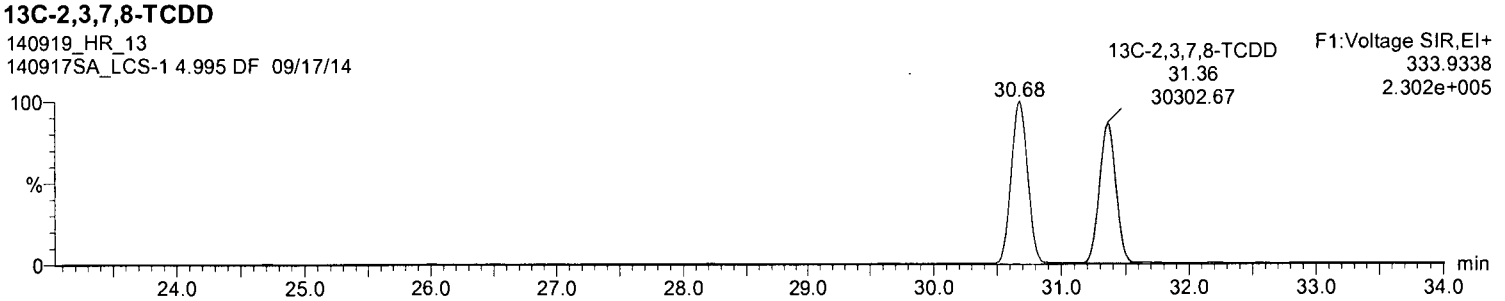
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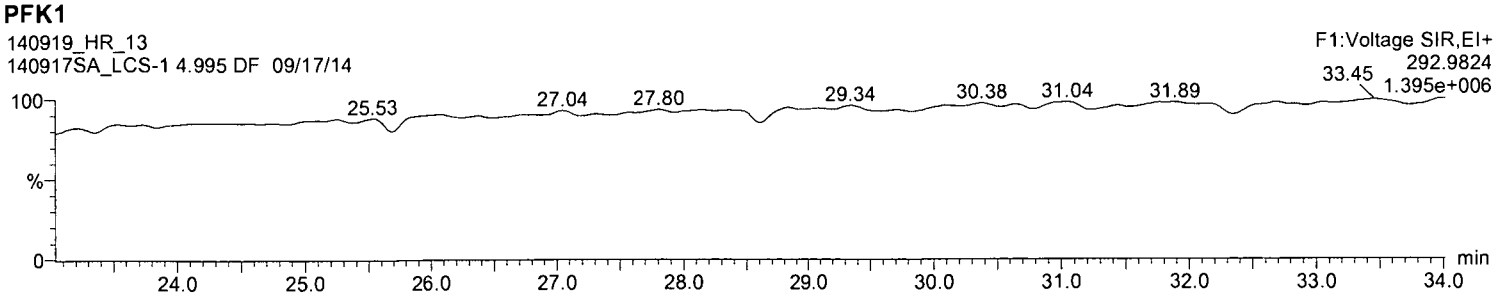
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13C-2,3,7,8-TCDD

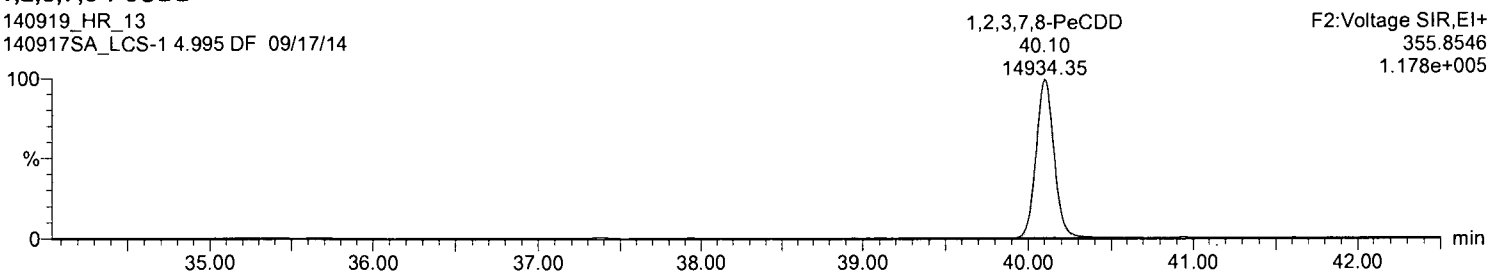


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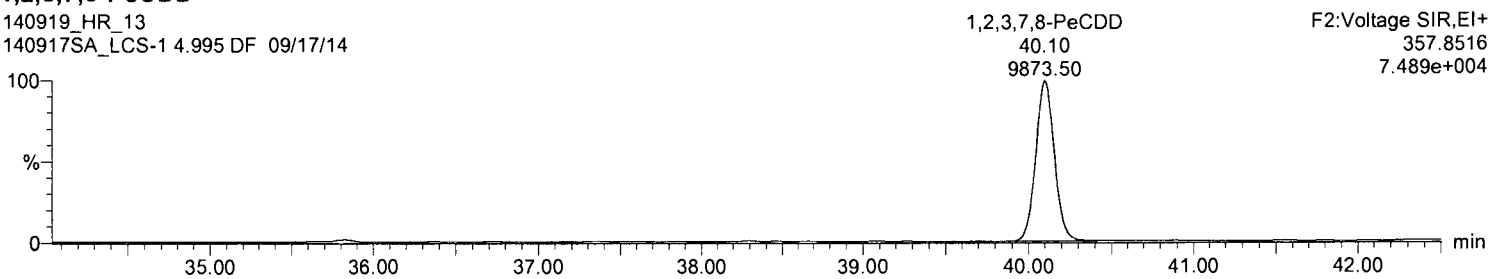


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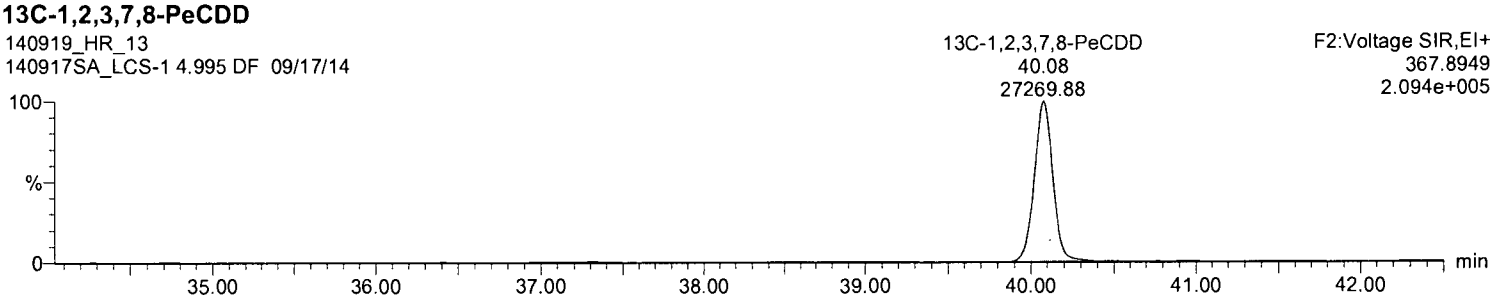
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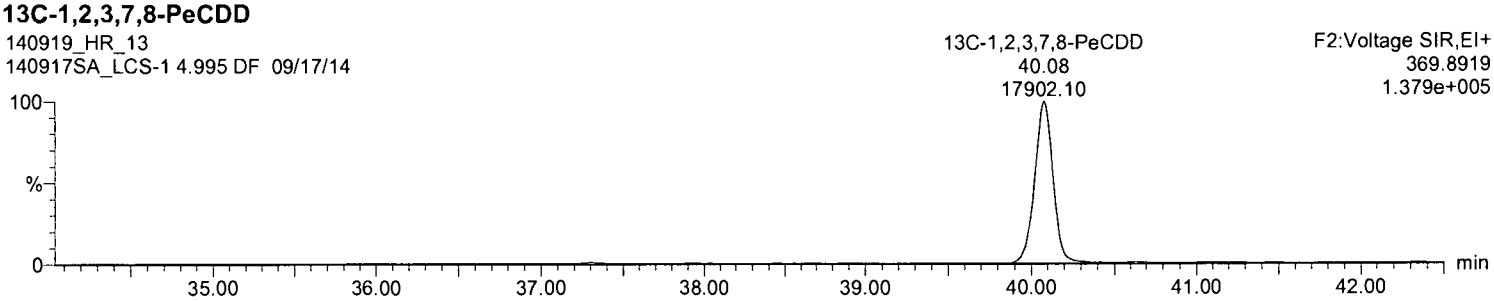
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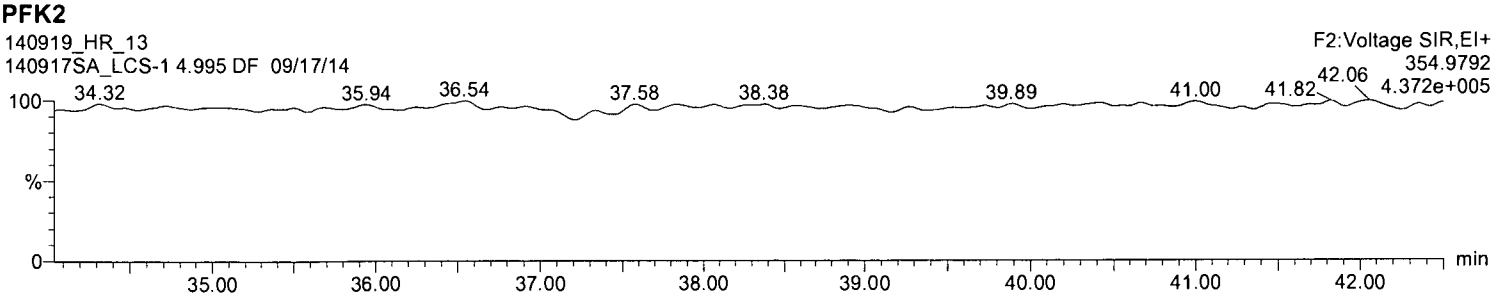
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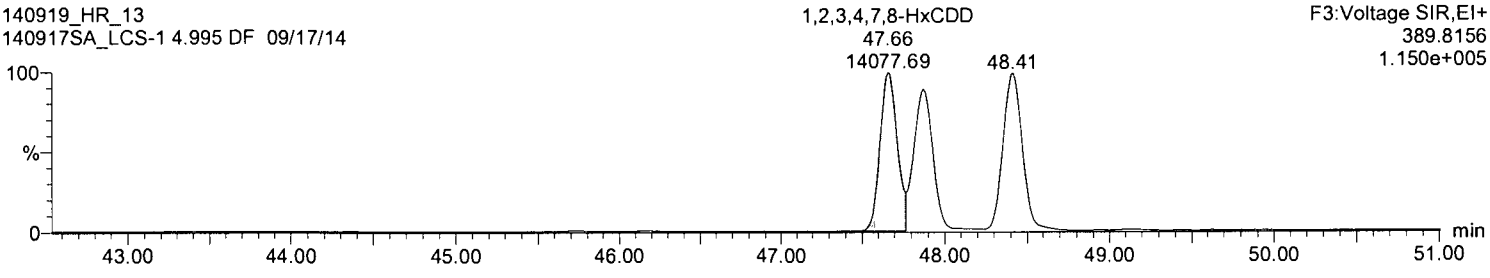


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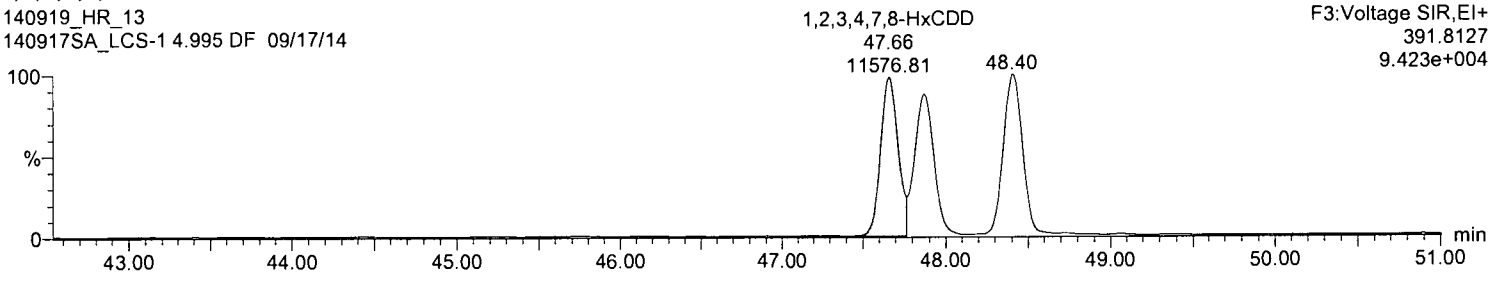


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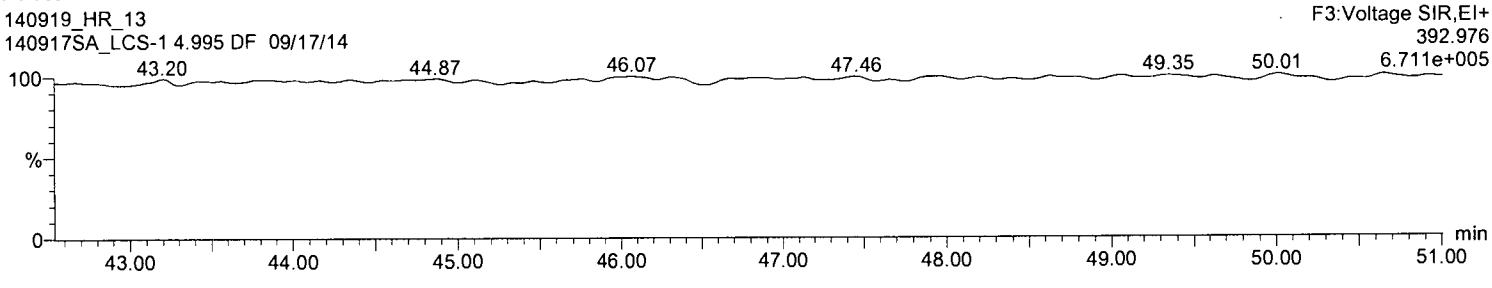
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1,2,3,4,7,8-HxCDD

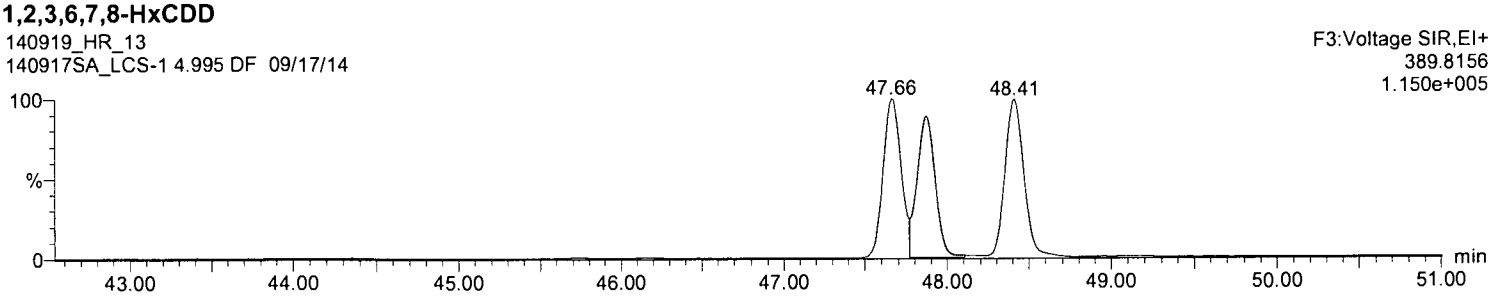


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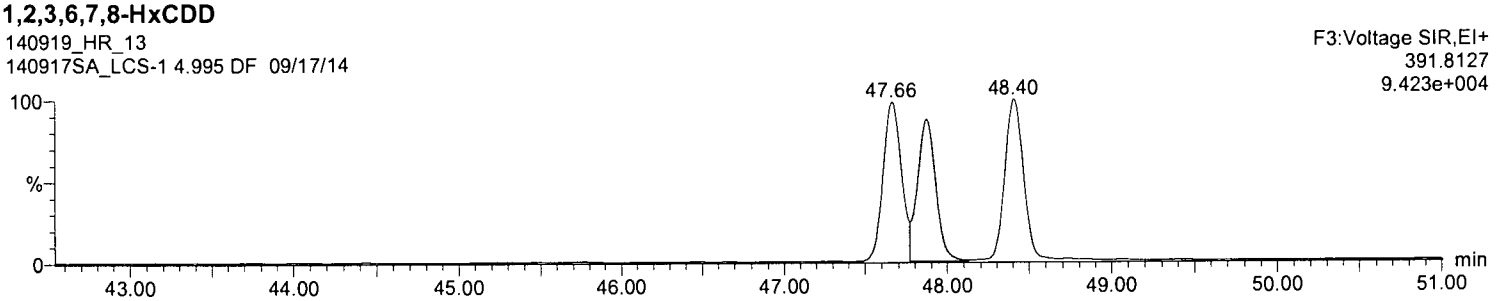


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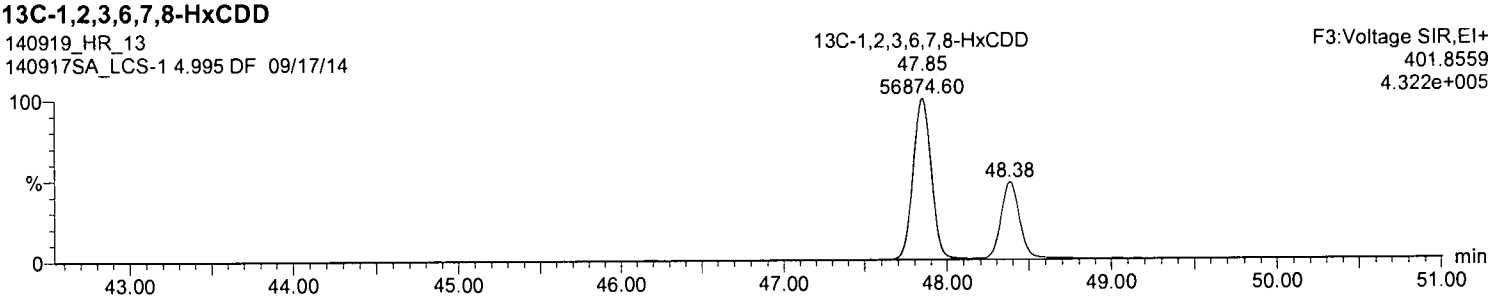
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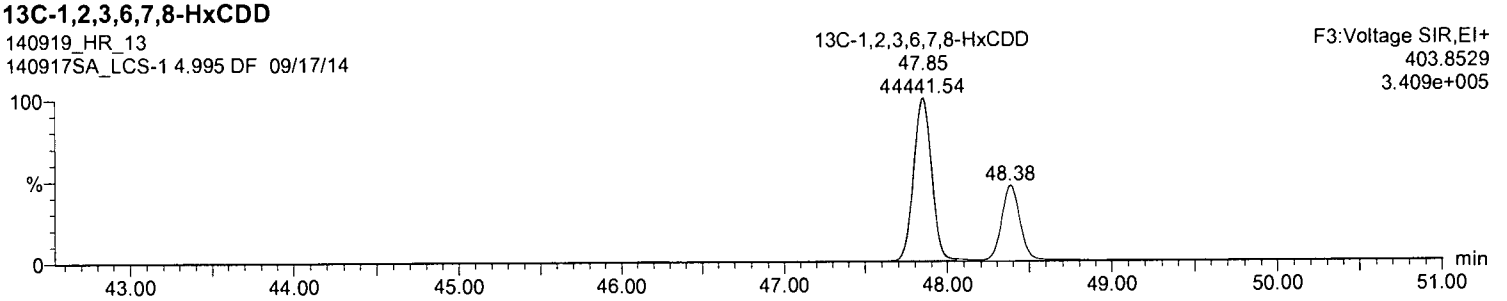
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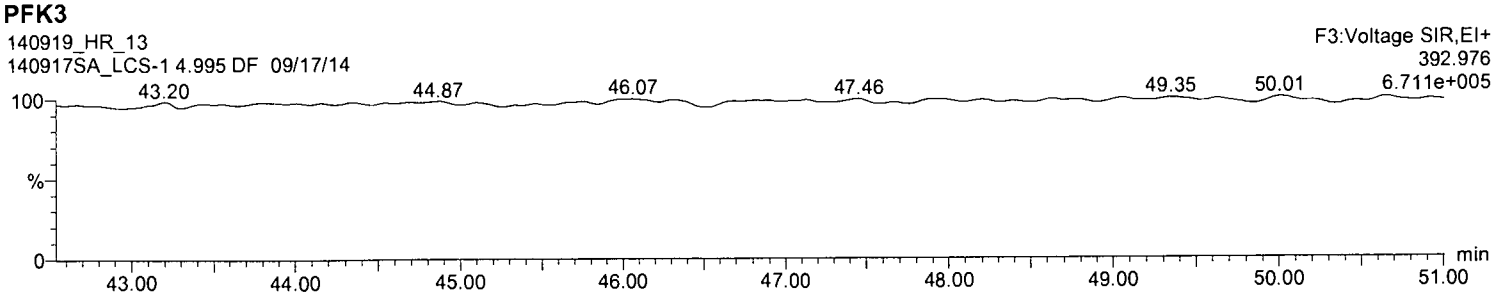
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13C-1,2,3,6,7,8-HxCDD

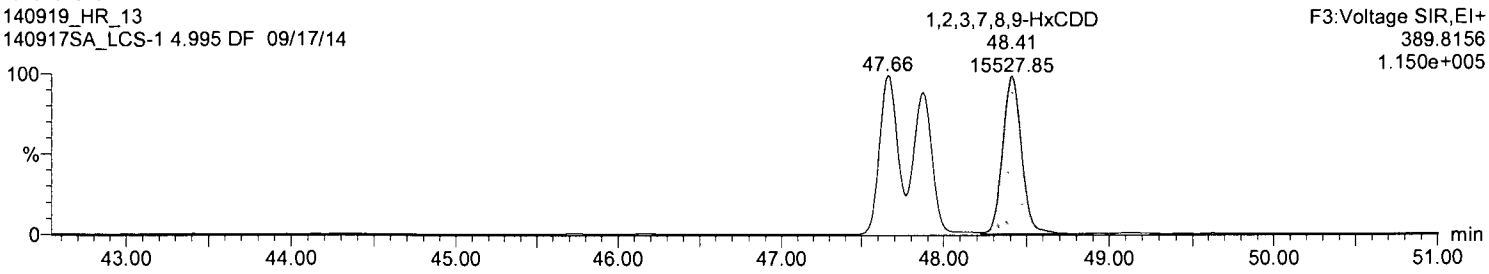


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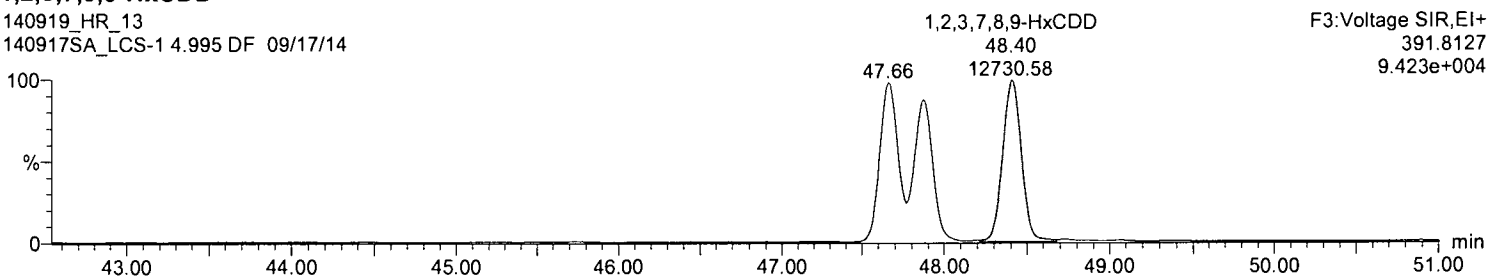


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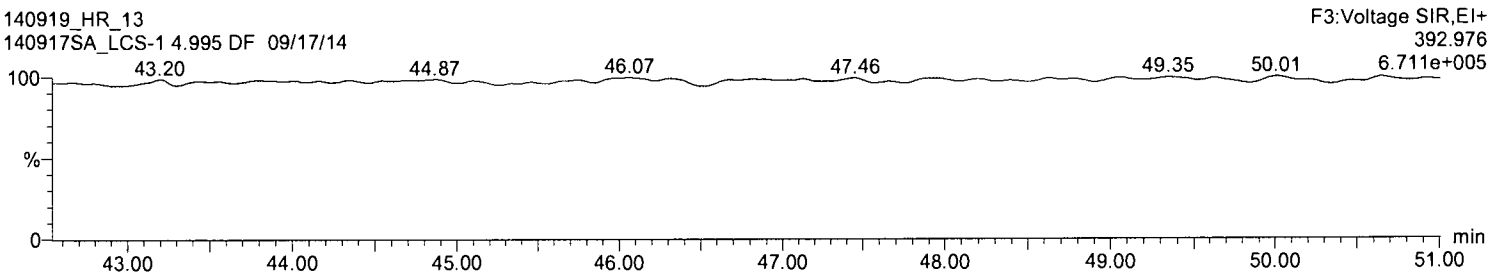
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1,2,3,7,8,9-HxCDD

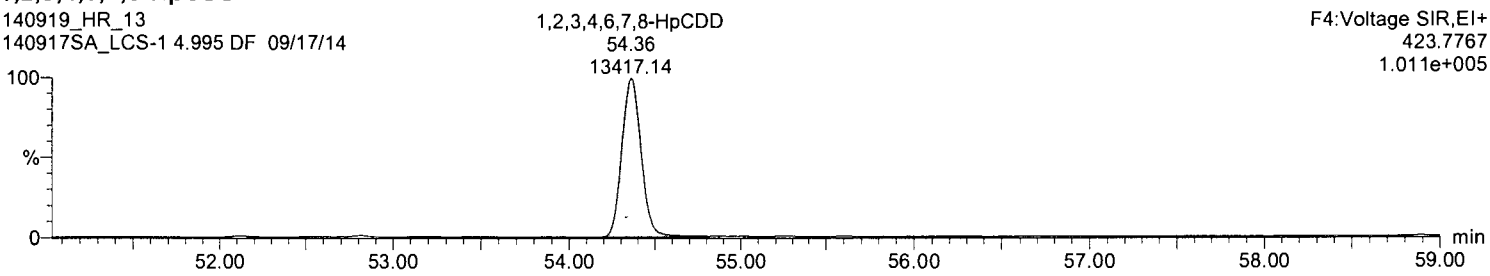


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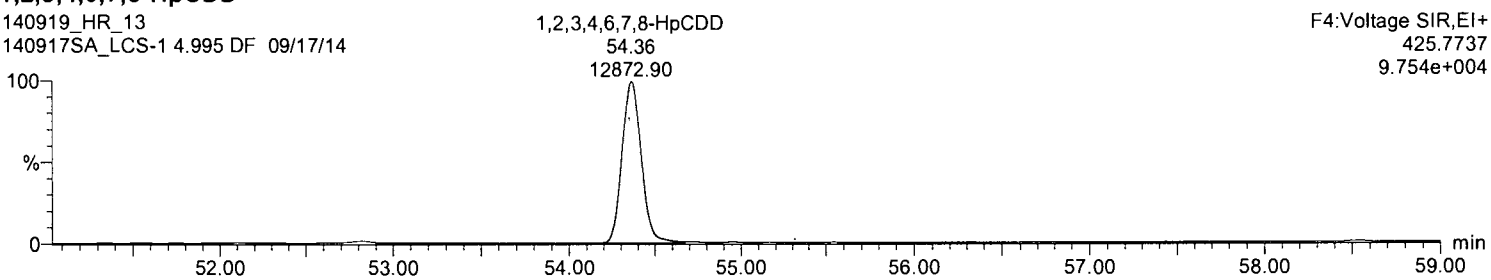


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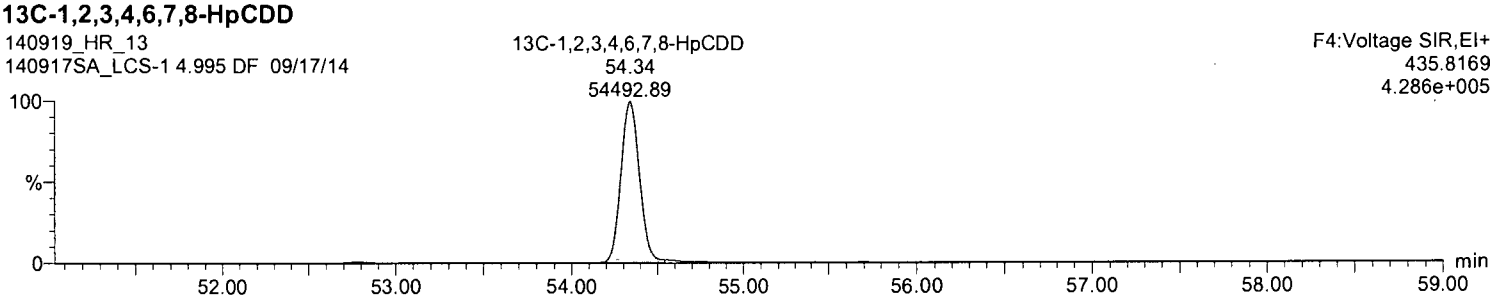
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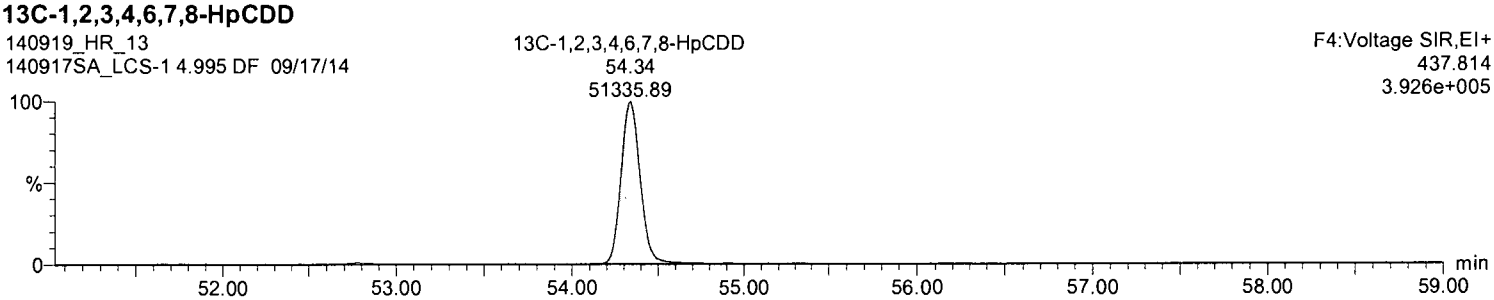
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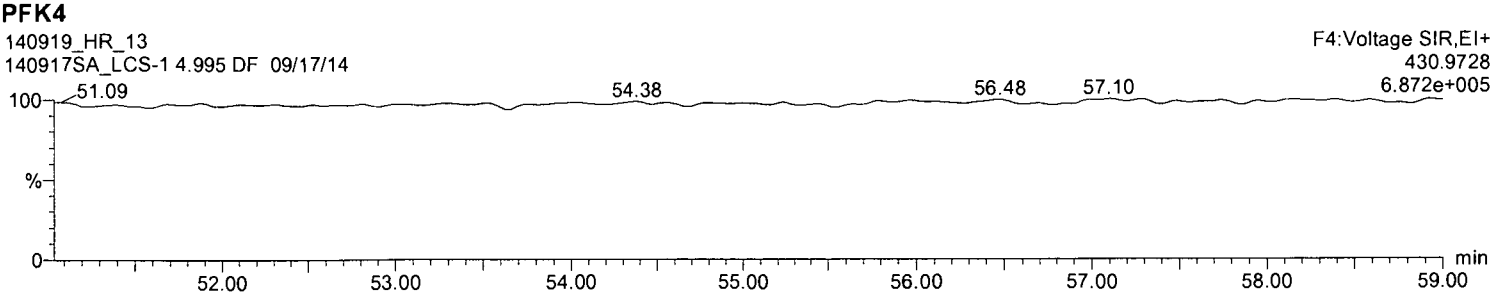
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13C-1,2,3,4,6,7,8-HpCDD

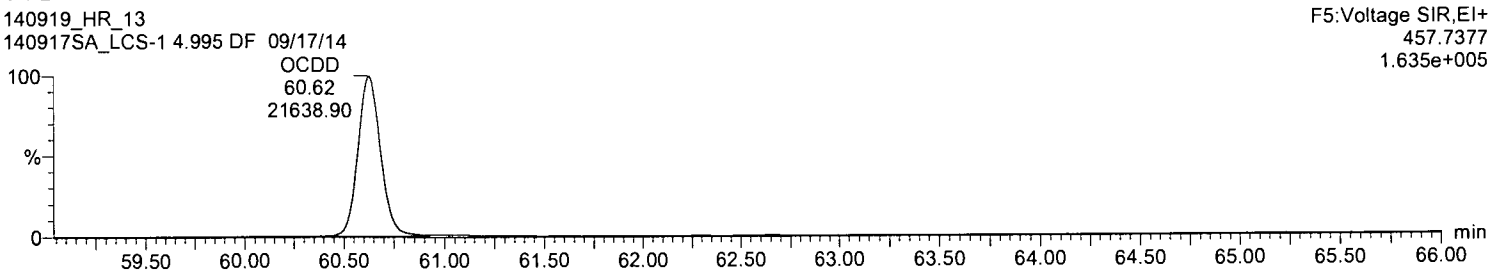


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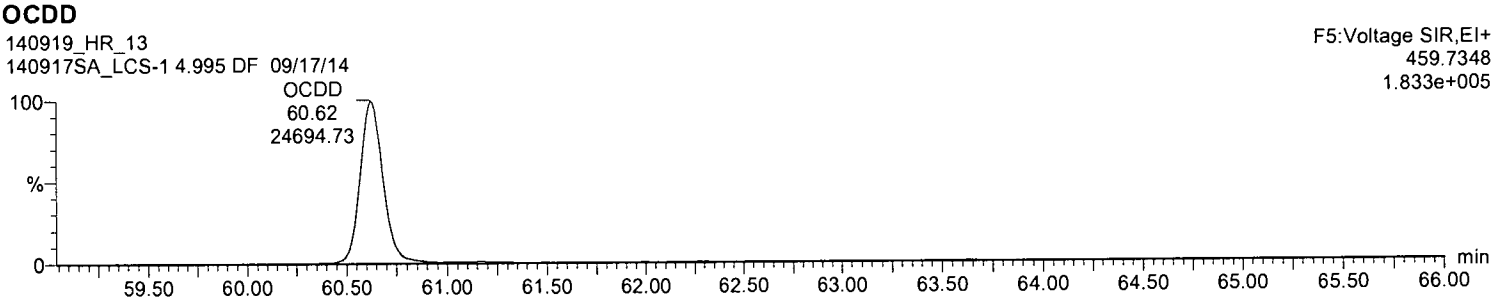


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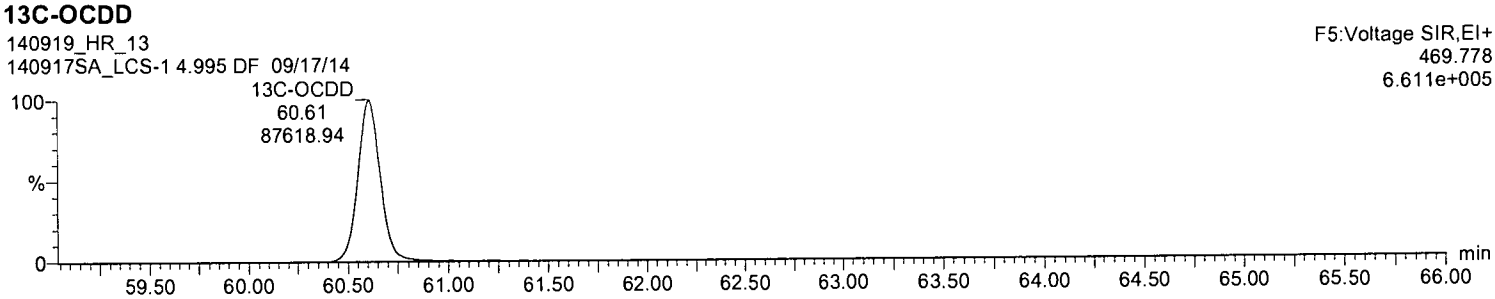
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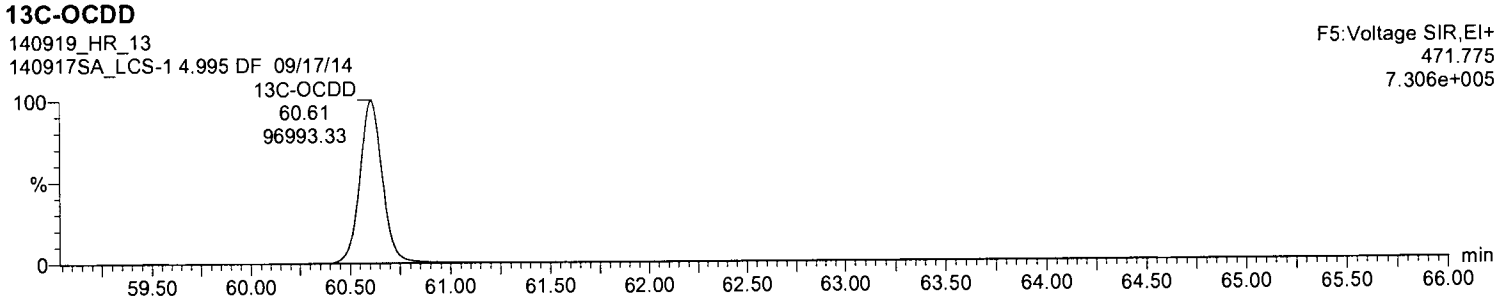
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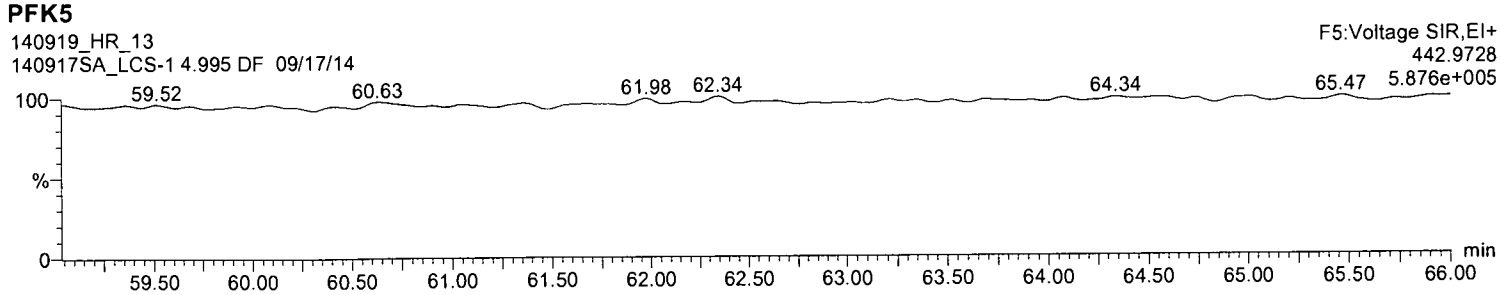
13C-OCDD



13C-OCDD

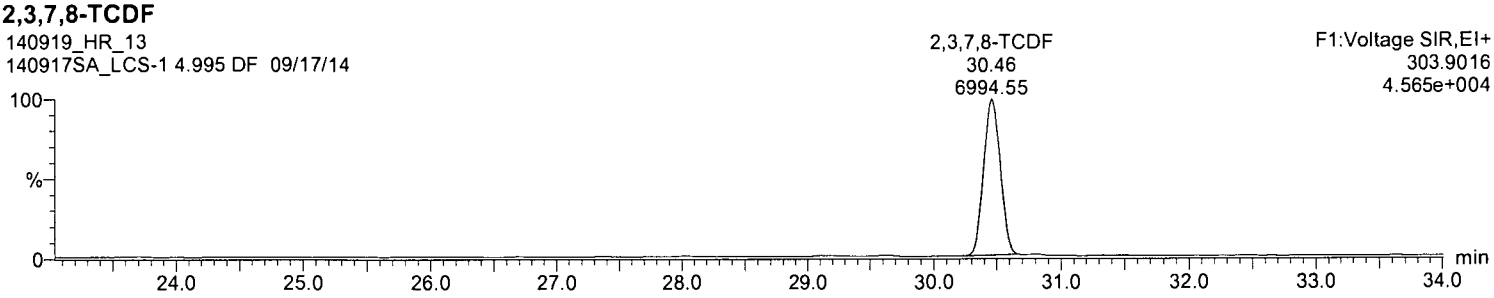


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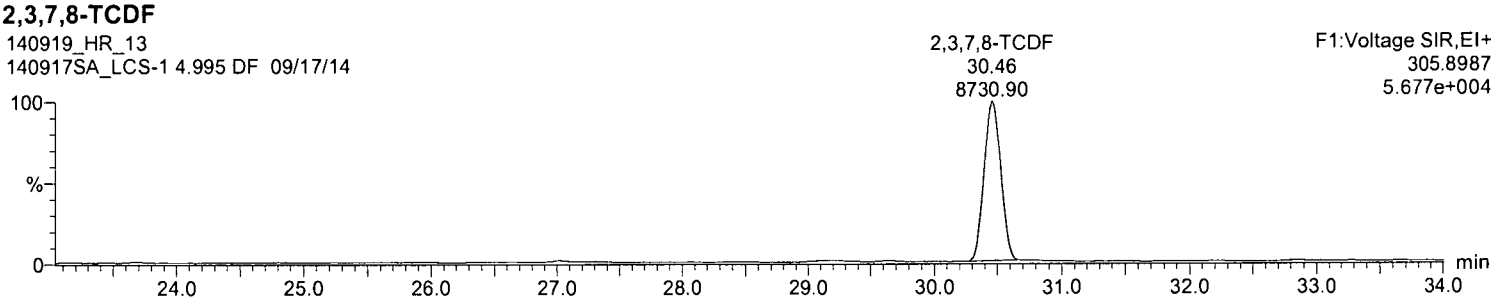


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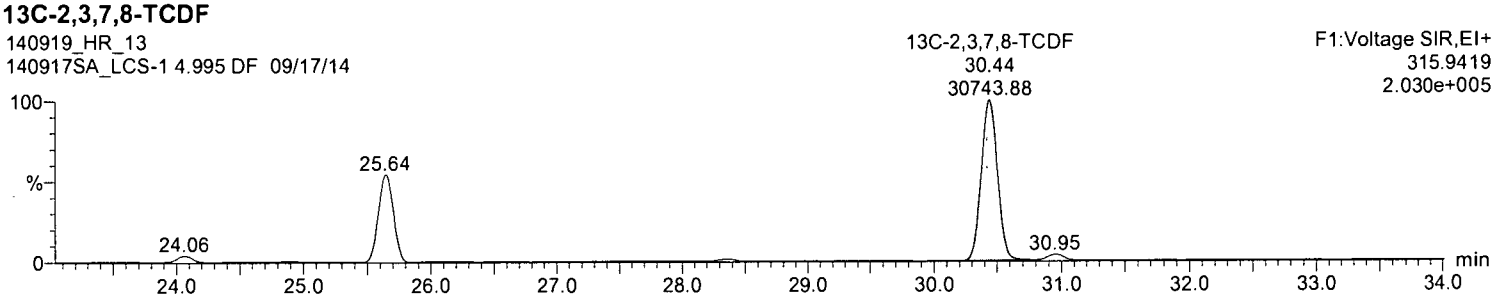
2,3,7,8-TCDF



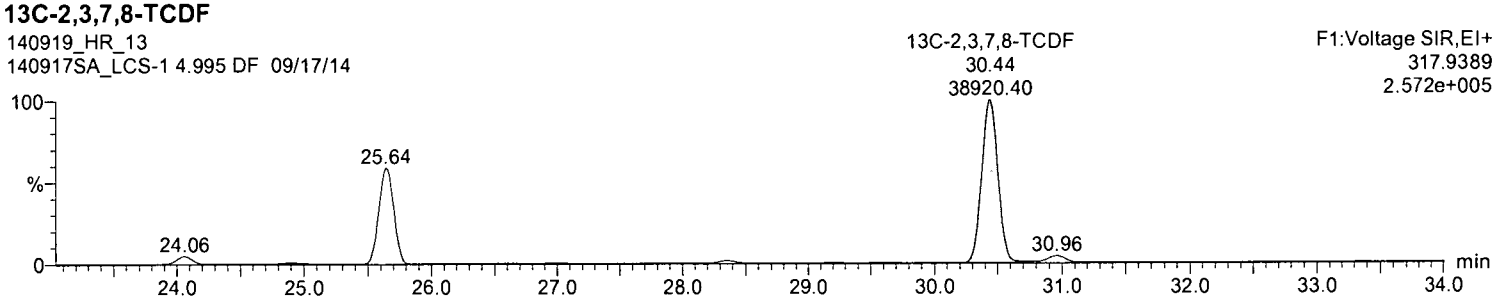
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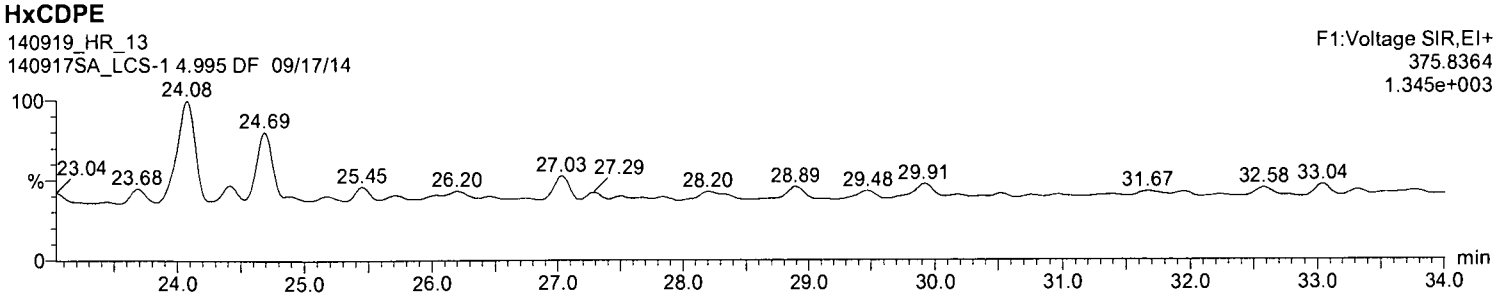
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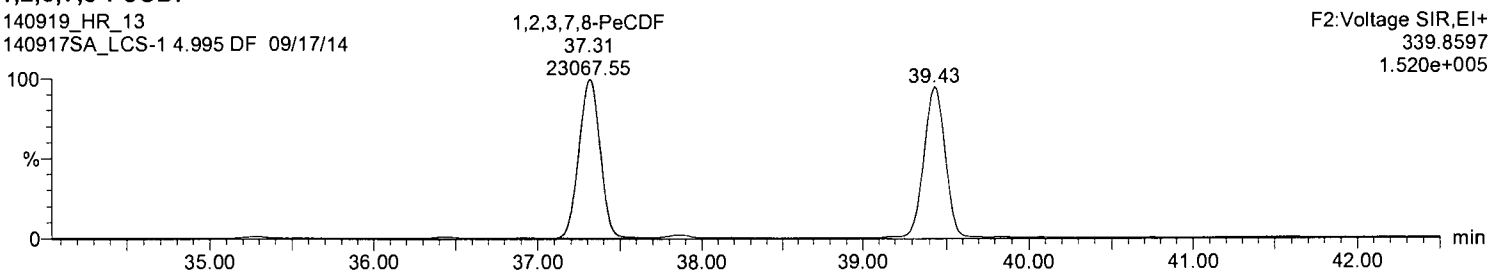


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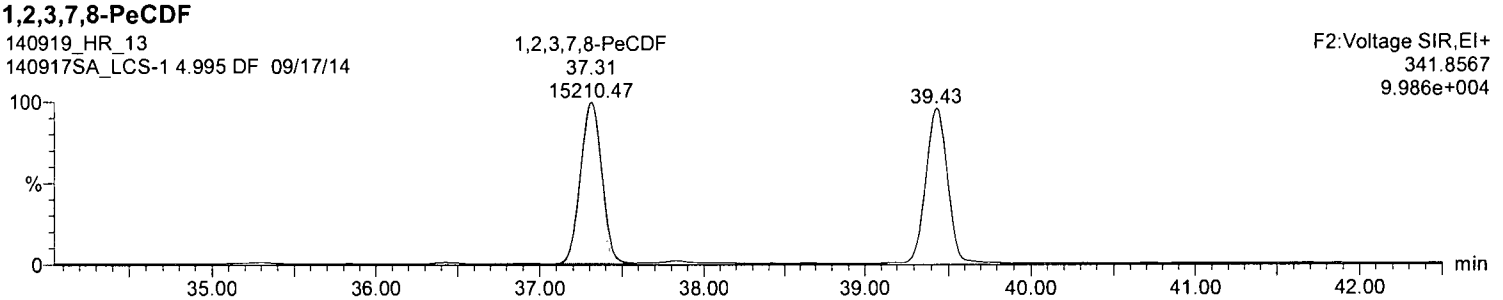


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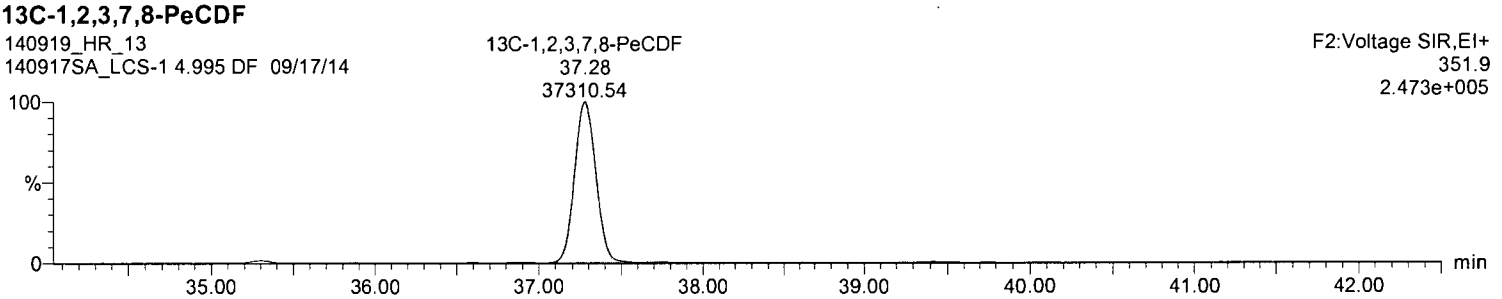
1,2,3,7,8-PeCDF



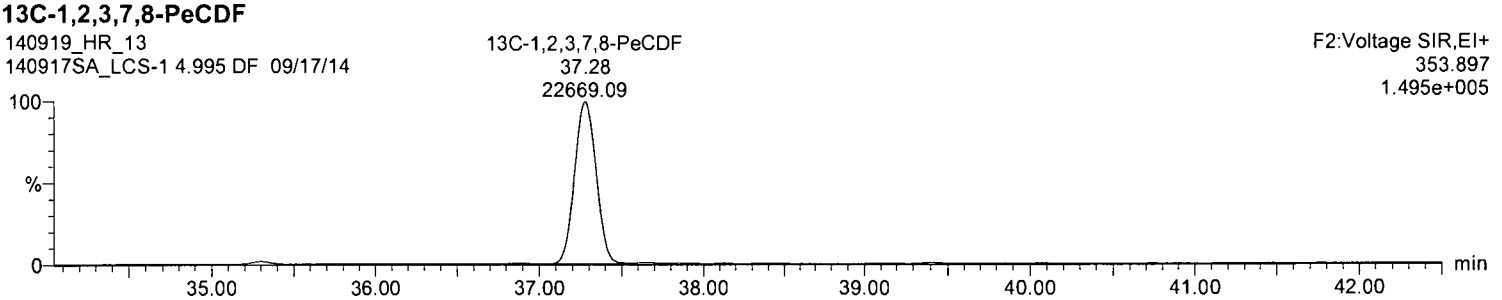
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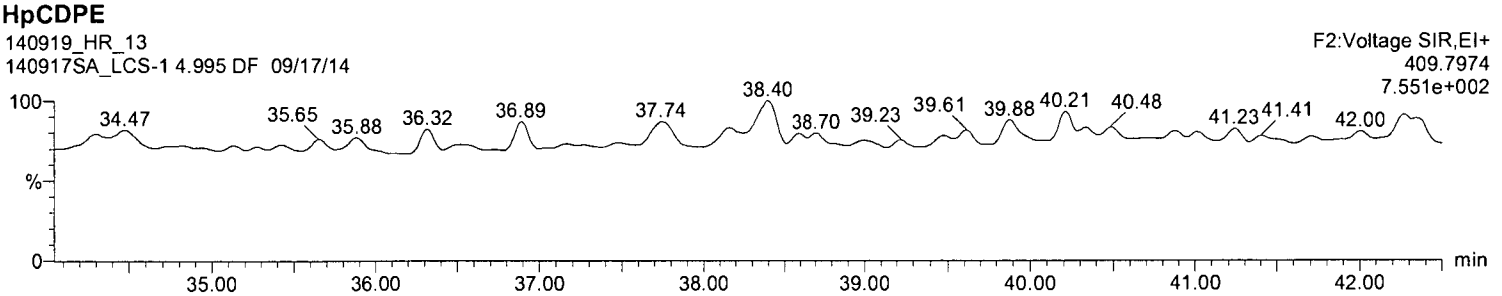
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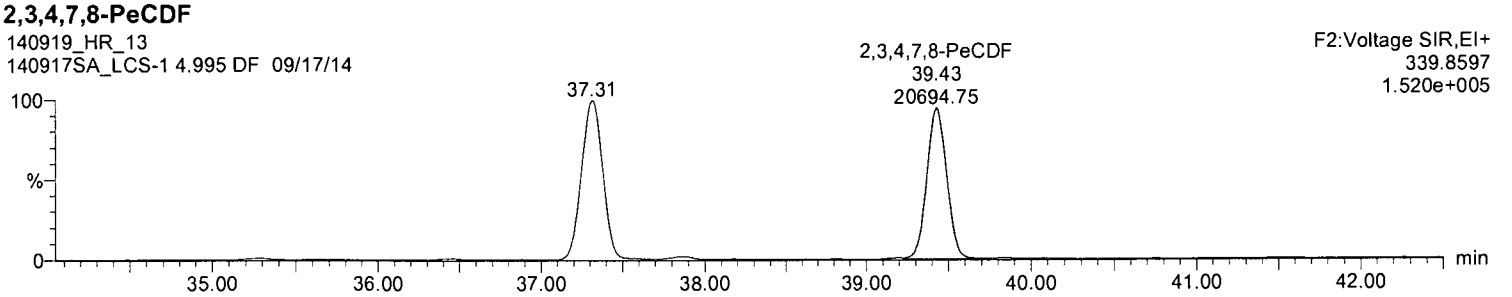


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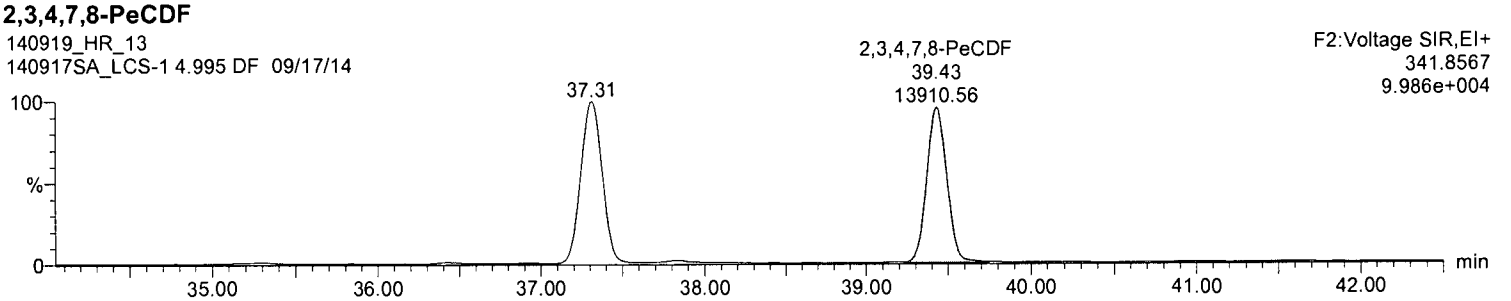


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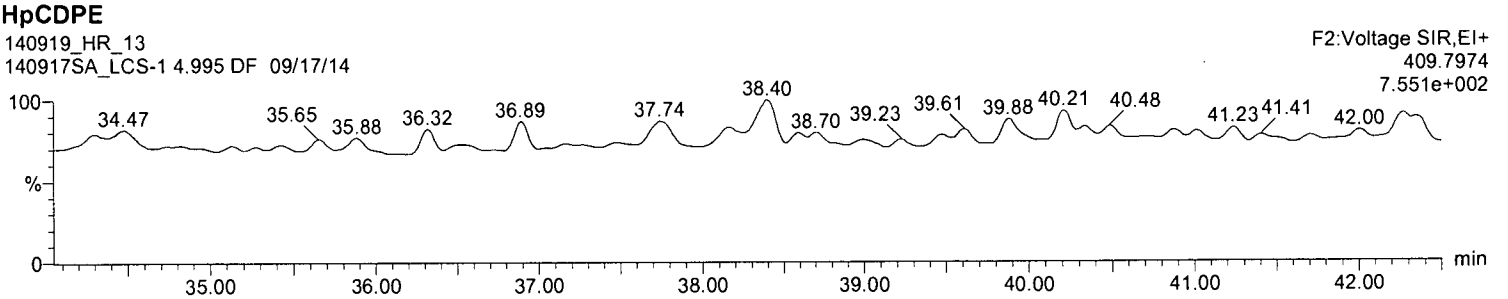
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2,3,4,7,8-PeCDF

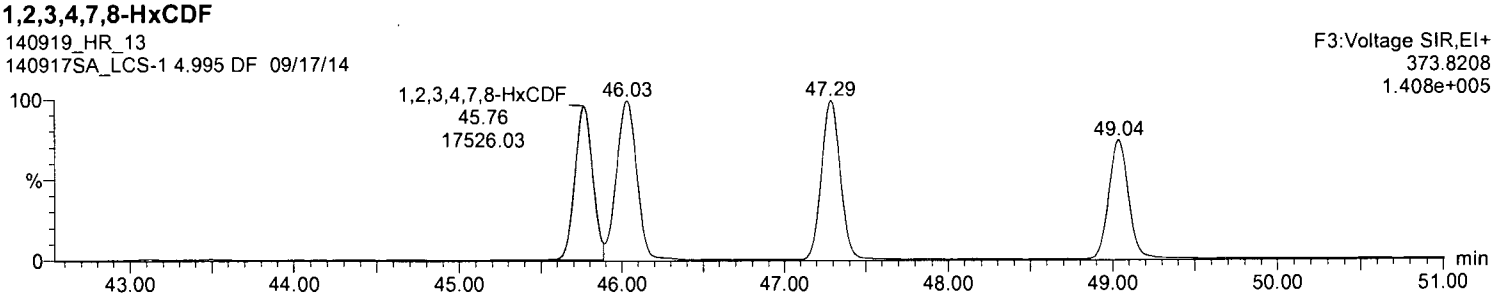


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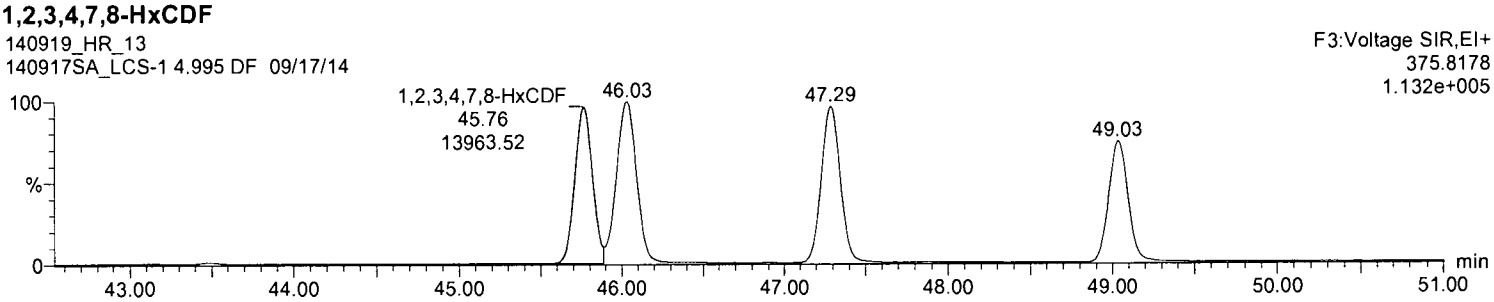


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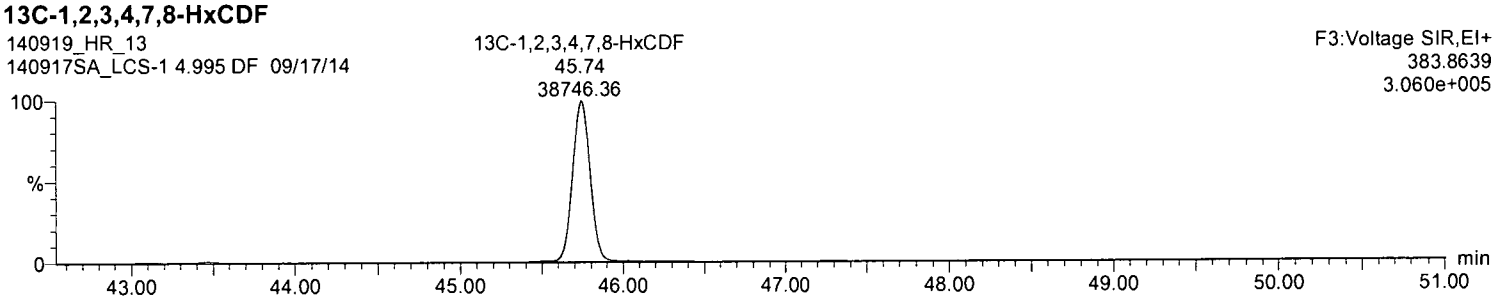
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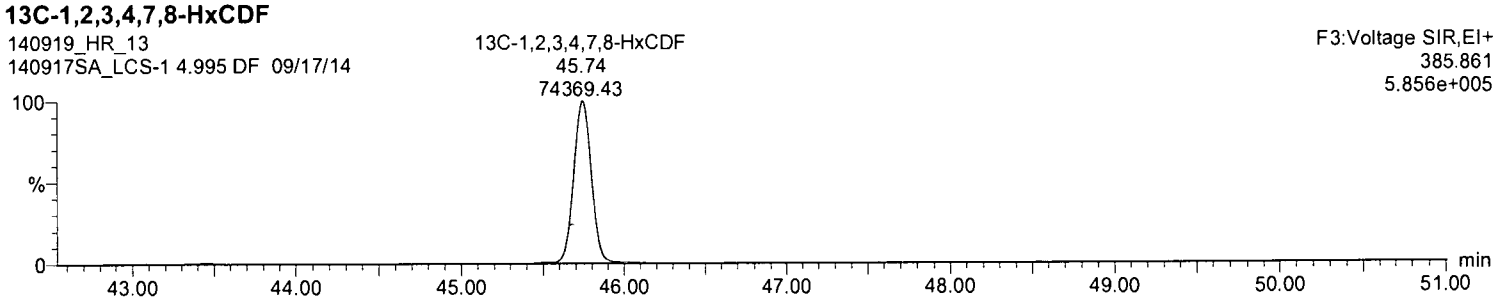
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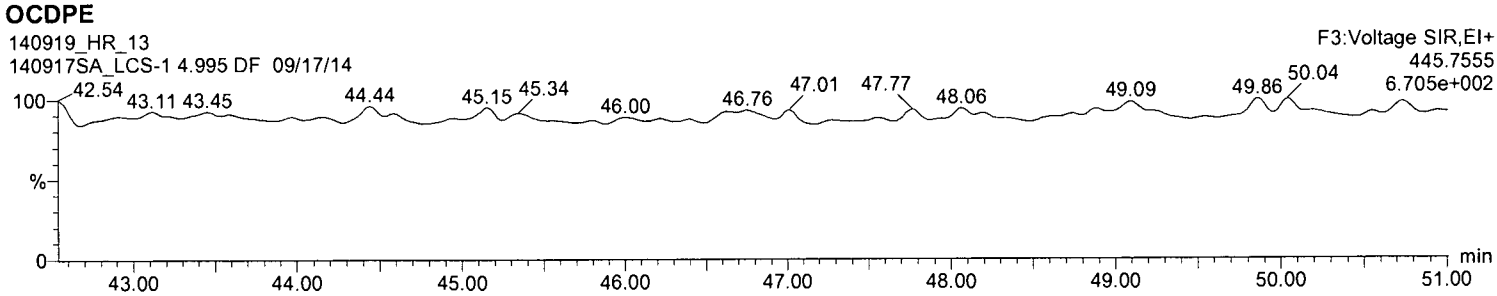
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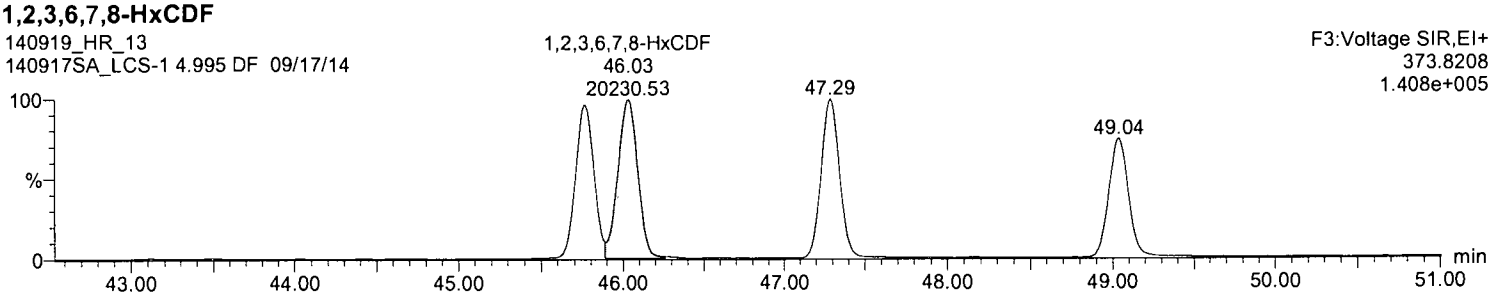


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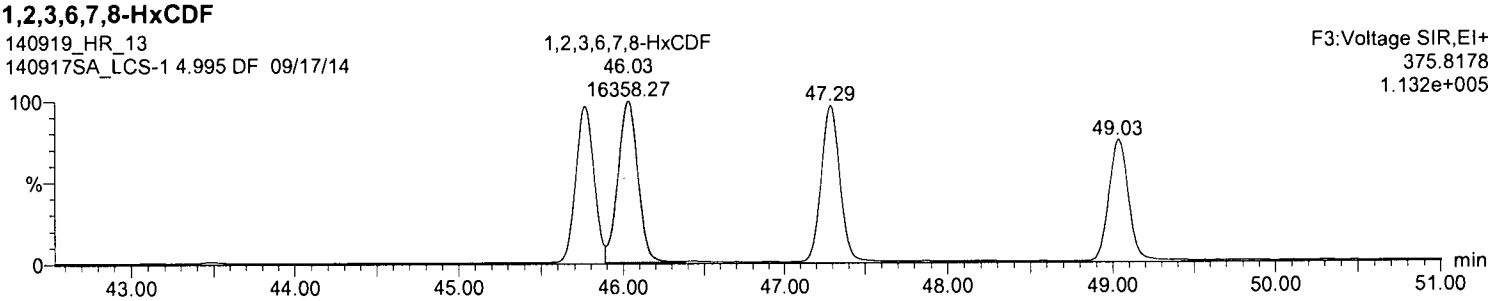


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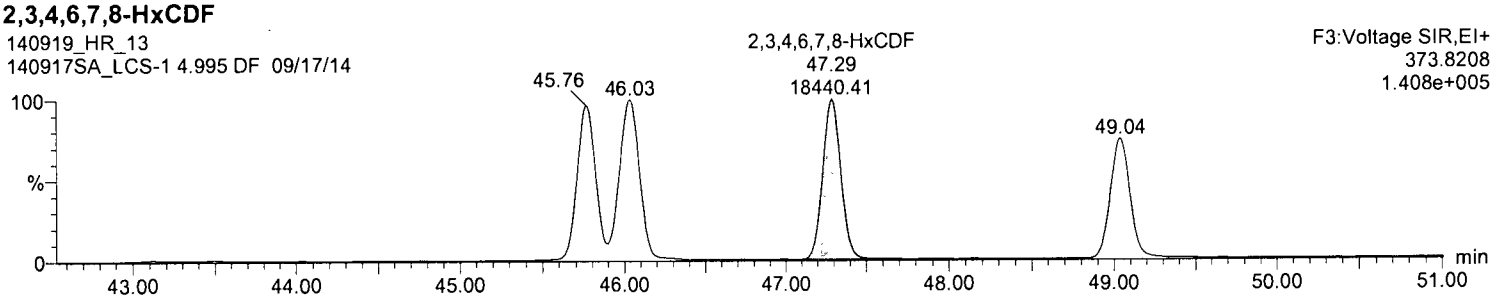
1,2,3,6,7,8-HxCDF



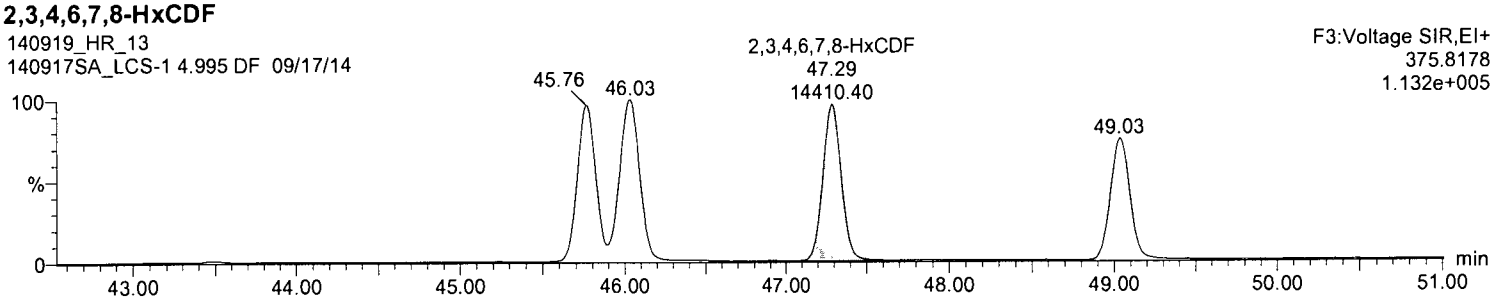
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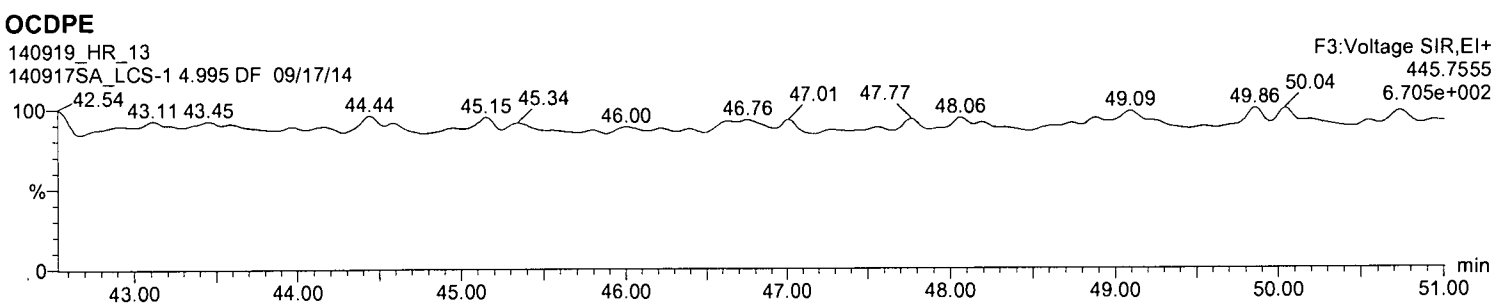
2,3,4,6,7,8-HxCDF



2,3,4,6,7,8-HxCDF

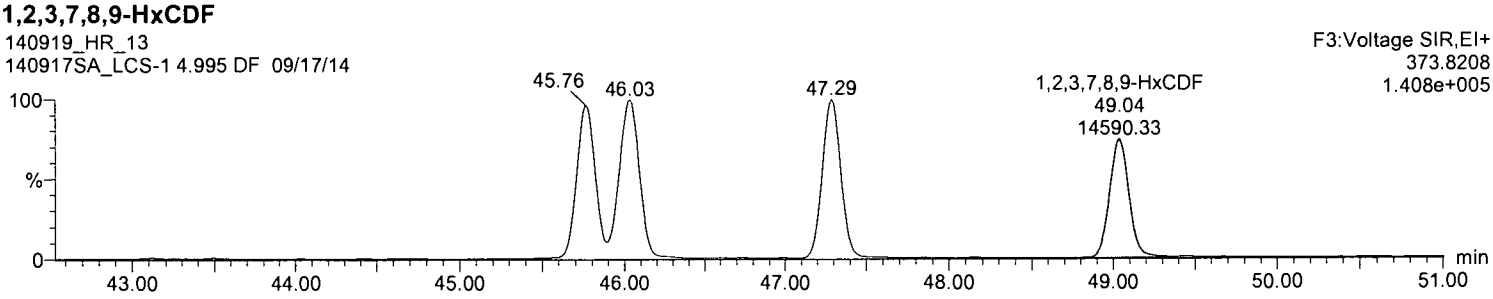


OCDPE

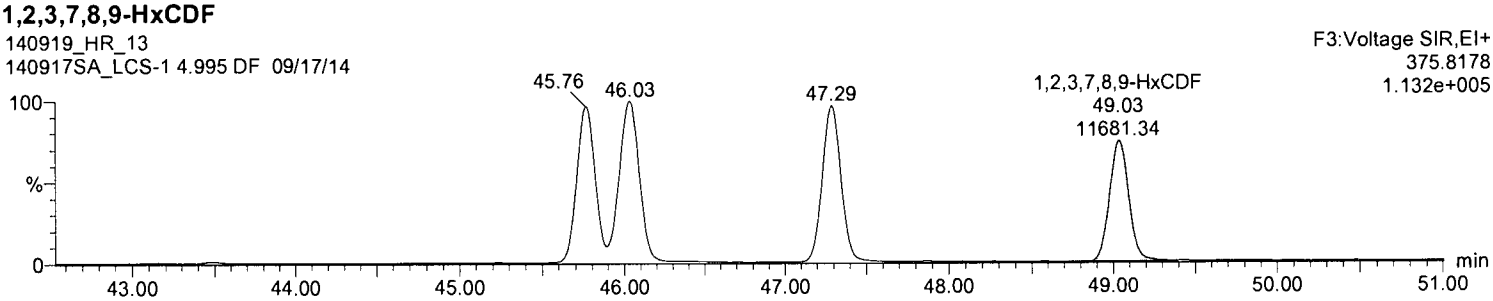


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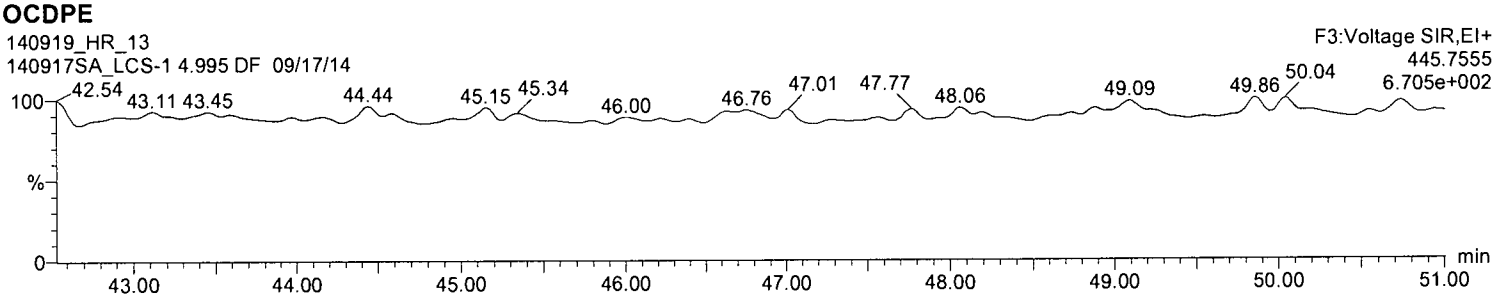
1,2,3,7,8,9-HxCDF



1,2,3,7,8,9-HxCDF

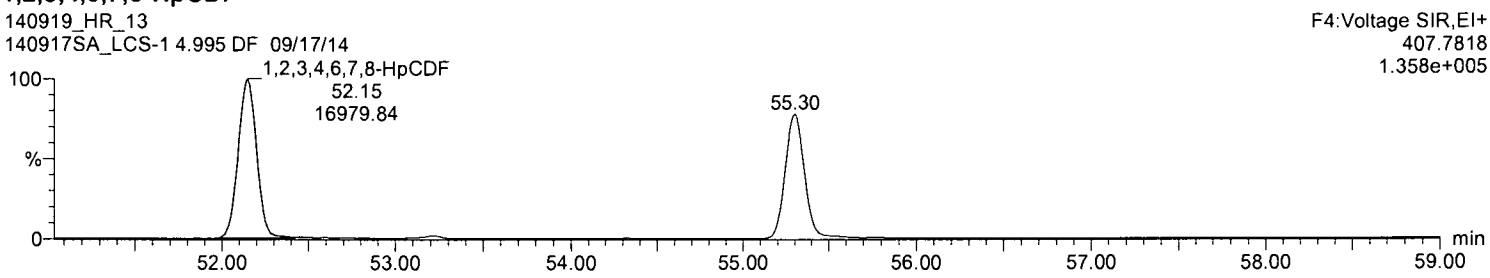


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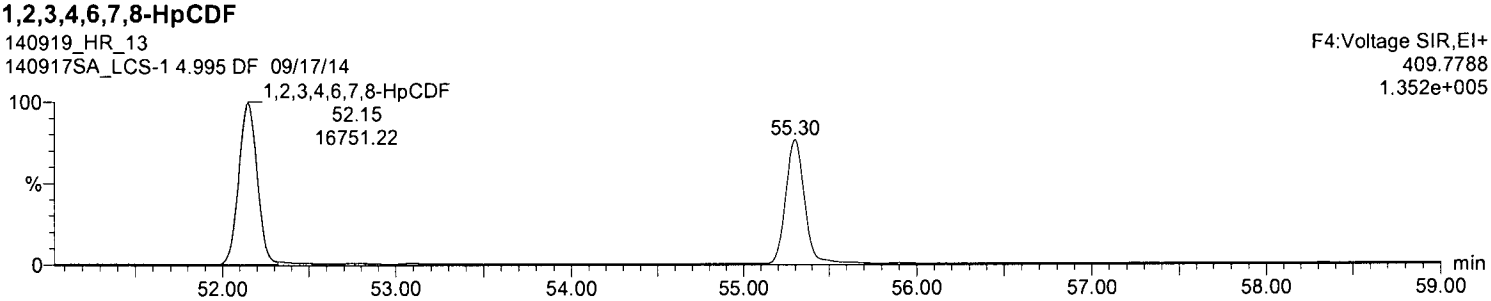


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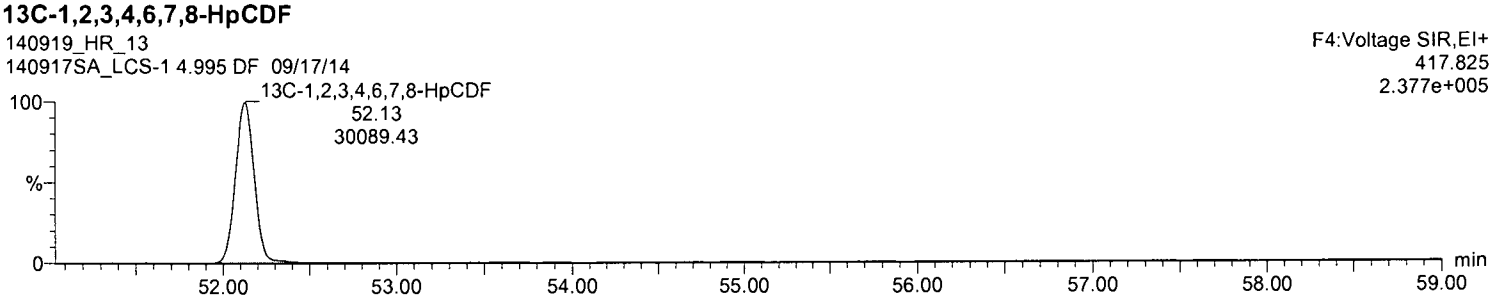
1,2,3,4,6,7,8-HpCDF



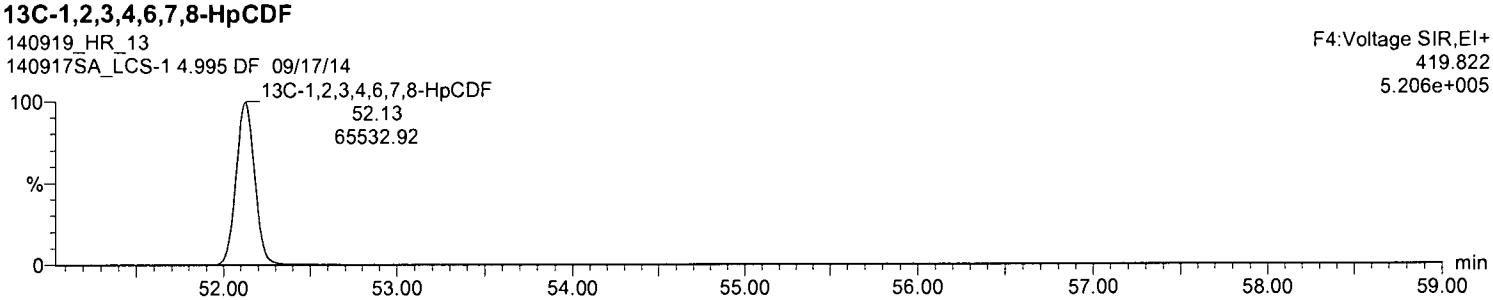
1,2,3,4,6,7,8-HpCDF



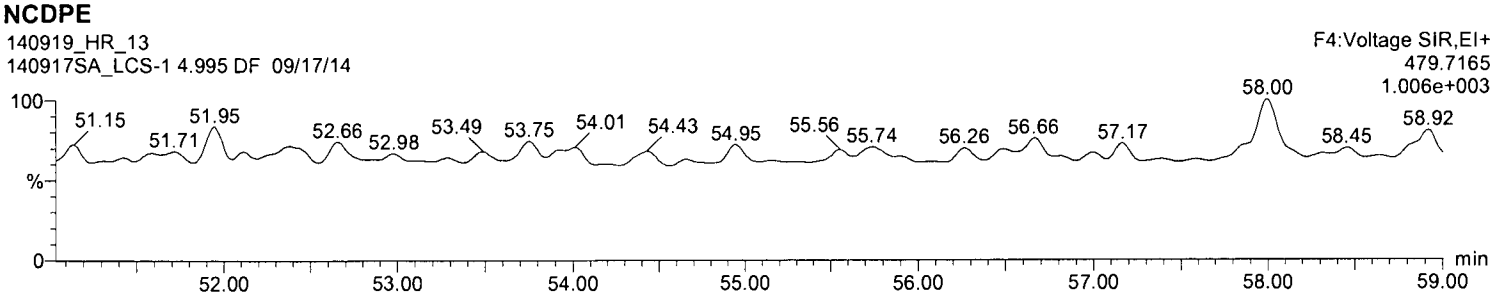
13C-1,2,3,4,6,7,8-HpCDF



13C-1,2,3,4,6,7,8-HpCDF

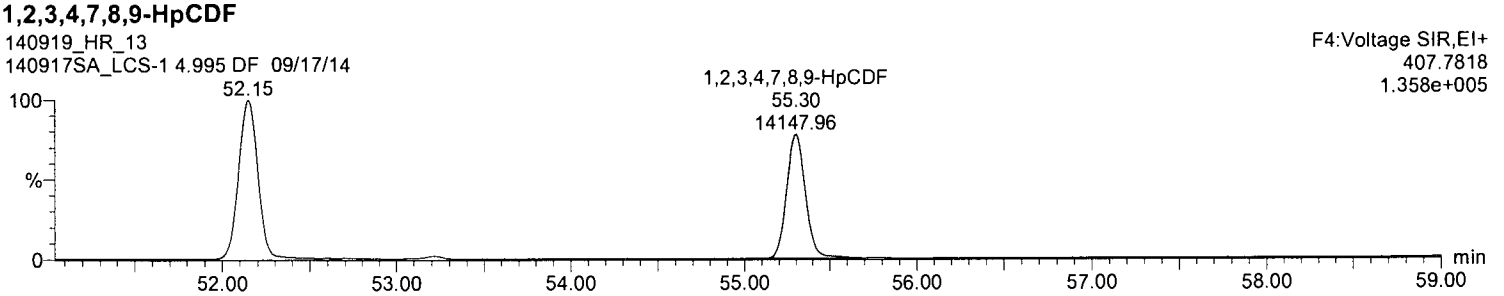


NCDPE

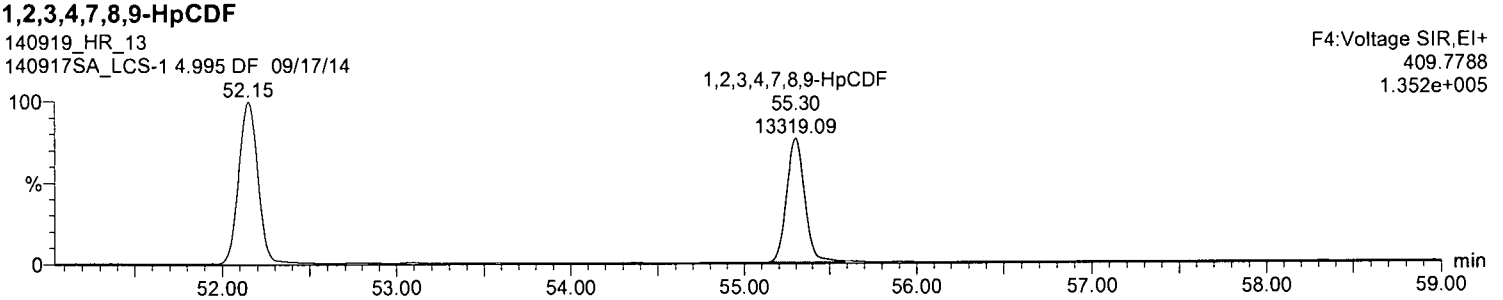


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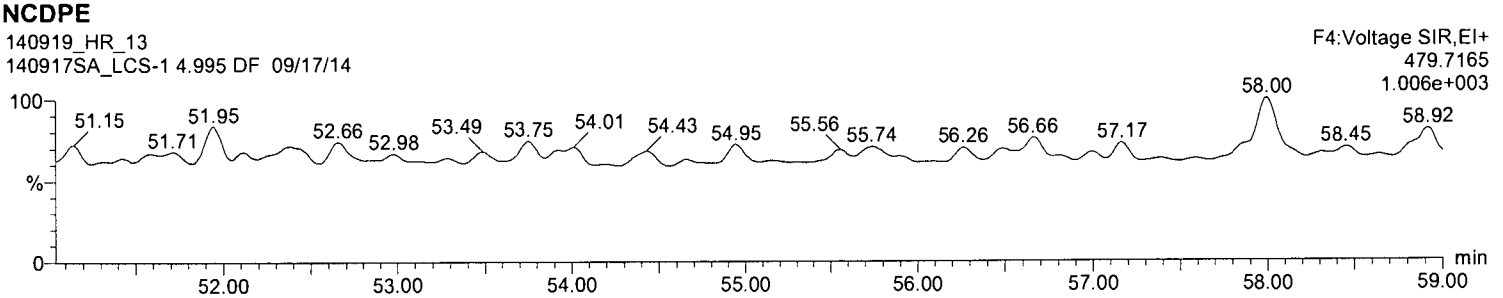
1,2,3,4,7,8,9-HpCDF



1,2,3,4,7,8,9-HpCDF

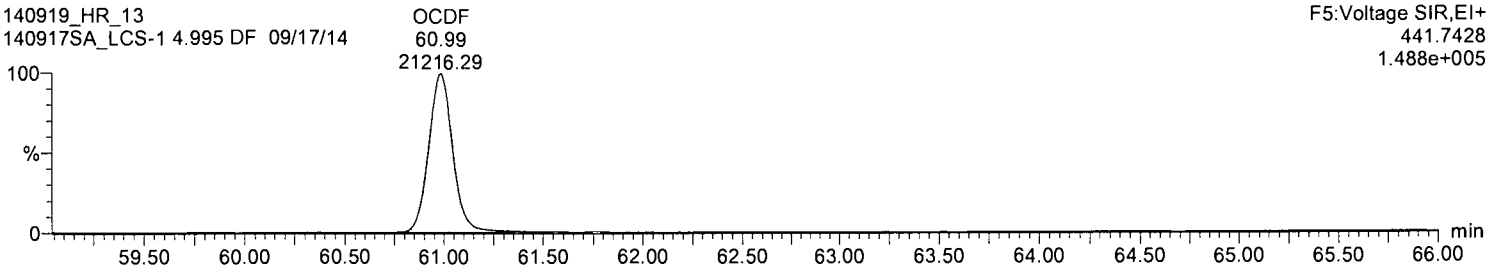


NCDPE

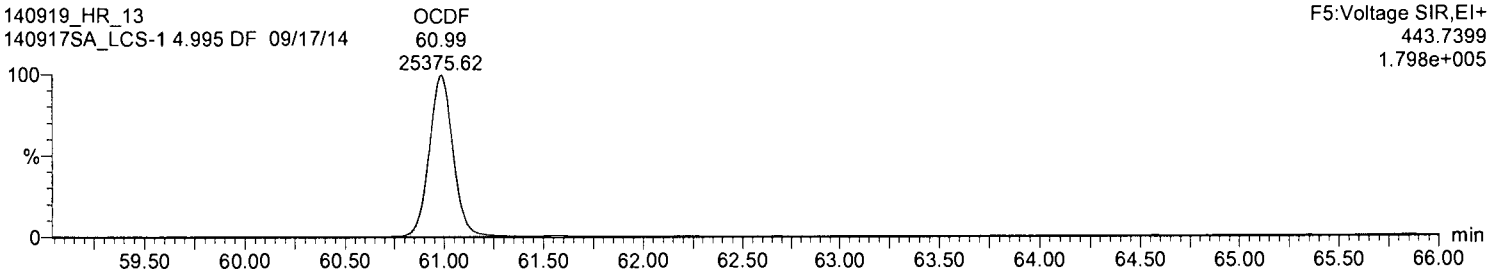


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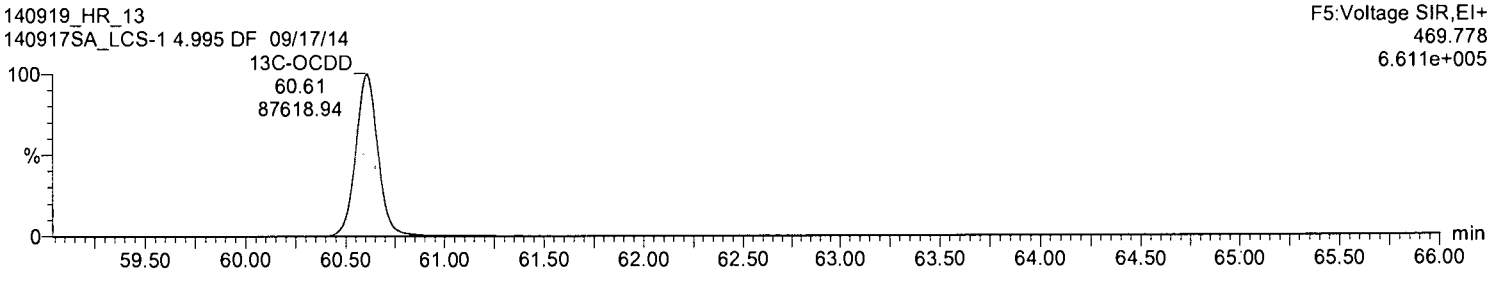
OCDF



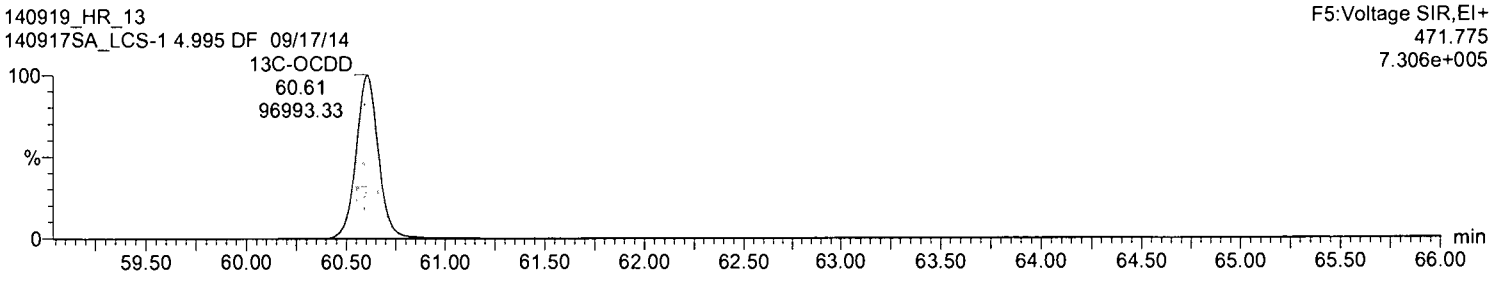
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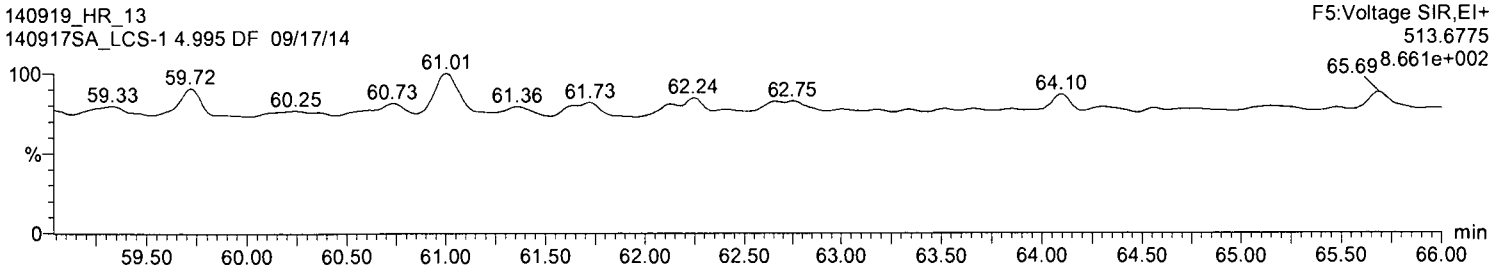
13C-OCDD



13C-OCDD

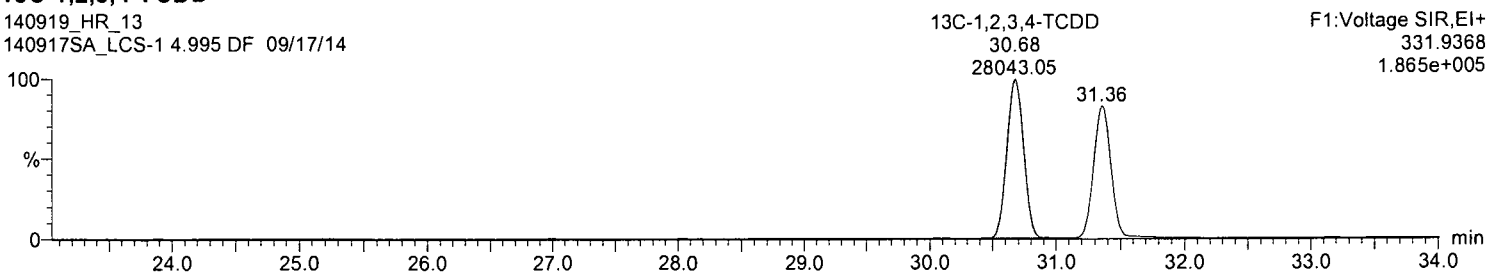


DCDPE

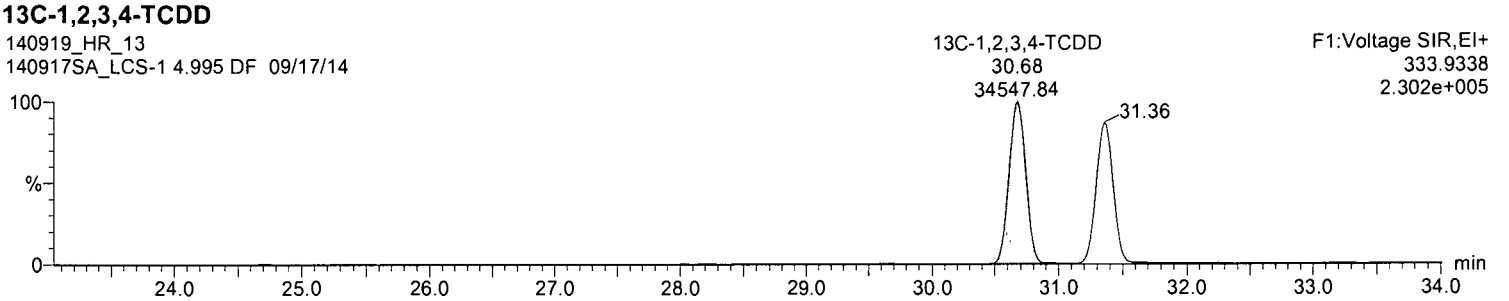


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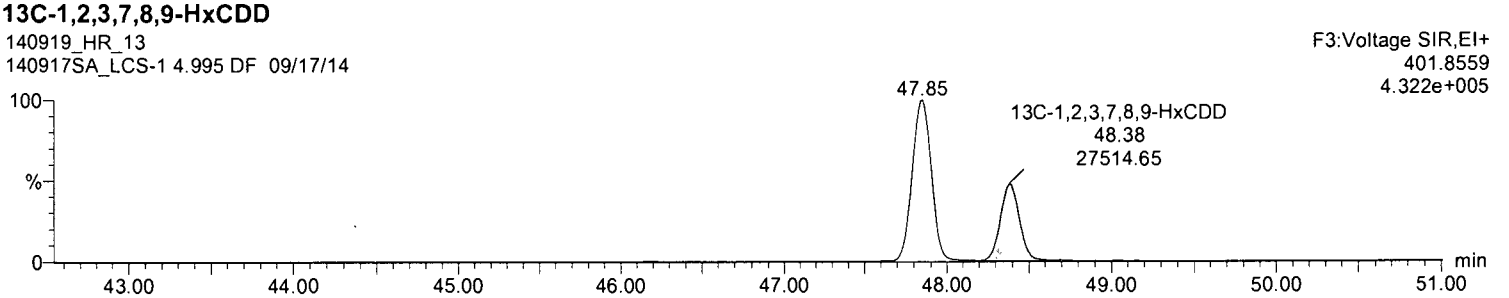
13C-1,2,3,4-TCDD



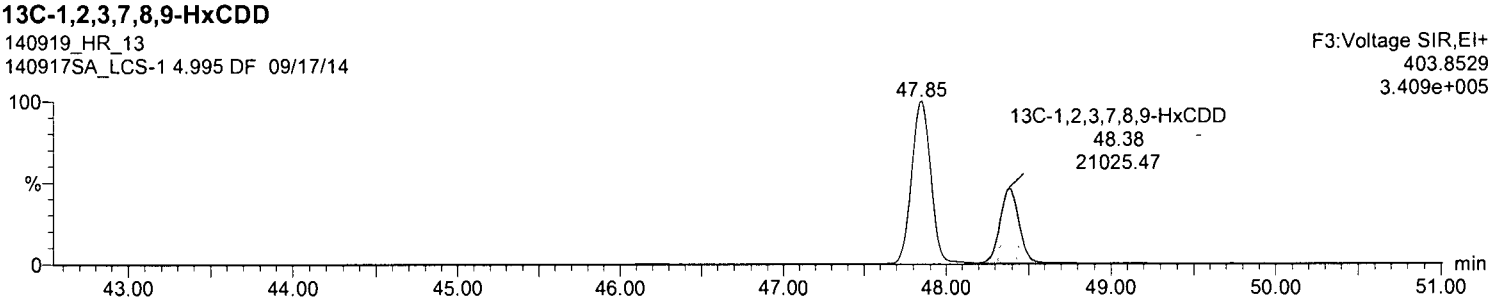
13C-1,2,3,4-TCDD

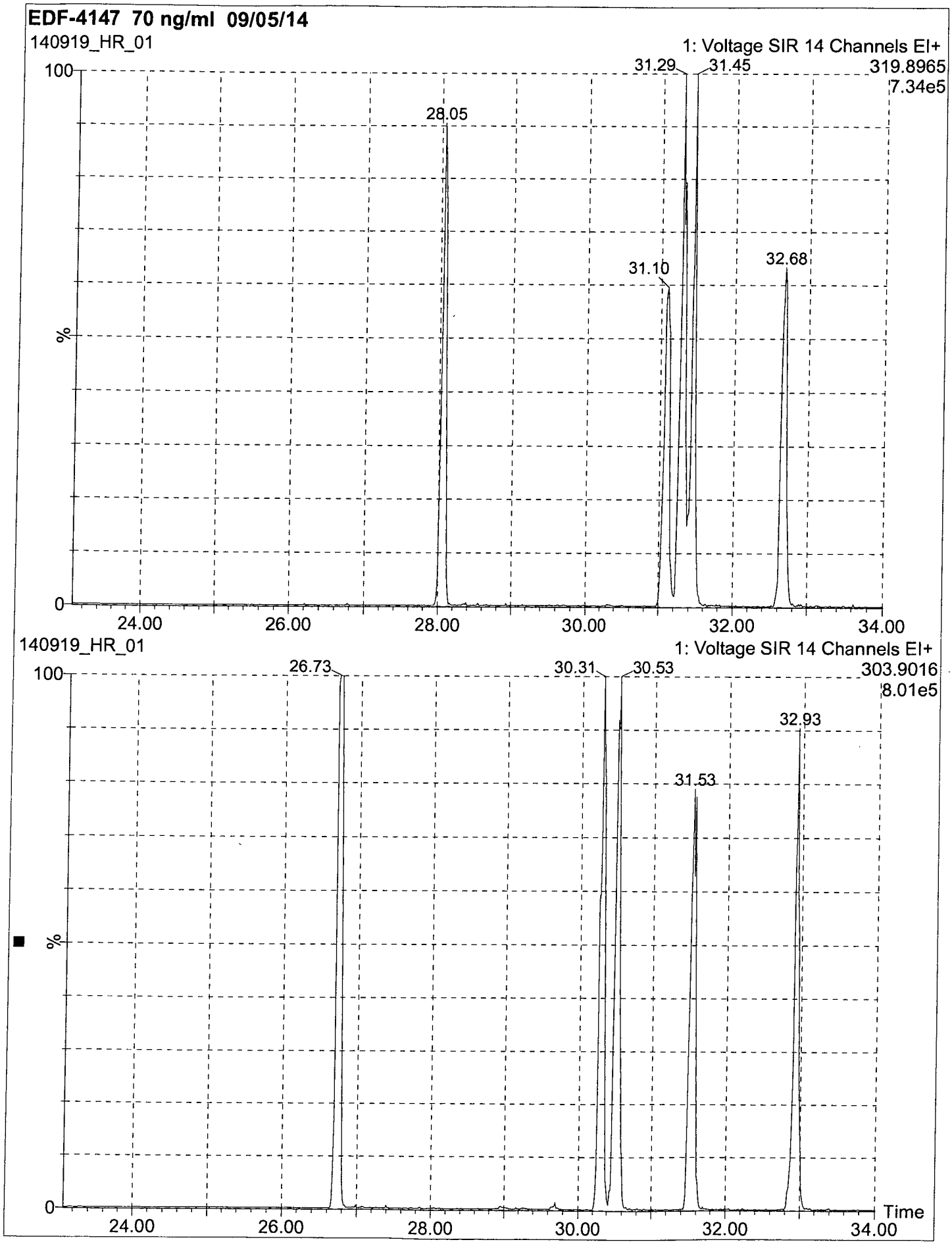


13C-1,2,3,7,8,9-HxCDD



13C-1,2,3,7,8,9-HxCDD




EDF-4147 70 ng/ml 09/05/14
140919_HR_01
1: Voltage SIR 14 Channels EI+
319.8965
7.34e5
31.29
31.45
28.05
31.10
32.68
100
%
0
24.00
26.00
28.00
30.00
32.00
34.00
140919_HR_01
1: Voltage SIR 14 Channels EI+
303.9016
8.01e5
26.73
30.31
30.53
32.93
31.53
100
%
0
Time
24.00
26.00
28.00
30.00
32.00
34.00

Method: C:\MassLynx\Default.pro\Methdb\140919_8290_CP.mdb 22 Sep 2014 12:18:54
Calibration: 22 Sep 2014 12:19:28

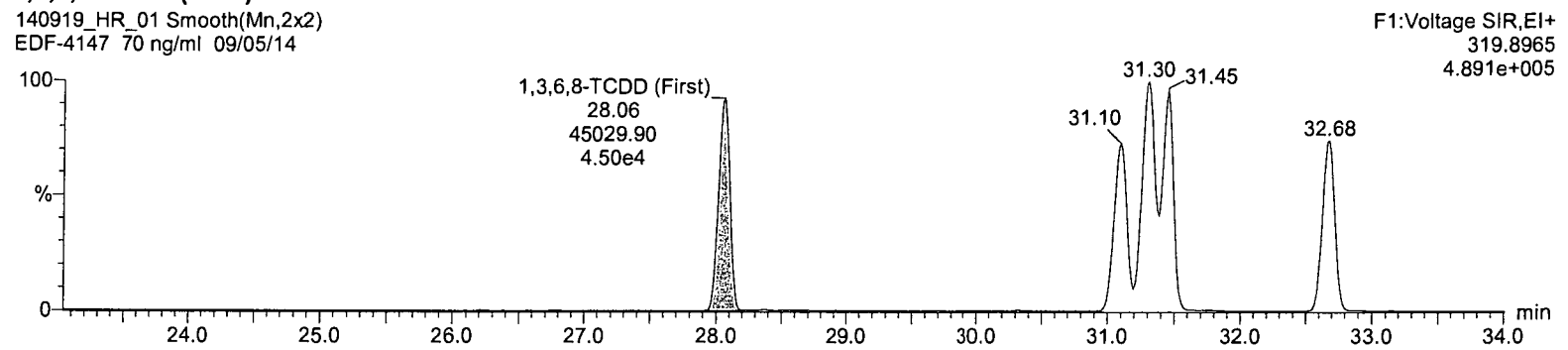
Name: 140919_HR_01, Date: 19-Sep-2014, Time: 16:36:42, ID: , Description: EDF-4147 70 ng/ml 09/05/14, User:

#	Name	RT
1	1,3,6,8-TCDD (First)	28.06
2	1,2,3,7/1,2,3,8-TCDD	31.10
3	1,2,3,9-TCDD	31.30
4	2,3,7,8-TCDD	31.45
5	1,2,8,9-TCDD (Last)	32.68
6	13C-2,3,7,8-TCDD	31.42
7	1,2,4,6,8/1,2,4,7,9-PeCDD (First)	35.45
8	1,2,3,8,9-PeCDD (Last)	41.07
9	1,2,4,6,7,9/1,2,4,6,8,9-HxCDD (First)	44.47
10	1,2,3,4,6,7-HxCDD (Last)	48.30
11	1,2,3,4,6,7,9-HpCDD (First)	52.86
12	1,2,3,4,6,7,8-HpCDD (Last)	54.43
13	1,3,6,8-TCDF (First)	26.73
14	2,3,4,7-TCDF	30.31
15	2,3,7,8-TCDF	30.51
16	1,2,3,9-TCDF	31.53
17	1,2,8,9-TCDF (Last)	32.93
18	13C-2,3,7,8-TCDF	30.50
19	1,3,4,6,8-PeCDF (First)	32.80
20	1,2,3,8,9-PeCDF (Last)	41.60
21	1,2,3,4,6,8-HxCDF (First)	43.19
22	1,2,3,4,8,9-HxCDF (Last)	49.18
23	1,2,3,4,6,7,8-HpCDF (First)	52.21
24	1,2,3,4,7,8,9-HpCDF (Last)	55.35

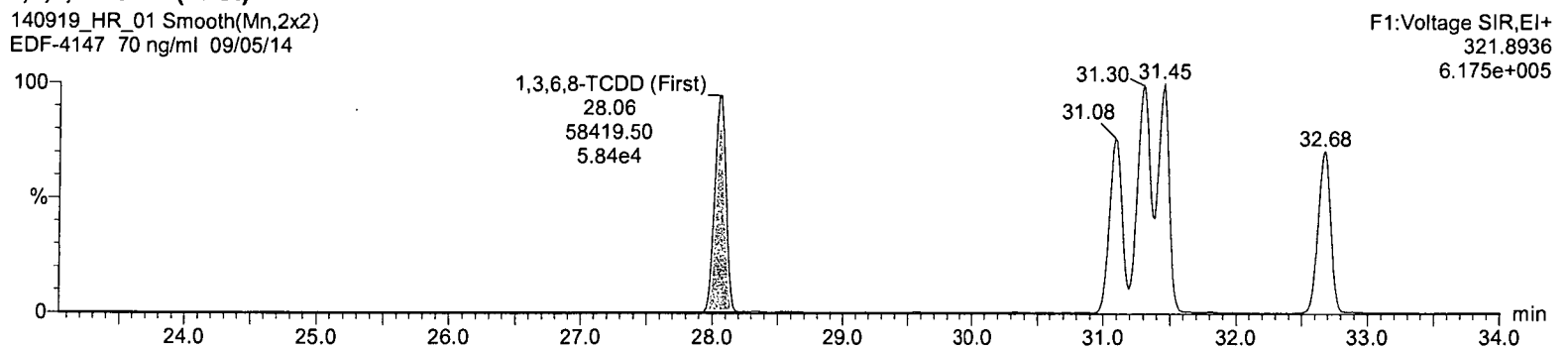
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Name: 140919_HR_01, Date: 19-Sep-2014, Time: 16:36:42, ID: , Description: EDF-4147 70 ng/ml 09/05/14

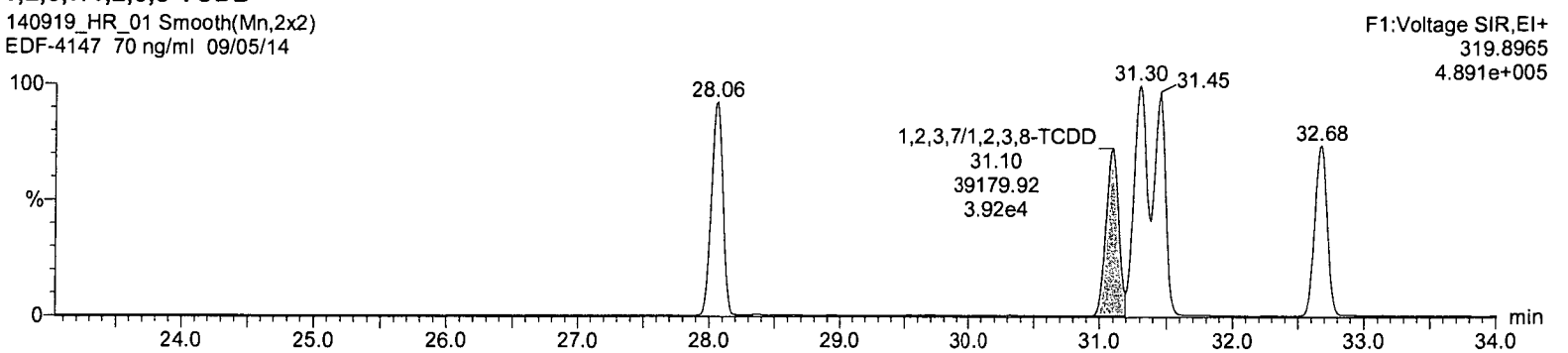
1,3,6,8-TCDD (First)



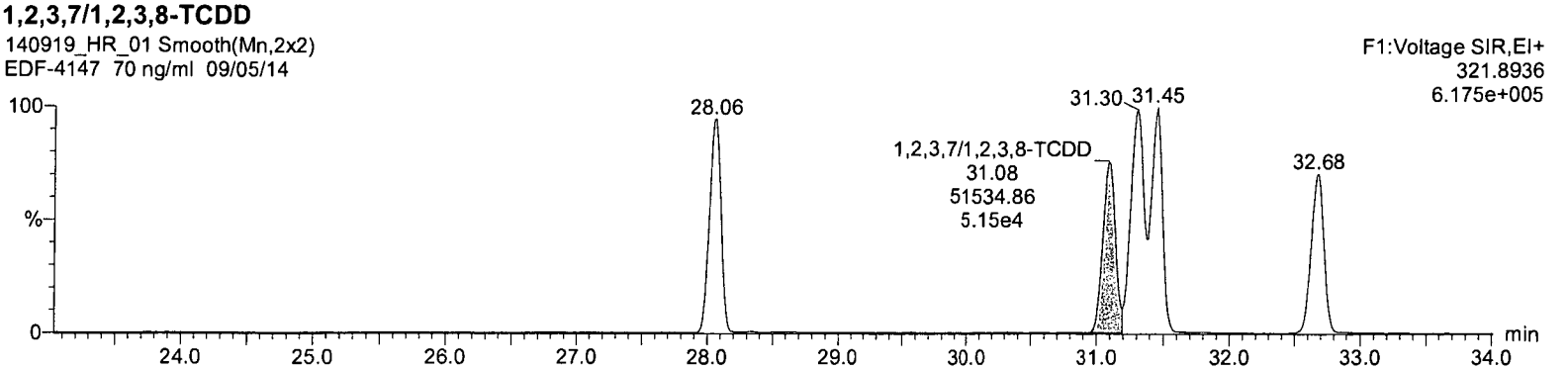
1,3,6,8-TCDD (First)



1,2,3,7/1,2,3,8-TCDD

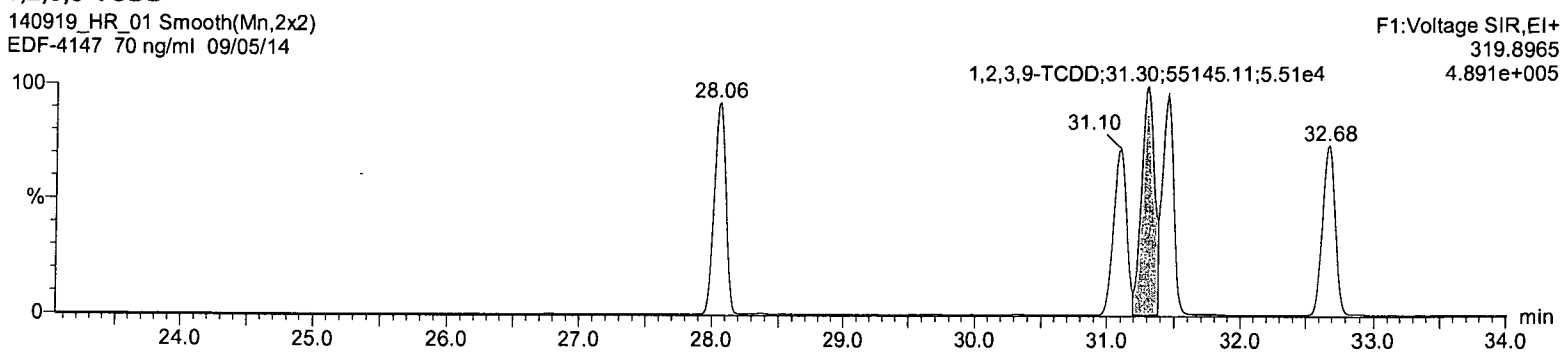


1,2,3,7/1,2,3,8-TCDD

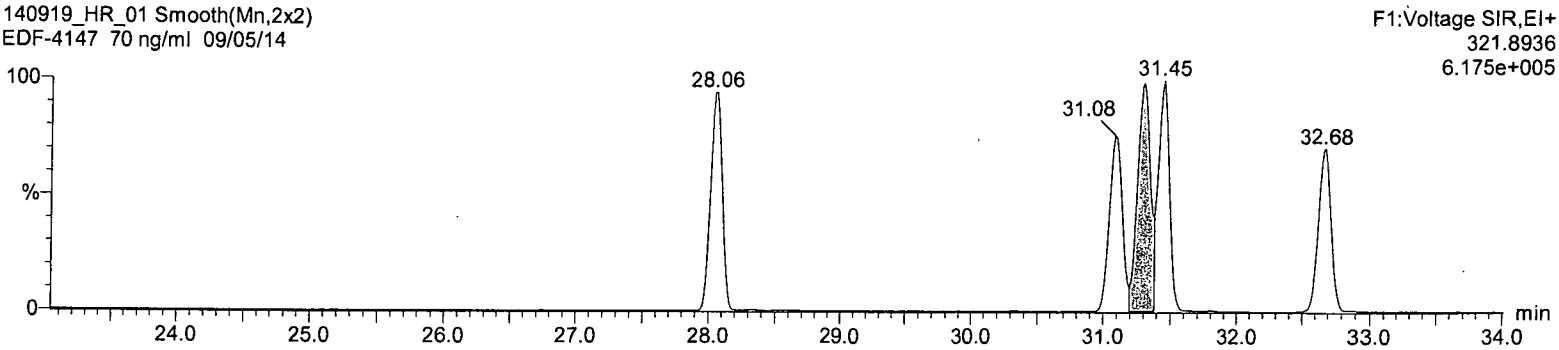


Name: 140919_HR_01, Date: 19-Sep-2014, Time: 16:36:42, ID: , Description: EDF-4147 70 ng/ml 09/05/14

1,2,3,9-TCDD

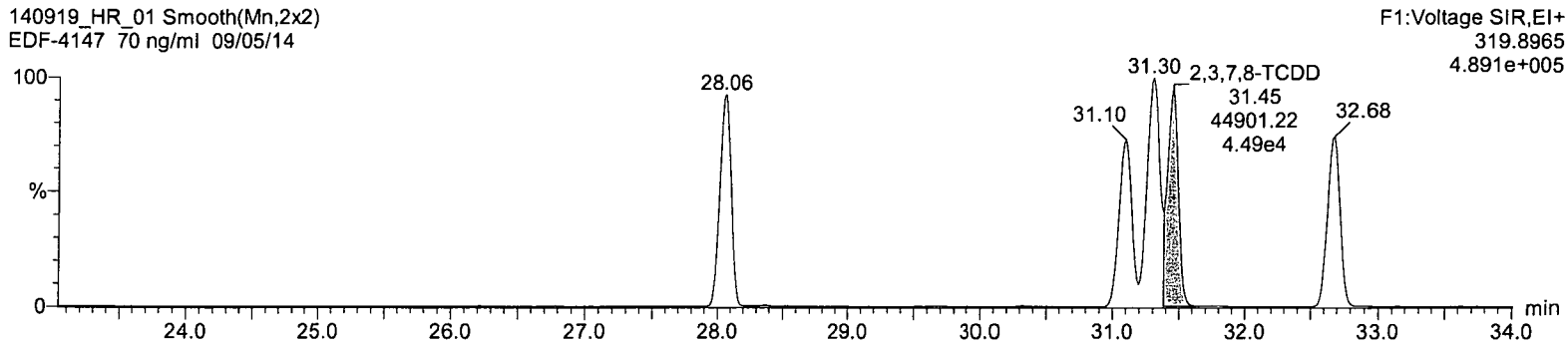


1,2,3,9-TCDD

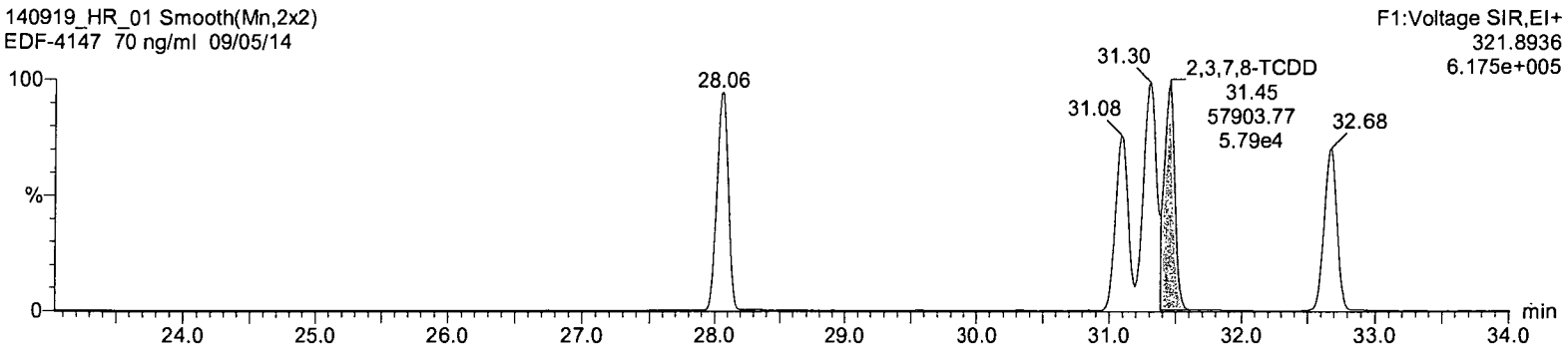


Name: 140919_HR_01, Date: 19-Sep-2014, Time: 16:36:42, ID: , Description: EDF-4147 70 ng/ml 09/05/14

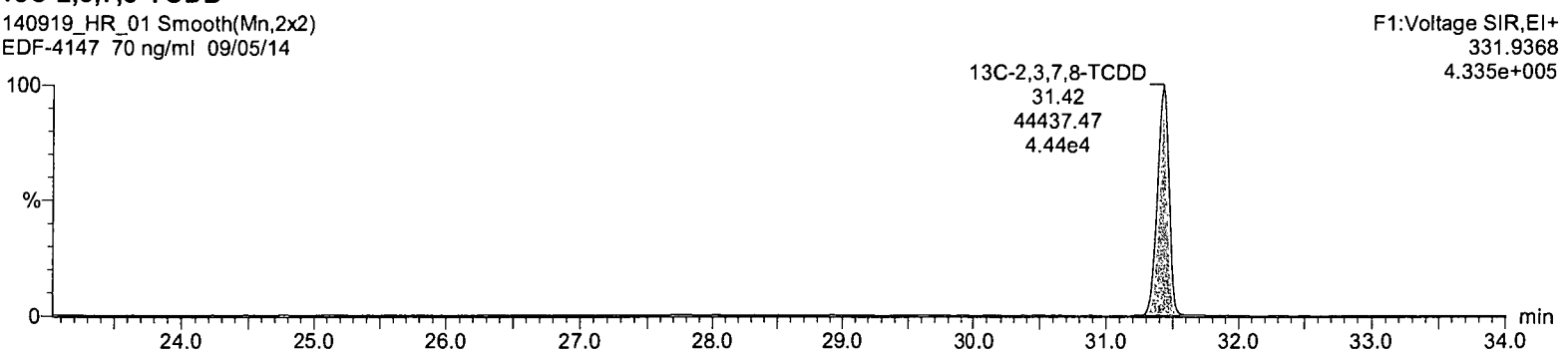
2,3,7,8-TCDD



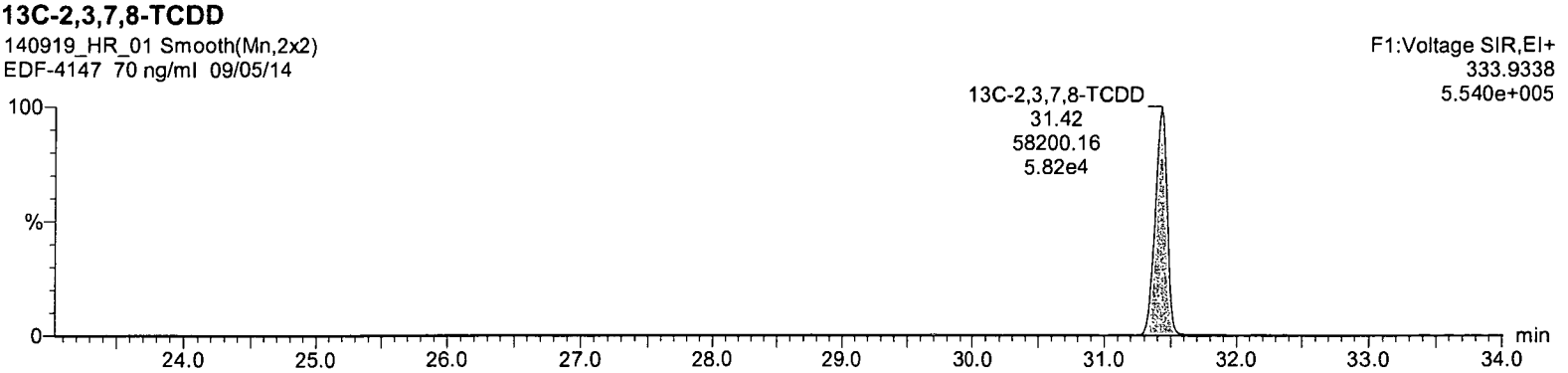
2,3,7,8-TCDD



13C-2,3,7,8-TCDD

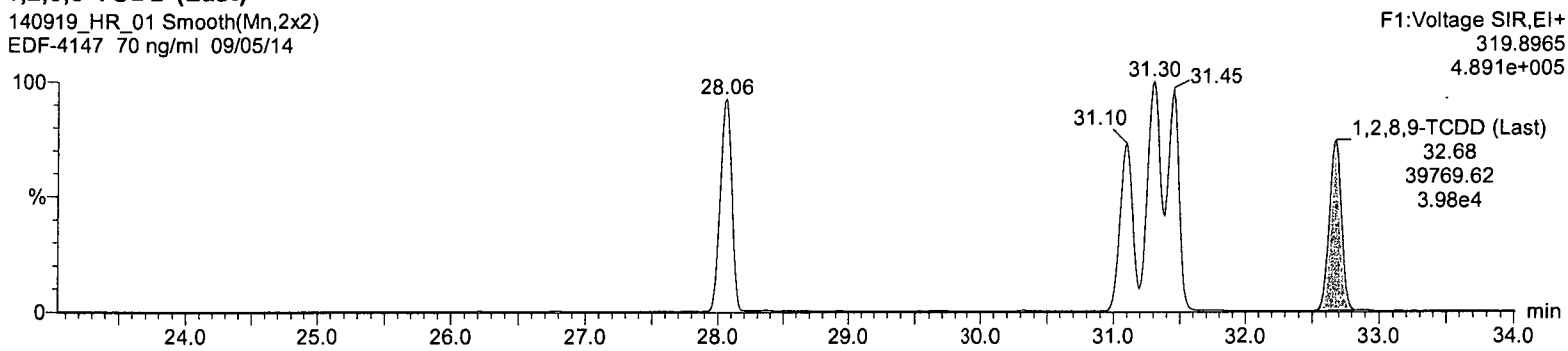


13C-2,3,7,8-TCDD

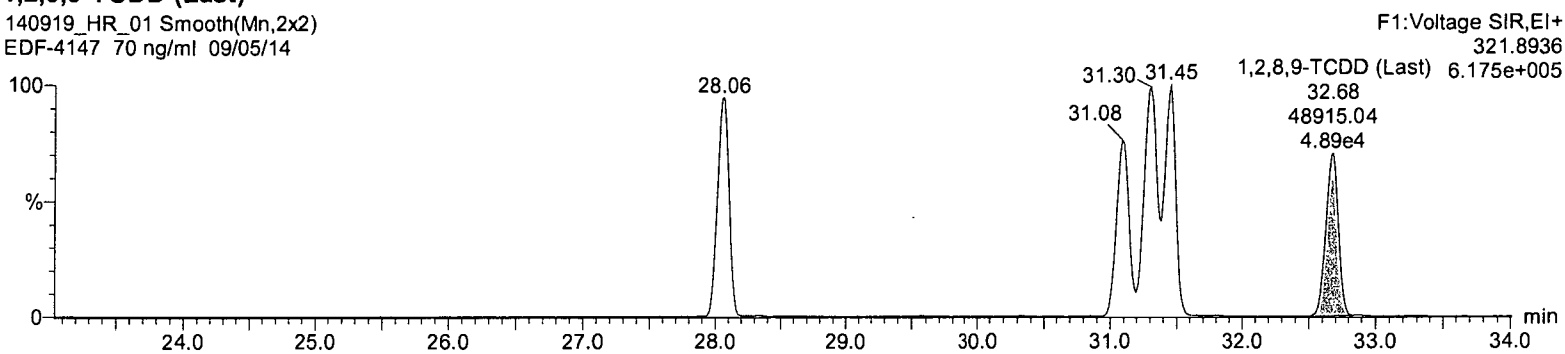


Name: 140919_HR_01, Date: 19-Sep-2014, Time: 16:36:42, ID: , Description: EDF-4147 70 ng/ml 09/05/14

1,2,8,9-TCDD (Last)

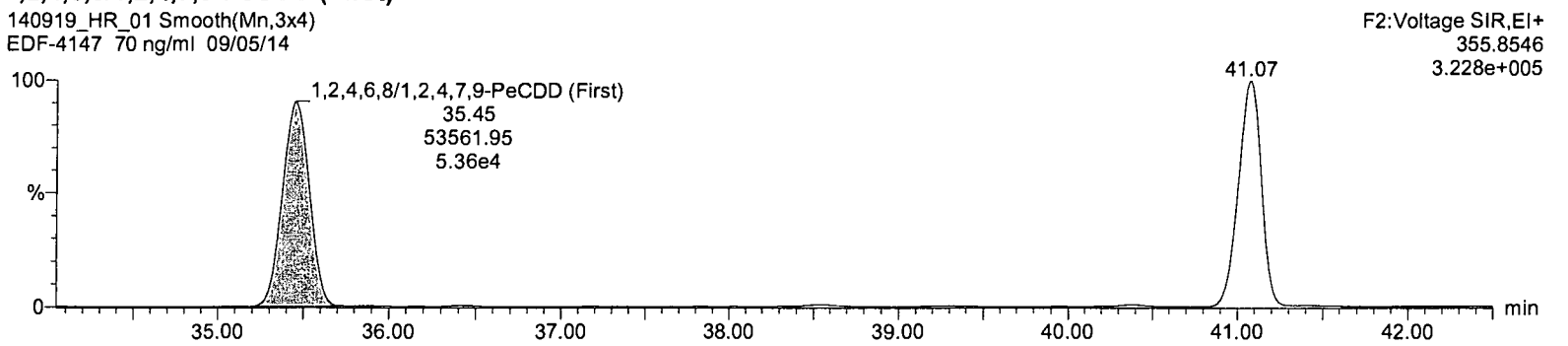


1,2,8,9-TCDD (Last)

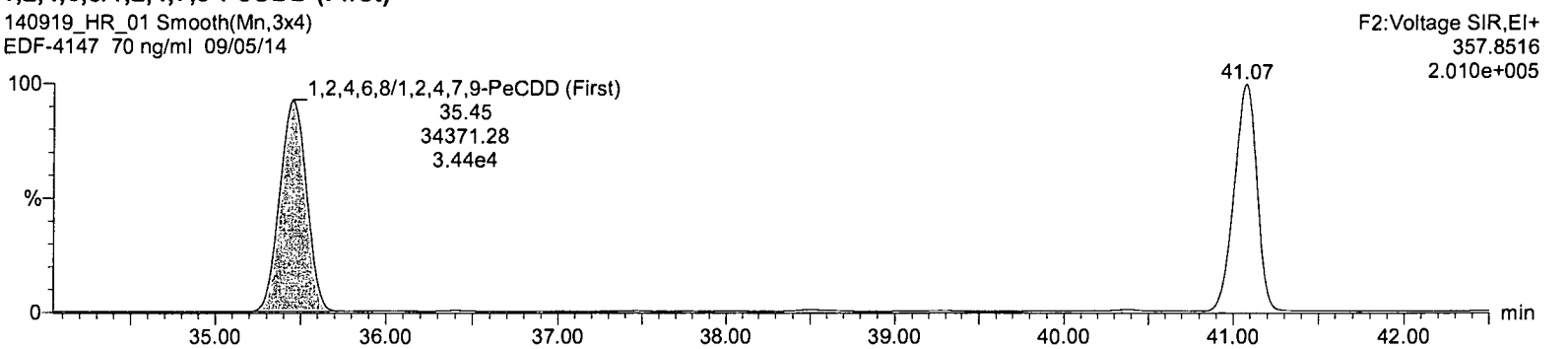


Name: 140919_HR_01, Date: 19-Sep-2014, Time: 16:36:42, ID: , Description: EDF-4147 70 ng/ml 09/05/14

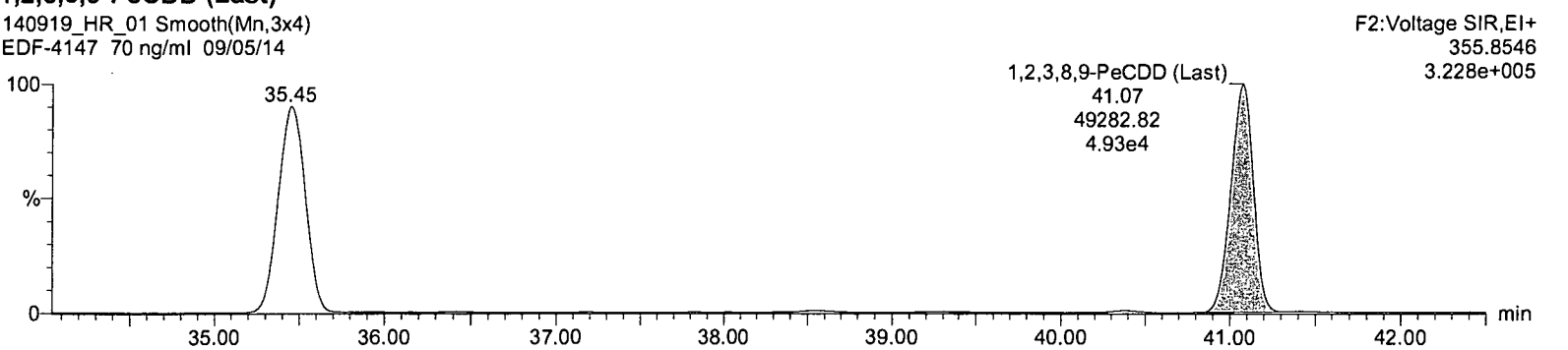
1,2,4,6,8/1,2,4,7,9-PeCDD (First)



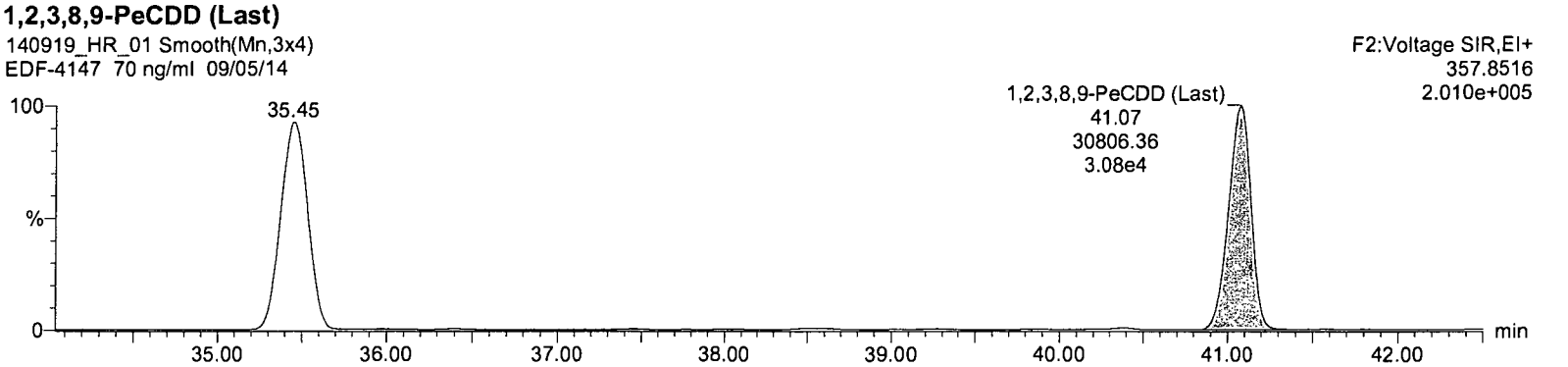
1,2,4,6,8/1,2,4,7,9-PeCDD (First)



1,2,3,8,9-PeCDD (Last)

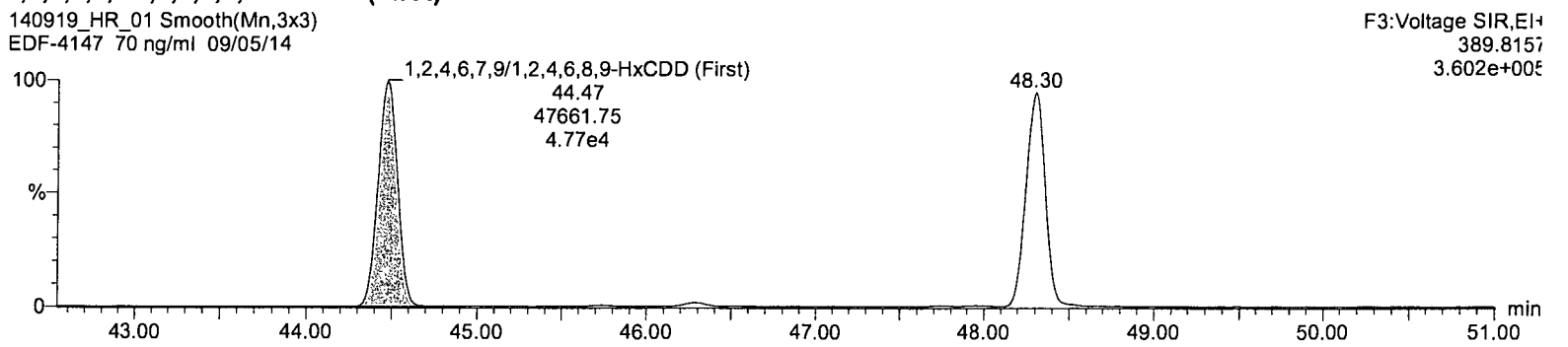


1,2,3,8,9-PeCDD (Last)

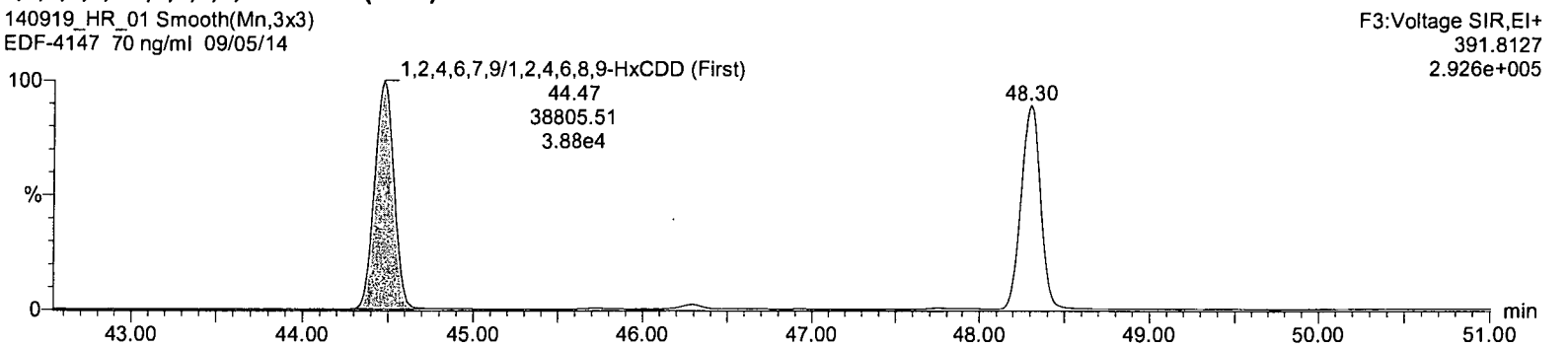


Name: 140919_HR_01, Date: 19-Sep-2014, Time: 16:36:42, ID: , Description: EDF-4147 70 ng/ml 09/05/14

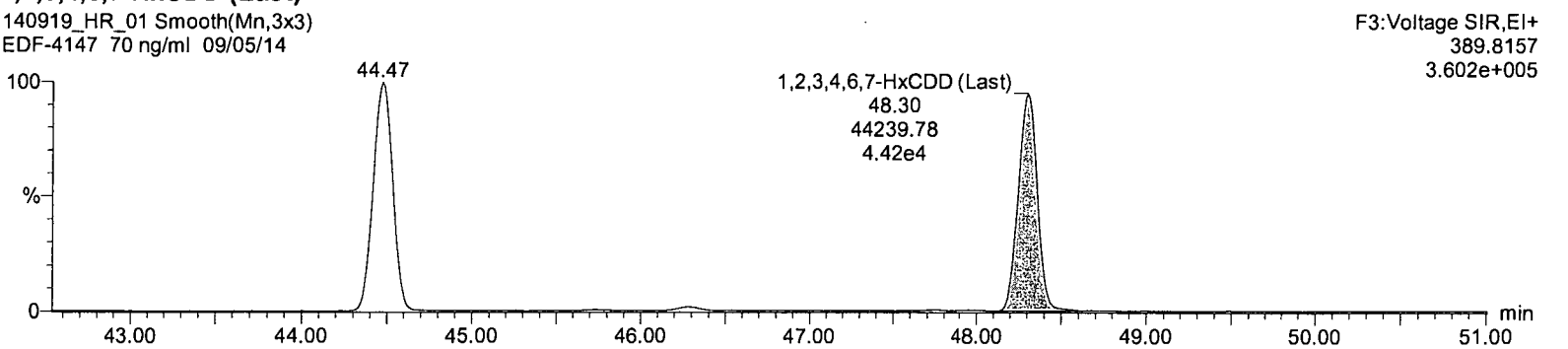
1,2,4,6,7,9/1,2,4,6,8,9-HxCDD (First)



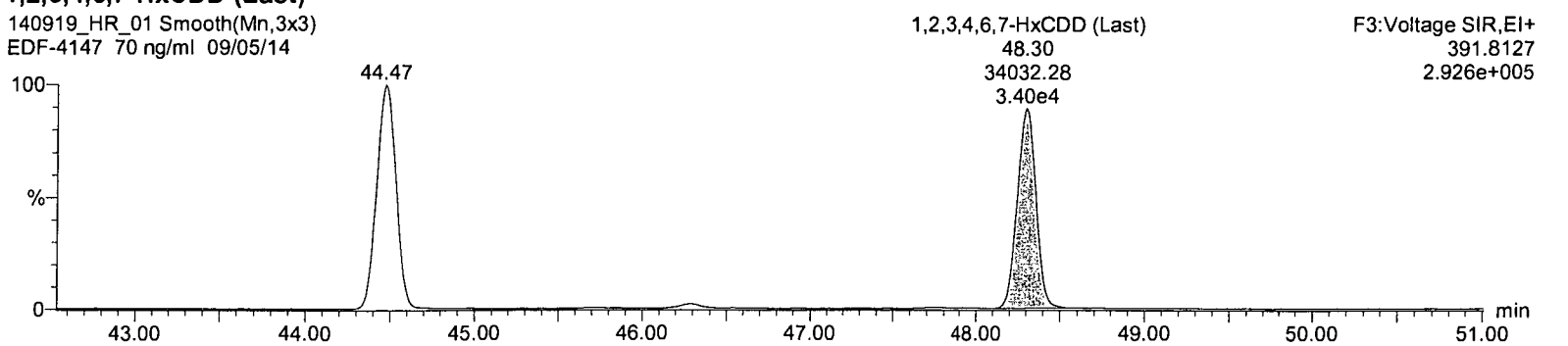
1,2,4,6,7,9/1,2,4,6,8,9-HxCDD (First)



1,2,3,4,6,7-HxCDD (Last)

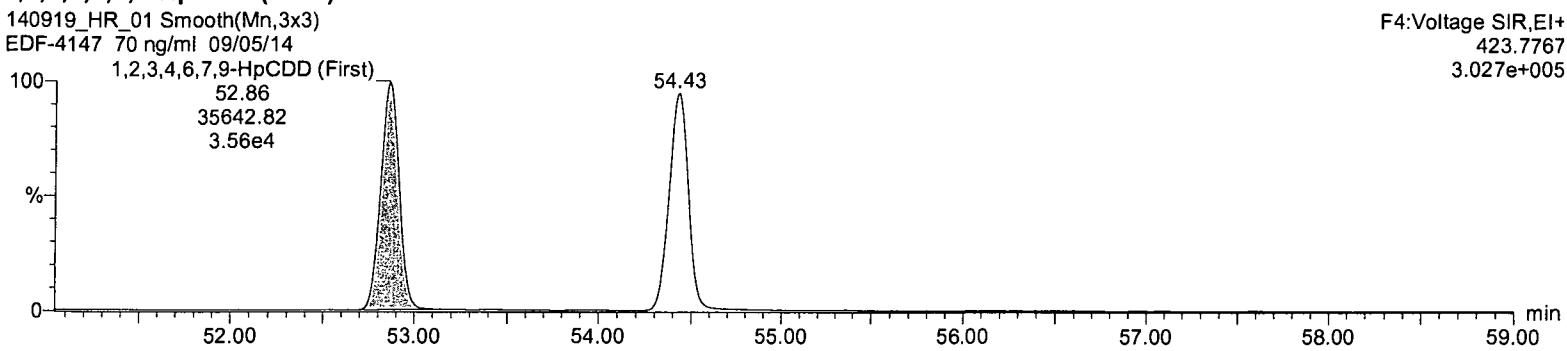


1,2,3,4,6,7-HxCDD (Last)

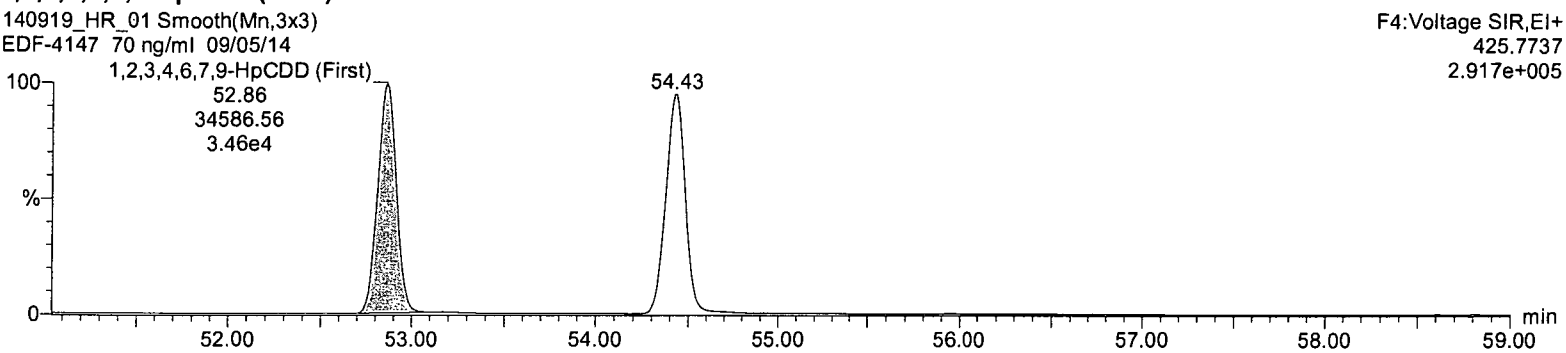


Name: 140919_HR_01, Date: 19-Sep-2014, Time: 16:36:42, ID: , Description: EDF-4147 70 ng/ml 09/05/14

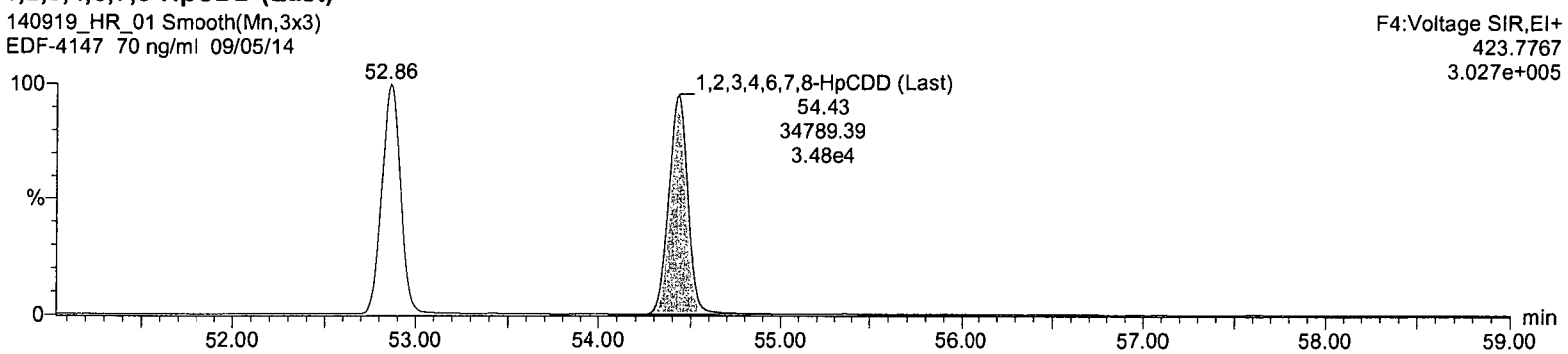
1,2,3,4,6,7,9-HpCDD (First)



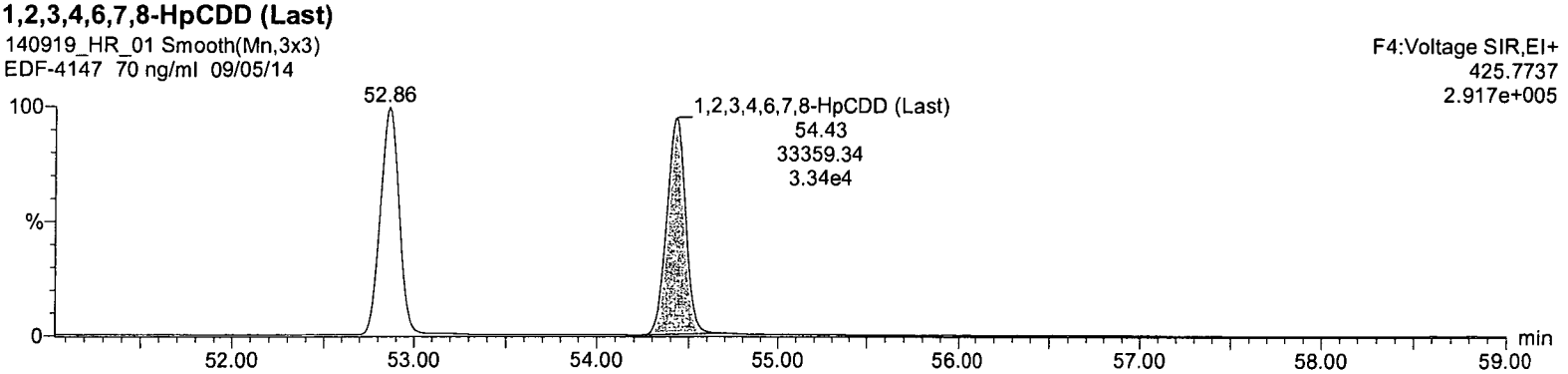
1,2,3,4,6,7,9-HpCDD (First)



1,2,3,4,6,7,8-HpCDD (Last)

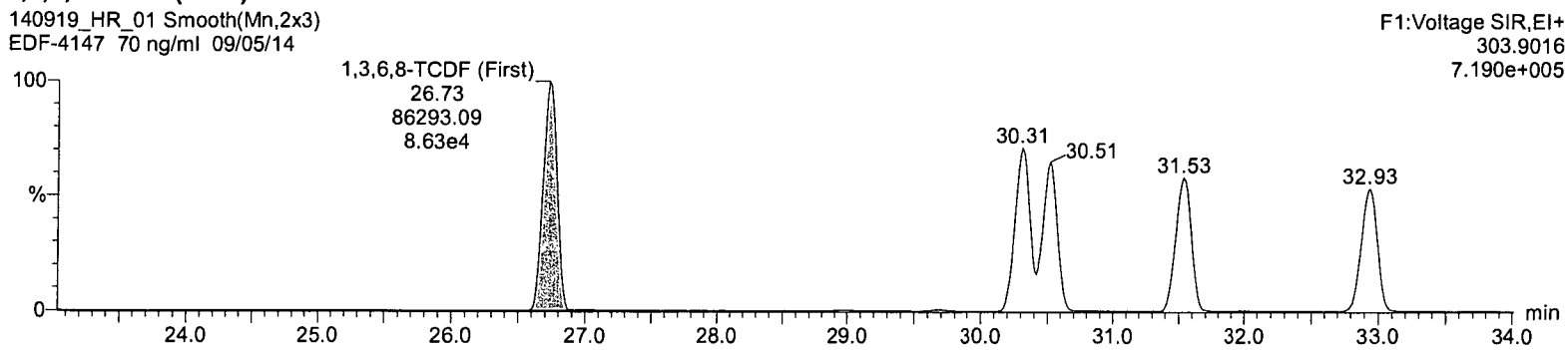


1,2,3,4,6,7,8-HpCDD (Last)

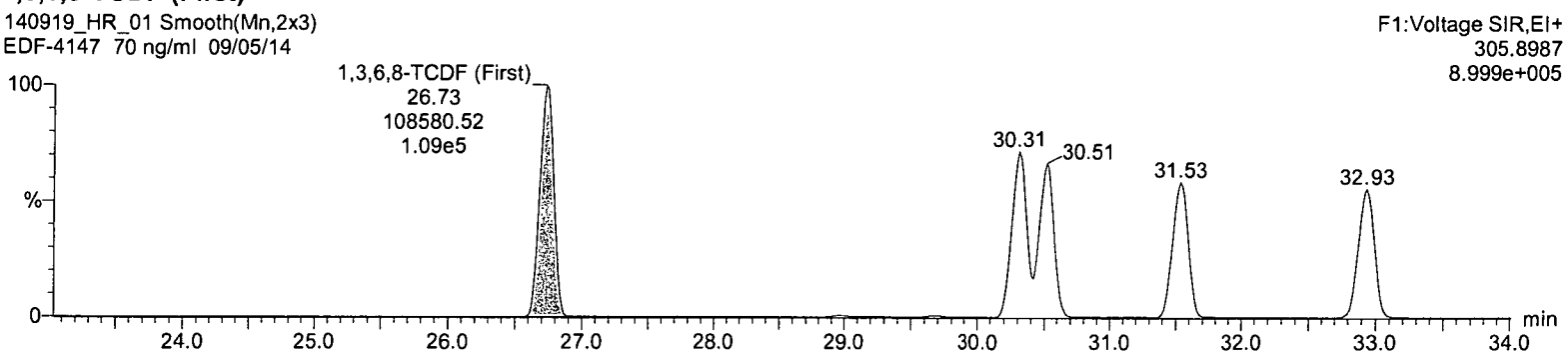


Name: 140919_HR_01, Date: 19-Sep-2014, Time: 16:36:42, ID: , Description: EDF-4147 70 ng/ml 09/05/14

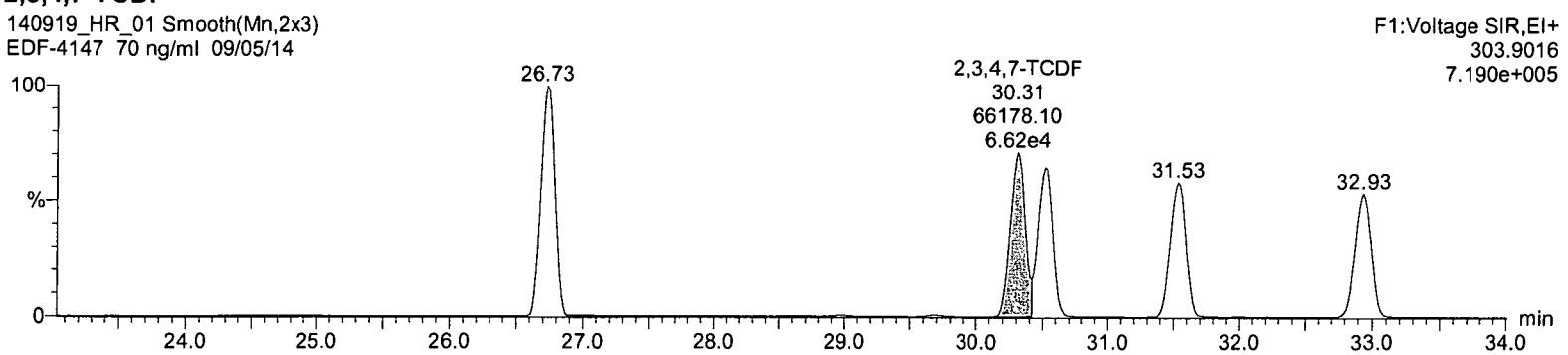
1,3,6,8-TCDF (First)



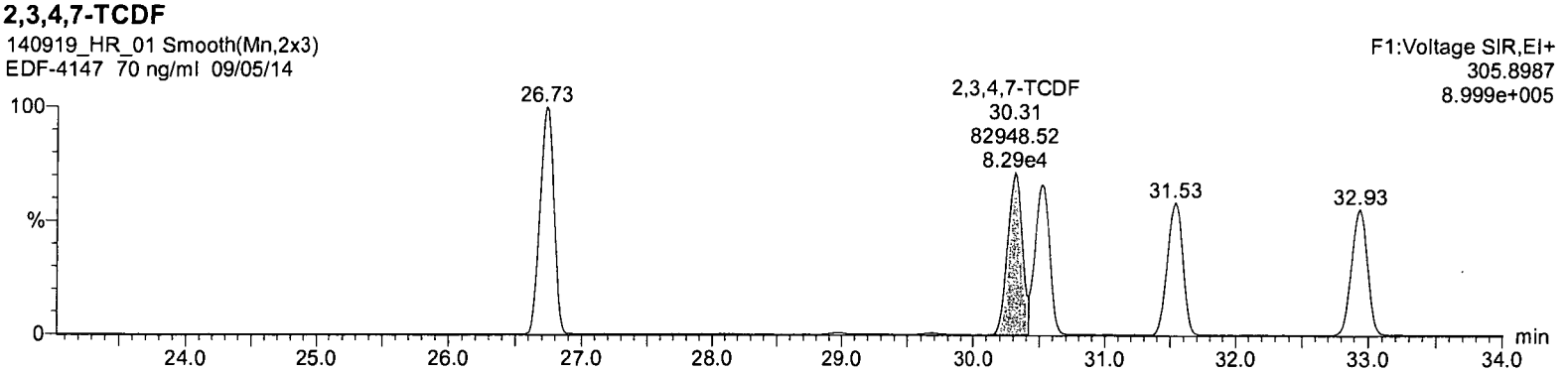
1,3,6,8-TCDF (First)



2,3,4,7-TCDF

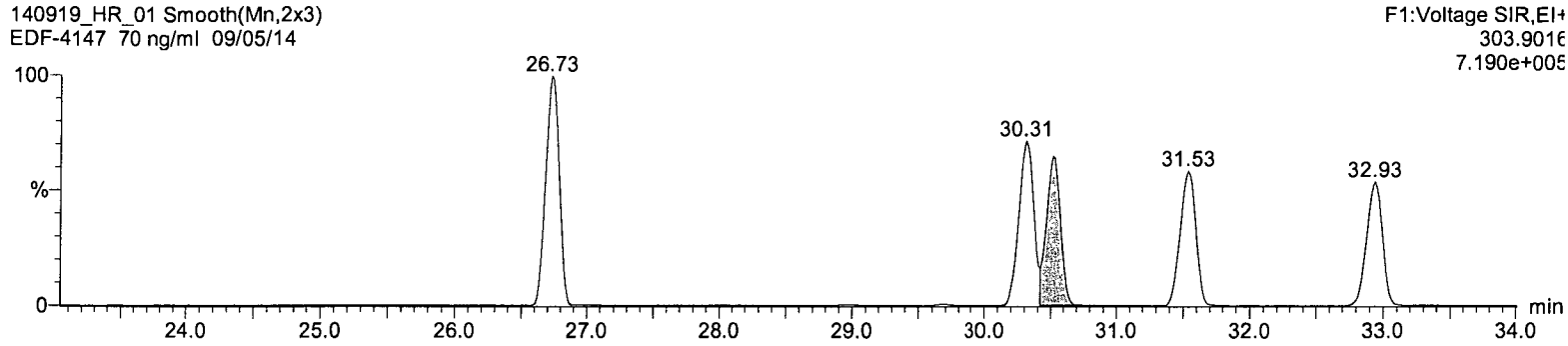


2,3,4,7-TCDF

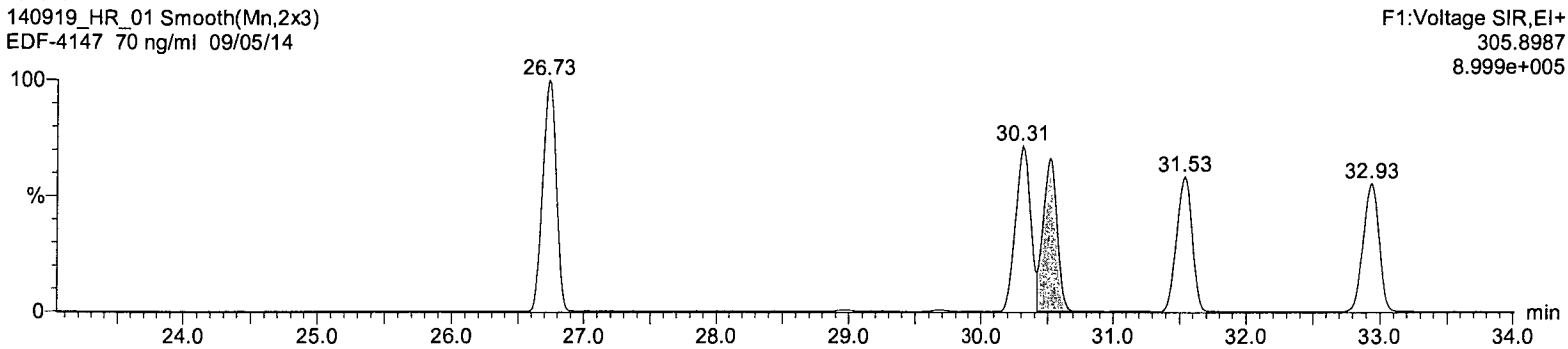


Name: 140919_HR_01, Date: 19-Sep-2014, Time: 16:36:42, ID: , Description: EDF-4147 70 ng/ml 09/05/14

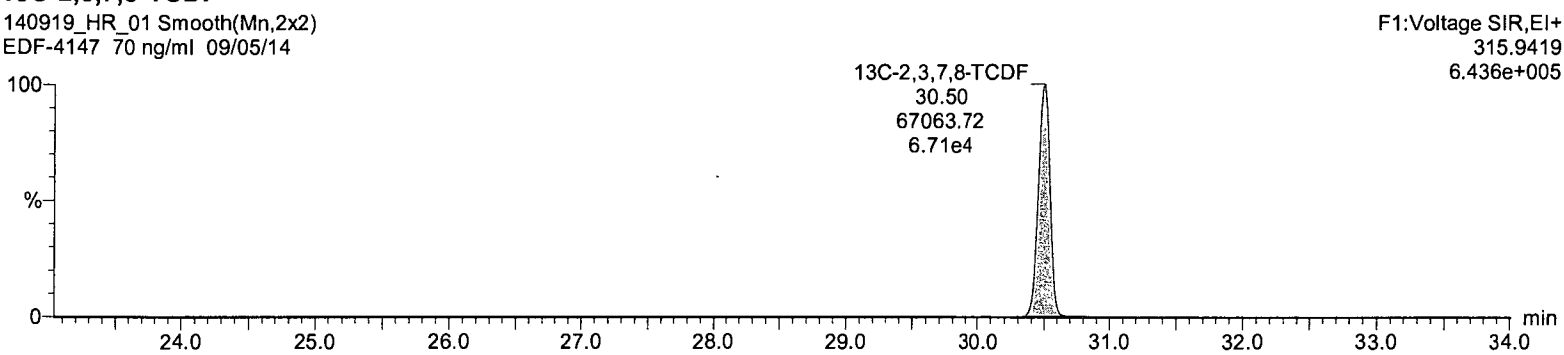
2,3,7,8-TCDF



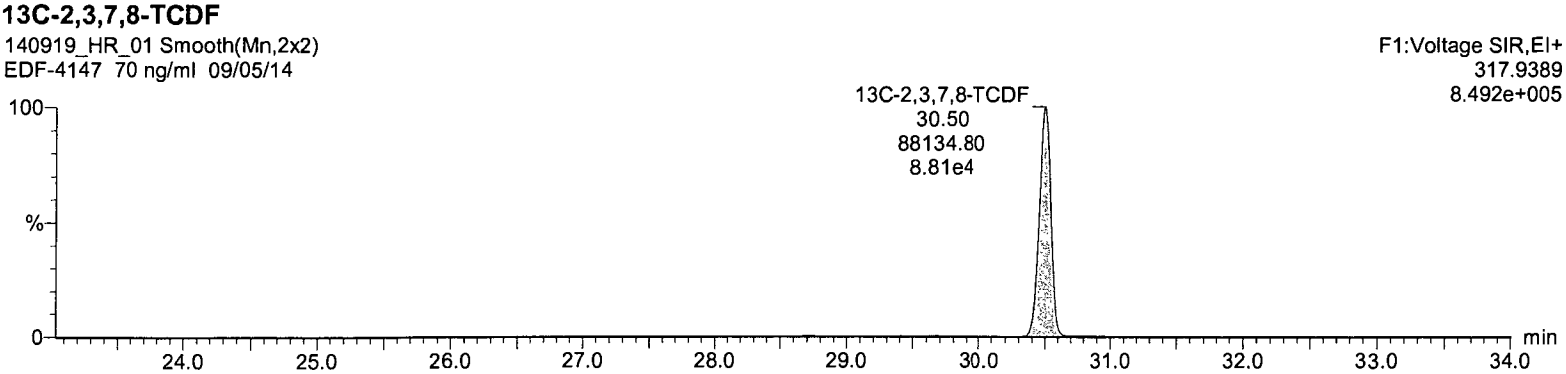
2,3,7,8-TCDF



13C-2,3,7,8-TCDF

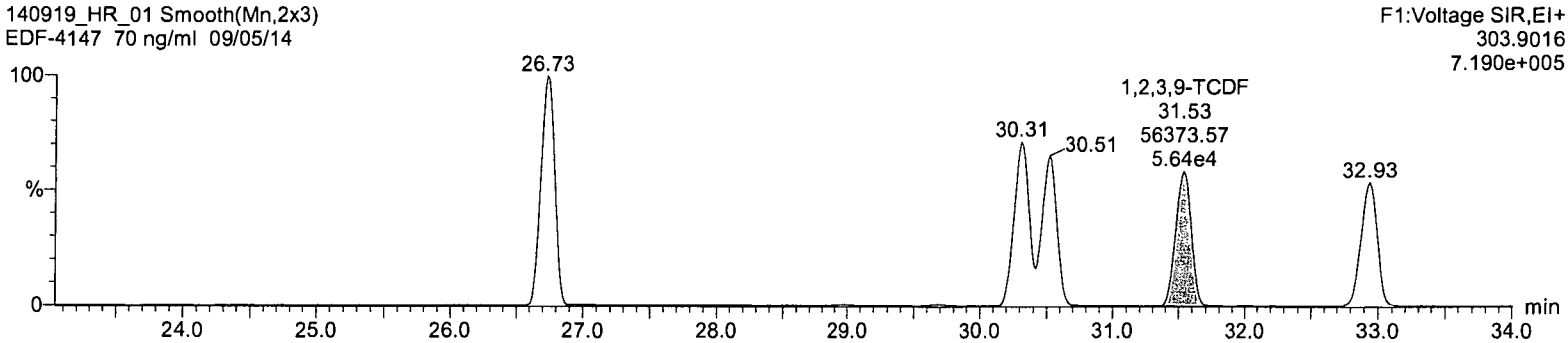


13C-2,3,7,8-TCDF

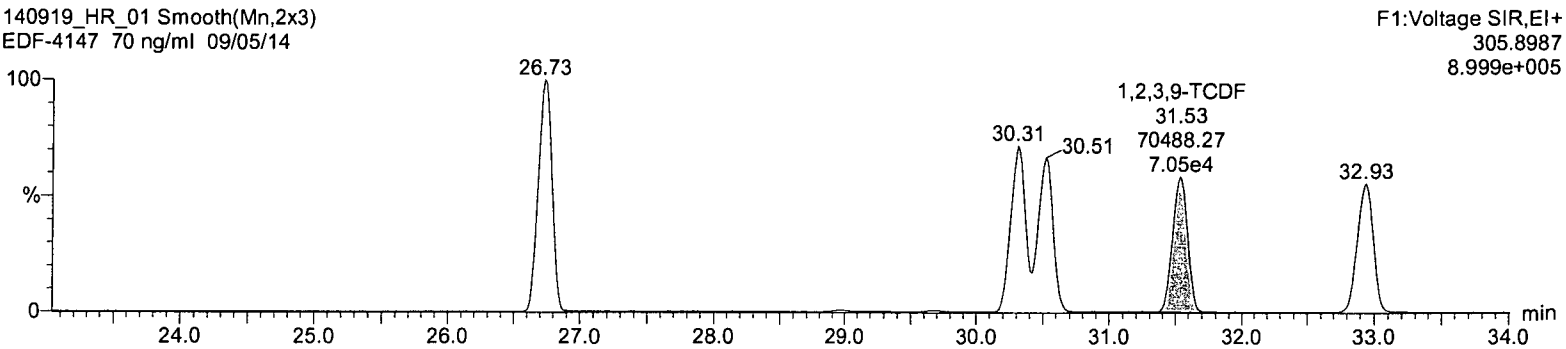


Name: 140919_HR_01, Date: 19-Sep-2014, Time: 16:36:42, ID: , Description: EDF-4147 70 ng/ml 09/05/14

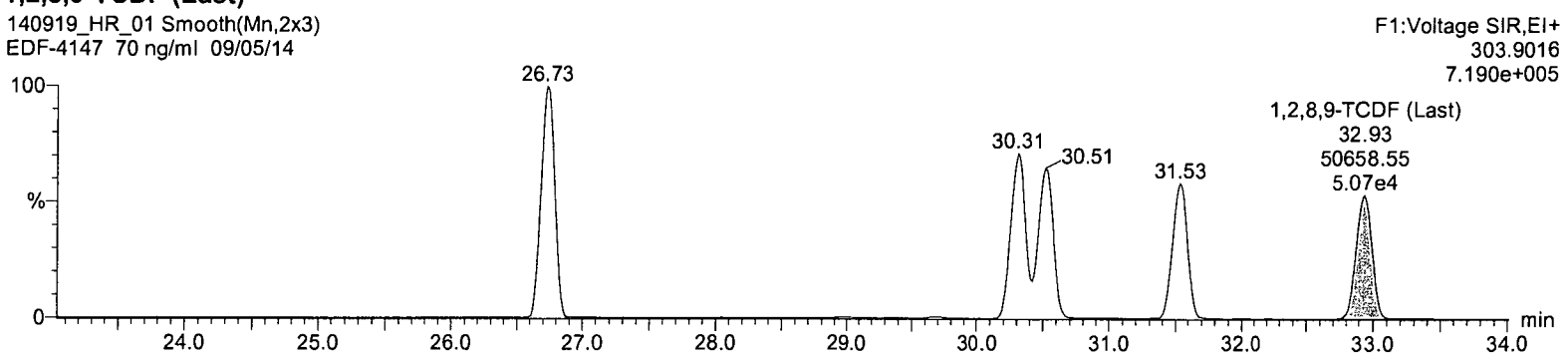
1,2,3,9-TCDF



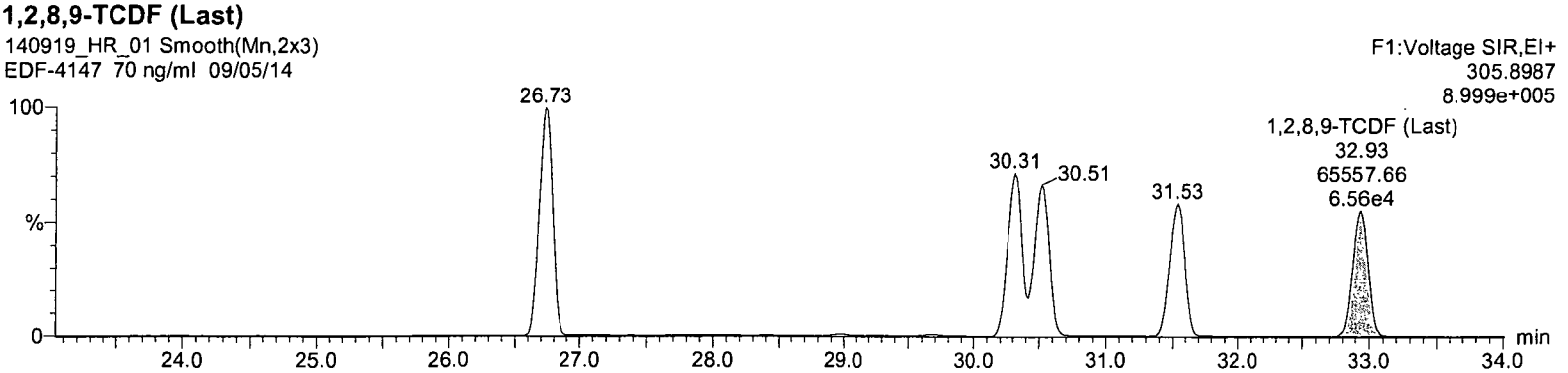
1,2,3,9-TCDF



1,2,8,9-TCDF (Last)

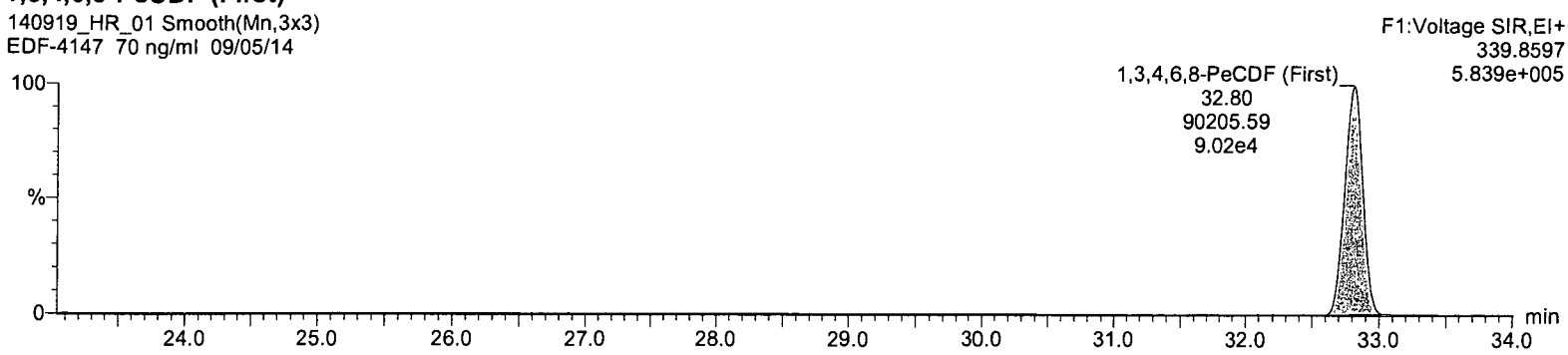


1,2,8,9-TCDF (Last)

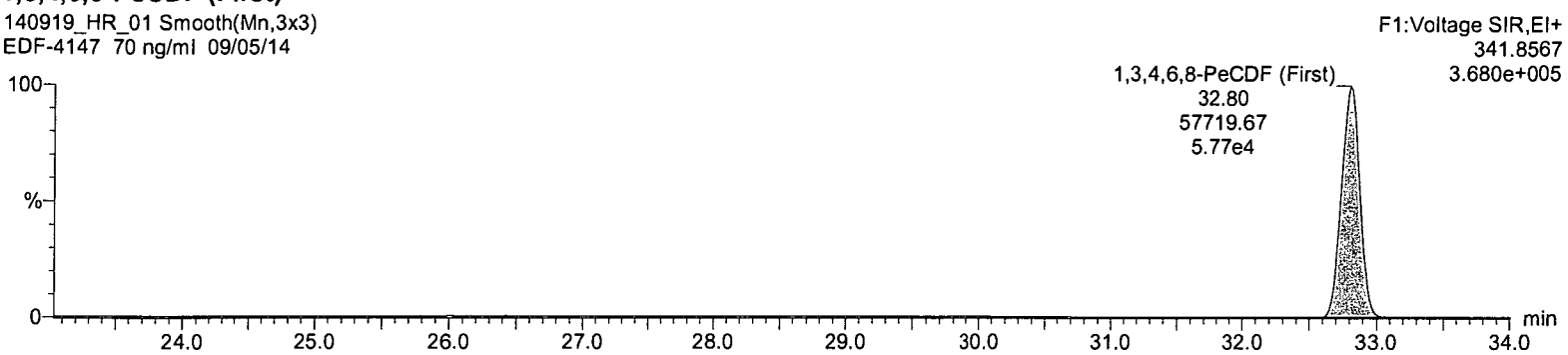


Name: 140919_HR_01, Date: 19-Sep-2014, Time: 16:36:42, ID: , Description: EDF-4147 70 ng/ml 09/05/14

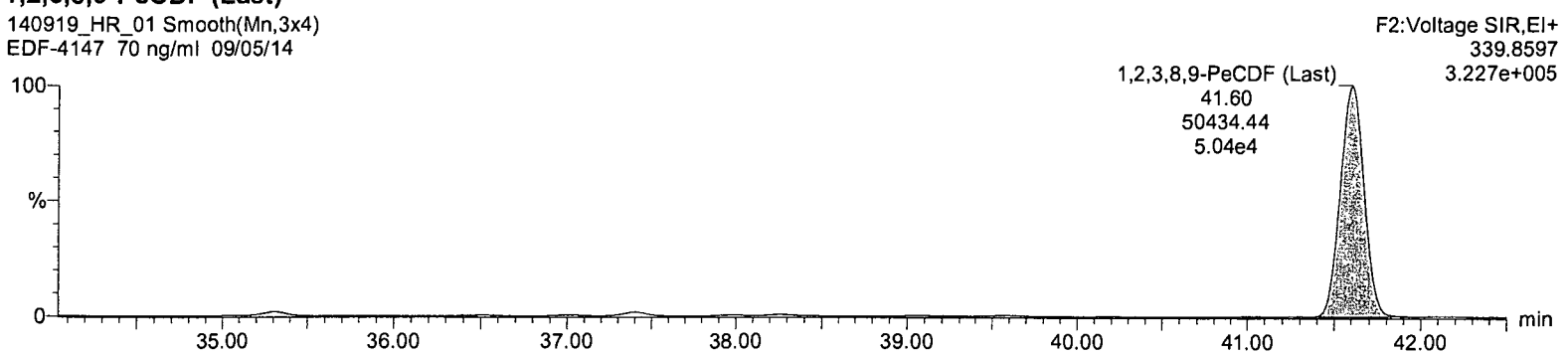
1,3,4,6,8-PeCDF (First)



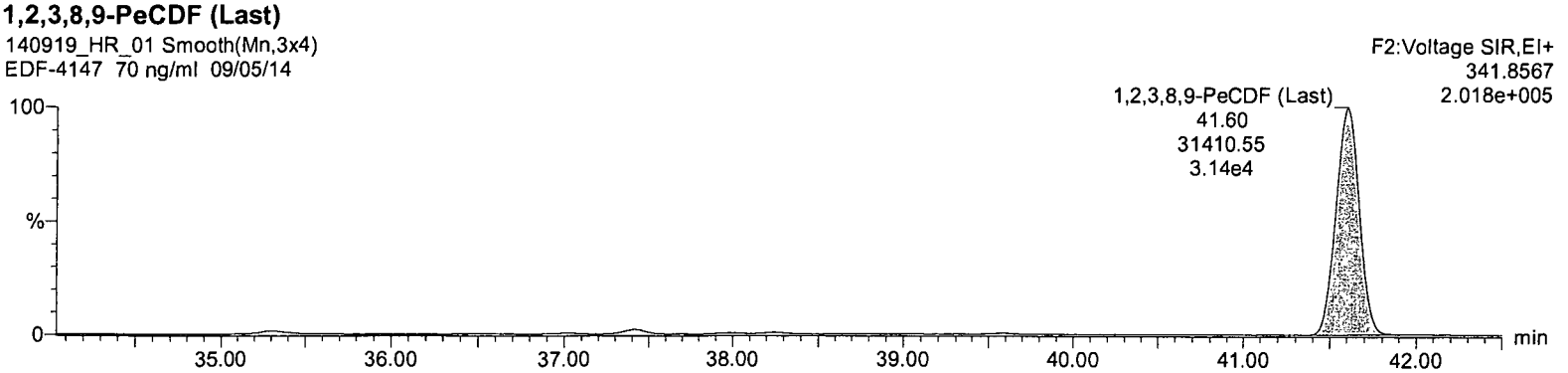
1,3,4,6,8-PeCDF (First)



1,2,3,8,9-PeCDF (Last)

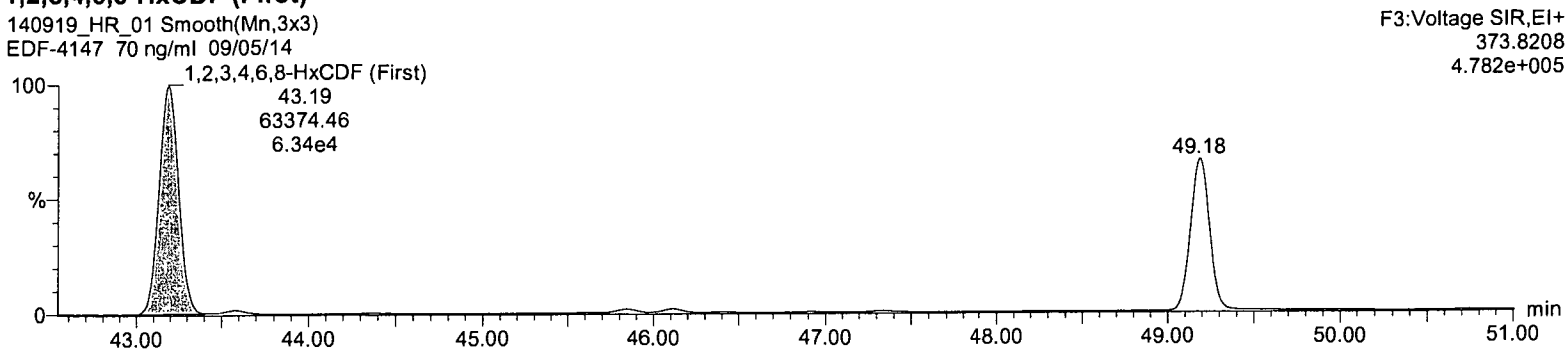


1,2,3,8,9-PeCDF (Last)

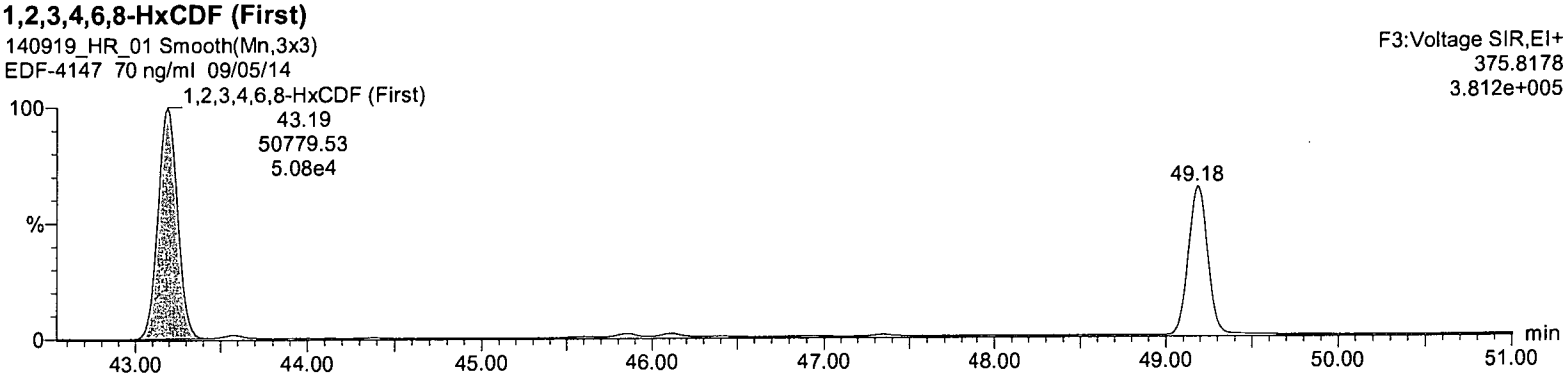


Name: 140919_HR_01, Date: 19-Sep-2014, Time: 16:36:42, ID: , Description: EDF-4147 70 ng/ml 09/05/14

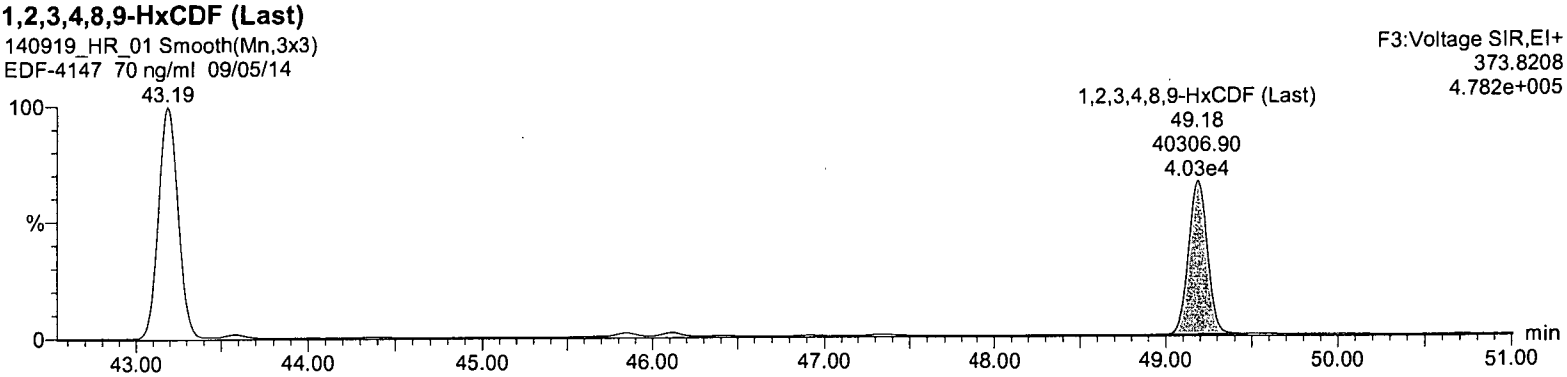
1,2,3,4,6,8-HxCDF (First)



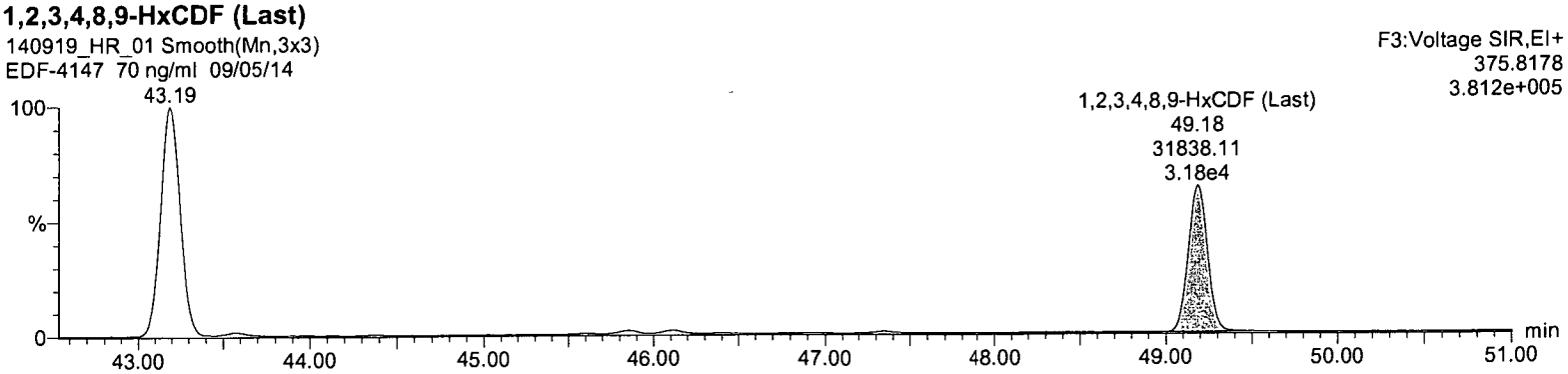
1,2,3,4,6,8-HxCDF (First)



1,2,3,4,8,9-HxCDF (Last)

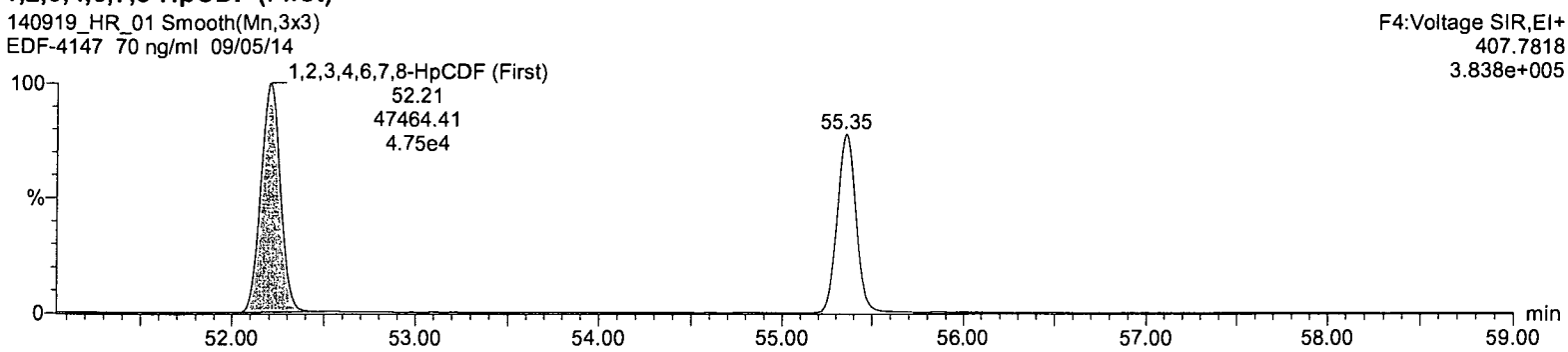


1,2,3,4,8,9-HxCDF (Last)

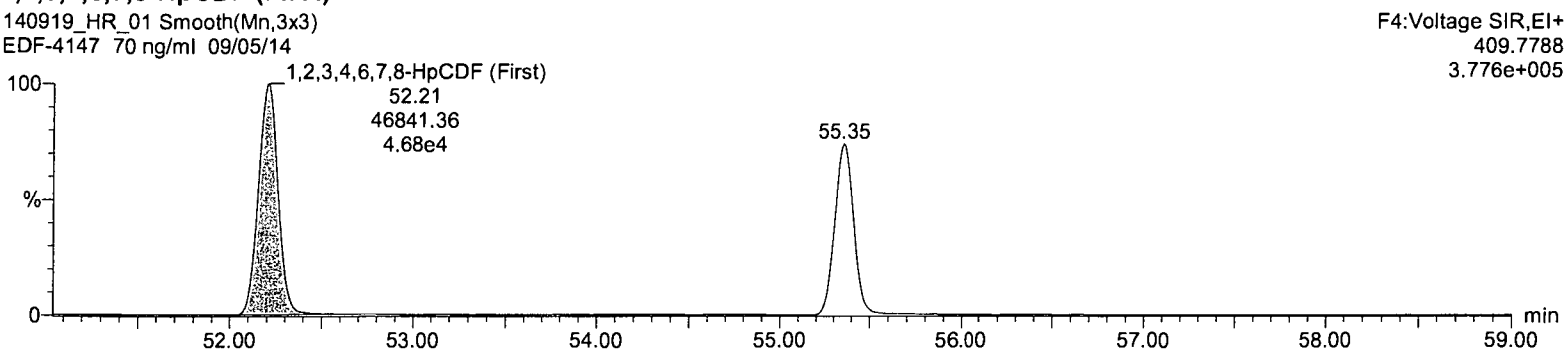


Name: 140919_HR_01, Date: 19-Sep-2014, Time: 16:36:42, ID: , Description: EDF-4147 70 ng/ml 09/05/14

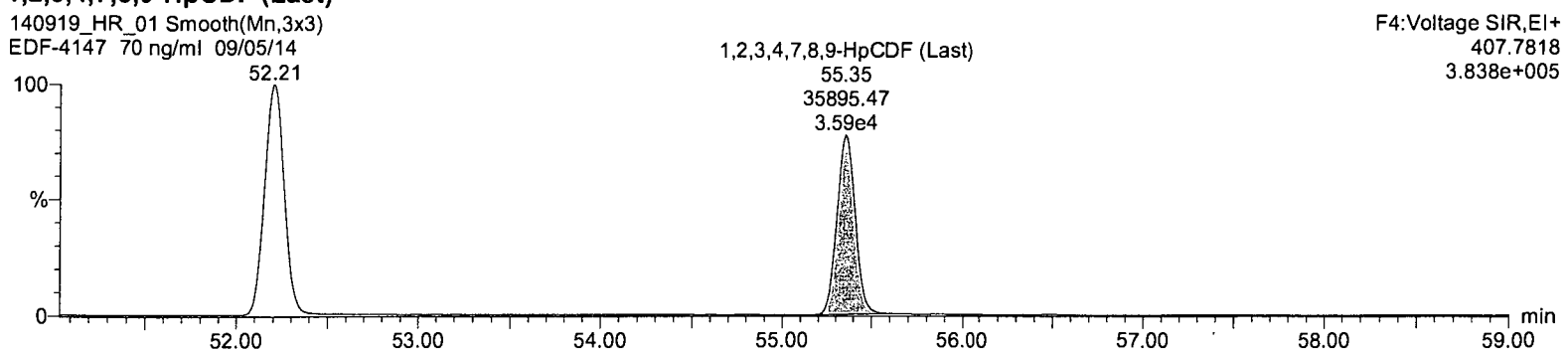
1,2,3,4,6,7,8-HpCDF (First)



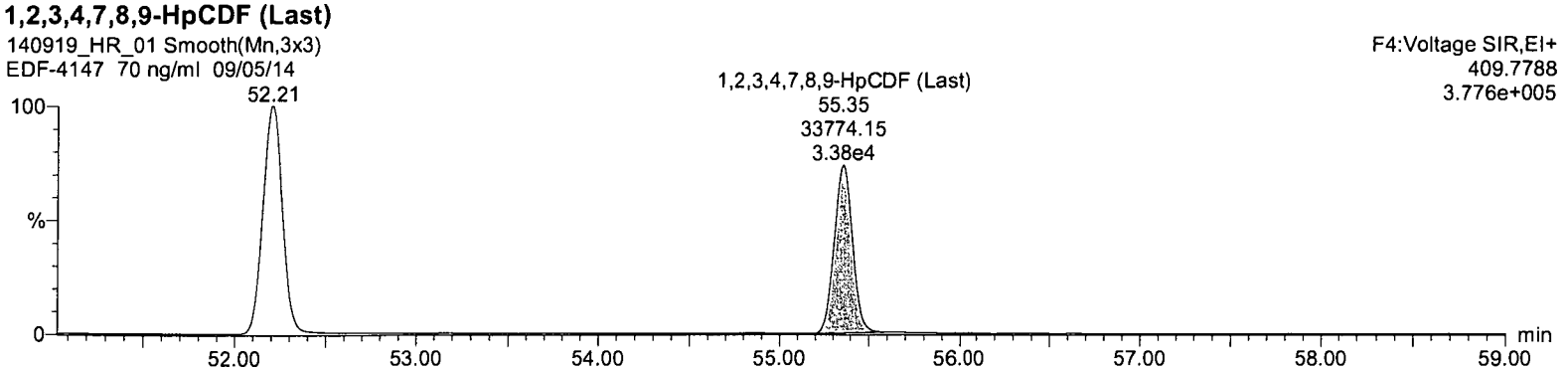
1,2,3,4,6,7,8-HpCDF (First)

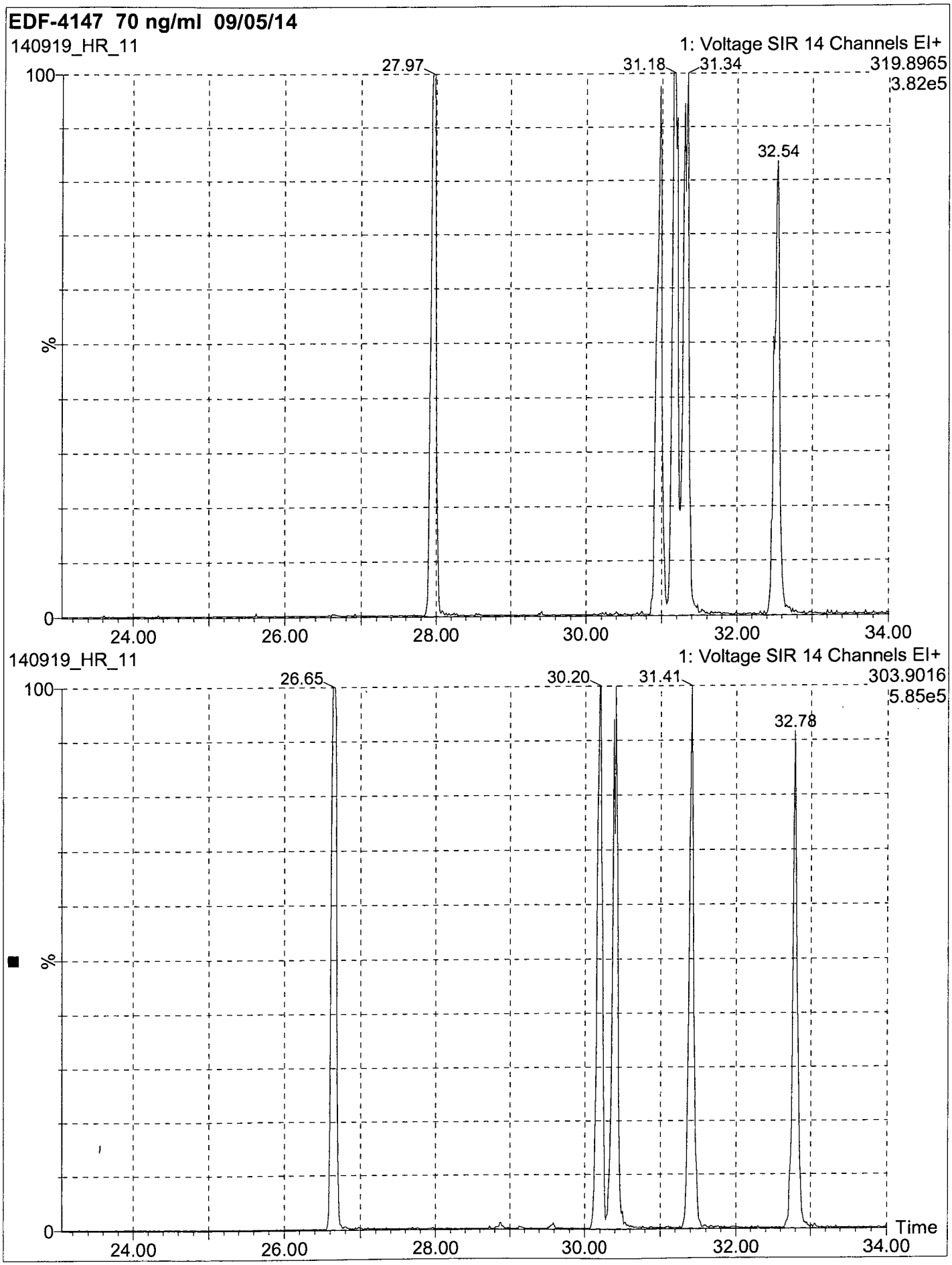


1,2,3,4,7,8,9-HpCDF (Last)



1,2,3,4,7,8,9-HpCDF (Last)




EDF-4147 70 ng/ml 09/05/14
140919_HR_11
1: Voltage SIR 14 Channels EI+
319.8965
3.82e5
27.97
31.18
31.34
32.54
100
%
0
24.00
26.00
28.00
30.00
32.00
34.00
140919_HR_11
1: Voltage SIR 14 Channels EI+
303.9016
5.85e5
26.65
30.20
31.41
32.78
100
%
0
Time
24.00
26.00
28.00
30.00
32.00
34.00

Dataset: C:\MassLynx\Default.pro\Quanted Data\140919_CP_11.qld

Method: C:\MassLynx\Default.pro\Methdb\140919_8290_CP.mdb 22 Sep 2014 12:18:54
Calibration: 22 Sep 2014 12:25:09

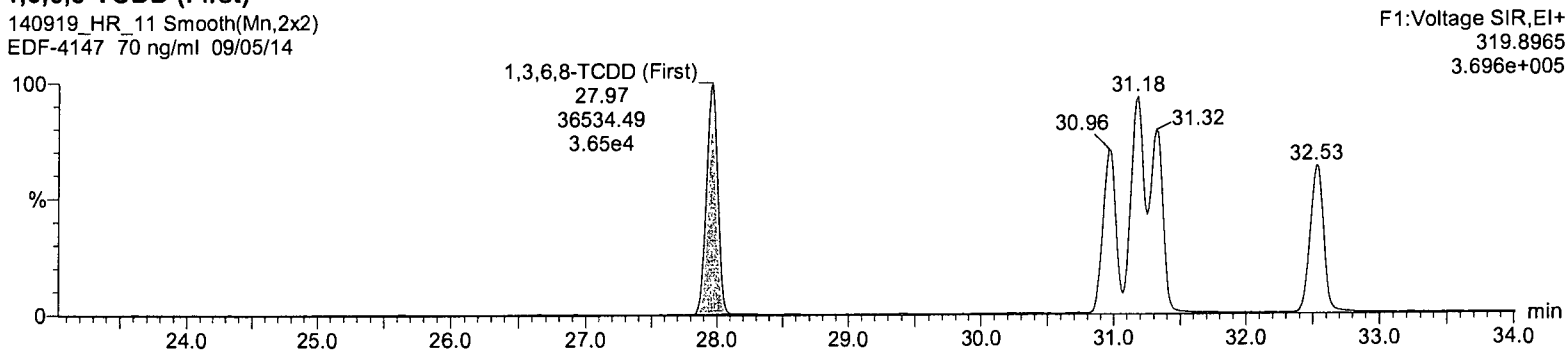
Name: 140919_HR_11, Date: 20-Sep-2014, Time: 04:26:21, ID: , Description: EDF-4147 70 ng/ml 09/05/14, User:

#	Name	RT
1	1,3,6,8-TCDD (First)	27.97
2	1,2,3,7/1,2,3,8-TCDD	30.96
3	1,2,3,9-TCDD	31.18
4	2,3,7,8-TCDD	31.32
5	1,2,8,9-TCDD (Last)	32.53
6	13C-2,3,7,8-TCDD	31.29
7	1,2,4,6,8/1,2,4,7,9-PeCDD (First)	35.29
8	1,2,3,8,9-PeCDD (Last)	40.90
9	1,2,4,6,7,9/1,2,4,6,8,9-HxCDD (First)	44.31
10	1,2,3,4,6,7-HxCDD (Last)	48.16
11	1,2,3,4,6,7,9-HpCDD (First)	52.74
12	1,2,3,4,6,7,8-HpCDD (Last)	54.31
13	1,3,6,8-TCDF (First)	26.65
14	2,3,4,7-TCDF	30.19
15	2,3,7,8-TCDF	30.40
16	1,2,3,9-TCDF	31.41
17	1,2,8,9-TCDF (Last)	32.78
18	13C-2,3,7,8-TCDF	30.38
19	1,3,4,6,8-PeCDF (First)	32.66
20	1,2,3,8,9-PeCDF (Last)	41.44
21	1,2,3,4,6,8-HxCDF (First)	43.03
22	1,2,3,4,8,9-HxCDF (Last)	49.05
23	1,2,3,4,6,7,8-HpCDF (First)	52.08
24	1,2,3,4,7,8,9-HpCDF (Last)	55.24

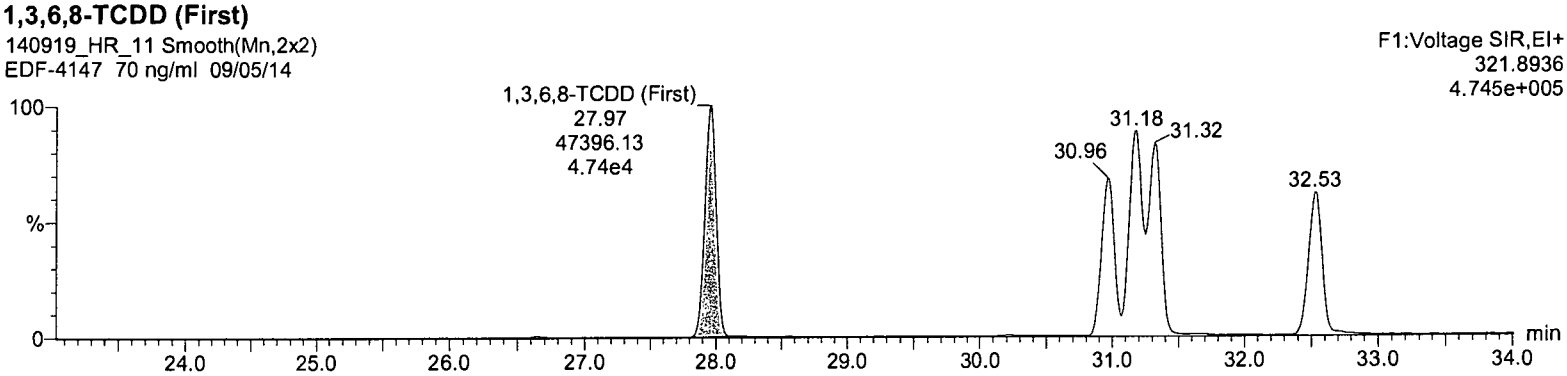
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Calibration: 22 Sep 2014 12:25:09

Name: 140919_HR_11, Date: 20-Sep-2014, Time: 04:26:21, ID: , Description: EDF-4147 70 ng/ml 09/05/14

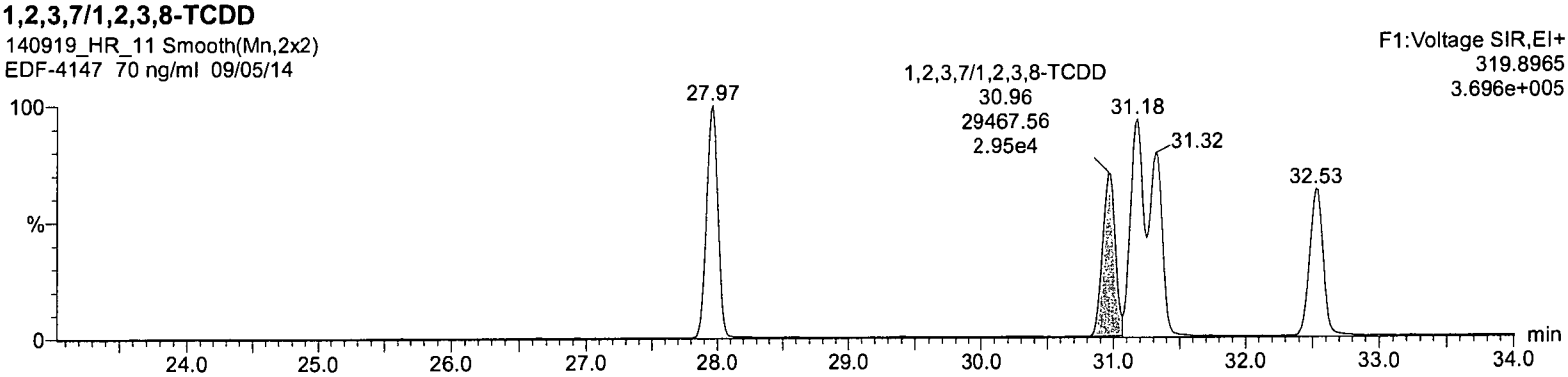
1,3,6,8-TCDD (First)



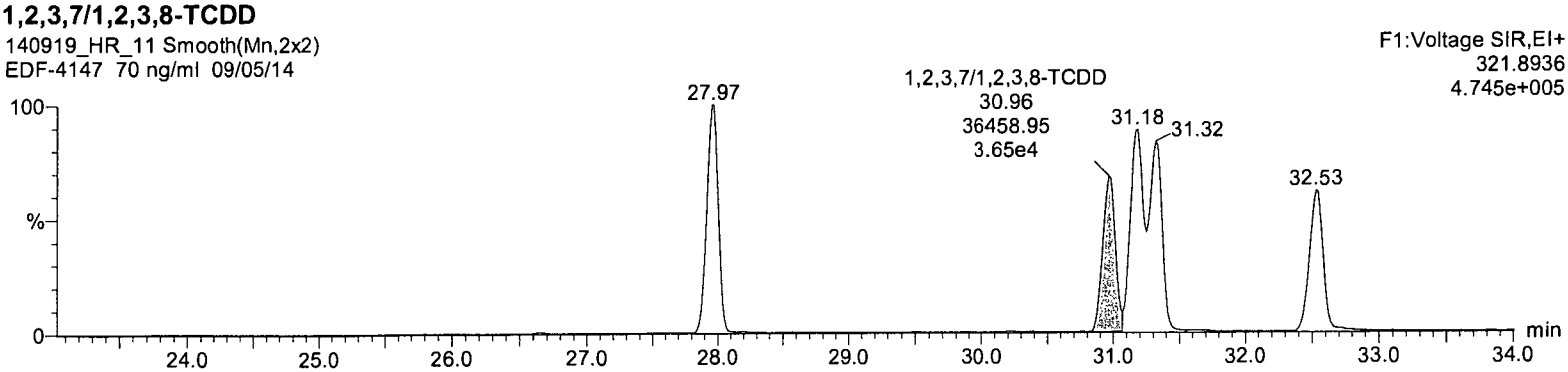
1,3,6,8-TCDD (First)



1,2,3,7/1,2,3,8-TCDD

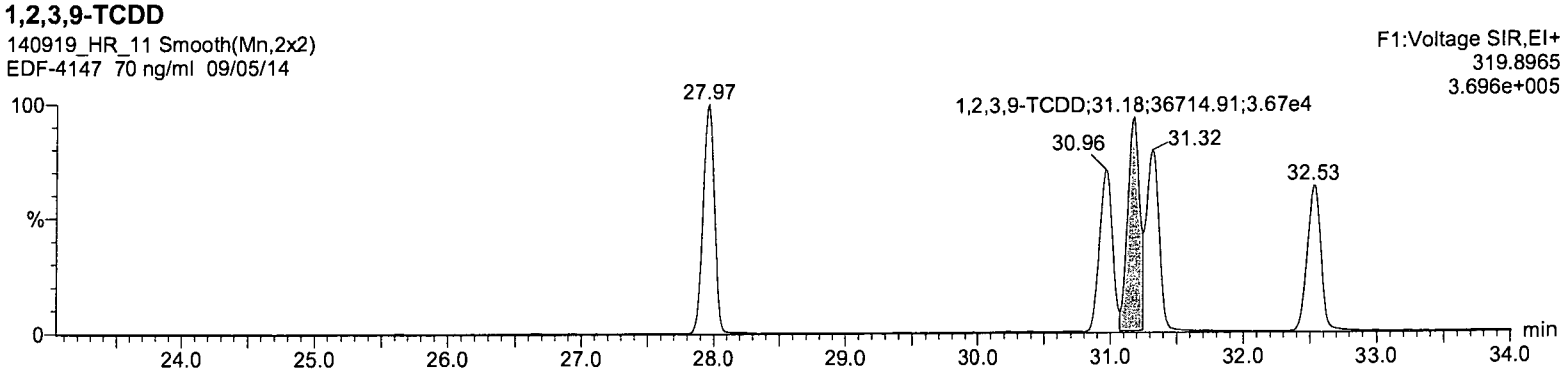


1,2,3,7/1,2,3,8-TCDD

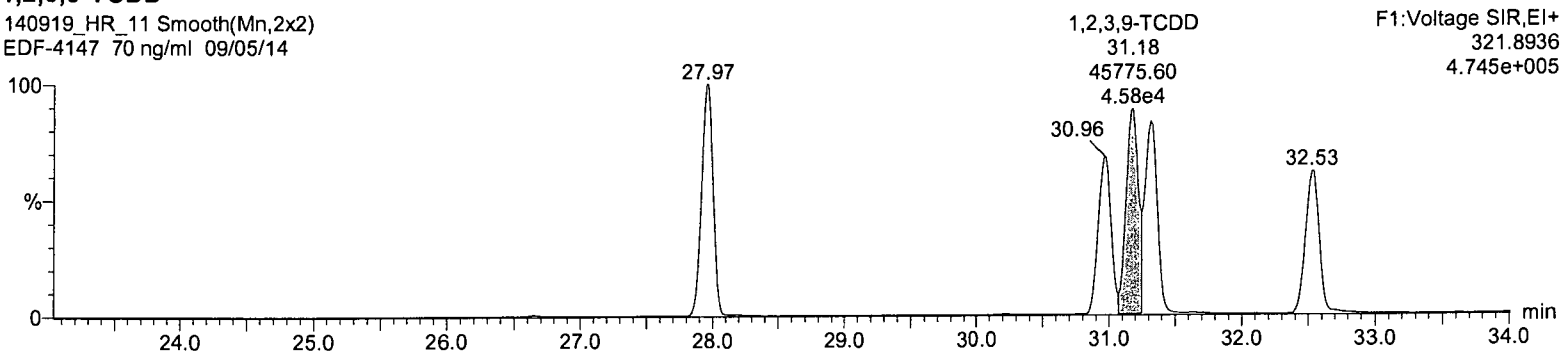


Name: 140919_HR_11, Date: 20-Sep-2014, Time: 04:26:21, ID: , Description: EDF-4147 70 ng/ml 09/05/14

1,2,3,9-TCDD

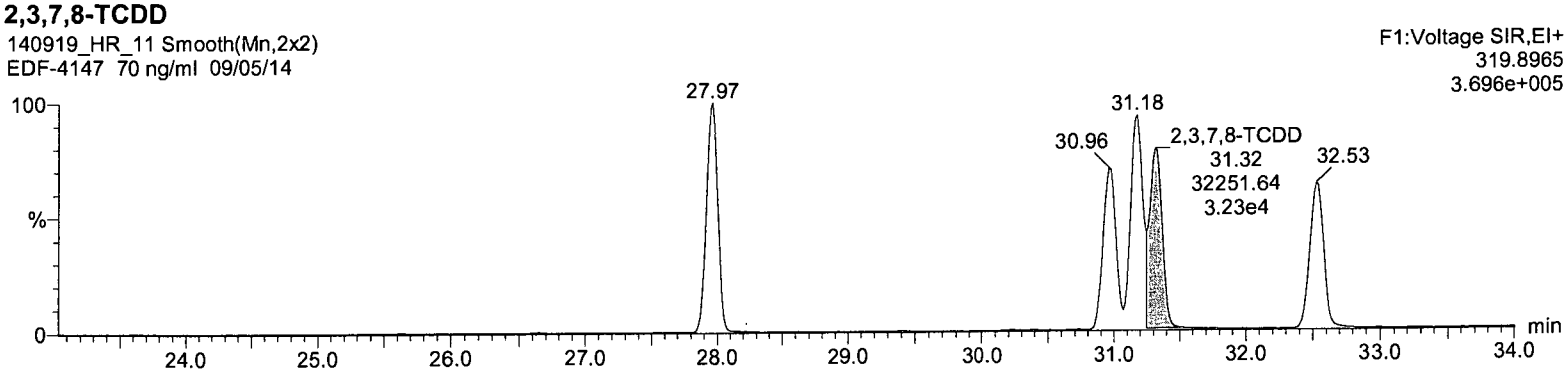


1,2,3,9-TCDD

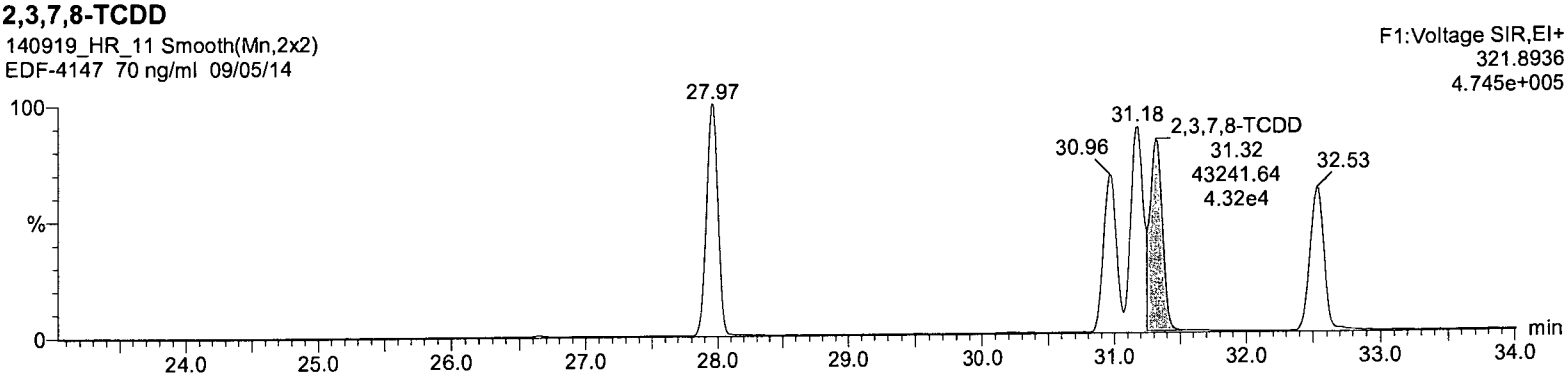


Name: 140919_HR_11, Date: 20-Sep-2014, Time: 04:26:21, ID: , Description: EDF-4147 70 ng/ml 09/05/14

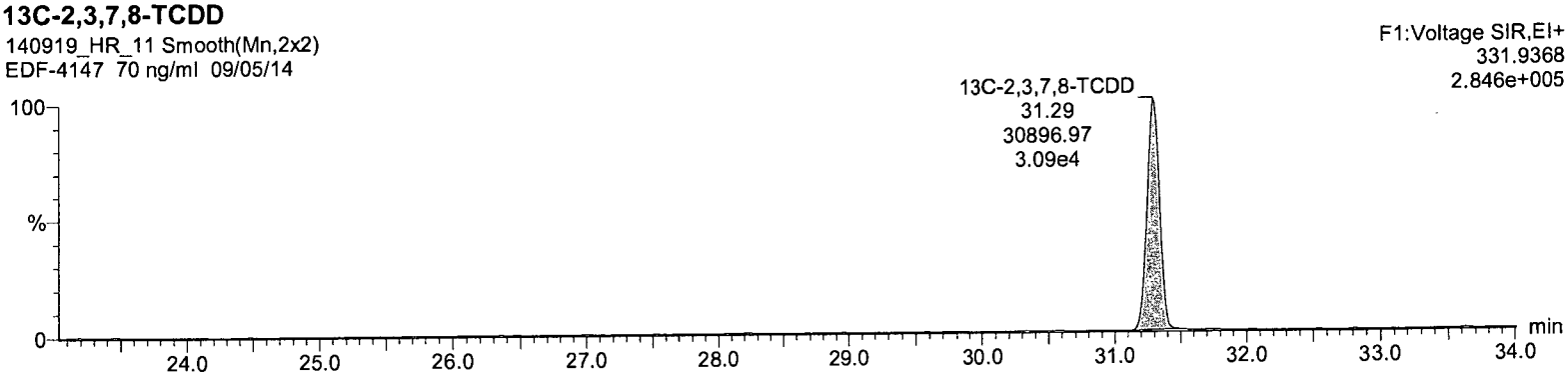
2,3,7,8-TCDD



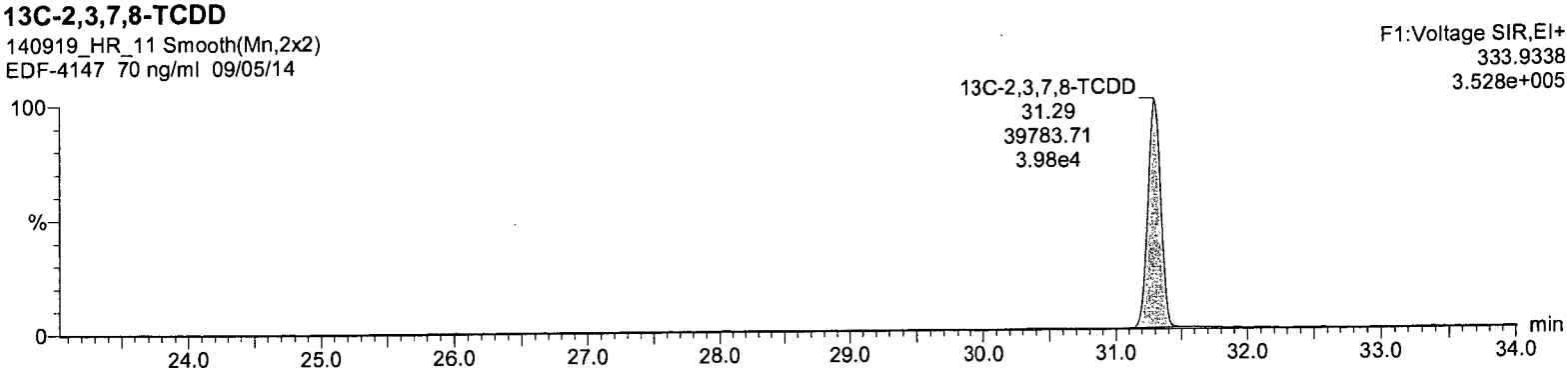
2,3,7,8-TCDD



13C-2,3,7,8-TCDD

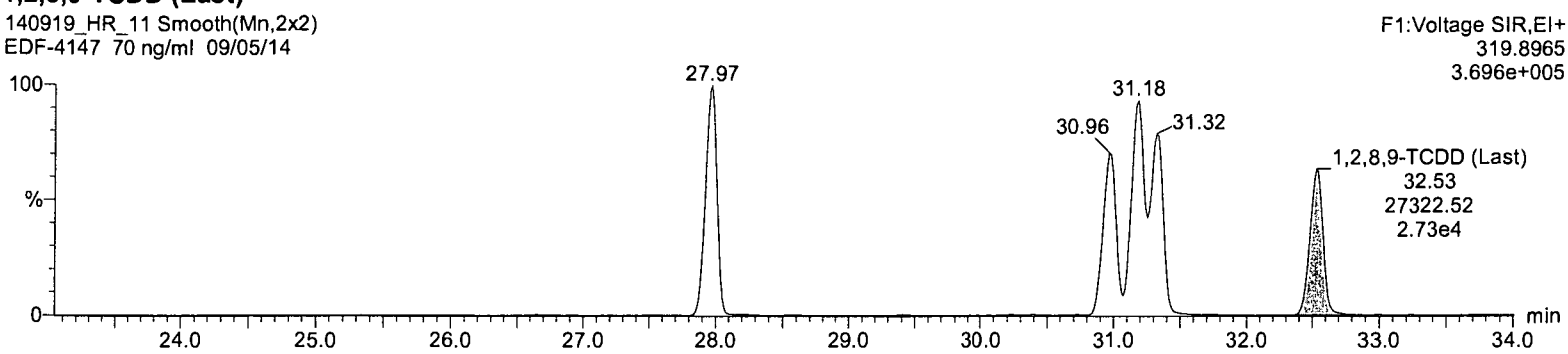


13C-2,3,7,8-TCDD

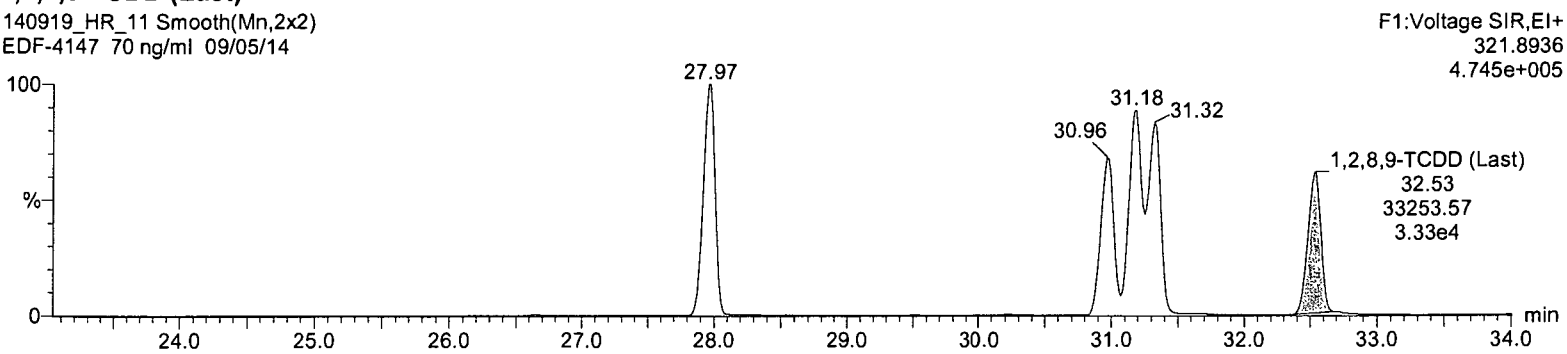


Name: 140919_HR_11, Date: 20-Sep-2014, Time: 04:26:21, ID: , Description: EDF-4147 70 ng/ml 09/05/14

1,2,8,9-TCDD (Last)

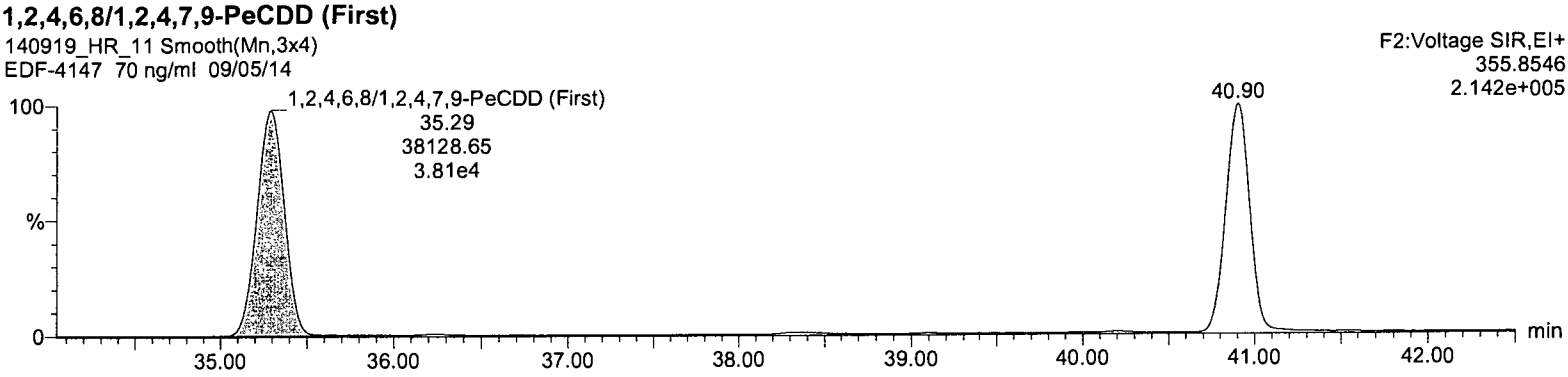


1,2,8,9-TCDD (Last)

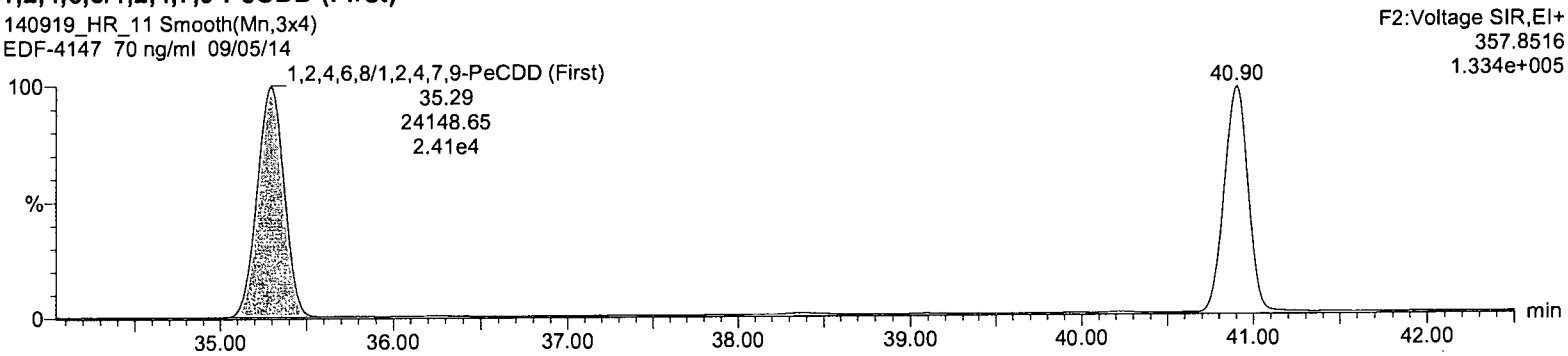


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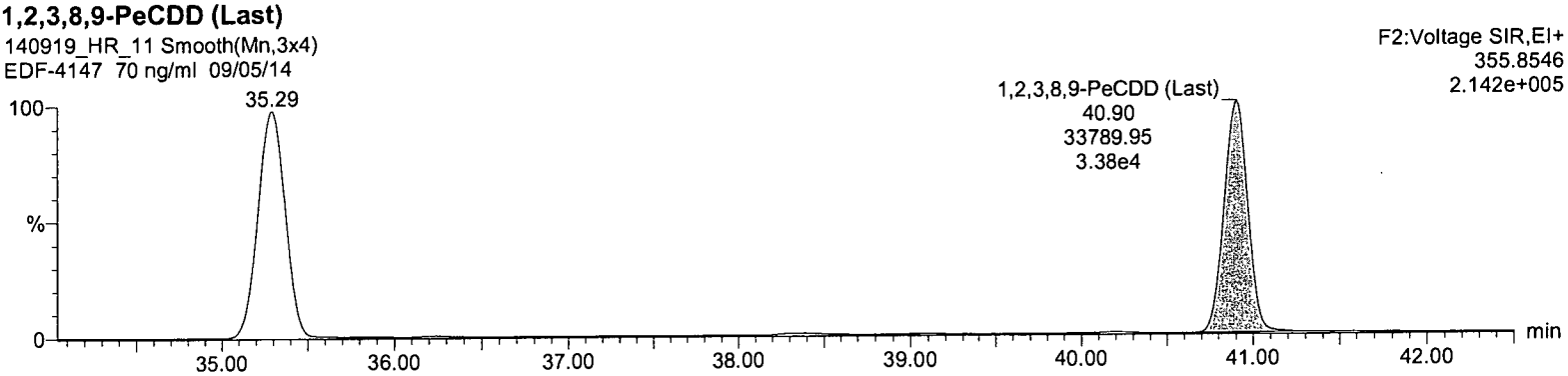
1,2,4,6,8/1,2,4,7,9-PeCDD (First)



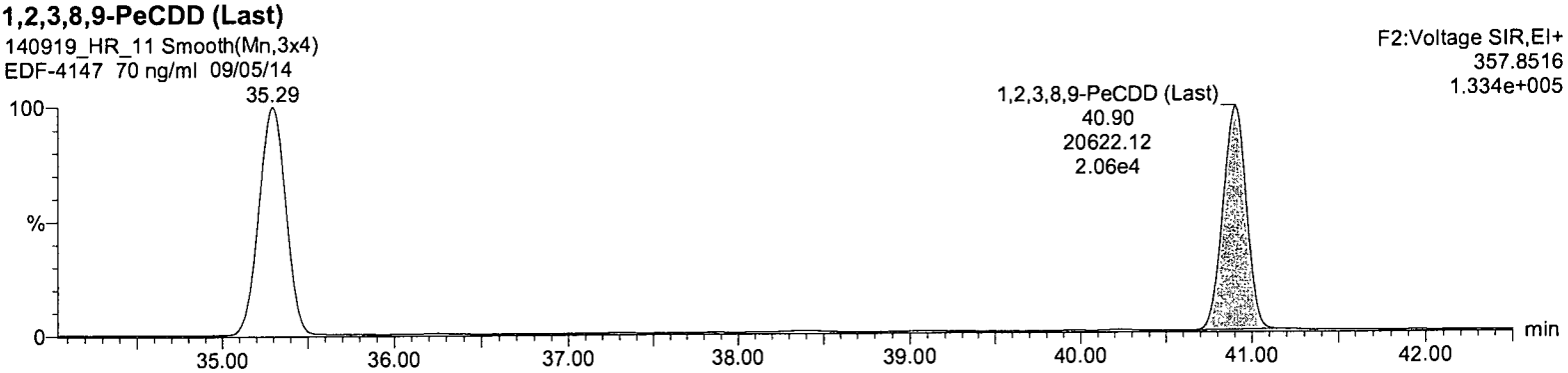
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1,2,3,8,9-PeCDD (Last)

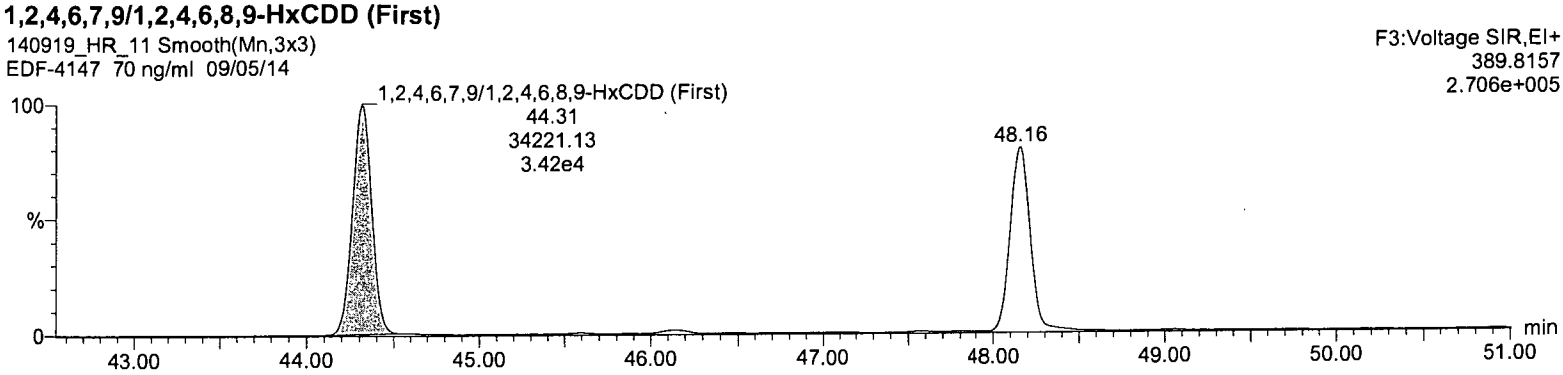


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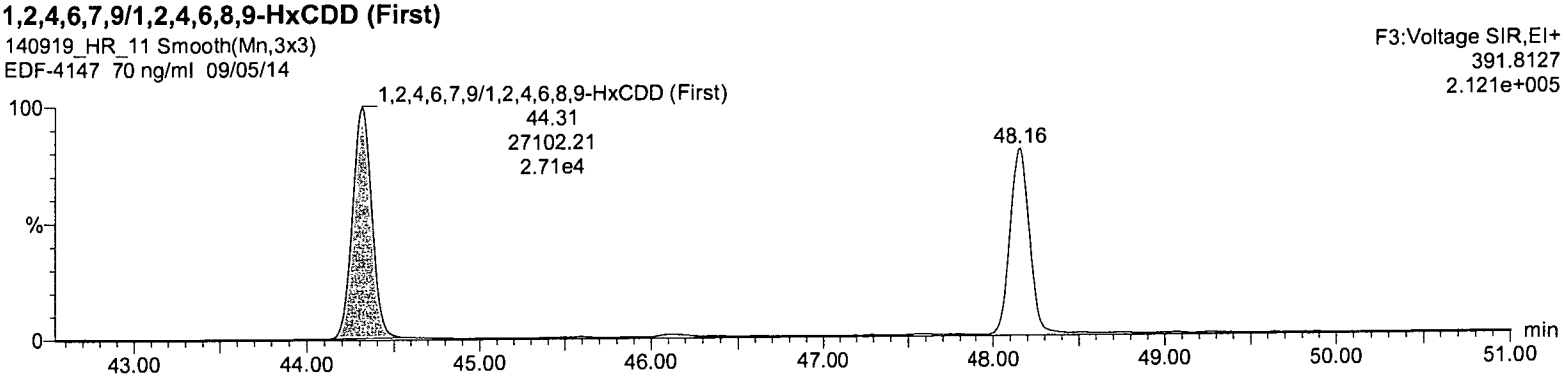


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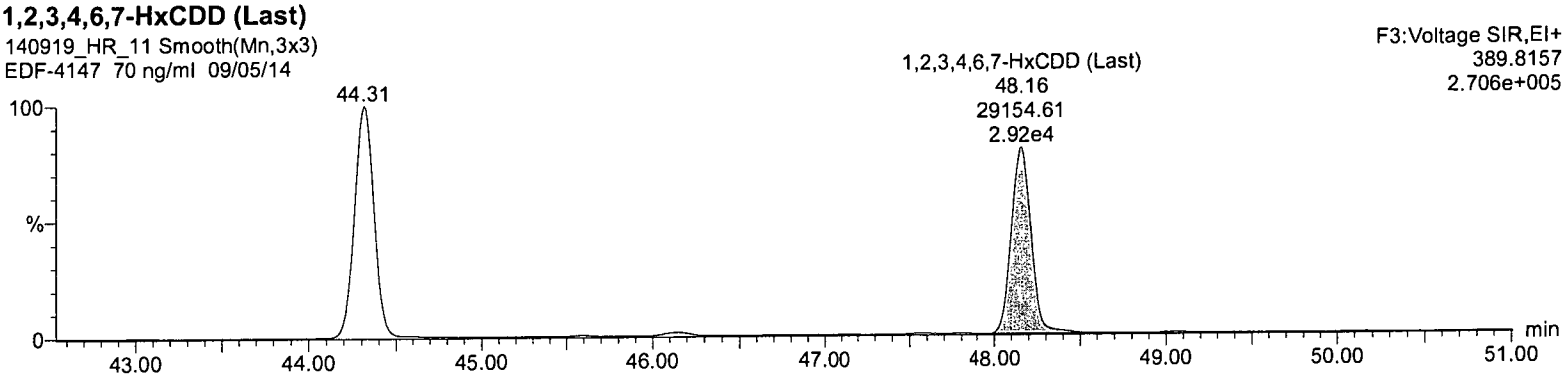
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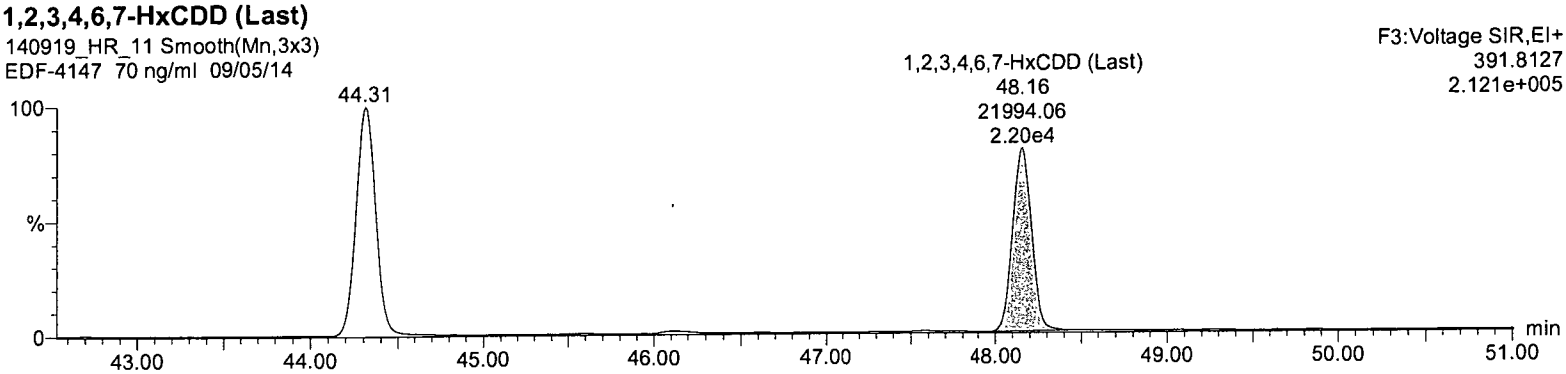
1,2,4,6,7,9/1,2,4,6,8,9-HxCDD (First)



1,2,3,4,6,7-HxCDD (Last)

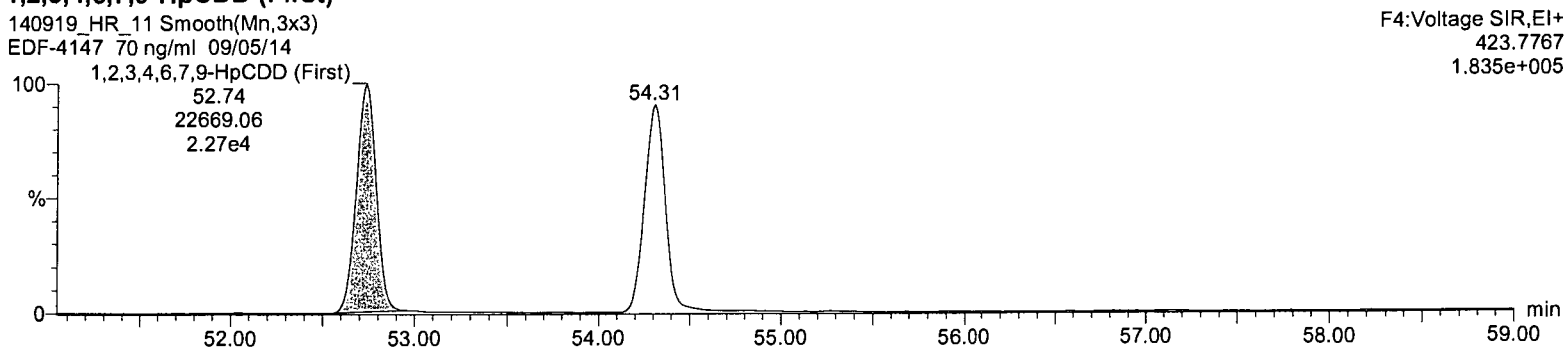


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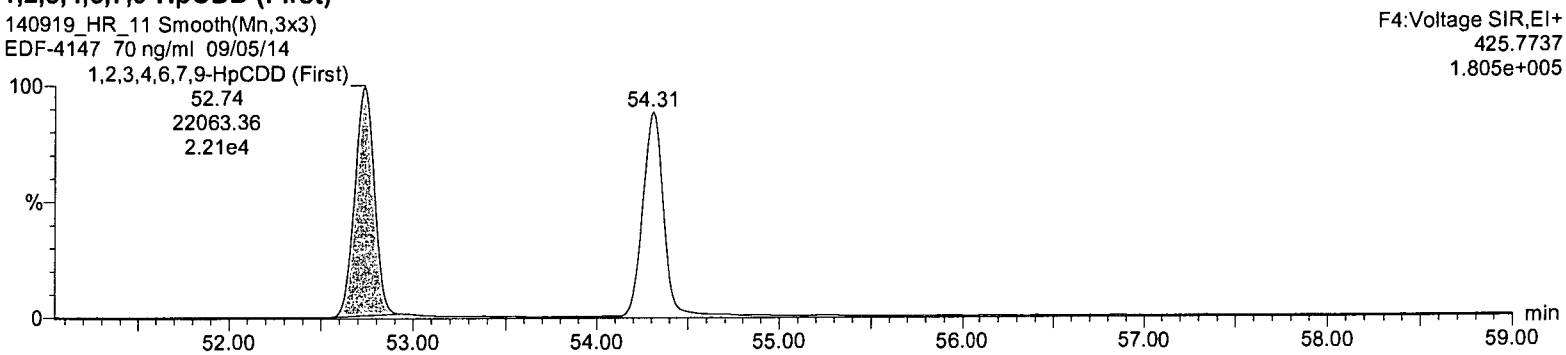


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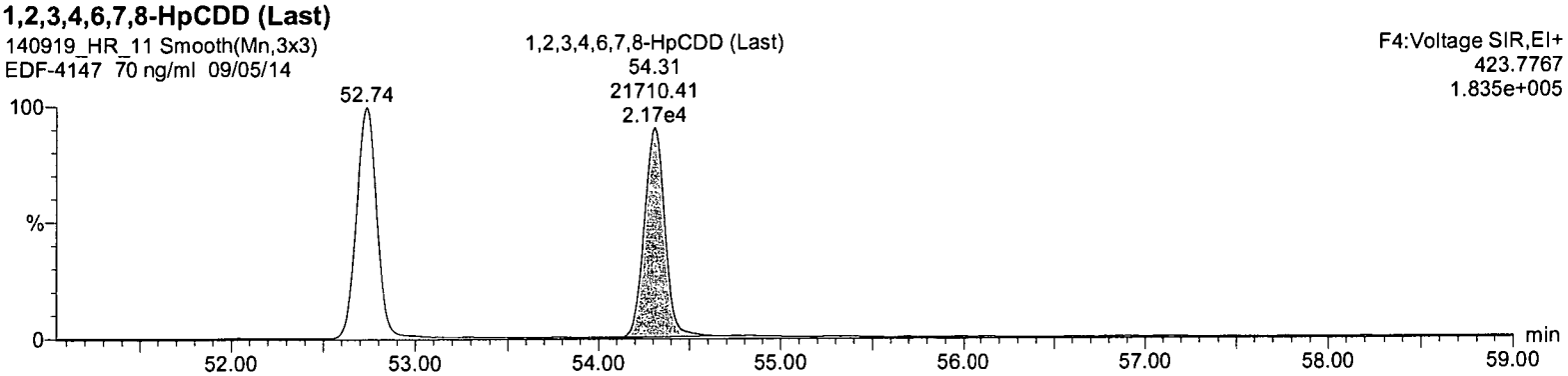
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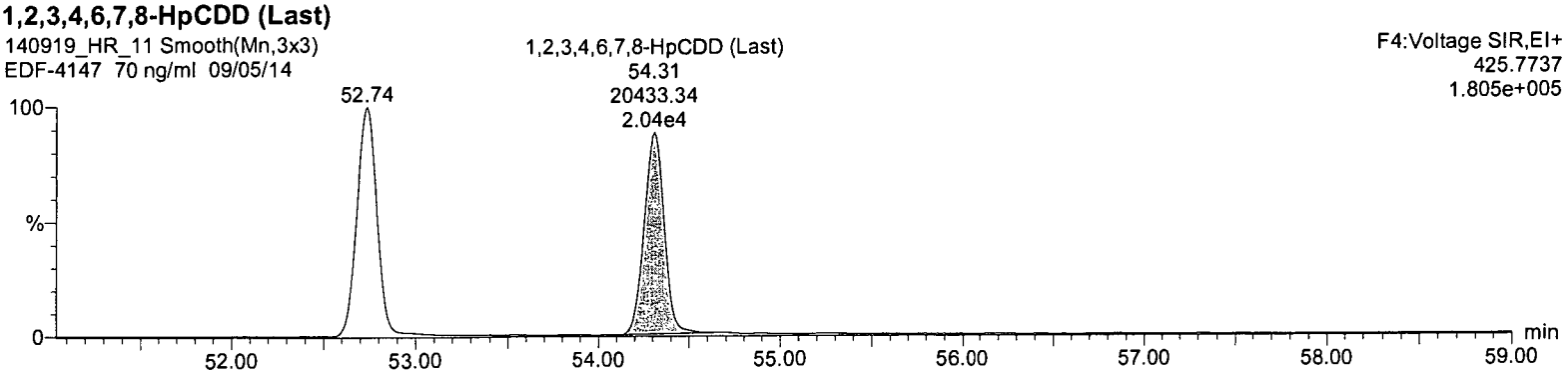
1,2,3,4,6,7,9-HpCDD (First)



1,2,3,4,6,7,8-HpCDD (Last)

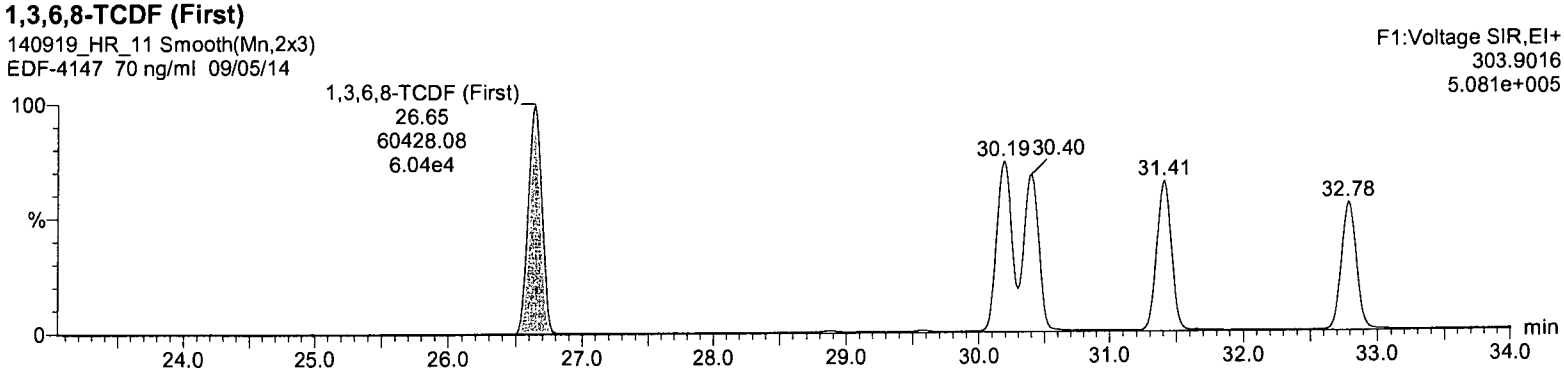


1,2,3,4,6,7,8-HpCDD (Last)

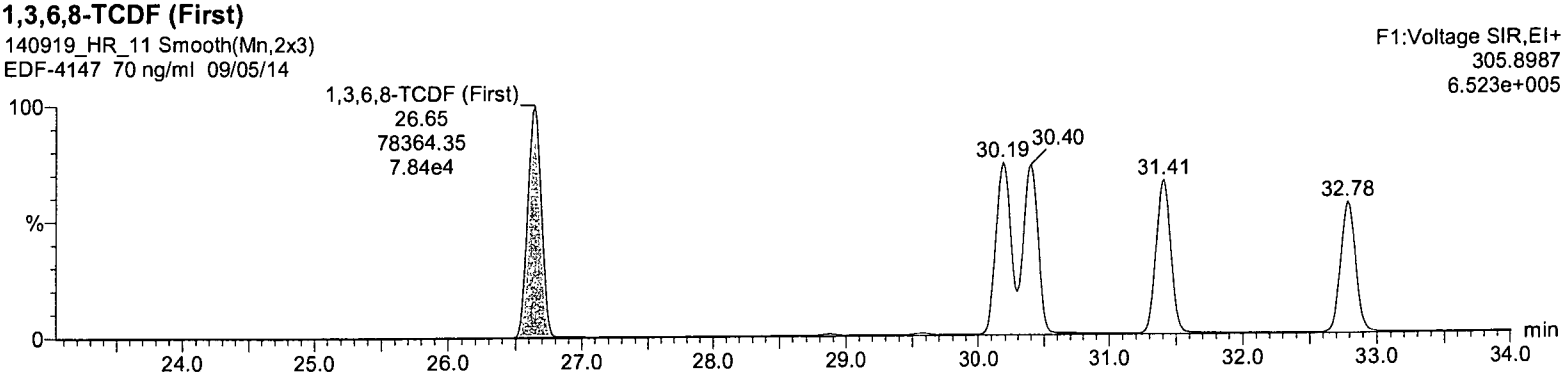


Name: 140919_HR_11, Date: 20-Sep-2014, Time: 04:26:21, ID: , Description: EDF-4147 70 ng/ml 09/05/14

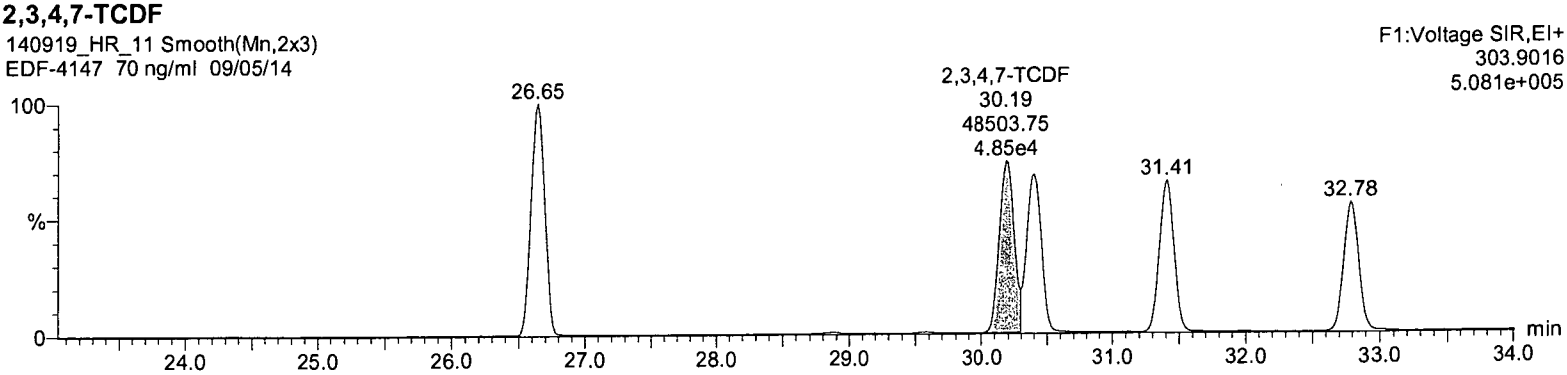
1,3,6,8-TCDF (First)



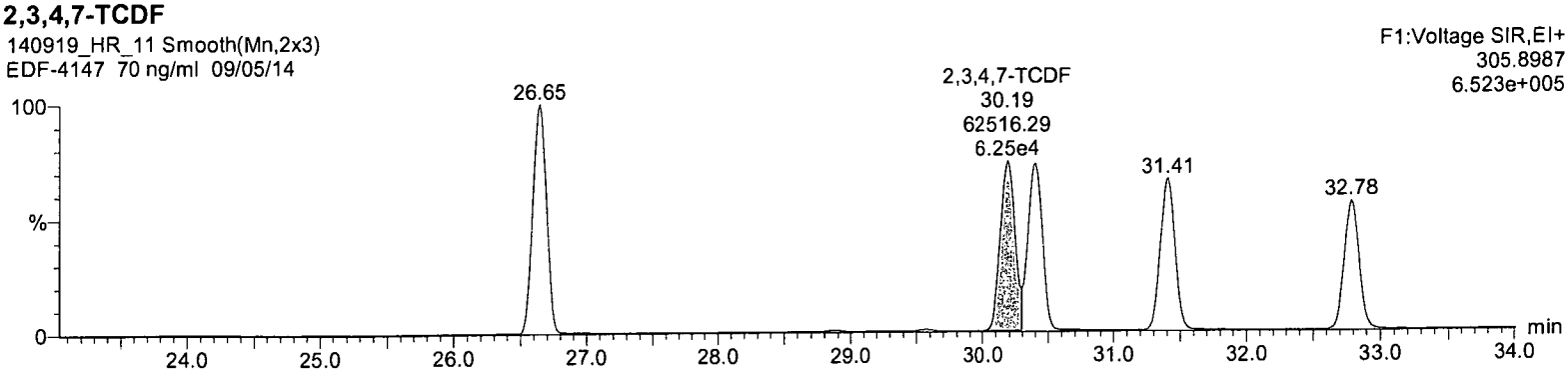
1,3,6,8-TCDF (First)



2,3,4,7-TCDF

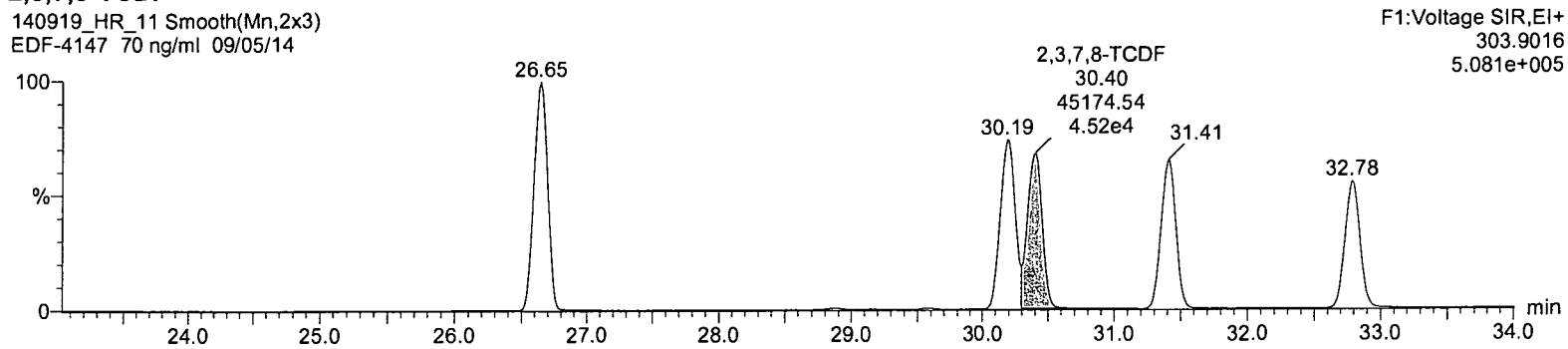


2,3,4,7-TCDF

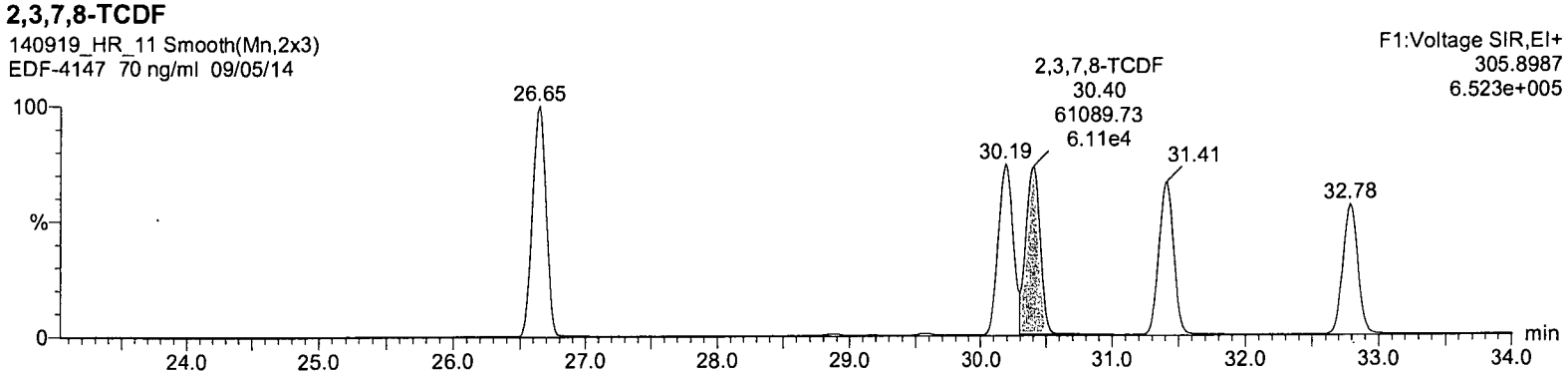


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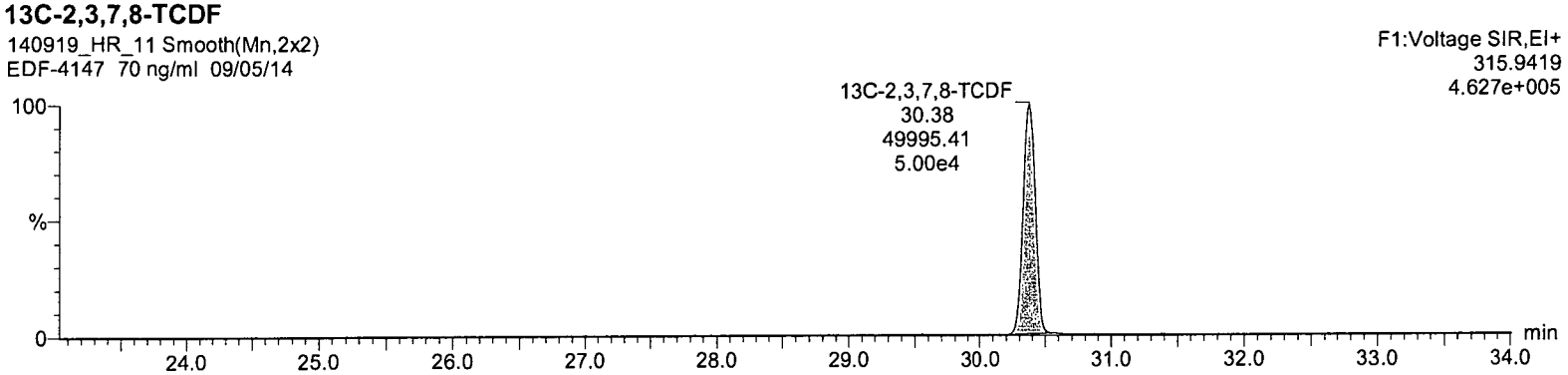
2,3,7,8-TCDF



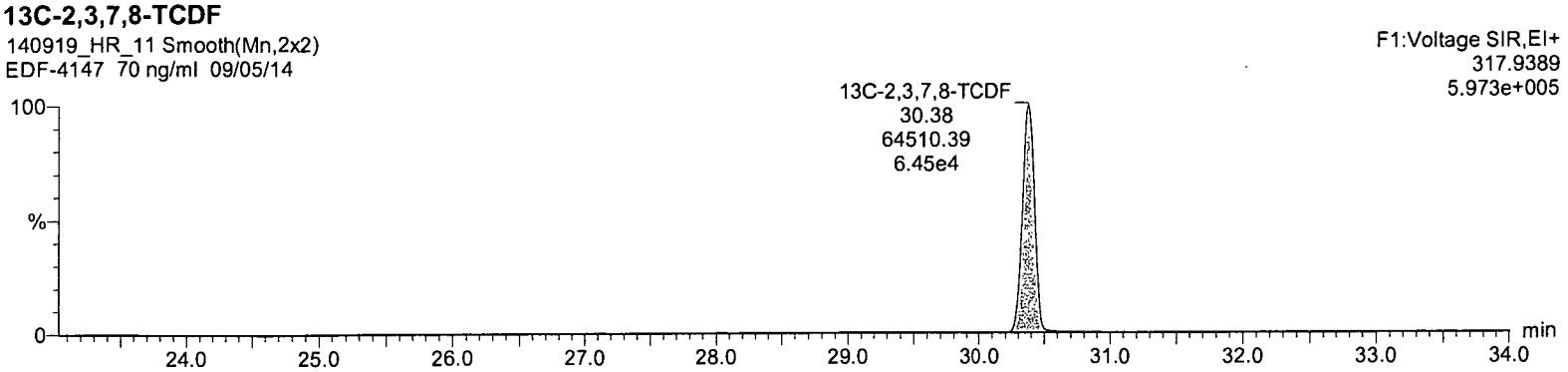
2,3,7,8-TCDF



13C-2,3,7,8-TCDF

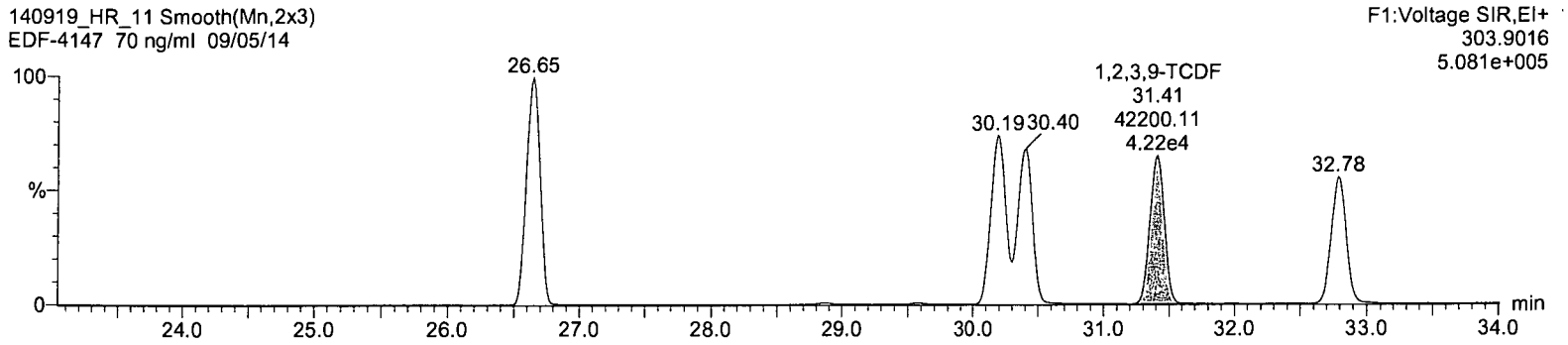


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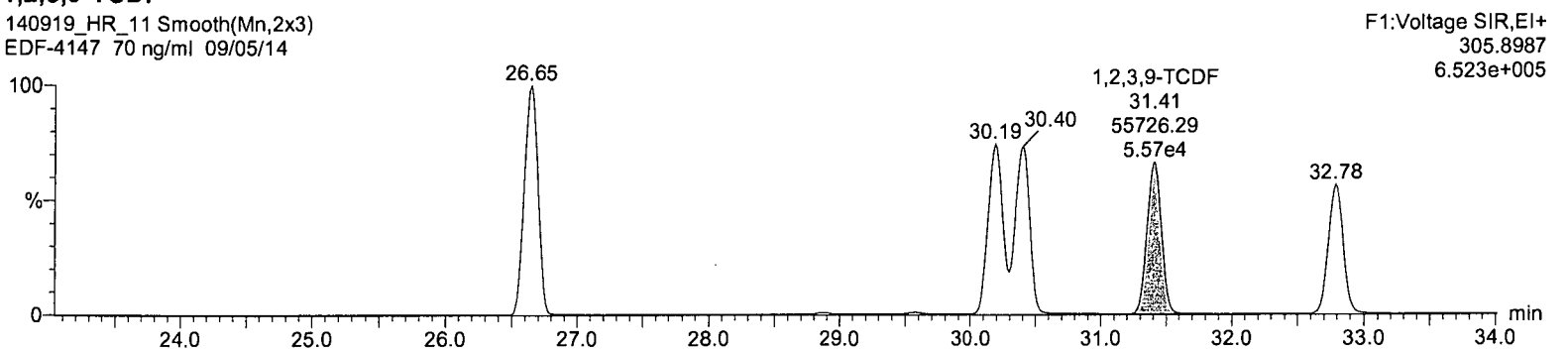


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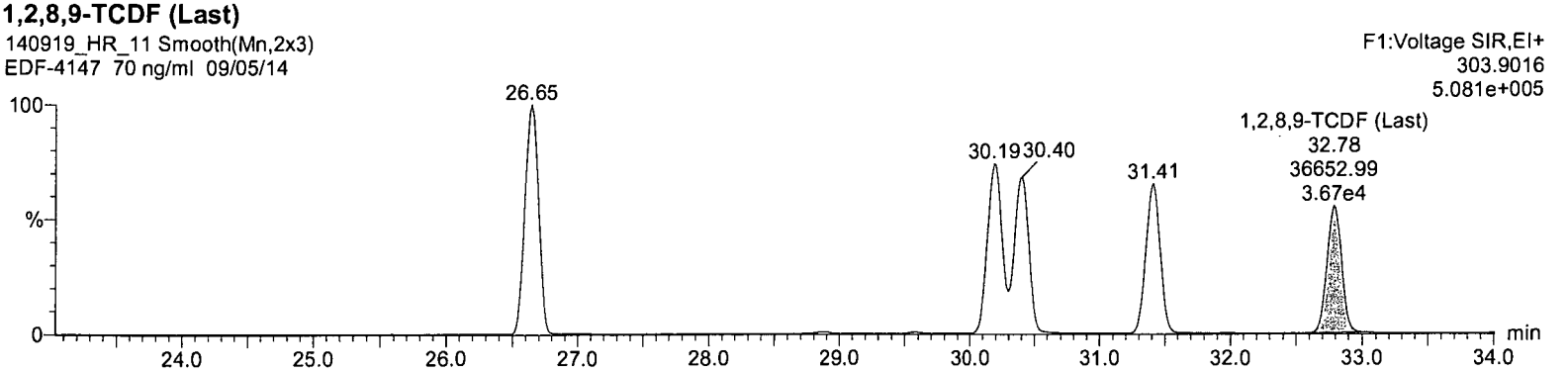
1,2,3,9-TCDF



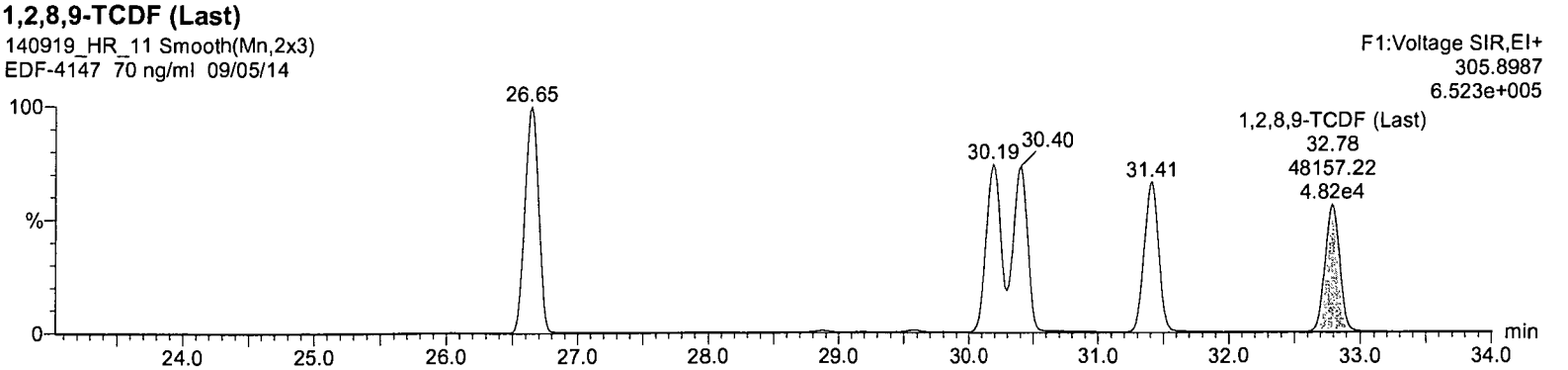
1,2,3,9-TCDF



1,2,8,9-TCDF (Last)

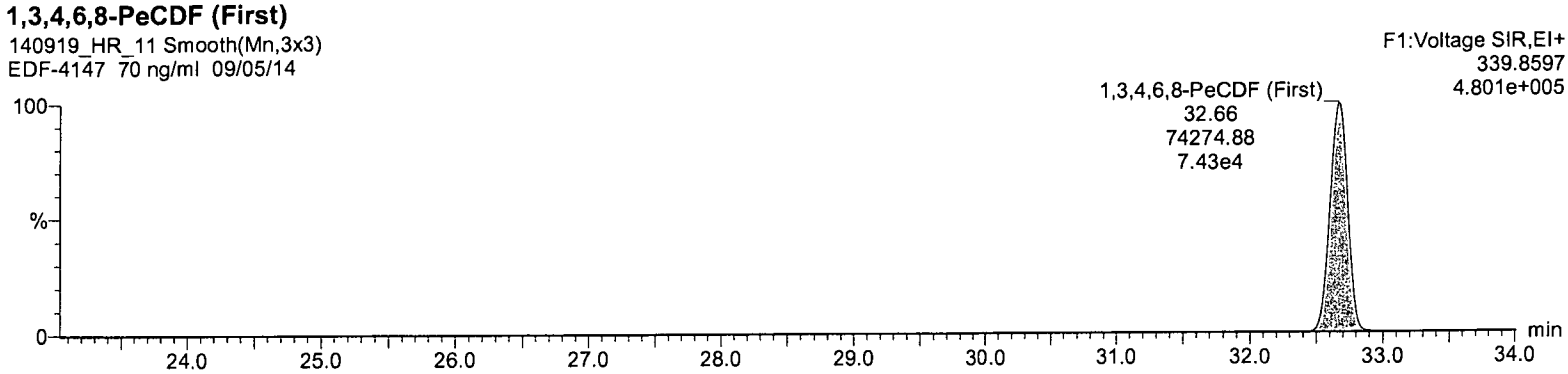


1,2,8,9-TCDF (Last)

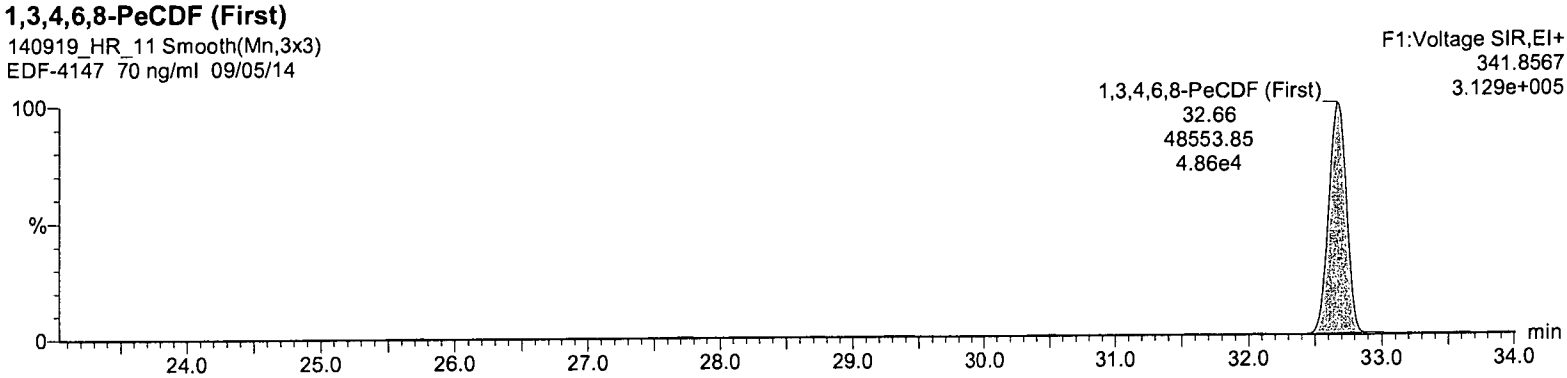


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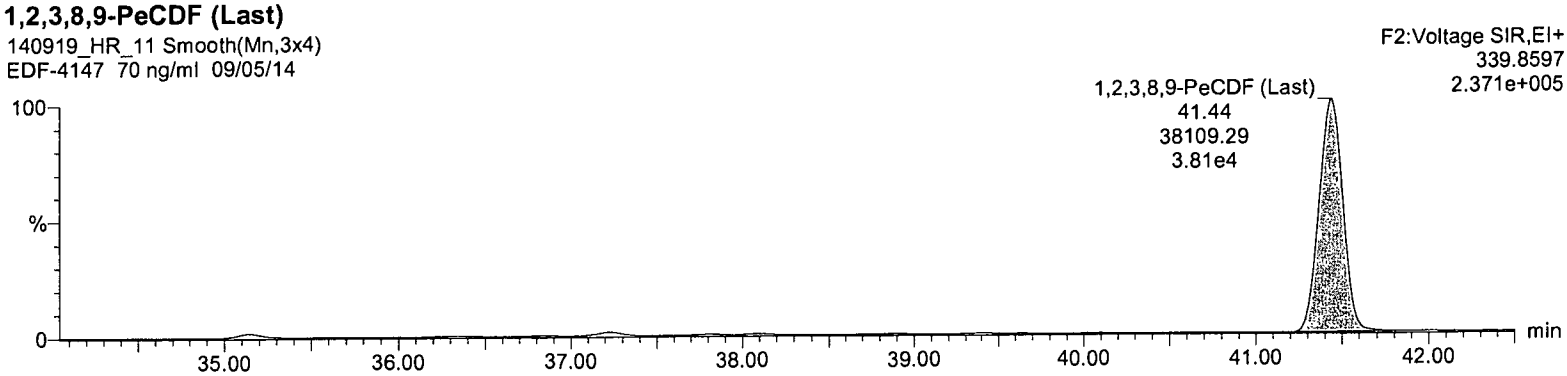
1,3,4,6,8-PeCDF (First)



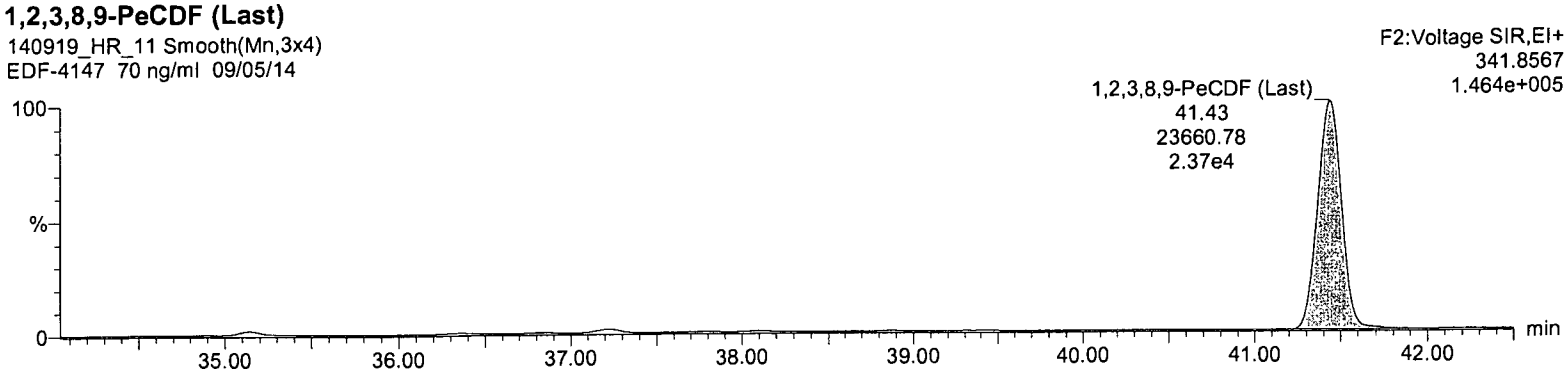
1,3,4,6,8-PeCDF (First)



1,2,3,8,9-PeCDF (Last)

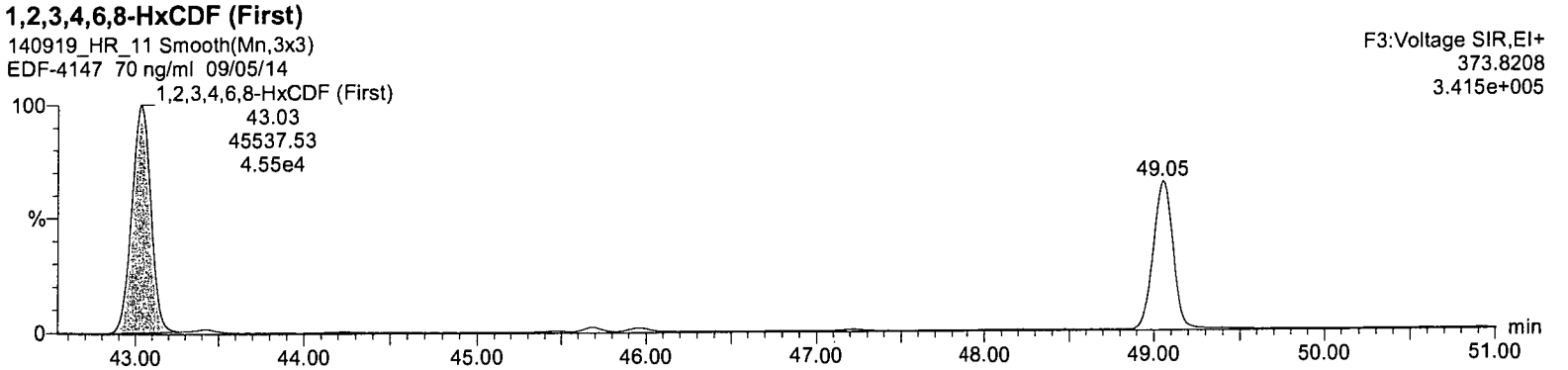


1,2,3,8,9-PeCDF (Last)

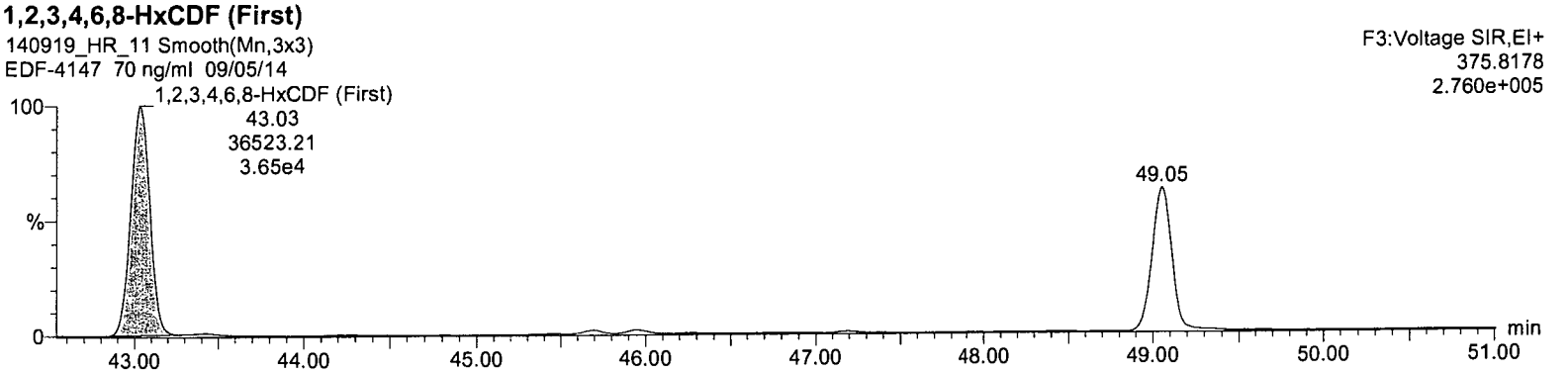


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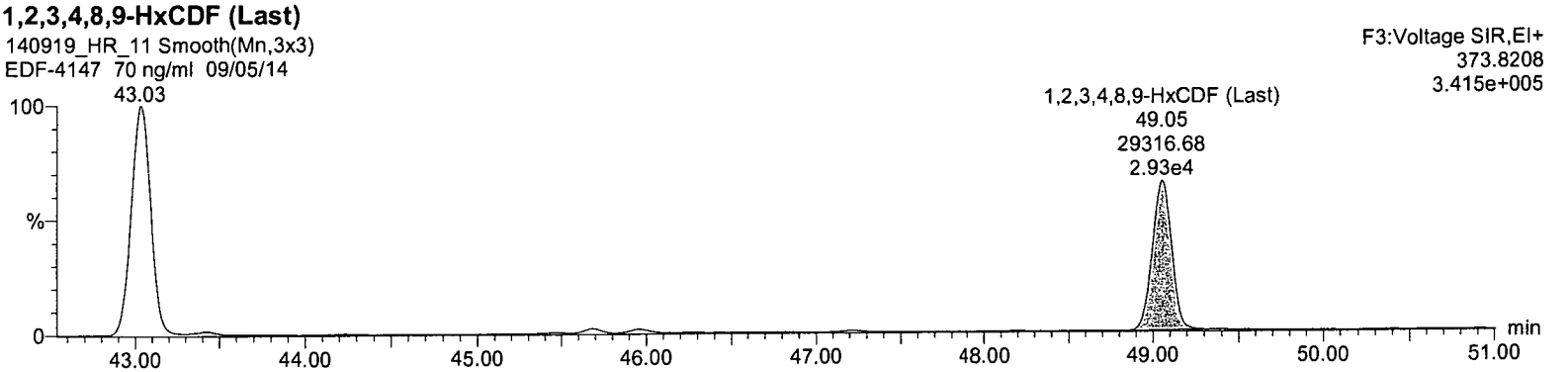
1,2,3,4,6,8-HxCDF (First)



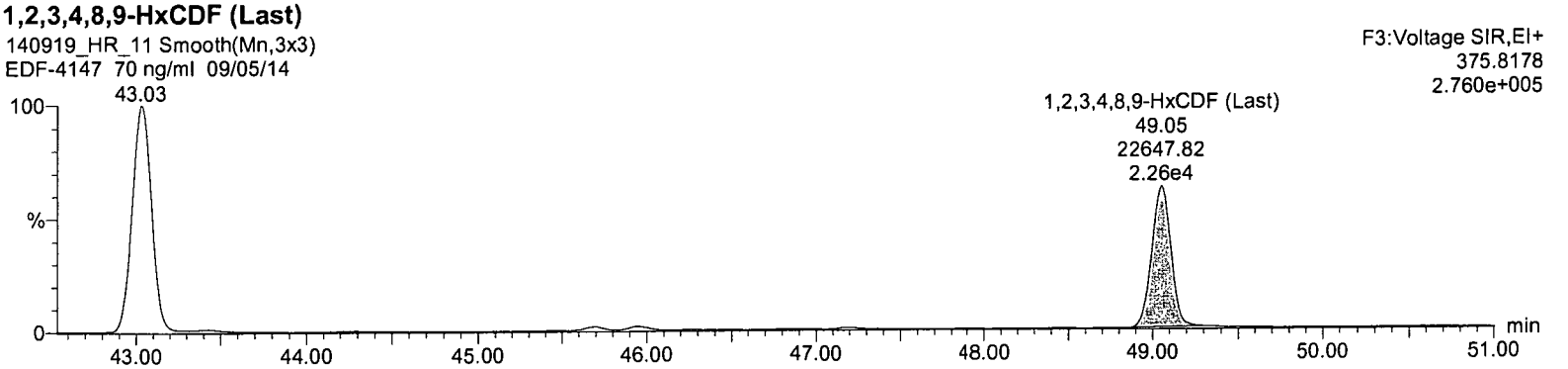
1,2,3,4,6,8-HxCDF (First)



1,2,3,4,8,9-HxCDF (Last)

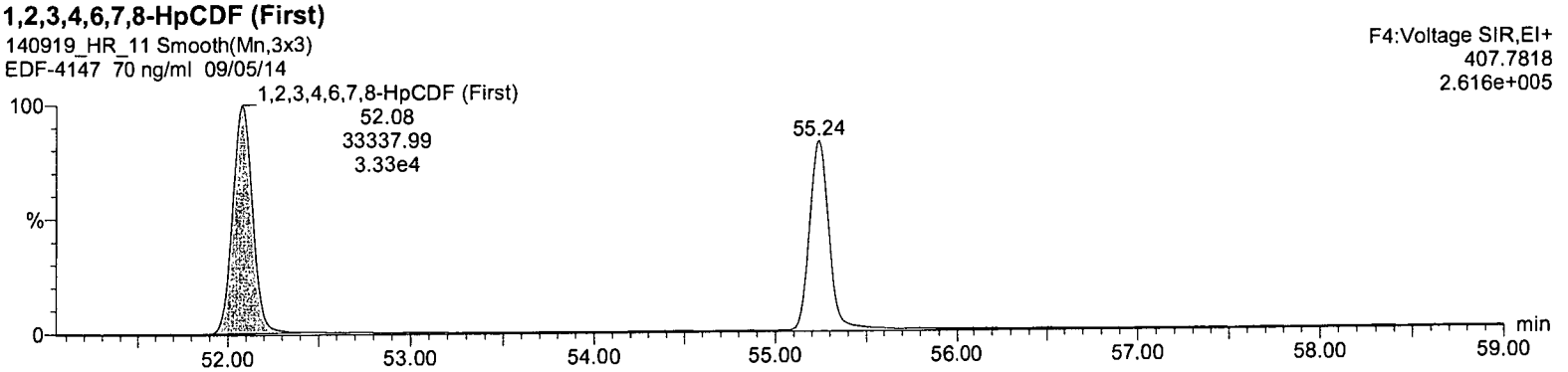


1,2,3,4,8,9-HxCDF (Last)

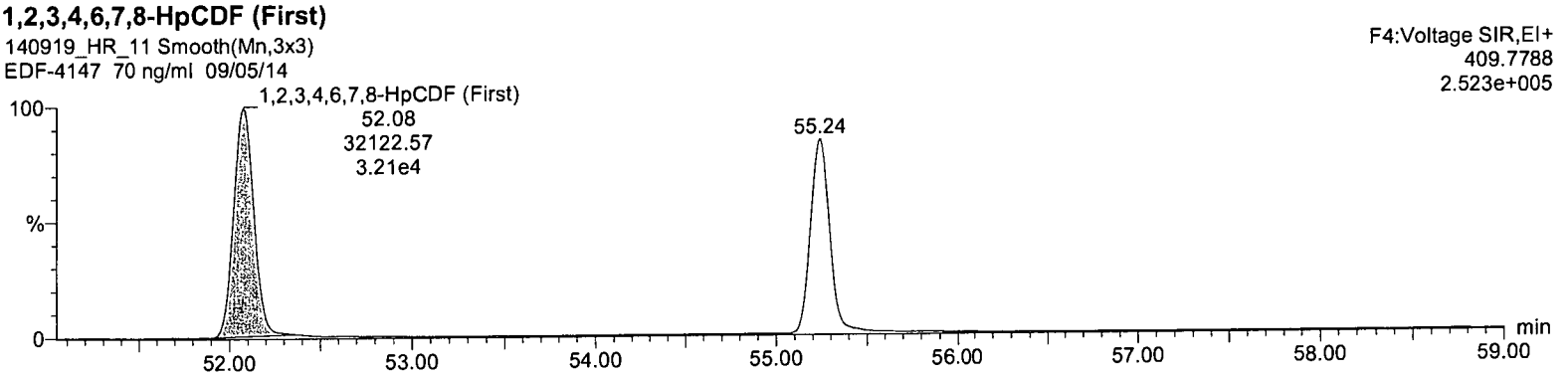


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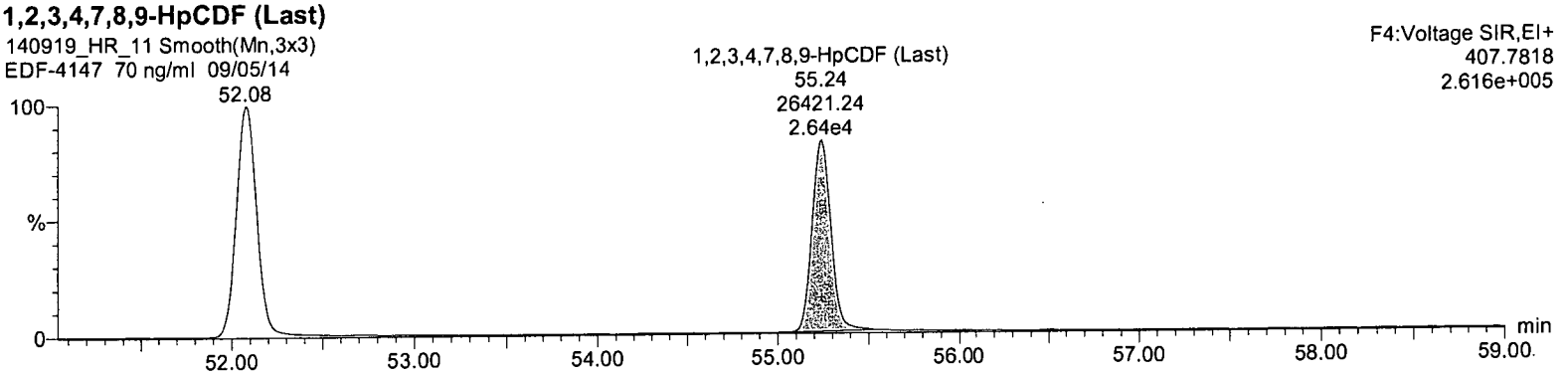
1,2,3,4,6,7,8-HpCDF (First)



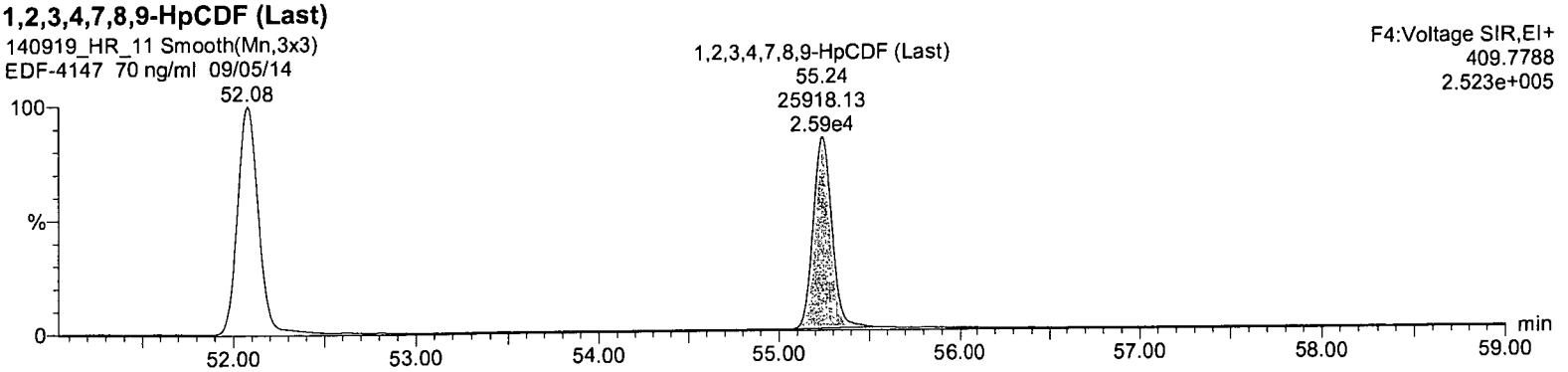
1,2,3,4,6,7,8-HpCDF (First)



1,2,3,4,7,8,9-HpCDF (Last)

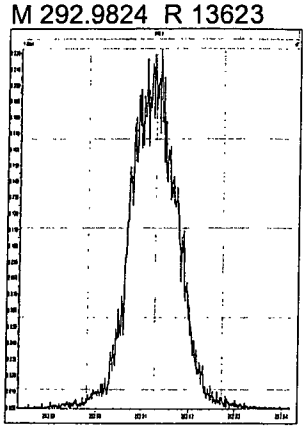


1,2,3,4,7,8,9-HpCDF (Last)

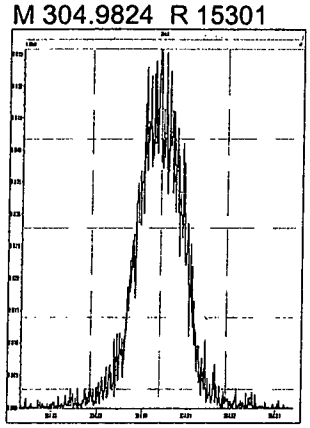


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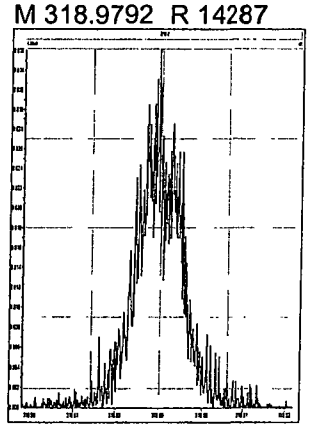
M 292.9824 R 13623



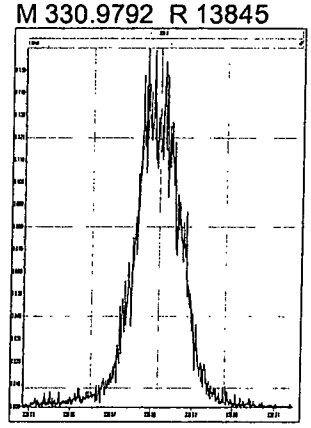
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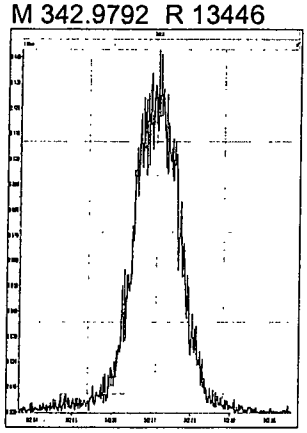
M 318.9792 R 14287



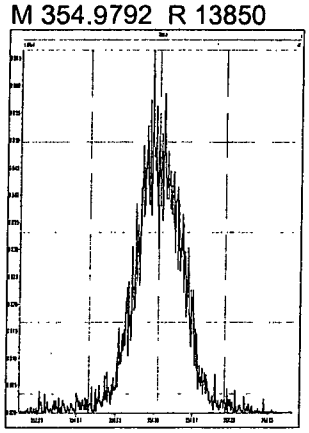
M 330.9792 R 13845



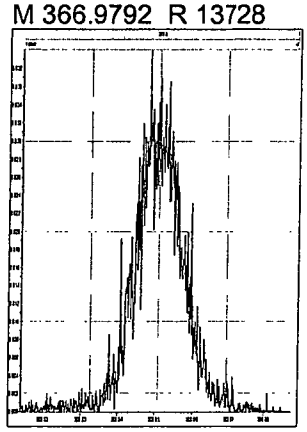
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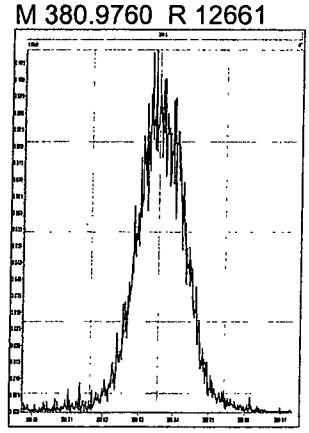
M 354.9792 R 13850



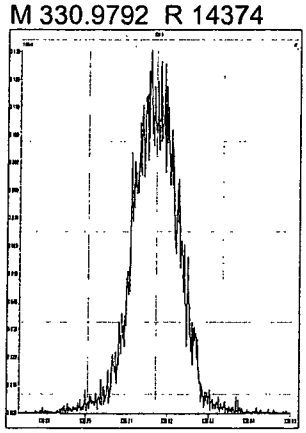
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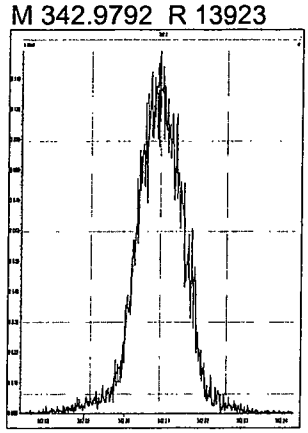
M 380.9760 R 12661



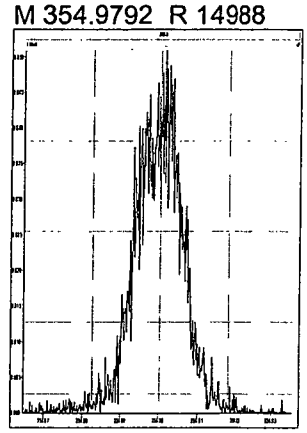
M 330.9792 R 14374



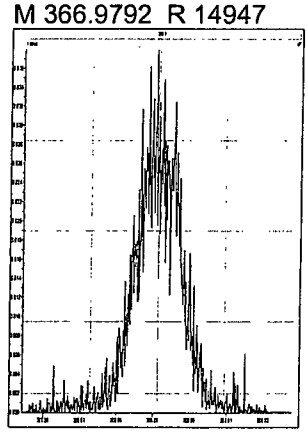
M 342.9792 R 13923



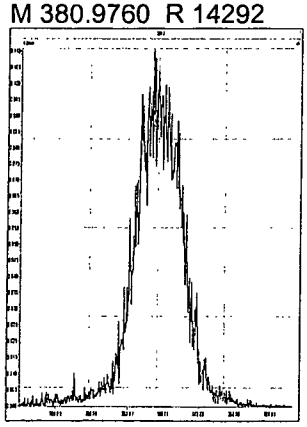
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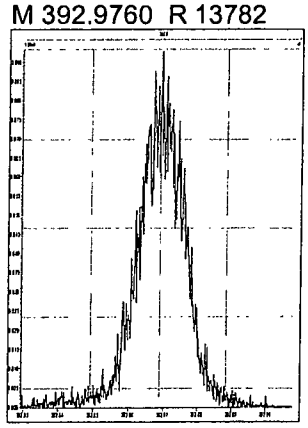
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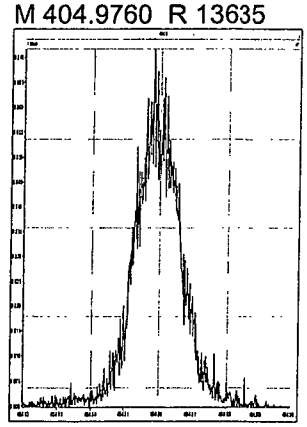
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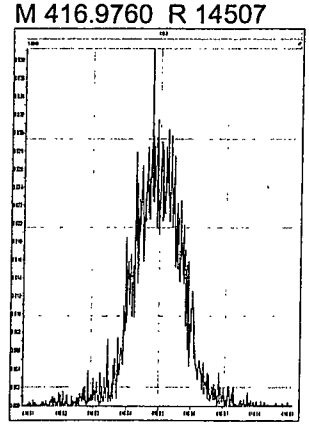
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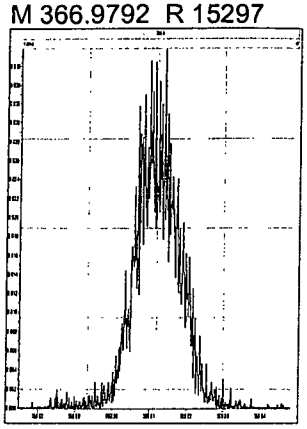
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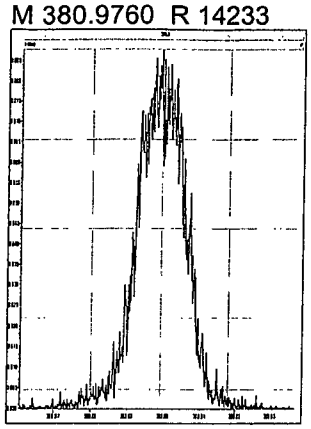
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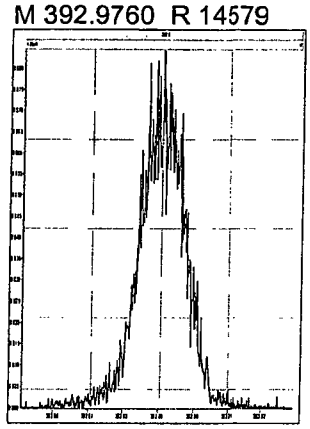
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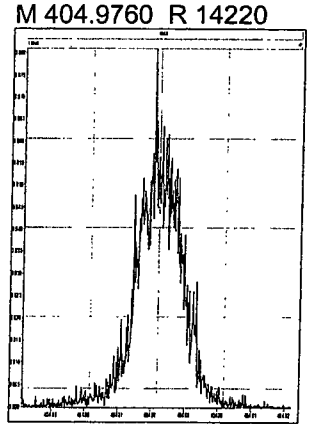
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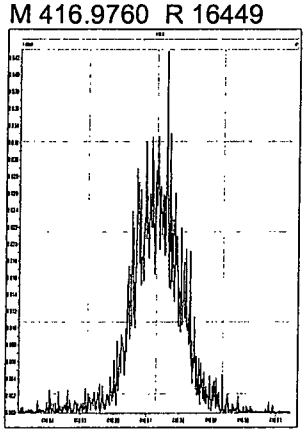
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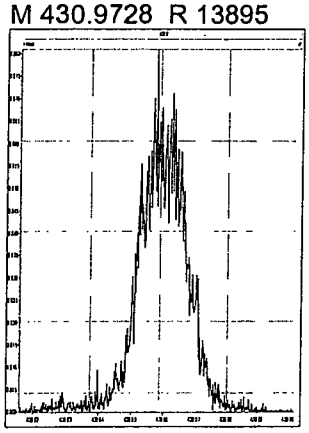
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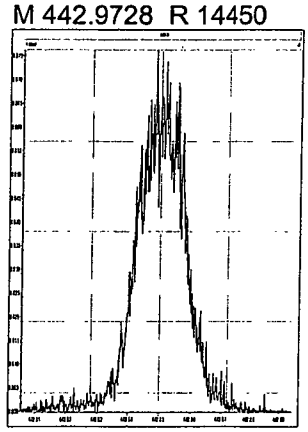
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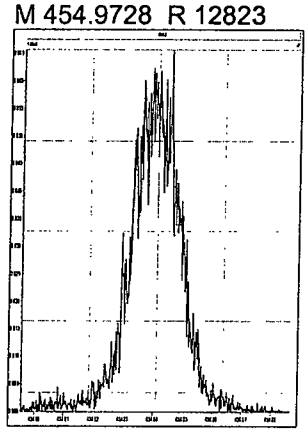
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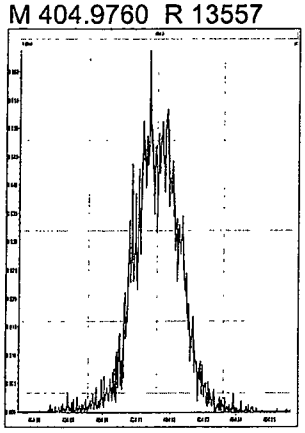
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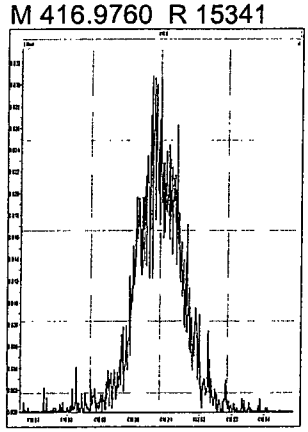
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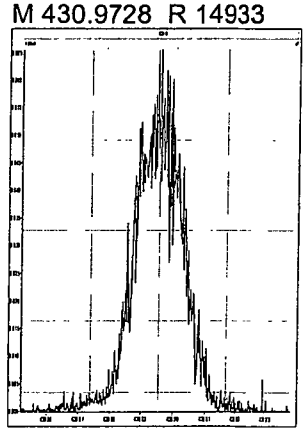
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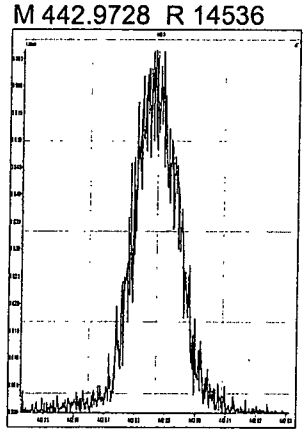
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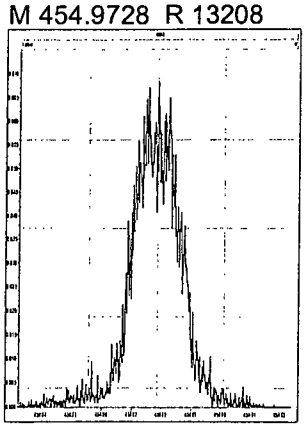
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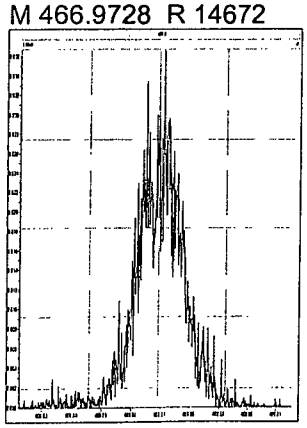
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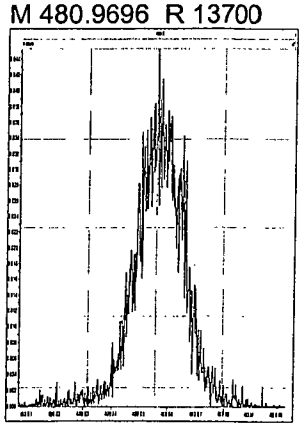
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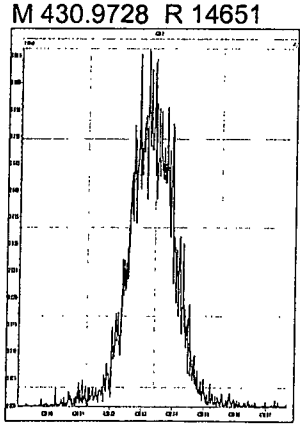
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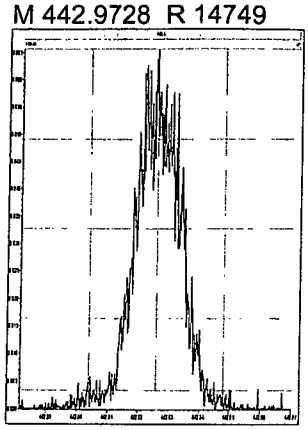


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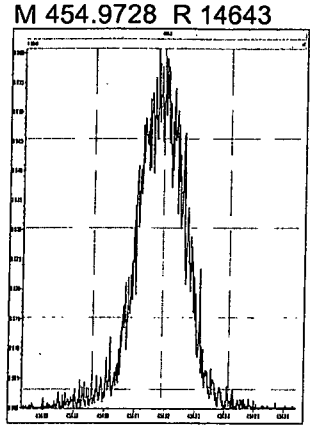


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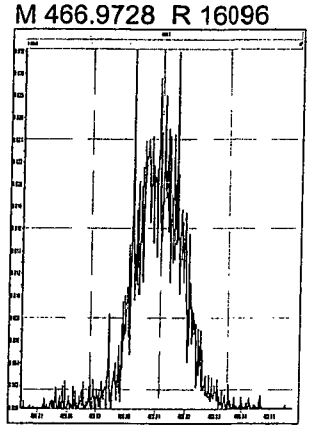
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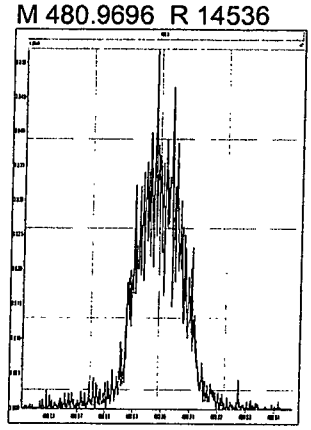
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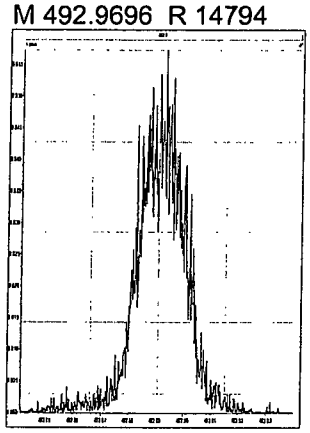
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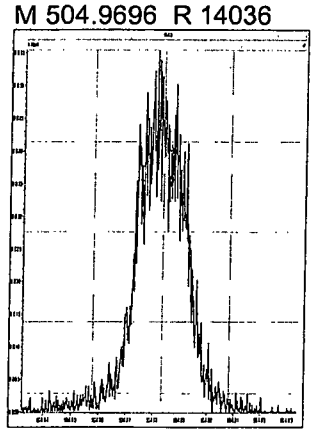
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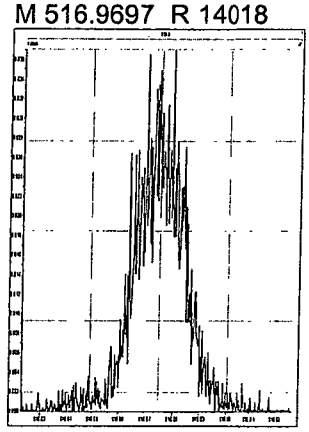
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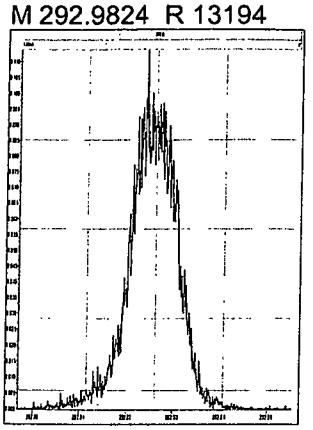


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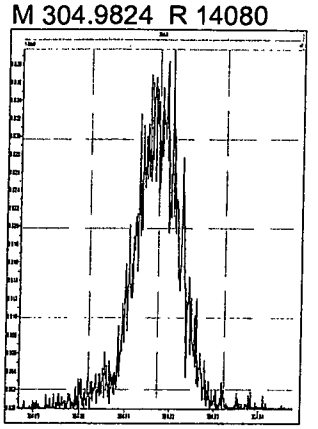


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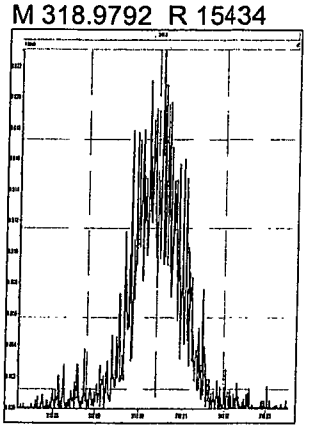
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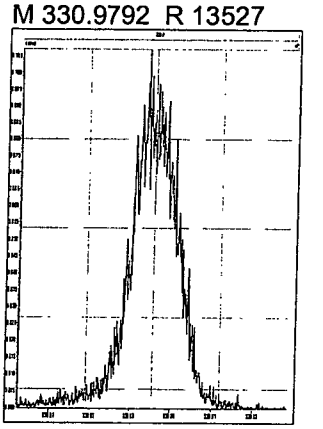
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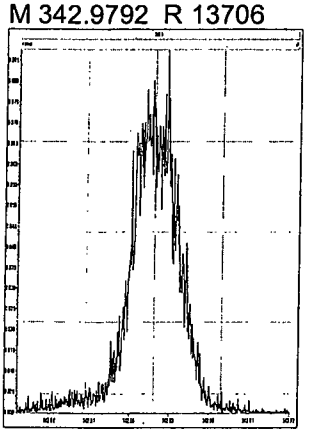
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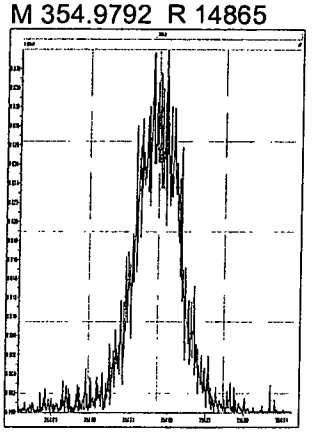
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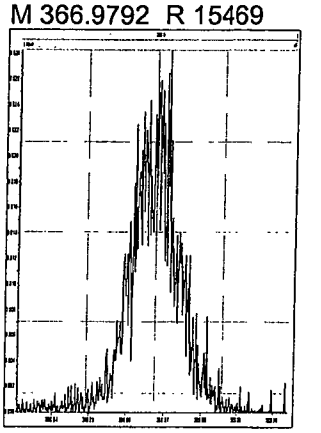
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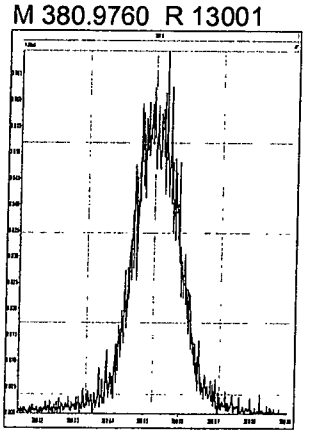
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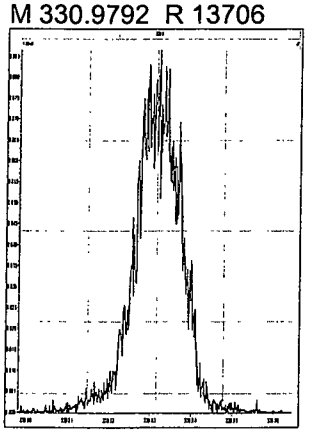
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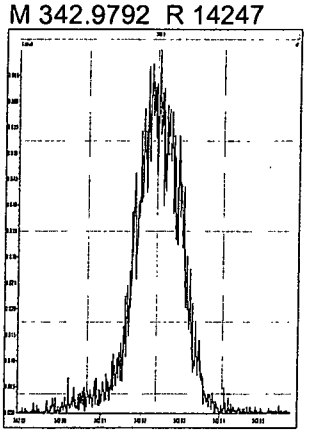
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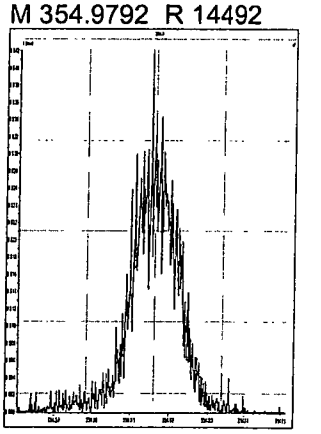
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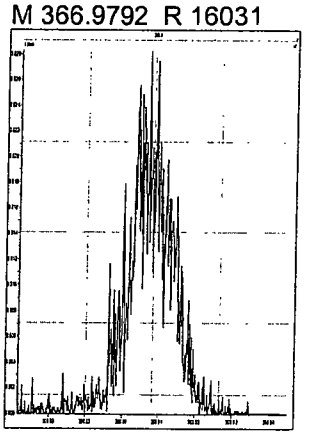
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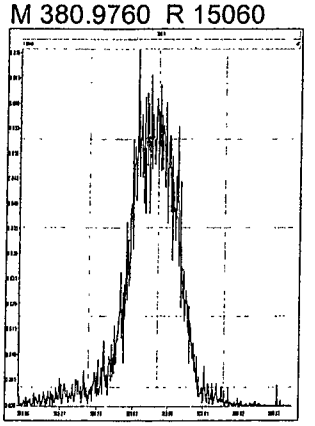
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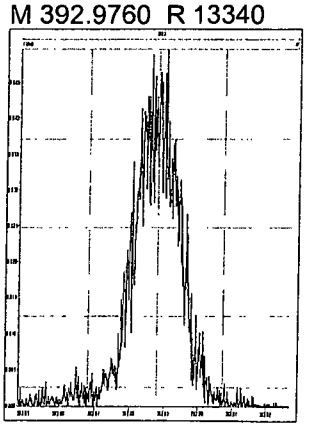
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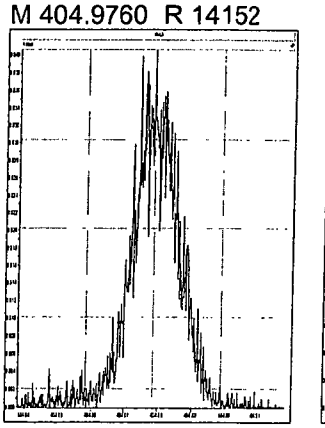
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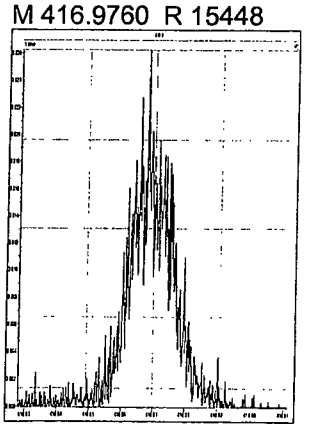
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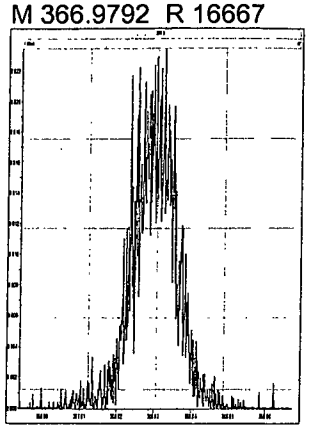
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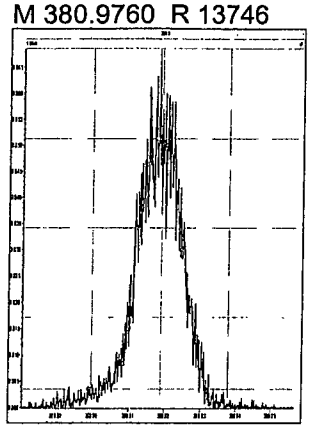
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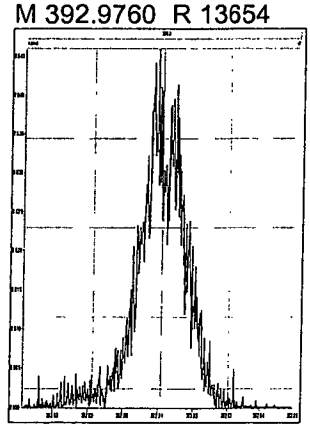
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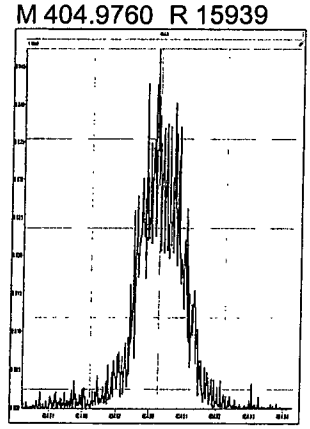
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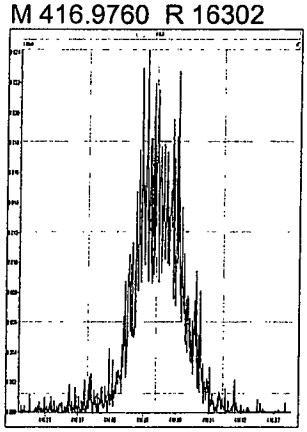
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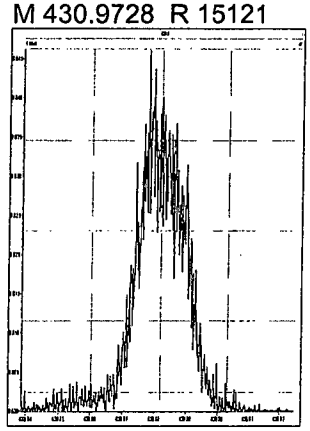
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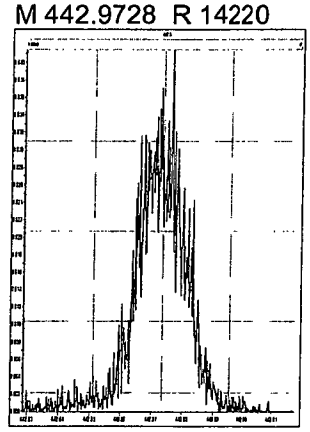
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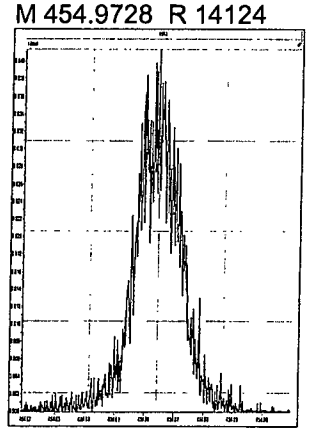
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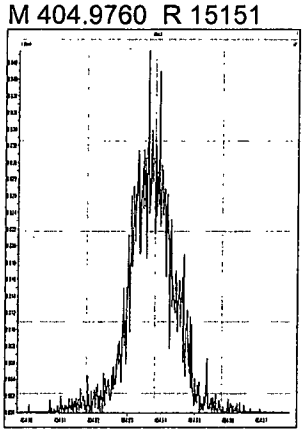
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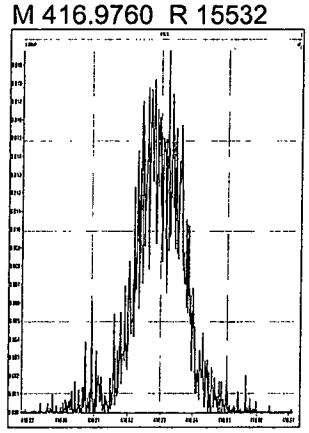
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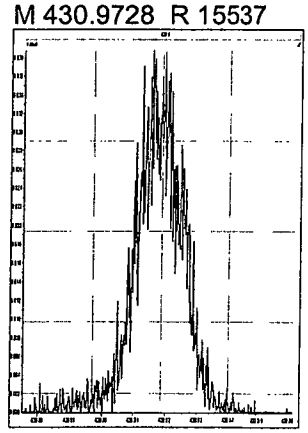
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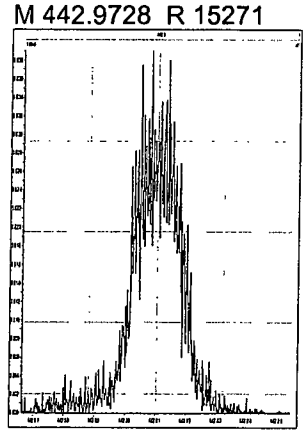
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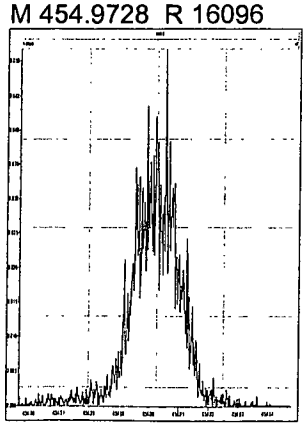
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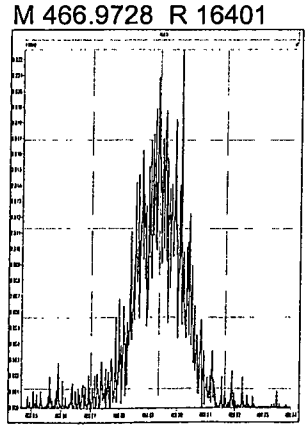
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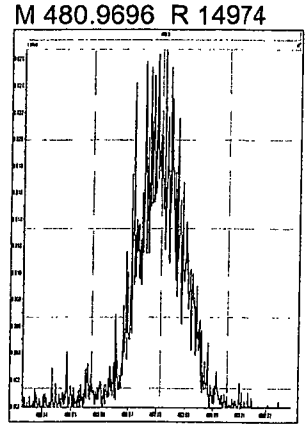
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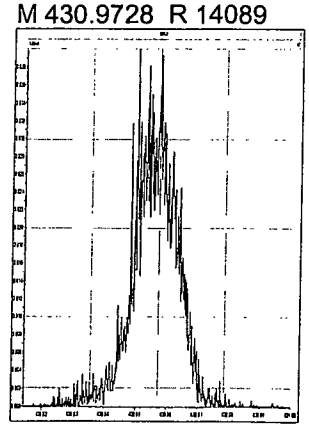
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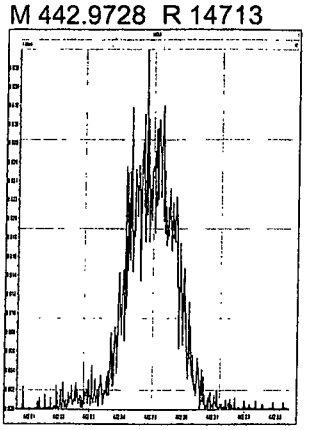
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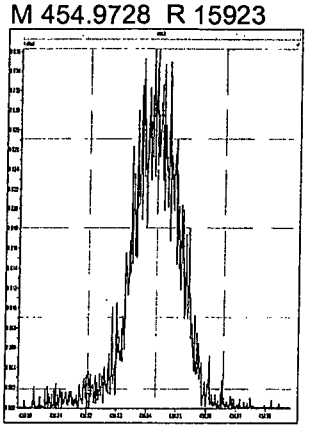
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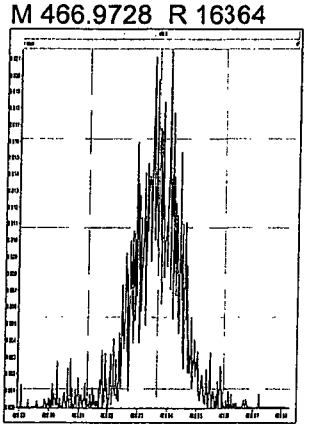
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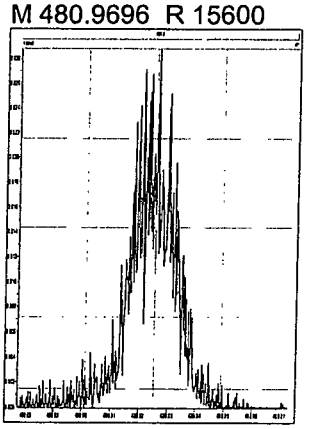
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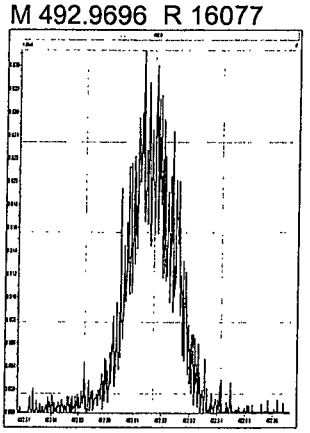
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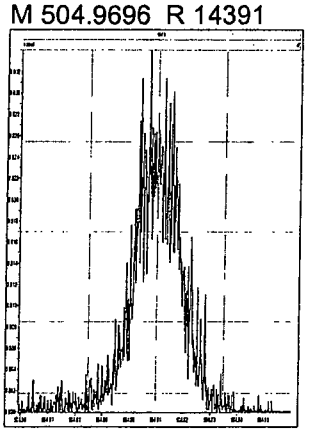
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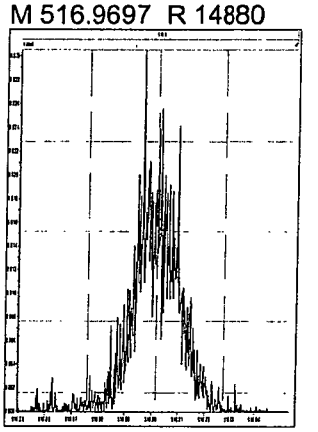
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M 504.9696 R 14391

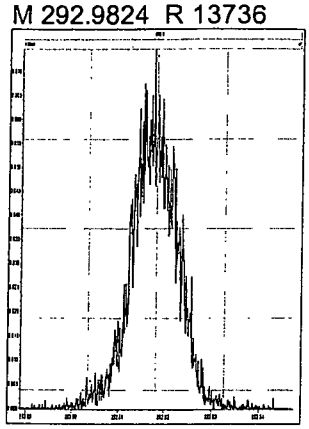


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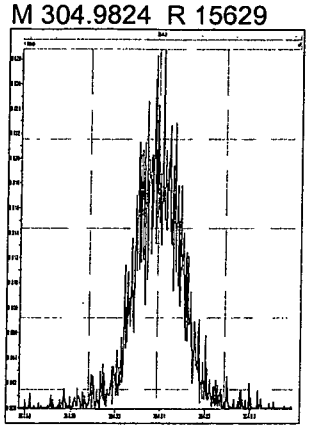


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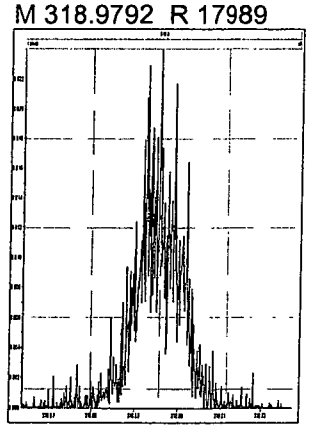
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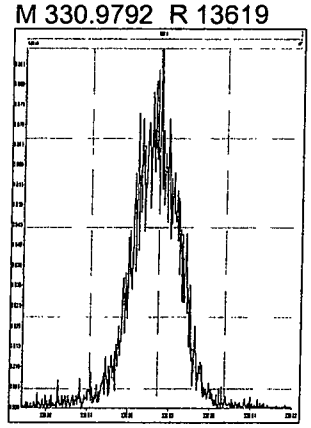
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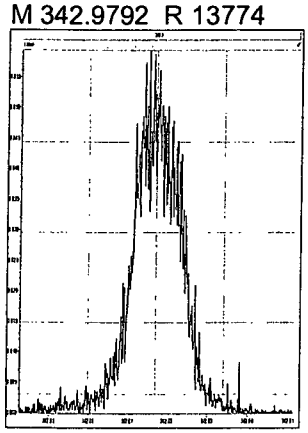
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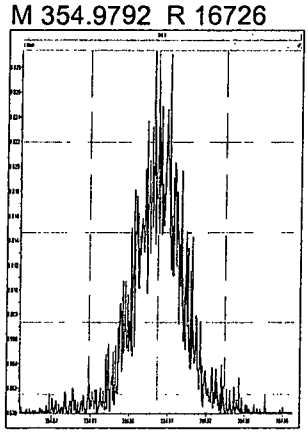
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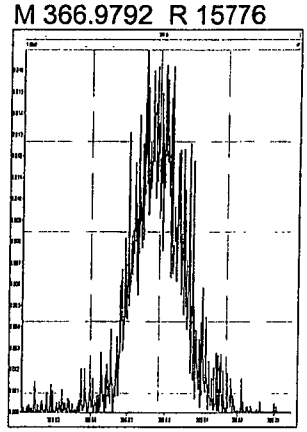
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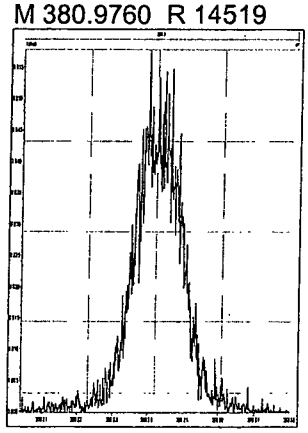
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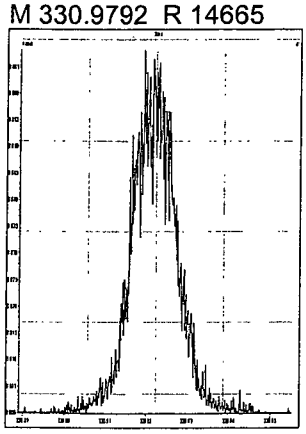
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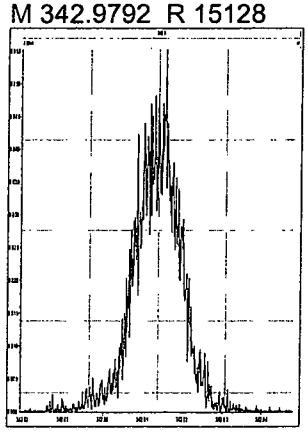
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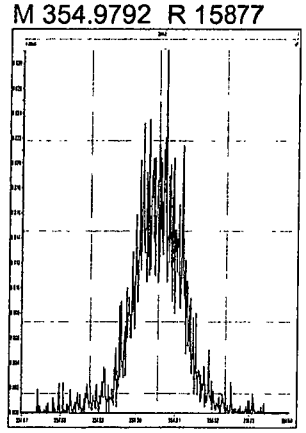
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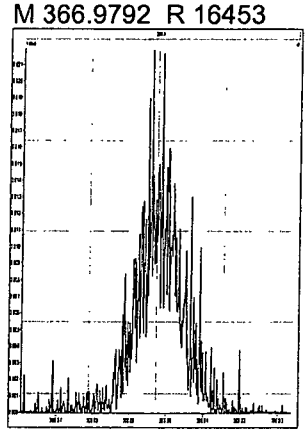
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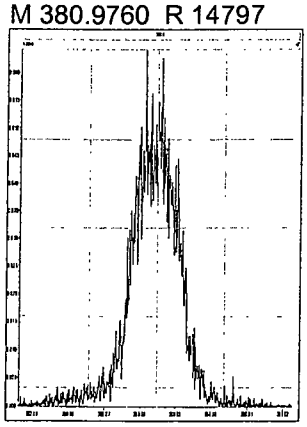
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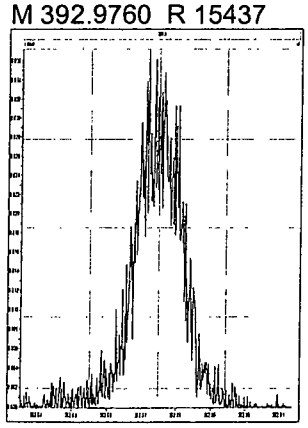
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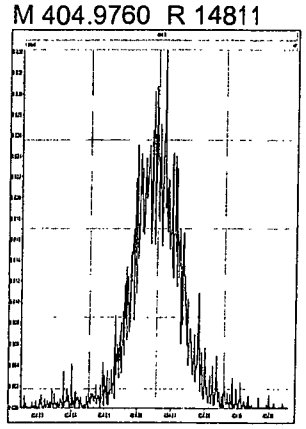
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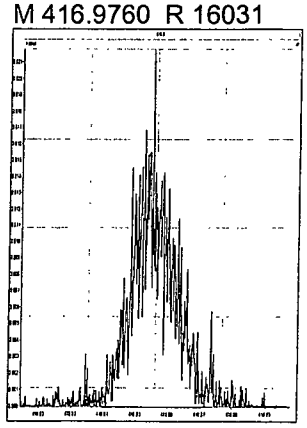
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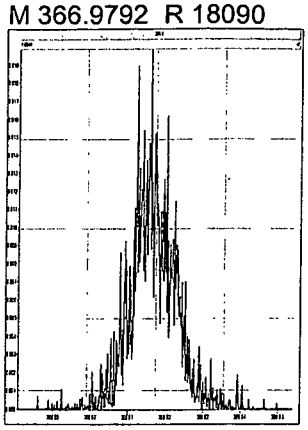
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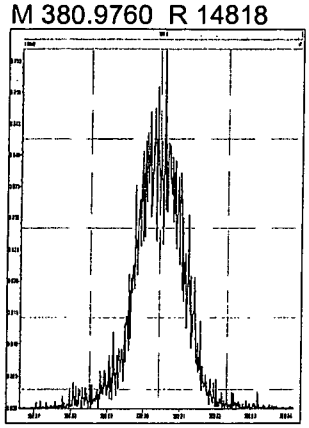
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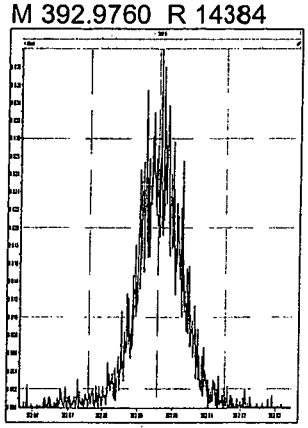
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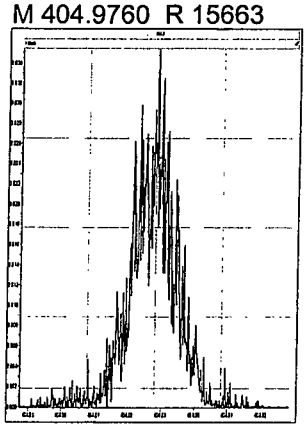
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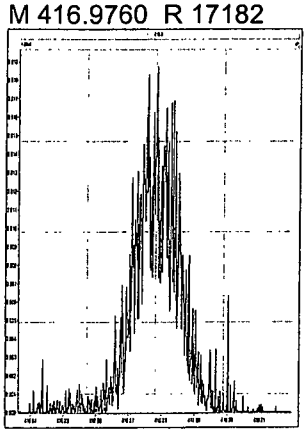
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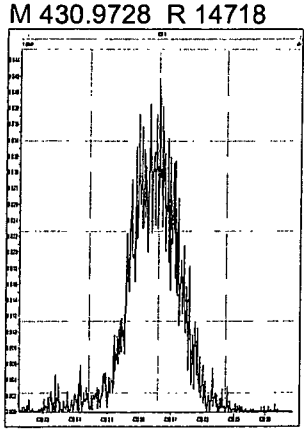
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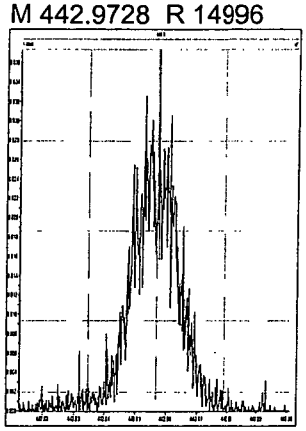
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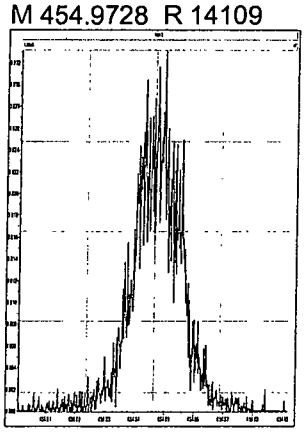
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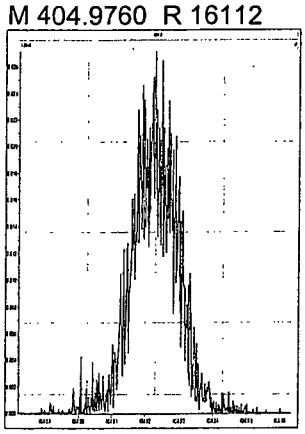
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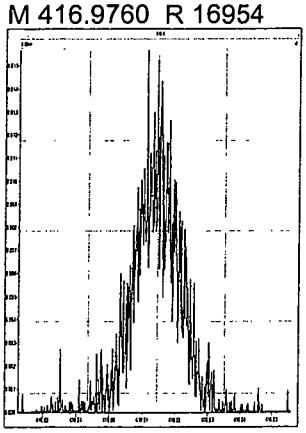
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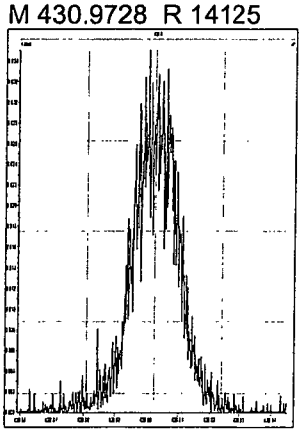
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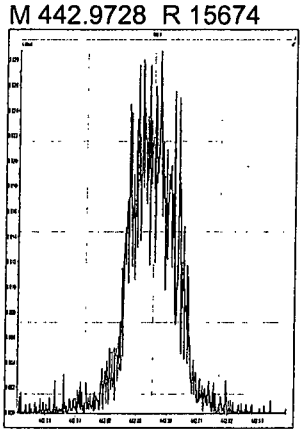
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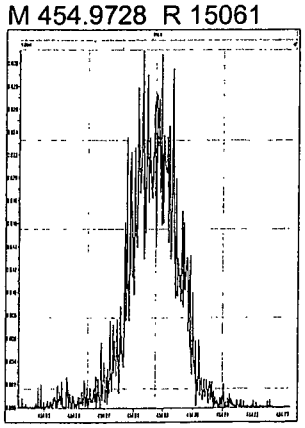
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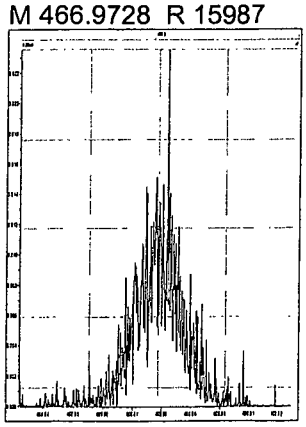
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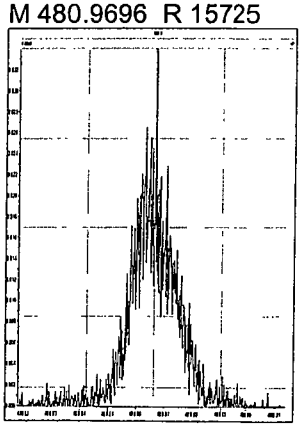
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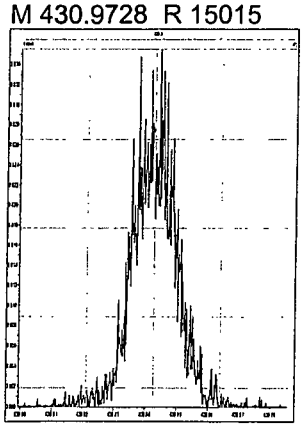
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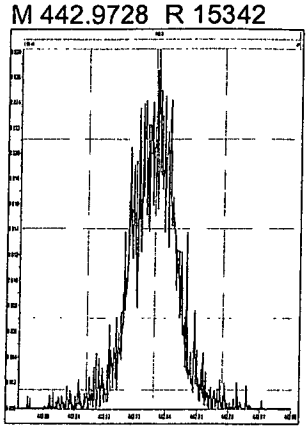


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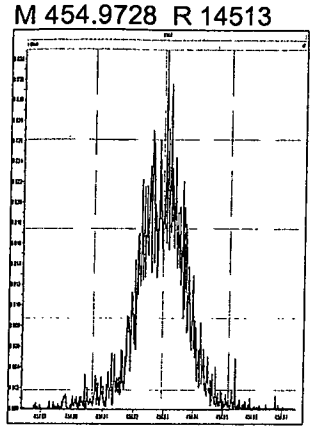


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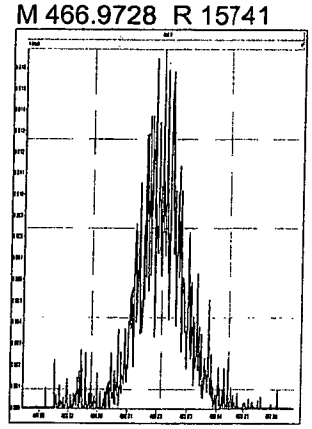
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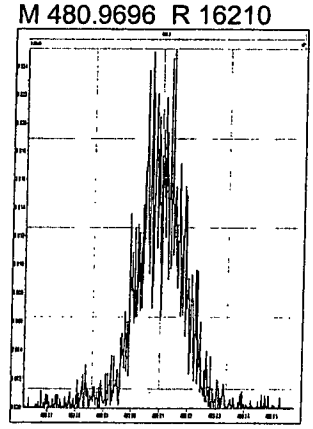
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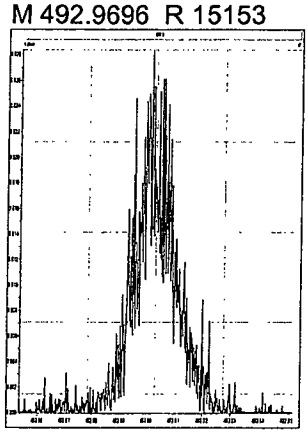
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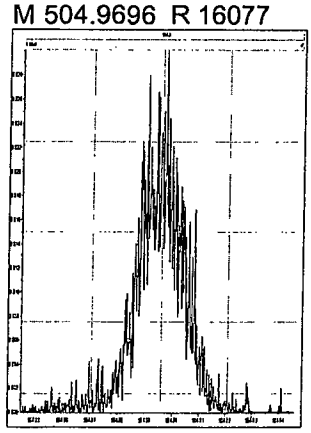
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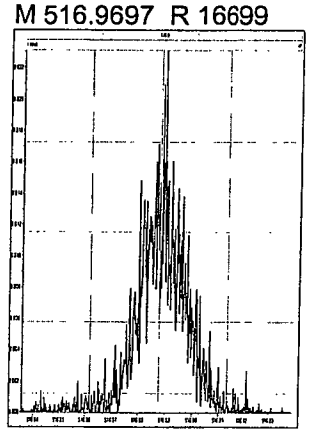
M 492.9696 R 15153



M 504.9696 R 16077



M 516.9697 R 16699



094

Dioxin/Furan Standard Prep Log #2

05-06-14E					
5% (w:v) Sodium Chloride					
Supplier	ID #	ID	Amount	Lot #	
EMD	SX0420-5	Sodium Chloride	50 g	VJ30C	
		Millipore filtered de-ionized water	1000 mL		
05-06-14F					
20% (w:v) Potassium Hydroxide					
Supplier	ID #	ID	Amount	Lot #	
JT Baker	3150-05	Potassium Hydroxide, Flake	200 g	G41599	
		Millipore filtered de-ionized water	1000 mL		
05-06-14G					
75:20:5 (v:v) Methylene chloride : Methanol : Toluene					
Supplier	ID #	ID	Amount	Lot #	Exp:
EMD	DX0835-3	Methylene Chloride	750 mL	53300	
EMD	MX0488P-1	Methanol	200 mL	53087	
BDH	BDH1151-4LG	Toluene	50 mL	101812C	04/18/14
05-06-14H					
50:50 (v:v) Methylene chloride : Cyclohexane					
Supplier	ID #	ID	Amount	Lot #	
EMD	DX0835-3	Methylene Chloride	500 mL	53300	
B&J Brand	053-4	Cyclohexane	500 mL	CX212	01/24/23

5/6/14 BP

BP

05-06-14I
Washed and Baked Celite 545

Supplier	ID #	ID	Lot #
JT Baker	3371-05	Celite 545	G40632

Soxhlet extract with methylene chloride for 24 hours — start time: 5/6/14 800 — end time: 5/7/14 800

5/6/14 BP

Bake for at 130C for 6 hours — start time: 5/7/14 1000 — end time: 5/7/14 1600

05-06-14J
Washed and Baked Carbon/Celite 545 Mix

Supplier	ID #	ID	Amount	Lot #
JT Baker	E346-07	Activated Carbor	5.40g	B10627
JT Baker	3371-05	Celite 545	62.0g	G40632

Soxhlet extract with methylene chloride for 24 hours — start time: 5/6/14 800 — end time: 5/7/14 800

Bake for at 130C for 6 hours — start time: 5/7/14 1000 — end time: 5/7/14 1600

05-06-14K
Washed Glass Wool

Supplier	ID #	ID	Lot #
Supelco	2-0410	Glass Wool	11786

Soxhlet extract with methylene chloride for 24 hours — start time: 5/6/14 800 — end time: 5/7/14 800

Rinse with Acetone and let air dry

Dioxin/Furan Standard Prep Log #2

096

5/20/14 A
RP

05-20-14A							
0.50 ng/ml Dioxin/Furan Spikes							
Exp:	05/20/14						
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume
CIL	EDF-5008	Matrix Spiking Solution	100-500 ng/mL	ER113006-01 - 32295	09-13-13A	11-30-16	50 uL
BDH Acetone		BDH1101-4LG		121813D			9950 uL

5-27-14 A
RP

05-27-14A							
0.50 ng/ml Dioxin/Furan Spikes							
Exp:	05/27/14						
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume
CIL	EDF-5008	Matrix Spiking Solution	100-500 ng/mL	ER113006-01 - 32295	09-13-13A	11-30-16	50 uL
BDH Acetone		BDH1101-4LG		121813D			9950 uL

5/29/14
RP

05-29-14A							
0.50 ng/ml Dioxin/Furan Spikes							
Exp.	05/29/14						
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp Date	Volume
CIL	EDF-5008	Matrix Spiking Solution	100-500 ng/mL	ER113006-01 - 32295	09-13-13A	11-30-16	50 uL
BDH Acetone		BDH1101-4LG		121813D			9950 uL
05-29-14B							
100 ng/ml EDF-4055							
Exp:	05/29/14						
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume
CIL	EDF-4055	Recovery Standard Stock Solution	500ng/mL	ER011911-02 - 33016	03-25-14A	1-31-21	200 uL
Nonane		Sigma Aldrich SHBC8566V					800 uL

6/3/14 A
RP

06-03-14A							
0.50 ng/ml Dioxin/Furan Spikes							
Exp:	06/03/14						
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume
CIL	EDF-5008	Matrix Spiking Solution	100-500 ng/mL	ER113006-01 - 32295	09-13-13A	11-30-16	50 uL
BDH Acetone		BDH1101-4LG		121813D			9950 uL

6/5/14 A
RP

06-05-14A							
0.50 ng/ml Dioxin/Furan Spikes							
Exp:	06/05/14						
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume
CIL	EDF-5008	Matrix Spiking Solution	100-500 ng/mL	ER113006-01 - 32295	09-13-13A	11-30-16	50 uL
BDH Acetone		BDH1101-4LG		121813D			9950 uL

6/10/14 A
RP

Brilliant Cil, Inc.
811 Paloma Dr., Ste. A
Round Rock, TX 78664
800.840.7637

Method 8290 Matrix
Spiking Solution
Catalog #: EDF-5002
Conc.: 100-500 ng/mL
Solvent: 1.2 mL n-Nonane
Lot No.: ER113006-01
Storage: Room Temperature
Exp. Date: 11/16
FLAMMABLE

FOR LABORATORY USE ONLY
Method 8290 Matrix Spiking Solution
Lot #: ER113006-01 - 33015
Rec: 10/16/13 MFR exp. 11/30/16

Dioxin/Furan Standard Prep Log #2

100

7/23/14 PP

07-23-14E							
0.50 ng/ml Dioxin/Furan Spikes							
Exp:	07/23/14						
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume
CIL	EDF-5008	Matrix Spiking Solution	100-500 ng/mL	ER113006-01 - 33015	06-10-14B	11-30-16	50 uL
BDH Acetone		BDH1101-4LG		121813D			9950 uL

7/24/14 PP

07-24-14A
Washed and Baked Silica Gel

Supplier	ID #	ID	Lot #
Sorbent Technologies	52700-5	Silica Gel 60A	021115L

Soxhlet extract with methylene chloride for 24 hours — start time: 7/24/14 @ 800 — end time: 7/25/14 @ 800

Baked at 180C for 24 hours — start time: 7/28/14 @ 1000 — end time: 7/29/14 10:00

07-24-14B
Washed and Baked Sodium Sulfate

Supplier	ID #	ID	Lot #
EMD	SX0760E-20	Sodium Sulfate	VB15C

Soxhlet extract with methylene chloride for 24 hours — start time: 7/24/14 @ 800 — end time: 7/25/14 @ 800

Baked at 400C for 4 hours. — start time: 7/23/14 @ 1000 — end time: 7/29/10 10:00

7/28/14 PP

07-29-14A							
1000 ng/ml PCB_1310116-01							
Exp:	07/29/15						
Supplier	ID #	ID	Conc	Lot #	Date Opened	Exp. Date	Volume
O2SI	1310116-01	PCB Congener Solution	100mg/L	189207-32539	10/28/13	04-30-15	20 ul
Nonane		Sigma Aldrich SHBC8566V		obtained from GC dept			1980 ul
07-29-14B							
2.5 ng/ml PCB_1310116-01 (Spike)							
Exp:	07/29/14						
Supplier	ID #	ID	Conc	Date Code	Exp. Date	Volume	
O2SI	1310116-01	PCB Congener Solution	1000ng/mL	07-29-14A	07/29/15	50 uL	
BDH Acetone		BDH1101-4LG		Lot #121813D		19955 uL	
07-29-14C							
5.0 ng/ml EC-4977 (Surrogate)							
Exp:	07/29/14						
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume
CIL	EC-4977	Method 1668A Toxics/LOC/Window Surrogate Spike Mix	1000ng/mL	PR-23564-33245	03-14-14A	07-27-22	100 uL
BDH Acetone		BDH1101-4LG		Lot #121813D			19900 uL
07-29-14D							
5.0 ng/ml EC-4978 (CleanUp)							
Exp:	07/29/14						
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume
CIL	ED-4978	Method 1668A Cleanup Standard	1000ng/mL	PR-22186-33246	03-14-14B	10-27-20	100 uL
BDH Acetone		BDH1101-4LG		Lot #121813D			19900 uL

Dioxin/Furan Standard Prep Log #2

08-04-14A							
0.50 ng/ml Dioxin/Furan Spikes							
Exp:	08/04/14						
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume
CIL	EDF-5008	Matrix Spiking Solution	100-500 ng/mL	ER113006-01 - 33015	06-10-14B	11-30-16	50 uL
BDH Acetone		BDH1101-4LG		121813D			9950 uL
08-04-14B							
100 ng/ml EDF-4055							
Exp:	09/04/14						
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume
CIL	EDF-4055	Recovery Standard Stock Solution	500ng/mL	ER09231101-02 - 33469	07-03-14F	9-3-21	200 uL
Nonane		Sigma Aldrich SHBC8566V					800 uL

8/14/14 Volume 50 uL 9950 uL

Brilliant CIL, Inc. 811 Paloma Dr Ste. A Round Rock, TX 78665 800.848.7837

Sample Fortification Solution
100 - 500 ng/mL
Solvent: 1.2 mL n-Nonane
EDF-5005
Lot: ER011911-02
Expires: 01/2021
Room Temp. (Do not store cold)
FLAMMABLE

FOR LABORATORY USE ONLY

8/12/14

8290 Smpl Fortification Soln
Lot #: ER011911-02 - 33788
Rec: 7/10/14 MFR exp. 1/31/21

08-12-14B

40% H2SO4 coated Silica Gel

Added 480g of concentrated sulfuric acid to 720g of baked silica gel 07-24-14A
Mixed with a glass rod until free of lumps.
Stored in a glass bottle seal with a Teflon lined screw cap

8/12/14

08-12-14C

Basic Silica Gel

Added 200g of 1M NaOH to 400g of baked silica gel 07-24-14A
Mixed with a glass rod until free of lumps.
Stored in a glass bottle seal with a Teflon lined screw cap

08-18-14A							
100 ng/ml EDF-4055							
Exp:	09/18/14						
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume
CIL	EDF-4055	Recovery Standard Stock Solution	500ng/mL	ER09231101-02 - 33469	07-03-14F	9-3-21	200 uL
Nonane		Sigma Aldrich SHBC8566V					800 uL

8/18/14

Dioxin/Furan Standard Prep Log #2

9/9/14A
PF



Sample Fortification Solution
Lot #: ER103112-02 - 34003
Rec: 9/3/14 MFR exp. 11/30/22

9/9/14B
PF

PF

09-09-14B							
100 ng/ml EDF-4055							
Exp:	10/09/14						
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volu
CIL	EDF-4055	Recovery Standard Stock Solution	500ng/mL	ER09231101-02 - 33469	07-03-14F	9-3-21	200
Nonane		Sigma Aldrich SHBC8566V					800

09-11-14
JA

EDF-9999
CS-3
09-11-14

Method 1613 Cal CS3
Lot #: ER031611-01C - 33889
Rec: 7/31/14 MFR exp. 3/28/21

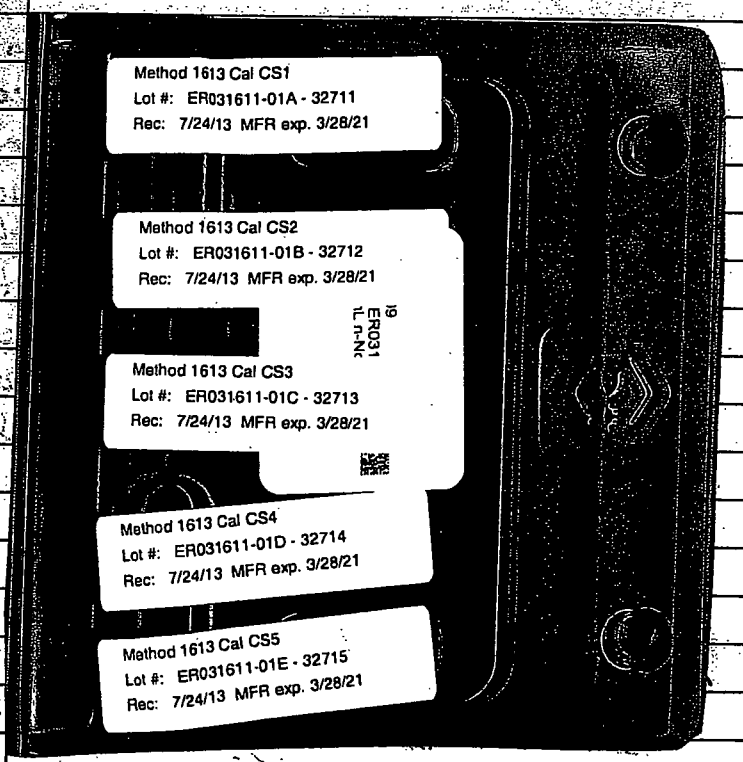
LC/MS STANDARD PREP LOG# 102 PAGE# 119

119

EXPAND	INITIAL CONC	SOURCE DATE	ALIQUAT	FINAL VOLUME	FINAL CONC	SOL. LOT #	DATE/ INITIALS

NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED: 08.26.13

8290 CURVE : 08-20-13: PP UP-305 JL 08-20-13



EDF-9999 CS-1 08.20-13
EDF-9999 CS-2 08.20-13
EDF-9999 CS-3 08-20-13
EDF-9999 CS-4 08.20-13
EDF-9999 CS-5 08.20-13

EACH RESPECTIVE VIAL IN THE ABOVE PHOTOCOPY WAS CRACKED OPEN AND THE CONTENTS WERE DELIVERED INTO A MICRO-INSERT WITHIN AN AMBER VIAL

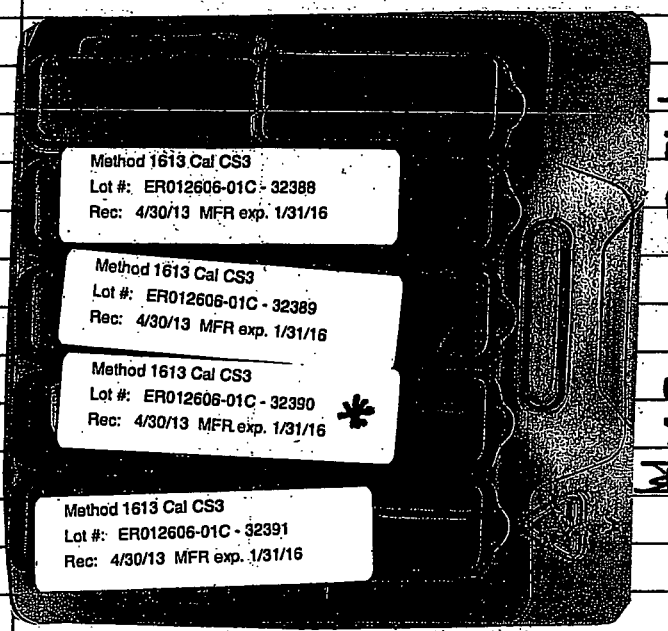
1

LC/MS STANDARD PREP LOG# 102 PAGE# 120

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CNC	SOL'N LOT #	DATE/ INITIALS

NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED: BL 08.26.13

EDF-9999 CS3 08.22.13: BL 08.22.13



Cracked open the vial starved in the adjacent photocopy and delivered the contents into a micro-insert within an amber injection vial BL

PER_IS_50:50 0.005 ug/ml 08/23/13:

To 19.000 ml 50:50 Burdick and Jackson Acetonitrile Lot DH422 and Laboratory Source DI_H20 1.000 ml of O2SI 18:O:4 Perchlorate 100 ug/L Lot 104733-32397 was added

Note : Solution prepared as needed:

BL 08.23.13

PERCHLORATE 0.005 ug/ml 08/23/13:

PERCHLORATE 0.010 ug/ml 07/07/13 took 0.500 ml and added to 0.500 ml PER_IS_50:50 0.005 ug/ml 08/23/13

_SOX8290MI

Organic Extraction Worksheet

Method	8290 Soxhlet Extraction (MULT INC SAMP)	Extraction Set	140917B	Extraction Method	SOX8290MIS	Units	mL

Spiked ID 1	EDF-5008 0.50ng/mL 06-10-14A		Surrogate ID 1	EDF-5005 100-500ng/mL 09-09-14A	
Spiked ID 2	EDF-4055 100ng/mL 09-09-14B		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NA	
Spiked ID 7			Ext. Start Time:	09/17/14 15:00	
Spiked ID 8			Ext. End Time:	09/18/14 7:00	
			GC Requires Extract By:	**09/18/14 17:00**	

pH1	NA		Water Bath Temp Criteria 35/60 °C
pH2	NA		
pH3	NA		

Spiked By: RP **Date** 09/17/14 2:55:00 PM **Witnessed By:** CFM **Date** 09/17/14 2:55:00 PM

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	140917B Blk		0.020mL	2	0.020mL	1	10.02g	0.050mL	NA	09/17/14 15:00	Method Blank
						equip	E-HP25 Rotovap-04 E-WB				
2	140917B LCS-1		0.005, 0.020mL	1,2	0.020mL	1	10.01g	0.050mL	NA	09/17/14 15:00	Lab Control Spike
						equip	E-HP26 Rotovap-01 E-WB				
3	AZ02099	AZ02099S11	0.020mL	2	0.020mL	1	10.07g	0.050mL	NA	09/17/14 15:00	MIS RUSH - 74218
						equip	E-HP27 Rotovap-04 E-WB				

9/18/14 RP

Solvent and Lot#	
Washed/Baked Silica Gel	07-24-14A
Washed/Baked sodium sulfa	07-24-14B
5% Sodium Chloride	05-06-14E
20% Potassium Hydroxide	05-06-14F
Washed Glass Wool	05-06-14K
Acidic Silica Gel	08-12-14B
Basic Silica Gel	08-12-14C

Extraction COC Transfer	
Extraction lab employee Initials	RP
GC analyst's initials	BA
Date	9/18/14
Time	1400
Refrigerator	PYRO

	Technician's Initials
Scanned By	RP
Sample Preparation	RP
Extraction	RP
Concentration	RP

Modified	09/18/14 1:05:05 PM

Reviewed By: RP **Date** 9/24/14

Injection Log

APPL, Inc.
Instrument: Magneto
EPA Method: 8290

140919.seq

	File Name	File Text	DF	Acq Date	Acq Time
1	140919_HR_01	EDF-4147 70 ng/ml 09/05/14	1.000	09/19/14	16:36
2	140919_HR_03	EDF-9999 CS-1 04/22/14	1.000	09/19/14	19:00
3	140919_HR_04	EDF-9999 CS-2 04/22/14	1.000	09/19/14	20:09
4	140919_HR_05	EDF-9999 CS-3 09/11/14	1.000	09/19/14	21:18
5	140919_HR_06	EDF-9999 CS-4 04/22/14	1.000	09/19/14	22:35
6	140919_HR_07	EDF-9999 CS-5 04/22/14	1.000	09/19/14	23:43
7	140919_HR_10	EDF-9999 CS-3 09/11/14	1.000	09/20/14	3:09
8	140919_HR_11	EDF-4147 70 ng/ml 09/05/14	1.000	09/20/14	4:26
9	140919_HR_13	140917SA_LCS-1 4.995 DF 09/17/14	4.995	09/20/14	6:42
10	140919_HR_17	140917SBLKA 4.990 DF 09/17/14	4.990	09/20/14	11:25
11	140919_HR_18	AZ02099_S11 4.965 DF 09/17/14	4.965	09/20/14	12:34
12	140919_HR_20	EDF-9999 CS-3 09/11/14	1.000	09/20/14	14:52

Former NOSC Site Drum Inventory

Generator/ Site Name	CTO	Drum Number	Storage Location/ Condition	Origin	IDW Type	Volume (%)	Generation Date	Disposal Date
SI for Former NOSC Site	0015	D001	Southeast corner of DU-3	Drill Cuttings	Soil	100	2014-09-02	2015-07-21
SI for Former NOSC Site	0015	D002	Southeast corner of DU-3	Drill Cuttings	Soil	100	2014-09-03	2015-07-21

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1 of 1

3. Generator's Name and Mailing Address
Commanding Officer
Attn: LE/Tim Cawthon
BOX 63062C Environmental
MCB Hawaii HI 96863-3062

4. Generator's Phone (808) 257-2860

PVT CLN: 97495

5. Transporter 1 Company Name
Motu Services, LLC

6. US EPA ID Number

A. State Transporter's ID

B. Transporter 1 Phone (808) 479-6075

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
Nanakuli Soil Reclamation Facility
87-2020 Farrington Highway, Nanakuli, Hawaii 96792

10. US EPA ID Number

E. State Facility's ID

F. Facility's Phone
(808) 668-4561

11. WASTE DESCRIPTION	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
a. Material not regulated by DOT (Soil) - Non-RCRA Solid, EPA Hazardous Waste Exemption 40 CFR 261.4(b)10	2	Drum	gallons 110	GL HOTL
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above
NOSC site soil

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

GENERATOR

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: Tim Cawthon
Signature: Timothy L Cawthon
Date: Month 07 Day 21 Year 15

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Matthew Neal/Motu Services LLC
Signature: Matthew Neal
Date: Month 07 Day 21 Year 15

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name:
Signature:
Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name: MARGIT DESOTO
Signature: Margit DeSoto
Date: Month 7 Day 21 Year 15

NON-HAZARDOUS WASTE

F14L © 2002 LABELMASTER® (800) 621-5808 www.labelmaster.com

			E2 Sample ID/Lab ID			EN001 / AZ02099			EN002 / AZ02100			EN003 / AZ02101		
			Former NOSC SI Sample ID			NOSCSI-MI-01-A0.5			NOSCSI-MI-01-D0.5			NOSCSI-MI-01-E0.5		
			Decision Unit			DU-1			DU-1			DU-1		
			Sample Depth (ft)			0.5			0.5			0.5		
Analyte	CAS No.	Human Health PALs (mg/kg)				Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
TPH (SW-846 8015B)														
TPH-DIESEL RANGE	N/A	500				14		1	12	J	1	14		1
TPH-OIL RANGE*	N/A	500				37	J	10	20	J	10	23	J	10
TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANICS	N/A	100				46	U	46	45	UJ	45	45	U	45
VOCs (SW-846 8260B)														
1,1,1-TRICHLOROETHANE	71-55-6	7.0				0.85	U	0.85	0.85	U	0.85	0.85	U	0.85
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.009				*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*
1,1,2-TRICHLOROETHANE	79-00-5	0.0089				*1.4*	U	*1.4*	*1.4*	U	*1.4*	*1.4*	U	*1.4*
1,1-DICHLOROETHANE	75-34-3	0.33				*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*
1,1-DICHLOROETHENE	75-35-4	4.3				1.4	U	1.4	1.4	U	1.4	1.4	U	1.4
1,2,3-TRICHLOROPROPANE	96-18-4	0.0013				*2.8*	U	*2.8*	*2.8*	U	*2.8*	*2.8*	U	*2.8*
1,2-DIBROMOETHANE	106-93-4	0.00087				*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*
1,2-DICHLOROETHANE	107-06-2	0.02				*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*
1,2-DICHLOROPROPANE	78-87-5	0.052				*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*
2-BUTANONE	78-93-3	15				5.7	U	5.7	5.6	U	5.6	5.6	U	5.6
4-METHYL-2-PENTANONE	108-10-1	0.5				*14*	U	*14*	*14*	U	*14*	*14*	U	*14*
ACETONE	67-64-1	1.0				*14*	U	*14*	*14*	U	*14*	*14*	U	*14*
BENZENE	71-43-2	0.67				*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*
BROMODICHLOROMETHANE	75-27-4	0.014				*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*
BROMOFORM	75-25-2	28				0.85	U	0.85	0.85	U	0.85	0.85	U	0.85
BROMOMETHANE	74-83-9	0.22				*1.4*	U	*1.4*	*1.4*	U	*1.4*	*1.4*	U	*1.4*
CARBON TETRACHLORIDE	56-23-5	0.087				*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*
CHLOROBENZENE	108-90-7	1.5				1.4	U	1.4	1.4	U	1.4	1.4	U	1.4
CHLOROETHANE	75-00-3	11				1.4	U	1.4	1.4	U	1.4	1.4	U	1.4
CHLOROFORM	67-66-3	0.023				*0.71*	U	*0.71*	*0.7*	U	*0.7*	*0.71*	U	*0.71*
CHLOROMETHANE	74-87-3	0.29				*1.4*	U	*1.4*	*1.4*	U	*1.4*	*1.4*	U	*1.4*
CIS-1,2-DICHLOROETHENE	156-59-2	0.31				*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*
CIS-1,3-DICHLOROPROPENE**	10061-01-5	0.13				*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*
DIBROMOCHLOROMETHANE	124-48-1	0.022				*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*

	E2 Sample ID/Lab ID		EN001 / AZ02099			EN002 / AZ02100			EN003 / AZ02101		
	Former NOSC SI Sample ID		NOSCSI-MI-01-A0.5			NOSCSI-MI-01-D0.5			NOSCSI-MI-01-E0.5		
	Decision Unit		DU-1			DU-1			DU-1		
	Sample Depth (ft)		0.5			0.5			0.5		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
ETHYLBENZENE	100-41-4	21	1.4	U	1.4	1.4	U	1.4	1.4	U	1.4
METHYLENE CHLORIDE	75-09-2	1.1	*2.8*	U	*2.8*	*2.8*	U	*2.8*	*2.8*	U	*2.8*
NAPHTHALENE	91-20-3	4.5	1.4	U	1.4	1.4	U	1.4	1.4	U	1.4
STYRENE	100-42-5	2.9	1.4	U	1.4	1.4	U	1.4	1.4	U	1.4
TETRACHLOROETHENE	127-18-4	0.088	*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*
TOLUENE	108-88-3	10	0.85	U	0.85	0.85	U	0.85	0.85	U	0.85
TRANS-1,2-DICHLOROETHENE	156-60-5	2.7	0.85	U	0.85	0.85	U	0.85	0.85	U	0.85
TRANS-1,3-DICHLOROPROPENE**	10061-02-6	0.13	*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*
TRICHLOROETHENE	79-01-6	0.26	*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*
VINYL CHLORIDE	75-01-4	0.072	*0.85*	U	*0.85*	*0.85*	U	*0.85*	*0.85*	U	*0.85*
XYLENES, TOTAL	1330-20-7	11	0.85	U	0.85	0.85	U	0.85	0.85	U	0.85
Organochlorine Pesticides (SW-846 8081A)											
4,4-DDD	72-54-8	2.0	0.004	U	0.004	0.004	U	0.004	0.004	U	0.004
4,4-DDE	72-55-9	1.4	0.025	J	0.004	0.024	J	0.004	0.022	J	0.004
4,4-DDT	50-29-3	1.7	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016
ALDRIN	309-00-2	0.92	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
CHLORDANE, TECHNICAL	12789-03-6	16	0.37	J	0.05	0.31	J	0.05	0.45	J	0.05
DIELDRIN	60-57-1	1.5	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
ENDOSULFAN I***	959-98-8	18	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016
ENDOSULFAN II***	33213-65-9	18	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016
ENDOSULFAN SULFATE***	1031-07-8	18	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
ENDRIN	72-20-8	3.7	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
HEPTACHLOR	76-44-8	0.11	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
HEPTACHLOR EPOXIDE	1024-57-3	0.053	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
HEXACHLOROBENZENE	118-74-1	0.3	0.01	U	0.01	0.01	U	0.01	0.01	U	0.01
LINDANE	58-89-9	0.037	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
METHOXYCHLOR	72-43-5	16	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
TOXAPHENE	8001-35-2	0.44	0.05	U	0.05	0.05	U	0.05	0.05	U	0.05

	E2 Sample ID/Lab ID		EN001 / AZ02099			EN002 / AZ02100			EN003 / AZ02101		
	Former NOSC SI Sample ID		NOSCSI-MI-01-A0.5			NOSCSI-MI-01-D0.5			NOSCSI-MI-01-E0.5		
	Decision Unit		DU-1			DU-1			DU-1		
	Sample Depth (ft)		0.5			0.5			0.5		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
PAHs (SW-846 8270C SIM)											
1-METHYLNAPHTHALENE	90-12-0	0.79	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
2-METHYLNAPHTHALENE	91-57-6	0.87	0.0017	U	0.0017	0.0013	J	0.0017	0.0017	U	0.0017
ACENAPHTHENE	83-32-9	120	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
ACENAPHTHYLENE	208-96-8	13	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
ANTHRACENE	120-12-7	4.3	0.0017	J	0.0017	0.0013	J	0.0017	0.0016	J	0.0017
BENZO[A]ANTHRACENE	56-55-3	1.5	0.013		0.0017	0.0099	J	0.0017	0.006		0.0017
BENZO[A]PYRENE	50-32-8	0.15	0.011		0.0017	0.0093	J	0.0017	0.0094		0.0017
BENZO[B]FLUORANTHENE	205-99-2	1.5	0.021	J	0.0017	0.018	J	0.0017	0.015	J	0.0017
BENZO[G,H,I]PERYLENE	191-24-2	27	0.013		0.0017	0.026		0.0017	0.02		0.0017
BENZO[K]FLUORANTHENE	207-08-9	15	0.021	J	0.0017	0.018	J	0.0017	0.016	J	0.0017
CHRYSENE	218-01-9	10	0.013		0.0017	0.01		0.0017	0.0087		0.0017
DIBENZ[A,H]ANTHRACENE	53-70-3	0.15	0.004	J	0.0017	0.01		0.0017	0.0017	U	0.0017
FLUORANTHENE	206-44-0	87	0.021		0.0017	0.015	J	0.0017	0.01		0.0017
FLUORENE	86-73-7	100	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
INDENO[1,2,3-CD]PYRENE	193-39-5	1.5	0.011		0.0017	0.012	J	0.0017	0.006		0.0017
PHENANTHRENE	85-01-8	69	0.011		0.0017	0.0043	J	0.0017	0.0043	J	0.0017
PYRENE	129-00-0	44	0.025		0.0017	0.014		0.0017	0.01		0.0017
PCBs (SW-846 8082)											
AROCLOR-1016	12674-11-2	1.1	0.02	U	0.02	0.02	U	0.02	0.02	U	0.02
AROCLOR-1221	11104-28-2	1.1	0.02	U	0.02	0.02	U	0.02	0.02	U	0.02
AROCLOR-1232	11141-16-5	1.1	0.01	U	0.01	0.01	U	0.01	0.01	U	0.01
AROCLOR-1242	53469-21-9	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01
AROCLOR-1248	12672-29-6	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01
AROCLOR-1254	11097-69-1	1.1	0.49	J	0.01	0.38	J	0.01	0.59	J	0.01
AROCLOR-1260	11096-82-5	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01
POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	1.1	0.49	J	0.02	0.38	J	0.02	0.59	J	0.02
SVOCs (SW-846 8270C)											

	E2 Sample ID/Lab ID		EN001 / AZ02099			EN002 / AZ02100			EN003 / AZ02101		
	Former NOSC SI Sample ID		NOSCSI-MI-01-A0.5			NOSCSI-MI-01-D0.5			NOSCSI-MI-01-E0.5		
	Decision Unit		DU-1			DU-1			DU-1		
	Sample Depth (ft)		0.5			0.5			0.5		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	120-82-1	0.098	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
1,2-DICHLOROBENZENE	95-50-1	1.1	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
1,3-DICHLOROBENZENE	541-73-1	7.4	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
1,4-DICHLOROBENZENE	106-46-7	0.047	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	0.66	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4,5-TRICHLOROPHENOL	95-95-4	3.2	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4,6-TRICHLOROPHENOL	88-06-2	12	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DICHLOROPHENOL	120-83-2	0.25	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DIMETHYLPHENOL	105-67-9	9.0	0.167	U	0.167	0.167	UJ	0.167	0.167	U	0.167
2,4-DINITROPHENOL	51-28-5	5.7	0.167	U	0.167	0.167	UJ	0.167	0.167	U	0.167
2,4-DINITROTOLUENE	121-14-2	1.6	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,6-DINITROTOLUENE	606-20-2	4.3	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2-CHLOROPHENOL	95-57-8	0.092	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
3,3-DICHLOROBENZIDINE	91-94-1	1.1	0.167	U	0.167	0.167	UJ	0.167	0.167	U	0.167
4-CHLOROANILINE	106-47-8	0.094	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
BIS(2-CHLOROETHYL)ETHER	111-44-4	0.0045	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	35	0.57	J	0.167	0.29	J	0.167	0.56	J	0.167
DIETHYLPHTHALATE	84-66-2	0.026	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
DIMETHYL PHTHALATE	131-11-3	0.035	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
HEXACHLOROBENZENE	118-74-1	0.30	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
HEXACHLOROBUTADIENE	87-68-3	0.95	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
HEXACHLOROETHANE	67-72-1	0.68	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
ISOPHORONE	78-59-1	1.4	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
NITROBENZENE	98-95-3	2.3	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
PENTACHLOROPHENOL	87-86-5	0.89	0.167	UJ	0.167	0.167	UJ	0.167	0.167	UJ	0.167
PHENOL	108-95-2	40	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
Chlorinated Herbicides (SW-846 8151)											
2,4,5-T	93-76-5	12	0.038	U	0.038	0.038	U	0.038	0.038	U	0.038

	E2 Sample ID/Lab ID		EN001 / AZ02099			EN002 / AZ02100			EN003 / AZ02101		
	Former NOSC SI Sample ID		NOSCSI-MI-01-A0.5			NOSCSI-MI-01-D0.5			NOSCSI-MI-01-E0.5		
	Decision Unit		DU-1			DU-1			DU-1		
	Sample Depth (ft)		0.5			0.5			0.5		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
2,4-D	94-75-7	0.2	0.192	U	0.192	0.192	UJ	0.192	0.192	U	0.192
DALAPON	75-99-0	0.16	*0.38*	U	*0.38*	*0.38*	UJ	*0.38*	***0.65***	J	*0.38*
SILVEX	93-72-1	0.87	0.038	U	0.038	0.038	U	0.038	0.038	U	0.038
Metals/Inorganics (SW-846 6020A / 7471B)											
ANTIMONY	7440-36-0	2.4	0.18	J	*0.2*	0.14	J	*0.2*	0.24	J	*0.2*
ARSENIC	7440-38-2	24	5.2	J	0.3	5.1	J	0.3	5.4	J	0.3
BERYLLIUM	7440-41-7	31	0.25	J	0.3	0.26	J	0.3	0.25	J	0.3
CADMIUM	7440-43-9	14	0.26		0.08	0.22		0.08	0.24		0.08
CHROMIUM, TOTAL	7440-47-3	1100	60.7		0.2	60.6		0.2	63.8		0.2
COPPER	7440-50-8	630	26.7	J	0.08	26.4	J	0.08	26.4	J	0.08
LEAD	7439-92-1	200	23.7		0.05	22.5		0.05	19.6		0.05
MERCURY	7439-97-6	4.7	0.065	J	0.04	0.061	J	0.04	0.058	J	0.04
NICKEL	7440-02-0	760	143		0.2	136		0.2	131		0.2
SELENIUM	7782-49-2	78	0.14	J	0.1	0.12	J	0.1	0.13	J	0.1
SILVER	7440-22-4	78	0.048	J	0.05	0.034	J	0.05	0.032	J	0.05
THALLIUM	7440-28-0	0.78	0.049	J	0.05	0.021	J	0.05	0.028	J	0.05
ZINC	7440-66-6	1000	114		1.5	106		1.5	109		1.5
Dioxins (SW 846 8290)											
1,2,3,4,6,7,8-HPCDD	35822-46-9	NA	5.60E-05		5.60E-05						
1,2,3,4,6,7,8-HPCDF	67562-39-4	NA	4.60E-07	U	4.60E-07						
1,2,3,4,7,8,9-HPCDF	55673-89-7	NA	6.30E-07	U	6.30E-07						
1,2,3,4,7,8-HXCDD	39227-28-6	NA	2.40E-06	J	2.40E-06						
1,2,3,4,7,8-HXCDF	70648-26-9	NA	7.70E-07	U	7.70E-07						
1,2,3,6,7,8-HXCDD	57653-85-7	NA	8.00E-07	U	8.00E-07						
1,2,3,6,7,8-HXCDF	57117-44-9	NA	3.00E-06	U	3.00E-06						
1,2,3,7,8,9-HXCDD	19408-74-3	NA	7.70E-07	U	7.70E-07						
1,2,3,7,8,9-HXCDF	72918-21-9	NA	9.30E-07	U	9.30E-07						
1,2,3,7,8-PECDD	40321-76-4	NA	6.60E-07	U	6.60E-07						
1,2,3,7,8-PECDF	57117-41-6	NA	1.30E-06	U	1.30E-06						

E2 Sample ID/Lab ID			EN001 / AZ02099			EN002 / AZ02100			EN003 / AZ02101		
Former NOSC SI Sample ID			NOSCSI-MI-01-A0.5			NOSCSI-MI-01-D0.5			NOSCSI-MI-01-E0.5		
Decision Unit			DU-1			DU-1			DU-1		
Sample Depth (ft)			0.5			0.5			0.5		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
2,3,4,6,7,8-HXCDF	60851-34-5	NA	7.90E-07	U	7.90E-07						
2,3,4,7,8-PECDF	57117-31-4	NA	1.40E-06	U	1.40E-06						
2,3,7,8-TCDD	1746-01-6	NA	5.10E-07	U	5.10E-07						
2,3,7,8-TCDF	51207-31-9	NA	2.40E-06	U	2.40E-06						
OCDD	3268-87-9	NA	5.60E-04		5.60E-04						
OCDF	39001-02-0	NA	4.00E-05		4.00E-05						
TEQ	-	0.00024	2.30E-06	-	-						

*The HDOH EAL is for TPH (residual fuels)

**The HDOH EAL is for 1,3-Dichloropropene

***The HDOH EAL is for Endosulfan

Italic - LOD exceeds PAL

Bold Italic - Analyte detected in concentration exceeding PAL

		E2 Sample ID/Lab ID	EN004 / AZ02102			EN005 / AZ02103			EN006 / AZ02104		
		Former NOSC SI Sample ID	NOSCSI-MI-01-A02.0			NOSCSI-MI-01-D02.0			NOSCSI-MI-01-E02.0		
		Decision Unit	DU-1			DU-1			DU-1		
		Sample Depth (ft)	2.0			2.0			2.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
TPH (SW-846 8015B)											
TPH-DIESEL RANGE	N/A	500	9.5		1	11		1	11		1
TPH-OIL RANGE*	N/A	500	19	J	10	18	J	10	20	J	10
TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANICS	N/A	100	45	U	45	48	U	48	47	U	47
VOCs (SW-846 8260B)											
1,1,1-TRICHLOROETHANE	71-55-6	7.0	0.84	U	0.84	0.89	U	0.89	0.87	U	0.87
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.009	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*
1,1,2-TRICHLOROETHANE	79-00-5	0.0089	*1.4*	U	*1.4*	*1.5*	U	*1.5*	*1.5*	U	*1.5*
1,1-DICHLOROETHANE	75-34-3	0.33	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*
1,1-DICHLOROETHENE	75-35-4	4.3	1.4	U	1.4	1.5	U	1.5	1.5	U	1.5
1,2,3-TRICHLOROPROPANE	96-18-4	0.0013	*2.8*	U	*2.8*	*3*	U	*3*	*2.9*	U	*2.9*
1,2-DIBROMOETHANE	106-93-4	0.00087	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*
1,2-DICHLOROETHANE	107-06-2	0.02	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*
1,2-DICHLOROPROPANE	78-87-5	0.052	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*
2-BUTANONE	78-93-3	15	5.6	U	5.6	5.9	U	5.9	5.8	U	5.8
4-METHYL-2-PENTANONE	108-10-1	0.5	*14*	U	*14*	*15*	U	*15*	*15*	U	*15*
ACETONE	67-64-1	1.0	*14*	U	*14*	*15*	U	*15*	*15*	U	*15*
BENZENE	71-43-2	0.67	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*
BROMODICHLOROMETHANE	75-27-4	0.014	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*
BROMOFORM	75-25-2	28	0.84	U	0.84	0.89	U	0.89	0.87	U	0.87
BROMOMETHANE	74-83-9	0.22	*1.4*	U	*1.4*	*1.5*	U	*1.5*	*1.5*	U	*1.5*
CARBON TETRACHLORIDE	56-23-5	0.087	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*
CHLOROBENZENE	108-90-7	1.5	1.4	U	1.4	1.5	U	1.5	1.5	U	1.5
CHLOROETHANE	75-00-3	11	1.4	U	1.4	1.5	U	1.5	1.5	U	1.5
CHLOROFORM	67-66-3	0.023	*0.7*	U	*0.7*	*0.74*	U	*0.74*	*0.73*	U	*0.73*
CHLOROMETHANE	74-87-3	0.29	*1.4*	U	*1.4*	*1.5*	U	*1.5*	*1.5*	U	*1.5*
CIS-1,2-DICHLOROETHENE	156-59-2	0.31	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*
CIS-1,3-DICHLOROPROPENE**	10061-01-5	0.13	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*
DIBROMOCHLOROMETHANE	124-48-1	0.022	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*

	E2 Sample ID/Lab ID		EN004 / AZ02102			EN005 / AZ02103			EN006 / AZ02104		
	Former NOSC SI Sample ID		NOSCSI-MI-01-A02.0			NOSCSI-MI-01-D02.0			NOSCSI-MI-01-E02.0		
	Decision Unit		DU-1			DU-1			DU-1		
	Sample Depth (ft)		2.0			2.0			2.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
ETHYLBENZENE	100-41-4	21	1.4	U	1.4	1.5	U	1.5	1.5	U	1.5
METHYLENE CHLORIDE	75-09-2	1.1	*2.8*	U	*2.8*	*3*	U	*3*	*2.9*	U	*2.9*
NAPHTHALENE	91-20-3	4.5	1.4	U	1.4	1.5	U	1.5	1.5	U	1.5
STYRENE	100-42-5	2.9	1.4	U	1.4	1.5	U	1.5	1.5	U	1.5
TETRACHLOROETHENE	127-18-4	0.088	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*
TOLUENE	108-88-3	10	0.84	U	0.84	0.89	U	0.89	0.87	U	0.87
TRANS-1,2-DICHLOROETHENE	156-60-5	2.7	0.84	U	0.84	0.89	U	0.89	0.87	U	0.87
TRANS-1,3-DICHLOROPROPENE**	10061-02-6	0.13	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*
TRICHLOROETHENE	79-01-6	0.26	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*
VINYL CHLORIDE	75-01-4	0.072	*0.84*	U	*0.84*	*0.89*	U	*0.89*	*0.87*	U	*0.87*
XYLENES, TOTAL	1330-20-7	11	0.84	U	0.84	0.89	U	0.89	0.87	U	0.87
Organochlorine Pesticides (SW-846 8081A)											
4,4-DDD	72-54-8	2.0	0.004	U	0.004	0.004	U	0.004	0.004	U	0.004
4,4-DDE	72-55-9	1.4	0.033	J	0.004	0.03	J	0.004	0.046	J	0.004
4,4-DDT	50-29-3	1.7	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	UJ	0.0016
ALDRIN	309-00-2	0.92	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
CHLORDANE, TECHNICAL	12789-03-6	16	0.81	J	0.05	1.1		0.05	0.72	J	0.05
DIELDRIN	60-57-1	1.5	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
ENDOSULFAN I***	959-98-8	18	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016
ENDOSULFAN II***	33213-65-9	18	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016
ENDOSULFAN SULFATE***	1031-07-8	18	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
ENDRIN	72-20-8	3.7	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
HEPTACHLOR	76-44-8	0.11	0.002	U	0.002	0.002	U	0.002	0.002	UJ	0.002
HEPTACHLOR EPOXIDE	1024-57-3	0.053	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
HEXACHLOROBENZENE	118-74-1	0.3	0.01	U	0.01	0.01	U	0.01	0.01	U	0.01
LINDANE	58-89-9	0.037	0.002	U	0.002	0.002	U	0.002	0.002	UJ	0.002
METHOXYCHLOR	72-43-5	16	0.002	U	0.002	0.002	U	0.002	0.002	UJ	0.002
TOXAPHENE	8001-35-2	0.44	0.05	U	0.05	0.05	U	0.05	0.05	U	0.05

			E2 Sample ID/Lab ID			EN004 / AZ02102			EN005 / AZ02103			EN006 / AZ02104		
			Former NOSC SI Sample ID			NOSCSI-MI-01-A02.0			NOSCSI-MI-01-D02.0			NOSCSI-MI-01-E02.0		
			Decision Unit			DU-1			DU-1			DU-1		
			Sample Depth (ft)			2.0			2.0			2.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)			
PAHs (SW-846 8270C SIM)														
1-METHYLNAPHTHALENE	90-12-0	0.79	0.0065		0.0017	0.0017	U	0.0017	0.0017	U	0.0017			
2-METHYLNAPHTHALENE	91-57-6	0.87	0.0047	J	0.0017	0.0017	U	0.0017	0.0017	U	0.0017			
ACENAPHTHENE	83-32-9	120	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017			
ACENAPHTHYLENE	208-96-8	13	0.00099	J	0.0017	0.0017	U	0.0017	0.0012	J	0.0017			
ANTHRACENE	120-12-7	4.3	0.0014	J	0.0017	0.0015	J	0.0017	0.004	J	0.0017			
BENZO[A]ANTHRACENE	56-55-3	1.5	0.0052		0.0017	0.0041	J	0.0017	0.034	J	0.0017			
BENZO[A]PYRENE	50-32-8	0.15	0.0068		0.0017	0.0044	J	0.0017	0.032	J	0.0017			
BENZO[B]FLUORANTHENE	205-99-2	1.5	0.017	J	0.0017	0.01	J	0.0017	0.069	J	0.0017			
BENZO[G,H,I]PERYLENE	191-24-2	27	0.015		0.0017	0.011		0.0017	0.021	J	0.0017			
BENZO[K]FLUORANTHENE	207-08-9	15	0.018	J	0.0017	0.01	J	0.0017	0.069	J	0.0017			
CHRYSENE	218-01-9	10	0.007		0.0017	0.0039	J	0.0017	0.028	J	0.0017			
DIBENZ[A,H]ANTHRACENE	53-70-3	0.15	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017			
FLUORANTHENE	206-44-0	87	0.01		0.0017	0.0056		0.0017	0.04	J	0.0017			
FLUORENE	86-73-7	100	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017			
INDENO[1,2,3-CD]PYRENE	193-39-5	1.5	0.0017	U	0.0017	0.0017	U	0.0017	0.012	J	0.0017			
PHENANTHRENE	85-01-8	69	0.0062		0.0017	0.0025	J	0.0017	0.0082	J	0.0017			
PYRENE	129-00-0	44	0.009		0.0017	0.0056		0.0017	0.045	J	0.0017			
PCBs (SW-846 8082)														
AROCLOR-1016	12674-11-2	1.1	0.02	U	0.02	0.02	U	0.02	0.02	U	0.02			
AROCLOR-1221	11104-28-2	1.1	0.02	U	0.02	0.02	U	0.02	0.02	U	0.02			
AROCLOR-1232	11141-16-5	1.1	0.01	U	0.01	0.01	U	0.01	0.01	U	0.01			
AROCLOR-1242	53469-21-9	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01			
AROCLOR-1248	12672-29-6	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01			
AROCLOR-1254	11097-69-1	1.1	0.84	J	0.01	0.53	J	0.01	***1.2***	J	0.01			
AROCLOR-1260	11096-82-5	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01			
POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	1.1	0.84	J	0.02	0.53	J	0.02	***1.2***	J	0.02			
SVOCs (SW-846 8270C)														

	E2 Sample ID/Lab ID		EN004 / AZ02102			EN005 / AZ02103			EN006 / AZ02104		
	Former NOSC SI Sample ID		NOSCSI-MI-01-A02.0			NOSCSI-MI-01-D02.0			NOSCSI-MI-01-E02.0		
	Decision Unit		DU-1			DU-1			DU-1		
	Sample Depth (ft)		2.0			2.0			2.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	120-82-1	0.098	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
1,2-DICHLOROBENZENE	95-50-1	1.1	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
1,3-DICHLOROBENZENE	541-73-1	7.4	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
1,4-DICHLOROBENZENE	106-46-7	0.047	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	0.66	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4,5-TRICHLOROPHENOL	95-95-4	3.2	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4,6-TRICHLOROPHENOL	88-06-2	12	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DICHLOROPHENOL	120-83-2	0.25	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DIMETHYLPHENOL	105-67-9	9.0	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DINITROPHENOL	51-28-5	5.7	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DINITROTOLUENE	121-14-2	1.6	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,6-DINITROTOLUENE	606-20-2	4.3	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2-CHLOROPHENOL	95-57-8	0.092	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
3,3-DICHLOROBENZIDINE	91-94-1	1.1	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
4-CHLOROANILINE	106-47-8	0.094	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
BIS(2-CHLOROETHYL)ETHER	111-44-4	0.0045	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	35	1		0.167	0.45	J	0.167	0.4	J	0.167
DIETHYLPHTHALATE	84-66-2	0.026	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
DIMETHYL PHTHALATE	131-11-3	0.035	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
HEXACHLOROBENZENE	118-74-1	0.30	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
HEXACHLOROBUTADIENE	87-68-3	0.95	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
HEXACHLOROETHANE	67-72-1	0.68	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
ISOPHORONE	78-59-1	1.4	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
NITROBENZENE	98-95-3	2.3	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
PENTACHLOROPHENOL	87-86-5	0.89	0.167	UJ	0.167	0.167	UJ	0.167	0.167	UJ	0.167
PHENOL	108-95-2	40	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
Chlorinated Herbicides (SW-846 8151)											
2,4,5-T	93-76-5	12	0.038	U	0.038	0.038	U	0.038	0.038	U	0.038

	E2 Sample ID/Lab ID		EN004 / AZ02102			EN005 / AZ02103			EN006 / AZ02104		
	Former NOSC SI Sample ID		NOSCSI-MI-01-A02.0			NOSCSI-MI-01-D02.0			NOSCSI-MI-01-E02.0		
	Decision Unit		DU-1			DU-1			DU-1		
	Sample Depth (ft)		2.0			2.0			2.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
2,4-D	94-75-7	0.2	0.192	U	0.192	0.192	U	0.192	0.192	U	0.192
DALAPON	75-99-0	0.16	*0.38*	U	*0.38*	*0.38*	U	*0.38*	*0.38*	U	*0.38*
SILVEX	93-72-1	0.87	0.038	U	0.038	0.038	U	0.038	0.038	U	0.038
Metals/Inorganics (SW-846 6020A / 7471B)											
ANTIMONY	7440-36-0	2.4	0.2	UJ	*0.2*	0.2	UJ	*0.2*	0.2	UJ	*0.2*
ARSENIC	7440-38-2	24	4.6	J	0.3	4.6	J	0.3	5.1	J	0.3
BERYLLIUM	7440-41-7	31	0.26	J	0.3	0.26	J	0.3	0.26	J	0.3
CADMIUM	7440-43-9	14	0.22		0.08	0.22		0.08	0.24		0.08
CHROMIUM, TOTAL	7440-47-3	1100	58.3		0.2	58.2		0.2	61.5		0.2
COPPER	7440-50-8	630	23.7	J	0.08	23.1	J	0.08	24.8	J	0.08
LEAD	7439-92-1	200	20.4		0.05	21		0.05	26.7		0.05
MERCURY	7439-97-6	4.7	0.068	J	0.04	0.06	J	0.04	0.068	J	0.04
NICKEL	7440-02-0	760	143		0.2	145		0.2	144		0.2
SELENIUM	7782-49-2	78	0.098	J	0.1	0.084	J	0.1	0.1	J	0.1
SILVER	7440-22-4	78	0.026	J	0.05	0.027	J	0.05	0.032	J	0.05
THALLIUM	7440-28-0	0.78	0.022	J	0.05	0.023	J	0.05	0.025	J	0.05
ZINC	7440-66-6	1000	102		1.5	106		1.5	112		1.5
Dioxins (SW 846 8290)											
1,2,3,4,6,7,8-HPCDD	35822-46-9	NA									
1,2,3,4,6,7,8-HPCDF	67562-39-4	NA									
1,2,3,4,7,8,9-HPCDF	55673-89-7	NA									
1,2,3,4,7,8-HXCDD	39227-28-6	NA									
1,2,3,4,7,8-HXCDF	70648-26-9	NA									
1,2,3,6,7,8-HXCDD	57653-85-7	NA									
1,2,3,6,7,8-HXCDF	57117-44-9	NA									
1,2,3,7,8,9-HXCDD	19408-74-3	NA									
1,2,3,7,8,9-HXCDF	72918-21-9	NA									
1,2,3,7,8-PECDD	40321-76-4	NA									
1,2,3,7,8-PECDF	57117-41-6	NA									

E2 Sample ID/Lab ID			EN004 / AZ02102			EN005 / AZ02103			EN006 / AZ02104		
Former NOSC SI Sample ID			NOSCSI-MI-01-A02.0			NOSCSI-MI-01-D02.0			NOSCSI-MI-01-E02.0		
Decision Unit			DU-1			DU-1			DU-1		
Sample Depth (ft)			2.0			2.0			2.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
2,3,4,6,7,8-HXCDF	60851-34-5	NA									
2,3,4,7,8-PECDF	57117-31-4	NA									
2,3,7,8-TCDD	1746-01-6	NA									
2,3,7,8-TCDF	51207-31-9	NA									
OCDD	3268-87-9	NA									
OCDF	39001-02-0	NA									
TEQ	-	0.00024									

*The HDOH EAL is for TPH (residual fuels)
**The HDOH EAL is for 1,3-Dichloropropene
***The HDOH EAL is for Endosulfan
Italic - LOD exceeds PAL
Bold Italic - Analyte detected in concentration exceeding PAL

			E2 Sample ID/Lab ID			EN007 / AZ02105			EN008 / AZ02106			EN009 / AZ02107		
			Former NOSC SI Sample ID			NOSCSI-MI-01-A04.0			NOSCSI-MI-01-D04.0			NOSCSI-MI-01-E04.0		
			Decision Unit			DU-1			DU-1			DU-1		
			Sample Depth (ft)			4.0			4.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)			
TPH (SW-846 8015B)														
TPH-DIESEL RANGE	N/A	500	4	J	1	5.4		1	5.1		1			
TPH-OIL RANGE*	N/A	500	20	J	10	48	J	10	17	J	10			
TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANICS	N/A	100	53	U	53	57	U	57	52	UJ	52			
VOCs (SW-846 8260B)														
1,1,1-TRICHLOROETHANE	71-55-6	7.0	0.99	U	0.99	1.1	U	1.1	0.98	U	0.98			
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.009	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*			
1,1,2-TRICHLOROETHANE	79-00-5	0.0089	*1.6*	U	*1.6*	*1.8*	U	*1.8*	*1.6*	U	*1.6*			
1,1-DICHLOROETHANE	75-34-3	0.33	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*			
1,1-DICHLOROETHENE	75-35-4	4.3	1.6	U	1.6	1.8	U	1.8	1.6	U	1.6			
1,2,3-TRICHLOROPROPANE	96-18-4	0.0013	*3.3*	U	*3.3*	*3.6*	U	*3.6*	*3.3*	U	*3.3*			
1,2-DIBROMOETHANE	106-93-4	0.00087	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*			
1,2-DICHLOROETHANE	107-06-2	0.02	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*			
1,2-DICHLOROPROPANE	78-87-5	0.052	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*			
2-BUTANONE	78-93-3	15	6.6	U	6.6	7.1	U	7.1	6.5	U	6.5			
4-METHYL-2-PENTANONE	108-10-1	0.5	*16*	U	*16*	*18*	U	*18*	*16*	U	*16*			
ACETONE	67-64-1	1.0	*16*	U	*16*	*18*	U	*18*	*16*	U	*16*			
BENZENE	71-43-2	0.67	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*			
BROMODICHLOROMETHANE	75-27-4	0.014	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*			
BROMOFORM	75-25-2	28	0.99	U	0.99	1.1	U	1.1	0.98	U	0.98			
BROMOMETHANE	74-83-9	0.22	*1.6*	U	*1.6*	*1.8*	U	*1.8*	*1.6*	U	*1.6*			
CARBON TETRACHLORIDE	56-23-5	0.087	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*			
CHLOROBENZENE	108-90-7	1.5	*1.6*	U	*1.6*	*1.8*	U	*1.8*	*1.6*	U	*1.6*			
CHLOROETHANE	75-00-3	11	1.6	U	1.6	1.8	U	1.8	1.6	U	1.6			
CHLOROFORM	67-66-3	0.023	*0.82*	U	*0.82*	*0.89*	U	*0.89*	*0.82*	U	*0.82*			
CHLOROMETHANE	74-87-3	0.29	*1.6*	U	*1.6*	*1.8*	U	*1.8*	*1.6*	U	*1.6*			
CIS-1,2-DICHLOROETHENE	156-59-2	0.31	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*			
CIS-1,3-DICHLOROPROPENE**	10061-01-5	0.13	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*			
DIBROMOCHLOROMETHANE	124-48-1	0.022	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*			

	E2 Sample ID/Lab ID		EN007 / AZ02105			EN008 / AZ02106			EN009 / AZ02107		
	Former NOSC SI Sample ID		NOSCSI-MI-01-A04.0			NOSCSI-MI-01-D04.0			NOSCSI-MI-01-E04.0		
	Decision Unit		DU-1			DU-1			DU-1		
	Sample Depth (ft)		4.0			4.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
ETHYLBENZENE	100-41-4	21	1.6	U	1.6	1.8	U	1.8	1.6	U	1.6
METHYLENE CHLORIDE	75-09-2	1.1	*3.3*	U	*3.3*	*3.6*	U	*3.6*	*3.3*	U	*3.3*
NAPHTHALENE	91-20-3	4.5	1.6	U	1.6	1.8	U	1.8	1.6	U	1.6
STYRENE	100-42-5	2.9	1.6	U	1.6	1.8	U	1.8	1.6	U	1.6
TETRACHLOROETHENE	127-18-4	0.088	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*
TOLUENE	108-88-3	10	0.99	U	0.99	1.1	U	1.1	0.98	U	0.98
TRANS-1,2-DICHLOROETHENE	156-60-5	2.7	0.99	U	0.99	1.1	U	1.1	0.98	U	0.98
TRANS-1,3-DICHLOROPROPENE**	10061-02-6	0.13	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*
TRICHLOROETHENE	79-01-6	0.26	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*
VINYL CHLORIDE	75-01-4	0.072	*0.99*	U	*0.99*	*1.1*	U	*1.1*	*0.98*	U	*0.98*
XYLENES, TOTAL	1330-20-7	11	0.99	U	0.99	1.1	U	1.1	0.98	U	0.98
Organochlorine Pesticides (SW-846 8081A)											
4,4-DDD	72-54-8	2.0	0.004	U	0.004	0.004	U	0.004	0.004	U	0.004
4,4-DDE	72-55-9	1.4	0.019	J	0.004	0.021	J	0.004	0.016	J	0.004
4,4-DDT	50-29-3	1.7	0.0016	UJ	0.0016	0.0016	U	0.0016	0.0016	UJ	0.0016
ALDRIN	309-00-2	0.92	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
CHLORDANE, TECHNICAL	12789-03-6	16	0.75	J	0.05	0.95	J	0.05	0.44	J	0.05
DIELDRIN	60-57-1	1.5	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
ENDOSULFAN I***	959-98-8	18	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016
ENDOSULFAN II***	33213-65-9	18	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016
ENDOSULFAN SULFATE***	1031-07-8	18	0.002	U	0.002	0.002	UJ	0.002	0.002	U	0.002
ENDRIN	72-20-8	3.7	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
HEPTACHLOR	76-44-8	0.11	0.002	UJ	0.002	0.002	UJ	0.002	0.002	UJ	0.002
HEPTACHLOR EPOXIDE	1024-57-3	0.053	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
HEXACHLOROBENZENE	118-74-1	0.3	0.01	U	0.01	0.01	U	0.01	0.01	U	0.01
LINDANE	58-89-9	0.037	0.002	UJ	0.002	0.002	U	0.002	0.002	UJ	0.002
METHOXYCHLOR	72-43-5	16	0.002	UJ	0.002	0.002	U	0.002	0.002	UJ	0.002
TOXAPHENE	8001-35-2	0.44	0.05	U	0.05	0.05	U	0.05	0.05	U	0.05

	E2 Sample ID/Lab ID		EN007 / AZ02105			EN008 / AZ02106			EN009 / AZ02107		
	Former NOSC SI Sample ID		NOSCSI-MI-01-A04.0			NOSCSI-MI-01-D04.0			NOSCSI-MI-01-E04.0		
	Decision Unit		DU-1			DU-1			DU-1		
	Sample Depth (ft)		4.0			4.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
PAHs (SW-846 8270C SIM)											
1-METHYLNAPHTHALENE	90-12-0	0.79	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
2-METHYLNAPHTHALENE	91-57-6	0.87	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
ACENAPHTHENE	83-32-9	120	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
ACENAPHTHYLENE	208-96-8	13	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
ANTHRACENE	120-12-7	4.3	0.0017	U	0.0017	0.0013	J	0.0017	0.0017	U	0.0017
BENZO[A]ANTHRACENE	56-55-3	1.5	0.0017	U	0.0017	0.024		0.0017	0.0047	J	0.0017
BENZO[A]PYRENE	50-32-8	0.15	0.0017	U	0.0017	0.023		0.0017	0.0039	J	0.0017
BENZO[B]FLUORANTHENE	205-99-2	1.5	0.0017	U	0.0017	0.048	J	0.0017	0.008	J	0.0017
BENZO[G,H,I]PERYLENE	191-24-2	27	0.014		0.0017	0.012		0.0017	0.0078		0.0017
BENZO[K]FLUORANTHENE	207-08-9	15	0.0017	U	0.0017	0.048	J	0.0017	0.008	J	0.0017
CHRYSENE	218-01-9	10	0.0017	U	0.0017	0.02		0.0017	0.0038	J	0.0017
DIBENZ[A,H]ANTHRACENE	53-70-3	0.15	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
FLUORANTHENE	206-44-0	87	0.0017	U	0.0017	0.017		0.0017	0.0079		0.0017
FLUORENE	86-73-7	100	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
INDENO[1,2,3-CD]PYRENE	193-39-5	1.5	0.0071		0.0017	0.0075		0.0017	0.0047	J	0.0017
PHENANTHRENE	85-01-8	69	0.0017	U	0.0017	0.0033	J	0.0017	0.0021	J	0.0017
PYRENE	129-00-0	44	0.0017	U	0.0017	0.017		0.0017	0.0079		0.0017
PCBs (SW-846 8082)											
AROCLOR-1016	12674-11-2	1.1	0.02	U	0.02	0.02	U	0.02	0.02	U	0.02
AROCLOR-1221	11104-28-2	1.1	0.02	U	0.02	0.02	U	0.02	0.02	U	0.02
AROCLOR-1232	11141-16-5	1.1	0.01	U	0.01	0.01	U	0.01	0.01	U	0.01
AROCLOR-1242	53469-21-9	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01
AROCLOR-1248	12672-29-6	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01
AROCLOR-1254	11097-69-1	1.1	0.28	J	0.01	0.42	J	0.01	0.23	J	0.01
AROCLOR-1260	11096-82-5	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01
POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	1.1	0.28	J	0.02	0.42	J	0.02	0.23	J	0.02
SVOCs (SW-846 8270C)											

	E2 Sample ID/Lab ID		EN007 / AZ02105			EN008 / AZ02106			EN009 / AZ02107		
	Former NOSC SI Sample ID		NOSCSI-MI-01-A04.0			NOSCSI-MI-01-D04.0			NOSCSI-MI-01-E04.0		
	Decision Unit		DU-1			DU-1			DU-1		
	Sample Depth (ft)		4.0			4.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	120-82-1	0.098	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
1,2-DICHLOROBENZENE	95-50-1	1.1	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
1,3-DICHLOROBENZENE	541-73-1	7.4	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
1,4-DICHLOROBENZENE	106-46-7	0.047	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	0.66	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4,5-TRICHLOROPHENOL	95-95-4	3.2	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4,6-TRICHLOROPHENOL	88-06-2	12	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DICHLOROPHENOL	120-83-2	0.25	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DIMETHYLPHENOL	105-67-9	9.0	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DINITROPHENOL	51-28-5	5.7	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DINITROTOLUENE	121-14-2	1.6	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,6-DINITROTOLUENE	606-20-2	4.3	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2-CHLOROPHENOL	95-57-8	0.092	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
3,3-DICHLOROBENZIDINE	91-94-1	1.1	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
4-CHLOROANILINE	106-47-8	0.094	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
BIS(2-CHLOROETHYL)ETHER	111-44-4	0.0045	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	35	1.1		0.167	0.38	J	0.167	0.52	J	0.167
DIETHYLPHTHALATE	84-66-2	0.026	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
DIMETHYL PHTHALATE	131-11-3	0.035	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
HEXACHLOROBENZENE	118-74-1	0.30	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
HEXACHLOROBUTADIENE	87-68-3	0.95	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
HEXACHLOROETHANE	67-72-1	0.68	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
ISOPHORONE	78-59-1	1.4	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
NITROBENZENE	98-95-3	2.3	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
PENTACHLOROPHENOL	87-86-5	0.89	0.167	UJ	0.167	0.167	UJ	0.167	0.167	UJ	0.167
PHENOL	108-95-2	40	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
Chlorinated Herbicides (SW-846 8151)											
2,4,5-T	93-76-5	12	0.038	U	0.038	0.038	U	0.038	0.038	U	0.038

	E2 Sample ID/Lab ID		EN007 / AZ02105			EN008 / AZ02106			EN009 / AZ02107		
	Former NOSC SI Sample ID		NOSCSI-MI-01-A04.0			NOSCSI-MI-01-D04.0			NOSCSI-MI-01-E04.0		
	Decision Unit		DU-1			DU-1			DU-1		
	Sample Depth (ft)		4.0			4.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
2,4-D	94-75-7	0.2	0.192	U	0.192	0.192	U	0.192	0.192	U	0.192
DALAPON	75-99-0	0.16	*0.38*	U	*0.38*	*0.38*	U	*0.38*	*0.38*	U	*0.38*
SILVEX	93-72-1	0.87	0.038	U	0.038	0.038	U	0.038	0.038	U	0.038
Metals/Inorganics (SW-846 6020A / 7471B)											
ANTIMONY	7440-36-0	2.4	0.2	UJ	0.2	0.2	UJ	0.2	0.2	UJ	0.2
ARSENIC	7440-38-2	24	4.1	J	0.3	4.2	J	0.3	3.6	J	0.3
BERYLLIUM	7440-41-7	31	0.19	J	0.3	0.19	J	0.3	0.19	J	0.3
CADMIUM	7440-43-9	14	0.084	J	0.08	0.1		0.08	0.099	J	0.08
CHROMIUM, TOTAL	7440-47-3	1100	29.5		0.2	33.2		0.2	34.4	J	0.2
COPPER	7440-50-8	630	10.8	J	0.08	11.9	J	0.08	12.6	J	0.08
LEAD	7439-92-1	200	6.9		0.05	8.2		0.05	8.3		0.05
MERCURY	7439-97-6	4.7	0.04	UJ	0.04	0.04	UJ	0.04	0.015	J	0.04
NICKEL	7440-02-0	760	68.5		0.2	74.4		0.2	79.6	J	0.2
SELENIUM	7782-49-2	78	0.052	J	0.1	0.092	J	0.1	0.057	J	0.1
SILVER	7440-22-4	78	0.05	UJ	0.05	0.05	UJ	0.05	0.05	UJ	0.05
THALLIUM	7440-28-0	0.78	0.05	UJ	0.05	0.05	UJ	0.05	0.05	UJ	0.05
ZINC	7440-66-6	1000	39.5		1.5	42.7		1.5	48.7		1.5
Dioxins (SW 846 8290)											
1,2,3,4,6,7,8-HPCDD	35822-46-9	NA									
1,2,3,4,6,7,8-HPCDF	67562-39-4	NA									
1,2,3,4,7,8,9-HPCDF	55673-89-7	NA									
1,2,3,4,7,8-HXCDD	39227-28-6	NA									
1,2,3,4,7,8-HXCDF	70648-26-9	NA									
1,2,3,6,7,8-HXCDD	57653-85-7	NA									
1,2,3,6,7,8-HXCDF	57117-44-9	NA									
1,2,3,7,8,9-HXCDD	19408-74-3	NA									
1,2,3,7,8,9-HXCDF	72918-21-9	NA									
1,2,3,7,8-PECDD	40321-76-4	NA									
1,2,3,7,8-PECDF	57117-41-6	NA									

E2 Sample ID/Lab ID			EN007 / AZ02105			EN008 / AZ02106			EN009 / AZ02107		
Former NOSC SI Sample ID			NOSCSI-MI-01-A04.0			NOSCSI-MI-01-D04.0			NOSCSI-MI-01-E04.0		
Decision Unit			DU-1			DU-1			DU-1		
Sample Depth (ft)			4.0			4.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
2,3,4,6,7,8-HXCDF	60851-34-5	NA									
2,3,4,7,8-PECDF	57117-31-4	NA									
2,3,7,8-TCDD	1746-01-6	NA									
2,3,7,8-TCDF	51207-31-9	NA									
OCDD	3268-87-9	NA									
OCDF	39001-02-0	NA									
TEQ	-	0.00024									

*The HDOH EAL is for TPH (residual fuels)
**The HDOH EAL is for 1,3-Dichloropropene
***The HDOH EAL is for Endosulfan
Italic - LOD exceeds PAL
Bold Italic - Analyte detected in concentration exceeding PAL

			E2 Sample ID/Lab ID			EN012 / AZ02105			EN013 / AZ02106			EN014 / AZ02107		
			Former NOSC SI Sample ID			NOSCSI-MI-02-A0.5			NOSCSI-MI-02-A02.0			NOSCSI-MI-02-A04.0		
			Decision Unit			DU-2			DU-2			DU-2		
			Sample Depth (ft)			0.5			2.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)			
TPH (SW-846 8015B)														
TPH-DIESEL RANGE	N/A	500	14		1	12		1	4.7	J	1			
TPH-OIL RANGE*	N/A	500	47	J	10	56		10	21	J	10			
TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANICS	N/A	100	47	U	47	48	U	48	52	U	52			
VOCs (SW-846 8260B)														
1,1,1-TRICHLOROETHANE	71-55-6	7.0	0.87	U	0.87	0.89	U	0.89	0.98	U	0.98			
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.009	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*			
1,1,2-TRICHLOROETHANE	79-00-5	0.0089	*1.5*	U	*1.5*	*1.5*	U	*1.5*	*1.6*	U	*1.6*			
1,1-DICHLOROETHANE	75-34-3	0.33	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*			
1,1-DICHLOROETHENE	75-35-4	4.3	1.5	U	1.5	1.5	U	1.5	1.6	U	1.6			
1,2,3-TRICHLOROPROPANE	96-18-4	0.0013	*2.9*	U	*2.9*	*3*	U	*3*	*3.3*	U	*3.3*			
1,2-DIBROMOETHANE	106-93-4	0.00087	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*			
1,2-DICHLOROETHANE	107-06-2	0.02	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*			
1,2-DICHLOROPROPANE	78-87-5	0.052	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*			
2-BUTANONE	78-93-3	15	5.8	U	5.8	6	U	6	6.5	U	6.5			
4-METHYL-2-PENTANONE	108-10-1	0.5	*15*	U	*15*	*15*	U	*15*	*16*	U	*16*			
ACETONE	67-64-1	1.0	*15*	U	*15*	*15*	U	*15*	*16*	U	*16*			
BENZENE	71-43-2	0.67	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*			
BROMODICHLOROMETHANE	75-27-4	0.014	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*			
BROMOFORM	75-25-2	28	0.87	U	0.87	0.89	U	0.89	0.98	U	0.98			
BROMOMETHANE	74-83-9	0.22	*1.5*	U	*1.5*	*1.5*	U	*1.5*	*1.6*	U	*1.6*			
CARBON TETRACHLORIDE	56-23-5	0.087	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*			
CHLOROBENZENE	108-90-7	1.5	1.5	U	1.5	1.5	U	1.5	*1.6*	U	*1.6*			
CHLOROETHANE	75-00-3	11	1.5	U	1.5	1.5	U	1.5	1.6	U	1.6			
CHLOROFORM	67-66-3	0.023	*0.73*	U	*0.73*	*0.74*	U	*0.74*	*0.81*	U	*0.81*			
CHLOROMETHANE	74-87-3	0.29	*1.5*	U	*1.5*	*1.5*	U	*1.5*	*1.6*	U	*1.6*			
CIS-1,2-DICHLOROETHENE	156-59-2	0.31	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*			
CIS-1,3-DICHLOROPROPENE**	10061-01-5	0.13	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*			
DIBROMOCHLOROMETHANE	124-48-1	0.022	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*			

	E2 Sample ID/Lab ID		EN012 / AZ02105			EN013 / AZ02106			EN014 / AZ02107		
	Former NOSC SI Sample ID		NOSCSI-MI-02-A0.5			NOSCSI-MI-02-A02.0			NOSCSI-MI-02-A04.0		
	Decision Unit		DU-2			DU-2			DU-2		
	Sample Depth (ft)		0.5			2.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
ETHYLBENZENE	100-41-4	21	1.5	U	1.5	1.5	U	1.5	1.6	U	1.6
METHYLENE CHLORIDE	75-09-2	1.1	*2.9*	U	*2.9*	*3*	U	*3*	*3.3*	U	*3.3*
NAPHTHALENE	91-20-3	4.5	1.5	U	1.5	1.5	U	1.5	1.6	U	1.6
STYRENE	100-42-5	2.9	1.5	U	1.5	1.5	U	1.5	1.6	U	1.6
TETRACHLOROETHENE	127-18-4	0.088	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*
TOLUENE	108-88-3	10	0.87	U	0.87	0.89	U	0.89	0.98	U	0.98
TRANS-1,2-DICHLOROETHENE	156-60-5	2.7	0.87	U	0.87	0.89	U	0.89	0.98	U	0.98
TRANS-1,3-DICHLOROPROPENE**	10061-02-6	0.13	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*
TRICHLOROETHENE	79-01-6	0.26	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*
VINYL CHLORIDE	75-01-4	0.072	*0.87*	U	*0.87*	*0.89*	U	*0.89*	*0.98*	U	*0.98*
XYLENES, TOTAL	1330-20-7	11	0.87	U	0.87	0.89	U	0.89	0.98	U	0.98
Organochlorine Pesticides (SW-846 8081A)											
4,4-DDD	72-54-8	2.0	0.004	U	0.004	0.004	U	0.004	0.018	J	0.004
4,4-DDE	72-55-9	1.4	0.06		0.004	0.046	J	0.004	0.066		0.004
4,4-DDT	50-29-3	1.7	0.048	J	0.0016	0.032	J	0.0016	0.15		0.0016
ALDRIN	309-00-2	0.92	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
CHLORDANE, TECHNICAL	12789-03-6	16	0.82	J	0.05	1.3		0.05	0.19	J	0.05
DIELDRIN	60-57-1	1.5	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
ENDOSULFAN I***	959-98-8	18	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016
ENDOSULFAN II***	33213-65-9	18	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016
ENDOSULFAN SULFATE***	1031-07-8	18	0.002	UJ	0.002	0.002	UJ	0.002	0.002	UJ	0.002
ENDRIN	72-20-8	3.7	0.002	U	0.002	0.002	U	0.002	0.042	J	0.002
HEPTACHLOR	76-44-8	0.11	0.002	UJ	0.002	0.002	UJ	0.002	0.002	UJ	0.002
HEPTACHLOR EPOXIDE	1024-57-3	0.053	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
HEXACHLOROBENZENE	118-74-1	0.3	0.01	U	0.01	0.01	U	0.01	0.01	U	0.01
LINDANE	58-89-9	0.037	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
METHOXYCHLOR	72-43-5	16	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
TOXAPHENE	8001-35-2	0.44	0.05	U	0.05	0.05	U	0.05	0.05	U	0.05

	E2 Sample ID/Lab ID		EN012 / AZ02105			EN013 / AZ02106			EN014 / AZ02107		
	Former NOSC SI Sample ID		NOSCSI-MI-02-A0.5			NOSCSI-MI-02-A02.0			NOSCSI-MI-02-A04.0		
	Decision Unit		DU-2			DU-2			DU-2		
	Sample Depth (ft)		0.5			2.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
PAHs (SW-846 8270C SIM)											
1-METHYLNAPHTHALENE	90-12-0	0.79	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
2-METHYLNAPHTHALENE	91-57-6	0.87	0.0012	J	0.0017	0.0015	J	0.0017	0.0017	U	0.0017
ACENAPHTHENE	83-32-9	120	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
ACENAPHTHYLENE	208-96-8	13	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
ANTHRACENE	120-12-7	4.3	0.0013	J	0.0017	0.0012	J	0.0017	0.0017	U	0.0017
BENZO[A]ANTHRACENE	56-55-3	1.5	0.0075		0.0017	0.0063		0.0017	0.0017	U	0.0017
BENZO[A]PYRENE	50-32-8	0.15	0.008		0.0017	0.0049	J	0.0017	0.0027	J	0.0017
BENZO[B]FLUORANTHENE	205-99-2	1.5	0.011	J	0.0017	0.013	J	0.0017	0.0017	U	0.0017
BENZO[G,H,I]PERYLENE	191-24-2	27	0.0073		0.0017	0.014		0.0017	0.016		0.0017
BENZO[K]FLUORANTHENE	207-08-9	15	0.011	J	0.0017	0.014	J	0.0017	0.0017	U	0.0017
CHRYSENE	218-01-9	10	0.0079		0.0017	0.0081		0.0017	0.0017	U	0.0017
DIBENZ[A,H]ANTHRACENE	53-70-3	0.15	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
FLUORANTHENE	206-44-0	87	0.0094		0.0017	0.0089		0.0017	0.0014	J	0.0017
FLUORENE	86-73-7	100	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
INDENO[1,2,3-CD]PYRENE	193-39-5	1.5	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
PHENANTHRENE	85-01-8	69	0.0041	J	0.0017	0.002	J	0.0017	0.0017	U	0.0017
PYRENE	129-00-0	44	0.011		0.0017	0.0094		0.0017	0.002	J	0.0017
PCBs (SW-846 8082)											
AROCLOR-1016	12674-11-2	1.1	0.02	U	0.02	0.02	U	0.02	0.02	U	0.02
AROCLOR-1221	11104-28-2	1.1	0.02	U	0.02	0.02	U	0.02	0.02	U	0.02
AROCLOR-1232	11141-16-5	1.1	0.01	U	0.01	0.01	U	0.01	0.01	U	0.01
AROCLOR-1242	53469-21-9	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01
AROCLOR-1248	12672-29-6	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01
AROCLOR-1254	11097-69-1	1.1	0.32	J	0.01	0.33	J	0.01	0.9	J	0.01
AROCLOR-1260	11096-82-5	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01
POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	1.1	0.32	J	0.02	0.33	J	0.02	0.9	J	0.02
SVOCs (SW-846 8270C)											

	E2 Sample ID/Lab ID		EN012 / AZ02105			EN013 / AZ02106			EN014 / AZ02107		
	Former NOSC SI Sample ID		NOSCSI-MI-02-A0.5			NOSCSI-MI-02-A02.0			NOSCSI-MI-02-A04.0		
	Decision Unit		DU-2			DU-2			DU-2		
	Sample Depth (ft)		0.5			2.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	120-82-1	0.098	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
1,2-DICHLOROBENZENE	95-50-1	1.1	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
1,3-DICHLOROBENZENE	541-73-1	7.4	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
1,4-DICHLOROBENZENE	106-46-7	0.047	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	0.66	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4,5-TRICHLOROPHENOL	95-95-4	3.2	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4,6-TRICHLOROPHENOL	88-06-2	12	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DICHLOROPHENOL	120-83-2	0.25	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DIMETHYLPHENOL	105-67-9	9.0	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DINITROPHENOL	51-28-5	5.7	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DINITROTOLUENE	121-14-2	1.6	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,6-DINITROTOLUENE	606-20-2	4.3	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2-CHLOROPHENOL	95-57-8	0.092	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
3,3-DICHLOROBENZIDINE	91-94-1	1.1	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
4-CHLOROANILINE	106-47-8	0.094	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
BIS(2-CHLOROETHYL)ETHER	111-44-4	0.0045	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	35	0.22	J	0.167	0.16	J	0.167	0.36	J	0.167
DIETHYLPHTHALATE	84-66-2	0.026	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
DIMETHYL PHTHALATE	131-11-3	0.035	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
HEXACHLOROBENZENE	118-74-1	0.30	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
HEXACHLOROBUTADIENE	87-68-3	0.95	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
HEXACHLOROETHANE	67-72-1	0.68	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
ISOPHORONE	78-59-1	1.4	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
NITROBENZENE	98-95-3	2.3	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
PENTACHLOROPHENOL	87-86-5	0.89	0.167	UJ	0.167	0.167	UJ	0.167	0.167	UJ	0.167
PHENOL	108-95-2	40	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
Chlorinated Herbicides (SW-846 8151)											
2,4,5-T	93-76-5	12	0.038	U	0.038	0.038	U	0.038	0.038	U	0.038

	E2 Sample ID/Lab ID		EN012 / AZ02105			EN013 / AZ02106			EN014 / AZ02107		
	Former NOSC SI Sample ID		NOSCSI-MI-02-A0.5			NOSCSI-MI-02-A02.0			NOSCSI-MI-02-A04.0		
	Decision Unit		DU-2			DU-2			DU-2		
	Sample Depth (ft)		0.5			2.0			4.0		
Analyte	**CAS No.**	**Human Health PALs (mg/kg)**	**Result (mg/kg)**	**Qualifier**	**LOD (mg/kg)**	**Result (mg/kg)**	**Qualifier**	**LOD (mg/kg)**	**Result (mg/kg)**	**Qualifier**	**LOD (mg/kg)**
2,4-D	94-75-7	0.2	0.192	U	0.192	0.192	U	0.192	0.192	U	0.192
DALAPON	75-99-0	0.16	*0.38*	U	*0.38*	*0.38*	U	*0.38*	*0.38*	U	*0.38*
SILVEX	93-72-1	0.87	0.038	U	0.038	0.038	U	0.038	0.038	U	0.038
Metals/Inorganics (SW-846 6020A / 7471B)											
ANTIMONY	7440-36-0	2.4	0.16	J	0.2	0.2	UJ	0.2	0.2	UJ	0.2
ARSENIC	7440-38-2	24	5.1	J	0.3	5.8	J	0.3	2.4	J	0.3
BERYLLIUM	7440-41-7	31	0.25	J	0.3	0.25	J	0.3	0.16	J	0.3
CADMIUM	7440-43-9	14	0.25		0.08	0.24		0.08	0.061	J	0.08
CHROMIUM, TOTAL	7440-47-3	1100	60.2		0.2	69.7		0.2	20.6		0.2
COPPER	7440-50-8	630	25.8	J	0.08	24.1	J	0.08	10.3	J	0.08
LEAD	7439-92-1	200	20.6		0.05	18.9		0.05	7.4		0.05
MERCURY	7439-97-6	4.7	0.067	J	0.04	0.068	J	0.04	0.04	UJ	0.04
NICKEL	7440-02-0	760	134		0.2	148		0.2	57.5		0.2
SELENIUM	7782-49-2	78	0.087	J	0.1	0.11	J	0.1	0.057	J	0.1
SILVER	7440-22-4	78	0.034	J	0.05	0.025	J	0.05	0.05	UJ	0.05
THALLIUM	7440-28-0	0.78	0.024	J	0.05	0.031	J	0.05	0.05	UJ	0.05
ZINC	7440-66-6	1000	106		1.5	104		1.5	30.4		1.5
Dioxins (SW 846 8290)											
1,2,3,4,6,7,8-HPCDD	35822-46-9	NA									
1,2,3,4,6,7,8-HPCDF	67562-39-4	NA									
1,2,3,4,7,8,9-HPCDF	55673-89-7	NA									
1,2,3,4,7,8-HXCDD	39227-28-6	NA									
1,2,3,4,7,8-HXCDF	70648-26-9	NA									
1,2,3,6,7,8-HXCDD	57653-85-7	NA									
1,2,3,6,7,8-HXCDF	57117-44-9	NA									
1,2,3,7,8,9-HXCDD	19408-74-3	NA									
1,2,3,7,8,9-HXCDF	72918-21-9	NA									
1,2,3,7,8-PECDD	40321-76-4	NA									
1,2,3,7,8-PECDF	57117-41-6	NA									

E2 Sample ID/Lab ID			EN012 / AZ02105			EN013 / AZ02106			EN014 / AZ02107		
Former NOSC SI Sample ID			NOSCSI-MI-02-A0.5			NOSCSI-MI-02-A02.0			NOSCSI-MI-02-A04.0		
Decision Unit			DU-2			DU-2			DU-2		
Sample Depth (ft)			0.5			2.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
2,3,4,6,7,8-HXCDF	60851-34-5	NA									
2,3,4,7,8-PECDF	57117-31-4	NA									
2,3,7,8-TCDD	1746-01-6	NA									
2,3,7,8-TCDF	51207-31-9	NA									
OCDD	3268-87-9	NA									
OCDF	39001-02-0	NA									
TEQ	-	0.00024									

*The HDOH EAL is for TPH (residual fuels)
**The HDOH EAL is for 1,3-Dichloropropene
***The HDOH EAL is for Endosulfan
Italic - LOD exceeds PAL
Bold Italic - Analyte detected in concentration exceeding PAL

			E2 Sample ID/Lab ID			EN015 / AZ02105			EN016 / AZ02106			EN017 / AZ02107		
			Former NOSC SI Sample ID			NOSCSI-MI-03-A0.5			NOSCSI-MI-03-A02.0			NOSCSI-MI-03-A04.0		
			Decision Unit			DU-3			DU-3			DU-3		
			Sample Depth (ft)			0.5			2.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)			
TPH (SW-846 8015B)														
TPH-DIESEL RANGE	N/A	500	10		1	8.4		1	4.8	J	1			
TPH-OIL RANGE*	N/A	500	16	J	10	20	J	10	11	J	10			
TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANICS	N/A	100	46	U	46	48	U	48	54	UJ	54			
VOCs (SW-846 8260B)														
1,1,1-TRICHLOROETHANE	71-55-6	7.0	0.87	U	0.87	0.9	U	0.9	1	U	1			
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.009	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*			
1,1,2-TRICHLOROETHANE	79-00-5	0.0089	*1.4*	U	*1.4*	*1.5*	U	*1.5*	*1.7*	U	*1.7*			
1,1-DICHLOROETHANE	75-34-3	0.33	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*			
1,1-DICHLOROETHENE	75-35-4	4.3	1.4	U	1.4	1.5	U	1.5	1.7	U	1.7			
1,2,3-TRICHLOROPROPANE	96-18-4	0.0013	*2.9*	U	*2.9*	*3*	U	*3*	*3.4*	U	*3.4*			
1,2-DIBROMOETHANE	106-93-4	0.00087	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*			
1,2-DICHLOROETHANE	107-06-2	0.02	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*			
1,2-DICHLOROPROPANE	78-87-5	0.052	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*			
2-BUTANONE	78-93-3	15	5.8	U	5.8	6	U	6	6.7	U	6.7			
4-METHYL-2-PENTANONE	108-10-1	0.5	*14*	U	*14*	*15*	U	*15*	*17*	U	*17*			
ACETONE	67-64-1	1.0	*14*	U	*14*	*15*	U	*15*	*17*	U	*17*			
BENZENE	71-43-2	0.67	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*			
BROMODICHLOROMETHANE	75-27-4	0.014	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*			
BROMOFORM	75-25-2	28	0.87	U	0.87	0.9	U	0.9	1	U	1			
BROMOMETHANE	74-83-9	0.22	*1.4*	U	*1.4*	*1.5*	U	*1.5*	*1.7*	U	*1.7*			
CARBON TETRACHLORIDE	56-23-5	0.087	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*			
CHLOROBENZENE	108-90-7	1.5	1.4	U	1.4	1.5	U	1.5	*1.7*	U	*1.7*			
CHLOROETHANE	75-00-3	11	1.4	U	1.4	1.5	U	1.5	1.7	U	1.7			
CHLOROFORM	67-66-3	0.023	*0.72*	U	*0.72*	*0.75*	U	*0.75*	*0.84*	U	*0.84*			
CHLOROMETHANE	74-87-3	0.29	*1.4*	U	*1.4*	*1.5*	U	*1.5*	*1.7*	U	*1.7*			
CIS-1,2-DICHLOROETHENE	156-59-2	0.31	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*			
CIS-1,3-DICHLOROPROPENE**	10061-01-5	0.13	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*			
DIBROMOCHLOROMETHANE	124-48-1	0.022	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*			

	E2 Sample ID/Lab ID		EN015 / AZ02105			EN016 / AZ02106			EN017 / AZ02107		
	Former NOSC SI Sample ID		NOSCSI-MI-03-A0.5			NOSCSI-MI-03-A02.0			NOSCSI-MI-03-A04.0		
	Decision Unit		DU-3			DU-3			DU-3		
	Sample Depth (ft)		0.5			2.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
ETHYLBENZENE	100-41-4	21	1.4	U	1.4	1.5	U	1.5	1.7	U	1.7
METHYLENE CHLORIDE	75-09-2	1.1	*2.9*	U	*2.9*	*3*	U	*3*	*3.4*	U	*3.4*
NAPHTHALENE	91-20-3	4.5	1.4	U	1.4	1.5	U	1.5	1.7	U	1.7
STYRENE	100-42-5	2.9	1.4	U	1.4	1.5	U	1.5	1.7	U	1.7
TETRACHLOROETHENE	127-18-4	0.088	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*
TOLUENE	108-88-3	10	0.87	U	0.87	0.9	U	0.9	1	U	1
TRANS-1,2-DICHLOROETHENE	156-60-5	2.7	0.87	U	0.87	0.9	U	0.9	1	U	1
TRANS-1,3-DICHLOROPROPENE**	10061-02-6	0.13	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*
TRICHLOROETHENE	79-01-6	0.26	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*
VINYL CHLORIDE	75-01-4	0.072	*0.87*	U	*0.87*	*0.9*	U	*0.9*	*1*	U	*1*
XYLENES, TOTAL	1330-20-7	11	0.87	U	0.87	0.9	U	0.9	1	U	1
Organochlorine Pesticides (SW-846 8081A)											
4,4-DDD	72-54-8	2.0	0.004	U	0.004	0.004	U	0.004	0.004	U	0.004
4,4-DDE	72-55-9	1.4	0.041	J	0.004	0.057		0.004	0.025	J	0.004
4,4-DDT	50-29-3	1.7	0.02	J	0.0016	0.018	J	0.0016	0.0016	UJ	0.0016
ALDRIN	309-00-2	0.92	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
CHLORDANE, TECHNICAL	12789-03-6	16	1.2		0.05	0.72	J	0.05	0.16	J	0.05
DIELDRIN	60-57-1	1.5	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
ENDOSULFAN I***	959-98-8	18	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016
ENDOSULFAN II***	33213-65-9	18	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016
ENDOSULFAN SULFATE***	1031-07-8	18	0.002	UJ	0.002	0.002	UJ	0.002	0.002	U	0.002
ENDRIN	72-20-8	3.7	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
HEPTACHLOR	76-44-8	0.11	0.002	UJ	0.002	0.002	UJ	0.002	0.002	UJ	0.002
HEPTACHLOR EPOXIDE	1024-57-3	0.053	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
HEXACHLOROBENZENE	118-74-1	0.3	0.01	U	0.01	0.01	U	0.01	0.01	U	0.01
LINDANE	58-89-9	0.037	0.002	U	0.002	0.002	U	0.002	0.002	UJ	0.002
METHOXYCHLOR	72-43-5	16	0.002	U	0.002	0.002	U	0.002	0.002	UJ	0.002
TOXAPHENE	8001-35-2	0.44	0.05	U	0.05	0.05	U	0.05	0.05	U	0.05

	E2 Sample ID/Lab ID		EN015 / AZ02105			EN016 / AZ02106			EN017 / AZ02107		
	Former NOSC SI Sample ID		NOSCSI-MI-03-A0.5			NOSCSI-MI-03-A02.0			NOSCSI-MI-03-A04.0		
	Decision Unit		DU-3			DU-3			DU-3		
	Sample Depth (ft)		0.5			2.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
PAHs (SW-846 8270C SIM)											
1-METHYLNAPHTHALENE	90-12-0	0.79	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
2-METHYLNAPHTHALENE	91-57-6	0.87	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
ACENAPHTHENE	83-32-9	120	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
ACENAPHTHYLENE	208-96-8	13	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
ANTHRACENE	120-12-7	4.3	0.0017	J	0.0017	0.0012	J	0.0017	0.0017	U	0.0017
BENZO[A]ANTHRACENE	56-55-3	1.5	0.014		0.0017	0.0058		0.0017	0.0019	J	0.0017
BENZO[A]PYRENE	50-32-8	0.15	0.013		0.0017	0.0051		0.0017	0.0024	J	0.0017
BENZO[B]FLUORANTHENE	205-99-2	1.5	0.027	J	0.0017	0.011	J	0.0017	0.0017	U	0.0017
BENZO[G,H,I]PERYLENE	191-24-2	27	0.014		0.0017	0.012		0.0017	0.0052		0.0017
BENZO[K]FLUORANTHENE	207-08-9	15	0.027	J	0.0017	0.012	J	0.0017	0.0017	U	0.0017
CHRYSENE	218-01-9	10	0.013		0.0017	0.0064		0.0017	0.002	J	0.0017
DIBENZ[A,H]ANTHRACENE	53-70-3	0.15	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
FLUORANTHENE	206-44-0	87	0.023		0.0017	0.0073		0.0017	0.0027	J	0.0017
FLUORENE	86-73-7	100	0.0017	U	0.0017	0.0017	U	0.0017	0.0017	U	0.0017
INDENO[1,2,3-CD]PYRENE	193-39-5	1.5	0.0058		0.0017	0.0039	J	0.0017	0.0017	U	0.0017
PHENANTHRENE	85-01-8	69	0.0074		0.0017	0.0019	J	0.0017	0.0011	J	0.0017
PYRENE	129-00-0	44	0.021		0.0017	0.0082		0.0017	0.003	J	0.0017
PCBs (SW-846 8082)											
AROCLOR-1016	12674-11-2	1.1	0.02	U	0.02	0.02	U	0.02	0.02	U	0.02
AROCLOR-1221	11104-28-2	1.1	0.02	U	0.02	0.02	U	0.02	0.02	U	0.02
AROCLOR-1232	11141-16-5	1.1	0.01	U	0.01	0.01	U	0.01	0.01	U	0.01
AROCLOR-1242	53469-21-9	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01
AROCLOR-1248	12672-29-6	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01
AROCLOR-1254	11097-69-1	1.1	0.18	J	0.01	0.18	J	0.01	0.21	J	0.01
AROCLOR-1260	11096-82-5	1.1	0.01	UJ	0.01	0.01	UJ	0.01	0.01	UJ	0.01
POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	1.1	0.18	J	0.02	0.18	J	0.02	0.21	J	0.02
SVOCs (SW-846 8270C)											

	E2 Sample ID/Lab ID		EN015 / AZ02105			EN016 / AZ02106			EN017 / AZ02107		
	Former NOSC SI Sample ID		NOSCSI-MI-03-A0.5			NOSCSI-MI-03-A02.0			NOSCSI-MI-03-A04.0		
	Decision Unit		DU-3			DU-3			DU-3		
	Sample Depth (ft)		0.5			2.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	120-82-1	0.098	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
1,2-DICHLOROBENZENE	95-50-1	1.1	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
1,3-DICHLOROBENZENE	541-73-1	7.4	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
1,4-DICHLOROBENZENE	106-46-7	0.047	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	0.66	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4,5-TRICHLOROPHENOL	95-95-4	3.2	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4,6-TRICHLOROPHENOL	88-06-2	12	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DICHLOROPHENOL	120-83-2	0.25	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DIMETHYLPHENOL	105-67-9	9.0	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DINITROPHENOL	51-28-5	5.7	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,4-DINITROTOLUENE	121-14-2	1.6	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2,6-DINITROTOLUENE	606-20-2	4.3	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
2-CHLOROPHENOL	95-57-8	0.092	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
3,3-DICHLOROBENZIDINE	91-94-1	1.1	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
4-CHLOROANILINE	106-47-8	0.094	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
BIS(2-CHLOROETHYL)ETHER	111-44-4	0.0045	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	35	0.13	J	0.167	0.082	J	0.167	0.17	J	0.167
DIETHYLPHTHALATE	84-66-2	0.026	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
DIMETHYL PHTHALATE	131-11-3	0.035	*0.167*	U	*0.167*	*0.167*	U	*0.167*	*0.167*	U	*0.167*
HEXACHLOROBENZENE	118-74-1	0.30	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
HEXACHLOROBUTADIENE	87-68-3	0.95	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
HEXACHLOROETHANE	67-72-1	0.68	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
ISOPHORONE	78-59-1	1.4	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
NITROBENZENE	98-95-3	2.3	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
PENTACHLOROPHENOL	87-86-5	0.89	0.167	UJ	0.167	0.167	UJ	0.167	0.167	UJ	0.167
PHENOL	108-95-2	40	0.167	U	0.167	0.167	U	0.167	0.167	U	0.167
Chlorinated Herbicides (SW-846 8151)											
2,4,5-T	93-76-5	12	0.038	U	0.038	0.038	U	0.038	0.038	U	0.038

			E2 Sample ID/Lab ID			EN015 / AZ02105			EN016 / AZ02106			EN017 / AZ02107		
			Former NOSC SI Sample ID			NOSCSI-MI-03-A0.5			NOSCSI-MI-03-A02.0			NOSCSI-MI-03-A04.0		
			Decision Unit			DU-3			DU-3			DU-3		
			Sample Depth (ft)			0.5			2.0			4.0		
Analyte	**CAS No.**	**Human Health PALs (mg/kg)**		**Result (mg/kg)**	**Qualifier**	**LOD (mg/kg)**	**Result (mg/kg)**	**Qualifier**	**LOD (mg/kg)**	**Result (mg/kg)**	**Qualifier**	**LOD (mg/kg)**
2,4-D	94-75-7	0.2		0.192	U	0.192	0.192	U	0.192	0.192	U	0.192
DALAPON	75-99-0	0.16		*0.38*	U	*0.38*	*0.38*	U	*0.38*	*0.38*	U	*0.38*
SILVEX	93-72-1	0.87		0.038	U	0.038	0.038	U	0.038	0.038	U	0.038
Metals/Inorganics (SW-846 6020A / 7471B)												
ANTIMONY	7440-36-0	2.4		0.2	J	0.2	0.19	J	0.2	0.2	UJ	0.2
ARSENIC	7440-38-2	24		5.9	J	0.3	6.6	J	0.3	2	J	0.3
BERYLLIUM	7440-41-7	31		0.25	J	0.3	0.24	J	0.3	0.18	J	0.3
CADMIUM	7440-43-9	14		0.32		0.08	0.28		0.08	0.087	J	0.08
CHROMIUM, TOTAL	7440-47-3	1100		74.6		0.2	77.5		0.2	17		0.2
COPPER	7440-50-8	630		27.6	J	0.08	26.9	J	0.08	9.9	J	0.08
LEAD	7439-92-1	200		32.9		0.05	26.6		0.05	6.3		0.05
MERCURY	7439-97-6	4.7		0.07	J	0.04	0.077	J	0.04	0.015	J	0.04
NICKEL	7440-02-0	760		151		0.2	169		0.2	65.3		0.2
SELENIUM	7782-49-2	78		0.11	J	0.1	0.12	J	0.1	0.1	UJ	0.1
SILVER	7440-22-4	78		0.036	J	0.05	0.034	J	0.05	0.05	UJ	0.05
THALLIUM	7440-28-0	0.78		0.021	J	0.05	0.035	J	0.05	0.05	UJ	0.05
ZINC	7440-66-6	1000		123		1.5	124		1.5	33.5		1.5
Dioxins (SW 846 8290)												
1,2,3,4,6,7,8-HPCDD	35822-46-9	NA										
1,2,3,4,6,7,8-HPCDF	67562-39-4	NA										
1,2,3,4,7,8,9-HPCDF	55673-89-7	NA										
1,2,3,4,7,8-HXCDD	39227-28-6	NA										
1,2,3,4,7,8-HXCDF	70648-26-9	NA										
1,2,3,6,7,8-HXCDD	57653-85-7	NA										
1,2,3,6,7,8-HXCDF	57117-44-9	NA										
1,2,3,7,8,9-HXCDD	19408-74-3	NA										
1,2,3,7,8,9-HXCDF	72918-21-9	NA										
1,2,3,7,8-PECDD	40321-76-4	NA										
1,2,3,7,8-PECDF	57117-41-6	NA										

E2 Sample ID/Lab ID			EN015 / AZ02105			EN016 / AZ02106			EN017 / AZ02107		
Former NOSC SI Sample ID			NOSCSI-MI-03-A0.5			NOSCSI-MI-03-A02.0			NOSCSI-MI-03-A04.0		
Decision Unit			DU-3			DU-3			DU-3		
Sample Depth (ft)			0.5			2.0			4.0		
Analyte	CAS No.	Human Health PALs (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)	Result (mg/kg)	Qualifier	LOD (mg/kg)
2,3,4,6,7,8-HXCDF	60851-34-5	NA									
2,3,4,7,8-PECDF	57117-31-4	NA									
2,3,7,8-TCDD	1746-01-6	NA									
2,3,7,8-TCDF	51207-31-9	NA									
OCDD	3268-87-9	NA									
OCDF	39001-02-0	NA									
TEQ	-	0.00024									

*The HDOH EAL is for TPH (residual fuels)
**The HDOH EAL is for 1,3-Dichloropropene
***The HDOH EAL is for Endosulfan
Italic - LOD exceeds PAL
Bold Italic - Analyte detected in concentration exceeding PAL

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Element Environmental LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701
ATTN: Mr. Roger Aoki

November 14, 2014

SUBJECT: **Data Quality Assessment Report**
Site Inspection For The Former Naval Ocean Systems Center Site
Marine Corps Base Hawaii (MCBH) Kaneohe
CTO 0015

Dear Mr. Aoki,

Enclosed is the Data Quality Assessment Report, Site Inspection For The Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii (MCBH) Kaneohe, CTO 0015.

We appreciate this opportunity to support Element Environmental in the performance of this project. Please feel free to call me at (760) 827-1100 if you have any questions.

Sincerely,

Andrew Kong
Project Manager/Senior Chemist

DATA QUALITY ASSESSMENT REPORT

SITE INSPECTION FOR THE FORMER NAVAL OCEAN SYSTEMS CENTER SITE MARINE CORPS BASE HAWAII (MCBH) KANEOHE OAHU, HAWAII

CTO 0015

November 13, 2014

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GLOSSARY

CTO	Contract Task Order
DL	Detection Limit
DOD	Department of Defense
DQAR	Data Quality Assessment Report
DRO	Diesel Range Organics
DUP	Duplicate
ER	Equipment Rinsate
FB	Field Blank
FT	Field Triplicate
ICB/CCB	Initial and Continuing Calibration Blanks
LCS/LCSD	Laboratory Control Sample / Laboratory Control Sample Duplicate
LDC	Laboratory Data Consultants, Inc
LOD	Limit of Detection
LOQ	Limit of Quantitation
LRO	Lubricant Oil Range Organics
MS/MSD	Matrix Spike / Matrix Spike Duplicate
PAH	Polynuclear Aromatic Hydrocarbon
PARCCS	Precision, Accuracy, Representativeness, Comparability, Completeness, Sensitivity
PCB	Polychlorinated Biphenyl
PCDD/PCDF	Polychlorinated Dioxin and Dibenzofuran
PE	Performance Evaluation Sample
PQO	Project Quality Objectives
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
QSM	Quality Systems Manual
RPD	Relative Percent Difference
RRF	Relative Response Factor
SDG	Sample Delivery Group
SOW	Statement of Work
SVOC	Semivolatile Organic Compound
TPH	Total Petroleum Hydrocarbons
VOC	Volatile Organic Compound
%D	Percent Difference
%R	Percent Recovery
%RSD	Percent Relative Standard Deviation
mg/Kg	Milligrams per Kilogram
pg/G	Picograms per Gram
ug/L	Micrograms per Liter

1.0 INTRODUCTION

A site inspection was conducted at the Former Naval Ocean Systems Center Site on Marine Corps Base Hawaii (MCBH) Kaneohe, in Oahu, Hawaii. This part of the site inspection included the collection and analyses of 19 environmental and quality control (QC) samples. The analyses were performed by the following methods:

Volatile Organic Compounds (VOCs) by US Environmental Protection Agency (EPA) SW-846 Method 8260B
Semivolatile Organic Compounds (SVOCs) by EPA SW-846 Method 8270C
Polynuclear Aromatic Hydrocarbons (PAHs) by EPA SW-846 Method 8270C using Selective Ion Monitoring (SIM)
Chlorinated Pesticides by EPA SW-846 Method 8081A
Polychlorinated Biphenyls (PCBs) by EPA SW-846 Method 8082A
Herbicides by EPA SW-846 Method 8151A
Total Petroleum Hydrocarbons (TPH) as Gasoline by EPA SW-846 Method 8015C
TPH as Extractables by EPA SW-846 Method 8015C
Polychlorinated Dioxins/Dibenzofurans (PCDDs/PCDFs) by EPA SW-846 Method 8290
Metals by EPA SW-846 Method 6020A/7470A/7471B

Analytical services were provided by APPL, Inc. The samples were grouped into sample delivery groups (SDGs) as received by the laboratory. The environmental samples are associated with quality assurance and quality control (QA/QC) samples designed to document the data quality of the entire SDG or a sub-group of samples within a SDG. Table I is a cross-reference table listing each sample, analysis, SDG, collection date, laboratory sample number, matrix, and validation level.

Approximately ten percent of the analytical data were validated according to the Naval Facilities Engineering Command (NAVFAC) Pacific Full data validation procedures and ninety percent of the analytical data were validated according to NAVFAC Pacific Standard data validation procedures. The analytical data were evaluated QA/QC based on the *Final Work Plan (WP) for Site Inspection (SI) for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kaneohe, Hawaii* (May 2013), the *NAVFAC Pacific Environmental Restoration (ER) Program Data Validation Procedures (2007),* and the *Department of Defense Quality Systems Manual (DoD QSM) for Environmental Laboratories, Version 4.2 (DoD 2010).*

This data quality assessment report (DQAR) summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) relative to the project quality objectives (PQOs). This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty, and bias that may affect the overall usability.

The DQAR evaluates and summarizes the results of QA/QC data validation for the entire sampling program. Each analytical fraction has a separate section for each of the PARCCS criteria. These sections interpret specific QC deviations and their effects on both individual data points and the analyses as a whole. Section 13 presents a summary of the PARCCS criteria by comparing quantitative parameters with acceptability criteria defined in the PQOs. Qualitative PARCCS criteria are also summarized in this section.

Precision and Accuracy of Environmental Data
Environmental data quality depends on sample collection procedures, analytical methods and instrumentation, documentation, and sample matrix properties. Both sampling procedures and laboratory analyses contain potential sources of uncertainty, error, and/or bias, which affect the overall quality of a measurement. Errors in sample data may result from incomplete equipment decontamination,

inappropriate sampling techniques, sample heterogeneity, improper filtering, and improper preservation. The accuracy of analytical results is dependent on selecting appropriate analytical methods, maintaining equipment properly, and complying with QC requirements. The sample matrix also is an important factor in the ability to obtain precise and accurate results within a given media.

Environmental and laboratory QA/QC samples assess the effects of sampling procedures and evaluate laboratory contamination, laboratory performance, and matrix effects. QA/QC samples include: trip blanks (TBs), equipment rinsates (ERs), field blanks (FBs), method blanks, laboratory control samples (LCSs), surrogate spikes, matrix spike/matrix spike duplicates (MS/MSDs), and field triplicates (FTs).

Before conducting the PARCCS evaluation, the analytical data were validated according to the NAVFAC Pacific Data Validation Procedures and the DoD QSM. Samples not meeting the Project Procedures Manual acceptance criteria were qualified with a flag, an abbreviation indicating a deficiency with the data. The following are flags used in data validation.

J Estimated The associated numerical value is an estimated quantity. The analyte was detected but the reported value may not be accurate or precise. The "J" qualification indicates the data fell outside the QC limits, but the exceedance was not sufficient to cause rejection of the data.

R Rejected The data is unusable (the compound or analyte may or may not be present). Use of the "R" qualifier indicates a significant variance from functional guideline acceptance criteria. Either resampling or reanalysis is necessary to determine the presence or absence of the rejected analyte.

U Nondetected Analyses were performed for the compound or analyte, but it was not detected. The "U" designation is also applied to suspected blank contamination. The "U" flag is used to qualify any result detected in an environmental sample at a concentration less than 10 times the value of the concentration in any associated blank for common laboratory contaminants and less than 5 times the concentration in any associated blank for all other contaminants.

UJ Estimated/Nondetected Analyses were performed for the compound or analyte, but it was not detected and the sample quantitation or detection limit is an estimated quantity due to poor accuracy or precision. This qualification is also used to flag possible false negative results in the case where low bias in the analytical system is indicated by low calibration response, surrogate, internal standard, or other spike recovery.

Once the data are reviewed and qualified according to the NAVFAC Pacific Data Validation Procedures and the DoD QSM, the data set is then evaluated using PARCCS criteria. PARCCS criteria provide an evaluation of overall data usability. The following is a discussion of PARCCS criteria as related to the PQOs.

Precision is a measure of the agreement or reproducibility of analytical results under a given set of conditions. It is a quantity that cannot be measured directly but is calculated from percent recovery data.

Precision is expressed as the relative percent difference (RPD):

$$RPD = (D1-D2)/\{1/2(D1+D2)\} \times 100$$

Where:
D1 and D2 = the reported concentrations for sample and duplicate analyses.

Precision is primarily assessed by calculating a RPD from the percent recoveries of the spiked compounds for each sample in the MS/MSD pair. In the absence of a MS/MSD pair, a laboratory duplicate or LCS/LCSD pair can be analyzed as an alternative means of assessing precision. In some cases, samples

from multiple SDGs were within one QC batch and therefore are associated with the same laboratory QC samples. An additional measure of sampling precision was obtained by collecting and analyzing field triplicate samples, which were compared using the %RSD result as the evaluation criteria.

MS and MSD samples are field samples spiked by the laboratory with target analytes prior to preparation and analysis. These samples measure the overall efficiency of the analytical method in recovering target analytes from an environmental matrix. A LCS is similar to a MS/MSD sample in that the LCS is spiked with the same target analytes prior to preparation and analysis. However, the LCS is prepared using a controlled interference-free matrix instead of a field sample aliquot. Laboratory reagent water is used to prepare aqueous LCS. The LCS measures laboratory efficiency in recovering target analytes from either a solid or aqueous matrix in the absence of matrix interferences.

Laboratory and field sampling precision are further evaluated by calculating percent relative standard deviation (%RSD) for field triplicate samples. The sampler collects three field samples at the same location and under identically controlled conditions. The laboratory then analyzes the samples under identical conditions.

An RPD or %RSD outside the numerical QC limit in either MS/MSD, LCS/LCSD, or field triplicate samples indicates imprecision. Imprecision is the variance in the consistency with which the laboratory arrives at a particular reported result. Thus, the actual analyte concentration may be higher or lower than the reported result.

Possible causes of poor precision include sample matrix interference, improper sample collection or handling, inconsistent sample preparation, and poor instrument stability. In some triplicate sets, results maybe reported at levels below the reporting limit or non-detected. Since these values are considered to be estimates, %RSD exceedances from these triplicates, do not suggest a significant impact on the data quality.

Accuracy is a measure of the agreement of an experimental determination and the true value of the parameter being measured. It is used to identify bias in a given measurement system. Recoveries outside acceptable QC limits may be caused by factors such as instrumentation, analyst error, or matrix interference. Accuracy is assessed through the analysis of MS, MSD, LCS, and samples containing surrogate spikes. In some cases, samples from multiple SDGs were within one QC batch and therefore are associated with the same laboratory QC samples. Surrogate spikes are either isotopically labeled compounds or compounds that are not typically detected in the samples. Surrogate spikes are added to every blank, environmental sample, MS/MSD, and standard, for all applicable organic analyses. Accuracy of inorganic analyses is determined using the percent recoveries of MS and LCS analyses.

Percent recovery (%R) is calculated using the following equation:

$$\%R = (A-B)/C \times 100$$

Where:
A = measured concentration in the spiked sample
B = measured concentration of the spike compound in the unspiked sample
C = concentration of the spike

The percent recovery of each analyte spiked in MS/MSD samples, LCS, and surrogate compounds added to environmental samples is evaluated against the acceptance criteria specified by the previously noted documents. Spike recoveries outside the acceptable QC accuracy limits provide an indication of bias, where the reported data may overestimate or underestimate the actual concentration of compounds detected or quantitation limits reported for environmental samples.

Representativeness is a qualitative parameter that expresses the degree to which the sample data are characteristic of a population and is evaluated by reviewing the QC results of blank samples and holding times. Positive detects of compounds in the blank samples identify compounds that may have been introduced into the samples during sample collection, transport, preparation, or analysis. The QA/QC blanks collected and analyzed are method blanks, initial and continuing calibration blanks, TBs, ERs, and FBs.

A method blank is a laboratory grade water or solid matrix that contains the method reagents and has undergone the same preparation and analysis as the environmental samples. The method blank provides a measure of the combined contamination derived from the laboratory source water, glassware, instruments, reagents, and sample preparation steps. Method blanks are prepared for each sample of a similar matrix extracted by the same method at a similar concentration level.

For inorganic analyses, initial and continuing calibration blanks (ICB/CCB) consist of acidified laboratory grade water, which are injected at the beginning and at a regular frequency during each 12 - hour sample analysis run. These blanks estimate residual contaminants from the previous sample or standards analysis and measure baseline shifts that commonly occur in emission and absorption spectroscopy.

Trip blanks are used to identify possible volatile organic contamination introduced into the sample during transport. A trip blank is a sample bottle filled in the laboratory with reagent-grade water and preserved to a pH less than 2 with hydrochloric acid. It is transported to the site, stored with the sample containers, and returned unopened to the laboratory for analysis.

Equipment rinsates consist of analyte-free water poured over or through the sample collection equipment. The water is collected in a sample container for laboratory analysis. These blanks are collected after the sampling equipment is decontaminated and measure efficiency of the decontamination procedure.

Field blanks consist of analyte-free source water stored at the sample collection site. The water is collected from each source water used during each sampling event.

Contaminants found in both the environmental sample and a blank sample are assumed to be laboratory artifacts if the concentration in the environmental sample is less than 10 times the blank value for common laboratory contaminants; methylene chloride, acetone, and 2-butanone or 5 times the blank value for other laboratory contaminants.

Holding times are evaluated to assure that the sample integrity is intact for accurate sample preparation and analysis. Holding times will be specific for each method and matrix analyzed. Holding time exceedances can cause loss of sample constituents due to biodegradation, precipitation, volatization, and chemical degradation.

Comparability is a qualitative expression of the confidence with which one data set may be compared to another. It provides an assessment of the equivalence of the analytical results to data obtained from other analyses. It is important that data sets be comparable if they are used in conjunction with other data sets. The factors affecting comparability include the following: sample collection and handling techniques, matrix type, and analytical method. If these aspects of sampling and analysis are carried out according to standard analytical procedures, the data are considered comparable. Comparability is also dependent upon other PARCCS criteria, because only when precision, accuracy, and representativeness are known can data sets be compared with confidence.

Completeness is defined as the percentage of acceptable sample results compared to the total number of sample results. Completeness is evaluated to determine if an acceptable amount of usable data were obtained so that a valid scientific site assessment can be completed. Completeness equals the total number

of sample results for each fraction minus the total number of rejected sample results divided by the total number of sample results multiplied by 100. As specified in the PQOs, the goal for completeness for target analytes in each analytical fraction is 90 percent.

Percent completeness is calculated using the following equation:

$\%C = (T - R)/T \times 100$

Where:
%C = percent completeness
T = total number of sample results
R = total number of rejected sample results

Completeness is also determined by comparing the planned number of samples per method and matrix as specified in the project planning document, with the number determined above.

Sensitivity is the ability of an analytical method or instrument to discriminate between measurement responses representing different concentrations. This capability is established during the planning phase to meet the DQOs. It is important that calibration requirements, detection limits (DLs), and LOQs presented in the QAPP are achieved and that target analytes can be detected at concentrations necessary to support the DQOs. In addition, sample results are compared to method blank, TB, ER, and FB results to identify potential effects of laboratory background and field procedures on sensitivity.

The following sections present a review of QC data for each analytical method.

2.0 VOLATILE ORGANIC COMPOUNDS

A total of 15 soil and 4 water samples were analyzed for VOCs by EPA SW-846 Method 8260B. All VOC data were assessed to be valid since none of the 665 total results were rejected due to holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

2.1 Precision and Accuracy

2.1.1 Instrument Calibration

Initial and continuing calibration results provide a means of evaluating accuracy within a particular SDG. Relative response factor (RRF), percent relative standard deviation (%RSD), and percent difference (%D) are the three major parameters used to measure the effectiveness of instrument calibration. RRF is a measure of the relative spectral response of an analyte compared to its internal standard. %RSD is an expression of the linearity of instrument response. %D is a comparison of a continuing calibration instrumental response with its initial response. %RSD and %D exceedances suggest routine instrumental anomalies, which typically impact all sample results for the affected compounds.

The %RSDs or coefficient of determination (r^2) in the initial calibration met the acceptance criteria of 15 percent or $\geq$ 0.990, respectively. The %Ds met the acceptance criteria of 20 percent in the initial and continuing calibration verification standards. The relative response factors met the acceptance criteria of 0.05 in the initial and continuing calibration standards.

2.1.2 Surrogates

No data were qualified based on surrogate non-conformances. The percent recoveries were evaluated against the acceptance criteria.

2.1.3 MS/MSD Samples

No data were qualified based on MS/MSD non-conformances. The percent recoveries and RPDs were evaluated against the acceptance criteria.

2.1.4 LCS Samples

No data were qualified based on LCS non-conformances. The percent recoveries were evaluated against the acceptance criteria.

2.1.5 Internal Standards

No data were qualified based on internal standard non-conformances. The areas and retention times were evaluated against the acceptance criteria.

2.1.6 FT Samples

No VOCs were detected in the field triplicates. The field triplicates are identified in the data validation reports.

2.1.7 Performance Evaluation Samples

Performance Evaluation (PE) samples were not performed for the sampling event.

2.1.8 Compound Quantitation and Target Identification

All compound quantitation and target identifications were found to be acceptable.

2.2 Representativeness

2.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

2.2.2 Blanks

Method blanks, TBs, ERs, and FBs were analyzed to evaluate representativeness. The concentration for an individual target compound in any of the types of QA/QC was used for data qualification.

If contaminants were detected in a blank, corrective actions were made for the chemical analytical data during data validation. The corrective action consisted of amending the laboratory reported results for organic compounds based on the following criteria. The validation qualifier codes used in the blank summary tables are described below.

> Results Below or Above the LOQ If a sample result for the blank contaminant was less than the LOQ or greater than the sample LOQ and less than 10 times the blank value for common contaminants or 5 times the blank value for other contaminants, the sample result for the blank contaminant was amended as an estimated non-detect at the concentration reported in the sample results.

No Action If a sample result for the blank contaminant was greater than 10 times the blank value for common contaminants or 5 times the blank value for other contaminants, the result was not amended.

2.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

2.2.2.2 TBs

As a result of trip blank contamination, the chloromethane result in sample EN011 was qualified as non-detected (U). The details regarding the qualification of results are provided in the data validation reports.

2.2.2.3 ERs and FBs

No data was qualified as a result of contaminants detected in the equipment or field blanks.

2.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the detection limits (DLs) attained were below the LOQs. Target compounds detected below the LOQs flagged (J) by the laboratory should be considered estimated. The comparability of the data is regarded as acceptable.

2.4 Completeness

The completeness level attained for VOC field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

2.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the QAPP.

3.0 SEMIVOLATILE ORGANIC COMPOUNDS

A total of 15 soil and 3 water samples were analyzed for SVOCs by EPA SW846 Method 8270C. All SVOC data were assessed to be valid since none of the 468 total results were rejected based on QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the DQOs.

3.1 Precision and Accuracy

3.1.1 Instrument Calibration

As previously discussed in Section 2.1.1, initial and continuing calibration results provide a means of evaluating accuracy.

The %Ds met the acceptance criteria of 20 percent in the initial and continuing calibration verification standards. The relative response factors met the acceptance criteria of 0.05 in the initial and continuing calibration standards.

As a result of %RSDs in the initial calibration outside the acceptance criteria of 15 percent, 18 pentachlorophenol results were qualified as non-detected estimated (UJ). The details regarding the qualification of results are provided in the data validation reports.

3.1.2 Surrogates

No data were qualified based on surrogate non-conformances. The percent recoveries were evaluated against the acceptance criteria.

3.1.3 MS/MSD Samples

As a result of non-compliant MS/MSD %Rs, the 2,4-dimethylphenol, 2,4-dinitrophenol, and 3,3'-dichlorobenzidine results in sample EN002 were qualified as non-detected estimated (UJ). The details regarding the qualification of results are provided in the data validation reports.

3.1.4 LCS Samples

No data were qualified due to non-compliant high LCS %Rs. The associated sample results were non-detect.

3.1.5 Internal Standards

No data were qualified based on internal standard non-conformances. The areas and retention times were evaluated against the acceptance criteria.

3.1.6 FT Samples

The field triplicate samples were evaluated for acceptable precision with %RSDs for the compounds. The associated data validation narratives provided details regarding criteria exceeded. Sample data were not qualified on the basis of field triplicate precision.

3.1.7 Performance Evaluation Samples

PE samples were not performed for the sampling event.

3.1.8 Compound Quantitation and Target Identification

All compound quantitation and target identifications were found to be acceptable.

3.2 Representativeness

3.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

3.2.2 Blanks

As previously discussed in Section 2.2.2, method blanks, ERs, and FBs were analyzed to evaluate representativeness.

3.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

3.2.2.2 ERs and FBs

No contaminants were detected in the equipment and field blanks collected for this analysis.

3.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs attained were below the LOQs. Target compounds detected below the LOQs flagged (J) by the laboratory should be considered estimated. The comparability of the data is regarded as acceptable.

3.4 Completeness

The completeness level attained for SVOC field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

3.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the QAPP.

4.0 POLYNUCLEAR AROMATIC HYDROCARBONS

A total of 15 soil and 3 water samples were analyzed for PAHs by EPA SW-846 Method 8270C-SIM. All PAH data were assessed to be valid since none of the 306 total results were rejected based on QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the DQOs.

4.1 Precision and Accuracy

4.1.1 Instrument Calibration

As previously discussed in Section 2.1.1, initial and continuing calibration results provide a means of evaluating accuracy.

The %RSDs in the initial calibration met the acceptance criteria of 15 percent. The %Ds met the acceptance criteria of 20 percent in the initial and continuing calibration verification standards. The relative response factors met the acceptance criteria of 0.05 in the initial and continuing calibration standards.

4.1.2 Surrogates

As a result of non-compliant surrogate %Rs, 12 results in sample EN006 were qualified as detected estimated (J). The affected compounds are acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. The details regarding the qualification of results are provided in the data validation reports.

4.1.3 MS/MSD Samples

As a result of non-compliant MS/MSD %Rs and RPDs, 8 results in sample EN002 were qualified as detected estimated (J). The affected compounds are 2-methylnaphthalene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, fluoranthene, indeno(1,2,3-cd)pyrene, and phenanthrene. The details regarding the qualification of results are provided in the data validation reports.

4.1.4 LCS Samples

No data were qualified based on LCS non-conformances. The percent recoveries were evaluated against the acceptance criteria.

4.1.5 Internal Standards

No data were qualified based on internal standard non-conformances. The areas and retention times were evaluated against the acceptance criteria.

4.1.6 FT Samples

The field triplicate samples were evaluated for acceptable precision with %RSDs for the compounds. The associated data validation narratives provided details regarding criteria exceeded. Sample data were not qualified on the basis of field triplicate precision.

4.1.7 Performance Evaluation Samples

PE samples were not performed for the sampling event.

4.1.8 Compound Quantitation and Target Identification

All target compound identifications were found to be acceptable.

Twenty four benzo(b)fluoranthene and benzo(k)fluoranthene results were qualified as detected estimated (J) as a result of compound quantitation non-conformances. Due to poor peak resolution, the laboratory performed the quantitation for each compound using the total peak area resulting in a high bias in the reported values. The details regarding the qualification of results are provided in the data validation reports.

4.2 Representativeness

4.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

4.2.2 Blanks

As previously discussed in Section 2.2.2, method blanks, ERs, and FBs were analyzed to evaluate representativeness.

4.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

4.2.2.2 ERs and FBs

No contaminants were detected in the equipment and field blanks collected for this analysis.

4.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs attained were below the LOQs. Target compounds detected below the LOQs flagged (J) by the laboratory should be considered estimated. The comparability of the data is regarded as acceptable.

4.4 Completeness

The completeness level attained for PAH field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

4.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the QAPP.

5.0 CHLORINATED PESTICIDES

A total of 15 soil and 3 water samples were analyzed for chlorinated pesticides by EPA SW-846 Method 8081A. All chlorinated pesticide data were assessed to be valid since none of the 288 total results were rejected based on holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

5.1 Precision and Accuracy

5.1.1 Instrument Calibration

As previously discussed in Section 2.1.1, initial and continuing calibration results provide a means of evaluating accuracy.

The %RSDs or coefficient of determination (r^2) in the initial calibration met the acceptance criteria of 20 percent or $\geq$ 0.990, respectively. The %Ds in the initial calibration verification standards met the acceptance criteria of 20 percent.

As a result of %Ds in the continuing calibration standards outside the acceptance criteria of 20 percent, 28 results were qualified as non-detected estimated (UJ). The affected compounds are 4,4'-DDT, endosulfan sulfate, heptachlor, lindane, and methoxychlor. The details regarding the qualification of results are provided in the data validation reports.

5.1.2 Surrogates

No data were qualified based on surrogate non-conformances. The percent recoveries were evaluated against the acceptance criteria.

5.1.3 MS/MSD Samples

No data were qualified based on MS/MSD non-conformances. The percent recoveries and RPDs were evaluated against the acceptance criteria.

5.1.4 LCS Samples

No data were qualified based on LCS non-conformances. The percent recoveries were evaluated against the acceptance criteria.

5.1.5 FT Samples

The field triplicate samples were evaluated for acceptable precision with %RSDs for the compounds. The associated data validation narratives provided details regarding criteria exceeded. Sample data were not qualified on the basis of field triplicate precision.

5.1.6 Performance Evaluation Samples

PE samples were not performed for the sampling event.

5.1.7 Compound Quantitation and Target Identification

All target compound identifications were found to be acceptable.

As a result of compound quantitation non-conformances (i.e., RPD between two columns > 40%), the chlordane, technical results in samples EN004, EN006, EN009, and EN014 were qualified as detected estimated (J). The details regarding the qualification of results are provided in the data validation reports.

5.2 Representativeness

5.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

5.2.2 Blanks

As previously discussed in Section 2.2.2, method blanks, ERs, and FBs were analyzed to evaluate representativeness.

5.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

5.2.2.2 ERs and FBs

No contaminants were detected in the equipment and field blanks collected for this analysis.

5.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs attained were below the LOQs. Target compounds detected below the LOQs flagged (J) by the laboratory should be considered estimated. The comparability of the data is regarded as acceptable.

5.4 Completeness

The completeness level attained for chlorinated pesticide field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

5.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the QAPP.

6.0 POLYCHLORINATED BIPHENYLS

A total of 15 soil and 3 water samples were analyzed for PCBs by EPA SW-846 Method 8082A. All PCB data were assessed to be valid since none of the 144 total results were rejected based on holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

6.1 Precision and Accuracy

6.1.1 Instrument Calibration

As previously discussed in Section 2.1.1, initial and continuing calibration results provide a means of evaluating accuracy.

The %RSDs in the initial calibration and the %Ds in the continuing calibration verification standard met the acceptance criteria of 20 percent.

As a result of %Ds in the initial calibration verification standard outside the acceptance criteria of 20 percent, 90 results were qualified as detected estimated (J) or non-detected estimated (UJ). The affected analytes were aroclor 1242, aroclor 1248, aroclor 1254, aroclor 1260, and total PCBs. The details regarding the qualification of results are provided in the data validation reports.

6.1.2 Surrogates

No data were qualified based on surrogate non-conformances. The percent recoveries were evaluated against the acceptance criteria.

6.1.3 MS/MSD Samples

No data were qualified based on MS/MSD non-conformances. The percent recoveries and RPDs were evaluated against the acceptance criteria.

6.1.4 LCS Samples

No data were qualified based on LCS non-conformances. The percent recoveries were evaluated against the acceptance criteria.

6.1.5 FT Samples

The field triplicate samples were evaluated for acceptable precision with %RSDs for the compounds. The associated data validation narratives provided details regarding criteria exceeded. Sample data were not qualified on the basis of field triplicate precision.

6.1.6 Performance Evaluation Samples

PE samples were not performed for the sampling event.

6.1.7 Compound Quantitation and Target Identification

All target compound identifications were found to be acceptable.

As a result of compound quantitation non-conformances (i.e., RPD between two columns > 40%), the aroclor 1254 results in samples EN013, EN015, and EN016 were qualified as detected estimated (J). The details regarding the qualification of results are provided in the data validation reports.

6.2 Representativeness

6.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

6.2.2 Blanks

As previously discussed in Section 2.2.2, method blanks, ERs, and FBs were analyzed to evaluate representativeness.

6.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

6.2.2.2 ERs and FBs

No contaminants were detected in the equipment and field blanks collected for this analysis.

6.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs attained were below the LOQs. The comparability of the data is regarded as acceptable.

6.4 Completeness

The completeness level attained for PCB field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

6.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the QAPP.

7.0 HERBICIDES

A total of 15 soil and 3 water samples were analyzed for herbicides by EPA SW-846 Method 8151A. All herbicide data were assessed to be valid since none of the 72 total results were rejected based on holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

7.1 Precision and Accuracy

7.1.1 Instrument Calibration

As previously discussed in Section 2.1.1, initial and continuing calibration results provide a means of evaluating accuracy.

The %RSDs in the initial calibration and the %Ds in the initial and continuing calibration verification standards met the acceptance criteria of 20 percent.

7.1.2 Surrogates

No data were qualified based on surrogate non-conformances. The percent recoveries were evaluated against the acceptance criteria.

7.1.3 MS/MSD Samples

As a result of non-compliant MS/MSD %Rs, the 2,4-D and dalapon results in sample EN002 were qualified as non-detected estimated (UJ). The details regarding the qualification of results are provided in the data validation reports.

7.1.4 LCS Samples

No data were qualified based on LCS non-conformances. The percent recoveries were evaluated against the acceptance criteria.

7.1.5 FT Samples

No herbicides were detected in the field triplicates. The field triplicates are identified in the data validation reports.

7.1.6 Performance Evaluation Samples

PE samples were not performed for the sampling event.

7.1.7 Compound Quantitation and Target Identification

All compound quantitation and target identifications were found to be acceptable.

7.2 Representativeness

7.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

7.2.2 Blanks

As previously discussed in Section 2.2.2, method blanks, ERs, and FBs were analyzed to evaluate representativeness.

7.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

7.2.2.2 ERs and FBs

No contaminants were detected in the equipment and field blanks collected for this analysis.

7.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs attained were below the LOQs. Target compounds detected below the LOQs flagged (J) by the laboratory should be considered estimated. The comparability of the data is regarded as acceptable.

7.4 Completeness

The completeness level attained for herbicide field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

7.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the QAPP.

8.0 TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

A total of 15 soil and 3 water samples were analyzed for TPH as gasoline by EPA SW-846 Method 8015C. All TPH as gasoline data were assessed to be valid since none of the 18 total results were rejected based on holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

8.1 Precision and Accuracy

8.1.1 Instrument Calibration

As previously discussed in Section 2.1.1, initial and continuing calibration results provide a means of evaluating accuracy.

The %RSDs or coefficient of determination (r^2) in the initial calibration met the acceptance criteria of 15 percent or $\geq$ 0.990, respectively. The %Ds in the initial calibration verification and continuing calibration met the acceptance criteria of 20 percent.

8.1.2 Surrogates

As a result of non-compliant surrogate %Rs, the TPH as gasoline results in samples EN002, EN009, and EN017 were qualified as non-detected estimated (UJ). The details regarding the qualification of results are provided in the data validation reports.

8.1.3 MS/MSD Samples

No data were qualified based on MS/MSD non-conformances. The percent recoveries and RPDs were evaluated against the acceptance criteria.

8.1.4 LCS Samples

No data were qualified based on LCS non-conformances. The percent recoveries were evaluated against the acceptance criteria.

8.1.5 FT Samples

No TPH as gasoline was detected in the field triplicates. The field triplicates are identified in the data validation reports.

8.1.6 Performance Evaluation Samples

PE samples were not performed for the sampling event.

8.1.7 Compound Quantitation and Target Identification

All compound quantitation and target identifications were found to be acceptable.

8.2 Representativeness

8.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

8.2.2 Blanks

As previously discussed in Section 2.2.2, method blanks, ERs, and FBs were analyzed to evaluate representativeness.

8.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

8.2.2.2 ERs and FBs

No contaminants were detected in the equipment and field blanks collected for this analysis.

8.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs attained were below the LOQs. The comparability of the data is regarded as acceptable.

8.4 Completeness

The completeness level attained for TPH as gasoline field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

8.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the QAPP.

9.0 TOTAL PETROLEUM HYDROCARBONS AS EXTRACTABLES

A total of 15 soil and 3 water samples were analyzed for Diesel Range Organics (DRO) and Lubricant Oil Range Organics (LRO) by EPA SW-846 Method 8015C. All TPH as extractables data were assessed to be valid since none of the 36 total results were rejected based on holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

9.1 Precision and Accuracy

9.1.1 Instrument Calibration

As previously discussed in Section 2.1.1, initial and continuing calibration results provide a means of evaluating accuracy.

The %RSDs in the initial calibration and the %Ds in the initial calibration verification and continuing calibration met the acceptance criteria of 20 percent.

9.1.2 Surrogates

No data were qualified based on surrogate non-conformances. The percent recoveries were evaluated against the acceptance criteria.

9.1.3 MS/MSD Samples

As a result of non-compliant MS/MSD %Rs and RPDs, the DRO result in sample EN002 was qualified as detected estimated (J). The details regarding the qualification of results are provided in the data validation reports.

9.1.4 LCS Samples

No data were qualified based on LCS non-conformances. The percent recoveries were evaluated against the acceptance criteria.

9.1.5 FT Samples

The field triplicate samples were evaluated for acceptable precision with %RSDs for the compounds. The associated data validation narratives provided details regarding criteria exceeded. Sample data were not qualified on the basis of field triplicate precision.

9.1.6 Performance Evaluation Samples

PE samples were not performed for the sampling event.

9.1.7 Compound Quantitation and Target Identification

All compound quantitation and target identifications were found to be acceptable.

9.2 Representativeness

9.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

9.2.2 Blanks

As previously discussed in Section 2.2.2, method blanks, ERs, and FBs were analyzed to evaluate representativeness.

9.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

9.2.2.2 ERs and FBs

No contaminants were detected in the equipment and field blanks collected for this analysis.

9.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs attained were below the LOQs. Target compounds detected below the LOQs flagged (J) by the laboratory should be considered estimated. The comparability of the data is regarded as acceptable.

9.4 Completeness

The completeness level attained for TPH as extractables field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

9.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the QAPP.

10.0 POLYCHLORINATED DIOXINS AND DIBENZOFURANS

A total of 1 soil sample was analyzed for PCDDs/PCDFs by EPA SW-846 Method 8290. All PCDD/PCDF data were assessed to be valid since none of the 17 total results were rejected based on holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the DQOs.

10.1 Precision and Accuracy

10.1.1 Instrument Calibration

The %RSDs in the initial calibration and the %Ds in the routine calibration met the method acceptance criteria of 20 percent for unlabeled compounds and 30 percent for labeled compounds. The ion abundance ratios met the method acceptance criteria.

10.1.2 MS/MSD Samples

MS/MSDs were not performed for this analysis. Since the LCS %Rs met the acceptance criteria, the absence of MS/MSD samples was judged to have no impact on the data quality and no qualifications were made.

10.1.3 LCS Samples

No data were qualified based on LCS non-conformances. The percent recoveries were evaluated against the acceptance criteria.

10.1.4 Internal Standards

No data were qualified based on internal standard non-conformances. The percent recoveries were evaluated against the acceptance criteria.

10.1.5 FT Samples

Field triplicates were not collected or analyzed for this analysis.

10.1.6 Performance Evaluation Samples

PE samples were not performed for the sampling event.

10.1.7 Compound Quantitation and Target Identification

All compound quantitations were found to be acceptable.

Target identification confirmation was not performed on samples undergoing Standard validation.

10.2 Representativeness

10.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

10.2.2 Blanks

As previously discussed in Section 2.2.2, method blanks were analyzed to evaluate representativeness.

10.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

10.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs attained were below the LOQs. Target compounds detected below the LOQs flagged (J) by the laboratory should be considered estimated. The comparability of the data is regarded as acceptable.

10.4 Completeness

The completeness level attained for PCDD/PCDF field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

10.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the QAPP.

11.0 METALS

A total of 15 soil and 3 water samples were analyzed for metals by EPA SW-846 Methods 6020A/7470A/7471B. All metals data were assessed to be valid since none of the 234 total results were rejected based on holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the DQOs.

11.1 Precision and Accuracy

11.1.1 Instrument Calibration

Initial and continuing calibration verification results provide a means of evaluating accuracy within a particular SDG. Correlation coefficient (r) and percent recovery (%R) are the two major parameters used to measure the effectiveness of instrument calibration. The correlation coefficient indicates the linearity of the calibration curve. %R is used to verify the ongoing calibration acceptability of the analytical system. The most critical of the two calibration parameters, r, has the potential to affect data accuracy across an SDG when it is outside the acceptable QC limits. %R exceedances suggest more routine instrumental anomalies, which typically impact all sample results for the affected analytes.

The correlation coefficients in the initial calibrations and percent recoveries in the continuing calibration verifications were within the acceptance criteria of ≥ 0.995 and 90-110 percent, respectively.

11.1.2 MS/MSD Samples

As a result of non-compliant MS/MSD %Rs, 120 results were qualified as detected estimated (J) or non-detected estimated (UJ). The affected analytes are antimony, arsenic, beryllium, copper, mercury, selenium, silver, and thallium. The details regarding the qualification of results are provided in the data validation reports.

11.1.3 Duplicate (DUP) Samples

DUP analyses were not performed for this sampling event.

11.1.4 LCS Samples

No data were qualified based on LCS non-conformances. The percent recoveries were evaluated against the acceptance criteria.

11.1.5 Internal Standards

As a result of non-compliant internal standard %Rs, the beryllium, chromium, copper, and nickel results in sample EN009 were qualified as detected estimated (J). The details regarding the qualification of results are provided in the data validation reports.

11.1.6 ICP Serial Dilution

ICP serial dilution was not performed for this analysis.

11.1.7 ICP Interference Check Sample

No data were qualified based on ICP interference check non-conformances. The percent recoveries were evaluated against the acceptance criteria.

11.1.8 FT Samples

The field triplicate samples were evaluated for acceptable precision with %RSDs for the compounds. The associated data validation narratives provided details regarding criteria exceeded. Sample data were not qualified on the basis of field triplicate precision.

11.1.9 Performance Evaluation Samples

PE samples were not performed for the sampling event.

11.1.10 Sample Result Verification

All sample results were found to be acceptable.

11.2 Representativeness

11.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

11.2.2 Blanks

As previously discussed in Section 2.2.2, method blanks, ICB/CCBs, ERs, and FBs were analyzed to evaluate representativeness.

11.2.2.1Method and Calibration Blanks

As a result of method blank contamination, the chromium results in samples EN010, EN011, and EN018 were qualified as non-detected (U). The details regarding the qualification of results are provided in the data validation reports.

11.2.2.2ERs and FBs

No data were qualified due to contaminants detected in the equipment rinsates or field blanks.

11.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs attained were below the LOQs. Target compounds detected below the LOQs flagged (J) by the laboratory should be considered estimated. The comparability of the data is regarded as acceptable.

11.4 Completeness

The completeness level attained for metal field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

11.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the QAPP.

12.0 VARIANCES IN ANALYTICAL PERFORMANCE

The laboratory used standard analytical methods for all of the analyses throughout the project. No systematic variances in analytical performance were noted according to the laboratory SOW.

13.0 SUMMARY OF PARCCS CRITERIA

The validation reports present the PARCCS results for all SDGs. Each PARCCS criterion is discussed in detail in the following sections.

13.1 Precision and Accuracy

Precision and accuracy were evaluated using data quality indicators such as calibration, MS/MSD, LCS, and surrogates. The precision and accuracy of the data set were considered acceptable with the exceptions noted in Sections 3.1.1, 3.1.3, 4.1.2, 4.1.3, 4.1.8, 5.1.1, 5.1.7, 6.1.1, 6.1.7, 7.1.3, 8.1.2, 9.1.3, 11.1.2, and 11.1.5.

13.2 Representativeness

All samples for each method and matrix were evaluated for holding time compliance. All samples were associated with a method blank in each individual SDG. The representativeness of the project data is considered acceptable.

13.3 Comparability

Sampling frequency requirements were met. The laboratory used standard analytical methods for their analyses. The analytical results were reported in correct standard units. Holding times, sample preservation, and sample integrity were within QC criteria. The overall comparability is considered acceptable.

13.4 Completeness

Of the 2,248 total analytes reported, none of the sample results were rejected. The completeness for all SDGs is as follows:

Parameter	Total Analytes	No. of Rejects	% Completeness
VOCs	665	0	100
SVOCs	468	0	100
PAHs	306	0	100
Chlorinated Pesticides	288	0	100
PCBs	144	0	100
Herbicides	72	0	100
TPH as Gasoline	18	0	100
TPH as Extractables	36	0	100
PCDDs/PCDFs	17	0	100
Metals	234	0	100
Total	**2,248**	**0**	**100**

The completeness percentage based on rejected data met the 90 percent PQO goal. A less quantifiable loss of data occurred in the application of blank qualifications as noted in Sections 2.2.2.2 and 11.2.2.1.

13.5 Sensitivity

Sensitivity was achieved by the laboratory to support the DQOs. Calibration concentrations, DLs, and LOQs met the project requirements and low level contamination in the method blanks, equipment rinsates, field blanks, and trip blanks did not affect sensitivity.

Table I

Validation Sample Table

SDG	Client Sample ID	Lab Sample ID	Matrix	QC Type	Sample Date	Validation Level	VOCs (8260B)	SVOCs (8270C)	PAHs (8270C-SIM)	Pest. (8081A)	PCBs (8082A)	Herb. (8151A)	TPH-G (8015C)	TPH-E (8015C)	PCDD/PCDFs (8290)	Metals (6020A)	Hg (7470A)	Hg (7471B)
74218	EN001	AZ02099	Soil	FT1	20140902	Standard	X	X	X	X	X	X	X	X	X	X		X
74218	EN002	AZ02100	Soil	FT1	20140902	Standard	X	X	X	X	X	X	X	X		X		X
74218	EN003	AZ02101	Soil	FT1	20140902	Standard	X	X	X	X	X	X	X	X		X		X
74218	EN004	AZ02102	Soil	FT2	20140902	Standard	X	X	X	X	X	X	X	X		X		X
74218	EN005	AZ02103	Soil	FT2	20140902	Standard	X	X	X	X	X	X	X	X		X		X
74218	EN006	AZ02104	Soil	FT2	20140902	Standard	X	X	X	X	X	X	X	X		X		X
74218	EN007	AZ02105	Soil	FT3	20140902	Standard	X	X	X	X	X	X	X	X		X		X
74218	EN008	AZ02106	Soil	FT3	20140902	Standard	X	X	X	X	X	X	X	X		X		X
74218	EN009	AZ02107	Soil	FT3	20140902	Full	X	X	X	X	X	X	X	X		X		X
74218	EN010	AZ02108	Water	FB	20140902	Standard	X	X	X	X	X	X	X	X		X	X	
74218	EN011	AZ02109	Water	ER	20140902	Standard	X	X	X	X	X	X	X	X		X	X	
74218	EN012	AZ02110	Soil	N	20140903	Full	X	X	X	X	X	X	X	X		X		X
74218	EN013	AZ02111	Soil	N	20140903	Standard	X	X	X	X	X	X	X	X		X		X
74218	EN014	AZ02112	Soil	N	20140903	Standard	X	X	X	X	X	X	X	X		X		X
74218	EN015	AZ02113	Soil	N	20140903	Standard	X	X	X	X	X	X	X	X		X		X
74218	EN016	AZ02114	Soil	N	20140903	Standard	X	X	X	X	X	X	X	X		X		X
74218	EN017	AZ02115	Soil	N	20140903	Standard	X	X	X	X	X	X	X	X		X		X
74218	EN018	AZ02116	Water	ER	20140903	Standard	X	X	X	X	X	X	X	X		X	X	
74218	Trip Blank	AZ02235	Water	TB	20140905	Standard	X											

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Element Environmental LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701
ATTN: Mr. Roger Aoki

October 23, 2014

SUBJECT: CTO 0015, MCBH NOSC, Data Validation

Dear Mr. Aoki,

Enclosed is the final validation report for the fractions listed below. This SDG was received on October 6, 2014. Attachment 1 is a summary of the sample that was reviewed for the analysis.

LDC Project #32797:

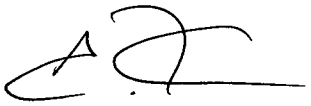
SDG #	Fraction
74218	Volatiles, Semivolatiles, Polynuclear Aromatic Hydrocarbons, Chlorinated Pesticides, Polychlorinated Biphenyls, Metals, Herbicides, Total Petroleum Hydrocarbons as Gasoline, Total Petroleum Hydrocarbons as Extractables, Dioxins/Dibenzofurans

The data validation was performed under Standard & Full Validation guidelines. The analyses were validated using the following documents, as applicable to each method:

- Final Work Plan Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kanehoe, Oahu, Hawaii, May 2013
- Project Procedures Manual, U.S. Navy Environmental Restoration Program NAVFAC Pacific, DON 2007
- U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.2, October 2010
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; Update IV, February 2007

Please feel free to contact us if you have any questions.

Sincerely,



Andrew Kong
Project Manager/Senior Chemist

Attachment 1

90/10 EDD & NIRIS

LDC #32797 (Element Environmental, LLC, Aiea, HI / CTO0015, MCBH NOSC)

Project #120033

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		SVOA (8270C)		PAHs (8270C-SIM)		Pest. (8081A)		PCBs (8082A)		Metals (SW846)		Herbs (8151A)		TPH-G (8015C)		TPH-E (8015C)		Dioxins (8290)															
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	74218	10/06/14	10/27/14	3	13	2	13	2	13	2	13	2	13	2	13	2	13	2	13	2	13	0	1														
A	74218	10/06/14	10/27/14	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0														
Total	A/AK			3	15	2	15	2	15	2	15	2	15	2	15	2	15	2	15	2	15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	155

Shaded cells indicate Full validation (all other cells are Standard validation). These sample counts do not include MS/MSD, and DUPs

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCBH CTO 0015

Collection Date: September 2 through September 5, 2014

LDC Report Date: October 20, 2014

Matrix: Soil/Water

Parameters: Volatiles

Validation Level: Standard & Full

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 74218

Sample Identification

EN001	EN002MSD
EN002	
EN003	
EN004	
EN005	
EN006	
EN007	
EN008	
EN009**	
EN010	
EN011	
EN012**	
EN013	
EN014	
EN015	
EN016	
EN017	
EN018	
Trip Blank	
EN002MS	

**Indicates sample underwent Full review

Introduction

This data review covers 17 soil samples and 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows the Final Work Plan Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii (May 2013), the Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific (DON 2007), and the U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.2 (October 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent a Full review. A Standard review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Standard criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

Qualification Code Reference

H	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.
C	Calibration %RSD, r, r^2 or %D were noncompliant
R	Calibration RRF was <0.05.
B	Presumed contamination from preparation (method blank)
L	Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits
Q	MS/MSD recovery was poor
E	MS/MSD or Duplicate RPD was high.
I	Internal standard performance was unsatisfactory
M	Instrument Performance Check (BFB or DFTPP) was noncompliant
T	Presumed contamination from trip blank.
F	Presumed contamination from FB or ER.
D	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor
*#	Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all volatile target compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for all compounds.

The percent difference (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample Trip Blank was identified as a trip blank. No volatile contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
Trip Blank	9/5/14	Chloromethane	0.53 ug/L	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009** EN010 EN011 EN012** EN013 EN014 EN015 EN016 EN017 EN018

Samples EN011 and EN018 were identified as equipment rinsates. No volatile contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EN011	9/2/14	Acetone Chloromethane Toluene	1.8 ug/L 0.45 ug/L 0.32 ug/L	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009**
EN018	9/3/14	Acetone Toluene	2.6 ug/L 0.19 ug/L	EN012** EN013 EN014 EN015 EN016 EN017

Sample EN010 was identified as a field blank. No volatile contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EN010	9/2/14	1,2-Dichloroethane Acetone Toluene	0.24 ug/L 1.7 ug/L 0.28 ug/L	All soil samples in SDG 74218

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated field blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
EN011	Chloromethane	0.45 ug/L	0.45U ug/L

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XII. Compound Quantitation

All compound quantitations were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Triplicates

Samples EN001, EN002, and EN003, samples EN004, EN005, and EN006, and samples EN007, EN008, and EN009** were identified as field triplicates. No volatiles were detected in any of the samples.

MCBH CTO 0015
Volatiles - Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

MCBH CTO 0015
Volatiles - Laboratory Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

MCBH CTO 0015
Volatiles - Field Blank Data Qualification Summary - SDG 74218

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
74218	EN011	Chloromethane	0.45U ug/L	A	T

LDC #: 32797A1
SDG #: 74218
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Standard/Full

Date: 10/14/14
Page: 1 of 1
Reviewer: EJ
2nd Reviewer: A

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/2 - 9/5/14
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 15, 1
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	Not reviewed for Standard validation.
XII.	Compound quantitation/RL/LOQ/LODs	A	Not reviewed for Standard validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for Standard validation.
XIV.	System performance	A	Not reviewed for Standard validation.
XV.	Overall assessment of data	A	
XVI.	Field duplicates	ND	T = 1,2,3* 4,5,6* 7,8,9*
XVII.	Field blanks	SW	FB = 10 ER = 11, 18 TB = 19

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; * ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Full validation

SOIL + WATER

1 1	EN001	11 3	EN011 ER W	21 1	EN002MSD	31 1	140911AL
2 1	EN002	12 1	EN012 **	22		32 2	140911BL
3 1	EN003	13 1	EN013	23		33 3	140910AL
4 1	EN004	14 1	EN014	24		34	
5 1	EN005	15 1	EN015	25		35	
6 1	EN006	16 2	EN016	26		36	
7 1	EN007	17 W	EN017	27		37	
8 1	EN008	18 3	EN018 ER W	28		38	
9 1	EN009**	19 3	Trip Blank TB W	29		39	
10 3	EN010** FD W	20 1	EN002MS	30		40	

LDC #: 32797A1

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% (15%) and relative response factors (RRF) ≥ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?	✓			
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 32797A1

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/RLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG. Triplicates	✓			
Target compounds were detected in the field duplicates.		✓		
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.	✓			

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 32797A1

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target compounds detected in the field blanks?

Blank units: ug/L **Associated sample units:** mg/kg

Sampling date: 9/2/014

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: FB Associated Samples: all soils

Compound	Blank ID	Sample Identification								
	10									
L	0.24									
F	1.7									
CC	0.28									

Blank units: ug/L **Associated sample units:** mg/kg

Sampling date: 9/2/14

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: ER Associated Samples: 1-9 (ND)

Compound	Blank ID	Sample Identification								
	11									
F	1.8									
A	0.45									
CC	0.32									

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as Methylene chloride, Acetone, 2-Butanone and Carbon disulfide that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

LDC #: 32797A1

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target compounds detected in the field blanks?

Blank units: ug/L **Associated sample units:** mg/kg

Sampling date: 9/3/14

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: ER Associated Samples: 12 - 17 (ND)

Compound	Blank ID	Sample Identification								
	18									
F	2.6									
CC	0.19									

Blank units: ug/L **Associated sample units:** mg/kg & ug/L

Sampling date: 9/5/14

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: TB Associated Samples: 1-7 / 8

Compound	Blank ID	Sample Identification								
	19		11							
A	0.53		0.45/U							

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as Methylene chloride, Acetone, 2-Butanone and Carbon disulfide that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

LDC #: 32797A1

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL Loki	9/9/14	C (1st internal standard)	0.5134	0.5134	0.5434	0.5434	8.0	8.0
			AA (2nd internal standard)	0.6902	0.6902	0.7549	0.7549	14	14
			BB (3rd internal standard)	1.032	1.032	1.088	1.088	13	13
			(4th internal standard)						
2			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 091105	9/11/14	C (1st internal standard)	0.5434	0.5147	0.5147	5.3	5.3
			AA (2nd internal standard)	0.7549	0.7043	0.7043	6.7	6.7
			BB (3rd internal standard)	1.088	1.041	1.041	4.4	4.4
			(4th internal standard)					
2			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A1

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: L

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #9

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4	24.764	26.25996	106	106	0
Toluene-d8	25.636	25.15077	98.1	98.1	↓
Bromofluorobenzene	23.806	24.48892	103	103	↓

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 32797A1

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD = I MSC - MSC I * 2/(MSC + MSDC)

MSC = Matrix spike concentration; MSDC = Matrix spike duplicate concentration

MS/MSD sample: 20 & 21

Compound	Spike Added (mg/kg)		Sample Concentration (mg/kg)	Spiked Sample Concentration (mg/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	0.50	0.50	ND	0.455	0.446	91.0	91.0	89.2	89.2	2.0	2.0
Trichloroethene	↓	↓	↓	0.528	0.547	106	106	109	109	3.5	3.5
Benzene	↓	↓	↓	0.457	0.454	91.4	91.4	90.8	90.8	0.66	0.66
Toluene	↓	↓	↓	0.486	0.491	97.2	97.2	98.2	98.2	1.0	1.0
Chlorobenzene	↓	↓	↓	0.473	0.469	94.6	94.6	93.8	93.8	0.85	0.85

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A1

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration; SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS ID: 140911AL-LCS

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene	0.5	NA	0.453	NA	90.6	90.6				
Trichloroethene	0.5	↓	0.478	↓	95.6	95.6				
Benzene	0.5	↓	0.453	↓	90.6	90.6				
Toluene	0.5	↓	0.481	↓	96.2	96.2				
Chlorobenzene	0.5	↓	0.477	↓	95.4	95.4	NA			

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A1

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. LCS (140911AL), V:

Conc. = $\frac{(365205)(25)(50)}{(479872)(2.102)(100)}$

=

= 0.453 mg/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCBH CTO 0015

Collection Date: September 2 through September 3, 2014

LDC Report Date: October 20, 2014

Matrix: Soil/Water

Parameters: Semivolatiles

Validation Level: Standard & Full

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 74218

Sample Identification

EN001
EN002
EN003
EN004
EN005
EN006
EN007
EN008
EN009**
EN010
EN011
EN012**
EN013
EN014
EN015
EN016
EN017
EN018
EN002MS
EN002MSD

**Indicates sample underwent Full review

Introduction

This data review covers 17 soil samples and 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Semivolatiles.

This review follows the Final Work Plan Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii (May 2013), the Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific (DON 2007), and the U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.2 (October 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent a Full review. A Standard review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Standard criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank)

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits

Q MS/MSD recovery was poor

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory

M Instrument Performance Check (BFB or DFTPP) was noncompliant

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor

*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	A or P
9/10/14	Pentachlorophenol	24	All water samples in SDG 74218	J (all detects) UJ (all non-detects)	A
9/20/14	Pentachlorophenol	29	All soil samples in SDG 74218	J (all detects) UJ (all non-detects)	A

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the validation criteria of less than or equal to 20.0% for all compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks.

Samples EN011 and EN018 were identified as equipment rinsates. No semivolatile contaminants were found.

Sample EN010 was identified as a field blank. No semivolatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. Surrogate recoveries (%R) were not within QC limits for samples EN016 and EN017. No data were qualified since the method allows for one base and one acid surrogate %R to be outside the QC limits if the surrogate %R is greater than 10%.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
EN002MS/MSD (EN002)	2,4-Dimethylphenol 2,4-Dinitrophenol 3,3'-Dichlorobenzidine	25.9 (30-105) - 9.6 (10-130)	24.4 (30-105) 12.5 (15-130) 7.2 (10-130)	- - -	J (all detects) UJ (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
140915A-LCS	4-Chloroaniline	119 (10-95)	All soil samples in SDG 74218	J (all detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XII. Compound Quantitation

All compound quantitations were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Triplicates

Samples EN001, EN002, and EN003, samples EN004, EN005, and EN006, and samples EN007, EN008, and EN009** were identified as field triplicates. No semivolatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN001	EN002	EN003		
Bis(2-ethylhexyl)phthalate	0.54	0.29	0.56	-	34 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN004	EN005	EN006		
Bis(2-ethylhexyl)phthalate	1.0	0.45	0.40	-	54 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN007	EN008	EN009**		
Bis(2-ethylhexyl)phthalate	1.1	0.38	0.52	-	57 (≤35)

MCBH CTO 0015
Semivolatiles - Data Qualification Summary - SDG 74218

SDG	Sample	Compound	Flag	A or P	Reason (Code)
74218	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009** EN010 EN011 EN012** EN013 EN014 EN015 EN016 EN017 EN018	Pentachlorophenol	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
74218	EN002	2,4-Dimethylphenol 2,4-Dinitrophenol 3,3'-Dichlorobenzidine	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
74218	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009** EN012** EN013 EN014 EN015 EN016 EN017	4-Chloroaniline	J (all detects)	P	Laboratory control samples (%R) (L)

MCBH CTO 0015
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

MCBH CTO 0015
Semivolatiles - Field Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

LDC #: 32797A2a
SDG #: 74218
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Standard/Full

Date: 10/14/14
Page: 1 of 1
Reviewer: EJ
2nd Reviewer: A

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/2 - 9/3/14
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	% RSD ≤ 15
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	Not reviewed for Standard validation.
XII.	Compound quantitation/RL/LOQ/LODs	A	Not reviewed for Standard validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for Standard validation.
XIV.	System performance	A	Not reviewed for Standard validation.
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	T = 1,2,3 4,5,6 7,8,9
XVII.	Field blanks	ND	FB = 10 ER = 11, 18

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: ** Indicates sample underwent Full validation

water + soil

1	EN001	11	EN011 ER W	21	1409084	31	
2	EN002	12	EN012 **	22	140915A	32	
3	EN003	13	EN013	23		33	
4	EN004	14	EN014	24		34	
5	EN005	15	EN015	25		35	
6	EN006	16	EN016	26		36	
7	EN007	17	EN017	27		37	
8	EN008	18	EN018 ER W	28		38	
9	EN009**	19	EN002MS	29		39	
10	EN010 FB W	20	EN002MSD	30		40	

LDC #: 32797A2a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	F7 ✓	~~✓~~		
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ ~~30%~~/15% and relative response factors (RRF) ≥ 0.05?		✓		
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	~~✓~~	✓		
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	T. 4-Chloroaniline	MM. 4-Chlorophenyl-phenyl ether	FFF. Di-n-octylphthalate	YYY. 2,3,5-Trimethylnaphthalene
B. Bis (2-chloroethyl) ether	U. Hexachlorobutadiene	NN. Fluorene	GGG. Benzo(b)fluoranthene	ZZZ. Perylene
C. 2-Chlorophenol	V. 4-Chloro-3-methylphenol	OO. 4-Nitroaniline	HHH. Benzo(k)fluoranthene	AAAA. Dibenzothiophene
D. 1,3-Dichlorobenzene	W. 2-Methylnaphthalene	PP. 4,6-Dinitro-2-methylphenol	III. Benzo(a)pyrene	BBBB. Benzo(a)fluoranthene
E. 1,4-Dichlorobenzene	X. Hexachlorocyclopentadiene	QQ. N-Nitrosodiphenylamine	JJJ. Indeno(1,2,3-cd)pyrene	CCCC. Benzo(b)fluorene
F. 1,2-Dichlorobenzene	Y. 2,4,6-Trichlorophenol	RR. 4-Bromophenyl-phenylether	KKK. Dibenz(a,h)anthracene	DDDD. cis/trans-Decalin
G. 2-Methylphenol	Z. 2,4,5-Trichlorophenol	SS. Hexachlorobenzene	LLL. Benzo(g,h,i)perylene	EEEE. Biphenyl
H. 2,2'-Oxybis(1-chloropropane)	AA. 2-Chloronaphthalene	TT. Pentachlorophenol	MMM. Bis(2-Chloroisopropyl)ether	FFFF. Retene
I. 4-Methylphenol	BB. 2-Nitroaniline	UU. Phenanthrene	NNN. Aniline	GGGG. C30-Hopane
J. N-Nitroso-di-n-propylamine	CC. Dimethylphthalate	VV. Anthracene	OOO. N-Nitrosodimethylamine	HHHH. 1-Methylphenanthrene
K. Hexachloroethane	DD. Acenaphthylene	WW. Carbazole	PPP. Benzoic Acid	IIII. 1,4-Dioxane
L. Nitrobenzene	EE. 2,6-Dinitrotoluene	XX. Di-n-butylphthalate	QQQ. Benzyl alcohol	JJJJ. Acetophenone
M. Isophorone	FF. 3-Nitroaniline	YY. Fluoranthene	RRR. Pyridine	KKKK. Atrazine
N. 2-Nitrophenol	GG. Acenaphthene	ZZ. Pyrene	SSS. Benzidine	LLLL. Benzaldehyde
O. 2,4-Dimethylphenol	HH. 2,4-Dinitrophenol	AAA. Butylbenzylphthalate	TTT. 1-Methylnaphthalene	MMMM. Caprolactam
P. Bis(2-chloroethoxy)methane	II. 4-Nitrophenol	BBB. 3,3'-Dichlorobenzidine	UUU.Benzo(b)thiophene	NNNN.
Q. 2,4-Dichlorophenol	JJ. Dibenzofuran	CCC. Benzo(a)anthracene	VVV.Benzonaphthothiophene	OOOO.
R. 1,2,4-Trichlorobenzene	KK. 2,4-Dinitrotoluene	DDD. Chrysene	WWW.Benzo(e)pyrene	PPPP.
S. Naphthalene	LL. Diethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	XXX. 2,6-Dimethylnaphthalene	QQQQ.

LDC #: 32797A2a

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Did the laboratory conduct an acceptable 5 point calibration prior to sample analysis?
Y N N/A Were percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCC's and SPCC's?
Y N N/A Was a curve fit used for evaluation? If yes, what was the acceptance criteria used for evaluation?_____
Y N N/A Did the initial calibration meet the acceptance criteria?
Y N N/A Were all %RSDs and RRFs within the validation criteria of ≤15/30 %RSD and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ~~≤15/30.0%~~) FT	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	9/10/14	ICAL- YODA	TT	24		all water	J/UJ/A (C)
	9/20/14	ICAL- YODA	TT	29		all soils	↓

LDC #: 32797A2a

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)
Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were percent recoveries (%R) for surrogates within QC limits?
Y N (N/A) If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N (N/A) If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		16	PHL	101 (40-100)	no qual
				( )	
				( )	
		17	PHL	105 (40-100)	↓
				( )	
				( )	
				( )	
				( )	
				( )	
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				( )	
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				( )	

(NBZ) = Nitrobenzene-d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl-d14
(PHL) = Phenol-d5
(2FP)= 2-Fluorophenol
(TBP) = 2,4,6-Tribromophenol
(2CP) = 2-Chlorophenol-d4
(DCB) = 1,2-Dichlorobenzene-d4

LDC #: 32797A2a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		19+20	O	25.9 (30-105)	24.4 (30-105)	( )	2	J/UJ/A (Q)
			HH	( )	12.5 (15-130)	( )	↓	↓
			BBB	9.6 (10-130)	7.2 (10-130)	( )	↓	↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )	

LDC #: 32797A2a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	140915A-LCS	T	119 (10-95)	( )	( )	all soils	J/P dil (L)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC#:32797A2a

VALIDATION FINDINGS WORKSHEET
Field Duplicate/Triplicates

Reviewer: EO
2nd Reviewer: A

METHOD: GCMS SVOA(EPA SW846 Method 8270C)

Y N NA Were lab triplicates sets identified in this SDG?
Y N NA Were target analytes detected in the lab triplicate sets?

Compound	Concentration (mg/kg)			RSD (≤35%)
	1	2	3	
EEE	0.57	0.29	0.56	34
				??

Compound	Concentration (mg/kg)			RSD (≤35%)
	4	5	6	
EEE	1.0	0.45	0.40	54
				??

Compound	Concentration (mg/kg)			RSD (≤35%)
	7	8	9	
EEE	1.1	0.38	0.52	57
				??

LDC #: 32797A2q

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)
The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Internal Standard)	Reported RRF (50 std)	Recalculated RRF (50 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL YODA	9/20/14	A (1st IS)	1.299	1.299	1.369	1.369	15	15
			R (2nd IS)	0.2805	0.2805	0.2797	0.2797	3.7	3.7
			~~[illegible] Z~~ (3rd IS)	~~0.0670~~	0.3007	0.3148	0.3148	7.9	7.9
			TT (4th IS)	0.3007 0.0732	0.0732	0.0645	0.0645	29	29
			EEE (5th IS)	0.8867	0.8867	0.9029	0.9029	15	15
			(6th IS)						
2			(1st IS)						
			(2nd IS)						
			(3rd IS)						
			(4th IS)						
			(5th IS)						
			(6th IS)						
3			(1st IS)						
			(2nd IS)						
			(3rd IS)						
			(4th IS)						
			(5th IS)						
			(6th IS)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A2a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)
The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 09214002	9/21/14	A (1st IS)	1.369	1.414	1.414	3.3	3.3
			B (2nd IS)	0.2797	0.2733	0.2733	2.3	2.3
			Z (3rd IS)	0.3148	0.3567	0.3567	13	13
			TT (4th IS)	0.0645	0.0722	0.0722	12	12
			EEE (5th IS)	0.9029	0.8576	0.8576	5.0	5.0
			(6th IS)					
2			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					
3			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A29

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 9

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	3317.850	2470.729	74.5	74.5	0
2-Fluorobiphenyl	3317.850	2430.7769	73.3	73.3	
Terphenyl-d14	3317.850	2487.832	75.0	75.0	
Phenol-d5	6635.70	5980.294	90.1	90.1	
2-Fluorophenol	6635.70 ~~2704.082~~ F1	4697.521	70.8	70.8	
2,4,6-Tribromophenol	6635.70	3861.707	58.2	58.2	
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 32797A2q

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 19 + 20

Compound	Spike Added (mg/kg)		Sample Concentration (mg/kg)	Spiked Sample Concentration (mg/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalc
Phenol	1.65	1.65	ND	1.46	1.37	88.5	88.5	83.0	83.0	6.4	6.4
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene											
Pentachlorophenol	↓	↓	ND	0.541	0.465	32.8	32.8	28.2	28.2	15.1	15.1
Pyrene											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A2a

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 140915A - LCS

Compound	Spike Added (mg/kg)		Spike Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol	1.66	NA	1.58	NA	95.2	95.2				
N-Nitroso-di-n-propylamine	NA									
4-Chloro-3-methylphenol	↓									
Acenaphthene										
Pentachlorophenol	1.66		0.870	NA	52.4	52.4				
Pyrene	NA	↓					NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A2a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #9, BEE:

Conc. = (22570)(40)(1)( )( )( )
(623837)(1.006)( )( )( )( )
0.9029 30.14

=

0.52 mg/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCBH CTO 0015

Collection Date: September 2 through September 3, 2014

LDC Report Date: October 20, 2014

Matrix: Soil/Water

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Standard & Full

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 74218

Sample Identification

EN001
EN002
EN003
EN004
EN005
EN006
EN007
EN008
EN009**
EN010
EN011
EN012**
EN013
EN014
EN015
EN016
EN017
EN018
EN002MS
EN002MSD

**Indicates sample underwent Full review

Introduction

This data review covers 17 soil samples and 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Polynuclear Aromatic Hydrocarbons.

This review follows the Final Work Plan Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii (May 2013), the Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific (DON 2007), and the U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.2 (October 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent a Full review. A Standard review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Standard criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank)

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits

Q MS/MSD recovery was poor

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory

M Instrument Performance Check (BFB or DFTPP) was noncompliant

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor

*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the validation criteria of less than or equal to 20.0% for all compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polynuclear aromatic hydrocarbon contaminants were found in the method blanks.

Samples EN011 and EN018 were identified as equipment rinsates. No polynuclear aromatic hydrocarbon contaminants were found.

Sample EN010 was identified as a field blank. No polynuclear aromatic hydrocarbon contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
EN006	2-Fluorobiphenyl Terphenyl-d14	109 (45-105) 164 (30-125)	All TCL compounds	J (all detects)	P

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
EN002MS/MSD (EN002)	1-Methylnaphthalene	137 (45-105)	110 (45-105)	-	J (all detects)	A
	2-Methylnaphthalene	-	115 (45-105)	-	J (all detects)	
	Acenaphthene	114 (45-110)	114 (45-110)	-	J (all detects)	
	Acenaphthylene	113 (45-105)	109 (45-105)	-	J (all detects)	
	Anthracene	129 (55-105)	113 (55-105)	-	J (all detects)	
	Benzo(a)anthracene	125 (55-110)	117 (50-110)	-	J (all detects)	
	Fluorene	116 (50-110)	-	-	J (all detects)	
	Phenanthrene	125 (50-110)	114 (50-110)	-	J (all detects)	
	Benzo(a)pyrene	118 (50-110)	-	-	J (all detects)	
EN002MS/MSD (EN002)	Benzo(k)fluoranthene	-	-	31.1 (≤30)	J (all detects)	A
	Fluoranthene	131 (55-115)	-	31.7 (≤30)	UJ (all non-detects)	
	Indeno(1,2,3-cd)pyrene	-	147 (40-120)	32.7 (≤30)		

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XII. Compound Quantitation

All compound quantitations were within validation criteria with the following exceptions:

Sample	Compound	Finding	Flag	A or P
EN001 EN002 EN003 EN004 EN005 EN006 EN008 EN009** EN012** EN013 EN015 EN016	Benzo(b)fluoranthene Benzo(k)fluoranthene	Due to lack of resolution between these compounds in the samples, the laboratory performed the quantitation using the total peak area.	J (all detects) J (all detects)	A

The reported results for the compounds listed above are biased high. The actual values of these compounds are lower than the values reported by the laboratory.

Raw data were not evaluated for the samples reviewed by Standard criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Triplicates

Samples EN001, EN002, and EN003, samples EN004, EN005, and EN006, and samples EN007, EN008, and EN009** were identified as field triplicates. No polynuclear aromatic hydrocarbons were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN001	EN002	EN003		
2-Methylnaphthalene	0.0017U	0.0013	0.0017U	-	Not calculable
Anthracene	0.0017	0.0013	0.0016	-	14 (≤35)
Benzo(a)anthracene	0.013	0.0099	0.0060	-	36 (≤35)
Benzo(a)pyrene	0.011	0.0093	0.0094	-	10 (≤35)
Benzo(b)fluoranthene	0.021	0.018	0.015	-	17 (≤35)
Benzo(g,h,i)perylene	0.013	0.026	0.020	-	33 (≤35)
Benzo(k)fluoranthene	0.021	0.018	0.016	-	14 (≤35)
Chrysene	0.013	0.010	0.0087	-	21 (≤35)
Dibenz(a,h)anthracene	0.0040	0.010	0.0017U	81 (≤100)	-
Fluoranthene	0.021	0.015	0.010	-	36 (≤35)
Indeno(1,2,3-cd)pyrene	0.011	0.012	0.0060	-	33 (≤35)
Phenanthrene	0.011	0.0043	0.0043	-	59 (≤35)
Pyrene	0.025	0.014	0.010	-	48 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN004	EN005	EN006		
1-Methylnaphthalene	0.0065	0.0017U	0.0017U	-	Not calculable
2-Methylnaphthalene	0.0047	0.0017U	0.0017U	-	Not calculable
Acenaphthylene	0.00099	0.0017U	0.0012	19 (≤100)	-

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN004	EN005	EN006		
Anthracene	0.0014	0.0015	0.0040	-	64 (≤35)
Benzo(a)anthracene	0.0052	0.0041	0.034	-	117 (≤35)
Benzo(a)pyrene	0.0068	0.0044	0.032	-	106 (≤35)
Benzo(b)fluoranthene	0.017	0.010	0.069	-	101 (≤35)
Benzo(g,h,i)perylene	0.015	0.011	0.021	-	32 (≤35)
Dibenz(a,h)anthracene	0.018	0.010	0.069	-	99 (≤35)
Chrysene	0.0070	0.0039	0.028	-	101 (≤35)
Fluoranthene	0.010	0.0056	0.040	-	101 (≤35)
Indeno(1,2,3-cd)pyrene	0.0017U	0.0017U	0.012	-	Not calculable
Phenanthrene	0.0062	0.0025	0.0082	-	51 (≤35)
Pyrene	0.0090	0.0056	0.045	-	110 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN007	EN008	EN009**		
Anthracene	0.0017U	0.0013	0.0017U	-	Not calculable
Benzo(a)anthracene	0.0017U	0.024	0.0047	94 (≤100)	-
Benzo(a)pyrene	0.0017U	0.023	0.0039	79 (≤100)	-
Benzo(b)fluoranthene	0.0017U	0.048	0.0080	130 (≤100)	-
Benzo(g,h,i)perylene	0.014	0.012	0.0078	-	28 (≤35)
Dibenz(a,h)anthracene	0.0017U	0.048	0.0080	130 (≤100)	-
Chrysene	0.0017U	0.020	0.0038	76 (≤100)	-
Fluoranthene	0.0017U	0.017	0.0079	129 (≤100)	-
Indeno(1,2,3-cd)pyrene	0.0071	0.0075	0.0047	-	24 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN007	EN008	EN009**		
Phenanthrene	0.0017U	0.0033	0.0021	21 (≤100)	-
Pyrene	0.0017U	0.017	0.0079	129 (≤100)	-

MCBH CTO 0015
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 74218

SDG	Sample	Compound	Flag	A or P	Reason (Code)
74218	EN006	All TCL compounds	J (all detects)	P	Surrogate spikes (%R) (S)
74218	EN002	1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Fluorene Phenanthrene Benzo(a)pyrene	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
74218	EN002	Benzo(k)fluoranthene	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (RPD) (E)
74218	EN002	Fluoranthene Indeno(1,2,3-cd)pyrene	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (RPD) (Q,E)
74218	EN001 EN002 EN003 EN004 EN005 EN006 EN008 EN009** EN012** EN013 EN015 EN016	Benzo(b)fluoranthene Benzo(k)fluoranthene	J (all detects) J (all detects)	A	Compound quantitation (peak resolution) (*XII)

MCBH CTO 0015
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

MCBH CTO 0015
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

LDC #: 32797A2b

VALIDATION COMPLETENESS WORKSHEET

Standard/Full

Date: 10/14/14

SDG #: 74218

Page: 1 of 1

Laboratory: APPL, Inc.

Reviewer: FJ

2nd Reviewer: A

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons(EPA SW 846 Method 8270C-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/2 - 9/3/14
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A SW	% RSD ≤ 15
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	Not reviewed for Standard validation.
XII.	Compound quantitation/RL/LOQ/LODs	SW	Not reviewed for Standard validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for Standard validation.
XIV.	System performance	A	Not reviewed for Standard validation.
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	Triplicates = 1, 2, 3 4, 5, 6 7, 8, 9
XVII.	Field blanks	ND	FB= 10 ER = 11, 18

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Full validation

Soil + Water

1 -	EN001	11	EN011 ER W	21	140908A	31	
2 -	EN002	12 -	EN012 **	22	140910A	32	
3 -	EN003	13 -	EN013	23		33	
4 -	EN004	14	EN014	24		34	
5 -	EN005	15 -	EN015	25		35	
6 -	EN006	16 -	EN016	26		36	
7	EN007	17	EN017	27		37	
8 -	EN008	18	EN018 ER W	28		38	
9 -	EN009**	19	EN002MS	29		39	
10	EN010** FB W	20	EN002MSD	30		40	

LDC #: 32797 A2b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30%/15% and relative response factors (RRF) ≥ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	.	✓		
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?		✓		
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 32797A2b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG. Triplicates	✓			
Target compounds were detected in the field duplicates.	✓			
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	T. 4-Chloroaniline	MM. 4-Chlorophenyl-phenyl ether	FFF. Di-n-octylphthalate	YYY. 2,3,5-Trimethylnaphthalene
B. Bis (2-chloroethyl) ether	U. Hexachlorobutadiene	NN. Fluorene	GGG. Benzo(b)fluoranthene	ZZZ. Perylene
C. 2-Chlorophenol	V. 4-Chloro-3-methylphenol	OO. 4-Nitroaniline	HHH. Benzo(k)fluoranthene	AAAA. Dibenzothiophene
D. 1,3-Dichlorobenzene	W. 2-Methylnaphthalene	PP. 4,6-Dinitro-2-methylphenol	III. Benzo(a)pyrene	BBBB. Benzo(a)fluoranthene
E. 1,4-Dichlorobenzene	X. Hexachlorocyclopentadiene	QQ. N-Nitrosodiphenylamine	JJJ. Indeno(1,2,3-cd)pyrene	CCCC. Benzo(b)fluorene
F. 1,2-Dichlorobenzene	Y. 2,4,6-Trichlorophenol	RR. 4-Bromophenyl-phenylether	KKK. Dibenz(a,h)anthracene	DDDD. cis/trans-Decalin
G. 2-Methylphenol	Z. 2,4,5-Trichlorophenol	SS. Hexachlorobenzene	LLL. Benzo(g,h,i)perylene	EEEE. Biphenyl
H. 2,2'-Oxybis(1-chloropropane)	AA. 2-Chloronaphthalene	TT. Pentachlorophenol	MMM. Bis(2-Chloroisopropyl)ether	FFFF. Retene
I. 4-Methylphenol	BB. 2-Nitroaniline	UU. Phenanthrene	NNN. Aniline	GGGG. C30-Hopane
J. N-Nitroso-di-n-propylamine	CC. Dimethylphthalate	VV. Anthracene	OOO. N-Nitrosodimethylamine	HHHH. 1-Methylphenanthrene
K. Hexachloroethane	DD. Acenaphthylene	WW. Carbazole	PPP. Benzoic Acid	IIII. 1,4-Dioxane
L. Nitrobenzene	EE. 2,6-Dinitrotoluene	XX. Di-n-butylphthalate	QQQ. Benzyl alcohol	JJJJ. Acetophenone
M. Isophorone	FF. 3-Nitroaniline	YY. Fluoranthene	RRR. Pyridine	KKKK. Atrazine
N. 2-Nitrophenol	GG. Acenaphthene	ZZ. Pyrene	SSS. Benzidine	LLLL. Benzaldehyde
O. 2,4-Dimethylphenol	HH. 2,4-Dinitrophenol	AAA. Butylbenzylphthalate	TTT. 1-Methylnaphthalene	MMMM. Caprolactam
P. Bis(2-chloroethoxy)methane	II. 4-Nitrophenol	BBB. 3,3'-Dichlorobenzidine	UUU.Benzo(b)thiophene	NNNN.
Q. 2,4-Dichlorophenol	JJ. Dibenzofuran	CCC. Benzo(a)anthracene	VVV.Benzonaphthothiophene	OOOO.
R. 1,2,4-Trichlorobenzene	KK. 2,4-Dinitrotoluene	DDD. Chrysene	WWW.Benzo(e)pyrene	PPPP.
S. Naphthalene	LL. Diethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	XXX. 2,6-Dimethylnaphthalene	QQQQ.

LDC #: 32797A2b

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were percent recoveries (%R) for surrogates within QC limits?
Y (N) N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N (N/A) If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		6	FBP	109 (45-105)	J/P det (3)
			TPH	164 (30-125)	↓
				( )	
		1	TPH	147 (30-125)	no qual
				( )	↓
		2	↓	146 ( )	↓
				( )	
		3		163 ( )	
				( )	
		5		144 ( )	
				( )	
		12		148 ( )	
				( )	
		13		127 ( )	
				( )	
		15		159 ( )	
				( )	
		16	↓	127 ( )	↓
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

(NBZ) = Nitrobenzene-d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl-d14
(PHL) = Phenol-d5
(2FP)= 2-Fluorophenol
(TBP) = 2,4,6-Tribromophenol
(2CP) = 2-Chlorophenol-d4
(DCB) = 1,2-Dichlorobenzene-d4

LDC #: 32797A2b

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		19+20	TTT	137 (45-105)	110 (45-105)	( )	2	J/A dit (Q)
			W	( )	115 (45-105)	( )		
			GG	114 (45-110)	114 (45-110)	( )		
			DD	113 (45-105)	109 (45-105)	( )		
			VV	129 (55-105)	113 (55-105)	( )		
			CCC	126 (50-110)	117 (50-110)	( )		
			III	118 (50-110)	( )	( )		
			HHH	( )	F7 ( )	31.1 (30)		J/UJ/A (Q,E)
			YY	131 (55-115)	~~131 (55-115)~~	31.7 (↓)		
			NN	116 (50-110)	~~116 (50-110)~~	( )		J/A dit (Q)
			JJJ	( )	147 (40-120)	32.7 (↓)		J/UJ/A (Q,E)
			UU	125 (50-110)	114 (50-110)	( )		J/A dit (Q)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 32797A26

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported RLs

Reviewer: FT
2nd Reviewer: [signature]

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Compound	Finding	Associated Samples	Qualifications
		GGG, HHH	Due to lack of resolution between these compounds in the sample, the laboratory performed the quantitation using the total peak area	1-6, 8, 9 12, 13, 15, 16	J/A det *X

Comments: See sample calculation verification worksheet for recalculations

LDC#:32797A2b

VALIDATION FINDINGS WORKSHEET
Field Duplicate/Triplicates

Reviewer: B
2nd Reviewer: E

METHOD: GC MS PAHs (EPA SW846 Method 8270D-SIM)

Y N NA Were lab triplicates sets identified in this SDG?
Y N NA Were target analytes detected in the field triplicate sets?

Compound	Concentration (mg/kg)			RSD (≤35%)	RPD (≤100%)
	1	2	3		
W	0.0017U	0.0013	0.0017U	NA	
VV	0.0017	0.0013	0.0016	14	
CCC	0.013	0.0099	0.0060	36	
III	0.011	0.0093	0.0094	10	
GGG	0.021	0.018	0.015	17	
LLL	0.013	0.026	0.020	33	
~~KKK~~ HHH	0.021	0.018	0.016	14	
DDD	0.013	0.010	0.0087	21	
KKK	0.0040	0.010	0.0017U		81
YY	0.021	0.015	0.010	36	
JJJ	0.011	0.012	0.0060	33	
UU	0.011	0.0043	0.0043	59	
ZZ	0.025	0.014	0.010	48	

LDC#:32797A2b

VALIDATION FINDINGS WORKSHEET
Field Duplicate/Triplicates

Reviewer: B
2nd Reviewer: E

METHOD: GC MS PAHs (EPA SW846 Method 8270D-SIM)

Y N NA Were lab triplicates sets identified in this SDG?
Y N NA Were target analytes detected in the field triplicate sets?

Compound	Concentration (mg/kg)			RSD (≤35%)	RPD (≤100%)
	4	5	6		
TTT	0.0065	0.0017U	0.0017U	~~NA~~ 2C	
W	0.0047	0.0017U	0.0017U	~~NA~~ 2C	
DD	0.00099	0.0017U	0.0012		19
VV	0.0014	0.0015	0.0040	64	
CCC	0.0052	0.0041	0.034	117	
III	0.0068	0.0044	0.032	106	
GGG	0.017	0.010	0.069	101	
LLL	0.015	0.011	0.021	32	
KKK	0.018	0.010	0.069	99	
DDD	0.0070	0.0039	0.028	101	
YY	0.010	0.0056	0.040	101	
JJJ	0.0017U	0.0017U	0.012	~~NA~~ 2C	
UU	0.0062	0.0025	0.0082	51	
ZZ	0.0090	0.0056	0.045	110	

LDC#:32797A2b

VALIDATION FINDINGS WORKSHEET
Field Duplicate/Triplicates

Reviewer: FJ
2nd Reviewer:

METHOD: GC MS PAHs (EPA SW846 Method 8270D-SIM)

Y N NA Were lab triplicates sets identified in this SDG?
Y N NA Were target analytes detected in the field triplicate sets?

Compound	Concentration (mg/kg)			RSD (≤35%)	RPD (≤100%)
	7	8	9		
VV	0.0017U	0.0013	0.0017U	NA NC	
CCC	0.0017U	0.024	0.0047		94
III	0.0017U	0.023	0.0039		79
GGG	0.0017U	0.048	0.0080		130
LLL	0.014	0.012	0.0078	28	
KKK	0.0017U	0.048	0.0080		130
DDD	0.0017U	0.020	0.0038		76
YY	0.0017U	0.017	0.0079		129
JJJ	0.0071	0.0075	0.0047	24	
UU	0.0017U	0.0033	0.0021		21
ZZ	0.0017U	0.017	0.0079		129

V:\Field Triplicates\32797A2b.wpd

LDC #: 32797A2b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)
The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Internal Standard)	Reported RRF (1.0 std)	Recalculated RRF (1.0 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL Linus	8/21/14	S (1st IS)	1.730	1.730	1.694	1.694	9.2	9.2
			NN (2nd IS)	2.363	2.363	2.264	2.264	6.1	6.1
			YY (3rd IS)	3.272	3.272	3.494	3.494	6.8	6.8
			ZZ (4th IS)	2.037	2.037	2.102	2.102	9.2	9.2
			III (5th IS)	2.228	2.228	2.425	2.425	6.6	6.6
			(6th IS)						
2			(1st IS)						
			(2nd IS)						
			(3rd IS)						
			(4th IS)						
			(5th IS)						
			(6th IS)						
3			(1st IS)						
			(2nd IS)						
			(3rd IS)						
			(4th IS)						
			(5th IS)						
			(6th IS)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A2b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)
The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	0915L002 CCV	9/15/14	S (1st IS)	1.694	1.533	1.533	9.5	9.5
			NN (2nd IS)	2.264	2.220	2.220	1.9	1.9
			YY (3rd IS)	3.494	3.457	3.457	1.1	1.1
			ZZ (4th IS)	2.102	~~2.511~~ 2.092	2.092	~~36~~ 0.47	0.47
			III (5th IS)	2.425	2.511	2.511	3.6	3.6
			(6th IS)					
2			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					
3			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A2b

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 9

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	51.033	34.563	67.7	67.7	0
2-Fluorobiphenyl	↓	35.94198	70.4	70.4	↓
Terphenyl-d14	↓	48.45811	95.0	95.0	↓
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 32797A26

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 19 & 20

Compound	Spike Added (mg/kg)		Sample Concentration (mg/kg)	Spiked Sample Concentration (mg/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalc
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene	0.118	0.118	ND	0.134	0.135	114	114	114	114	0.74	0.74
Pentachlorophenol											
Pyrene	0.118	0.118	0.012	0.151	0.147	118	118	114	114	2.7	2.7

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A06

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 140910A - LCS

Compound	Spike Added (mg/kg)		Spike Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene	0.133	NA	0.0983	NA	73.9	73.9				
Pentachlorophenol										
Pyrene	0.133	↓	0.099	↓	74.4	74.4	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A26

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #9 , YY

Conc. = $\frac{(463)(2.5)(1)}{(1404)(3.494)(39.19)(0.766)}$

= 0.0079 mg/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCBH CTO 0015

Collection Date: September 2 through September 3, 2014

LDC Report Date: October 17, 2014

Matrix: Soil/Water

Parameters: Chlorinated Pesticides

Validation Level: Standard & Full

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 74218

Sample Identification

EN001
EN002
EN003
EN004
EN005
EN006
EN007
EN008
EN009**
EN010
EN011
EN012**
EN013
EN014
EN015
EN016
EN017
EN018
EN002MS
EN002MSD

**Indicates sample underwent Full review.

Introduction

This data review covers 17 soil samples and 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8081A for Chlorinated Pesticides.

This review follows the Final Work Plan Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii (May 2013), the Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific (DON 2007), and the U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.2 (October 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent a Full review. A Standard review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Standard criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank)

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits

Q MS/MSD recovery was poor

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory

M Instrument Performance Check (BFB or DFTPP) was noncompliant

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor

*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

The individual 4,4'-DDT and Endrin breakdowns (%BD) were less than or equal to 15.0%.

III. Initial Calibration

Initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

Retention time windows were established as required by the method for samples on which a Full review was performed. Raw data were not evaluated for the samples on which a Standard review was performed.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
9/24/14	0922128	DB-35MS	gamma-BHC Heptachlor 4,4'-DDT Methoxychlor	30 36 24 23	EN006 EN007 EN009** EN017	J (all detects) UJ (all non-detects)	A
9/24/14	0922128	DB-XLB	gamma-BHC Heptachlor	24 53	EN006 EN007 EN009** EN017	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
9/24/14	0922145	DB-35MS	Endosulfan sulfate	22	EN008 EN012** EN013 EN014 EN015 EN016	J (all detects) UJ (all non-detects)	A
9/24/14	0922145	DB-XLB	Heptachlor	37	EN008 EN012** EN013 EN014 EN015 EN016	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times of all compounds in the calibration standards were within the established retention time windows for samples on which a Full review was performed. Raw data were not evaluated for the samples on which a Standard review was performed.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide contaminants were found in the method blanks.

Samples EN011 and EN018 were identified as equipment rinsates. No chlorinated pesticide contaminants were found.

Sample EN010 was identified as a field blank. No chlorinated pesticide contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not reviewed in this SDG.

XI. GPC Calibration

GPC cleanup was not reviewed in this SDG.

XII. Target Compound Identification

All target compound identifications were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XIII. Compound Quantitation

All compound quantitations were within validation criteria for samples on which a Full review was performed.

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
EN004	Chlordane, technical	48	J (all detects)	A
EN006	Chlordane, technical	49	J (all detects)	A
EN009**	Chlordane, technical	46	J (all detects)	A
EN014	Chlordane, technical	41	J (all detects)	A

Raw data were not evaluated for the samples reviewed by Standard criteria.

XIV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XV. Field Duplicates

No field duplicates were identified in this SDG.

XVI. Field Triplicates

Samples EN001, EN002, and EN003, samples EN004, EN005, and EN006, and samples EN007, EN008, and EN009** were identified as field triplicates. No chlorinated pesticides were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN001	EN002	EN003		
4,4'-DDE	0.025	0.024	0.022	-	6 (≤35)
Chlordane, technical	0.37	0.31	0.45	-	19 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN004	EN005	EN006		
4,4'-DDE	0.033	0.030	0.046	-	23 (≤35)
Chlordane, technical	0.81	1.1	0.72	-	23 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN007	EN008	EN009**		
4,4'-DDE	0.019	0.021	0.016	-	13 (≤35)
Chlordane, technical	0.75	0.95	0.44	-	36 (≤35)

MCBH CTO 0015
Chlorinated Pesticides - Data Qualification Summary - SDG 74218

SDG	Sample	Compound	Flag	A or P	Reason (Code)
74218	EN006 EN007 EN009** EN017	gamma-BHC Heptachlor 4,4'-DDT Methoxychlor	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
74218	EN008 EN012** EN013 EN014 EN015 EN016	Endosulfan sulfate Heptachlor	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
74218	EN004 EN006 EN009** EN014	Technical chlordane	J (all detects)	A	Compound quantitation (RPD) (*XIII)

MCBH CTO 0015
Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

MCBH CTO 0015
Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

LDC #: 32797A3a
SDG #: 74218
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Standard/Full

Date: 10/14/14
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Chlorinated Pesticides(EPA SW 846 Method ~~8082~~ 8081A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/2 - 9/3/14
II.	GC Instrument Performance Check	A	
III.	Initial calibration	A	%RSD ≤ 20, 1 2
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	Not reviewed for Standard validation.
XIII.	Compound quantitation/RL/LOQ/LODs	SW	Not reviewed for Standard validation.
XIV.	Overall assessment of data	A	
XV.	Field duplicates	SW	T = 1, 2, 3 4, 5, 6 7, 8, 9
XVI.	Field blanks	ND	FB = 10 ER = 11, 18

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Full validation

soil + water

1 2	EN001	11	EN011 ER W	21 1	140909A	31	
2	EN002	12	EN012 **	22 2	140916A	32	
3	EN003	13	EN013	23		33	
4	EN004	14	EN014	24		34	
5	EN005	15	EN015	25		35	
6	EN006	16	EN016	26		36	
7	EN007	17	EN017	27		37	
8	EN008	18	EN018 ER W	28		38	
9	EN009**	19	EN002MS	29		39	
10	EN010** W FB W	20	EN002MSD	30		40	

Notes: _____

LDC #: 32797A3e

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
2nd Reviewer: [illegible]

Method: Pesticides/PCBs (EPA SW 846 Method 8081A/8082)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/ECD Instrument performance check				
Was the instrument performance found to be acceptable?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?	✓			
Did the initial calibration meet the curve fit acceptance criteria?	✓			
Were the RT windows properly established?	✓			
Were the required standard concentrations analyzed in the initial calibration?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ____%D or ____%R	✓			
Were Evaluation mix standards analyzed prior to the initial calibration and sample analysis?	✓			
Were endrin and 4,4'-DDT breakdowns ≤ 15% for individual breakdown in the Evaluation mix standards?	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%? FT	✓	✓		
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Were extract cleanup blanks analyzed with every batch requiring clean-up?			✓	
Was there contamination in the method blanks or clean-up blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	

LDC #: 32797 A3a

VALIDATION FINDINGS CHECKLIST

Reviewer: PT
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions, dry weight factors, and clean-up activities applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG. Triplicates	✓			
Target compounds were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticide/PCBs (EPASW 846 Method 8081/8082)

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG.
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH.
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II.
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ.
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. DB 608	KK.
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. DB 1701	LL.
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE. Chlordane, Technical	MM.
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF.	NN.

Notes:_____

LDC #: 32797A 3a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
What type of continuing calibration calculation was performed? __%D or __%R
Y N N/A Were continuing calibration standards analyzed at the required frequencies?
Y N N/A Did the continuing calibration standards meet the %D / %R validation criteria of ≤20.0% / 80-120%?
Level IV Only
Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

(C)

#	Date	Standard ID	Detector/ Column	Compound	%D (Limit ≤ 20.0)	RT (limit)	Associated Samples	Qualifications
	9/24/14	092228 CCV	DB-35MS	D	30	( )	6, 7, 9, 17	J/UJ/A
				E	36	( )	↓	↓
				O	24	( )		
				P	23	( )		
			DB-XLB	D	24	( )		
				E	53	( )		
						( )		
						( )		
						( )		
	9/24/14	092245 CCV	DB-35MS	N	22	( )	8, ~~8~~ 12 → 16	↓
			DB-XLB	E	37	( )	↓	
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		

LDC #: 32797A3a

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	% RPD Bet 2 col ± 40 Finding	Associated Samples	Qualifications
	Technical chlordane	48	4	J/A det * X111
	↓	49	6	↓
	↓	46	9	↓
	↓	41	14	↓

Comments: See sample calculation verification worksheet for recalculations

LDC#:32797A3a

VALIDATION FINDINGS WORKSHEET
Field Duplicate/Triplicates

Reviewer: F2
2nd Reviewer: [illegible]

METHOD: GC Pesticides (EPA SW846 Method 8081A)

Y N NA Were lab triplicates sets identified in this SDG?
Y N NA Were target analytes detected in the lab triplicate sets?

Compound	Concentration (mg/kg)			RSD (≤35%)	RPD (≤100%)
	1	2	3		
J	0.025	0.024	0.022	6	
EE	0.37	0.31	0.45	19	

Compound	Concentration (mg/kg)			RSD (≤35%)	RPD (≤100%)
	4	5	6		
J	0.033	0.030	0.046	23	
EE	0.81	1.1	0.72	23	

Compound	Concentration (mg/kg)			RSD (≤35%)	RPD (≤100%)
	7	8	9		
J	0.019	0.021	0.016	13	
EE	0.75	0.95	0.44	36	

V:\Field Triplicates\32797A3a.wpd

LDC #: 32797A3c

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC ✓ HPLC _____

The calibration factors (CF) and relative standard deviation (%RSD) were recalculated using the following calculations:

CF = A/C
Average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where: A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

922007

#	Standard ID	Calibration Date	Compound	Reported CF (0.1 std)	Recalculated CF (0.1 std)	Reported CF (initial)	Recalculated CF (intial)	Reported %RSD	Recalculated %RSD
1	ICAL	9/22/14	endosulfan I	192907370	192907370	175738172	175738172	8.5	8.5
	Lucy	DB 35MS	methoxychlor	74205510	74205510	69309459	69309459	7.1	7.1
2	↓	DB-XLB	↓	N1062490	141062490	133067309	133067309	8.0	80
				67095360	67095360	65534198	65534198	3.3	3.3
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A3a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC Chlorinated Pesticide (EPA SW 846 Method 8081)

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/ Conc. CCV	Recalculated CF/ Conc. CCV	Reported %D	Recalculated %D
1	CCV	9/23/14	endosulfan I	1757380000	184823000	184823000	5.2	5.2
	0922097	DB-35MS	Methoxychlor	69309500	72958500	72958500	5.3	5.3
2	↓	DB-XLB	↓	1330670000	130116000	130116000	2.2	2.2
				65534200	61066300	61066300	6.8	6.8
3	CCV	9/24/14	↓	↓	191298000	191298000	8.9	8.9
	0922128	DB-35MS	↓	↓	53029300	53029300	23	2.3
4		DB-XLB	↓	↓	147730000	147730000	11	11
			↓	↓	58304900	58304900	11	11

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A3a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FJ
2nd Reviewer: R

METHOD: GC ✓ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/ Conc. CCV	Recalculated CF/ Conc. CCV	Reported %D	Recalculated %D
1	CCV 092245	9/24/14 DB-35MS	endosulfan I	175738000 U	163278000	163278000	7.1	7.1
			methoxychlor	69309500	61930900	61930960	11	11
2	↓	DB-XLB	↓	133061000	124791000 U	124791000	6.2	6.2
			↓	65534200	63703600 U	63703600 U	2.8	2.8
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A3q

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: [illegible]

METHOD:GC Chlorinated Pesticides (EPA SW 846 Method 8081)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 9

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
DCB	PB-XLB	326.264	249.4345	76.5	76.5	0
TCMX	↓	↓	315.0168	96.6	96.6	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 32797A3a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC Chlorinated Pesticide (EPA SW 846 Method 8081)

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

Where SSC = Spiked sample concentration; SC = Sample concentration; SA = Spike added; MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples: 19 + 20

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gamma-BHC	0.167	0.167	ND	0.151	0.151	90.4	90.4	90.4	90.4	0	0
4,4'-DDT	↓	↓	↓	0.189	0.185	113	113	111	111	2.1	2.1

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A39

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer: [signature]

METHOD: GC Chlorinated Pesticide (EPA SW 846 Method 8081)

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100 LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: 140916A LCS

Compound	Spike Added (mg/kg)		Spike Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gamma-BHC	0.167	NA	0.127	NA	76.0	76.0				
4,4'-DDT	0.167	↓	0.127	↓	76.0	76.0	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A3e

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd Reviewer: [signature]

METHOD: GC Chlorinated Pesticide (EPA SW 846 Method 8081)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. # 9 Compound Name 4,4'-DDE

Concentration = $\frac{1847265 \quad (5)}{188\,279000 \quad (30.65)\,(0.05)\,(2)}$

$= 0.016$ mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCBH CTO 0015

Collection Date: September 2 through September 3, 2014

LDC Report Date: October 17, 2014

Matrix: Soil/Water

Parameters: Polychlorinated Biphenyls

Validation Level: Standard & Full

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 74218

Sample Identification

EN001
EN002
EN003
EN004
EN005
EN006
EN007
EN008
EN009**
EN010
EN011
EN012**
EN013
EN014
EN015
EN016
EN017
EN018
EN002MS
EN002MSD

**Indicates sample underwent Full review

Introduction

This data review covers 17 soil samples and 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082A for Polychlorinated Biphenyls.

This review follows the Final Work Plan Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii (May 2013), the Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific (DON 2007), and the U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.2 (October 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent a Full review. A Standard review was performed on all other samples. Raw data were not evaluated for the samples reviewed by Standard criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank)

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits

Q MS/MSD recovery was poor

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory

M Instrument Performance Check (BFB or DFTPP) was noncompliant

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor

*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/ECD Instrument Performance Check

Instrument performance was not required by the method.

III. Initial Calibration

Initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0%.

Retention time windows were established as required by the method for samples on which a Full review was performed. Raw data were not evaluated for the samples on which a Standard review was performed.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Affected Compound	Flag	A or P
9/23/14	Lucy ICV	DB-35MS	Aroclor-1260	22.2	All samples in SDG 74218	Aroclor-1254 Aroclor-1260 Aroclor-1242 Aroclor-1248 Total PCBs	J (all detects) UJ (all non-detects)	A

Retention times of all compounds in the calibration standards were within the established retention time windows for samples on which a Full review was performed. Raw data were not evaluated for the samples on which a Standard review was performed.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polychlorinated biphenyl contaminants were found in the method blanks.

Samples EN011 and EN018 were identified as equipment rinsates. No polychlorinated biphenyl contaminants were found.

Sample EN010 was identified as a field blank. No polychlorinated biphenyl contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not reviewed in this SDG.

XI. GPC Calibration

GPC cleanup was not reviewed in this SDG.

XII. Target Compound Identification

All target compound identifications were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XIII. Compound Quantitation

All compound quantitation were within validation criteria for samples on which a Full review was performed.

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
EN013	Aroclor-1254	43	J (all detects)	A
EN015	Aroclor-1254	75	J (all detects)	A
EN016	Aroclor-1254	51	J (all detects)	A

Raw data were not evaluated for the samples reviewed by Standard criteria.

XIV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XV. Field Duplicates

No field duplicates were identified in this SDG.

XVI. Field Triplicates

Samples EN001, EN002, and EN003, samples EN004, EN005, and EN006, and samples EN007, EN008, and EN009** were identified as field triplicates. No polychlorinated biphenyls were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN001	EN002	EN003		
Aroclor-1254	0.49	0.38	0.59	-	22 (≤35)
Total PCBs	0.49	0.38	0.59	-	22 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN004	EN005	EN006		
Aroclor-1254	0.84	0.53	1.2	-	39 (≤35)
Total PCBs	0.84	0.53	1.2	-	39 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN007	EN008	EN009**		
Aroclor-1254	0.28	0.42	0.23	-	32 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN007	EN008	EN009**		
Total PCBs	0.28	0.42	0.23	-	32 (≤35)

MCBH CTO 0015
Polychlorinated Biphenyls - Data Qualification Summary - SDG 74218

SDG	Sample	Compound	Flag	A or P	Reason (Code)
74218	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009** EN010 EN011 EN012** EN013 EN014 EN015 EN016 EN017 EN018	Aroclor-1254 Aroclor-1260 Aroclor-1242 Aroclor-1248 Total PCBs	J (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D) (C)
74218	EN013 EN015 EN016	Aroclor-1254	J (all detects)	A	Compound quantitation (RPD) (*XIII)

MCBH CTO 0015
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

MCBH CTO 0015
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

LDC #: 32797A3b
SDG #: 74218
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Standard/Full

Date: 10/13/14
Page: 1 of 1
Reviewer: EB
2nd Reviewer: EC

METHOD: GC Polychlorinated Biphenyls(EPA SW 846 Method 8082A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/2 - 9/3/14
II.	GC Instrument Performance Check	N/A	
III.	Initial calibration	A	% RSD ≤ 20
IV.	Continuing calibration/ICV	SW	RF/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	Not reviewed for Standard validation.
XIII.	Compound quantitation/RL/LOQ/LODs	SW	Not reviewed for Standard validation.
XIV.	Overall assessment of data	A	
XV.	Field duplicates	SW	T= 1,2,3 4,5,6 7,8,9
XVI.	Field blanks	ND	FB = 10 ER = 11,18

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Full validation

Soil + Water

1 2	EN001	11 1	EN011 ER W	21 1	140909A	31	
2	EN002	12	EN012 **	22 2	140916A	32	
3	EN003	13	EN013	23		33	
4	EN004	14	EN014	24		34	
5	EN005	15	EN015	25		35	
6	EN006	16	EN016	26		36	
7	EN007	17	EN017	27		37	
8	EN008	18 1	EN018 ER W	28		38	
9	EN009**	19	EN002MS	29		39	
10 1	EN010W FB W	20	EN002MSD	30		40	

Notes: _____

LDC #: 32797A3b

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓		
Did the initial calibration meet the curve fit acceptance criteria?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ✓ %D or ___ %R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?		✓		
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			

LDC #: 32797A3b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: L

Validation Area	Yes	No	NA	Findings/Comments
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG. Triplicates	✓			
Target compounds were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticide/PCBs (EPA SW 846 Method 8081/8082)

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG. Chlordane
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH. Chlordane (Technical)
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II. Aroclor 1262
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ. Aroclor 1268
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. 2,4'-DDD	KK. Oxychlordane
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. 2,4'-DDE	LL. trans-Nonachlor
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE. 2,4'-DDT	MM. cis-Nonachlor
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF. Hexachlorobenzene	NN.

Notes:_____

LDC #: 32797A3b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
What type of continuing calibration calculation was performed? __%D or __%R
Y N N/A Were continuing calibration standards analyzed at the required frequencies?
Y N N/A Did the continuing calibration standards meet the %D / %R validation criteria of ≤20.0% / 80-120%?
Level IV Only
Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

(C)

#	Date	Standard ID	Detector/ Column	Compound	%D (Limit ≤ 20.0)	RT (limit)	Associated Samples	Qualifications
	9/23/14	Lucy - ICV	DB-35MS	BB	22.2	( )	All	J/UJ/A qual AA, BB, Y, Z + Total PCBs
						( )		
						( )		
						( )		
						( )		
						( )		
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LDC #: 32797A 3b

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: FT
2nd Reviewer:

METHOD: ✓ **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	%RPD Bet. 2 col Finding ≤ 40	Associated Samples	Qualifications
	AA	43	13	J/A det
	↓	75	15	↓
	↓	51	16	↓

Comments: See sample calculation verification worksheet for recalculations

LDC#:32797A3b

VALIDATION FINDINGS WORKSHEET
Field Duplicate/Triplicates

Reviewer: PO
2nd Reviewer: [illegible]

METHOD: GC PCB (EPA SW846 Method 8082A)

Y N NA Were lab triplicates sets identified in this SDG?
Y N NA Were target analytes detected in the lab triplicate sets?

Compound	Concentration (mg/kg)			RSD (≤35%)
	1	2	3	
Aroclor 1254	0.49	0.38	0.59	22
Total PCBs	0.49	0.38	0.59	22

Compound	Concentration (mg/kg)			RSD (≤35%)
	4	5	6	
Aroclor 1254	0.84	0.53	1.2	39
Total PCBs	0.84	0.53	1.2	39

Compound	Concentration (mg/kg)			RSD (≤35%)
	7	8	9	
Aroclor 1254	0.28	0.42	0.23	32
Total PCBs	0.28	0.42	0.23	32

V:\Field Triplicates\32797A3b.wpd

LDC #: 32797 A2b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FR
2nd Reviewer:

METHOD: GC ✓ HPLC _____

The calibration factors (CF) and relative standard deviation (%RSD) were recalculated using the following calculations:

CF = A/C
Average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where: A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (0.25 std)	Recalculated CF (0.25 std)	Reported CF (initial)	Recalculated CF (intial)	Reported %RSD	Recalculated %RSD
1	ICAL LUCY	9/23/14	Aroclor 1260-1	10826487	10826487	11800474	11800474	9.2	9.2
			(DB-35MS)						
2	↓	↓	Aroclor 1260-1	4476550	4476550	4923126	4923126	12	12
			(DB-35MS)						
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A3b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FJ
2nd Reviewer:

METHOD: GC _____ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/ Conc. CCV	Recalculated CF/ Conc. CCV	Reported %D	Recalculated %D
1	CCV 0922093	9/23/14	Aroclor 1260-1 (DB-35MS)	11800500	11581900	11581900	1.9	1.9
			(DB-XLB)	4923130	4901040	4901040	0.45	0.45
2	CCV 0927062	9/29/14	↓	↓	11358400	11358400	3.7	3.7
					4945400	4945400	0.45	0.45
3	CCV 0927082	9/29/14	↓	↓	11920300	11920300	1.0	1.0
					4806590	4806590	2.4	2.4
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A3b

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: EJ
2nd reviewer: [illegible]

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #9

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Decachlorobiphenyl	DB-XLB	326.264	269.561	82.6	82.6	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 32797A36

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FP
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

Where SSC = Spiked sample concentration; SC = Sample concentration; SA = Spike added; MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples: 19 + 20

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Aroclor 1260	0.417	0.417	ND	0.535	0.513	128	128	123	123	4.2	4.2

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A36

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: F2
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; SA = Spike added
LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: 140916-A LC>

Compound	Spike Added (mg/kg)		Spike Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Aroclor 1260	0.417	NA	0.411	NA	98.6	98.6	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A3b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: F7
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #9 Compound Name Aroclor 1254-1

Concentration = $\frac{(812524)(5)(1000)}{(11174155)(30.65)(0.05)}$

= 237.241

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications
	Aroclor	1254-1 =	237.241		
			246.512	231.56 / 100 =	0.231 mg/kg
			210.946		
			~~111.779~~ F7		
			~~275.607~~ F7		
			Ave= 231.56		

Comments:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCBH CTO 0015

Collection Date: September 2 through September 3, 2014

LDC Report Date: October 22, 2014

Matrix: Soil/Water

Parameters: Metals

Validation Level: Standard & Full

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 74218

Sample Identification

EN001
EN002
EN003
EN004
EN005
EN006
EN007
EN008
EN009**
EN010
EN011
EN012**
EN013
EN014
EN015
EN016
EN017
EN018
EN002MS
EN002MSD
EN018MS
EN018MSD

**Indicates sample underwent Full review

Introduction

This data review covers 17 soil samples and 5 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6020A, 7470A, and 7471B for Metals. The metals analyzed were Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium, and Zinc.

This review follows the Final Work Plan Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii (May 2013), the Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific (DON 2007), and the U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.2 (October 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent a Full review. A Standard review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Standard criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

Qualification Code Reference

H Holding times were exceeded.

S The sequence or number of standards used for the calibration was incorrect.

C Correlation coefficient is <0.995.

R %R for calibration is not within control limits

B Presumed contamination from preparation (method) blank or calibration blank

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD or difference was high.

I ICP ICS results were unsatisfactory.

A ICP Serial Dilution %D were not within control limits

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Post Digestion Spike recovery was not within control limits

*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5%.

III. Calibration

The initial and continuing calibrations were performed at the required frequency.

The calibration standards criteria were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No metal contaminants were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Chromium	0.23 ug/L	All water samples in SDG 74218

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
EN010	Chromium	0.30 ug/L	0.30U ug/L
EN011	Chromium	0.31 ug/L	0.31U ug/L
EN018	Chromium	0.35 ug/L	0.35U ug/L

Samples EN011 and EN018 were identified as equipment rinsates. No metal contaminants were found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EN011	9/2/14	Chromium Copper Nickel	0.31 ug/L 0.46 ug/L 0.25 ug/L	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009**
EN018	9/3/14	Chromium Copper Nickel	0.35 ug/L 0.45 ug/L 0.31 ug/L	EN012** EN013 EN014 EN015 EN016 EN017

Sample EN010 was identified as a field blank. No metal contaminants were found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EN010	9/2/14	Chromium Copper Nickel	0.30 ug/L 0.57 ug/L 0.28 ug/L	All soil samples in SDG 74218

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated field blanks.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
EN002MS/MSD (All soil samples in SDG 74218)	Beryllium	350 (80-120)	350 (80-120)	-	J (all detects)	A

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
EN002MS/MSD (All soil samples in SDG 74218)	Antimony Arsenic Copper Selenium Silver Thallium Mercury	29.6 (80-120) 66.0 (80-120) 46.0 (80-120) 54.8 (80-120) 76.7 (80-120) 69.8 (80-120) -	30.6 (80-120) 64.0 (80-120) 46.0 (80-120) 53.8 (80-120) 76.7 (80-120) 70.8 (80-120) 74.8 (80-120)	- - - - - - -	J (all detects) UJ (all non-detects)	A

For EN002MS/MSD, no data were qualified for Chromium, Lead, Nickel, and Zinc percent recoveries outside the QC limits since the parent sample results were greater than 4X the spike concentration.

For EN002MS/MSD, although the percent recoveries were severely low for Antimony, the associated sample results were qualified as estimated (J/UJ) since the post spike recoveries were within the QC limits.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Internal Standards (ICP-MS)

All internal standard percent recoveries (%R) were within QC limits for samples on which a Full review was performed with the following exceptions:

Sample	Internal Standard	%R (Limits)	Analyte	Flag	A or P
EN009**	Scandium-45 (no gas) Scandium-45 (w/Helium)	132.31 (30-120) 128.93 (30-120)	Beryllium Chromium Copper Nickel	J (all detects) UJ (all non-detects)	A

Raw data were not evaluated for the samples reviewed by Standard criteria.

X. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XI. Sample Result Verification

All sample result verifications were acceptable for samples on which a Full review was . Raw data were not evaluated for the samples reviewed by Standard criteria.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

No field duplicates were identified in this SDG.

XIV. Field Triplicates

Samples EN001, EN002, and EN003, samples EN004, EN005, and EN006, and samples EN007, EN008, and EN009** were identified as field triplicates. No metals were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN001	EN002	EN003		
Antimony	0.18	0.14	0.24	-	27 (≤35)
Arsenic	5.2	5.1	5.4	-	3 (≤35)
Beryllium	0.25	0.26	0.25	-	2 (≤35)
Cadmium	0.26	0.22	0.24	-	8 (≤35)
Chromium	60.7	60.6	63.8	-	3 (≤35)
Copper	26.7	26.4	26.4	-	1 (≤35)
Lead	23.7	22.5	19.6	-	10 (≤35)
Mercury	0.065	0.061	0.058	-	6 (≤35)
Nickel	143	136	131	-	4 (≤35)
Selenium	0.14	0.12	0.13	-	8 (≤35)
Silver	0.048	0.034	0.032	-	23 (≤35)
Thallium	0.049	0.021	0.028	-	45 (≤35)
Zinc	114	106	109	-	4 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN004	EN005	EN006		
Arsenic	4.6	4.6	5.1	-	6 (≤35)
Beryllium	0.26	0.26	0.26	-	0 (≤35)
Cadmium	0.22	0.22	0.24	-	5 (≤35)
Chromium	58.3	58.2	61.5	-	3 (≤35)
Copper	23.7	23.1	24.8	-	4 (≤35)
Lead	20.4	21.0	26.7	-	15 (≤35)
Mercury	0.068	0.060	0.068	-	7 (≤35)
Nickel	143	145	144	-	1 (≤35)
Selenium	0.098	0.084	0.10	-	9 (≤35)
Silver	0.026	0.027	0.032	-	11 (≤35)
Thallium	0.022	0.023	0.025	-	7 (≤35)
Zinc	102	106	112	-	5 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN007	EN008	EN009**		
Arsenic	4.1	4.2	3.6	-	8 (≤35)
Beryllium	0.19	0.19	0.19	-	0 (≤35)
Cadmium	0.084	0.10	0.099	-	10 (≤35)
Chromium	29.5	33.2	34.4	-	8 (≤35)
Copper	10.8	11.9	12.6	-	8 (≤35)
Lead	6.9	8.2	8.3	-	10 (≤35)
Mercury	0.04U	0.04U	0.015	-	Not calculable

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN007	EN008	EN009**		
Nickel	68.5	74.4	79.6	-	7 (≤35)
Selenium	0.052	0.092	0.057	-	33 (≤35)
Zinc	39.5	42.7	48.7	-	11 (≤35)

MCBH CTO 0015
Metals - Data Qualification Summary - SDG 74218

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
74218	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009** EN012** EN013 EN014 EN015 EN016 EN017	Beryllium	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
74218	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009** EN012** EN013 EN014 EN015 EN016 EN017	Antimony Arsenic Copper Selenium Silver Thallium Mercury	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
74218	EN009**	Beryllium Chromium Copper Nickel	J (all detects) UJ (all non-detects)	A	Internal standards (%R) (*IX)

MCBH CTO 0015
Metals - Laboratory Blank Data Qualification Summary - SDG 74218

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
74218	EN010	Chromium	0.30U ug/L	A	B
74218	EN011	Chromium	0.31U ug/L	A	B
74218	EN018	Chromium	0.35U ug/L	A	B

MCBH CTO 0015
Metals - Field Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

LDC #: 32797A4
SDG #: 74218
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET

Standard/Full

Date: 10/8/14
Page: 1 of 1
Reviewer: JD
2nd Reviewer: CL

METHOD: Metals (EPA SW 846 Method 6020A/~~7471B~~ A/7470A/7471B) a JD

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 09/02-03/14
II.	ICP/MS Tune	A	
III.	Calibration	A	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	A	
VI.	Matrix Spike Analysis	SW	MS/D = (19,20) (21,22)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	SW	Not Reviewed for Standard Validation
X.	~~Furnace Atomic Absorption QC~~ JD	—	
XI.	ICP Serial Dilution	N	Not Performed
XII.	Sample Result Verification	A	Not reviewed for Standard validation.
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	SW	Field Trips = (1,2,3) (4,5,6) (7,8,9)
XV	Field Blanks	SW	Equipment Rinsate = (11) (18) FB = (10)

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Full validation Waters / Soils

1	EN001	11	EN011 Waters	21	EN018MS	31	
2	EN002	12	EN012**	22	EN018MSD	32	
3	EN003	13	EN013	23		33	
4	EN004	14	EN014	24		34	
5	EN005	15	EN015	25		35	
6	EN006	16	EN016	26		36	
7	EN007	17	EN017	27		37	
8	EN008	18	EN018 Waters	28		38	
9	EN009**	19	EN002MS	29		39	
10	EN010** Waters	20	EN002MSD	30		40	

Notes:

LDC #: 32797A1

VALIDATION FINDINGS CHECKLIST

Reviewer: JD
2nd Reviewer: CR

Method: Metals (EPA SW 846 Method 6010/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?	✓			
Were %RSD of isotopes in the tuning solution ≤5%?	✓			
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓	✓		JD
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the ~~75-125~~ 80-120 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.		✓		
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were < 5X the RL.	✓			
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

Validation Area	Yes	No	NA	Findings/Comments
VIII. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?		/		
If the %Rs were outside the criteria, was a reanalysis performed?		/		
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?				
Were all percent differences (%Ds) < 10%?				
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.				
X. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	/			
XI. Overall assessment of data				
Overall assessment of data was found to be acceptable.	/			
XII. Field duplicates				
Field duplicate pairs were identified in this SDG.	/			
Target analytes were detected in the field duplicates.	/			
XIII. Field blanks				
Field blanks were identified in this SDG.	/			
Target analytes were detected in the field blanks.	/			

LDC #: 32797A4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: 3D
2nd reviewer: 02

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-9, 12-17	S	Al, (Sb) (As) Ba (Be) (Cd) (Ca) (Cr) Co (Cu) Fe (Pb) Mg, Mn, (Hg) (Ni) K, (Se) (Ag) Na, (Tl) V, (Zn) Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
10-11, 18	W	Al, (Sb) (As) Ba (Be) (Cd) (Ca) (Cr) Co (Cu) Fe (Pb) Mg, Mn (Hg) (Ni) K, (Se) (Ag) Na, (Tl) V, (Zn) Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
QC: 19-20	S	Al, (Sb) (As) Ba, (Be) (Cd) Ca, (Cr) Co, (Cu) Fe (Pb) Mg, Mn (Hg) (Ni) K, (Se) Ag, Na, (Tl) V, (Zn) Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
QC: 21-22	W	Al, (Sb) (As) Ba (Be) (Cd) (Ca) (Cr) Co (Cu) Fe (Pb) Mg, Mn, (Hg) (Ni) K, (Se) (Ag) Na (Tl) V, (Zn) Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,

Comments: Mercury by CVAA if performed

LDC #: 32797A4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

METHOD: Trace metals (EPA SW 846 Method 6010B/6020/7000) Soil preparation factor applied: ____
Sample Concentration units, unless otherwise noted: ug/L Associated Samples: All waters (B)

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Level	10	11	18								
Cr		0.23		1.15	0.30	0.31	0.35								

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #:32797A4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: JD
2nd Reviewer: G

METHOD: Trace Metals

Blank units: ug/L **Associated sample units:** mg/kg
Sampling date: 9/02/14 Soil factor applied 10X
Field blank type: (circle one) Field Blank / Rinsate / Other: Equipment Rinsate Associated Samples: 1-9

Analyte	Blank ID	Sample Identification											
	11	Action Limit	No Qual.										
Cr	0.31	0.0155											
Cu	0.46	0.023											
Ni	0.25	0.0125											

Blank units: ug/L **Associated sample units:** mg/kg
Sampling date: 9/03/14 Soil factor applied 10X
Field blank type: (circle one) Field Blank / Rinsate / Other: Equipment Rinsate Associated Samples: 12-17

Analyte	Blank ID	Sample Identification											
	18	Action Limit	No Qual.										
Cr	0.35	0.0175											
Cu	0.45	0.0225											
Ni	0.31	0.0155											

Blank units: ug/L **Associated sample units:** mg/kg
Sampling date: 9/02/14 Soil factor applied 10X
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All soils

Analyte	Blank ID	Sample Identification											
	10	Action Limit	No Qual.										
Cr	0.30	0.015											
Cu	0.57	0.0285											
Ni	0.28	0.014											

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with analyte concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

LDC #: 32797A4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: JD
2nd Reviewer: [illegible]

METHOD: Trace metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y N N/A Were matrix spike percent recoveries (%R) within the control limits of 80-120 If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for samples?

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
	19/20	Soils	Sb	29.6*	30.6		All Soils	J/UJ/A (Q)
			As	66.0	61.0			J/UJ/A (Q)
			Be	350	350			Jdet/A (Q)
			Cu	46.0	46.0			J/UJ/A (Q)
			Se	54.8	53.8			J/UJ/A (Q)
			Ag	76.7	76.7			J/UJ/A (Q)
			Tl	69.8	70.8			J/UJ/A (Q)
			Hg		74.8			J/UJ/A (Q)

Comments: 19/20: Cr, Pb, Ni, Zn > 4X *Sb Postspike (102%) within limits

LDC #: 32797A4

VALIDATION FINDINGS WORKSHEET
Internal Standards (ICP-MS)

Reviewer: JD
2nd Reviewer: OL

METHOD: Metals (EPA SW 846 Method 6020A)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were all internal standard percent recoveries within 30-120% of the intensity of the internal standard in the initial calibration standard ?

Y (N) N/A If the response to either of the above questions is no, were the samples reanalyzed as required ?

#	Date	Internal Standard	Associated Metals	%R (Limits)	Associated Samples	Qualifications
		Sc (45) [no gas]	Be	132.31 (30-120)	9	J/UJ/A
		Sc (45) [He]	Cr, Cu, Ni	128.93 (30-120)	9	J/UJ/A

LDC#: 32797A4

VALIDATION FINDINGS WORKSHEET
Field Triplicates

Reviewer: BD
2nd Reviewer: CR

METHOD: Metals (EPA Method 6010B/7000)

Analyte	Concentration (mg/kg)			RSD (≤35)
	1	2	3	
Antimony	0.18	0.14	0.24	27
Arsenic	5.2	5.1	5.4	3
Beryllium	0.25	0.26	0.25	2
Cadmium	0.26	0.22	0.24	8
Chromium	60.7	60.6	63.8	3
Copper	26.7	26.4	26.4	1
Lead	23.7	22.5	19.6	10
Mercury	0.065	0.061	0.058	6
Nickel	143	136	131	4
Selenium	0.14	0.12	0.13	8
Silver	0.048	0.034	0.032	23
Thallium	0.049	0.021	0.028	45
Zinc	114	106	109	4

Analyte	Concentration (mg/kg)			RSD (≤35)
	4	5	6	
Arsenic	4.6	4.6	5.1	6
Beryllium	0.26	0.26	0.26	0
Cadmium	0.22	0.22	0.24	5
Chromium	58.3	58.2	61.5	3

VALIDATION FINDINGS WORKSHEET
Field Triplicates

METHOD: Metals (EPA Method 6010B/7000)

Analyte	Concentration (mg/kg)			RSD (≤35)
	4	5	6	
Copper	23.7	23.1	24.8	4
Lead	20.4	21.0	26.7	15
Mercury	0.068	0.060	0.068	7
Nickel	143	145	144	1
Selenium	0.098	0.084	0.10	9
Silver	0.026	0.027	0.032	11
Thallium	0.022	0.023	0.025	7
Zinc	102	106	112	5

Analyte	Concentration (mg/kg)			RSD (≤35)
	7	8	9	
Arsenic	4.1	4.2	3.6	8
Beryllium	0.19	0.19	0.19	0
Cadmium	0.084	0.10	0.099	10
Chromium	29.5	33.2	34.4	8
Copper	10.8	11.9	12.6	8
Lead	6.9	8.2	8.3	10
Mercury	0.04U	0.04U	0.015	~~46~~ NC
Nickel	68.5	74.4	79.6	7
Selenium	0.052	0.092	0.057	33

LDC#: 32797A4

VALIDATION FINDINGS WORKSHEET
Field Triplicates

Reviewer: SD
2nd Reviewer: ON

METHOD: Metals (EPA Method 6010B/7000)

Analyte	Concentration (mg/kg)			RSD (≤35)
	7	8	9	
Zinc	39.5	42.7	48.7	11

\\LDCFILESERVER\Validation\FIELD DUPLICATES\FD_inorganic\32797A4.wpd

LDC #: 32797A4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: JO
2nd Reviewer: 9R

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found x 100 / True

Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
	ICP (Initial calibration)						
	GFAA (Initial calibration)						
ICV 11:39	CVAA (Initial calibration)	Hg	4.242	4.17	102%R	102%R	Y
	ICP (Continuing calibration)						
	GFAA (Continuing calibration)						
CCV 17:27	CVAA (Continuing calibration)	Hg	5.308	5.208	102%R	102%R	Y
ICV 11:24	ICP/MS (Initial calibration)	Sb	103.076	100	103%R	103%R	Y
CCV 17:36	ICP/MS (Continuing calibation)	As	49.98	~~100~~ 50	99.8%R	99.8% ~~42.3%~~	J
				50		50	

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32744A4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: SD
2nd Reviewer: CR

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$ Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICS AB 13:01	ICP interference check	Ni	84.244 mg/L	100 mg/L	84.2%R	84.2%R	Y
LCS 16:05	Laboratory control sample	Cd	0.45 mg/kg	0.5 mg/kg	90%R	90%R	↓
MS 16:36	Matrix spike	Cu	(SSR-SR) 4.6 mg/kg	10 mg/kg	46.0%R	46.0%R	↓
MSD 16:42	Duplicate	Ag	3.08 mg/kg	3.06 mg/kg	0.1%RPD	0.0%RPD	Y**
N*	ICP serial dilution						

Comments: * Ran on blank = Not Performed

** = Rounding

LDC #: 32797A4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: SD
2nd reviewer: CL

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for (12) Cu were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = 51.863 ug/L
FV = 100 ml
Dil = 50x
In. Vol. = 10.06

Recalculation: $\frac{(51.863\ ug/L)(100\ ml)(50)}{10.06} \times \left(\frac{1\ mg}{1000\ ug}\right) = 25.8\ mg/kg$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	9	Zn	48.7	48.7	Y
	12	Cu	25.8	25.8	Y

Note: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCBH CTO 0015

Collection Date: September 2 through September 3, 2014

LDC Report Date: October 17, 2014

Matrix: Soil/Water

Parameters: Herbicides

Validation Level: Standard & Full

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 74218

Sample Identification

EN001
EN002
EN003
EN004
EN005
EN006
EN007
EN008
EN009**
EN010
EN011
EN012**
EN013
EN014
EN015
EN016
EN017
EN018
EN002MS
EN002MSD

**Indicates sample underwent Full review

Introduction

This data review covers 17 soil samples and 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8151A for Herbicides.

This review follows the Final Work Plan Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii (May 2013), the Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific (DON 2007), and the U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.2 (October 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent a Full review. A Standard review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Standard criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank)

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits

Q MS/MSD recovery was poor

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory

M Instrument Performance Check (BFB or DFTPP) was noncompliant

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor

*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable for samples on which a Full review was performed. Raw data were not evaluated for the samples on which Standard review was performed.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits for samples on which a Full review was performed. Raw data were not evaluated for the samples on which Standard review was performed.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No herbicide contaminants were found in the method blanks.

Samples EN011 and EN018 were identified as equipment rinsates. No herbicide contaminants were found.

Sample EN010 was identified as a field blank. No herbicide contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicate

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
EN002MS/MSD (EN002)	2,4-D	32.3 (35-145)	27.3 (35-145)	-	J (all detects) UJ (all non-detects)	A
	Dalapon	14.5 (44-139)	14.8 (44-139)	-	J (all detects) UJ (all non-detects)	

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

IX. Compound Quantitation

All compound quantitations were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

X. System Performance

The system performance was acceptable for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

XIII. Field Triplicates

Samples EN001, EN002, and EN003, samples EN004, EN005, and EN006, and samples EN007, EN008, and EN009** were identified as field triplicates. No herbicides were detected in any of the samples.

MCBH CTO 0015
Herbicides - Data Qualification Summary - SDG 74218

SDG	Sample	Compound	Flag	A or P	Reason (Code)
74218	EN002	2,4-D Dalapon	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)

MCBH CTO 0015
Herbicides - Laboratory Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

MCBH CTO 0015
Herbicides - Field Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

LDC #: 32797A5
SDG #: 74218
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Standard/Full

Date: 10/14/14
Page: 6of 1
Reviewer: EJ
2nd Reviewer:

METHOD: GC Herbicides (EPA SW 846 Method 8151A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/2 - 9/3/14
II	Initial calibration	A	%D RSD ≤20
III.	Calibration verification/ICV	A	ICV/CCV ≤20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	SW	
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	Not reviewed for Standard validation.
IX.	Compound quantitation/RL/LOQ/LODs	A	Not reviewed for Standard validation.
X.	System Performance	A	Not reviewed for Standard validation.
XI.	Overall assessment of data	A	
XII.	Field duplicates	ND	TRIPLICATES = 1, 2, 3 4,5,6 7,8,9
XIII.	Field blanks	ND	FB = 10 ER = 11, 18

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: ** Indicates sample underwent Full validation

soil + water

1	EN001	11	EN011 W	21	140908A	31	
2	EN002	12	EN012 **	22	140916A	32	
3	EN003	13	EN013	23		33	
4	EN004	14	EN014	24		34	
5	EN005	15	EN015	25		35	
6	EN006	16	EN016	26		36	
7	EN007	17	EN017	27		37	
8	EN008	18	EN018 W	28		38	
9	EN009**	19	EN002MS	29		39	
10	EN010** W FB W	20	EN002MSD	30		40	

Notes:

LDC #: 32797 15

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓		
Did the initial calibration meet the curve fit acceptance criteria?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ____%D or ____%R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			

LDC #: 32797A5

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: L

Validation Area	Yes	No	NA	Findings/Comments
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.		✓		
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: ____GC ____HPLC

8310	8330	8151	8141	8141 (Con't)	8021B
A. Acenaphthene	A. HMX	A. 2,4-D	A. Dichlorvos	V. Fensulfothion	V. Benzene
B. Acenaphthylene	B. RDX	B. 2,4-DB	B. Mevinphos	W. Bolstar	CC. Toluene
C. Anthracene	C. 1,3,5-Trinitrobenzene	C. 2,4,5-T	C. Demeton-O	X. EPN	EE. Ethyl Benzene
D. Benzo(a)anthracene	D. 1,3-Dinitrobenzene	D. 2,4,5-TP	D. Demeton-S	Y. Azinphos-methyl	SSS. O-Xylene
E. Benzo(a)pyrene	E. Tetryl	E. Dinoseb	E. Ethoprop	Z. Coumaphos	RRR. MP-Xylene
F. Benzo(b)fluoranthene	F. Nitrobenzene	F. Dichlorprop	F. Naled	AA. Parathion	GG. Total Xylene
G. Benzo(g,h,i)perylene	G. 2.4.6-Trinitrotoluene	G. Dicamba	G. Sulfotep	BB. Trichloronate	
H. Benzo(k)fluoranthene	H. 4-Amino-2,6-dinitrotoluene	H. Dalapon	H. Phorate	CC. Trichlorinate	
I. Chrysene	I. 2-Amino-4,6-dinitrotoluene	I. MCPP	I. Dimethoate	DD. Trifluralin	
J. Dibenz(a,h)anthracene	J. 2,4-Dinitrotolune	J. MCPA	J. Diazinon	EE. Def	
K. Fluoranthene	K. 2,6-Dinitrotoluene	K. Pentachlorophenol	K. Disulfoton	FF. Prowl	
L. Fluorene	L. 2-Nitrotoluene	L.. 2,4,5-TP (silvex)	L. Parathion-methyl	GG. Ethion	
M. Indeno(1,2,3-cd)pyrene	M. 3-Nitrotoluene	M. Silvex	M. Ronnel		
N. Naphthalene	N. 4-Nitrotoluene		N. Malathion		
O. Phenanthrene	O.		O. Chlorpyrifos		
P. Pyrene	P.		P. Fenthion		
Q.	Q		Q. Parathion-ethyl		
R.			R. Trichlornate		
S.			S. Merphos		
			T. Stirofos		
			U. Tokuthion		

Notes:_____

_____

_____

LDC #: 32797A5

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: ✓ **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?
Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	20+21	A	32.3 (35-145)	27.3 (35-145)	( )	2	J/UJ/A (Q)
		H	14.5 (44-139)	14.8 (44-139)	( )	↓	↓
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		

LDC #: 32797A5

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: F2
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration factors (CF) and relative standard deviation (%RSD) were recalculated using the following calculations:

CF = A/C
Average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where: A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (1.2 std)	Recalculated CF (1.2 std)	Reported CF (initial)	Recalculated CF (intial)	Reported %RSD	Recalculated %RSD
1	ICAL 7/3/14	7/3/14	2,4-D (DB-35MS	1870972	1870972	1976674	1976674	10.0	10.0
			↓ (DB-XLB	2693139	2693139	2810343	2810343	10.0	10.0
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797T5

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/ Conc. CCV	Recalculated CF/ Conc. CCV	Reported %D	Recalculated %D
1	0911068 CCV	9/18/14	2,4-D (DB-35MS)	1976670	1750700	1750700	11	11
			↓ (DB-XLB)	2810340	2489760	2489760	11	11
2	0911082 CCV	9/18/14	↓	↓	1762100	1762100	11	11
					2602890	2602890	7.4	7.4
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797f5

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer:
2nd reviewer:

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 9

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
2,4-DCAA	DB-XLB	584.795	279.916	47.9	47.9	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 32797T5

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

Where SSC = Spiked sample concentration; SC = Sample concentration; SA = Spike added; MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples: 19 + 20

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)	0.640	0.640	ND	0.207	0.175	32.3	32.3	27.3	27.3	16.8	16.8
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A5

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: F2
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; SA = Spike added
LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: 140916A LCS

Compound	Spike Added (mg/kg)		Spike Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)	0.640	NA	0.620	NA	96.9	96.9	NA	———	———	
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A5

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: F7
2nd Reviewer: C

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. # 105 soil Compound Name 2,4-D

Concentration = $\frac{1745442\ (10)}{(2810343)(5.01)(2)}$

= 0.619 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

Laboratory Data Consultants, Inc.
Data Verification Report

Project/Site Name:	MCBH CTO 0015
Collection Date:	September 2 through September 3, 2014
LDC Report Date:	October 17, 2014
Matrix:	Soil/Water
Parameters:	Total Petroleum Hydrocarbons as Gasoline
Verification Level:	Standard & Full
Laboratory:	APPL, Inc.
Sample Delivery Group (SDG):	74218

Sample Identification

EN001
EN002
EN003
EN004
EN005
EN006
EN007
EN008
EN009**
EN010
EN011
EN012**
EN013
EN014
EN015
EN016
EN017
EN018
EN002MS
EN002MSD

**Indicates sample underwent Full review.

Introduction

This data review covers 17 soil samples 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015C for Total Petroleum Hydrocarbons (TPH) as Gasoline.

This review follows the Final Work Plan Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii (May 2013), the Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific (DON 2007), and the U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.2 (October 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent a Full review. A Standard was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Standard criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank)

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits

Q MS/MSD recovery was poor

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory

M Instrument Performance Check (BFB or DFTPP) was noncompliant

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor

*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met verification criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as gasoline contaminants were found in the method blanks.

Samples EN011 and EN018 were identified as equipment rinsates. No total petroleum hydrocarbons as gasoline contaminants were found.

Sample EN010 was identified as a field blank. No total petroleum hydrocarbons as gasoline contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
EN002	4-Bromofluorobenzene	69.3 (76-131)	TPH as gasoline	J (all detects) UJ (all non-detects)	A

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
EN009**	4-Bromofluorobenzene	74.2 (76-131)	TPH as gasoline	J (all detects) UJ (all non-detects)	P
EN017	4-Bromofluorobenzene	48.9 (76-131)	TPH as gasoline	J (all detects) UJ (all non-detects)	P

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

IX. Compound Quantitation

All compound quantitations were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

X. System Performance

The system performance was acceptable for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

XIII. Field Triplicates

Samples EN001, EN002, and EN003, samples EN004, EN005, and EN006, and samples EN007, EN008, and EN009** were identified as field triplicates. No total petroleum hydrocarbons as gasoline were detected in any of the samples.

MCBH CTO 0015
Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG 74218

SDG	Sample	Compound	Flag	A or P	Reason (Code)
74218	EN002	TPH as gasoline	J (all detects) UJ (all non-detects)	A	Surrogate spikes (%R) (S)
74218	EN009** EN017	TPH as gasoline	J (all detects) UJ (all non-detects)	P	Surrogate spikes (%R) (S)

MCBH CTO 0015
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

MCBH CTO 0015
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

LDC #: 32797A7
SDG #: 74218
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Standard/Full

Date: 10/13/14
Page: 1 of 1
Reviewer: EJ
2nd Reviewer:

METHOD: GC TPH as Gasoline (EPA SW846 Method 8015C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/2 - 9/3/14
II	Initial calibration	A	% RSD ≤20, 1 2
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	SW	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	Not reviewed for Standard validation.
IX.	Compound quantitation/RL/LOQ/LODs	A	Not reviewed for Standard validation.
X.	System Performance	A	Not reviewed for Standard validation.
XI.	Overall assessment of data	A	
XII.	Field duplicates	ND	T= 1, 2, 3 4, 5, 6 7, 8, 9
XIII.	Field blanks	ND	FB = 10 ER = 11, 18

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: ** Indicates sample underwent Full validation

Soil & water

1	EN001	11	EN011 ER W	21	140912B - MB	31	
2	EN002	12	EN012 **	22	140915A - MB	32	
3	EN003	13	EN013	23		33	
4	EN004	14	EN014	24		34	
5	EN005	15	EN015	25		35	
6	EN006	16	EN016	26		36	
7	EN007	17	EN017	27		37	
8	EN008	18	EN018 ER W	28		38	
9	EN009**	19	EN002MS	29		39	
10	EN010W FB W	20	EN002MSD	30		40	

Notes:

LDC #: 32797A7

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?	✓			
Did the initial calibration meet the curve fit acceptance criteria?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ✓ %D or ___ %R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?		✓		
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?		✓		
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			

Validation Area	Yes	No	NA	Findings/Comments
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG. Triplicates	✓			
Target compounds were detected in the field duplicates.		✓		
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 32797A7

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: ✓ **GC** __ **HPLC**

Are surrogates required by the method? Yes___ or No___.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were surrogates spiked into all samples and blanks?

Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	2	↓	↓	69.3 (76-131)	J/UJ/A (S)
				( )	
				( )	
	9	↓	↓	74.2 (↓)	J/UJ/P (S)
				( )	
				( )	
	17	↓	↓	48.9 (↓)	J/UJ/P (S)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene	Z	2-Bromonaphthalene
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin	AA	1-Chlorooctadecane
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin	BB	2,4-DCAA
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC#: 32797A7
SDG#: 74218

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: GC TPH Extractables method 8015C

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
9/15/2014 Harpo	GC FID	GRO	1	862607	20
			2	2340124	50
			3	6046243	100
			4	20787698	300
			5	44090177	600
			6	58248921	800
			7	75314241	1000

Regression Output		*Reported*
Constant	*-1400832.295231*	
Std Err of Y Est		
R Squared	*0.999493*	*1.000000*
Degrees of Freedom		
X Coefficient(s)	*75782.521626*	
Std Err of Coef.		
Correlation Coefficient	*0.999746*	
Coefficient of Determination (r^2)	*0.999493*	

LDC #: 32797A7

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/ Conc. CCV	Recalculated CF/ Conc. CCV	Reported %D	Recalculated %D
1	0915H17 CCV	9/16/14	GRO	300	291.626	291.626	6.1	6.1
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 3279747

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #9

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
BFB	DB-624	29.122	21.597	74.2	74.2	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 32797A7

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: F2
2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

Where SSC = Spiked sample concentration; SC = Sample concentration; SA = Spike added; MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples: 19 + 20

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)	18.7	18.7	ND	13.4	14.0	71.7	71.7	74.9	74.9	4.4	4.4
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 3279747

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: F2
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; SA = Spike added
LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: 140915A – LC3

Compound	Spike Added (mg/kg)		Spike Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)	15.0	NA	13.0	NA	86.7	86.7	NA			
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 3279747

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd Reviewer: L

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. LCS (soil) Compound Name GRO

Concentration = $\frac{260 \text{ (final)} (50)}{1000}$

= 13 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications
	18315373 =	75782.521626 (X)	- 1400832.295		
		X = 260			

Comments: _____

Laboratory Data Consultants, Inc.
Data Verification Report

Project/Site Name:	MCBH CTO 0015
Collection Date:	September 2 through September 3, 2014
LDC Report Date:	October 17, 2014
Matrix:	Soil/Water
Parameters:	Total Petroleum Hydrocarbons as Extractables
Verification Level:	Standard & Full
Laboratory:	APPL, Inc.
Sample Delivery Group (SDG):	74218

Sample Identification

EN001
EN002
EN003
EN004
EN005
EN006
EN007
EN008
EN009**
EN010
EN011
EN012**
EN013
EN014
EN015
EN016
EN017
EN018
EN002MS
EN002MSD

**Indicates sample underwent Full review.

Introduction

This data review covers 17 soil samples and 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015C for Total Petroleum Hydrocarbons (TPH) as Extractables.

This review follows the Final Work Plan Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii (May 2013), the Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific (DON 2007), and the U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.2 (October 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent a Full review. A Standard was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Standard criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank)

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits

Q MS/MSD recovery was poor

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory

M Instrument Performance Check (BFB or DFTPP) was noncompliant

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor

*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met verification criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as extractables contaminants were found in the method blanks.

Samples EN011 and EN018 were identified as equipment rinsates. No total petroleum hydrocarbons as extractables contaminants were found.

Sample EN010 was identified as a field blank. No total petroleum hydrocarbons as extractables contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
EN002MS/MSD (EN002)	Diesel range organics (C10-C24)	34.0 (64-122)	-	58.7 (≤30)	J (all detects) UJ (all non-detects)	A

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

IX. Compound Quantitation

All compound quantitations were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

X. System Performance

The system performance was acceptable for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Triplicates

Samples EN001, EN002, and EN003, samples EN004, EN005, and EN006, and samples EN007, EN008, and EN009** were identified as field triplicates. No total petroleum hydrocarbons as extractables were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN001	EN002	EN003		
Diesel range organics (C10-C24)	14	12	14	-	9 (≤35)
Lubricant oil range organics (C24-C36)	37	20	23	-	34 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN004	EN005	EN006		
Diesel range organics (C10-C24)	9.5	11	11	-	8 (≤35)
Lubricant oil range organics (C24-C36)	19	18	20	-	5 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN007	EN008	EN009**		
Diesel range organics (C10-C24)	4.0	5.4	5.1	-	15 (≤35)
Lubricant oil range organics (C24-C36)	20	48	17	-	60 (≤35)

MCBH CTO 0015
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 74218

SDG	Sample	Compound	Flag	A or P	Reason (Code)
74218	EN002	Diesel range organics (C10-C24)	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD) (Q,E)

MCBH CTO 0015
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

MCBH CTO 0015
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

LDC #: 32797A8
SDG #: 74218
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Standard/Full

Date: 10/13/14
Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC TPH as Extractables(EPA SW846 Method 8015C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/2 - 9/3/14
II	Initial calibration	A	%D RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	SW	
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	Not reviewed for Standard validation.
IX.	Compound quantitation/RL/LOQ/LODs	A	Not reviewed for Standard validation.
X.	System Performance	A	Not reviewed for Standard validation.
XI.	Overall assessment of data	A	
XII.	Field duplicates	SW	T = 1,2,3 4,5,6 7,8,9
XIII.	Field blanks	ND	FB = 10 ER = 11 18

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: ** Indicates sample underwent Full validation

soil + water

1 W	EN001	11 W	EN011 ER W	21 W	140909A - MB	31	
2	EN002	12	EN012 **	22 W	140910A - MB	32	
3	EN003	13	EN013	23		33	
4	EN004	14	EN014	24		34	
5	EN005	15	EN015	25		35	
6	EN006	16	EN016	26		36	
7	EN007	17	EN017	27		37	
8	EN008	18 W	EN018 ER W	28		38	
9	EN009**	19	EN002MS	29		39	
10 W	EN010** W FB W	20	EN002MSD	30		40	

Notes:

LDC #: 32797AY

VALIDATION FINDINGS CHECKLIST

Reviewer: MT
2nd Reviewer:

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓		
Did the initial calibration meet the curve fit acceptance criteria?			✓	
Were the RT windows properly established?		✓		
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ____%D or ____%R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			

LDC #: 32797A8

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG. Triplicates	✓			
Target compounds were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 32797 A8

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: __ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?
Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	19 + 20	TPH - DRO	34.0 (64-122	( )	98.7 (30)	2	J/UJ/Δ
		(c10-c24)	( )	( )	( )		(Q, E)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC#:32797A3b

VALIDATION FINDINGS WORKSHEET

Field Duplicate/Triplicates

Reviewer: RJ
2nd Reviewer: A

METHOD: GC TPHE (EPA SW846 Method 8015)

Y N NA Were lab triplicates sets identified in this SDG?
Y N NA Were target analytes detected in the lab triplicate sets?

Compound	Concentration (mg/kg)			RSD (≤35%)
	1	2	3	
TPH-DRO (C10-C24)	14	12	14	9
TPH-LRO (C24-C36)	37	20	23	34

Compound	Concentration (mg/kg)			RSD (≤35%)
	4	5	6	
TPH-DRO (C10-C24)	9.5	11	11	8
TPH-LRO (C24-C36)	19	18	20	5

Compound	Concentration (mg/kg)			RSD (≤35%)
	7	8	9	
TPH-DRO (C10-C24)	4.0	5.4	5.1	15
TPH-LRO (C24-C36)	20	48	17	60

V:\Field Triplicates\32797A8.wpd

LDC #: 32797A8

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FR
2nd Reviewer: A

METHOD: GC ✓ HPLC _____

The calibration factors (CF) and relative standard deviation (%RSD) were recalculated using the following calculations:

CF = A/C
Average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where: A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (400 std)	Recalculated CF (400 std)	Reported CF (initial)	Recalculated CF (intial)	Reported %RSD	Recalculated %RSD
1	ICAL Apollo	7/7/14	Diesel C10-C24	1319999	1319999	1296375	1296375	10	10
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A8

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FJ
2nd Reviewer:

METHOD: GC ✓ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/ Conc. CCV	Recalculated CF/ Conc. CCV	Reported %D	Recalculated %D
1	CCV 922016	9/23/14	Diesel (C10-C24)	1296370	1210300	1210300	6.6	6.6
2	CCV 922035	9/23/14	↓	↓	1200890	1200890	7.4	7.4
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A8

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #9

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
octacosane	DB-5	2297.794	1980.205	86.2	86.18	0
o-Terphenyl	↓	2297.794	1626.417	70.8	70.8	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 32797A

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FR
2nd Reviewer: [illegible]

METHOD: ___ GC ___ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

Where SSC = Spiked sample concentration; SC = Sample concentration; SA = Spike added; MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples: 19 + 20

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)	40	40	10	23.6	43.2	34.0	34	83.0	83	58.7	58.7
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A8

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: F2
2nd Reviewer:

METHOD: ___ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration
LCS = Laboratory Control Sample
SA = Spike added
LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: 140910A VC)

Compound	Spike Added (mg/kg)		Spike Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)	40	NA	28.6	NA	71.5	71.5	NA			
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A8

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd Reviewer: ✓

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #9 Compound Name DRO

Concentration = $\frac{26690015 \quad (5)(5)}{1296375 \quad (65.28)(0.766)(2)}$

= 5.1 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	MCBH CTO 0015
Collection Date:	September 2, 2014
LDC Report Date:	October 17, 2014
Matrix:	Soil
Parameters:	Dioxins/Dibenzofurans
Validation Level:	Standard
Laboratory:	APPL, Inc.
Sample Delivery Group (SDG):	74218

Sample Identification

EN001

Introduction

This data review covers one soil sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8290 for Polychlorinated Dioxins/Dibenzofurans.

This review follows the Final Work Plan Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii (May 2013), the Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific (DON 2007), and the U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.2 (October 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank)

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits

Q MS/MSD recovery was poor

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory

M Instrument Performance Check (BFB or DFTPP) was noncompliant

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor

*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. HRGC/HRMS Instrument Performance Check

Instrument performance was checked at the required daily frequency.

Retention time windows were established for all homologues.

The chromatographic resolution between 2,3,7,8-TCDD and the peaks representing any other unlabeled TCDD isomers was resolved with a valley of less than or equal to 25%.

III. Initial Calibration

A five point initial calibration was performed as required by the method.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 20.0% for unlabeled compounds and less than or equal to 30.0% for labeled compounds.

The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polychlorinated dioxin/dibenzofuran contaminants were found in the method blanks.

No field blanks were identified in this SDG.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. The percent recoveries (%R) were within the QC limits.

VIII. Regional Quality Assurance and Quality Control

Not applicable.

IX. Internal Standards

All internal standard recoveries (%R) were within QC limits.

X. Target Compound Identifications

Raw data were not reviewed for this SDG.

XI. Compound Quantitation

Raw data were not reviewed for this SDG.

XII. System Performance

Raw data were not reviewed for this SDG.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

MCBH CTO 0015
Dioxins/Dibenzofurans - Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

MCBH CTO 0015
Dioxins/Dibenzofurans - Laboratory Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

MCBH CTO 0015
Dioxins/Dibenzofurans - Field Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

LDC #: 32797A21 **VALIDATION COMPLETENESS WORKSHEET** Date: 10-14-14
SDG #: 74218 Standard Page: 1 of 1
Laboratory: APPL, Inc. Reviewer: 9m
2nd Reviewer: 4

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA SW 846 Method 8290)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/2/14
II.	HRGC/HRMS Instrument performance check	A	
III.	Initial calibration	A	≤20
IV.	Continuing calibration/~~ICV~~	A	CCV ≤20/30
V.	Blanks	A	
VI.	Matrix spike/Matrix spike duplicates	N	C.S.
VII.	Laboratory control samples	A	LCS
VIII.	Regional quality assurance and quality control	N	
IX.	Internal standards	A	
X.	Target compound identifications	N	
XI.	Compound quantitation/RL/LOQ/LODs	N	
XII.	System performance	N	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	N	
XV.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil

1	EN001	11		21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20	140917B-BLK	30		40	

Notes:

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Element Environmental LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701
ATTN: Mr. Roger Aoki

November 14, 2014

SUBJECT: Revised MCBH CTO 0015, Data Validation

Dear Mr. Aoki,

Enclosed is the revised validation report for the fraction listed below. Please replace the previously submitted report with the enclosed revised report.

LDC Project #32797:

SDG #	Fraction
74218	Semivolatiles

- Corrected reason for qualification from "Continuing calibration (%D)" to "Initial calibration (%RSD)" in Qualification Summary tables

Please feel free to contact us if you have any questions.

Sincerely,

Andrew Kong
Project Manager/Senior Chemist

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCBH CTO 0015

Collection Date: September 2 through September 3, 2014

LDC Report Date: November 13, 2014

Matrix: Soil/Water

Parameters: Semivolatiles

Validation Level: Standard & Full

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 74218

Sample Identification

EN001
EN002
EN003
EN004
EN005
EN006
EN007
EN008
EN009**
EN010
EN011
EN012**
EN013
EN014
EN015
EN016
EN017
EN018
EN002MS
EN002MSD

**Indicates sample underwent Full review

Introduction

This data review covers 17 soil samples and 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Semivolatiles.

This review follows the Final Work Plan Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii (May 2013), the Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific (DON 2007), and the U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.2 (October 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent a Full review. A Standard review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Standard criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank)

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits

Q MS/MSD recovery was poor

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory

M Instrument Performance Check (BFB or DFTPP) was noncompliant

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor

*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	A or P
9/10/14	Pentachlorophenol	24	All water samples in SDG 74218	J (all detects) UJ (all non-detects)	A
9/20/14	Pentachlorophenol	29	All soil samples in SDG 74218	J (all detects) UJ (all non-detects)	A

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the validation criteria of less than or equal to 20.0% for all compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks.

Samples EN011 and EN018 were identified as equipment rinsates. No semivolatile contaminants were found.

Sample EN010 was identified as a field blank. No semivolatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. Surrogate recoveries (%R) were not within QC limits for samples EN016 and EN017. No data were qualified since the method allows for one base and one acid surrogate %R to be outside the QC limits if the surrogate %R is greater than 10%.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
EN002MS/MSD (EN002)	2,4-Dimethylphenol 2,4-Dinitrophenol 3,3'-Dichlorobenzidine	25.9 (30-105) - 9.6 (10-130)	24.4 (30-105) 12.5 (15-130) 7.2 (10-130)	- - -	J (all detects) UJ (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
140915A-LCS	4-Chloroaniline	119 (10-95)	All soil samples in SDG 74218	J (all detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XII. Compound Quantitation

All compound quantitations were within validation criteria for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable for samples on which a Full review was performed. Raw data were not evaluated for the samples reviewed by Standard criteria.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Triplicates

Samples EN001, EN002, and EN003, samples EN004, EN005, and EN006, and samples EN007, EN008, and EN009** were identified as field triplicates. No semivolatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN001	EN002	EN003		
Bis(2-ethylhexyl)phthalate	0.54	0.29	0.56	-	34 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN004	EN005	EN006		
Bis(2-ethylhexyl)phthalate	1.0	0.45	0.40	-	54 (≤35)

Compound	Concentration (mg/Kg)			RPD (Limits)	%RSD (Limits)
	EN007	EN008	EN009**		
Bis(2-ethylhexyl)phthalate	1.1	0.38	0.52	-	57 (≤35)

MCBH CTO 0015
Semivolatiles - Data Qualification Summary - SDG 74218

SDG	Sample	Compound	Flag	A or P	Reason (Code)
74218	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009** EN010 EN011 EN012** EN013 EN014 EN015 EN016 EN017 EN018	Pentachlorophenol	J (all detects) UJ (all non-detects)	A	Initial calibration (%RSD) (C)
74218	EN002	2,4-Dimethylphenol 2,4-Dinitrophenol 3,3'-Dichlorobenzidine	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
74218	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009** EN012** EN013 EN014 EN015 EN016 EN017	4-Chloroaniline	J (all detects)	P	Laboratory control samples (%R) (L)

MCBH CTO 0015
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

MCBH CTO 0015
Semivolatiles - Field Blank Data Qualification Summary - SDG 74218

No Sample Data Qualified in this SDG

LDC #: 32797A2a

SDG #: 74218

Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET

Standard/Full

Date: 10/14/14

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/2 - 9/3/14
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	% RSD ≤ 15
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	Not reviewed for Standard validation.
XII.	Compound quantitation/RL/LOQ/LODs	A	Not reviewed for Standard validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for Standard validation.
XIV.	System performance	A	Not reviewed for Standard validation.
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	T = 1,2,3 4,5,6 7,8,9
XVII.	Field blanks	ND	FB = 10 ER = 11, 18

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Full validation

water + soil

1	EN001	11	EN011 ER W	21	140908A	31	
2	EN002	12	EN012 **	22	140915A	32	
3	EN003	13	EN013	23		33	
4	EN004	14	EN014	24		34	
5	EN005	15	EN015	25		35	
6	EN006	16	EN016	26		36	
7	EN007	17	EN017	27		37	
8	EN008	18	EN018 ER W	28		38	
9	EN009**	19	EN002MS	29		39	
10	EN010 FB W	20	EN002MSD	30		40	

LDC #: 32797A2a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓	✓		
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30%/15% and relative response factors (RRF) > 0.05?		✓		
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.			✓	
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓	✓		
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	T. 4-Chloroaniline	MM. 4-Chlorophenyl-phenyl ether	FFF. Di-n-octylphthalate	YYY. 2,3,5-Trimethylnaphthalene
B. Bis (2-chloroethyl) ether	U. Hexachlorobutadiene	NN. Fluorene	GGG. Benzo(b)fluoranthene	ZZZ. Perylene
C. 2-Chlorophenol	V. 4-Chloro-3-methylphenol	OO. 4-Nitroaniline	HHH. Benzo(k)fluoranthene	AAAA. Dibenzothiophene
D. 1,3-Dichlorobenzene	W. 2-Methylnaphthalene	PP. 4,6-Dinitro-2-methylphenol	III. Benzo(a)pyrene	BBBB. Benzo(a)fluoranthene
E. 1,4-Dichlorobenzene	X. Hexachlorocyclopentadiene	QQ. N-Nitrosodiphenylamine	JJJ. Indeno(1,2,3-cd)pyrene	CCCC. Benzo(b)fluorene
F. 1,2-Dichlorobenzene	Y. 2,4,6-Trichlorophenol	RR. 4-Bromophenyl-phenylether	KKK. Dibenz(a,h)anthracene	DDDD. cis/trans-Decalin
G. 2-Methylphenol	Z. 2,4,5-Trichlorophenol	SS. Hexachlorobenzene	LLL. Benzo(g,h,i)perylene	EEEE. Biphenyl
H. 2,2'-Oxybis(1-chloropropane)	AA. 2-Chloronaphthalene	TT. Pentachlorophenol	MMM. Bis(2-Chloroisopropyl)ether	FFFF. Retene
I. 4-Methylphenol	BB. 2-Nitroaniline	UU. Phenanthrene	NNN. Aniline	GGGG. C30-Hopane
J. N-Nitroso-di-n-propylamine	CC. Dimethylphthalate	VV. Anthracene	OOO. N-Nitrosodimethylamine	HHHH. 1-Methylphenanthrene
K. Hexachloroethane	DD. Acenaphthylene	WW. Carbazole	PPP. Benzoic Acid	IIII. 1,4-Dioxane
L. Nitrobenzene	EE. 2,6-Dinitrotoluene	XX. Di-n-butylphthalate	QQQ. Benzyl alcohol	JJJJ. Acetophenone
M. Isophorone	FF. 3-Nitroaniline	YY. Fluoranthene	RRR. Pyridine	KKKK. Atrazine
N. 2-Nitrophenol	GG. Acenaphthene	ZZ. Pyrene	SSS. Benzidine	LLLL. Benzaldehyde
O. 2,4-Dimethylphenol	HH. 2,4-Dinitrophenol	AAA. Butylbenzylphthalate	TTT. 1-Methylnaphthalene	MMMM. Caprolactam
P. Bis(2-chloroethoxy)methane	II. 4-Nitrophenol	BBB. 3,3'-Dichlorobenzidine	UUU.Benzo(b)thiophene	NNNN.
Q. 2,4-Dichlorophenol	JJ. Dibenzofuran	CCC. Benzo(a)anthracene	VVV.Benzonaphthothiophene	OOOO.
R. 1,2,4-Trichlorobenzene	KK. 2,4-Dinitrotoluene	DDD. Chrysene	WWW.Benzo(e)pyrene	PPPP.
S. Naphthalene	LL. Diethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	XXX. 2,6-Dimethylnaphthalene	QQQQ.

LDC #: 32797A2a

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Did the laboratory conduct an acceptable 5 point calibration prior to sample analysis?
Y N N/A Were percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCC's and SPCC's?
Y N N/A Was a curve fit used for evaluation? If yes, what was the acceptance criteria used for evaluation?_____
Y N N/A Did the initial calibration meet the acceptance criteria?
Y N N/A Were all %RSDs and RRFs within the validation criteria of ≤15/30 %RSD and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ~~≤15/30.0%~~) FT	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	9/10/14	ICAL-YODA	TT	24		all water	J/UJ/A (C)
	9/20/14	ICAL-YODA	TT	29		all soils	↓

LDC #: 32797A2a

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were percent recoveries (%R) for surrogates within QC limits?
Y N N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N (N/A) If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		16	PHL	101 (40-100)	no qual
				( )	
				( )	
		17	PHL	105 (40-100)	↓
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
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				( )	
				( )	

(NBZ) = Nitrobenzene-d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl-d14
(PHL) = Phenol-d5
(2FP)= 2-Fluorophenol
(TBP) = 2,4,6-Tribromophenol
(2CP) = 2-Chlorophenol-d4
(DCB) = 1,2-Dichlorobenzene-d4

LDC #: 32797A2a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		9+20	O	25.9 (30-105)	24.4 (30-105)	( )	2	J/W/A (Q)
			HH	( )	12.5 (15-130)	( )	↓	↓
			BBB	9.6 (10-130)	7.2 (10-130)	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	(

LDC #: 32797A2a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?

Y N N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	140915A-LCS	T	119 (10-95)	( )	( )	all soils	J/P dil (L)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC#:32797A2a

VALIDATION FINDINGS WORKSHEET
Field Duplicate/Triplicates

Reviewer: P2
2nd Reviewer: A

METHOD: GCMS SVOA(EPA SW846 Method 8270C)

Y N NA Were lab triplicates sets identified in this SDG?
Y N NA Were target analytes detected in the lab triplicate sets?

Compound	Concentration (mg/kg)			RSD (≤35%)
	1	2	3	
EEE	0.57	0.29	0.56	34
				??

Compound	Concentration (mg/kg)			RSD (≤35%)
	4	5	6	
EEE	1.0	0.45	0.40	54
				??

Compound	Concentration (mg/kg)			RSD (≤35%)
	7	8	9	
EEE	1.1	0.38	0.52	57
				??

LDC #: 32797A2q

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)
The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard
S = Standard deviation of the RRFs, X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Internal Standard)	Reported RRF (50 std)	Recalculated RRF (50 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL YODA	9/20/14	A (1st IS)	1.299	1.299	1.369	1.369	15	15
			R (2nd IS)	0.2805	0.2805	0.2797	0.2797	3.7	3.7
			### Z (3rd IS)	~~0.0670~~ 0.3007	0.3007	0.3148	0.3148	7.9	7.9
			TT (4th IS)	0.0732	0.0732	0.0645	0.0645	29	29
			EEE (5th IS)	0.8867	0.8867	0.9029	0.9029	15	15
			(6th IS)						
2			(1st IS)						
			(2nd IS)						
			(3rd IS)						
			(4th IS)						
			(5th IS)						
			(6th IS)						
3			(1st IS)						
			(2nd IS)						
			(3rd IS)						
			(4th IS)						
			(5th IS)						
			(6th IS)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A2a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)
The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 09214002	9/21/14	A (1st IS)	1.369	1.414	1.414	3.3	3.3
			B (2nd IS)	0.2797	0.2733	0.2733	2.3	2.3
			C (3rd IS)	0.3148	0.3567	0.3567	13	13
			TT (4th IS)	0.0645	0.0722	0.0722	12	12
			EEE (5th IS)	0.9029	0.8576	0.8576	5.0	5.0
			(6th IS)					
2			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					
3			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A29

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 11 9

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	3317.850	2470.729	74.5	74.5	0
2-Fluorobiphenyl	3317.850	2430.7769	73.3	73.3	
Terphenyl-d14	3317.850	2487.832	75.0	75.0	
Phenol-d5	6635.70	5980.294	90.1	90.1	
2-Fluorophenol 6635.70	~~2404.082~~ F1	4897.521	70.8	70.8	
2,4,6-Tribromophenol	6635.70	3861.707	58.2	58.2	
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 32797A29

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 19 + 20

Compound	Spike Added (mg/kg)		Sample Concentration (mg/kg)	Spiked Sample Concentration (mg/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-----	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalc
Phenol	1.65	1.65	ND	1.46	1.37	88.5	88.5	83.0	83.0	6.4	6.4
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene											
Pentachlorophenol	↓	↓	ND	0.541	0.465	32.8	32.8	28.2	28.2	15.1	15.1
Pyrene											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A2a

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 140915A - LCS

Compound	Spike Added (mg/kg)		Spike Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol	1.66	NA	1.58	NA	95.2	95.2				
N-Nitroso-di-n-propylamine	NA									
4-Chloro-3-methylphenol	↓									
Acenaphthene										
Pentachlorophenol	1.66		0.870	NA	52.4	52.4				
Pyrene	NA	↓					NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 32797A2a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #9, BEE:

Conc. = $\frac{(22570)(40)(1)}{(633837)(1006)(30.14)(0.9029)}$ =

0.52 mg/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

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Table F-1: Data Validation Exceptions - Initial Calibration

Date	Compound	%RSD	Associated Sample	Flag	A or P
9/10/14	Pentachlorophenol	24	All water samples in SDG 74218	J (all detects) UJ (all non-detects)	A
9/20/14	Pentachlorophenol	29	All soil samples in SDG 74218	J (all detects) UJ (all non-detects)	A

Table F-2: Data Validation Exceptions - Continuing Calibration

Date	Standard	Column	Compound	%D	Associated Sample	Flag	A or P
9/24/14	0922128	DB-35MS	Gamma-BHC Heptachlor 4,4'-DDT Methoxychlor	30 36 24 23	EN006 EN007 EN009 EN017	J (all detects) UJ (all non-detects)	A
9/24/14	0922128	DB-XLB	Gamma-BHC Heptachlor	24 53	EN006 EN007 EN009 EN017	J (all detects) UJ (all non-detects)	A
9/24/14	0922145	DB-35MS	Endosulfan sulfate	22	EN008 EN012 EN013 EN014 EN015 EN016	J (all detects) UJ (all non-detects)	A
9/24/14	0922145	DB-XLB	Heptachlor	37	EN008 EN012 EN013 EN014 EN015 EN016	J (all detects) UJ (all non-detects)	A
9/23/14	Lucy ICV	DB-35MS	Aroclor-1260	22.2	All samples in SDG 74218	Aroclor-1254 Aroclor-1260 Aroclor-1242 Aroclor-1248 Total PCBs	A

Table F-3: Data Validation Exceptions - ICBs/CCBs/PBs

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Chromium	0.23 µg/L	All water samples in SDG 74218

Table F-4: Data Validation Exceptions - ICBs/CCBs/PBs Data Qualification

Sample	Analyte	Reported Concentration	Modified Final Concentration
EN010	Chromium	0.30 µg/L	0.30U µg/L
EN011	Chromium	0.31 µg/L	0.31U µg/L

EN018	Chromium	0.35 µg/L	0.35U µg/L

Table F-5: Data Validation Exceptions - Trip Blanks

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
Trip Blank	9/5/14	Chloromethane	0.53 µg/L	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009 EN010 EN011 EN012 EN013 EN014 EN015 EN016 EN017

Table F-6: Data Validation Exceptions - Equipment Rinsates

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EN011	9/2/14	Acetone Chloromethane Toluene	1.8 µg/L 0.45 µg/L 0.32 µg/L	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009
EN018	9/3/14	Acetone Toluene	2.6 µg/L 0.19 µg/L	EN012 EN013 EN014 EN015 EN016 EN017
EN011	9/2/14	Chromium Copper Nickel	0.31 µg/L 0.46 µg/L 0.25 µg/L	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EN018	9/3/14	Chromium Copper Nickel	0.35 µg/L 0.45 µg/L 0.31 µg/L	EN012 EN013 EN014 EN015 EN016 EN017

Table F-7: Data Validation Exceptions - Field Blank

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EN010	9/2/14	1,2-Dichloroethane Acetone Toluene	0.24 µg/L 1.7 µg/L 0.28 µg/L	All soil samples in SDG 74218
EN010	9/2/14	Chromium Copper Nickel	0.30 µg/L 0.57 µg/L 0.28 µg/L	All soil samples in SDG 74218

Table F-8: Data Validation Exceptions - Field Blank Sample Comparisons

Sample	Compound	Reported Concentration	Modified Final Concentration
EN011	Chloromethane	0.45 µg/L	0.45U µg/L

Table F-9: Data Validation Exceptions - Surrogate Spikes

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
EN006	2-Fluorobiphenyl Terpheny-d14	109 (45-105) 163 (30-125)	All TCL compounds	J (all detects)	P
EN002	4-Bromofluorobenzene	69.3 (76-131)	TPH as Gasoline	J (all detects) UJ (all non-detects)	A
EN009	4-Bromofluorobenzene	74.2 (76-131)	TPH as Gasoline	J (all detects) UJ (all non-detects)	P
EN017	4-Bromofluorobenzene	48.9 (76-131)	TPH as Gasoline	J (all detects) UJ (all non-detects)	P

Table F-10: Data Validation Exceptions - Matrix Spikes/Matrix Spike Duplicates

Spike ID (Associated Samples	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
EN002MS / MSD (EN002)	2,4-Dimenthylphenol 2,4-Dinitrophenol 3,3-Dichlorobenzidine	25.9 (30-105) - 9.6 (10-130)	24.4 (30-105) 12.5 (15-130) 7.2 (10-130)	- - -	J (all detects) UJ (all non-detects)	A
EN002MS / MSD (EN002)	1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene	137 (45-105) - 114 (45-110) 113 (45-105)	110 (45-105) 115 (45-105) 114 (45-110) 109 (45-105)	- - - -	J (all detects)	A

Spike ID (Associated Samples	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
	Anthracene	129 (55-105)	113 (55-105)	-		
	Benzo(a)anthracene	125 (55-110)	117 (50-110)	-		
	Fluorene	116 (50-110)	-	-		
	Phenanthrene	125 (50-110)	114 (50-110)	-		
	Benzo(a)pyrene	118 (50-110)	-	-		
EN002MS / MSD (EN002)	Benzo(k)fluoranthene	-	-	31.1 (≤30)	J (all detects) UJ (all non-detects)	A
	Fluoranthene	131 (55-115)	-	31.7 (≤30)		
	Indeno(1,2,3-cd)pyrene	-	147 (40-120)	32.7 (≤30)		
EN002MS / MSD (All soil samples in SDG 74218)	Beryllium	350 (80-120)	350 (80-120)	-	J (all detects)	A
EN002MS / MSD (All soil samples in SDG 74218)	Antimony	29.6 (80-120)	30.6 (80-120)	-	J (all detects) UJ (all non-detects)	A
	Arsenic	66.0 (80-120)	64.0 (80-120)	-		
	Copper	46.0 (80-120)	46.0 (80-120)	-		
	Selenium	54.8 (80-120)	53.8 (80-120)	-		
	Silver	76.7 (80-120)	76.7 (80-120)	-		
	Thallium	69.8 (80-120)	70.8 (80-120)	-		
	Mercury	-	74.8 (80-120)	-		
EN002MS / MSD (EN002)	2,4-D	32.3 (35-145)	27.3 (35-145)	-	J (all detects) UJ (all non-detects)	A
	Dalapon	14.5 (44-139)	14.8 (44-139)	-		
EN002MS / MSD (EN002)	Diesel range organics (C10-C24)	34.0 (64-122)	-	58.7 (≤30)	J (all detects) UJ (all non-detects)	A

Table F-11: Data Validation Exceptions - Laboratory Control Samples

LCS ID	Compound	%R (Limits)	Associated Sample	Flag	A or P
140915A-LCS	4-Chloroaniline	119 (10-95)	All soil samples in SDG 74218	J (all detects)	P

Table F-12: Data Validation Exceptions - Internal Standards

Sample	Internal Standard	% R (Limits)	Analyte	Flag	A or P
EN009	Scandium-45 (no gas)	132.31 (30-120)	Beryllium	J (all detects) UJ (all non-detects)	A
	Scandium-45 (w/Helium)	128.93 (30-120)	Chromium		
			Copper		
			Nickel		

Table F-13: Data Validation Exceptions - Compound Quantitation

Sample	Compound	Finding	Flag	A or P
EN001 EN002 EN003 EN004 EN005 EN006 EN008 EN009 EN012 EN013 EN015 EN016	Benzo(b)fluoranthene Benzo(k)fluoranthene	Due to lack of resolution between these compounds in the samples, the laboratory performed the quantitation using the total peak area.	J (all detects)	A

Table F-14: Data Validation Exceptions - Compound Quantitation RPD

Sample	Compound	RPD	Flag	A or P
EN004	Chlordane, technical	48	J (all detects)	A
EN006	Chlordane, technical	49	J (all detects)	A
EN009	Chlordane, technical	46	J (all detects)	A
EN014	Chlordane, technical	41	J (all detects)	A
EN013	Aroclor-1254	43	J (all detects)	A
EN015	Aroclor-1254	75	J (all detects)	A
EN016	Aroclor-1254	51	J (all detects)	A

Table F-15: Data Qualifications - Summary

SDG	Sample IDs	Compound	Flag	A or P	Reason
74218	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009 EN010 EN011 EN012 EN013 EN014 EN015 EN016 EN017 EN018	Pentachlorophenol	J (all detects) UJ (all non-detects)	A	Initial calibration (%RSD) (C)
74218	EN002	2,4-Dimenthylphenol 2,4-Dinitrophenol 3,3-Dichlorobenzidine	J (all detects) UJ (all non-detects)	A	Matrix Spike/Matrix Spike Duplicate (%R) (Q)
74218	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009 EN012 EN013 EN014 EN015 EN016 EN017	4-Chloroaniline	J (all detects)	P	Laboratory control samples (%R) (L)
74218	EN006	All TCL Compounds	J (all detects)	P	Surrogate Spikes (%R) (S)
74218	EO002	1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Fluorene Phenanthrene Benzo(a)pyrene	J (all detects)	A	Matrix Spike/Matrix Spike Duplicate (%R) (Q)
74218	EN002	Benzo(k)fluoranthene	J (all detects) UJ (all non-detects)	A	Matrix Spike/Matrix Spike Duplicate (RPD) (E)
74218	EN002	Fluoranthene Indeno(1,2,3-cd)pyrene	J (all detects) UJ (all non-detects)	A	Matrix Spike/Matrix Spike Duplicate (%R) (RPD) (Q,E)

74218	EN001 EN002 EN003 EN004 EN005 EN006 EN008 EN009 EN012 EN013 EN015 EN016	Benzo(b)fluoranthene Benzo(k)fluoranthene	J (all detects)	A	Compound quantitation (peak resolution) (*XII)
74218	EN006 EN007 EN009 EN017	Gamma-BHC Heptachlor 4,4'-DDT Methoxychlor	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
74218	EN008 EN012 EN013 EN014 EN015 EN016	Endosulfan sulfate Heptachlor	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
74218	EN004 EN006 EN009 EN017	Technical chlordane	J (all detects)	A	Compound Quantitation (RPD) (*XII)
74218	EN001 EN002 EN003 EN004 EN005 EN006 EN007 EN008 EN009 EN010 EN011 EN012 EN013 EN014 EN015 EN016 EN017 EN018	Aroclor-1254 Aroclor-1260 Aroclor-1242 Aroclor-1248 Total PCBs	J (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D) (C)
74218	EN013 EN015 EN016	Aroclor-1254 Aroclor-1260 Aroclor-1242 Aroclor-1248 Total PCBs	J (all detects) UJ (all non-detects)	A	Compound Quanititation (RPD) (*XII)
74218	EN002	2,4-D Dalapon	J (all detects) UJ (all non-detects)	A	Matrix Spike/Matrix Spike Duplicate (%R) (Q)
74218	EN002	TPH as gasoline	J (all detects) UJ (all non-detects)	A	Surrogate Spikes (%R) (S)
74218	EN009 EN017	TPH as gasoline	J (all detects) UJ (all non-detects)	P	Surrogate Spikes (%R) (S)

74218	EN002	Diesel range organics (C10-C24)	J (all detects) UJ (all non-detects)	A	Matrix Spike/Matrix Spike Duplicate (%R) (RPD) (Q,E)

Table F-16: Laboratory Blank Data Qualifications - Summary

SDG	Sample IDs	Compound	Modified Final Concentration	A or P	Reason
74218	EN010	Chromium	0.30U µg/L	A	B
74218	EN011	Chromium	0.31U µg/L	A	B
74218	EN018	Chromium	0.35U µg/L	A	B

Table F-17: Field Blank Data Qualifications - Summary

SDG	Sample IDs	Compound	Modified Final Concentration	A or P	Reason
74218	EN0011	Chloromethane	0.45U µg/L	A	T

Table F-18: Field Triplicates - Summary

Compound	Concentration (mg/kg)			RPD (Limits)	%RSD (Limits)
	EN001	EN002	EN003		
Bis(2-ethylhexyl)phthalate	0.54	0.29	0.56	-	34 (≤35)
2-Methylnaphthalene	0.0017U	0.0013	0.0017U	-	Not Calculable
Anthracene	0.0017	0.0013	0.0016	-	14 (≤35)
Benzo(a)anthracene	0.013	0.0099	0.0060	-	36 (≤35)
Benzo(a)pyrene	0.011	0.0093	0.0094	-	10 (≤35)
Benzo(b)fluoranthene	0.021	0.018	0.015	-	17 (≤35)
Benzo(g,h)perylene	0.013	0.026	0.020	-	33 (≤35)
Benzo(k)fluoranthene	0.021	0.018	0.016	-	14 (≤35)
Chrysene	0.013	0.010	0.0087	-	21 (≤35)
Dibenz(a,h)anthracene	0.0040	0.010	0.0017U	81 (≤100)	-
Fluoranthene	0.021	0.015	0.010	-	36 (≤35)

Compound	Concentration (mg/kg)			RPD (Limits)	%RSD (Limits)
	EN001	EN002	EN003		
Indeno(1,2,3-cd)pyrene	0.011	0.012	0.0060	-	33 (≤35)
Phenanthrene	0.011	0.0043	0.0043	-	59 (≤35)
Pyrene	0.025	0.014	0.010	-	48 (≤35)
4,4'-DDE	0.025	0.024	0.022	-	6 (≤35)
Chlordane, technical	0.37	0.31	0.45	-	19 (≤35)
Aroclor-1254	0.49	0.38	0.59	-	22 (≤35)
Total PCBs	0.49	0.38	0.59	-	22 (≤35)
Antimony	0.18	0.14	0.24	-	27 (≤35)
Arsenic	5.2	5.1	5.4	-	3 (≤35)
Beryllium	0.25	0.26	0.25	-	2 (≤35)
Cadmium	0.26	0.22	0.24	-	8 (≤35)
Chromium	60.7	60.6	63.8	-	3 (≤35)
Copper	26.7	26.4	26.4	-	1 (≤35)
Lead	23.7	22.5	19.6	-	10 (≤35)
Mercury	0.065	0.061	0.058	-	6 (≤35)
Nickel	143	136	131	-	4 (≤35)
Selenium	0.14	0.12	0.13	-	8 (≤35)
Silver	0.048	0.034	0.032	-	23 (≤35)
Thallium	0.049	0.021	0.028	-	45 (≤35)
Zinc	114	106	109	-	4 (≤35)

Compound	Concentration (mg/kg)			RPD (Limits)	%RSD (Limits)
	EN001	EN002	EN003		
Diesel Range Organics (C10-C24)	14	12	14	-	9 (≤35)
Lubricant oil range organics (C24-C36)	37	20	23	-	34 (≤35)

Compound	Concentration (mg/kg)			RPD (Limits)	%RSD (Limits)
	EN004	EN005	EN006		
Bis(2-ethylhexyl)phthalate	1.0	0.45	0.40	-	54 (≤35)
1-Methylnaphthalene	0.0065	0.0017U	0.0017U	-	Not Calculable
2-Methylnaphthalene	0.0047	0.0017U	0.0017U	-	Not Calculable
Acenaphthylene	0.00099	0.0017U	0.0012	19 (≤100)	-
Anthracene	0.0014	0.0015	0.0040	-	64 (≤35)
Benzo(a)anthacene	0.0052	0.0041	0.034	-	117 (≤35)
Benzo(a)pyrene	0.0068	0.0044	0.032	-	106 (≤35)
Benzo(b)fluoranthene	0.017	0.010	0.069	-	101 (≤35)
Benzo(g,h,i)perylene	0.015	0.011	0.021	-	32 (≤35)
Dibenz(a,h)anthracene	0.018	0.010	0.069	-	99 (≤35)
Chrysene	0.0070	0.0039	0.028	-	101 (≤35)
Fluoranthene	0.010	0.0056	0.040	-	101 (≤35)
Indeno(1,2,3-cd)pyrene	0.0017U	0.0017U	0.012	-	Not Calculable
Phenanthrene	0.0062	0.0025	0.0082	-	51 (≤35)
Pyrene	0.0090	0.0056	0.045	-	110 (≤35)

Compound	Concentration (mg/kg)			RPD (Limits)	%RSD (Limits)
	EN004	EN005	EN006		
4,4'-DDE	0.033	0.030	0.046	-	23 (≤35)
Chlordane, technical	0.81	1.1	0.72	-	23 (≤35)
Aroclor-1254	0.84	0.53	1.2	-	39 (≤35)
Total PCBs	0.84	0.53	1.2	-	39 (≤35)
Arsenic	4.6	4.6	5.1	-	6 (≤35)
Beryllium	0.26	0.26	0.26	-	0 (≤35)
Cadmium	0.22	0.22	0.24	-	5 (≤35)
Chromium	58.3	58.2	61.5	-	3 (≤35)
Copper	23.7	23.1	24.8	-	4 (≤35)
Lead	20.4	21.0	26.7	-	15 (≤35)
Mercury	0.068	0.060	0.068	-	7 (≤35)
Nickel	143	145	144	-	1 (≤35)
Selenium	0.098	0.084	0.10	-	9 (≤35)
Silver	0.026	0.027	0.032	-	11 (≤35)
Thallium	0.022	0.023	0.025	-	7 (≤35)
Zinc	102	106	112	-	5 (≤35)
Diesel Range Organics (C10-C24)	9.5	11	11	-	8 (≤35)
Lubricant oil range organics (C24-C36)	19	18	20	-	5 (≤35)

Compound	Concentration (mg/kg)			RPD (Limits)	%RSD (Limits)
	EN007	EN008	EN009		
Bis(2-ethylhexyl)phthalate	1.1	0.38	0.52	-	57 (≤35)
Anthracene	0.0017U	0.024	0.0047	-	Not Calculable
Benzo(a)anthracene	0.0017U	0.024	0.0047	94 (≤100)	-
Benzo(a)pyrene	0.0017U	0.023	0.0039	79 (≤100)	-
Benzo(b)fluoranthene	0.0017U	0.048	0.0080	130 (≤100)	-
Benzo(g,h,i)perylene	0.014	0.012	0.0078	-	28 (≤35)
Dibenz(a,h)anthracene	0.0017U	0.048	0.0080	130 (≤100)	-
Chrysene	0.0017U	0.020	0.0038	76 (≤100)	-
Fluoranthene	0.0017U	0.017	0.0079	129 (≤100)	-
Indeno(1,2,3-cd)pyrene	0.0071	0.0075	0.0047	-	24 (≤35)
Phenanthrene	0.0017U	0.0033	0.0021	21 (≤100)	-
Pyrene	0.0017U	0.017	0.0079	129 (≤100)	-
4,4'-DDE	0.019	0.021	0.016	-	13 (≤35)
Chlordane, technical	0.75	0.95	0.44	-	36 (≤35)
Aroclor-1254	0.28	0.42	0.23	-	32 (≤35)
Total PCBs	0.28	0.42	0.23	-	32 (≤35)
Arsenic	4.1	4.2	3.6	-	8 (≤35)
Beryllium	0.19	0.19	0.19	-	0 (≤35)
Cadmium	0.084	0.10	0.099	-	10 (≤35)

Compound	Concentration (mg/kg)			RPD (Limits)	%RSD (Limits)
	EN007	EN008	EN009		
Chromium	29.5	33.2	34.4	-	8 (≤35)
Copper	10.8	11.9	12.6	-	8 (≤35)
Lead	6.9	8.2	8.3	-	10 (≤35)
Mercury	0.04U	0.04U	0.015	-	Not Calculable
Nickel	68.5	74.4	79.6	-	7 (≤35)
Selenium	0.052	0.092	0.057	-	33 (≤35)
Zinc	39.5	42.7	48.7	-	11 (≤35)
Diesel Range Organics (C10-C24)	4.0	5.4	5.1	-	15 (≤35)
Lubricant oil range organics (C24-C36)	20	48	17	-	60 (≤35)

Table F-19: Usability, Completeness, and Field QC Summary

Analyte (Analytical Method)	Sample Counts		Number of Results			Percent Completeness
	Normal Field Sample	Field Replicates / QA	Total Results	Acceptable Results	Rejected Results	
VOCs	9	9	665	665	0	100%
SVOCs	9	9	468	468	0	100%
PAH	9	9	306	306	0	100%
Chlorinated Pesticides	9	9	288	288	0	100%
PCBs	9	9	144	144	0	100%
Herbicides	9	9	72	72	0	100%
TPH as Gasoline	9	9	18	18	0	100%
TPH as Extractables	9	9	36	36	0	100%
Dioxins	1	0	17	17	0	100%
Metals	9	9	234	234	0	100%

Analyte (Analytical Method)	Sample Counts		Number of Results			Percent Completeness
	Normal Field Sample	Field Replicates / QA	Total Results	Acceptable Results	Rejected Results	
Total	9	9	2,248	2,248	0	100%

* Rejected results were original results from samples that were diluted and reanalyzed.

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[1]Tier 1 EAL SURFER SUMMARY REPORT
Hawai'i DOH (Fall 2011; rev Jan 2012)

Site Name: Former NOSC Site
Site Address: MCB Hawaii

Site ID Number:
Date of EAL Search: 2/20/2015

Selected Site Scenario	
Land Use:	Unrestricted
Groundwater Utility:	Nondrinking Water Resource
Distance To Nearest Surface Water Body:	< 150m

Selected Chemical of Concern: POLYCHLORINATED BIPHENYLS (PCBs)

Input Site Concentrations	
Soil (mg/kg):	1.2
Groundwater (ug/L):	-
Soil Gas (ug/m^3):	-

Soil Environmental Hazards	Units	Tier 1 Action Level	[2]Potential Hazard?	[3]Referenced Table
Direct Exposure:	mg/kg	1.1E+00	Yes	Table I-1
Vapor Emissions To Indoor Air:	mg/kg	-	-	Table C-1b
Terrestrial Ecotoxicity:	mg/kg	site-specific	No	Table L
Gross Contamination:	mg/kg	5.0E+02	No	Table F-2
Leaching (threat to groundwater):	mg/kg	6.3E+00	No	Table E-1
Background:	mg/kg	-		
Final Soil Tier 1 EAL:	**mg/kg**	**1.1E+00**		
	Basis:	**Direct Exposure**		

Groundwater Environmental Hazards	Units	Tier 1 Action Level	[2]Potential Hazard?	[3]Referenced Table
Drinking Water (Toxicity):	ug/L	-	-	Table D-1c
Vapor Emissions To Indoor Air:	ug/L	-	-	Table C-1a
Aquatic Ecotoxicity:	ug/L	1.4E-02	-	Table D-4a
Gross Contamination:	ug/L	1.6E+01	-	Table G-2
Final Groundwater Tier 1 EAL:	**ug/L**	**1.4E-02**		
	Basis:	**Aquatic Ecotoxicity**		

Other Tier 1 EALs:	Units	EAL	[2]Potential Hazard?	[3]Referenced Table
Shallow Soil Gas:	ug/m^3	-	-	Table C-2
Indoor Air:	ug/m^3	-	-	Table C-3

Notes:

1. Include Surfer Summary Report in appendices of *Environmental Hazard Evaluation* (EHE) for contaminants that exceed Tier 1 EALs (refer to Chapter 3 of main text).
2. Environmental hazard could exist of concentration of contaminant exceeds action level.
3. Referenced tables presented in Appendix 1 of EHE guidance document (HDOH 2011).

Reference: HDOH 2011, *Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater* (Fall 2011): Hawai'i Department of Health, Hazard Evaluation and Emergency Response, http://hawaii.gov/health/environmental/hazard/index.html

[1]Tier 1 EAL SURFER SUMMARY REPORT
Hawai'i DOH (Fall 2011; rev Jan 2012)

Site Name: Former NOSC Site
Site Address: MCB Hawaii

Site ID Number:
Date of EAL Search: 2/20/2015

Selected Site Scenario	
Land Use:	Unrestricted
Groundwater Utility:	Nondrinking Water Resource
Distance To Nearest Surface Water Body:	< 150m

Selected Chemical of Concern: **DALAPON**

Input Site Concentrations	
Soil (mg/kg):	0.65
Groundwater (ug/L):	-
Soil Gas (ug/m^3):	-

Soil Environmental Hazards	Units	Tier 1 Action Level	[2]Potential Hazard?	[3]Referenced Table
Direct Exposure:	mg/kg	3.7E+02	No	Table I-1
Vapor Emissions To Indoor Air:	mg/kg	-	-	Table C-1b
Terrestrial Ecotoxicity:	mg/kg	site-specific	No	Table L
Gross Contamination:	mg/kg	5.0E+02	No	Table F-2
Leaching (threat to groundwater):	mg/kg	1.6E-01	Yes	Table E-1
Background:	mg/kg	-		
Final Soil Tier 1 EAL:	**mg/kg**	**1.6E-01**		
	Basis:	**Leaching**		

Groundwater Environmental Hazards	Units	Tier 1 Action Level	[2]Potential Hazard?	[3]Referenced Table
Drinking Water (Toxicity):	ug/L	-	-	Table D-1c
Vapor Emissions To Indoor Air:	ug/L	-	-	Table C-1a
Aquatic Ecotoxicity:	ug/L	3.0E+02	-	Table D-4a
Gross Contamination:	ug/L	5.0E+04	-	Table G-2
Final Groundwater Tier 1 EAL:	**ug/L**	**3.0E+02**		
	Basis:	**Aquatic Ecotoxicity**		

Other Tier 1 EALs:	Units	EAL	[2]Potential Hazard?	[3]Referenced Table
Shallow Soil Gas:	ug/m^3	-	-	Table C-2
Indoor Air:	ug/m^3	-	-	Table C-3

Notes:

1. Include Surfer Summary Report in appendices of *Environmental Hazard Evaluation* (EHE) for contaminants that exceed Tier 1 EALs (refer to Chapter 3 of main text).
2. Environmental hazard could exist of concentration of contaminant exceeds action level.
3. Referenced tables presented in Appendix 1 of EHE guidance document (HDOH 2011).

Reference: HDOH 2011, *Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater* (Fall 2011): Hawai'i Department of Health, Hazard Evaluation and Emergency Response, http://hawaii.gov/health/environmental/hazard/index.html

Tier 2 Soil Direct-Exposure Action Levels

Hawai'i DOH (Fall 2011)

Notes:

1. Calculates Tier 2 direct-exposure action levels (screening levels) for soil. Assumes exposure by ingestion, inhalation and dermal contact.
2. Addresses mass-balance issues for volatile chemicals by accounting for thickness of contaminated soil (nonvolatile chemicals not affected).
3. Does not address potential cumulative effects posed by multiple contaminants (evaluate separately).
3. Does not address potential vapor intrusion concerns, nuisance concerns, leaching concerns or ecological concerns.
4. Use default values in absence of site-specific data.
5. Natural background concentration of metals replaces risk-base action level if higher (e.g., arsenic).
5. Password to unprotect worksheets is "EAL."

(Steps 1 through 3 - Use pull-down boxes to select options.)

Step 1. Select Contaminant:	POLYCHLORINATED BIPHENYLS (PCBs)
Step 2. Select Exposure Scenario:	Unrestricted (Residential) Land Use

Step 3. Input Site Data:	***Tier 1 Default**	**Site-Specific**
Thickness impacted soil (m)	infinite	1,000.0
Soil density (g/cm^3)	1.50	1.50
Particle density (g/cm^3)	2.65	2.65
Soil moisture content (ml/g)	0.10	0.10
Fraction organic carbon in soil	0.006	0.006

*Default site parameter values from USEPA RSLs (USEPA 2008).

Step 4. *Adjust Default Exposure Assumptions (see attached worksheet)

*Generally not recommended in a Tier 2 assessment. Includes Tier 1 chemical toxicity factors.

POLYCHLORINATED BIPHENYLS (PCBs)		**(mg/kg)**
Unrestricted (Residential) Land Use	Cancer Concerns:	2.9E+01
	Mutagenic Concerns:	-
	Noncancer Concerns:	1.8E+00
	Final Tier 2 Direct-Exposure Action Level:	**1.8E+00**

*Saturation limits and Construction/Trench worker action levels take precedence if lower. Refer to detailed calculations worksheet.

PROJECT NAME: Former NOSC Site Site ID No.:

SPREADSHEET PREPARED BY: Katie Kilway DATE: 2/20/2015

SIGNATURE: Katie Kilway

COMPANY: Element Environmental. LLC

SUPPORTING SITE INVESTIGATION REPORT(S) (Note report title, date, and preparer's name and address):
Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii
Prepared By: Element Environmental, LLC,
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701-4900

Notes:

Tier 2 model based on USEPA Regional Screening Levels model (USEPA 2011) with option for mass-balance Volatilization Factor as presented in USEPA *Soil Screening Guidance* document (USEPA 2002). Refer to Tier 2 Calculations worksheet and Appendix 2 of HDOH EHE guidance (HDOH 2011). **Addresses direct exposure hazards only. Other potential environmental hazards must be evaluated separately (vapor intrusion, leaching, ecotoxicity, gross contamination, etc.).**

Reference:

HDOH, 2011, Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater: Hawai'i Department of Health, Office of Hazard Evaluation and Emergency Response, Fall 2011, www.hawaii.gov/health/environmental/hazard/eal2005.html.

USEPA, 2002, *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites*: U.S. Environmental Protection Agency, Solid Waste and Emergency Response, OSWER 9355.4-24, December 2002, http://www.epa.gov/superfund/resources/soil/ssg_main.pdf

USEPA, 2011, Screening Levels for Chemical Contaminants: U.S. Environmental Protection Agency, June 2011, prepared by Oak Ridge National Laboratories, http://www.epa.gov/region09/waste/sfund/prg/

Calculation of Tier 2 Soil Direct-Exposure Action Levels

POLYCHLORINATED BIPHENYLS (PCBs)

CHEMICAL PARAMETERS		
Physical State (volatile/nonvolatile)		NV
Physical State (solid/liquid/gas)		S
Molecular Weight (modeled)		326.44
Koc	cm^3/g	130500
Diffusivity in Air	cm^2/sec	0.0E+00
Diffusivity in Water	cm^2/sec	0.0E+00
Solubility in water	ug/L	3.2E-02
Henry's Constant	$(atm\text{-}m^3/mol)$	2.9E-04
Henry's Constant	unitless	1.20E-02
Saturation (Csat, liquids only)	mg/kg	NA
GI Absorption Factor	unitless	1.0E+00
Skin Absorption Factor	unitless	1.4E-01
Mutagen?		No
Cancer Slope Factor (oral)	$(mg/kg\text{-}d)^{-1}$	2.0E+00
Cancer Unit Risk Factor (inhalation)	$(ug/m^3)^{-1}$	5.7E-04
Reference Dose (oral)	mg/kg-d	2.0E-05
Reference Concentration (inhalation)	mg/m^3	0.0E+00
CALCULATED PARAMETERS		
Kd	cm^3/g	7.8E+02
Saturation (Volatile Liquids Only)	mg/kg	NA
Air dispersion term (SSGs)	$g/m^2\text{-}sec$	N/A
Apparent Diffusivity (SSGs)	cm^2/sec	NA
Inhalation Age-Adjusted Factor		
Residential		
Infinite-source Volatilization Factor	m^3/kg	NA
Finite-source Volatilization Factor	m^3/kg	N/A
Final Volatilization Factor	m^3/kg	0.0E+00
Particulate Emission Factor	m^3/kg	1.4E+09
Commercial/Industrial		
Infinite-source Volatilization Factor	m^3/kg	NA
Finite-source Volatilization Factor	m^3/kg	N/A
Final Volatilization Factor	m^3/kg	0.0E+00
Particulate Emission Factor	m^3/kg	1.4E+09
Construction/trench Worker		
Infinite-source Volatilization Factor	m^3/kg	NA
Finite-source Volatilization Factor	m^3/kg	N/A
Final Volatilization Factor	m^3/kg	0.0E+00
Particulate Emission Factor	m^3/kg	1.4E+06

Selected Site Exposure Scenario:
Unrestricted (Residential) Land Use

Tier 2 Soil Action Level	(mg/kg)
Carcinogenic Effects	2.92E+01
Mutagenic Effects	-
Noncancer Effects	1.75E+00
Construction/Trench Worker Exposure	2.55E+01
Saturation	NA
Final Action Level	**1.75E+00**

Calculation of Tier 2 Soil Direct-Exposure Action Levels

POLYCHLORINATED BIPHENYLS (PCBs)

RESIDENTIAL		
Carcinogenic Effects		**Tier 1 AL**
Ingestion	mg/kg	4.9E+01
Dermal	mg/kg	7.2E+01
Inhalation (vapors+particulates)	mg/kg	-
Inhalation (particulates only)	mg/kg	5.8E+05
1/Ingestion	kg/mg	2.0E-02
1/Dermal	kg/mg	1.4E-02
1/Inhalation (vapors+particulates)	kg/mg	-
1/Inhalation (particulates only)	kg/mg	1.7E-06
Carcinogenic Effects Final Action Level	mg/kg	2.9E+01
Mutagenic Effects		
Ingestion	mg/kg	-
Dermal	mg/kg	-
Inhalation (vapors+particulates)	mg/kg	-
Inhalation (particulates only)	mg/kg	-
1/Ingestion	kg/mg	-
1/Dermal	kg/mg	-
1/Inhalation (vapors+particulates)	kg/mg	-
1/Inhalation (particulates only)	kg/mg	-
Mutagenic Effects Final Action Level	mg/kg	-
Noncarcinogenic Effects		
Ingestion	mg/kg	3.1E+00
Dermal	mg/kg	4.0E+00
Inhalation (vapors+particulates)	mg/kg	-
Inhalation (particulates only)	mg/kg	-
1/Ingestion	kg/mg	3.2E-01
1/Dermal	kg/mg	2.5E-01
1/Inhalation (vapors+particulates)	kg/mg	0.0E+00
1/Inhalation (particulates only)	kg/mg	0.0E+00
Noncancer Effects Final Action Level	mg/kg	1.8E+00
Final Tier 2 Action Level:	**mg/kg**	**1.8E+00**

Calculation of Tier 2 Soil Direct-Exposure Action Levels

POLYCHLORINATED BIPHENYLS (PCBs)

COMMERCIAL/INDUSTRIAL		
Carcinogenic Effects		**Tier 1 AL**
Ingestion	mg/kg	1.4E+02
Dermal	mg/kg	1.5E+02
Inhalation (vapors+particulates)	mg/kg	-
Inhalation (particulates only)	mg/kg	2.9E+06
1/Ingestion	kg/mg	7.0E-03
1/Dermal	kg/mg	6.5E-03
1/Inhalation (vapors+particulates)	kg/mg	-
1/Inhalation (particulates only)	kg/mg	3.4E-07
Carcinogenic Effects Final Action Level	mg/kg	7.4E+01
Noncarcinogenic Effects		
Ingestion	mg/kg	2.0E+01
Dermal	mg/kg	2.2E+01
Inhalation (vapors+particulates)	mg/kg	-
Inhalation (particulates only)	mg/kg	-
1/Ingestion	kg/mg	4.9E-02
1/Dermal	kg/mg	4.5E-02
1/Inhalation (vapors+particulates)	kg/mg	0.0E+00
1/Inhalation (particulates only)	kg/mg	0.0E+00
Noncancer Effects Final Action Level	mg/kg	1.1E+01
Final Tier 2 Action Level:	**mg/kg**	**1.1E+01**

CONSTRUCTION/TRENCH WORKERS		
Carcinogenic Effects		**Tier 1 AL**
Ingestion	mg/kg	1.1E+03
Dermal	mg/kg	1.5E+03
Inhalation (vapors+particulates)	mg/kg	-
Inhalation (particulates only)	mg/kg	7.9E+04
1/Ingestion	kg/mg	9.0E-04
1/Dermal	kg/mg	6.7E-04
1/Inhalation (vapors+particulates)	kg/mg	-
1/Inhalation (particulates only)	kg/mg	1.3E-05
Carcinogenic Effects Final Action Level	mg/kg	6.3E+02
Noncarcinogenic Effects		
Ingestion	mg/kg	4.4E+01
Dermal	mg/kg	6.0E+01
Inhalation (vapors+particulates)	mg/kg	-
Inhalation (particulates only)	mg/kg	-
1/Ingestion	kg/mg	2.3E-02
1/Dermal	kg/mg	1.7E-02
1/Inhalation (vapors+particulates)	kg/mg	0.0E+00
1/Inhalation (particulates only)	kg/mg	0.0E+00
Noncancer Effects Final Action Level	mg/kg	2.5E+01
Final Tier 2 Action Level:	**mg/kg**	**2.5E+01**

NOTES:

1. Default human exposure parameter values from USEPA Regional Screening Levels Guidance (USEPA 2011) unless otherwise noted.

2. Refer to Appendx 1 for and Appendix 2 OF DOH EHE guidance for discussion of construction/trench worker exposure scenario (HDOH 2011).

REFERENCES:

HDOH, 2011, Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater: Hawai'i Department of Health, Office of Hazard Evaluation and Emergency Response, Fall 2011, www.hawaii.gov/health/environmental/hazard/eal2005.html.

USEPA, 2011, Screening Levels for Chemical Contaminants: U.S. Environmental Protection Agency, June 2011, prepared by Oak Ridge National Laboratories, http://www.epa.gov/region09/waste/sfund/prg/

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GOVERNOR OF HAWAI'I

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DIRECTOR OF HEALTH

STATE OF HAWAI'I
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAI'I 96801-3378

In reply, please refer to:
File: EHA / HEER Office
2015-478-ES

July 30, 2015

Ms. Janice Fukumoto
Environmental Restoration Product Line Supervisor
Naval Facilities Engineering Command, Hawai'i (EV3)
400 Marshall Road, Building X-11
Pearl Harbor, Hawai'i 96860

Facility/Site: Kaneohe MCBH Naval Ocean Systems Center

Subject: Review of *Draft Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii (May 2015)*

Dear Ms. Fukumoto:

The Hawai'i Department of Health (HDOH) has reviewed the *Draft Site Inspection for the Former Naval Ocean Systems Center Site, Marine Corps Base Hawaii (May 2015).* We apologize for the delay and thank you for your patience and cooperation. We have no comments on this draft. Please proceed with finalization of the document.

Thank you for your cooperation and assistance. Should you have any questions, please contact me at eric.sadoyama@doh.hawaii.gov or (808) 586-0955.

Sincerely,

ERIC SADOYAMA, Remedial Project Manager
Site Discovery, Assessment, and Remediation Section
Hazard Evaluation and Emergency Response Office