

Final
Remediation Verification Report
Time Critical Removal Action for
Various Transformers (Site 0026)
MARINE CORPS BASE HAWAII
KANEOHE, OAHU, HAWAII

April 2015

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



Small Business Remedial Action Contract
Contract Number N62742-10-D-1804, CTO HC11

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Prepared for:



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Prepared under:

Small Business Remedial Action Contract
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**Final
Remediation Verification Report**

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Marine Corps Base Hawaii
Kaneohe, Oahu, Hawaii**

April 2015

I hereby certify that the enclosed Removal Verification Report (RVR), shown and marked in this submittal, is that proposed to be incorporated with Contract Number N62742-10-D-1804, Contract Task Order HC11, “*Time Critical Removal Action for Various Transformers (Site 0026), Marine Corps Base Hawaii*”. This RVR is in compliance with contract specifications, Occupational Safety and Health Administration requirements, United States Army Corps of Engineers, Safety and Health Requirements Manual (EM 385-1-1, 5 July 2011), and is submitted for Government approval.

Reviewed By:



Project Manager

4/16/2015

Date



Quality Control Officer

4/16/2015

Date

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ACRONYMS AND ABBREVIATIONS

AHA	Activity Hazard Analysis
bgs	Below ground surface
Bldg	Building
BOD	Beneficial Occupancy Date
BMPs	Best Management Practices
CAPE	Cape Environmental Management, Inc
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	Chain-of-Custody
CTO	Contract Task Order
CY	Cubic yard
DER	Data Evaluation Report
DL	Dilution
DON	Department of the Navy
D	Duplicate samples
DU	Decision Unit
EAL	Environmental Action Level
EBS	Environmental Baseline Survey
ERP	Environmental Restoration Program
ft	Feet
HDOH	Department of Health, State of Hawaii
ID	Identification
in	Inch or inches
ISM	Incremental Sampling Methodology
J	Estimated Value
JBPHH	Joint Base Pearl Harbor Hickam
LOD	Limit of detection
mg/kg	Milligram per Kilogram
MCBH	Marine Corps Base Hawaii
NAVFAC Hawaii	Naval Facilities Engineering Command, Hawaii
OSHA	Occupational Safety and Health Standards
PARCC	Precision, Accuracy, Representativeness, Comparability, and Completeness
PA/SI	Preliminary Assessment/Site Investigation
PCB	Polychlorinated Biphenyl
PM	Project Manager
PPE	Personal Protective Equipment
PQO	Project Quality Objective
QAR	Quality Assessment Report
QC	Quality Control
R	Rejected
RA	Re-Analysis/Analyze
RADL	Re-Analysis/Analyze and Dilution
RPD	Relative Percent Difference
RSD	Relative Standard Deviation

ACRONYMS AND ABBREVIATIONS

RVR	Removal Verification Report
SDG	Sample Delivery Group
SI	Site Investigation
TCRA	Time Critical Removal Action
TSCA	Toxic Substances Control Act
U	Non-detect
USACE	United States Army Corps of Engineers
WRF	Water Reclamation Facility
WWTP	Wastewater Treatment Plant

1. INTRODUCTION

This Removal Verification Report (RVR) has been prepared for the Naval Facilities Engineering Command, Hawaii (NAVFAC Hawaii) under Contract Number N62742-10-D-1804, Contract Task Order (CTO) HC11. The purpose of this RVR is to document the remediation activities completed during a Time Critical Removal Action (TCRA) of soil containing polychlorinated biphenyls (PCBs) for Various Transformers (Site 0026), located at Marine Corps Base Hawaii Kaneohe Bay, and hereinafter called MCBH.

All work was performed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and applicable federal and local laws, regulations and policies.

This RVR has been prepared in accordance with Department of the Navy (DON) *Guidance to Documenting Milestones throughout the Site Closeout Process* (DON 2006), the CTO HC11 Performance Work Statement (DON 2011) and the *Final Work Plan, Time Critical Removal Action for Various Transformer (Site 026), Marine Corps Base Hawaii* (CAPE Environmental Management, Inc [CAPE] 2013).

1.1 PURPOSE AND SCOPE

The purpose of this RVR is to describe the TCRA activities completed and to document the post-excavation conditions, including the results of confirmation soil sampling. The actions described in this document and performed under this CTO were conducted as a result of recommendation presented in the Preliminary Assessment/Site Investigation (PA/SI) (AECOM and WCP 2012).

The scope of the TCRA was to excavate surface and subsurface soil following delineation sampling at each of the transformer sites that contained PCB concentrations above the Department of Health, State of Hawaii (HDOH) Tier 1 direct-exposure Environmental Action Level (EAL) of 1.1 milligram per kilogram (mg/kg) (clean-up goal). The TCRA was achieved at six of the seven sites by the excavation, and off-site disposal of PCB contaminated soil. At one site, Transformers F-678/678, this goal was not feasible due to infrastructure which restricted the ability to remove all the soil above the HDOH EAL clean-up goal.

1.2 SITE DESCRIPTION AND BACKGROUND

1.2.1 Site Location and Background

The various pad-mounted transformers associated with the Installation Restoration Program Site 0026 (Various Transformers) are located base-wide at MCBH. As shown in Figure 1, MCBH occupies the entire 2,951-acre Mokapu Peninsula on the windward (northeast) coast of Oahu. MCBH is bordered to the west by Kaneohe Bay, to the north by the Pacific Ocean, to the east by Kailua Bay and to the south by the Nu'upia Ponds. South of the Nu'upia Ponds, the property is bordered by Kaneohe Bay Drive, the City and County of Honolulu's Kailua Regional Wastewater Treatment Plant (WWTP), and the residential communities of Kaneohe and Kailua.

The MCBH electrical distribution system is comprised of 52 miles of overhead and underground lines with electrical substations and pad and pole-mounted transformers. There are 10 transformers within seven different sites where TCRA activities were performed (Figure 1). See below for descriptions and locations of these seven sites. See Figure 1 for base-wide locations of the seven sites, and Figures 2 through 8 for the layout at each site.

Transformer 1129 – is located along Manning Street, in front of the Tiki Island Mini-Golf facility, in the northern portion of the MCBH. The site nickname by field and MCBH personnel is the “*Tiki Island Site*” since it the site is fronting the main entrance to the Tiki Island Mini-Golf facility. The site contains Transformer 1129, which is situated on a concrete pad that is 25 feet (ft) by 31 ft, and an electrical cabinet.

Transformer 298 – is located in front of Building (Bldg) 352 along C Street, in the southwest portion of the MCBH. The site nickname by field and MCBH personnel is the “*Motor Pool Site*” due to the proximity to base motor vehicle rental pool. It is situated on a concrete pad that is 19 ft by 11 ft.

Transformers F-678/678 – are located along 1st Street between Bldg 201 and 202 in the southern portion of the MCBH just north of the Salvage Yard Wetland. The site nickname by field and MCBH personnel is the “*Electrical Shop Site*” due to the proximity the MCBH Electrical Shop Site. There are two concrete pads at the site, one is the location of the former 678 (Transformer F-678) (11 ft by 21 ft) and one is the location of the current Transformer 678 (6 ft by 6 ft).

Transformer 252B – is located south of the MCBH swimming pool facility in the central portion of the Base; it is situated on a concrete pad that is 5 ft by 4 ft. The site nickname by field and MCBH personnel is the “*Swimming Pool Site*” due to the proximity the MCBH swimming pool.

Transformers 898/SS245A/SS245F – are located at the MCBH Water Reclamation Facility (WRF) in the central portion of the Base, just east of the Salvage Yard Wetland. The site nickname by field and MCBH personnel is the “*Wastewater Reclamation Plant Site*” because the site is surrounded by the WRF storage tanks, buildings, and equipment. There are a total of four transformers on two concrete pads (MCBH has two transformers labeled as 898). One concrete pad is 15 ft by 16 ft and contains three transformers, and the other concrete pad is 6 ft by 7 ft with one transformer (SS245F).

Transformers F-1126A/F-1126B – are located at the MCBH Military Police facility between Bldg 1095 and 1096, in the southwestern portion of the Base. The site nickname by field and MCBH personnel the “*Military Police Site*” as the adjacent buildings occupant is the MCBH Military Police. There are two adjacent concrete pads. One pad is 16 ft by 20 ft and is the location of the former Transformer F-1126A, and the other pad is 5 ft by 6 ft and is the location of the former Transformer F-1126B.

Transformer 1255 – is located at the MCBH Laundromat (Bldg 1255) in the central portion of the Base. The site has one concrete pad that is 6 ft by 5 ft containing Transformer 1255. The site nickname by field and MCBH personnel the “*Laundromat Site*” due to the proximity the MCBH Laundromat.

1.2.2 Previous Environmental Actions

1.2.2.1 2005 ENVIRONMENTAL BASELINE SURVEY

An Environmental Baseline Survey (EBS) was conducted in 2005 to support the utility privatization of the electrical distribution and wastewater systems located at MCBH (Environet 2005). The purpose of the EBS was to provide an evaluation of existing environmental conditions for real property locations by documenting existing conditions of the survey area, identify areas of potential environmental concern, and classifying the survey area based on its environmental condition. The EBS included only transformers that met the survey guidelines of the EBS; therefore not all transformers or former transformers at MCBH were included in the study.

The MCBH electrical distribution system is comprised of approximately 52 miles of overhead and underground lines, and includes electrical substations as well as pad-mounted and pole-mounted transformers. Prior to 1979, the year PCBs were banned in the U.S., the Navy documented that periodically one aliquot of dielectric fluid would be taken from a transformer and tested for its dielectric properties. This dielectric fluid, which contained PCBs, typically was discarded on the ground, resulting in contamination of soil and concrete at the transformer locations (Environet 2005). PCB contamination of soils at the subject transformer sites may have been the result of similar testing practices, and/or potentially releases of dielectric fluid from leaking transformers.

The EBS evaluated all pad- and pole-mounted transformers based upon their reported date of installation. Sixty transformers were identified as having been installed prior to 1979, and, therefore, were potential sources of PCB contamination (Environet 2005). Composite surface soil and/or concrete pad wipe samples

were collected from the area around the base of each transformer pad during the EBS. Aroclors 1242, 1254, and 1260 were detected at 39 transformer locations, which were identified for additional assessment (Environet 2005).

1.2.2.2 2012 PRELIMINARY ASSESSMENT/SITE INVESTIGATION

Prior to Site Investigation (SI) sampling activities for various transformer sites at MCBH, a Preliminary Assessment was performed by conducting an electrical utility records search and a site reconnaissance to verify the locations of all transformers that could have had a historic release to the environment, including current and former locations of transformers. The record search yielded a total of 145 additional (in addition to the 39 transformer locations identified during the EBS) potential transformer sites to be verified during the site reconnaissance.

The results of the records search and the site reconnaissance determined that 76 pad-mounted transformer locations (four transformer locations from the EBS and an additional 72 added during the PA/SI) would require sampling during the SI portion of the PA/SI (AECOM and WCP 2012). Indoor transformers were removed from the PA/SI list because the Environmental Restoration Program (ERP) does not investigate indoor transformers. The ERP also does not investigate pole mounted transformers unless there is a known release or there is a release that is highly suspect. The PA/SI did not identify any pole-mounted transformers that met one of these conditions.

During the PA/SI surface soil and concrete wipe samples were collected at the 76 transformer locations and analyzed for PCBs as Aroclors. Ten transformer locations were identified for further evaluation based upon surface soil concentrations that exceeded the HDOH Tier 1 direct-exposure EAL of 1.1 mg/kg because they may pose an unacceptable risk to human health and the environment. The PA/SI recommended that a remedial investigation and/or removal action be initiated to address the 10 transformers (AECOM and WCP 2012).

Table 1 summarizes EBS (Environet 2005) and PA/SI (AECOM and WCP 2012) PCB concentrations in surface soil samples that exceed screening criteria at the 10 active transformers.

2. FIELD ACTIVITIES

The TCRA field activities at various transformers were performed from 30 October 2012 to completion on 16 September 2014. Prior to beginning the removal action field work, a pre-construction meeting was conducted on 24 October 2012. Removal action field activities were recorded in the daily production and quality control (QC) reports (Attachment 1). All employees involved in the TCRA also reviewed the Activity Hazards Analyses (AHAs) for each TCRA activity. Prior to each work day all equipment was inspected and tested in accordance with safety requirements. Modified Level D personal protective equipment (PPE) was donned during field work, with the exception at the Transformer Site F-678/678. Level C PPE was donned while excavating Toxic Substances Control Act (TSCA) regulated PCB soil waste at this site. A photograph log is provided in Attachment 2. All removal action activities were performed in accordance with the Work Plans (DON 2013), which are discussed in further detail below.

2.1 UTILITY CLEARANCE

A utility clearance was performed by a Hawaii Geophysical Services LLC prior to delineation and excavation activities on 30 October and completed on 31 October 2012 using ground penetrating radar, an electromagnetic locator, and a metal detector to locate underground utilities and anomalies. Utilities were marked on ground surface in addition to utilities identified during the dig permitting process.

2.2 DELINEATION SOIL SAMPLING

Prior to excavation, the extent of contamination was delineated at each transformer site by discrete surface and subsurface soil sampling. Sampling locations were chosen based historical discrete and composite surface soil sampling results. At previous surface soil sample locations that had PCB concentrations above clean-up goal (1.1 mg/kg), delineation samples were collected from the subsurface at those locations and at the surface and subsurface at two step-out locations. Samples were collected from 0 to 2 ft below ground surface (bgs) at every site except Transformer F-678/678, of which subsurface samples were collected up to 3 ft bgs due the high historical PCB concentrations at this specific site. The soil ranged from sandy silt to coralline gravelly sand.

The first step-out sampling locations were analyzed and the second step-out locations were placed on hold at the laboratory pending analysis of the first step-out sampling locations. If there were PCB concentrations above the clean-up goal in the first step out sample, then the second step-out samples were analyzed. If both step-out sampling locations were above clean-up goals, then further action (including revising area boundaries, additional sampling, alternative removal actions) were considered. Once the site was delineated to below 1.1 mg/kg excavation activities were performed.

2.2.1 First Delineation Sampling Event

The first delineation sampling event was conducted from 5 November through 9 November 2012 at all seven sites. Direct push soil borings were advanced to the proposed excavation depth. Direct push drilling was performed by ESN Pacific, Inc. All delineation soil samples were analyzed for total PCBs by Environmental Protection Agency SW-846 Method 8082. See Figures 2 through 10 for delineation sample locations and results. Delineation sampling results are summarized in Table 2.

The delineation sampling results of November 2012 were also used to confirm historical sampling results and for waste characterization. Soil was excavated as CERCLA non-hazardous waste/Non TSCA regulated (PCB soil concentrations less than 50 mg/kg) waste at all TCRA sites except the Transformer F-678/678 site. The delineation sampling results confirmed that Transformer F-678/678 should be excavated as both CERLCA non-hazardous waste and TSCA-regulated hazardous waste (PCB soil concentrations greater than or equal to 50 mg/kg); and PCBs were not detected beneath the asphalt parking lot to the north.

Transformers 898, SS245A, and SS245F delineation sampling results ranged from 0.015 to 3.6 mg/kg. Transformer 1255 delineation sampling results ranged from 0.01 to 5.1 mg/kg. Transformer 1129 delineation sampling results ranged from 0.126 mg/kg to 28 mg/kg. Transformers F-1126A/F-1126B delineation sampling results ranged from 0.040 to 29 mg/kg. Transformers 298 and 252B delineation sampling results were below 1.1 mg/kg. Transformer F-678/678 delineation sampling results ranged from 0.02 to 7,100 mg/kg.

2.2.2 Second Delineation Sampling Event

Additional step-out delineation samples were collected on 20 December 2012 to further delineate the extent of contamination at Transformer Sites 1255, F-1126A/F-1126B, and F-678/678. At these three sites, a minimum of one step-out sampling location exceeded the clean-up goal. The other four sites were delineated in the November 2012 sampling event. Results from this delineation sampling event are summarized in Table 3.

At Transformer 1255, additional delineation sampling was extended to the north and south, at Transformers F-1126A/F-1126B additional delineation sampling was extended to the north. At these two sites, all the second step-out sampling results were below the clean-up goal and; therefore no further delineation required prior to excavation.

At Transformers F-678/678, delineation sampling was extended to the southeast toward Bldg 30 and 3007 and samples were collected from 0 to 3 ft bgs, including underneath concrete. Soil sample results, and ranged from 0.03 to 130 mg/kg. The samples results above 50 mg/kg were collected in the soil beneath the concrete. Delineation sampling was also extended to the west and south of Transformer F-678/678 and samples were collected from 0 to 8 ft bgs. Sample results were above 1.1 mg/kg, and ranged from 0.017 to 54 mg/kg.

2.2.3 Third Delineation Sampling Event

During the additional December 2012 Transformer F-678/678 delineation sampling event, PCB contamination had been delineated with exception to the southeast direction. Additional delineation samples were collected on 13 February 2013 to assess the lateral and vertical extent of contamination further southeast of Transformers F-678/678 (extending toward Bldg 202, the Electrical Shop). The samples were collected from 0 to 3 ft bgs, and results ranged from 0.016 to 170 mg/kg. Results from this delineation sampling event are summarized in Table 4.

2.2.4 Fourth Delineation Sampling Event

A fourth round of step-out delineation sampling was completed on 1 April 2013 at Transformers F-678/678 further southeast towards Bldg. 202. The samples were collected from 0 to 3 ft bgs, and results ranged from 0.024 to 6.2 mg/kg. After this last sampling event, the extent of PCB contamination was considered delineated. Results from this delineation sampling event are summarized in Table 5.

Note all site figures (Figure 2-10) show sampling locations which match the sampling tables, with results above the clean-up goal specifically summarized.

2.3 MOBILIZATION

Mobilization of the project team for removal actions occurred on 15 January 2013 (excavation of first five sites), 15 July 2013 (Transformer 1129 excavation), 20 September 2013 (Transformer 1129 over-excavation), 6 November 2013 (Transformer F-678/678 excavation), 16 April 2014 (Transformer F-678/678 over-excavation), 7 May 2014 (Transformer F-678/678 concrete cap installation), 18 August 2014 (Transformer F-678/678 concrete channel cleanout) and 2 September 2014 (concrete cap modifications for

improved site drainage). The project team consisted of a Site Superintendent, Quality Control Officer/Site Safety and Health Officer, and a field crew consisting of equipment operators and laborers. During the TCRA, a laydown and storage area was utilized and located within half a mile of the majority of transformer sites (Figure 1).

The following equipment and supplies were mobilized as needed for each site:

- Heavy equipment (Backhoe, Excavator, Loader, Skid Steer, Forklift, Flatbed Truck, Vacuum Truck, Compactor)
- Roll-off bins
- Supersack Hopper
- Backfill soil
- Backflow preventer for fire hydrant and hoses
- Orange construction fencing materials
- Safety documents, supplies, and PPE
- Hand wash and eyewash station, portable toilet

2.4 EXCAVATION AND OFF-SITE DISPOSAL OF FIVE TRANSFORMER SITES

According to historical soil sampling and delineation soil sampling performed during this TCRA, the soil was classified as CERCLA non-hazardous/non-TSCA regulated PCB waste or TSCA regulated PCB soil waste (Transformers F-1126A/ F-1126B). The excavations at these sites were completed between 23 and 28 January 2013. On 22 January 2013, a pre-construction meeting was attended by CAPE and their excavation subcontractor to discuss the plans and procedures for the MCBH electrical outage. The electrical outage was required for safe excavation around underground electrical lines at Transformer Sites 1255, F-1126A/F-1126B, and 898/SS245A/SS245F. During the outage on 23 January 2013 the excavations with active underground electrical lines at Transformer Sites 1255, F-1126A/F-1126B, and 898/SS245A/SS245F was completed and described below.

Transformer 298: One area adjacent to the concrete pad of Transformer 298 was excavated to 1 ft bgs (Figure 2). An estimated 1 ton of CERCLA non-hazardous/non-TSCA regulated PCB waste was excavated.

Transformer 1255: Two areas surrounding the concrete pad of Transformer 1255 were excavated to 1 ft bgs. One area adjacent to the northeast corner of the concrete pad was excavated to 2.5 ft bgs (Figure 3). An estimated 4 tons of CERCLA non-hazardous/non-TSCA regulated PCB waste was excavated.

Transformer 252B: One area adjacent to the concrete pad of Transformer 252B was excavated to 1 ft bgs (Figure 4). An estimated 1 ton of CERCLA non-hazardous/non-TSCA regulated PCB waste was excavated.

Transformer F-1126A/F-1126B: Excavation to the north of Transformer F-1126A was completed to 2.5 ft bgs, with exception at an abandoned concrete utility jacket found at 1.5 ft bgs (the concrete utility jacket extends to below the bottom excavation depth of 1.5 ft bgs) (Figure 5). To the south of the transformer pad, excavation was completed to 1.5 ft bgs. Based on a historical EBS sampling result of surface soil with PCB concentrations above 50 mg/kg (Environet 2005), a small section (approximately 5 ft by 3 ft, as shown on Figure 5) directly south and adjacent to the concrete pad where the transformer was formerly located was excavated to a depth of 1 ft bgs and the soil placed into a one cubic yard (CY) supersack for TSCA regulated waste disposal (weighing approximately 1 ton). The supersack was stored in the laydown area, and subsequently transported and disposed with the TSCA regulated soil waste generated from Transformer F-678/678. An estimated 17 tons of CERCLA non-hazardous/non-TSCA regulated PCB waste was excavated.

Transformers 898/SS245A/SS245F: Excavation of one area between the concrete pads of Transformers SS245A and SS245F were completed to 1.5 ft bgs except for where concrete utility jackets were encountered (the concrete utility jacket extends to below the bottom excavation depth of 1.5 ft bgs) (Figure 6). Two areas adjacent to Transformers 898 and SS245A were excavated to 2.5 ft bgs (Figure 6). An estimated 26 tons of CERCLA non-hazardous/non-TSCA regulated PCB waste was excavated.

All CERCLA non-hazardous/non-TSCA regulated PCB excavated soil waste was direct loaded into plastic lined 15 to 20 CY roll-off bins and disposed of at PVT Landfill located in Nanakuli, Oahu, Hawaii. In summary, a total of four bins containing 95,420 pounds (approximately 49 tons) of soil was excavated and disposed in this excavation event. The bins were transported to PVT Landfill on 19 February and 20 February 2013. Attachment 3 contains a bin and supersack tracking log and the associated waste disposal documentation.

2.5 POST EXCAVATION CONFIRMATION SOIL SAMPLING OF FIVE TRANSFORMER SITES

On 29 January 2013 and 30 January 2013, confirmation soil samples were collected using Incremental Sampling Methodology (ISM) (MBT484-MBT490). Each ISM sample consisted of 30 increments of soil (approximately 33 grams each) and were collected from one decision unit (DU) that included the excavation floor and sidewalls at each transformer site. These results are summarized in Table 6. The total ISM PCB concentration of DUs at Transformers 298, 1255, 252B, F-1126A/F-1126B, and 898/SS245A/SS245F was 0.046 mg/kg, 0.18 mg/kg, 0.226 mg/kg, 0.83 mg/kg, and 0.48 estimated value (J) mg/kg, respectively, and were all below the clean-up goal.

2.6 TRANSFORMER 1129 EXCAVATION, OFF-SITE DISPOSAL, AND CONFIRMATION SOIL SAMPLING

The Transformer 1129, Tiki Island, site required two excavations to complete the TCRA because ISM confirmation soil results for total PCBs was above the clean-up goal after the initial excavation. Figure 7 illustrates the final excavation boundaries. Excavations, disposal, and confirmation sampling at Transformer 1129 is described below.

2.6.1 Transformer 1129 Initial Excavation and Off-Site Disposal

A pre-construction meeting to discuss planning and procedures for an electrical outage was held on 10 July 2013. There are multiple underground electrical lines surrounding Transformer 1129, so an outage was requested to facilitate safe excavation activities. The excavation was completed during the planned outage on 16 July 2013. The excavation was located on the east, north, and western sides of the transformer pad at various depths ranging from 1 to 3 ft bgs (Figure 7).

Historical and delineation sampling results classified all soil removed during the excavation as CERCLA non-hazardous/non-TSCA regulated PCB waste. This soil was direct loaded into 15 CY roll-off bins. A total of three bins containing 47,520 pounds (approximately 24 tons) of soil were transported to PVT Landfill on 17 July 2013 for disposal. A supporting waste tracking table and waste documentation are provided in Attachment 3.

2.6.2 Post Initial Excavation Confirmation Soil Sampling at Transformer 1129

On 17 July 2013, three multi-increment confirmation soil samples, one primary and two replicate samples (MBT578-MBT580) consisting of 30 increments each (approximately 33 grams each) were collected from one DU that included the excavation floor and sidewalls. These results are summarized in Table 7. The total ISM PCB concentration was 1.6 mg/kg, exceeding the clean-up goal.

Further action in the form of additional discrete sampling was completed in a grid pattern on the excavation floor to locate potential hot spots within the excavation to guide additional excavation efforts.

On 24 July 2013, 15 primary samples, and one duplicate sample were collected from the excavation floor. These results are summarized in Table 8. Delineation sampling identified three locations that had total PCB concentrations above the clean-up goal (1.5, 1.5, and 9.3 mg/kg) and one equal to the cleanup goal of 1.1 mg/kg. The discrete sampling locations from the excavation floor are shown on Figure 7.

2.6.3 Transformer 1129 Over-excavation and Off-Site Disposal

The over-excavation was completed on 20 September 2013. The three areas with PCB concentrations of 1.1 to 1.5 mg/kg were over-excavated by hand with shovels and pick axes approximately 1 ft deeper, and approximately 1.5 ft deeper at the sampling location with a total PCB concentration of 9.3 mg/kg. Hand digging was completed due to the proximity of underground utilities. This soil was placed in supersacks for ease of handling, labeled appropriately, and transported to the project laydown area.

The supersacks containing an estimated 2 tons of CERCLA non-hazardous/non-TSCA regulated soil waste from Transformer 1129 was consolidated with the Transformer F-678/678 CERCLA non-hazardous/non-TSCA regulated soil waste. This soil was transported to PVT Landfill on 12 November 2014 for disposal.

2.6.4 Post Over-excavation Confirmation Sampling at Transformer 1129

On 23 September 2013, three multi-increment confirmation soil samples, one primary and two replicate samples (MBT597-MBT599) were collected from one DU that included all initial excavation and over-excavation areas. These results are summarized in Table 9. The total PCB concentration was 0.80 mg/kg, below the clean-up goal.

2.7 TRANSFORMER F-678/678 EXCAVATION, OFF-SITE DISPOSAL, CONFIRMATION SAMPLING, AND CONCRETE CAP INSTALLATION

Transformer F-678/678 was evaluated as a special case in this TCRA due to the extensive PCB contamination and site complexities. PCB contamination surrounding Transformer F-678/678 was found to extend from Bldg 201 to Bldg 202, below concrete, and to a depth of 6.5 ft bgs between the active transformer and Bldg 202. PCB concentrations were at TSCA regulated levels (above 50 mg/kg) in the area directly surrounding the transformer F-678 concrete pad and at various locations below the concrete pad surrounding Bldg 30 (an abandoned small “bunker” like Bldg). PCB concentrations in this area were considered heterogeneous, with results ranging from 2 to 7,100 mg/kg. The soil in this entire area which exhibited this heterogeneity was considered TSCA regulated soil waste as a conservative measure (see Figure 8).

The CERCLA non-hazardous/non-TSCA regulated soil located further away from the F-678/678 transformer pads were delineated to shallow depths and was considered homogenous with lower PCB concentrations ranging from 1.2 mg/kg to 7.9 mg/kg (the Non-Hazardous Excavation Area marked on Figure 8). Figures 9 and 10 divide the site into two halves (west and east) in order to better show sampling results.

Excavation was not feasible for the deeper PCB contaminated soil located adjacent to Bldg 201 and the active Transformer F-678 pad. In addition, in the specific area between the Transformer F-678 pad and the Bldg. 202, an underground electrical main conduit encased in concrete 4.5 ft wide was located at a depth of only 8 inches (in) bgs. These factors made it not feasible to excavate all soil above the clean-up goal without compromising the structural integrity of the Bldg foundation, underground utilities, and the active transformer concrete pads. PCB contamination was also found below the concrete pad surrounding Bldg 30. All these factors lead to evaluating alternative removal actions. Through consultation with the HDOH, the recommended alternative removal action would be to excavate and dispose of PCB contamination feasibly removed, and place a concrete cap meeting TSCA requirements (minimum thickness of 6 in, Code of Federal Regulations [CFR] Part 761, Subpart D, 761.61.7) over the PCB contamination to be left in

place. The PCB contamination already capped by existing concrete pads would remain in place. The installed concrete cap would prevent further downward migration of PCBs due to rainwater infiltration and remove direct exposure pathways from PCBs to human and ecological receptors. The HDOH concurred with this alternative removal action via email on 17 June 2013.

2.7.1 Transformer F-678/678 Initial Excavation and Off-Site Disposal

On 6 and 7 November 2013, the TSCA regulated PCB soil waste surrounding Transformer F-678 pad was excavated and placed into one CY supersacks using a soil load out hopper. The excavation depth was approximately 1 ft bgs, except for the area surrounding sampling location B58 (total PCB concentration of 7,100 mg/kg) that was excavated to approximately 3 ft bgs. The excavation was completed in Level C PPE due to the elevated PCB concentrations. A total of 25 supersacks were filled for TSCA regulated waste disposal. On 7 and 8 November 2013 the CERCLA non-hazardous/non-TSCA regulated PCB soil waste in the discontinuous areas located adjacent to the TSCA regulated soil excavation and the concrete pad adjacent to Bldg. 30 and Bldg. 3007 (shed) were excavated to 1 ft bgs and direct loaded into two plastic lined roll-off bins.

The two roll-off bins containing approximately 21 tons of CERCLA non-hazardous/non-TSCA regulated PCB soil waste (2 tons of which were from the Transformer 1129 CERCLA non-hazardous/non-TSCA regulated over-excavation) were transported and disposed to PVT Landfill on 12 November 2013. The supersacks with a total weight of approximately 25 tons were loaded into containers on 12 November 2013 for disposal at Chemical Waste Management of the Northwest in Arlington, Oregon.

Due to muddy site conditions, one supersack could not be included with the 12 November 2013 shipment. This supersack (total weight of approximately 1 ton) was picked up for transport on 12 December 2013 for subsequent shipment and disposal at Chemical Waste Management of the Northwest. Supporting waste documentation is provided in Attachment 3.

2.7.2 Post Initial Excavation Soil Sampling at Transformer F-678/678

On 11 November 2013, three multi-increment confirmation soil samples, one primary and two replicate samples (MBT600-MBT602) consisting of 30 increments each (approximately 33 grams each) were collected from one DU that included the excavation floor and sidewalls of the discontinuous CERCLA non-hazardous/non-TSCA regulated excavation area. The three multi-increment PCB concentrations were 1.5 J mg/kg, 2.2 J mg/kg, and 1.8 J mg/kg, all exceeding the clean-up goal. The results are summarized in Table 10.

Additional sampling was conducted on 19 March 2014 to delineate excavation limits to 1.1 mg/kg at the discontinuous CERCLA non-hazardous/non-TSCA regulated excavation areas using ISM. The discontinuous CERCLA non-hazardous/non-TSCA regulated excavation area was divided into two DUs, DUA and DUB. DUA is the eastern excavation area and DUB is the western excavation area (as shown in Figure 8). To delineate *in situ* PCB concentrations laterally and vertically, one multi-increment sample was collected at the excavation floor and sidewalls, and a split spoon slide hammer sampler was used to collect an ISM sample representing a 6 in and 1 ft over-excavation below the initial excavation limits for a total of three multi-increment samples for each of the three depths. The multi-increment PCB sample results for DUA, collected in triplicate for QC, at the excavation floor and sidewalls were 1.0 J, 1.2 J, and 2.4 J mg/kg (total bgs depth of 1 ft); and at 6 in below initial excavation floor (total bgs depth of 1.5 ft) was 0.62 mg/kg. The 1 ft below excavation floor (total 2 ft bgs) was not analyzed because the excavation had been delineated to 1.5 ft bgs. The multi-increment PCB sample result for DUB at the excavation floor and sidewall was 1.4 mg/kg. The multi-increment PCB sample result 6 in below the initial excavation floor (total bgs depth of 1.5 ft) was 0.72 mg/kg. The 1 ft below excavation floor (total bgs depth of 2 ft) was not analyzed because the excavation had been delineated to 1.5 ft bgs.

One multi-increment soil sample was collected on 19 March 2014 to determine the concentration of PCBs to be left in place at the site underneath the concrete cap. The multi-increment sample consisted of 30 increments of soil (approximately 33 grams each) from the excavation floor of the area to be capped with concrete. The resulting total PCB concentration was 32 J mg/kg.

The asphalt parking lot located north of Transformer F-678/678 was obstructed with storage of equipment and materials and subsurface utilities during delineation sampling, so samples were not collected at all proposed locations. To address the data gaps, soil borings were completed on 20 March 2014. Stored equipment/materials were removed from the area being sampled, the asphalt chipped to allow for access to the soil, and a hand slide hammer sampler with disposable acetate sleeves was used to collect soil samples just below the asphalt at 1 ft and 2 ft bgs at borings B100 and B102 (Figure 8). These results were used to delineate potential PCB contamination at the corners of the asphalt parking lot. All PCB concentrations in the asphalt parking lot were below the clean-up goal.

The additional sampling results from Transformer F-678/678 are summarized in Table 11.

2.7.3 Transformer F-678/678 Over-Excavation and Off-Site Disposal

DUA and DUB were excavated an additional 6 in vertically to a total depth of 1.5 ft bgs based on results shown in Table 11. This soil was excavated and direct loaded into a lined roll-off bin on 16 April 2014. The roll-off bin with approximately 8 tons of CERCLA non-hazardous/non-TSCA regulated was picked up for transportation and disposal to PVT Landfill for on 17 April 2014.

2.7.4 Concrete Cap Installation

The concrete cap installation activities were performed from 7 May to 16 September 2014. Formwork and preparations for pouring the concrete cap were completed from 7 through 9 May 2014. The excavation floor was mechanically compacted. Twelve tons of base course was imported and compacted in 6 in lifts to a finished thickness of approximately 6 in bgs to support the concrete cap. Wire mesh was laid out on saddles and tied together with wire at the midpoint of the pour for structural enforcement. An expansion joint was installed between the concrete pad and the Bldg. On 10 May 2014 the 6 in concrete cap with a thickened edge of 1 ft was poured with 2,500 pounds per square inch concrete. Curing compound was evenly distributed on the concrete surface to prevent cracking and the formwork was stripped on 12 May 2014.

On 15 May 2014 MCBH facilities communicated they were concerned site drainage (site has flat to very low gradient (not more than approximately a 2 percent grade) downslope to the sidewalk/road) was not steep enough for good storm water flow through the area. Another concern was a trip hazard from the electrical vault manhole because the concrete did not slope gently from the ledge of the concrete cap to the top of the manhole cover. The concrete cap height had been restricted by the existing electrical manhole height.

In response to the MCBH concerns, concrete cap modifications were completed. MCBH facilities personnel raised the elevation of the electrical manhole cover on 31 July 2014 to enable a higher elevation concrete cap. Formwork and layout for the concrete cap modifications was completed on 2, 11 and 12 September 2014. The formwork was laid out to bring the concrete cap up to the new elevation of the electrical manhole cover and even with the surrounding transformer pads and asphalt parking lot to the extent possible. At the midpoint of the new pour height wire mesh was laid out on saddles and tied with wire at the midpoint of the pour for structural enforcement. The concrete pour was completed on 16 September 2014. This increased the thickness of the cap from 6 in to between 1 ft and 1.5 ft, depending on the height required to bring concrete cap surface with the adjacent transformer concrete pads.

2.7.5 Transformer F-678/678 Concrete Channel Cleanout

During a post excavation site inspection on 12 May 2014, it was noticed Transformer 678 contained a below grade concrete channel in the transformer concrete pad. The concrete channel (approximately 1 foot wide and 1 foot deep) contained electrical conductors connecting the in-use Transformer F-678, electrical cabinets, and electrical panel. A metal cover for maintenance access covered the trench. Inside this concrete channel was soil 1 to 4 in deep. This soil was stained and suspected to potentially contain PCBs. Removal of concrete channel soil was added to the scope of the TCRA.

On 13 August 2014, a pre-construction meeting was conducted to go over plans and procedures for an electrical outage to allow for safe removal and cleanout of the soil located in the concrete channel.

On 18 August 2014, during the electrical outage the soil was washed out with water and the resulting water/soil mixture was pumped directly into 55-gallons drums through flexible plastic hosing. A dual venture head pump was mounted to each drum for direct extraction of the soil and wash water from the concrete channel to the drum. The power for the operation was supplied by a vacuum truck. A total of four 55-gallon drums were filled with the soil and rinse water. On 25 August 2014, the drums were sampled using a disposable drum thief to collect a composite waste characterization sample representative of all the drums. The drum thief collected a column of soil and water from the bottom to the top of each drum.

The sampling results are summarized in Table 12. The results determined the rinse water and soil would be designated for disposal as CERCLA non-hazardous/non-TSCA regulated waste. On 8 October 2014, the drums were transported for disposal at PVT Landfill.

2.8 SITE SURVEY

A post excavation land survey was performed by Gil Surveying, Inc. of the extents of each excavation. One survey point was collected for the multi-increment sample from the approximate center of the excavation to represent the ISM confirmation locations. Post excavation survey maps of each transformer sites are provided in Attachment 4.

2.9 BACKFILLING AND SITE RESTORATION

Following the post-excavation survey and confirmation sampling results meeting the clean-up goal, each site was backfilled and restored. Backfilling was placed in 6 in lifts and mechanical compacted with a walk behind vibratory plate compactor. The final 4 to 6 in of each excavation was backfilled with commercial topsoil. The topsoil was seeded with a Bermuda/Rye grass mixture. Once grass was re-established, Best Management Practices (BMPs) and the temporary orange fencing were removed. The first five sites (Section 2.4) were backfilled and seeded from 20-21 February 2013. Transformer 1129 was backfilled and seeded on 12 November 2013. Transformer F-678/678 on 7 and 8 May 2013.

2.10 WASTE DISPOSAL SUMMARY

A total of 10 roll-off bins containing 200,760 pounds (approximately 101 tons) of CERCLA non-hazardous/non-TSCA regulated soil were disposed at PVT Landfill. A waste summary table is presented prior to the CERCLA non-hazardous/non-TSCA regulated disposal manifest and weight tickets in Attachment 3.

A total of 26 supersacks containing 23,710 pounds (approximately 26 tons) of TSCA regulated waste soil were disposed at Chemical Waste Management of the Northwest in Arlington, Oregon. A waste summary table is presented prior to the TSCA regulated disposal manifests and weight tickets in Attachment 3.

Four drums of soil and rinse water from cleaning the concrete channel were disposed at PVT Landfill. The total weight of the drums was 1,911 pounds. The manifest and weight ticket for these drums is presented with the CERCLA non-hazardous/non-TSCA regulated disposal manifest and weight tickets.

2.11 DECONTAMINATION AND SITE DEMOBILIZATION

Upon completion of field activities at each transformer site location, a dry decontamination method was used for equipment and personnel decontamination prior to departing the site location. These activities were performed in accordance with the procedures described in *Site Safety and Health Plan, Time Critical Removal Action for Various Transformers (Site 0026), Marine Corps Base Hawaii, Oahu, Hawaii* contained in Appendix D of the Work Plan (CAPE 2013). Following the implementation of decontamination activities at the Transformer F-678/678 location, all remaining on-site equipment, materials, and personnel were demobilized on 16 September 2014.

3. PERFORMANCE STANDARDS AND CONSTRUCTION QUALITY CONTROL

The TCRA activities were performed in accordance with the Data Quality Objectives outlined in the Sampling and Analysis Plan and requirements outlined in the Project Quality Control Plan. A data quality assessment for confirmation soil analytical samples and a review of the project quality control results are summarized below.

3.1 ASSESSMENT OF DATA QUALITY

A Level C data package was provided by Test America and all soil analytical data was subjected to a data validation review by CAPE in accordance with *Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC (DON 2007)*. Data was validated to assess method compliance, calibration frequency and acceptability, QC frequency and acceptability, and data usability. Ten percent of the confirmation data underwent Navy “Full” level data validation, and 90 percent of the confirmation data underwent Navy “Standard” level validation. “Standard” and “Full” data validation results are presented in the Quality Assessment Reports (QARs). A cursory data validation was performed on delineation soil sample results and presented in a Data Evaluation Report (DER).

A QAR was completed for the confirmation soil sampling results collected on 29 and 30 January 2013, 23 September 2013, and 19 and 20 March 2014. The data validation review was performed by CAPE in accordance with NAVFAC ERP Procedure II-F, *Standard and Full Data Validation for Polychlorinated Biphenyls as Aroclors by SW-846 8082 (DON 2007)*. Precision, Accuracy, Representativeness, Comparability, and Completeness (PARCC) parameters were evaluated for confirmation soil sampling and these evaluation results are presented in the QAR provided in Attachment 6, and the Level C data packages are also provided in Attachment 7.

A DER was completed for the delineation soil sample results (Attachment 5). The data validation review was performed by CAPE in accordance with NAVFAC ERP Procedure II-A, *Data Validation Procedure* for cursory data validation of organic analyses (DON 2007).

3.1.1 Data Quality Assessment Summary

In summary, the TCRA data was qualified as J when results were below the laboratory limit of detection (LOD), between the LOD and the laboratory limit of quantitation to indicate they were qualitative estimates; unacceptable surrogate recoveries, primary/secondary column confirmations, initial calibration verification, or continuing calibration verification (if results rejected during original analysis and samples re-analyzed or diluted to achieve acceptable results); and these J qualifiers did not impact project decisions or removal action objectives. Data was qualified as non-detect (U) for results that were below the laboratory LOD. For delineation sample results any rejected (R) results reported the samples were diluted and re-analyzed. These results were then qualified J; see the DER for details on delineation data qualifiers. For confirmation sample results, there were three instances when the data was rejected (R), but re-analysis, dilutions (DLs), and project quality objectives (PQOs) resulted in the data to be qualified J or UJ. In sample delivery group (SDG) 580-40506-1, samples MBT597 and MBT599 (confirmation ISM samples collected at Transformer 1129) were rejected based on exceedances of the upper calibration range, but when samples were diluted and re-analyzed the calibration ranges were acceptable and the results were qualified J. In SDG 580-41230-1, samples MBT600, MBT601, and MBT602 (multi-increment samples collected from initial excavation floor of DUA/DUB at Transformer F-678/678) were analyzed without DL and at 20 times DL, but were rejected due to surrogate recoveries outside acceptance criteria for Aroclor 1260. The samples were re-analyzed for the remaining Aroclors and all Aroclors were reported U or J from the re-analyzed (RA) samples except for Aroclor 1260. Aroclor 1260 for sample MBT600 was reported J as the re-analyzed and dilution (RADL), sample MBT601 was reported J as RADL, and sample MBT602 was reported J as DL. In SDG 320-6695-1, sample MBT606 (multi-increment sample from excavation floor of area of concrete cap) had unacceptable surrogate recoveries in which the non-detected Aroclors were qualified as

R and positively detected results were qualified J. Delineation sampling results from the DU of the capped area did not detect any other Aroclors besides Aroclor 1260, so the R results do not impact the PQOs.

A total of 46 field duplicate soil sample pairs were collected during delineation sampling and relative percent differences (RPDs) were calculated for each pair. Eleven out of the 46 pairs did not pass the NAVFAC ERP Procedure II-F, *Standard and Full Data Validation for Polychlorinated Biphenyls as Aroclors by SW-846 8082* (DON 2007) limit of 100 percent RPD, but this does not affect the PQOs because of DLs performed on those samples and the heterogeneity of PCBs.

During conformation sampling a total of 13 DUs (including over-excavations) were sampled and four were sampled in triplicate. The average, standard deviation, and relative standard deviation (RSD) were calculated for the triplicates and out of the four triplicates, only one group from DUA at Transformer F-678/678 was above the 35 percent RSD goal with an RSD of 49 percent. This result does not affect the PQOs because this location was over-excavated. The RSD results are summarized in Table 13.

PARCC parameters were evaluated for confirmation samples and details presented in the QARs. In summary, all PARCC parameters were acceptable except for surrogate recoveries in some samples questioned accuracy and the rejected Aroclor results in sample MBT606 caused the SDG for that sample to have a completeness of 75 percent instead of the project goal of 95 percent. These accuracy and completeness issues do not impact the final conclusions or recommendations for this TCRA. MBT606 did not impact decisions in this TCRA as the intent of this sample was to measure the average concentration of PCBs remaining underneath the cap. The data is not used to confirm whether the clean-up goal has been achieved.

3.2 PROJECT QUALITY CONTROL ASSESSMENT

Project quality control is identified by controls, quality procedures and processes, and guidelines. In general, the quality control procedures implemented during the project QC were scheduling, managing subcontractors, tracking materials, documentation, and analytical testing. Definable Features of Work were evaluated during the three-phases of project control, in which all procedures were evaluated against the requirements of the contract. There was one non-conformance issued during the initial excavation at Transformer 1129 on 15 July 2013. The excavation subcontractor had initiated machine excavating when only hand digging was approved for the day. The pre-approved machine excavation was scheduled for the following day during a planned electrical shutdown of Transformer 1129. The corrective action to avoid this deficiency in the future would be for the Project Manager (PM) to meet with the crew at the start of the work to go over scope and allowed activities, and what steps are needed before the next activity can start. Any crew member that deviates without PM approval would be immediately dismissed from the site. The Contractor Daily Production and QC Reports, and field forms are provided in Attachment 1. The Navy's Pre-Final/Final Inspection were performed by the Navy Technical Representative on 7 October 2014, in which a punch list was created by the attendees of the inspection. All punch list items were completed by 8 October 2014. The final inspection report documenting the results of the Site Inspection and the Beneficial Occupancy Date (BOD) letter are provided in Attachment 8.

4. CONCLUSIONS AND RECOMMENDATIONS

The purpose of the TCRA at the Various Transformers (Site 0026) was to remove surface and subsurface soil surrounding seven active or former transformer sites containing PCB concentrations above the HDOH EAL of 1.1 mg/kg. At six of the seven transformer sites the clean-up goal was achieved and TCRA completed. At one site (Transformer 678/678) an alternative removal action was performed. At this site, the soil with the highest total PCB concentrations (adjacent to the Transformer F-678 pad) was removed and the soil not feasible for removal was capped with concrete to TSCA regulatory standards (CFR Part 761, Subpart D, 761.61.7) to eliminate direct exposure pathways to human and ecological receptors.

Transformers Sites 298, 1255, 252B, F-1126A/ F-1126B and 898/SS245/SS245F were excavated between 23 January 2013 and 28 January 2014. After the excavations were completed, a multi-increment sample was collected from the excavation floor and sidewalls of each site. The ISM results from all these five sites were below the clean-up goal, therefore meeting regulatory criteria for unrestricted/residential land use. After lab analysis confirmed the clean-up goal had been achieved these sites were backfilled and restored.

The initial excavation at Transformer 1129 was completed 16 July 2013. The post excavation confirmation soil sampling result was 1.6 mg/kg, just above the clean-up goal of 1.1 mg/kg; so discrete sampling was conducted to determine the specific area or areas of the excavation which did not meet the clean-up goal. The areas with PCB concentrations at or above the clean-up goal were over-excavated on 20 September 2014. The resulting confirmation ISM result was below the clean-up goal, therefore meeting regulatory criteria for unrestricted/residential land use. After lab analysis confirmed the clean-up goal had been achieved, this site was backfilled and restored.

Transformer F-678/678 was excavated on 6 and 7 November 2013. Following excavation, the confirmation ISM result from the un-capped area was 1.8 mg/kg, slightly above the clean-up goal of 1.1 mg/kg. Additional ISM *in situ* confirmation soil sampling determined the excavation needed to extend another 6 in vertically to meet the clean-up goal. This over-excavation was completed 16 March 2014. Therefore, this un-capped area now met regulatory criteria for unrestricted/residential land use and no further action is recommended in this un-capped area.

In the area to be capped with concrete at Transformer F-678/678 the soil was first excavated from 1 to 3 ft bgs. The excavated area was backfilled and compacted to 6 in bgs and a 6 in thick concrete cap was installed on 10 May 2014 to cover PCB contaminated soil not feasible for removal. The soil beneath the concrete cap has an average PCB concentration of 32 mg/kg. The concrete cap thickness was increased on 16 September 2014 to address site concerns related to storm water drainage. The resulting total thickness of the concrete cap is now 1 to 1.5 ft. The concrete cap eliminates direct exposure pathways to humans and the environment, and eliminated the potential for rainwater infiltration and migration of PCBs in subsurface soil.

In summary, this TCRA met the clean-up goal for unrestricted/residential land use at six of the seven transformers site and therefore no further action is recommended for these sites. No further action is recommended at Transformer F-678/678 uncapped areas, and at concrete capped areas with PCBs remaining at Transformer F-678/678 institution controls/land use controls are recommended.

5. REFERENCES

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Tables

Table 1: Summary of EBS and PA/SI Results Exceeding Screening Criteria

Transformer	COC Surface Soil Sample ID	Total PCB (mg/kg)	Exceeds HDOH Tier 1 EAL ¹ for Direct Exposure (1.1 mg/kg)	Exceeds HDOH Tier 1 EAL ¹ for Leaching threat to Groundwater (11 mg/kg)	Exceeds HDOH Tier 1 EAL ¹ for Gross Contamination (500 mg/kg)
1129	KD0179	4.9	x		
	KD0180(D)	2.6	x		
	KD0181	3.7	x		
	KD0183	5.8	x		
	KD0184	6.7	x		
298	KD0654	1.1	x		
	S97	1.7	x		
678	KD0676	3.7	x		
	KD0677	6.4	x		
	KD0680	3.1	x		
	KD0681	18	x	x	
	KD0682	9.7	x		
	KD0683(D)	12	x	x	
	S32	3.5	x		
	S33	18	x	x	
F-678	KD0689	1,700	x	x	x
	KD0690	13	x	x	
	KD0691	14	x	x	
	KD0692	22	x	x	
	KD0693	13	x	x	
	KD0694	61	x	x	
	KD0695	320	x	x	
	KD0696	260	x	x	
	KD0697(D)	290	x	x	
252B	KD0670	12	x	x	
898/SS245A	KD0755	1.2	x		
	KD0757	1.6	x		
	KD0759	1.9	x		
	KD0760	1.8	x		
	KD0761	3.1	x		
SS-245F	KD0771	3	x		
	KD0772	17	x	x	
F-1126A	KD0780	4.1	x		
	KD0781	1.3	x		
	KD0782	3.7	x		
	KD0783	25	x	x	
	KD0784	5.7	x		
F-1126B	KD0793	4.9	x		
	KD0794	3.4	x		

Transformer	COC Surface Soil Sample ID	Total PCB (mg/kg)	Exceeds HDOH Tier 1 EAL ¹ for Direct Exposure (1.1 mg/kg)	Exceeds HDOH Tier 1 EAL ¹ for Leaching threat to Groundwater (11 mg/kg)	Exceeds HDOH Tier 1 EAL ¹ for Gross Contamination (500 mg/kg)
	KD0795	3.6	x		
	KD0796	6.3	x		
	KD0797	21	x	x	
	KD0798	38	x	x	
	KD0799	30	x	x	
	KD0800(D)	31	x	x	
	S1	9.9	x		
	S2	150	x	x	
1255	KD0608	4.2	x		
	KD0609	1.9	x		
	KD0610	2.5	x		
	KD0611	1.6	x		
	KD0612	2.1	x		
	S9	0.59			
	S10	5.8	x		
	S11(D)	4.9	x		

Notes:

KDxxx = PA/SI Sample Identifier

Sx = EBS Sample Identifier

X = Surface soil concentration exceeds respective HDOH EAL criteria.

COC = chain-of-custody

(D) = duplicate samples

EAL = Environmental Action Level

HDOH = Department of Health, State of Hawaii

ID = Identification

mg/kg = milligram per kilogram

PCB = polychlorinated biphenyl¹ HDOH EAL Fall 2011 , Revised January 2012

Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT004	MBT005	MBT006	MBT007	MBT008	MBT012	MBT013	MBT014	MBT015	MBT016	MBT017	MBT018	MBT019	
Lab Identification		580-35831-4	580-35831-5	580-35831-6	580-35831-7	580-35831-8	580-35831-12	580-35831-13	580-35831-14	580-35831-15	580-35831-16	580-35831-17	580-35831-18	580-35831-19	
Sample Delivery Group (SDG)		580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	
Date Sampled		11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	
Soil Boring Number		B02			B03			B05			B06			B07	
Depth (in feet below ground surface)		0-0.5	1	2	1	2	1	1	2	1	2	0-0.5	1	2	
Sample Quality Control							Parent of MBT013	Field Duplicate of MBT012							
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
PCB-1016	--	0.0056U	0.0057U	0.0055U	0.0059U	0.006U	0.0061U	0.0057U	0.006U	0.010J	0.0052U	0.0058U	0.0062U	0.0049U	
PCB-1221	--	0.011U	0.011U	0.011U	0.012U	0.012U	0.012U	0.011U	0.012U	0.011U	0.010U	0.012U	0.012U	0.0099U	
PCB-1232	--	0.011U	0.011U	0.011U	0.012U	0.012U	0.012U	0.011U	0.012U	0.011U	0.010U	0.012U	0.012U	0.0099U	
PCB-1242	--	0.0056U	0.0057U	0.0055U	0.0059U	0.006U	0.0061U	0.0057U	0.006U	0.0056U	0.0052U	0.0058U	0.0062U	0.0049U	
PCB-1248	--	0.0056U	0.0057U	0.0055U	0.0059U	0.006U	0.0061U	0.0057U	0.006U	0.0056U	0.0052U	0.0058U	0.0062U	0.0049U	
PCB-1254	--	0.0056U	0.0057U	0.0055U	0.0059U	0.006U	0.0061U	0.0057U	0.006U	0.094J	0.0052U	0.0058U	0.0062U	0.0049U	
PCB-1260	--	0.770	0.360	0.240	2.600J	0.340	0.660	3.300J	0.250	1.300J	1.100	0.810	0.220	0.120	
PCB-1262	--	0.0056U	0.0057U	0.0055U	0.0059U	0.006U	0.0061U	0.0057U	0.006U	0.0056U	0.0052U	0.0058U	0.0062U	0.0049U	
PCB-1268	--	0.0056U	0.0034U	0.0033U	0.0035U	0.0036U	0.0037U	0.0034U	0.0036U	0.0034U	0.0031U	0.0035U	0.0037U	0.003U	
Total PCBs	1.100	0.770	0.360	0.240	2.600J	0.340	0.660	3.300J	0.250	1.404J	1.100	0.810	0.220	0.120	

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

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U - Result is not detected

UJ - Result is not detected and a quantitative estimate

ND - Non-detected

Bold results indicate positively detected value

Highlighted results exceeds PALS

Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT020	MBT021	MBT022	MBT023	MBT024	MBT025	MBT026	MBT027	MBT028	MBT029	MBT030	MBT031	
Lab Identification		580-35831-20	580-35831-21	580-35831-22	580-35831-23	580-35831-24	580-35831-25	580-35831-26	580-35831-27	580-35831-28	580-35831-29	580-35831-30	580-35831-31	
Sample Delivery Group (SDG)		580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-2	580-35831-2	580-35831-2	580-35831-1	580-35831-1	580-35831-1
Date Sampled		11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012
Soil Boring Number		B08			B09			B10			B11			
Depth (in feet below ground surface)		1	2	2	0-0.5	1	2	0-0.5	1	2	0-0.5	1	2	
Sample Quality Control		Parent of MBT022	Field Duplicate of MBT021											
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
PCB-1016	--	0.005U	0.0054U	0.0057U	0.0055U	0.0054U	0.0054U	0.0054U	0.0052U	0.0051U	0.0052U	0.0057U	0.0055U	
PCB-1221	--	0.0099U	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.010U	0.010U	0.010U	0.011U	0.011U	
PCB-1232	--	0.0099U	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.010U	0.010U	0.010U	0.011U	0.011U	
PCB-1242	--	0.005U	0.0054U	0.0057U	0.0055U	0.0054U	0.0054U	0.0054U	0.0052U	0.0051U	0.0052U	0.0057U	0.0055U	
PCB-1248	--	0.005U	0.0054U	0.0057U	0.0055U	0.0054U	0.0054U	0.0054UJ	0.0052UJ	0.0051U	0.0052U	0.0057U	0.0055U	
PCB-1254	--	0.005U	0.0054U	0.0057U	0.0055U	0.0054U	0.0054U	0.0054U	0.0052U	0.0051U	0.0052U	0.0057U	0.0055U	
PCB-1260	--	0.220J	0.500	1.000	0.590	0.680	0.720	0.190	0.016	0.120	0.250	0.230	0.350	
PCB-1262	--	0.005U	0.0054U	0.0057U	0.0055U	0.0054U	0.0054U	0.160	0.016	0.120	0.0052U	0.0057U	0.0055U	
PCB-1268	--	0.003U	0.0032U	0.0034U	0.0033U	0.0032U	0.0032U	0.0032UJ	0.0031UJ	0.0031U	0.0031U	0.0034U	0.0033U	
Total PCBs	1.100	0.220J	0.500	1.000	0.590	0.680	0.720	0.350	0.032	0.240	0.250	0.230	0.350	

Notes:

- ¹ EAL Environmental Action Level
- DOH Department of Health, State of Hawaii
- mg/kg-milligrams per kilogram
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Highlighted results exceeds PALs

Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT036	MBT037	MBT038	MBT039	MBT040	MBT044	MBT045	MBT046	MBT047	MBT048	MBT049
Lab Identification		580-35831-36	580-35831-37	580-35831-38	580-35831-39	580-35831-40	580-35831-44	580-35831-45	580-35831-46	580-35831-47	580-35831-48	580-35831-49
Sample Delivery Group (SDG)		580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1	580-35831-1
Date Sampled		11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012
Soil Boring Number		B13		B14			B16			B17		
Depth (in feet below ground surface)		1	2	0-0.5	1	2	0-0.5	0-0.5	1	2	1	2
Sample Quality Control						Parent of MBT045	Field Duplicate of MBT044					
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	--	0.0053U	0.0058U	0.0055U	0.0055U	0.0053U	0.0058U	0.0094J	0.020J	0.0057U	0.019J	0.0057U
PCB-1221	--	0.011U	0.012U	0.011U	0.011U	0.011U	0.012U	0.011U	0.012U	0.011U	0.011U	0.011U
PCB-1232	--	0.011U	0.012U	0.011U	0.011U	0.011U	0.012U	0.011U	0.012U	0.011U	0.011U	0.011U
PCB-1242	--	0.0053U	0.0058U	0.0055U	0.0055U	0.0053U	0.0058U	0.0056U	0.0059U	0.0057U	0.0057U	0.0057U
PCB-1248	--	0.0053U	0.0058U	0.0055U	0.0055U	0.0053U	0.0058U	0.0056U	0.0059U	0.0057U	0.0057U	0.0057U
PCB-1254	--	0.0053U	0.0058U	0.0055U	0.0055U	0.0053U	0.082J	0.070J	0.150J	0.046J	0.023J	0.0057U
PCB-1260	--	1.300	3.600J	0.770	1.100	1.400	0.035J	0.029J	0.061J	0.023J	0.0098J	0.0057U
PCB-1262	--	0.0053U	0.0058U	0.0055U	0.0055U	0.0053U	0.0058U	0.0056U	0.0059U	0.0057U	0.0057U	0.0057U
PCB-1268	--	0.0032U	0.0035U	0.0033U	0.0033U	0.0032U	0.0035U	0.0034U	0.0035U	0.0034U	0.0034U	0.0034U
Total PCBs	1.100	1.300	3.600J	0.770	1.100	1.400	0.117J	0.1084J	0.231J	0.069J	0.0518J	ND

Notes:

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DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT050	MBT051	MBT052	MBT056	MBT057	MBT058	MBT059	MBT060	MBT061	MBT067	MBT068	MBT069	MBT070	
Lab Identification		580-35831-50	580-35831-51	580-35831-52	580-35845-1	580-35845-2	580-35845-3	580-35845-4	580-35845-5	580-35845-6	580-35845-12	580-35845-13	580-35845-14	580-35845-15	
Sample Delivery Group (SDG)		580-35831-1	580-35831-1	580-35831-1	580-35845-1	580-35845-1	580-35845-1	580-35845-1	580-35845-1	580-35845-1	580-35845-1	580-35845-1	580-35845-1	580-35845-1	
Date Sampled		11/5/2012	11/5/2012	11/5/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	
Soil Boring Number		B18			B20			B21			B23			B24	
Depth (in feet below ground surface)		0-0.5	1	2	1	1	2	0-0.5	1	2	2	0-0.5	1	2	
Sample Quality Control					Parent of MBT057	Field Duplicate of MBT056									
Polychlorinated Biphenyls (PCBs) by SW846 8082		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016		--	0.030J	0.0055J	0.0057U	0.0055U	0.0053U	0.0055U	0.0056U	0.0055U	0.0056U	0.0058U	0.0058U	0.0057U	0.0057U
PCB-1221		--	0.012U	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.012U	0.012U	0.011U	0.011U
PCB-1232	--	0.012U	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.012U	0.012U	0.011U	0.011U	
PCB-1242	--	5.8U	0.0056U	0.0057U	0.0055U	0.0053U	0.0055U	0.0056U	0.0055U	0.0056U	0.0058U	0.0058U	0.0057U	0.0057U	
PCB-1248	--	5.8U	0.0056U	0.0057U	0.0055U	0.0053U	0.0055U	0.0056U	0.0055U	0.0056U	0.0058U	0.0058U	0.0057U	0.0057U	
PCB-1254	--	0.360J	0.032J	0.0057U	0.0055U	0.0053U	0.0055U	0.0056U	0.0055U	0.0056U	0.0058U	0.0058U	0.0057U	0.0057U	
PCB-1260	--	0.140J	0.014J	0.0057U	1.500J	0.730	1.400J	0.260	0.170	0.120	0.006J	0.280	0.098	0.140	
PCB-1262	--	0.0058U	0.0056U	0.0057U	0.0055U	0.0053U	0.0055U	0.0056U	0.0055U	0.0056U	0.0058U	0.0058U	0.075	0.0057U	
PCB-1268	--	0.0035U	0.0034U	0.0034U	0.0033U	0.0032U	0.0033U	0.0034U	0.0033U	0.0033U	0.0035U	0.0035U	0.023	0.0034U	
Total PCBs	1.100	0.530J	0.0515J	ND	1.500J	0.730	1.400J	0.260	0.170	0.120	0.006J	0.280	0.196	0.140	

Notes:

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mg/kg-milligrams per kilogram

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Highlighted results exceeds PALs

Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT071	MBT072	MBT073	MBT074	MBT075	MBT079	MBT080	MBT081	MBT085	MBT086	MBT087	MBT088	
Lab Identification		580-35845-16	580-35845-17	580-35845-18	580-35845-19	580-35845-20	580-35845-24	580-35845-25	580-35845-26	580-35845-30	580-35845-31	580-35845-32	580-35845-33	
Sample Delivery Group (SDG)		580-35845-1	580-35845-1	580-35845-1	580-35845-1	580-35845-1	580-35845-2	580-35845-2	580-35845-2	580-35845-1	580-35845-1	580-35845-1	580-35845-1	
Date Sampled		11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	
Soil Boring Number		B25			B26			B28			B30			
Depth (in feet below ground surface)		1	1	2	1	2	0-0.5	1	2	0-0.5	0-0.5	1	2	
Sample Quality Control		Parent of MBT072	Field Duplicate of MBT071							Parent of MBT086	Field Duplicate of MBT085			
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
PCB-1016	--	0.0055U	0.0059U	0.0059U	0.0059U	0.0057U	0.0051U	0.0054U	0.0052U	0.0054U	0.0054U	0.0055U	0.0055U	
PCB-1221	--	0.011U	0.012U	0.012U	0.012U	0.011U	0.010U	0.011U	0.010U	0.011U	0.011U	0.011U	0.011U	
PCB-1232	--	0.011U	0.012U	0.012U	0.012U	0.011U	0.010U	0.011U	0.010U	0.011U	0.011U	0.011U	0.011U	
PCB-1242	--	0.0055U	0.0059U	0.0059U	0.0059U	0.0057U	0.0051U	0.0054U	0.0052U	0.0054U	0.0054U	0.0055U	0.0055U	
PCB-1248	--	0.0055U	0.0059U	0.0059U	0.0059U	0.0057U	0.0051U	0.0054U	0.0052U	0.0054U	0.0054U	0.0055U	0.0055U	
PCB-1254	--	0.0055U	0.0059U	0.0059U	0.0059U	0.0057U	0.0051U	0.0054U	0.0052U	0.0054U	0.0054U	0.0055U	0.0055U	
PCB-1260	--	1.400	1.300	0.250	0.052	0.015	0.150	0.250	0.026	0.530	0.310	0.250	0.330	
PCB-1262	--	0.0055U	0.0059U	0.0059U	0.0059U	0.0057U	0.0051U	0.0054U	0.0052U	0.0054U	0.0054U	0.0055U	0.0055U	
PCB-1268	--	0.0033U	0.0036U	0.0035U	0.0036U	0.0034U	0.0030U	0.0032U	0.0031U	0.0033U	0.0032U	0.0033U	0.0033U	
Total PCBs	1.100	1.400	1.300	0.250	0.052	0.015	0.150	0.250	0.026	0.530	0.310	0.250	0.330	

Notes:

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT095	MBT096	MBT097	MBT098	MBT099	MBT100	MBT101	MBT115	MBT116	MBT117	MBT118	
Lab Identification		580-35845-40	580-35845-41	580-35845-42	580-35845-43	580-35845-44	580-35845-45	580-35845-46	580-35845-60	580-35845-66	580-35845-61	580-35845-62	
Sample Delivery Group (SDG)		580-35845-1	580-35845-1	580-35845-1	580-35845-1	580-35845-1	580-35845-1	580-35845-1	580-35845-1	580-35845-3	580-35845-3	580-35845-3	580-35845-3
Date Sampled		11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012
Soil Boring Number		B33				B34				B39			
Depth (in feet below ground surface)		0-0.5	0-0.5	1	2	0-0.5	1	2	0-0.5	1	1	2	
Sample Quality Control		Parent of MBT096	Field Duplicate of MBT095							Parent of MBT117	Field Duplicate of MBT116		
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	
PCB-1016	--	0.0052U	0.0052U	0.0054U	0.0053U	0.0053U	0.0055U	0.0057U	0.0058U	0.005U	0.0053U	0.0053U	
PCB-1221	--	0.010U	0.010U	0.011U	0.011U	0.011U	0.011U	0.011U	0.012U	0.010U	0.011U	0.011U	
PCB-1232	--	0.010U	0.010U	0.011U	0.011U	0.011U	0.011U	0.011U	0.012U	0.010U	0.011U	0.011U	
PCB-1242	--	0.0052U	0.0052U	0.0054U	0.0053U	0.0053U	0.0055U	0.0057U	0.0058U	0.005U	0.0053U	0.0053U	
PCB-1248	--	0.0052U	0.0052U	0.0054U	0.0053U	0.0053U	0.0055U	0.0057U	0.0058U	0.005U	0.0053U	0.0053U	
PCB-1254	--	0.0052U	0.0052U	0.0054U	0.0053U	0.0053U	0.0055U	0.0057U	0.0058U	0.005U	0.0053U	0.0053U	
PCB-1260	--	0.068	0.060	0.020	0.008J	0.051	0.0056J	0.0035J	0.540	0.019	0.015	0.012	
PCB-1262	--	0.0052U	0.0052U	0.0054U	0.0053U	0.0053U	0.0055U	0.0057U	0.450	0.015	0.012	0.0093J	
PCB-1268	--	0.0031U	0.0031U	0.0032U	0.0032U	0.0032U	0.0033U	0.0034U	0.0035U	0.003U	0.0032U	0.0032U	
Total PCBs	1.100	0.068	0.060	0.020	0.008J	0.051	0.0056J	0.0035J	0.990	0.034	0.027	0.0213J	

Notes:

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Highlighted results exceeds PALs

Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT119	MBT120	MBT121	MBT122	MBT123	MBT124	MBT125	MBT126	MBT127	MBT128	MBT129	MBT130	MBT131	
Lab Identification		580-35845-63	580-35845-64	580-35845-65	580-35884-1	580-35884-2	580-35884-3	580-35884-4	580-35884-5	580-35884-6	580-35884-7	580-35884-8	580-35884-9	580-35884-10	
Sample Delivery Group (SDG)		580-35845-3	580-35845-3	580-35845-3	580-35884-2	580-35884-2	580-35884-2	580-35884-2	580-35884-2	580-35884-2	580-35884-1	580-35884-1	580-35884-1	580-35884-1	
Date Sampled		11/6/2012	11/6/2012	11/6/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	
Soil Boring Number		B40			B41			B42			B43				
Depth (in feet below ground surface)		0-0.5	1	2	0-0.5	1	2	0-0.5	1	2	0-0.5	0-0.5	1	2	
Sample Quality Control											Parent of MBT129	Field Duplicate of MBT128			
Polychlorinated Biphenyls (PCBs) by SW846 8082		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
PCB-1016		--	0.0058U	0.0055U	0.0051U	0.0059U	0.0046U	0.006U	0.0048U	0.0064U	0.0047U	0.0057U	0.0056U	0.0055U	0.0056U
PCB-1221		--	0.012U	0.011U	0.010U	0.012U	0.0092U	0.012U	0.0095U	0.013U	0.0094U	0.011U	0.011U	0.011U	0.011U
PCB-1232	--	0.012U	0.011U	0.010U	0.012U	0.0092U	0.012U	0.0095U	0.013U	0.0094U	0.011U	0.011U	0.011U	0.011U	
PCB-1242	--	0.0058U	0.0055U	0.0051U	0.0059U	0.0046U	0.006U	0.0048U	0.0064U	0.0047U	0.0057U	0.0056U	0.0055U	0.0056U	
PCB-1248	--	0.0058U	0.0055U	0.0051U	0.0059U	0.0046U	0.006U	0.0048U	0.0064U	0.0047U	0.0057U	0.0056U	0.0055U	0.0056U	
PCB-1254	--	0.0058U	0.0055U	0.0051U	0.0059U	0.0046U	0.006U	0.0048U	0.0064U	0.0047U	0.0057U	0.0056U	0.0055U	0.0056U	
PCB-1260	--	0.020	0.018	0.0051U	0.0059UJ	0.0046UJ	0.006UJ	0.250J	0.023J	0.013J	0.140	0.330	0.0045J	0.010J	
PCB-1262	--	0.017	0.015	0.002J	0.0059U	0.0046U	0.006U	0.190J	0.015J	0.0086J	0.0057U	0.0056U	0.0055U	0.0056U	
PCB-1268	--	0.0035U	0.0033U	0.0031U	0.0036U	0.0028U	0.0036U	0.0029U	0.0038U	0.0028U	0.0034U	0.0034U	0.0033U	0.0033U	
Total PCBs	1.100	0.037	0.033	0.002J	ND	ND	ND	0.440J	0.038J	0.0216J	0.140	0.330	0.0045J	0.010J	

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

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Highlighted results exceeds PALs

Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT132	MBT133	MBT134	MBT135	MBT136	MBT137	MBT138	MBT139	MBT140	MBT141	MBT142	MBT143	
Lab Identification		580-35884-11	580-35884-12	580-35884-13	580-35884-14	580-35884-15	580-35884-16	580-35884-17	580-35884-18	580-35884-19	580-35884-20	580-35884-21	580-35884-22	
Sample Delivery Group (SDG)		580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	
Date Sampled		11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	
Soil Boring Number		B44			B45			B46			B47			
Depth (in feet below ground surface)		0-0.5	1	2	0-0.5	1	2	0-0.5	0-0.5	1	2	1	2	
Sample Quality Control								Parent of MBT139	Field Duplicate of MBT138					
Polychlorinated Biphenyls (PCBs) by SW846 8082		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016		--	0.0061U	0.0062U	0.0052U	0.0054U	0.0061U	0.0052U	0.0057U	0.0056U	0.0056U	0.0054U	0.0063U	0.0063U
PCB-1221		--	0.012U	0.012U	0.010U	0.011U	0.012U	0.010U	0.011U	0.011U	0.011U	0.011U	0.013U	0.013U
PCB-1232	--	0.012U	0.012U	0.010U	0.011U	0.012U	0.010U	0.011U	0.011U	0.011U	0.011U	0.013U	0.013U	
PCB-1242	--	0.0061U	0.0062U	0.0052U	0.0054U	0.0061U	0.0052U	0.0057U	0.0056U	0.0056U	0.0054U	0.0063U	0.0063U	
PCB-1248	--	0.0061U	0.0062U	0.0052U	0.0054U	0.0061U	0.0052U	0.0057U	0.0056U	0.0056U	0.0054U	0.0063U	0.0063U	
PCB-1254	--	0.0061U	0.0062U	0.0052U	0.0054U	0.0061U	0.0052U	0.0057U	0.0056U	0.0056U	0.0054U	0.0063U	0.0063U	
PCB-1260	--	0.060	0.028J	0.250	0.063	0.039	0.0072J	0.480	4.100J	0.210	0.034	6.700J	2.100	
PCB-1262	--	0.0061U	0.0062U	0.0052U	0.0054U	0.0061U	0.0052U	0.0057U	0.0056U	0.0056U	0.0054U	0.0063U	0.0063U	
PCB-1268	--	0.0036U	0.0037U	0.0031U	0.0033U	0.0037U	0.0031U	0.0034U	0.0034U	0.0033U	0.0032U	0.0038U	0.038U	
Total PCBs	1.100	0.060	0.028J	0.250	0.063	0.039	0.0072J	0.480	4.100J	0.210	0.034	6.700J	2.100	

Notes:

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DOH Department of Health, State of Hawaii

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT144	MBT145	MBT146	MBT147	MBT148	MBT149	MBT150	MBT151	MBT152	MBT153	MBT154	MBT155	MBT156	
Lab Identification		580-35884-23	580-35884-24	580-35884-25	580-35884-26	580-35884-27	580-35884-28	580-35884-29	580-35884-30	580-35884-31	580-35884-32	580-35884-33	580-35884-34	580-35884-35	
Sample Delivery Group (SDG)		580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-2	580-35884-2	580-35884-2	580-35884-1	580-35884-1
Date Sampled		11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012
Soil Boring Number		B48		B49		B50				B51		B52			
Depth (in feet below ground surface)		1	2	1	2	0-0.5	1	1	2	0-0.5	1	2	1	2	
Sample Quality Control							Parent of MBT150	Field Duplicate of MBT149							
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	
PCB-1016	--	0.005U	0.0055U	0.0051U J	0.0061U	0.0053U	0.0055U	0.0055U	0.0056U	0.0056U	0.0063U	0.0059U	0.0056U	0.0054U	
PCB-1221	--	0.011U	0.011U	0.010U	0.012U	0.011U	0.011U	0.011U	0.011U	0.011U	0.013U	0.012U	0.011U	0.011U	
PCB-1232	--	0.011U	0.011U	0.010U	0.012U	0.011U	0.011U	0.011U	0.011U	0.011U	0.013U	0.012U	0.011U	0.011U	
PCB-1242	--	0.005U	0.0055U	0.0051U	0.0061U	0.0053U	0.0055U	0.0055U	0.0056U	0.0056U	0.0063U	0.0059U	0.0056U	0.0054U	
PCB-1248	--	0.005U	0.0055U	0.0051U	0.0061U	0.0053U	0.0055U	0.0055U	0.0056U	0.0056U	0.0063U	0.0059U	0.0056U	0.0054U	
PCB-1254	--	0.005U	0.0055U	0.0051U	0.0061U	0.0053U	0.0055U	0.0055U	0.0056U	0.0056U	0.0063U	0.0059U	0.0056U	0.0054U	
PCB-1260	--	35.000	3.900J	12.000	3.700J	15.000	15.000	13.000	9.300	6.700J	0.110J	0.048J	13.000	3.000J	
PCB-1262	--	0.005U	0.0055U	0.0051U	0.0061U	0.0053U	0.0055U	0.0055U	0.0056U	5.400J	0.092J	0.040J	0.0056U	0.0054U	
PCB-1268	--	0.003U	0.0033U	0.0031U	0.0036U	0.0032U	0.0033U	0.0033U	0.0034U	0.0034U	0.0038U	0.0035U	0.0034U	0.0032U	
Total PCBs	1.100	35.000	3.900J	12.000	3.700J	15.000	15.000	13.000	9.300	12.100J	0.202J	0.088J	13.000	3.000J	

Notes:

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT157	MBT158	MBT159	MBT160	MBT161	MBT162	MBT163	MBT164	MBT165	MBT166	MBT167	MBT168	MBT169	
Lab Identification		580-35884-36	580-35884-37	580-35884-38	580-35884-39	580-35884-40	580-35884-41	580-35884-42	580-35884-43	580-35884-44	580-35884-45	580-35884-46	580-35884-47	580-35884-48	
Sample Delivery Group (SDG)		580-35884-2	580-35884-2	580-35884-2	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1
Date Sampled		11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012
Soil Boring Number		B53			B54				B55			B56			
Depth (in feet below ground surface)		0-0.5	1	2	0-0.5	0-0.5	1	2	0-0.5	1	2	0-0.5	1	2	
Sample Quality Control					Parent of MBT161	Field Duplicate of MBT160									
Polychlorinated Biphenyls (PCBs) by SW846 8082		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016		--	0.0049UJ	0.0049UJ	0.0051UJ	0.0058U	0.0056U	0.0061U	0.0051U	0.0054U	0.0053U	0.0059U	0.0057U	0.0058U	0.0057U
PCB-1221		--	0.0097U	0.0097U	0.010U	0.012U	0.011U	0.012U	0.010U	0.011U	0.011U	0.012U	0.011U	0.012U	0.011U
PCB-1232	--	0.0097U	0.0097U	0.010U	0.012U	0.011U	0.012U	0.010U	0.011U	0.011U	0.012U	0.011U	0.012U	0.011U	
PCB-1242	--	0.0049U	0.0049UJ	0.0051UJ	0.0058U	0.0056U	0.0061U	0.0051U	0.0054U	0.0053U	0.0059U	0.0057U	0.0058U	0.0057U	
PCB-1248	--	0.0049U	0.0049UJ	0.0051UJ	0.0058U	0.0056U	0.0061U	0.0051U	0.0054U	0.0053U	0.0059U	0.0057U	0.0058U	0.0057U	
PCB-1254	--	0.0049U	0.0049UJ	0.0051UJ	0.0058U	0.0056U	0.0061U	0.0051U	0.0054U	0.0053U	0.0059U	0.0057U	0.0058U	0.0057U	
PCB-1260	--	18.000J	2.400J	2.600J	3.500J	1.600J	1.100	0.051	16.000	10.000	0.480	0.120J	0.016	0.0057U	
PCB-1262	--	0.0049U	0.0049UJ	0.0051UJ	0.0058U	0.0056U	0.0061U	0.0051U	0.0054U	0.0053U	0.0059U	0.0057U	0.0058U	0.0057U	
PCB-1268	--	0.0029U	0.0029U	0.0031U	0.0035U	0.0033U	0.0037U	0.0031U	0.0032U	0.0032U	0.0036U	0.0034U	0.0035U	0.0034U	
Total PCBs	1.100	18.000J	2.400J	2.600J	3.500J	1.600J	1.100	0.051	16.000	10.000	0.480	0.120J	0.016	ND	

Notes:

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT170	MBT171	MBT172	MBT173	MBT174	MBT175	MBT176	MBT177	MBT178	MBT179	MBT180	
Lab Identification		580-35884-49	580-35884-50	580-35884-51	580-35884-52	580-35884-53	580-35884-54	580-35884-55	580-35884-56	580-35884-57	580-35884-58	580-35884-59	
Sample Delivery Group (SDG)		580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-1	580-35884-2	580-35884-2	580-35884-2	580-35884-2
Date Sampled		11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012
Soil Boring Number		B57			B58			B59					
Depth (in feet below ground surface)		1	2	3	0-0.5	1	2	3	0-0.5	1	2	3	
Sample Quality Control													
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	
PCB-1016	--	0.0057U	0.0057U	0.0059U	0.0058U	5.300U	2.900U	3.100U	0.0051UJ	0.0055UJ	0.0056UJ	0.0059UJ	
PCB-1221	--	0.011U	0.011U	0.012U	0.012U	11.000U	5.700U	6.200U	0.010U	0.011U	0.011U	0.012U	
PCB-1232	--	0.011U	0.011U	0.012U	0.012U	11.000U	5.700U	6.200U	0.010U	0.011U	0.011U	0.012U	
PCB-1242	--	0.0057U	0.0057U	0.0059U	0.0058U	5.300U	2.900U	3.100U	0.0051U	0.0055U	0.0056U	0.0059U	
PCB-1248	--	0.0057U	0.0057U	0.0059U	0.0058U	5.300U	2.900U	3.100U	0.0051U	0.0055U	0.0056U	0.0059U	
PCB-1254	--	0.0057U	0.0057U	0.0059U	0.0058U	5.300U	2.900U	3.100U	0.0051U	0.0055U	0.0056U	0.0059U	
PCB-1260	--	7,800J	2,400.000	16.000	7,100.000	2,100J	160.000	120.000	84.000J	13.000J	4.000J	5.200J	
PCB-1262	--	0.0057U	0.0057U	0.0059U	0.0058U	5.300U	2.900U	3.100U	0.0051U	0.0055U	0.0056U	0.0059U	
PCB-1268	--	0.0034U	0.0034U	0.0036U	0.0035U	3.200U	1.700U	1.900U	0.0031U	0.0033U	0.0033U	0.0035U	
Total PCBs	1.100	7,800J	2,400.000	16.000	7,100.000	2,100J	160.000J	120.000	84.000J	13.000J	4.000J	5.200J	

Notes:

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT181	MBT182	MBT183	MBT184	MBT185	MBT186	MBT187	MBT188	MBT189	MBT190	MBT191	
Lab Identification		580-35884-60	580-35890-1	580-35890-2	580-35890-3	580-35890-4	580-35890-5	580-35890-6	580-35890-7	580-35890-8	580-35890-9	580-35890-10	
Sample Delivery Group (SDG)		580-35884-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-2	580-35890-2	580-35890-2	580-35890-2
Date Sampled		11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012
Soil Boring Number		B60			B61			B62					
Depth (in feet below ground surface)		1	2	3	0-0.5	1	2	3	0-0.5	1	2	3	
Sample Quality Control													
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	
PCB-1016	--	2.500U	2.700U	0.120U	2.700U	2.800U	2.800U	0.0062UJ	0.005U	0.0056U	0.0055U	0.0055U	
PCB-1221	--	5.100U	5.400U	0.240U	5.400U	5.600U	5.500U	0.012U	0.0099U	0.011U	0.011U	0.011U	
PCB-1232	--	5.100U	5.400U	0.240U	5.400U	5.600U	5.500U	0.012U	0.0099U	0.011U	0.011U	0.011U	
PCB-1242	--	2.500U	2.700U	0.120U	2.700U	2.800U	2.800U	0.0062U	0.005U	0.0056U	0.0055U	0.0055U	
PCB-1248	--	2.500U	2.700U	0.120U	2.700U	2.800U	2.800U	0.0062U	0.005U	0.0056U	0.0055U	0.0055U	
PCB-1254	--	160.000J	2.700U	0.120U	2.700U	2.800U	2.800U	0.0062U	0.005U	0.0056U	0.0055U	0.0055U	
PCB-1260	--	250.000J	71.000J	6.100J	250.000J	2.800U	2.800U	0.950J	16.000J	3.600	1.000	0.042	
PCB-1262	--	170.000J	47.000J	4.100J	170.000J	2.800U	2.800U	0.490J	0.005U	0.0056U	0.0055U	0.0055U	
PCB-1268	--	63.000J	1.600U	0.071U	1.600U	1.700U	1.700U	0.0037U	0.003U	0.0034U	0.0033U	0.0033U	
Total PCBs	1.100	643.000J	118.000J	10.200J	420.000J	ND	ND	1.440J	16.000J	3.600	1.000	0.042	

Notes:

¹EAL Environmental Action Level
DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

ND - Non-detected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT192	MBT193	MBT194	MBT195	MBT196	MBT197	MBT198	MBT199	MBT200	MBT201	MBT202	MBT203	
Lab Identification		580-35890-11	580-35890-12	580-35890-13	580-35890-14	580-35890-15	580-35890-16	580-35890-17	580-35890-18	580-35890-19	580-35890-20	580-35890-21	580-35890-22	
Sample Delivery Group (SDG)		580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-2	580-35890-2	580-35890-2	580-35890-2
Date Sampled		11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012
Soil Boring Number		B63				B64				B65				
Depth (in feet below ground surface)		1	1	2	3	0-0.5	1	2	3	0-0.5	1	2	3	
Sample Quality Control		Parent of MBT193	Field Duplicate of MBT192											
Polychlorinated Biphenyls (PCBs) by SW846 8082		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016		--	0.530U	0.540U	0.0057UJ	0.120U	2.800U	2.700UJ	2.700U	2.700U	0.0054U	0.0056U	0.0054U	0.0052U
PCB-1221		--	1.100U	1.100U	0.011U	0.250U	5.500U	5.500U	5.500U	5.300U	0.011U	0.011U	0.011U	0.010U
PCB-1232	--	1.100U	1.100U	0.011U	0.250U	5.500U	5.500U	5.500U	5.300U	0.011U	0.011U	0.011U	0.010U	
PCB-1242	--	0.530U	0.540U	0.0057U	0.120U	2.800U	2.700U	2.700U	2.700U	0.0054U	0.0056U	0.0054U	0.0052U	
PCB-1248	--	0.530U	0.540U	0.0057U	0.120U	2.800U	2.700U	2.700U	2.700U	0.0054U	0.0056U	0.0054U	0.0052U	
PCB-1254	--	0.530U	0.540U	0.0057U	0.120U	2.800U	2.700U	2.700U	2.700U	0.0054U	0.0056U	0.0054U	0.0052U	
PCB-1260	--	13.000J	25.000J	0.580J	0.120U	340.000J	29.000J	88.000J	22.000J	4.500	0.440	0.810	0.130	
PCB-1262	--	9.700J	18.000J	0.410J	0.120U	250.000J	20.000J	61.000J	15.000J	0.0054U	0.0056U	0.0054U	0.0052U	
PCB-1268	--	0.320U	0.320U	0.0034U	0.074U	1.700U	1.600U	1.600U	1.600U	0.0033U	0.0034U	0.0032U	0.0031U	
Total PCBs	1.100	22.700J	43.000J	0.990J	ND	590.000J	49.000J	149.000J	37.000J	4.500	0.440	0.810	0.130	

Notes:

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DOH Department of Health, State of Hawaii

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT204	MBT205	MBT206	MBT207	MBT208	MBT209	MBT210	MBT211	MBT212	MBT213	MBT214	
Lab Identification		580-35890-23	580-35890-24	580-35890-25	580-35890-26	580-35890-27	580-35890-28	580-35890-29	580-35890-30	580-35890-31	580-35890-32	580-35890-33	
Sample Delivery Group (SDG)		580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-3	580-35890-2	580-35890-2	580-35890-2
Date Sampled		11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012
Soil Boring Number		B66			B67			B68			B69		
Depth (in feet below ground surface)	1	1	2	0-0.5	1	2	1	2	0-0.5	1	2		
Sample Quality Control	Parent of MBT205	Field Duplicate of MBT204											
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
PCB-1016	--	2.600U	0.280U	0.120U	0.0053U J	0.0051UJ	0.0052UJ	2.700U	0.0062UJ	0.0061U	0.0057U	0.0059U	
PCB-1221	--	5.300U	0.550U	0.240U	0.011U	0.010U	0.010U	5.500U	0.012UJ	0.012U	0.011U	0.012U	
PCB-1232	--	5.300U	0.550U	0.240U	0.011U	0.010U	0.010U	5.500U	0.012UJ	0.012U	0.011U	0.012U	
PCB-1242	--	2.600U	0.280U	0.120U	0.0053U J	0.0051UJ	0.0052U	2.700U	0.0062UJ	0.0061U	0.0057U	0.0059U	
PCB-1248	--	2.600U	0.280U	0.120U	0.0053U J	0.0051UJ	0.0052U	2.700U	0.0062UJ	0.0061U	0.0057U	0.0059U	
PCB-1254	--	2.600U	0.280U	0.120U	0.0053U J	0.0051UJ	0.0052U	2.700U	0.0062UJ	0.0061U	0.0057U	0.0059U	
PCB-1260	--	14.000J	7.300J	5.400J	0.260J	0.042	0.049	110.000J	1.000J	4.400	0.096	24.000J	
PCB-1262	--	10.000J	6.100J	3.700J	0.160J	0.0051UJ	0.0052U	73.000J	0.870J	0.0061U	0.0057U	0.0059U	
PCB-1268	--	1.600U	0.170U	0.071U	0.0032U	0.003U	0.0031U	1.600U	0.0037UJ	0.0036U	0.0034U	0.0035U	
Total PCBs	1.100	24.000J	13.400J	9.100J	0.420J	0.042	0.049	183.000J	1.870J	4.400	0.096	24.000J	

Notes:

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT215	MBT216	MBT217	MBT218	MBT219	MBT220	MBT221	MBT225	MBT226	MBT227	MBT231	MBT232	MBT233		
Lab Identification		580-35890-34	580-35890-35	580-35890-36	580-35890-37	580-35890-38	580-35890-39	580-35890-40	580-35890-44	580-35890-45	580-35890-46	580-35890-50	580-35890-51	580-35890-52		
Sample Delivery Group (SDG)		580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	580-35890-1	
Date Sampled		11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	
Soil Boring Number		B70				B71				B73			B75			
Depth (in feet below ground surface)		0-0.5	0-0.5	1	2	0-0.5	1	2	1	2	2	0-0.5	1	2		
Sample Quality Control		Parent of MBT216	Field Duplicate of MBT215								Parent of MBT227	Field Duplicate of MBT226				
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
PCB-1016	--	2.600U	0.120U	0.120U	0.0056UJ	0.0054UJ	0.0054UJ	0.0054UJ	0.0053UJ	0.0055UJ	0.0055UJ	0.005UJ	0.0053UJ	0.0052UJ		
PCB-1221	--	5.200U	0.240U	0.230U	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.010U	0.011U	0.010U		
PCB-1232	--	5.200U	0.240U	0.230U	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.010U	0.011U	0.010U		
PCB-1242	--	2.600U	0.120U	0.120U	0.0056U	0.0054U	0.0054U	0.0054U	0.0053U	0.0055U	0.0055U	0.005U	0.0053U	0.0052U		
PCB-1248	--	2.600U	0.120U	0.120U	0.0056U	0.0054U	0.0054U	0.0054U	0.0053U	0.0055U	0.0055U	0.005U	0.0053U	0.0052U		
PCB-1254	--	2.600U	0.120U	0.120U	0.0056U	0.0054U	0.0054U	0.0054U	0.0053U	0.0055U	0.0055U	0.005U	0.0053U	0.0052U		
PCB-1260	--	40.000J	3.300J	3.000J	0.120J	0.046J	0.0054UJ	0.0054UJ	0.0053UJ	0.0055UJ	0.0055UJ	0.005UJ	0.0053UJ	0.0052UJ		
PCB-1262	--	27.000J	2.200J	2.000J	0.063J	0.035J	0.0054U	0.0054U	0.0053U	0.0055U	0.0055U	0.005U	0.0053U	0.0052U		
PCB-1268	--	1.600U	0.072U	0.070U	0.0034U	0.0033U	0.0032U	0.0032U	0.0032U	0.0033U	0.0033U	0.003U	0.180	0.0031U		
Total PCBs	1.100	67.000J	5.500J	5.000J	0.183J	0.081J	ND	ND	ND	ND	ND	ND	0.180	ND		

Notes:

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT240	MBT241	MBT242	MBT243	MBT244	MBT338	MBT245	MBT246	MBT247	MBT248	MBT249	MBT250	MBT251		
Lab Identification		580-35899-7	580-35899-8	580-35899-9	580-35899-10	580-35899-11	580-35900-45	580-35899-12	580-35899-13	580-35899-14	580-35899-15	580-35899-16	580-35899-17	580-35899-18		
Sample Delivery Group (SDG)		580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35900-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	
Date Sampled		11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	
Soil Boring Number		B78			B79			B80			B81			B82		
Depth (in feet below ground surface)		1	1	2	1	2	0-0.5	1	2	1	2	0-0.5	1	2		
Sample Quality Control		Parent of MBT241	Field Duplicate of MBT240													
Polychlorinated Biphenyls (PCBs) by SW846 8082		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
PCB-1016		--	0.055U	0.110U	0.110U	0.0054U	0.0054U	0.570UJ	0.0053U	0.0055U	0.0056U	0.0058U	0.0054U	0.0053U	0.0053U	
PCB-1221		--	0.110U	0.220U	0.220U	0.011U	0.011U	1.100U	0.011U	0.011U	0.011U	0.012U	0.011U	0.011U	0.011U	
PCB-1232	--	0.110U	0.220U	0.220U	0.011U	0.011U	1.100U	0.011U	0.011U	0.011U	0.012U	0.011U	0.011U	0.011U		
PCB-1242	--	0.055U	0.110U	0.110U	5.4U	0.0054U	0.570UJ	0.0053U	0.0055U	0.0056U	0.0058U	0.0054U	0.0053U	0.0053U		
PCB-1248	--	0.055U	0.110U	0.110U	0.0054U	0.0054U	0.570UJ	0.0053U	0.0055U	0.0056U	0.0058U	0.0054U	0.0053U	0.0053U		
PCB-1254	--	0.055U	0.110U	0.110U	0.0054U	0.0054U	0.570UJ	0.0053U	0.0055U	0.0056U	0.0058U	0.0054U	0.0053U	0.0053U		
PCB-1260	--	4.400J	8.700J	0.550U	0.190J	0.200J	3.600J	0.470J	0.650J	2.400J	3.100J	0.210J	0.160J	0.160J		
PCB-1262	--	3.000J	6.300J	3.200	0.140J	0.150J	2.500J	0.290J	0.380J	1.900J	2.400J	0.170J	0.130J	0.130J		
PCB-1268	--	0.033U	0.066U	0.066U	0.0032U	0.0032U	0.340U	0.0032U	0.0033U	0.0034U	0.0035U	0.0033U	0.0032U	0.0032U		
Total PCBs	1.100	7.400J	15.000J	3.200	0.330J	0.350J	6.100J	0.760J	1.030J	4.300J	5.500J	0.380J	0.290J	0.290J		

Notes:

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mg/kg-milligrams per kilogram

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT252	MBT253	MBT254	MBT259	MBT260	MBT261	MBT262	MBT263	MBT264	MBT265	MBT266	MBT267
Lab Identification		580-35899-19	580-35899-20	580-35899-21	580-35899-26	580-35899-27	580-35899-28	580-35899-29	580-35899-30	580-35899-31	580-35899-32	580-35899-33	580-35899-34
Sample Delivery Group (SDG)		580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1
Date Sampled		11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012
Soil Boring Number		B83			B85			B86			B87		
Depth (in feet below ground surface)		0-0.5	1	2	0-0.5	1	2	0-0.5	1	2	0-0.5	1	2
Sample Quality Control													
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016	--	0.0055U	0.0053U	0.0051U	0.0054U	0.0053U	0.0055U	0.0054U	0.0053U	0.0053U	0.0055U	0.0061U	0.0056U
PCB-1221	--	0.011U	0.011U	0.010U	0.011U	0.012U	0.011U						
PCB-1232	--	0.011U	0.011U	0.010U	0.011U	0.012U	0.011U						
PCB-1242	--	0.0055U	0.0053U	0.0051U	0.0054U	0.0053U	0.0055U	0.0054U	0.0053U	0.0053U	0.0055U	0.0061U	0.0056U
PCB-1248	--	0.0055U	0.0053U	0.0051U	0.0054U	0.0053U	0.0055U	0.0054U	0.0053U	0.0053U	0.0055U	0.0061U	0.0056U
PCB-1254	--	0.0055U	0.0053U	0.0051U	0.0054U	0.0053U	0.0055U	0.0054U	0.0053U	0.0053U	0.0055U	0.0061U	0.0056U
PCB-1260	--	0.067J	0.012J	0.0051U	0.140J	0.190J	0.150J	0.190J	0.043J	0.011J	0.130J	0.093J	0.057J
PCB-1262	--	0.028J	0.0041J	0.0051U	0.110J	0.150J	0.120J	0.170J	0.037J	0.0053U	0.0055U	0.062J	0.046J
PCB-1268	--	0.0033U	0.0032U	0.0031U	0.0033U	0.0032U	0.0033U	0.0033U	0.0032U	0.0032U	0.0033U	0.0037U	0.034U
Total PCBs	1.100	0.095J	0.0161J	ND	0.250J	0.340J	0.270J	0.360J	0.080J	0.011J	0.130J	0.155J	0.103J

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT268	MBT269	MBT270	MBT271	MBT272	MBT273	MBT274	MBT275	MBT276	MBT277	MBT278	MBT279	
Lab Identification		580-35899-35	580-35899-36	580-35899-37	580-35899-38	580-35899-39	580-35899-40	580-35899-41	580-35899-42	580-35899-43	580-35899-44	580-35899-45	580-35899-46	
Sample Delivery Group (SDG)		580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	
Date Sampled		11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	
Soil Boring Number		B88			B89			B90			B91			
Depth (in feet below ground surface)		1	1	2	1	1	2	1	2	2	1	1	2	
Sample Quality Control		Parent of MBT269	Field Duplicate of MBT268		Parent of MBT272	Field Duplicate of MBT271			Parent of MBT276	Field Duplicate of MBT275	Parent of MBT278	Field Duplicate of MBT277		
Polychlorinated Biphenyls (PCBs) by SW846 8082		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016		--	0.0063U	0.0062U	0.0061U	0.0052UJ	0.0056U	0.006U	0.0054U	0.0065U	0.0064U	0.0057U	0.0056U	0.0062U
PCB-1221		--	0.013U	0.012U	0.012U	0.010UJ	0.011U	0.012U	0.011U	0.013U	0.013U	0.011U	0.011U	0.012U
PCB-1232	--	0.013U	0.012U	0.012U	0.010UJ	0.011U	0.012U	0.011U	0.013U	0.013U	0.011U	0.011U	0.012U	
PCB-1242	--	0.0063U	0.0062U	0.0061U	0.0052UJ	0.0056U	0.006U	0.0054U	0.0065U	0.0064U	0.0057U	0.0056U	0.0062U	
PCB-1248	--	0.0063U	0.0062U	0.0061U	0.0052UJ	0.0056U	0.006U	0.0054U	0.0065U	0.0064U	0.0057U	0.0056U	0.0062U	
PCB-1254	--	0.0063U	0.0062U	0.0061U	0.0052UJ	0.0056U	0.006U	0.0054U	0.0065U	0.0064U	0.0057U	0.0056U	0.0062U	
PCB-1260	--	7.800J	8.200J	3.000J	0.034J	0.016J	0.006U	18.000J	1.400J	0.900J	5.900J	1.200J	1.500J	
PCB-1262	--	5.200J	5.700J	2.000J	0.024J	0.0087J	0.006U	11.000J	0.640J	0.400J	2.900J	0.450J	0.830J	
PCB-1268	--	0.0038U	0.0037U	0.0037U	0.0031UJ	0.0034U	0.0036U	0.0032U	0.0039U	0.0038U	0.0034U	0.0034U	0.0037U	
Total PCBs	1.100	13.000J	13.900J	5.000J	0.058J	0.0247J	ND	29.000J	2.040J	1.300J	8.800J	1.650J	2.330J	

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

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UJ - Result is not detected and a quantitative estimate

ND - Non-detected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT280	MBT281	MBT282	MBT283	MBT284	MBT285	MBT286	MBT287	MBT288	MBT289	MBT290	MBT291	MBT292	
Lab Identification		580-35899-47	580-35899-48	580-35899-49	580-35899-50	580-35899-51	580-35899-52	580-35899-53	580-35899-54	580-35899-55	580-35899-56	580-35899-57	580-35899-58	580-35899-59	
Sample Delivery Group (SDG)		580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1	580-35899-1
Date Sampled		11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012
Soil Boring Number		B92			B93			B94			B95			B96	
Depth (in feet below ground surface)		1	2	2	1	1	2	1	2	1	2	0-0.5	1	2	
Sample Quality Control			Parent of MBT282	Field Duplicate of MBT281	Parent of MBT284	Field Duplicate of MBT283									
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
PCB-1016	--	0.006U	0.0061U	0.006U	0.0058U	0.0059U	0.0049U	0.0059U	0.005U	0.0056U	0.0064U	0.0056U	0.0054U	0.0055U	
PCB-1221	--	0.012U	0.012U	0.012U	0.012U	0.012U	0.0098UJ	0.012UJ	0.010UJ	0.011UJ	0.013UJ	0.011UJ	0.011U	0.011U	
PCB-1232	--	0.012U	0.012U	0.012U	0.012U	0.012U	0.0098U	0.012U	0.010U	0.011U	0.013U	0.011U	0.011U	0.011U	
PCB-1242	--	0.006U	0.0061U	0.006U	0.0058U	0.0059U	0.0049U	0.0059U	0.005U	0.0056U	0.0064U	0.0056U	0.0054U	0.0055U	
PCB-1248	--	0.006U	0.0061U	0.006U	0.0058U	0.0059U	0.0049U	0.0059U	0.005U	0.0056U	0.0064U	0.0056U	0.0054U	0.0055U	
PCB-1254	--	0.006U	0.0061U	0.006U	0.0058U	0.0059U	0.0049U	0.0059U	0.005U	0.0056U	0.0064U	0.0056U	0.0054U	0.0055U	
PCB-1260	--	1.400J	0.420J	0.270	1.900J	1.300J	0.150J	0.750J	0.051J	0.920J	0.160J	0.120J	0.044J	0.078J	
PCB-1262	--	0.620J	0.170J	0.006U	1.000J	0.820J	0.110J	0.470J	0.035J	0.780J	0.130J	0.096J	0.030J	0.060J	
PCB-1268	--	0.0036U	0.0037U	0.0036U	0.0035U	0.0035U	0.0029U	0.0036U	0.003U	0.0034U	0.0038U	0.0034U	0.0032U	0.0033U	
Total PCBs	1.100	2.020J	0.590J	0.270	2.900J	2.120J	0.260J	1.220J	0.086J	1.700J	0.290J	0.216J	0.074J	0.138J	

Notes:

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DOH Department of Health, State of Hawaii

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ND - Non-detected

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Highlighted results exceeds PALS

Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT296	MBT297	MBT298	MBT299	MBT300	MBT301	MBT302	MBT303	MBT304	MBT305	MBT306	
Lab Identification		580-35900-3	580-35900-4	580-35900-5	580-35900-6	580-35900-7	580-35900-8	580-35900-9	580-35900-10	580-35900-11	580-35900-12	580-35900-13	
Sample Delivery Group (SDG)		580-35900-1	580-35900-1	580-35900-1	580-35900-1	580-35900-1	580-35900-2	580-35900-2	580-35900-2	580-35900-2	580-35900-2	580-35900-2	
Date Sampled		11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	
Soil Boring Number		B98			B99			B100			B101		
Depth (in feet below ground surface)		0-0.5	1	2	1	2	0-0.5	1	2	0-0.5	1	2	
Sample Quality Control													
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	
PCB-1016	--	0.0057U	0.0057U	0.0057U	0.0055U	0.0053U	0.0055U	0.0054U	0.0052U	0.0056U	0.0053U	0.0054U	
PCB-1221	--	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.010U	0.011U	0.011U	0.011U	
PCB-1232	--	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.011U	0.010U	0.011U	0.011U	0.011U	
PCB-1242	--	0.0057U	0.0057U	0.0057U	0.0055U	0.0053U	0.0055U	0.0054U	0.0052U	0.0056U	0.0053U	0.0054U	
PCB-1248	--	0.0057U	0.0057U	0.0057U	0.0055U	0.0053U	0.0055U	0.0054U	0.0052U	0.0056U	0.0053U	0.0054U	
PCB-1254	--	0.0057U	0.0057U	0.0057U	0.0055U	0.0053U	0.0055U	0.0054U	0.0052U	0.0056U	0.0053U	0.0054U	
PCB-1260	--	0.370J	1.400J	0.350J	3.400J	3.100	1.400	0.560	0.180	0.220	0.210	0.210	
PCB-1262	--	0.260J	1.000J	0.250J	2.500J	0.0053U	0.0055U	0.0054U	0.0052U	0.0056U	0.0053U	0.0054U	
PCB-1268	--	0.0034U	0.0034U	0.0034U	0.0033U	0.0032U	0.0033U	0.0033U	0.0031U	0.0033U	0.0032U	0.0032U	
Total PCBs	1.100	0.630J	2.400J	0.600J	5.900J	3.100	1.400	0.560	0.180	0.220	0.210	0.210	

Notes:

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT310	MBT311	MBT312	MBT313	MBT314	MBT315	MBT316	MBT317	MBT318	MBT319	MBT320	
Lab Identification		580-35900-17	580-35900-18	580-35900-19	580-35900-20	580-35900-21	580-35900-22	580-35900-23	580-35900-24	580-35900-25	580-35900-26	580-35900-27	
Sample Delivery Group (SDG)		580-35900-1	580-35900-1	580-35900-1	580-35900-1	580-35900-1	580-35900-1	580-35900-1	580-35900-1	580-35900-3	580-35900-3	580-35900-3	
Date Sampled		11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	
Soil Boring Number		B103				B104				B105			
Depth (in feet below ground surface)		0-0.5	0-0.5	1	2	0-0.5	1	2	0-0.5	1	2	2	
Sample Quality Control	Parent of MBT311	Field Duplicate of MBT310								Parent of MBT320	Field Duplicate of MBT319		
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	
PCB-1016	--	0.0057U	0.0056U	0.0056U	0.0062U	0.0057U	0.0058U	0.0057U	0.0051UJ	0.0051U	0.0053U	0.0053U	
PCB-1221	--	0.011U	0.011U	0.011U	0.012U	0.011U	0.012U	0.011U	0.010U	0.010U	0.011U	0.011U	
PCB-1232	--	0.011U	0.011U	0.011U	0.012U	0.011U	0.012U	0.011U	0.010U	0.010U	0.011U	0.011U	
PCB-1242	--	0.0057U	0.0056U	0.0056U	0.0062U	0.0057U	0.0058U	0.0057U	0.0051U	0.0051UJ	0.0053U	0.0053U	
PCB-1248	--	0.0057U	0.0056U	0.0056U	0.0062U	0.0057U	0.0058U	0.0057U	0.0051U	0.0051UJ	0.0053U	0.0053U	
PCB-1254	--	0.0057U	0.0056U	0.0056U	0.0062U	0.0057U	0.0058U	0.0057U	0.0051U	0.0051U	0.0053U	0.0053U	
PCB-1260	--	1.100	0.170	0.096	0.040	2.600	1.700J	0.470	0.0051UJ	0.0051U	0.0053U	0.0053U	
PCB-1262	--	0.0057U	0.0056U	0.0056U	0.0062U	0.0057U	1.200J	0.31	0.0051U	0.0051U	0.0053U	0.0053U	
PCB-1268	--	0.0034U	0.0034U	0.0033U	0.0037U	0.0034U	0.0035U	0.0034U	0.003U	0.0031UJ	0.0032U	0.0032U	
Total PCBs	1.100	1.100	0.170	0.096	0.040	2.600	2.900J	0.780	ND	ND	ND	ND	

Notes:

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT321	MBT322	MBT323	MBT324	MBT328	MBT329	MBT330	MBT331	MBT332	MBT333	MBT334	
Lab Identification		580-35900-28	580-35900-29	580-35900-30	580-35900-31	580-35900-35	580-35900-36	580-35900-37	580-35900-38	580-35900-39	580-35900-40	580-35900-41	
Sample Delivery Group (SDG)		580-35900-1	580-35900-1	580-35900-1	580-35900-1	580-35900-1	580-35900-1	580-35900-1	580-35900-1	580-35900-2	580-35900-2	580-35900-2	580-35900-2
Date Sampled		11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012
Soil Boring Number		B106				B108				B109			
Depth (in feet below ground surface)		0-0.5	1	1	2	0-0.5	1	2	0-0.5	1	2	2	
Sample Quality Control		Parent of MBT323	Field Duplicate of MBT322							Parent of MBT334	Field Duplicate of MBT333		
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	
PCB-1016	--	0.0056U	0.0059UJ	0.0059UJ	0.005U	0.0058U	0.0056U	0.0055UJ	0.0059U	0.0055U	0.0059U	0.0058U	
PCB-1221	--	0.011U	0.012U	0.012U	0.010U	0.012U	0.011U	0.011U	0.012U	0.011U	0.012U	0.012U	
PCB-1232	--	0.011U	0.012U	0.012U	0.010U	0.012U	0.011U	0.011U	0.012U	0.011U	0.012U	0.012U	
PCB-1242	--	0.0056U	0.0059U	0.0059U	0.005U	0.0058U	0.0056U	0.0055U	0.0059U	0.0055U	0.0059UJ	0.0058UJ	
PCB-1248	--	0.0056U	0.0059U	0.0059U	0.005U	0.0058U	0.0056U	0.0055U	0.0059U	0.0055U	0.0059UJ	0.0058UJ	
PCB-1254	--	0.0056U	0.0059U	0.0059U	0.005U	0.0058U	0.0056U	0.0055U	0.0059U	0.0055U	0.0059U	0.0058U	
PCB-1260	--	0.050	0.015J	0.014J	0.005U	0.0058U	0.0056U	0.0055U	0.020J	0.024J	0.0092J	0.022J	
PCB-1262	--	0.0056U	0.0059U	0.0059U	0.005U	0.0058U	0.0056U	0.0055U	0.016J	0.019J	0.010J	0.022J	
PCB-1268	--	0.0034U	0.0036U	0.0036U	0.003U	0.0035U	0.0034U	0.0033U	0.0035U	0.0033U	0.0036UJ	0.0035UJ	
Total PCBs	1.100	0.050	0.015J	0.014J	ND	ND	ND	ND	0.036J	0.043J	0.0192J	0.044J	

Notes:

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT335	MBT336	MBT337	MBT339	MBT340	MBT341	MBT342	MBT343	MBT344	MBT345	MBT346	MBT347	MBT348	
Lab Identification		580-35900-42	580-35900-43	580-35900-44	580-35926-1	580-35926-2	580-35926-3	580-35926-4	580-35926-5	580-35926-6	580-35926-7	580-35926-8	580-35926-9	580-35926-10	
Sample Delivery Group (SDG)		580-35900-1	580-35900-1	580-35900-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1
Date Sampled		11/8/2012	11/8/2012	11/8/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012
Soil Boring Number		B110			B111			B112			B113				
Depth (in feet below ground surface)		0-0.5	1	2	0-0.5	1	2	0-0.5	1	2	2	0-0.5	1	2	
Sample Quality Control										Parent of MBT345	Field Duplicate of MBT344				
Polychlorinated Biphenyls (PCBs) by SW846 8082		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg								
PCB-1016		--	0.0057UJ	0.0057UJ	0.0059UJ	0.0062U	0.0065U	0.006U	0.007U	0.0069U	0.0063U	0.0066U	0.0062U	0.0063U	0.0067UJ
PCB-1221		--	0.011U	0.011U	0.012U	0.012U	0.013U	0.012U	0.014U	0.014U	0.013U	0.013U	0.012U	0.013U	0.013UJ
PCB-1232	--	0.011U	0.011U	0.012U	0.012U	0.013U	0.012U	0.014U	0.014U	0.013U	0.013U	0.012U	0.013U	0.013UJ	
PCB-1242	--	0.0057U	0.0057U	0.0059U	0.0062U	0.0065U	0.006U	0.007U	0.0069U	0.0063U	0.0066U	0.0062U	0.0063U	0.0067UJ	
PCB-1248	--	0.0057U	0.0057U	0.0059U	0.0062U	0.0065U	0.006U	0.007U	0.0069U	0.0063U	0.0066U	0.0062U	0.0063U	0.0067UJ	
PCB-1254	--	0.0057U	0.0057U	0.0059U	0.0062U	0.0065U	0.006U	0.007U	0.0069U	0.0063U	0.0066U	0.0062U	0.0063U	0.0067UJ	
PCB-1260	--	0.073J	0.210J	0.270J	0.056J	0.033J	0.017J	0.080J	0.039J	0.0063J	0.0066U	5.900J	8.200J	0.170J	
PCB-1262	--	0.054J	0.140J	0.190J	0.042J	0.024J	0.012J	0.073J	0.033J	0.0065J	0.0066U	4.500J	5.800J	0.130J	
PCB-1268	--	0.0034U	0.0034U	0.0035U	0.0037U	0.0039U	0.0036U	0.0042U	0.0041U	0.0038U	0.004U	0.0037U	0.0038U	0.004UJ	
Total PCBs	1.100	0.127J	0.350J	0.460J	0.098J	0.057J	0.029J	0.153J	0.072J	0.00128J	ND	10.400J	14.000J	0.300J	

Notes:

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Highlighted results exceeds PALs

Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT349	MBT350	MBT351	MBT352	MBT353	MBT354	MBT355	MBT356	MBT357	MBT358	MBT359	MBT360
Lab Identification		580-35926-11	580-35926-12	580-35926-13	580-35926-14	580-35926-15	580-35926-16	580-35926-17	580-35926-18	580-35926-19	580-35926-20	580-35926-21	580-35926-22
Sample Delivery Group (SDG)		580-35926-2	580-35926-2	580-35926-2	580-35926-2	580-35926-2	580-35926-2	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1
Date Sampled		11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012
Soil Boring Number		B114			B115			B116			B117		
Depth (in feet below ground surface)		0-0.5	1	2	0-0.5	1	2	0-0.5	0-0.5	1	2	1	2
Sample Quality Control								Parent of MBT356	Field Duplicate of MBT355				
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016	--	0.005U	0.0058U	0.0063U	0.0049U	0.0054U	0.006U	0.0064U	0.006U	0.0061U	0.0068U	0.0056U	0.0058U
PCB-1221	--	0.010U	0.012U	0.013U	0.0099U	0.011U	0.012U	0.013U	0.0099U	0.012U	0.014U	0.011U	0.012U
PCB-1232	--	0.010U	0.012U	0.013U	0.0099U	0.011U	0.012U	0.013U	0.012U	0.012U	0.014U	0.011U	0.012U
PCB-1242	--	0.005U	0.0058U	0.0063U	0.0049U	0.0054U	0.006U	0.0064U	0.006U	0.0061U	0.0068U	0.0056U	0.0058U
PCB-1248	--	0.005U	0.0058U	0.0063U	0.0049U	0.0054U	0.006U	0.0064U	0.006U	0.0061U	0.0068U	0.0056U	0.0058U
PCB-1254	--	0.005U	0.0058U	0.0063U	0.0049U	0.0054U	0.006U	0.0064U	0.006U	0.0061U	0.0068U	0.0056U	0.0058U
PCB-1260	--	0.290J	0.420J	0.038J	0.071J	0.044J	0.460J	0.0065J	0.027J	0.300J	0.450J	3.700J	0.150J
PCB-1262	--	0.180J	0.310J	0.026J	0.048J	0.034J	0.230J	0.0063J	0.022J	0.210J	0.370J	3.000J	0.096J
PCB-1268	--	0.003U	0.0035U	0.0038U	0.003U	0.0032U	0.0036U	0.0038U	0.0036U	0.0037U	0.0041U	0.0034U	0.0035U
Total PCBs	1.100	0.470J	0.730J	0.064J	0.119J	0.078J	0.690J	0.0128J	0.049J	0.510J	0.820J	6.700J	0.246J

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

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ND - Non-detected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT361	MBT362	MBT363	MBT364	MBT365	MBT366	MBT367	MBT368	MBT369	MBT370	MBT371
Lab Identification		580-35926-23	580-35926-24	580-35926-25	580-35926-26	580-35926-27	580-35926-28	580-35926-29	580-35926-30	580-35926-31	580-35926-32	580-35926-33
Sample Delivery Group (SDG)		580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1
Date Sampled		11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012
Soil Boring Number		B118		B119		B120			B121	B122		
Depth (in feet below ground surface)		1	2	1	2	1	2	2	0-0.5	0-0.5	1	2
Sample Quality Control							Parent of MBT367	Field Duplicate of MBT366				
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	--	0.0062U	0.006U	0.0067U	0.0063U	0.0067UJ	0.0069U	0.0069U	0.0063U	0.0062U	0.0058U	0.0065U
PCB-1221	--	0.012U	0.012U	0.013U	0.013U	0.013UJ	0.014U	0.014U	0.013U	0.012U	0.012U	0.013U
PCB-1232	--	0.012U	0.012U	0.013U	0.013U	0.013UJ	0.014U	0.014U	0.013U	0.012U	0.012U	0.013U
PCB-1242	--	0.0062U	0.006U	0.0067U	0.0063U	0.0067UJ	0.0069U	0.0069U	0.0063U	0.0062U	0.0058U	0.0065U
PCB-1248	--	0.0062U	0.006U	0.0067U	0.0063U	0.0067UJ	0.0069U	0.0069U	0.0063U	0.0062U	0.0058U	0.0065U
PCB-1254	--	0.0062U	0.006U	0.0067U	0.0063U	0.0067UJ	0.0069U	0.0069U	0.0063U	0.0062U	0.0058U	0.0065U
PCB-1260	--	16.000J	5.500J	0.530J	0.061	0.950J	0.074J	0.032J	0.940J	3.000J	4.400J	4.600J
PCB-1262	--	12.000J	3.900J	0.460J	0.0063U	0.610J	0.052J	0.023J	0.760J	2.400J	2,900J	3.500J
PCB-1268	--	0.0037U	0.0036U	0.004U	0.0038U	0.004UJ	0.0041U	0.0041U	0.0038U	0.0037U	0.0035U	0.0039U
Total PCBs	1.100	28.000J	9.400J	0.990J	0.610	1.560J	0.126J	0.055J	1.700J	5.400J	7.300J	8.100J

Notes:

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DOH Department of Health, State of Hawaii

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Highlighted results exceeds PALs

Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT372	MBT373	MBT374	MBT375	MBT376	MBT377	MBT378	MBT379	MBT380	MBT381	MBT382	MBT383	MBT384	
Lab Identification		580-35926-34	580-35926-35	580-35926-36	580-35926-37	580-35926-38	580-35926-39	580-35926-40	580-35926-41	580-35926-42	580-35926-43	580-35926-44	580-35926-45	580-35926-46	
Sample Delivery Group (SDG)		580-35926-1	580-35926-1	580-35926-1	580-35926-4	580-35926-4	580-35926-4	580-35926-3	580-35926-3	580-35926-3	580-35926-3	580-35926-1	580-35926-1	580-35926-1	
Date Sampled		11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	
Soil Boring Number		B123			B124			B125			B126				
Depth (in feet below ground surface)		0-0.5	1	2	0-0.5	1	2	0-0.5	0-0.5	1	2	0-0.5	1	2	
Sample Quality Control								Parent of MBT379	Field Duplicate of MBT378						
Polychlorinated Biphenyls (PCBs) by SW846 8082		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016		--	0.0062UJ	0.0059U	0.0061U	0.0053U	0.0057U	0.006U	0.0054U	0.0061U	0.0054U	0.0051U	0.0053U	0.005U	0.0056U
PCB-1221		--	0.012U	0.012U	0.012U	0.011U	0.011U	0.012U	0.011U	0.012U	0.011U	0.010U	0.011U	0.010U	0.011U
PCB-1232	--	0.012U	0.012U	0.012U	0.011U	0.011U	0.012U	0.011U	0.012U	0.011U	0.010U	0.011U	0.010U	0.011U	
PCB-1242	--	0.0062U	0.0059U	0.0061U	0.0053U	0.0057U	0.006U	0.0054U	0.0061U	0.0054U	0.0051U	0.0053U	0.005U	0.0056U	
PCB-1248	--	0.0062U	0.0059U	0.0061U	0.0053U	0.0057U	0.006U	0.0054U	0.0061U	0.0054U	0.0051U	0.0053U	0.005U	0.0056U	
PCB-1254	--	0.0062U	0.0059U	0.0061U	0.0053U	0.0057U	0.006U	0.0054U	0.0061U	0.0054U	0.0051U	0.0053U	0.005U	0.0056U	
PCB-1260	--	5.500J	1.300J	0.210J	0.0053U	0.180	0.014	1.300J	0.090J	0.120J	0.0051U	3.000J	0.370J	0.170J	
PCB-1262	--	4.300J	0.870J	0.130J	0.0053U	0.0057U	0.006U	1.000J	0.070J	0.099J	0.0051U	2.100J	0.190J	0.089J	
PCB-1268	--	0.0037U	0.0035U	0.0037U	0.0053U	0.0057U	0.006U	0.0032U	0.0036U	0.0032U	0.0030U	0.0032U	0.003U	0.0034U	
Total PCBs	1.100	9.800J	2.170J	0.340J	ND	0.180	0.014	2.300J	0.160J	0.219J	ND	5.100J	0.560J	0.259J	

Notes:

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT385	MBT386	MBT387	MBT388	MBT389	MBT390	MBT391	MBT392	MBT393	MBT394	MBT395	MBT396	MBT397	
Lab Identification		580-35926-47	580-35926-48	580-35926-49	580-35926-50	580-35926-51	580-35926-52	580-35926-53	580-35926-54	580-35926-55	580-35926-56	580-35926-57	580-35926-58	580-35926-59	
Sample Delivery Group (SDG)		580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1
Date Sampled		11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012
Soil Boring Number		B127		B128		B129		B130		B131		B132			
Depth (in feet below ground surface)		1	2	1	2	1	2	1	2	1	2	0-0.5	1	2	
Sample Quality Control															
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	
PCB-1016	--	0.0056U	0.0057U	0.0055U	0.0059U	0.0049U	0.005U	0.0053U	0.0053U	0.0054U	0.0062U	0.005U	0.0051U	0.006U	
PCB-1221	--	0.011U	0.011U	0.011U	0.012U	0.0098U	0.010U	0.011U	0.011U	0.011U	0.012U	0.010U	0.010U	0.012U	
PCB-1232	--	0.011U	0.011U	0.011U	0.012U	0.0098U	0.010U	0.011U	0.011U	0.011U	0.012U	0.010U	0.010U	0.012U	
PCB-1242	--	0.0056U	0.0057U	0.0055U	0.0059U	0.0049U	0.005U	0.0053U	0.0053U	0.0054U	0.0062U	0.005U	0.0051U	0.006U	
PCB-1248	--	0.0056U	0.0057U	0.0055U	0.0059U	0.0049U	0.005U	0.0053U	0.0053U	0.0054U	0.0062U	0.005U	0.0051U	0.006U	
PCB-1254	--	0.0056U	0.0057U	0.0055U	0.0059U	0.0049U	0.005U	0.0053U	0.0053U	0.0054U	0.0062U	0.005U	0.0051U	0.006U	
PCB-1260	--	1.900J	0.120J	0.470J	0.320J	0.810J	1.900J	0.300J	0.049J	0.044J	0.0062U	0.027J	0.0051U	0.006U	
PCB-1262	--	1.500J	0.083J	0.380J	0.220J	0.650J	1.500J	0.230J	0.037J	0.015J	0.0062U	0.029J	0.0051U	0.006U	
PCB-1268	--	0.0034U	0.0034U	0.0033U	0.0035U	0.0029U	0.003U	0.0032U	0.0032U	0.0033U	0.0037U	0.003U	0.0031U	0.0036U	
Total PCBs	1.100	3.400J	0.203J	0.850J	0.540J	1.460J	3.400J	0.530J	0.086J	0.059J	ND	0.056J	ND	ND	

Notes:

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Table 2: First Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT398	MBT399	MBT400	MBT401	MBT402	MBT403	MBT404	MBT405	MBT406	MBT407
Lab Identification		580-35926-60	580-35926-61	580-35926-62	580-35926-63	580-35926-64	580-35926-65	580-35926-66	580-35926-67	580-35926-68	580-35926-69
Sample Delivery Group (SDG)		580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1	580-35926-1
Date Sampled		11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012	11/9/2012
Soil Boring Number		B133			B134			B135	B136	B137	
Depth (in feet below ground surface)		0-0.5	1	1	2	0-0.5	1	2	0-0.5	0-0.5	0-0.5
Sample Quality Control		Parent of MBT400	Field Duplicate of MBT399								
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	--	0.006U	0.0049U	0.0063U	0.0058U	0.0051U	0.0061U	0.0059U	0.0051U	0.0051U	0.005U
PCB-1221	--	0.012U	0.0099U	0.013U	0.012U	0.010U	0.012U	0.012U	0.010U	0.010U	0.010U
PCB-1232	--	0.012U	0.0099U	0.013U	0.012U	0.010U	0.012U	0.012U	0.010U	0.010U	0.010U
PCB-1242	--	0.006U	0.0049U	0.0063U	0.0058U	0.0051U	0.0061U	0.0059U	0.0051U	0.0051U	0.005U
PCB-1248	--	0.006U	0.0049U	0.0063U	0.0058U	0.0051U	0.0061U	0.0059U	0.0051U	0.0051U	0.005U
PCB-1254	--	0.006U	0.0049U	0.0063U	0.0058U	0.0051U	0.0061U	0.0059U	0.0051U	0.0051U	0.005U
PCB-1260	--	0.006U	0.0049U	0.0063U	0.0058U	0.0042J	0.0061U	0.0049J	8.800J	16.000J	19.000J
PCB-1262	--	0.0031J	0.0049U	0.0063U	0.0058U	0.0055J	0.0061U	0.0044J	7.100J	13.000J	16.000J
PCB-1268	--	0.0036U	0.003U	0.0038U	0.0035U	0.003U	0.0037U	0.0035U	0.0031U	0.0031U	0.003U
Total PCBs	1.100	0.0031J	ND	ND	ND	0.0097J	ND	0.0093J	15.900J	29.000J	35.000J

Notes:

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Highlighted results exceeds PALs

Table 3: Second Delineation Sampling Event Sampling Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT408	MBT409	MBT410	MBT411	MBT412	MBT413	MBT421	MBT422	MBT423
Lab Identification		580-36482-1	580-36482-2	580-36482-3	580-36482-4	580-36482-5	580-36482-6	580-36482-14	580-36482-15	580-36482-16
Sample Delivery Group (SDG)		580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1
Date Sampled		12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012
Soil Boring Number		B138			B139			B142		
Depth (in feet below ground surface)		0-0.5	1	2	0-0.5	1	2	0-0.5	1	2
Sample Quality Control										
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	--	0.0056U	0.0054U	0.0057U	0.0054U	0.0054U	0.0052U	0.0059U	0.0051U	0.0052U
PCB-1221	--	0.011U	0.011U	0.011U	0.011U	0.011U	0.010U	0.012U	0.010U	0.010U
PCB-1232	--	0.011U	0.011U	0.011U	0.011U	0.011U	0.010U	0.012U	0.010U	0.010U
PCB-1242	--	0.0056U	0.0054U	0.0057U	0.0054U	0.0054U	0.0052U	0.0059U	0.0051U	0.0052U
PCB-1248	--	0.0056U	0.0054U	0.0057U	0.0054U	0.0054U	0.0052U	0.0059U	0.0051U	0.0052U
PCB-1254	--	0.0056U	0.0054U	0.0057U	0.023J	0.0054U	0.0052U	0.0059U	0.0051U	0.0052U
PCB-1260	--	0.037	0.018	0.005J	0.038J	0.022	0.049	0.036	0.036	0.036
PCB-1262	--	0.0056U	0.0054U	0.0057U	0.0054U	0.0054U	0.0052U	0.0059U	0.0051U	0.0052U
PCB-1268	--	0.0056U	0.0054U	0.0057U	0.0054U	0.0054U	0.0052U	0.0059U	0.0051U	0.0052U
Total PCBs	1.100	0.037	0.018	0.005J	0.061J	0.022	0.049	0.036	0.036	0.036

Notes:

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Highlighted results exceeds PALs

Table 3: Second Delineation Sampling Event Sampling Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT424	MBT425	MBT426	MBT427	MBT428	MBT429	MBT430	MBT431	MBT432
Lab Identification		580-36482-17	580-36482-18	580-36482-19	580-36482-20	580-36482-21	580-36482-22	580-36482-23	580-36482-24	580-36482-25
Sample Delivery Group (SDG)		580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1
Date Sampled		12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012
Soil Boring Number		B143			B144			B145		
Depth (in feet below ground surface)		0-0.5	1	2	0-0.5	1	2	0-0.5	1	2
Sample Quality Control										
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	--	0.0053U	0.0054U	0.0059U	0.0049U	0.0052U	0.0051U	0.005U	0.0054U	0.0056U
PCB-1221	--	0.011U	0.011U	0.012U	0.0099U	0.010U	0.010U	0.0099U	0.011U	0.011U
PCB-1232	--	0.011U	0.011U	0.012U	0.0099U	0.010U	0.010U	0.0099U	0.011U	0.011U
PCB-1242	--	0.0053U	0.0054U	0.0059U	0.0049U	0.0052U	0.0051U	0.005U	0.0054U	0.0056U
PCB-1248	--	0.0053U	0.0054U	0.0059U	0.0049U	0.0052U	0.0051U	0.005U	0.0054U	0.0056U
PCB-1254	--	0.0053U	0.0054U	0.0059U	0.0049U	0.0052U	0.0051U	0.005U	0.0054U	0.0056U
PCB-1260	--	0.049J	0.190J	0.180J	0.120	0.034	0.0051U	0.110J	0.190	0.120
PCB-1262	--	0.0053U	0.0054U	0.0059U	0.0049U	0.0052U	0.0051U	0.005U	0.0054U	0.0056U
PCB-1268	--	0.0053U	0.0054U	0.0059U	0.0049U	0.0052U	0.0051U	0.005U	0.0054U	0.0056U
Total PCBs	1.100	0.049J	0.190J	0.180J	0.120	0.034	ND	0.110J	0.190	0.120

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

ND - Non-detected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 3: Second Delineation Sampling Event Sampling Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT436	MBT437	MBT438	MBT439	MBT440	MBT441	MBT442	MBT443	MBT444	MBT445	MBT446	MBT447
Lab Identification		580-36482-29	580-36482-30	580-36482-31	580-36482-32	580-36482-33	580-36482-34	580-36482-35	580-36482-36	580-36482-37	580-36482-38	580-36482-39	580-36482-40
Sample Delivery Group (SDG)		580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1	580-36482-1
Date Sampled		12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012
Soil Boring Number		B147				B148				B149			
Depth (in feet below ground surface)		0-0.5	1	2	3	0-0.5	1	2	3	0-0.5	1	2	3
Sample Quality Control													
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016	--	0.0061U	0.0064U	0.0063U	0.0058U	0.0065U	0.0063U	0.0054U	0.0053U	0.0063U	0.0058U	0.0053U	0.0055U
PCB-1221	--	0.012U	0.013U	0.013U	0.012U	0.013U	0.013U	0.011U	0.011U	0.013U	0.012U	0.011U	0.011U
PCB-1232	--	0.012U	0.013U	0.013U	0.012U	0.013U	0.013U	0.011U	0.011U	0.013U	0.012U	0.011U	0.011U
PCB-1242	--	0.0061U	0.0064U	0.0063U	0.0058U	0.0065U	0.0063U	0.0054U	0.0053U	0.0063U	0.0058U	0.0053U	0.0055U
PCB-1248	--	0.0061U	0.0064U	0.0063U	0.0058U	0.0065U	0.0063U	0.0054U	0.0053U	0.0063U	0.0058U	0.0053U	0.0055U
PCB-1254	--	0.0061U	0.0064U	0.0063U	0.0058U	0.0065U	0.0063U	0.0054U	0.0053U	0.0063U	0.0058U	0.0053U	0.0055U
PCB-1260	--	130.0	5.300	6.600J	0.420	100.000J	0.930J	0.0096J	0.0053U	4.100J	1.800J	0.025	0.008J
PCB-1262	--	0.0061U	0.0064U	0.0063U	0.0058U	0.0065U	0.0063U	0.0054U	0.0053U	0.0063U	0.0058U	0.0053U	0.0055U
PCB-1268	--	0.0061U	0.0064U	0.0063U	0.0058U	0.0065U	0.0063U	0.0054U	0.0053U	0.0063U	0.0058U	0.0053U	0.0055U
Total PCBs	1.100	130.0	5.300	6.600J	0.420	100.000J	0.930J	0.0096J	ND	4.100J	1.800J	0.025	0.008J

Notes:

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DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

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UJ - Result is not detected and a quantitative estimate

ND - Non-detected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 3: Second Delineation Sampling Event Sampling Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT448	MBT449	MBT450	MBT451	MBT452	MBT453	MBT454
Lab Identification		580-36483-1	580-36483-2	580-36483-3	580-36483-4	580-36483-5	580-36483-6	580-36483-7
Sample Delivery Group (SDG)		580-36483-1	580-36483-1	580-36483-1	580-36483-1	580-36483-1	580-36483-1	580-36483-1
Date Sampled		12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012
Soil Boring Number		B150						
Depth (in feet below ground surface)		4	4	5	6	7	8	8
Sample Quality Control		Parent of MBT449	Field Duplicate of MBT448				Parent of MBT454	Field Duplicate of MBT453
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	
PCB-1016	--	0.0054U	0.005U	0.0054U	0.0052U	0.0053U	0.005U	0.0054U
PCB-1221	--	0.011U	0.010U	0.011U	0.010U	0.011U	0.010U	0.011U
PCB-1232	--	0.011U	0.010U	0.011U	0.010U	0.011U	0.010U	0.011U
PCB-1242	--	0.0054U	0.005U	0.0054U	0.0052U	0.0053U	0.005U	0.0054U
PCB-1248	--	0.0054U	0.005U	0.0054U	0.0052U	0.0053U	0.005U	0.0054U
PCB-1254	--	0.0054U	0.005U	0.0054U	0.0052U	0.0053U	0.005U	0.0054U
PCB-1260	--	0.053	0.023	0.016	54.000J	0.016	0.0078J	0.018
PCB-1262	--	0.0054U	0.005U	0.0054U	0.0052U	0.0053U	0.005U	0.0054U
PCB-1268	--	0.0054U	0.005U	0.0054U	0.0052U	0.0053U	0.005U	0.0054U
Total PCBs	1.100	0.053	0.023	0.016	54.000J	0.016	0.0078J	0.018

Notes:

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DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

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ND - Non-detected

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Highlighted results exceeds PALs

Table 3: Second Delineation Sampling Event Sampling Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT455	MBT456	MBT457	MBT458	MBT459	MBT460	MBT461	MBT462	MBT463	MBT464	MBT465	
Lab Identification		580-36483-8	580-36483-9	580-36483-10	580-36483-11	580-36483-12	580-36483-13	580-36483-14	580-36483-15	580-36483-16	580-36483-17	580-36483-18	
Sample Delivery Group (SDG)		580-36483-1	580-36483-1	580-36483-1	580-36483-1	580-36483-1	580-36483-1	580-36483-1	580-36483-1	580-36483-1	580-36483-1	580-36483-1	
Date Sampled		12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	
Soil Boring Number		B151						B152					
Depth (in feet below ground surface)		4	4	5	6	7	8	8	0-0.5	1	2	3	
Sample Quality Control	Parent of MBT456	Field Duplicate of MBT455				Parent of MBT461	Field Duplicate of MBT460						
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	
PCB-1016	--	0.0059U	0.0054U	0.0057U	0.0055U	0.0051U	0.0056U	0.0059U	0.0063UJ	0.0051U	0.0055U	0.0053U	
PCB-1221	--	0.012U	0.011U	0.011U	0.011U	0.010U	0.011U	0.012U	0.0013U	0.010U	0.011U	0.011U	
PCB-1232	--	0.012U	0.011U	0.011U	0.011U	0.010U	0.011U	0.012U	0.0013U	0.010U	0.011U	0.011U	
PCB-1242	--	0.0059U	0.0054U	0.0057U	0.0055U	0.0051U	0.0056U	0.0059U	0.0063U	0.0051U	0.0055U	0.0053U	
PCB-1248	--	0.0059U	0.0054U	0.0057U	0.0055U	0.0051U	0.0056U	0.0059U	0.0063U	0.0051U	0.0055U	0.0053U	
PCB-1254	--	0.0059U	0.0054U	0.0057U	0.0055U	0.0051U	0.0056U	0.0059U	0.0063U	0.0051U	0.0055U	0.0053U	
PCB-1260	--	1.000J	0.058	9.900J	0.410J	0.0056J	0.017J	0.015J	1.300J	0.025J	0.014J	0.032J	
PCB-1262	--	0.0059U	0.0054U	0.0057U	0.0055UJ	0.0051UJ	0.0056UJ	0.0059UJ	0.0063UJ	0.0051UJ	0.0055U	0.0053U	
PCB-1268	--	0.0059U	0.0054U	0.0057U	0.0055U	0.0051U	0.0056U	0.0059U	0.0063U	0.0051U	0.0055U	0.0053U	
Total PCBs	1.100	1.000J	0.058	9.900J	0.410J	0.0056J	0.017J	0.015J	1.300J	0.025J	0.014J	0.032J	

Notes:

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DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

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Table 3: Second Delineation Sampling Event Sampling Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT466	MBT467	MBT468	MBT469	MBT470	MBT471	MBT472	MBT473	MBT474	
Lab Identification		580-36483-19	580-36483-20	580-36483-21	580-36483-22	580-36483-23	580-36483-24	580-36483-25	580-36483-26	580-36483-27	
Sample Delivery Group (SDG)		580-36483-1	580-36483-1	580-36483-1	580-36483-1	580-36483-2	580-36483-2	580-36483-2	580-36483-2	580-36483-2	
Date Sampled		12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	
Soil Boring Number		B153					B154				
Depth (in feet below ground surface)		0-0.5	1	2	3	0-0.5	0-0.5	1	2	3	
Sample Quality Control					Parent of MBT471	Field Duplicate of MBT470					
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	
PCB-1016	--	0.0064U	0.0059U	0.0058U	0.0052U	0.0063UJ	0.0063UJ	0.0060UJ	0.0064UJ	0.0057UJ	
PCB-1221	--	0.0013U	0.012U	0.012U	0.010U	0.013UJ	0.013UJ	0.012UJ	0.013UJ	0.011UJ	
PCB-1232	--	0.0013U	0.012U	0.012U	0.010U	0.013UJ	0.013UJ	0.012UJ	0.013UJ	0.011UJ	
PCB-1242	--	0.0064U	0.0059U	0.0058U	0.0052U	0.0063UJ	0.0063UJ	0.0060UJ	0.0064UJ	0.0057UJ	
PCB-1248	--	0.0064U	0.0059U	0.0058U	0.0052U	0.0063UJ	0.0063UJ	0.0060UJ	0.0064UJ	0.0057UJ	
PCB-1254	--	0.0064U	0.0059U	0.0058U	0.0052U	0.0063UJ	0.0063UJ	0.0060UJ	0.0064UJ	0.0057UJ	
PCB-1260	--	1.200J	6.800J	0.060J	0.023J	0.260J	0.340J	0.310J	0.140J	0.340J	
PCB-1262	--	0.0064U	0.0059U	0.0058U	0.0052U	0.0063UJ	0.0063UJ	0.0060UJ	0.0064UJ	0.0057UJ	
PCB-1268	--	0.0064U	0.0059U	0.0058U	0.0052U	0.0063UJ	0.0063UJ	0.0060UJ	0.0064UJ	0.0057UJ	
Total PCBs	1.100	1.200J	6.800J	0.060J	0.023J	0.260J	0.340J	0.310J	0.140J	0.340J	

Notes:

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Table 3: Second Delineation Sampling Event Sampling Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT475	MBT476	MBT477	MBT478	MBT479	MBT480	MBT481	MBT482	MBT483
Lab Identification		580-36483-28	580-36483-29	580-36483-30	580-36483-31	580-36483-32	580-36483-33	580-36483-34	580-36483-35	580-36483-36
Sample Delivery Group (SDG)		580-36483-1	580-36483-1	580-36483-1	580-36483-1	580-36483-2	580-36483-2	580-36483-2	580-36483-2	580-36483-2
Date Sampled		12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012	12/20/2012
Soil Boring Number		B155					B156			
Depth (in feet below ground surface)	0-0.5	1	2	3	0-0.5	1	2	2	3	
Sample Quality Control							Parent of MBT482	Field Duplicate of MBT481		
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016	--	0.0062U	0.0057U	0.0064U	0.006U	0.006UJ	0.016J	0.0055UJ	0.0054UJ	0.0052UJ
PCB-1221	--	0.012U	0.011U	0.013U	0.012U	0.012UJ	0.012UJ	0.011UJ	0.011UJ	0.010UJ
PCB-1232	--	0.012U	0.011U	0.013U	0.012U	0.012UJ	0.012UJ	0.011UJ	0.011UJ	0.010UJ
PCB-1242	--	0.0062U	0.0057U	0.0064U	0.006U	0.006UJ	0.0061UJ	0.0055UJ	0.0054UJ	0.0052UJ
PCB-1248	--	0.0062U	0.0057U	0.0064U	0.006U	0.006UJ	0.0061UJ	0.0055UJ	0.0054UJ	0.0052UJ
PCB-1254	--	0.0062U	0.0057U	0.0064U	0.006U	0.006UJ	0.068J	0.0055UJ	0.0054UJ	0.0052UJ
PCB-1260	--	2.000J	0.053J	0.120J	0.039J	0.160J	0.049J	0.0057J	0.0076J	0.100J
PCB-1262	--	0.0062U	0.0057U	0.0064U	0.006U	0.006UJ	0.0061UJ	0.0055UJ	0.0054UJ	0.0052UJ
PCB-1268	--	0.0062U	0.0057U	0.0064U	0.006U	0.006UJ	0.0061UJ	0.0055UJ	0.0054UJ	0.0052UJ
Total PCBs	1.100	2.000J	0.053J	0.120J	0.039J	0.160J	0.133J	0.0057J	0.0076J	0.100J

Notes:

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mg/kg-milligrams per kilogram

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Table 4: Third Delineation Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT491	MBT492	MBT493	MBT494	MBT495	MBT496	MBT497	MBT498
Lab Identification		580-37096-1	580-37096-2	580-37096-3	580-37096-4	580-37096-5	580-37096-6	580-37096-7	580-37096-8
Sample Delivery Group (SDG)		580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1
Date Sampled		2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013
Soil Boring Number		B157				B158			
Depth (in feet below ground surface)		0-0.5	1	2	3	0-0.5	1	2	3
Sample Quality Control									
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	--	0.0059U	0.0053U	0.100U	0.0056U	6.000U	0.007U	0.0074UJ	0.0056U
PCB-1221	--	0.012U	0.011U	0.210U	0.011U	12.000U	0.014U	0.015U	0.011U
PCB-1232	--	0.012U	0.011U	0.210U	0.011U	12.000U	0.014U	0.015U	0.011U
PCB-1242	--	0.0059U	0.0053U	0.100U	0.0056U	6.000U	0.007U	0.0074UJ	0.0056U
PCB-1248	--	0.0059U	0.0053U	0.100U	0.0056U	6.000U	0.007U	0.0074UJ	0.0056U
PCB-1254	--	0.0059U	0.0053U	0.100U	0.0056U	6.000U	0.007U	0.0074UJ	0.0056U
PCB-1260	--	1.800	0.028J	5.000J	0.004J	170.000J	0.310J	0.096J	0.036J
PCB-1262	--	0.0059U	0.0053U	0.100U	0.0056U	12.000U	0.007U	0.0074UJ	0.0056U
PCB-1268	--	0.0059U	0.0053U	0.100U	0.0056U	12.000U	0.007U	0.0074UJ	0.0056U
Total PCBs	1.100	1.800	0.028J	5.000J	0.004J	170.000J	0.310J	0.096J	0.036J

Notes:

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DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

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Highlighted results exceeds PALs

Table 4: Third Delineation Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT499	MBT500	MBT501	MBT502	MBT503	MBT504	MBT505	MBT506	MBT507	MBT508	
Lab Identification		580-37096-9	580-37096-10	580-37096-11	580-37096-12	580-37096-13	580-37096-14	580-37096-15	580-37096-16	580-37096-17	580-37096-18	
Sample Delivery Group (SDG)		580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	
Date Sampled		2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	
Soil Boring Number		B159					B160					
Depth (in feet below ground surface)		0-0.5	1	2	3	0-0.5	1	1	2	2	3	
Sample Quality Control							Parent of MBT505	Field Duplicate of MBT504	Parent of MBT507	Field Duplicate of MBT506		
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	
PCB-1016	--	0.110UJ	0.110UJ	0.0068UJ	0.0054UJ	0.110UJ	0.059UJ	0.0063UJ	0.0064UJ	0.0059UJ	0.005UJ	
PCB-1221	--	0.220U	0.230U	0.014U	0.011U	0.220U	0.120U	0.013U	0.013U	0.012U	0.0099U	
PCB-1232	--	0.220U	0.230U	0.014U	0.011U	0.220U	0.120U	0.013U	0.013U	0.012U	0.0099U	
PCB-1242	--	0.110UJ	0.110UJ	0.0068UJ	0.0054UJ	0.110UJ	0.059UJ	0.0063UJ	0.0064UJ	0.0059UJ	0.005U	
PCB-1248	--	0.110UJ	0.110UJ	0.0068UJ	0.0054UJ	0.110UJ	0.059UJ	0.0063UJ	0.0064UJ	0.0059UJ	0.005U	
PCB-1254	--	0.110UJ	0.110UJ	0.0068UJ	0.0054UJ	0.110UJ	0.059UJ	0.0063UJ	0.0064UJ	0.0059UJ	0.005U	
PCB-1260	--	7.900J	5.700J	0.700J	0.280J	2.800J	1.100J	0.041J	0.090J	0.0088J	0.005UJ	
PCB-1262	--	0.110UJ	0.110UJ	0.0068UJ	0.0054UJ	0.110UJ	0.059UJ	0.0063UJ	0.0064UJ	0.0059UJ	0.005U	
PCB-1268	--	0.110UJ	0.110UJ	0.0068UJ	0.0054UJ	0.110UJ	0.059UJ	0.0063UJ	0.0064UJ	0.0059UJ	0.005U	
Total PCBs	1.100	7.900J	5.700J	0.700J	0.280J	2.800J	1.100J	0.041J	0.090J	0.0088J	ND	

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

ND - Non-detected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 4: Third Delineation Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT509	MBT510	MBT511	MBT512	MBT513	MBT514	MBT515	MBT516	MBT517	MBT518	MBT519	MBT520
Lab Identification		580-37096-19	580-37096-20	580-37096-21	580-37096-22	580-37096-23	580-37096-24	580-37096-25	580-37096-26	580-37096-27	580-37096-28	580-37096-29	580-37096-30
Sample Delivery Group (SDG)		580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1	580-37096-1
Date Sampled		2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013	2/13/2013
Soil Boring Number		B161				B162				B163			
Depth (in feet below ground surface)		0-0.5	1	2	3	0-0.5	1	2	3	0-0.5	1	2	3
Sample Quality Control													
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016	--	0.0059UJ	0.0063UJ	0.0062UJ	0.0063U	0.0065U	0.0067U	0.006U	0.0055U	0.0053U	0.0060U	0.0056U	0.0058U
PCB-1221	--	0.012U	0.013U	0.012U	0.013U	0.013U	0.013U	0.012U	0.011U	0.011U	0.012U	0.011U	0.012U
PCB-1232	--	0.012U	0.013U	0.012U	0.013U	0.013U	0.013U	0.012U	0.011U	0.011U	0.012U	0.011U	0.012U
PCB-1242	--	0.0059UJ	0.0063U	0.0062UJ	0.0063U	0.0065U	0.0067U	0.006U	0.0055U	0.0053U	0.0060U	0.0056U	0.0058U
PCB-1248	--	0.0059UJ	0.0063U	0.0062UJ	0.0063U	0.0065U	0.0067U	0.006U	0.0055U	0.0053U	0.0060U	0.0056U	0.0058U
PCB-1254	--	0.0059UJ	0.0063U	0.0062UJ	0.0063U	0.0065U	0.0067U	0.006U	0.0055U	0.0053U	0.0060U	0.0056U	0.0058U
PCB-1260	--	3.500	0.200J	0.036J	0.012J	2.800	0.026	0.016	0.0055U	0.034	0.0060U	0.0056U	0.0058U
PCB-1262	--	0.0059UJ	0.0063U	0.0062UJ	0.0063U	0.0065U	0.0067U	0.006U	0.0055U	0.0053U	0.0060U	0.0056U	0.0058U
PCB-1268	--	0.0059UJ	0.0063U	0.0062UJ	0.0063U	0.0065U	0.0067U	0.006U	0.0055U	0.0053U	0.0060U	0.0056U	0.0058U
Total PCBs	1.100	3.500	0.200J	0.036J	0.012J	2.800	0.026	0.016	ND	0.034	ND	ND	ND

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

ND - Non-detected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 5: Forth Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT538	MBT539	MBT540	MBT541	MBT542	MBT543	MBT544	MBT545	MBT546	
Lab Identification		580-37820-18	580-37820-19	580-37820-20	580-37820-21	580-37820-22	580-37820-23	580-37820-24	580-37820-25	580-37820-26	
Sample Delivery Group (SDG)		580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	
Date Sampled		4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	
Soil Boring Number		B168					B169				
Depth (in feet below ground surface)		0-0.5	1	2	2	3	0-0.5	1	2	3	
Sample Quality Control			Parent of MBT541	Field Duplicate of MBT540							
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	
PCB-1016	--	0.0066U	0.0064U	0.0062U	0.0062U	0.0053U	0.0059U	0.0064U	0.0061U	0.0052U	
PCB-1221	--	0.013U	0.013U	0.012U	0.012U	0.011U	0.012U	0.013U	0.012U	0.010U	
PCB-1232	--	0.013U	0.013U	0.012U	0.012U	0.011U	0.012U	0.013U	0.012U	0.010U	
PCB-1242	--	0.0066U	0.0064U	0.0062U	0.0062U	0.0053U	0.0059U	0.0064U	0.0061U	0.0052U	
PCB-1248	--	0.0066U	0.0064U	0.0062U	0.0062U	0.0053U	0.0059U	0.0064U	0.0061U	0.0052U	
PCB-1254	--	0.0066UJ	0.0064UJ	0.0062UJ	0.0062UJ	0.0053UJ	0.045J	0.0064UJ	0.0061UJ	0.0052UJ	
PCB-1260	--	0.038J	0.012J	0.0062U	0.0062U	0.0053U	0.110J	0.024	0.010J	0.0052U	
PCB-1262	--	0.0066U	0.0064U	0.0062U	0.0062U	0.0053U	0.0059U	0.0064U	0.0061U	0.0052U	
PCB-1268	--	0.0066U	0.0064U	0.0062U	0.0062U	0.0053U	0.0059U	0.0064U	0.0061U	0.0052U	
Total PCBs	1.100	0.038J	0.012J	ND	ND	ND	0.155J	0.024	0.010J	ND	

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

ND - Non-detected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 5: Forth Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT547	MBT548	MBT549	MBT550	MBT551	MBT552	MBT553	MBT554	MBT555	
Lab Identification		580-37820-27	580-37820-28	580-37820-29	580-37820-30	580-37820-31	580-37820-32	580-37820-33	580-37820-34	580-37820-35	
Sample Delivery Group (SDG)		580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	
Date Sampled		4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	
Soil Boring Number		B170					B171				
Depth (in feet below ground surface)		0-0.5	1	2	3	0-0.5	0-0.5	1	2	3	
Sample Quality Control						Parent of MBT552	Field Duplicate of MBT551				
Polychlorinated Biphenyls (PCBs) by SW846 8082		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016		--	0.0061U	6.7U	0.0063U	0.0057U	0.0065U	0.0063U	0.0056U	0.0052U	0.0056U
PCB-1221		--	0.012U	0.013U	0.013U	0.011U	0.013U	0.013U	0.011U	0.010U	0.011U
PCB-1232	--	0.012U	0.013U	0.013U	0.011U	0.013U	0.013U	0.011U	0.010U	0.011U	
PCB-1242	--	0.0061U	0.0067U	0.0063U	0.0057U	0.0065U	0.0063U	0.0056U	0.0052U	0.0056U	
PCB-1248	--	0.0061U	0.0067U	0.0063U	0.0057U	0.0065U	0.0063U	0.0056U	0.0052U	0.0056U	
PCB-1254	--	0.0061UJ	0.0067UJ	0.0063UJ	0.0057UJ	0.0065UJ	0.0063UJ	0.0056UJ	0.0052UJ	0.0056UJ	
PCB-1260	--	0.056	0.0067U	0.0063U	0.0057U	0.31	0.1	0.0056U	0.0052U	0.0056U	
PCB-1262	--	0.0061U	0.0067U	0.0063U	0.0057U	0.0065U	0.0063U	0.0056U	0.0052U	0.0056U	
PCB-1268	--	0.0061U	0.0067U	0.0063U	0.0057U	0.0065U	0.0063U	0.0056U	0.0052U	0.0056U	
Total PCBs	1.100	0.056	ND	ND	ND	0.31	0.1	ND	ND	ND	

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

ND - Non-detected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 5: Forth Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT556	MBT557	MBT558	MBT559	MBT561	MBT562	MBT563	MBT564	MBT565	MBT566	MBT567	MBT568
Lab Identification		580-37820-36	580-37820-37	580-37820-38	580-37820-39	580-37820-41	580-37820-42	580-37820-43	580-37820-44	580-37820-45	580-37820-46	580-37820-47	580-37820-48
Sample Delivery Group (SDG)		580-37820-2	580-37820-2	580-37820-2	580-37820-2	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1
Date Sampled		4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013
Soil Boring Number		B172				B173				B174			
Depth (in feet below ground surface)		0-0.5	1	2	3	1	2	3	3	0-0.5	1	2	3
Sample Quality Control							Parent of MBT564	Field Duplicate of MBT563					
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016	--	0.0058U	0.0071U	0.0061U	0.0055U	0.0073U	0.0064U	0.0066U	0.0058U	0.0068U	0.0065U	0.006U	0.0056U
PCB-1221	--	0.012U	0.014U	0.012U	0.011U	0.015U	0.013U	0.013U	0.012U	0.014U	0.013U	0.012U	0.011U
PCB-1232	--	0.012U	0.014U	0.012U	0.011U	0.015U	0.013U	0.013U	0.012U	0.014U	0.013U	0.012U	0.011U
PCB-1242	--	0.0058U	0.0071U	0.0061U	0.0055U	0.0073U	0.0064U	0.0066U	0.0058U	0.0068U	0.0065U	0.006U	0.0056U
PCB-1248	--	0.0058U	0.0071U	0.0061U	0.0055U	0.0073U	0.0064U	0.0066U	0.0058U	0.0068U	0.0065U	0.006U	0.0056U
PCB-1254	--	0.0058UJ	0.0071UJ	0.0061UJ	0.0055UJ	0.0073UJ	0.0064UJ	0.0066UJ	0.0058U	0.0068UJ	0.0065UJ	0.006UJ	0.0056UJ
PCB-1260	--	0.0058U	0.0071U	0.0061U	0.0055U	0.290J	0.220J	0.032J	0.0058UJ	6.2	0.53	0.028	0.0056U
PCB-1262	--	0.0058U	0.0071U	0.0061U	0.0055U	0.0073U	0.0064U	0.0066U	0.0058U	0.0068U	0.0065U	0.006U	0.0056U
PCB-1268	--	0.0058U	0.0071U	0.0061U	0.0055U	0.0073U	0.0064U	0.0066U	0.0058U	0.0068U	0.0065U	0.006U	0.0056U
Total PCBs	1.100	ND	ND	ND	ND	0.290J	0.220J	0.032J	ND	6.2	0.53	0.028	ND

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

ND - Non-detected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 5: Forth Delineation Soil Sampling Event Results

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT569	MBT570	MBT571	MBT572	MBT573	MBT574	MBT575	MBT576	MBT577
Lab Identification		580-37820-49	580-37820-50	580-37820-51	580-37820-52	580-37820-53	580-37820-54	580-37820-55	580-37820-56	580-37820-57
Sample Delivery Group (SDG)		580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1	580-37820-1
Date Sampled		4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013	4/1/2013
Soil Boring Number		B175					B176			
Depth (in feet below ground surface)	0-0.5	1	2	3	0-0.5	0-0.5	1	2	3	
Sample Quality Control					Parent of MBT574	Field Duplicate of MBT573				
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	--	0.0063U	0.0064U	0.0061U	0.0057U	0.0061U	0.0072U	0.0071U	0.0056U	0.0059U
PCB-1221	--	0.013U	0.013U	0.012U	0.011U	0.012U	0.014U	0.014U	0.011U	0.012U
PCB-1232	--	0.013U	0.013U	0.012U	0.011U	0.012U	0.014U	0.014U	0.011U	0.012U
PCB-1242	--	0.0063U	0.0064U	0.0061U	0.0057U	0.0061U	0.0072U	0.0071U	0.0056U	0.0059U
PCB-1248	--	0.0063U	0.0064U	0.0061U	0.0057U	0.0061U	0.0072U	0.0071U	0.0056U	0.0059U
PCB-1254	--	0.0063UJ	0.0064UJ	0.0061UJ	0.0057UJ	0.0061UJ	0.0072UJ	0.0071UJ	0.0056UJ	0.0059UJ
PCB-1260	--	4.500	0.470	0.100	0.0057U	3.200	1.300	0.490	0.240	0.020
PCB-1262	--	0.0063U	0.0064U	0.0061U	0.0057U	0.0061U	0.0072U	0.0071U	0.0056U	0.0059U
PCB-1268	--	0.0063U	0.0064U	0.0061U	0.0057U	0.0061U	0.0072U	0.0071U	0.0056U	0.0059U
Total PCBs	1.100	4.500	0.470	0.100	ND	3.200	1.300	0.490	0.240	0.020

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

ND - Non-detected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 6: Post Excavation Confirmation Soil Sampling Results of Five Transformer Sites

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT484	MBT485	MBT486	MBT487	MBT488	MBT489	MBT490
Lab Identification		580-36879-1	580-36921-1	580-36921-2	580-36921-3	580-36921-4	580-36921-5	580-36921-6
Sample Delivery Group (SDG)		580-36879-1	580-36921-1	580-36921-1	580-36921-1	580-36921-1	580-36921-1	580-36921-1
Date Sampled		1/29/2013	1/30/2013	1/30/2013	1/30/2013	1/30/2013	1/30/2013	1/30/2013
Sample Location		Transformer F-1126A and F-1126B - Military Police	Transformer 298 - Motor Pool	Transformer 252B - Swimming Pool	Transformers 898/SS245A and SS245F	Transformer 1255 - Laundromat	Transformer 1255 - Laundromat	Transformer 1255 - Laundromat
Depth (in feet below ground surface) ²		Excavation Floor + Sidewalls	Excavation Floor + Sidewalls	Excavation Floor + Sidewalls	Excavation Floor + Sidewalls	Excavation Floor + Sidewalls	Excavation Floor + Sidewalls	Excavation Floor + Sidewalls
Sample Type		ISM	ISM	ISM	ISM	ISM Parent	ISM Replicate	ISM Triplicate
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	1.1	0.0016 U	0.0016 U	0.0017 U	0.0016 U	0.0017 U	0.0017 U	0.0016 U
PCB-1221	1.1	0.0032 U	0.0032 U	0.0033 U	0.0032 U	0.0033 U	0.0033 U	0.0033 U
PCB-1232	1.1	0.0032 U	0.0032 U	0.0033 U	0.0032 U	0.0033 U	0.0033 U	0.0033 U
PCB-1242	1.1	0.0016 UJ	0.0016 U	0.0017U	0.0016 U	0.0017 U	0.0017 U	0.0016 U
PCB-1248	1.1	0.0016 U	0.0016 U	0.0017 U	0.0016 U	0.0017 U	0.0017 U	0.0016 U
PCB-1254	1.1	0.0016 UJ	0.0016 UJ	0.15J	0.0016 UJ	0.0017 UJ	0.0017 UJ	0.0016 UJ
PCB-1260	1.1	0.83	0.046J	0.076	0.48J	0.25J	0.14J	0.16
PCB-1262	1.1	0.0016 U	0.0016 U	0.0017 U	0.0016 U	0.0017 U	0.0017 U	0.0016 U
PCB-1268	1.1	0.0016 UJ	0.0016 UJ	0.0017 UJ	0.0016 UJ	0.0017 UJ	0.0017 UJ	0.0016 UJ
Total PCBs	1.1	0.83	0.046J	0.226J	0.48J	0.25J	0.14J	0.16

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

² Excavation floor depths vary depending on delineation sampling results.

mg/kg-milligrams per kilogram

U - Result is not detected

J - Result is estimated

UJ - Result is not detected and estimated

ISM - Incremental Sampling Methodology

Table 7: Post Initial Excavation Confirmation Soil Sampling Results for Transformer 1129

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT578	MBT579	MBT580
Lab Identification		580-39417-1	580-39417-2	580-39417-3
Sample Delivery Group (SDG)		580-39417-1	580-39417-1	580-39417-1
Date Sampled		7/17/2013	7/17/2013	7/17/2013
Location		Transformer 1129 - Tiki Island	Transformer 1129 Tiki Island	Transformer 1129 Tiki Island
Depth (in feet below ground surface) ²		Excavation Floor	Excavation Floor	Excavation Floor
Sample Type	ISM Parent	ISM Replicate	ISM Triplicate	
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	--	0.0016U	0.0016U	0.0016U
PCB-1221	--	0.0033U	0.0033U	0.0033U
PCB-1232	--	0.0033U	0.0033U	0.0033U
PCB-1242	--	0.0016U	0.0016U	0.0016U
PCB-1248	--	0.0016U	0.0016U	0.0016U
PCB-1254	--	0.0016U	0.0016U	0.0016U
PCB-1260	--	2.100J	1.500J	1.200J
PCB-1262	--	0.0016U	0.0016U	0.0016U
PCB-1268	--	0.0016U	0.0016U	0.0016U
Total PCBs	1.100	2.100J	1.500J	1.200J

Notes:

¹ EAL - Environmental Action Level
DOH (Department of Health, State of Hawaii)

² Excavation floor depths vary depending on delineation sampling results.
mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

ND - Non-detected

ISM - Increment Sampling Methodology

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 8: Additional Soil Sampling Results at Transformer 1129

Sample Identification		MBT581	MBT582	MBT583	MBT584	MBT585	MBT586	MBT587	MBT588
Lab Identification		580-39497-1	580-39497-2	580-39497-3	580-39497-4	580-39497-5	580-39497-6	580-39497-7	580-39497-8
Sample Delivery Group (SDG)	Project Cleanup	580-39497-1	580-39497-1	580-39497-1	580-39497-1	580-39497-1	580-39497-1	580-39497-1	580-39497-1
Date Sampled	Goal (DOH EAL) ¹	7/24/2013	7/24/2013	7/24/2013	7/24/2013	7/24/2013	7/24/2013	7/24/2013	7/24/2013
Location		Transformer 1129 - Tiki Island							
Depth (in feet below ground surface) ²		Excavation Floor							
Sample Type		Discrete							
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016	--	0.0057U	0.0058U	0.0066U	0.0066U	0.006U	0.0068U	0.0059U	0.0063U
PCB-1221	--	0.011U	0.012U	0.013U	0.013U	0.012U	0.014U	0.012U	0.013U
PCB-1232	--	0.011U	0.012U	0.013U	0.013U	0.012U	0.014U	0.012U	0.013U
PCB-1242	--	0.0057U	0.0058U	0.0066U	0.0066U	0.006U	0.0068U	0.0059U	0.0063U
PCB-1248	--	0.0057U	0.0058U	0.0066U	0.0066U	0.006U	0.0068U	0.0059U	0.0063U
PCB-1254	--	0.0057U	0.0058U	0.0066U	0.0066U	0.006U	0.0068U	0.0059U	0.0063U
PCB-1260	--	0.270J	0.068J	0.220J	0.018J	1.100J	0.180J	0.020J	0.350J
PCB-1262	--	0.0057U	0.0058U	0.0066U	0.0066U	0.006U	0.0068U	0.0059U	0.0063U
PCB-1268	--	0.0057U	0.0058U	0.0066U	0.0066U	0.006U	0.0068U	0.0059U	0.0063U
Total PCBs	1.100	0.270J	0.068J	0.220J	0.018J	1.100J	0.180J	0.020J	0.350J

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

² Excavation floor depths vary depending on delineation sampling results.
mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

ND - Non-detected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 8: Additional Soil Sampling Results at Transformer 1129

Sample Identification		MBT589	MBT590	MBT591	MBT592	MBT593	MBT594	MBT595	MBT596
Lab Identification		580-39497-9	580-39497-10	580-39497-11	580-39497-12	580-39497-13	580-39497-14	580-39497-15	580-39497-16
Sample Delivery Group (SDG)	Project Cleanup	580-39497-1	580-39497-1	580-39497-1	580-39497-1	580-39497-1	580-39497-1	580-39497-1	580-39497-1
Date Sampled	Goal (DOH EAL) ¹	7/24/2013	7/24/2013	7/24/2013	7/24/2013	7/24/2013	7/24/2013	7/24/2013	7/24/2013
Location		Transformer 1129 - Tiki Island							
Depth (in feet below ground surface) ²		Excavation Floor							
Sample Type		Discrete							
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016	--	0.006U	0.0064U	0.0069U	0.0064U	0.0059U	0.0066U	0.0059U	0.0061U
PCB-1221	--	0.012U	0.013U	0.014U	0.013U	0.012U	0.013U	0.012U	0.012U
PCB-1232	--	0.012U	0.013U	0.014U	0.013U	0.012U	0.013U	0.012U	0.012U
PCB-1242	--	0.006U	0.0064U	0.0069U	0.0064U	0.0059U	0.0066U	0.0059U	0.0061U
PCB-1248	--	0.006U	0.0064U	0.0069U	0.0064U	0.0059U	0.0066U	0.0059U	0.0061U
PCB-1254	--	0.006U	0.0064U	0.0069U	0.0064U	0.0059U	0.0066U	0.0059U	0.0061U
PCB-1260	--	1.500J	0.061J	0.013J	9.300J	0.430J	1.500J	0.240J	0.190J
PCB-1262	--	0.006U	0.0064U	0.0069U	0.0064U	0.0059U	0.0066U	0.0059U	0.0061U
PCB-1268	--	0.006U	0.0064U	0.0069U	0.0064U	0.0059U	0.0066U	0.0059U	0.0061U
Total PCBs	1.100	1.500J	0.061J	0.013J	9.300J	0.430J	1.500J	0.240J	0.190J

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

² Excavation floor depths vary depending on delineation sampling results.
mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

ND - Non-detected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 9: Post Over-Excavation Confirmation Soil Sampling Results at Transformer 1129

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT597	MBT598	MBT599
Lab Identification		580-40506-1	580-40506-2	580-40506-3
Sample Delivery Group (SDG)		580-40506-1	580-40506-1	580-40506-1
Sample Date		9/23/2013	9/23/2013	9/23/2013
Location		Transformer 1129 - Tiki Island	Transformer 1129 - Tiki Island	Transformer 1129 - Tiki Island
Depth (in feet below ground surface) ²		Excavation Floor	Excavation Floor	Excavation Floor
Sample Type		ISM Parent	ISM Replicate	ISM Triplicate
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016	--	0.0016UJ	0.0016UJ	0.0016U
PCB-1221	--	0.0033U	0.0032U	0.0033U
PCB-1232	--	0.0033U	0.0032U	0.0033U
PCB-1242	--	0.0016U	0.0016U	0.0016U
PCB-1248	--	0.0016U	0.0016U	0.0016U
PCB-1254	--	0.0016UJ	0.0016UJ	0.0016UJ
PCB-1260	--	1.0J	0.41J	0.98J
Total PCBs	1.1	1.0J	0.41J	0.98J

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

² Excavation floor depths vary depending on delineation sampling results.

mg/kg-milligrams per kilogram

J - Preliminary data qualifier for an estimated concentration

ISM - Incremental Sampling Methodology

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 10: Post Initial Excavation Soil Sampling Results at Transformer F-678/678

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT600	MBT601	MBT602
Lab Identification		580-41230-1	580-41230-2	580-41230-3
Sample Delivery Group (SDG)		580-41230-1	580-41230-1	580-41230-1
Date Sampled		11/11/2013	11/11/2013	11/11/2013
Location		Transformers F-678/678	Transformers F-678/678	Transformers F-678/678
Depth (in feet below ground surface) ²		Excavation Floor	Excavation Floor	Excavation Floor
Sample Type	ISM Parent	ISM Replicate	ISM Triplicate	
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	--	0.0016UJ	0.0016UJ	0.0016UJ
PCB-1221	--	0.0033U	0.0033U	0.0032U
PCB-1232	--	0.0033U	0.0033U	0.0032U
PCB-1242	--	0.0016U	0.0016U	0.0016U
PCB-1248	--	0.0016U	0.0016U	0.0016U
PCB-1254	--	0.0016UJ	0.0016UJ	0.0016UJ
PCB-1260	--	1.500J	2.200J	1.800J
PCB-1262	--	NA	NA	NA
PCB-1268	--	NA	NA	NA
Total PCBs	1.100	1.500J	2.200J	1.800J

Notes:

¹EAL Environmental Action Level
DOH Department of Health, State of Hawaii

² Excavation floor depths vary depending on delineation sampling results.
mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

NA - Not Analyzed

ISM - Increment Sampling Methodology

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 11: Additional Soil Sampling Results for Transformer F-678/678

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT603	MBT604	MBT605	MBT607	MBT606	MBT608
Lab Identification		320-6695-1	320-6695-2	320-6695-3	320-6695-5	320-6695-4	320-6695-6
Sample Delivery Group (SDG)		320-6695-1	320-6695-1	320-6695-1	320-6695-1	320-6695-1	320-6695-1
Date Sampled		3/19/2014	3/19/2014	3/19/2014	3/19/2014	3/19/2014	3/19/2014
Location		Decision Unit A	Decision Unit A	Decision Unit A	Decision Unit B	Capped Area	Decision Unit A
Depth (in feet below ground surface) ²		Excavation Floor	1.5				
Sample Type		ISM Parent	ISM Duplicate	ISM Triplicate	ISM	ISM	ISM
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	--	R	0.100U	0.200U	0.100U	R	0.03U
PCB-1221	--	0.200U	0.200U	0.300U	0.200U	R	0.06U
PCB-1232	--	0.150U	0.150U	0.300U	0.150U	R	0.045U
PCB-1242	--	0.100U	0.100U	0.200U	0.100U	R	0.03U
PCB-1248	--	0.100U	0.100U	0.200U	0.100U	R	0.03U
PCB-1254	--	0.100U	0.100U	0.200U	0.100U	R	0.03U
PCB-1260	--	1.000J	1.200J	2.400J	1.400J	32J	0.620
PCB-1262	--	NA	NA	NA	NA	NA	NA
PCB-1268	--	NA	NA	NA	NA	NA	NA
Total PCBs	1.100	1.000J	1.200J	2.400J	1.400J	32J	0.620

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

² Excavation floor depths vary depending on delineation sampling results.
mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

NA - Not Analyzed

ND - Non-detected

ISM - Increment Sampling Methodology

R - Rejected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 11: Additional Soil Sampling Results for Transformer F-678/678

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT610	MBT612	MBT613	MBT614	MBT618	MBT619	MBT620
Lab Identification		320-6695-8	320-6695-10	320-6695-11	320-6695-12	320-6695-16	320-6695-17	320-6695-18
Sample Delivery Group (SDG)		320-6695-1	320-6695-1	320-6695-1	320-6695-1	320-6695-1	320-6695-1	320-6695-1
Date Sampled		3/20/2014	3/20/2014	3/20/2014	3/20/2014	3/20/2014	3/20/2014	3/20/2014
Location		Decision Unit B	B100			B102		
Depth (in feet below ground surface) ²		1.5	0.5	1	2	0.5	1	2
Sample Type		ISM	Discrete	Discrete	Discrete	Discrete	Discrete	Discrete
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>		<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	--	0.03U	0.011U	0.014U	0.011U	0.011U	0.011U	0.012U
PCB-1221	--	0.06U	0.023U	0.027U	0.022U	0.022U	0.022U	0.023U
PCB-1232	--	0.045U	0.017U	0.020U	0.016U	0.016U	0.017U	0.017U
PCB-1242	--	0.03U	0.011U	0.014U	0.011U	0.011U	0.011U	0.022U
PCB-1248	--	0.03U	0.011U	0.014U	0.011U	0.011U	0.011U	0.022U
PCB-1254	--	0.03U	0.011U	0.014U	0.011U	0.011U	0.011U	0.022U
PCB-1260	--	0.720	0.011U	0.014U	0.011U	8.3J	0.011U	0.022U
PCB-1262	--	NA	NA	NA	NA	NA	NA	NA
PCB-1268	--	NA	NA	NA	NA	NA	NA	NA
Total PCBs	1.100	0.720	ND	ND	ND	8.3J	ND	ND

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

² Excavation floor depths vary depending on delineation sampling results.

mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

NA - Not Analyzed

ND - Non-detected

ISM - Increment Sampling Methodology

R - Rejected

Bold results indicate positively detected value

Highlighted results exceeds PALs

Table 12: Summary of the Final Sampling Results for Transformer F-678/678

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT606	MBT608	MBT610
Lab Identification		320-6695-4	320-6695-6	320-6695-8
Date Sampled		3/19/2014	3/19/2014	3/20/2014
Sample Location		Capped Area	Decision Unit A, 1.5 feet bgs	Decision Unit B, 1.5 feet bgs
<i>PCBs by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	--	R	0.03U	0.03U
PCB-1221	--	R	0.06U	0.06U
PCB-1232	--	R	0.045U	0.045U
PCB-1242	--	R	0.03U	0.03U
PCB-1248	--	R	0.03U	0.03U
PCB-1254	--	R	0.03U	0.03U
PCB-1260	--	32J	0.620	0.720
Total PCBs	1.1	32J	0.620	0.720

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

mg/kg-miligrams per kilogram

bgs - below ground surface

J - Preliminary data qualifier for an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

R - Result is rejected as unusable

Bold results indicate positively detected value

Highlighted results exceeds PAL

Table 13: Waste Characterization Sampling Results of the Concrete Channel Rinse Water and Soil

Sample Identification	Regulatory Limits	MBT624
Lab Identification		320-9102-1
Date Sampled		8/25/2014
TPH by 8015B		ug/L
Diesel Range Organics (C10-C24)	--	230
Motor Oil Range Organics (C19-C36)	--	1,400
Polychlorinated Biphenyls (PCBs) by 8082		ug/L
PCB-1016	--	0.5U
PCB-1221	--	0.5U
PCB-1232	--	0.5U
PCB-1242	--	0.5U
PCB-1248	--	0.5U
PCB-1254	--	0.5U
PCB-1260	--	21
PCB-1262	--	0.5U
PCB-1268	--	0.5U
Total PCBs	--	21
Metals by 6010B	mg/L	mg/L
Silver	5	0.025
Arsenic	5	0.87
Barium	100	2.5
Beryllium	--	0.0092
Cadmium	1	0.71J
Cobalt	--	0.31
Chromium	5	1.8J
Copper	--	18J
Molybdenum	--	0.018J
Nickel	--	0.87
Lead	5	19J
Selenium	1	0.025U
Antimony	--	0.042J
Thallium	--	0.013J
Vanadium	--	0.52
Zinc	--	41J
Mercury by 7470A	mg/L	mg/L
Mercury	0.2	0.0036

Notes:

Regulatory Limits: Title 40 Code of Federal Regulations (40 CFR) Part 261 Subpart C and 40 CFR 761.

ug/L-micrograms per liter

mg/L-miligrams per liter

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

Bold results indicate positively detected value

Table 14: Relative Standard Deviation for Increment Sampling Methodology Quality Assurance/Quality Control Results

Sample Identification	MBT578	MBT579	MBT580	MBT600	MBT601	MBT602
Lab Identification	580-39417-1	580-39417-2	580-39417-3	580-41230-1	580-41230-2	580-41230-3
Sample Delivery Group (SDG)	580-39417-1	580-39417-1	580-39417-1	580-41230-1	580-41230-1	580-41230-1
Date Sampled	7/17/2013	7/17/2013	7/17/2013	11/11/2013	11/11/2013	11/11/2013
Location	Transformer 1129 - Tiki Island	Transformer 1129 - Tiki Island	Transformer 1129 - Tiki Island	Transformers F- 678/678 - Electrical Shop	Transformers F- 678/678 - Electrical Shop	Transformers F- 678/678 - Electrical Shop
Sample Type	Parent	Replicate	Triplicate	Parent	Replicate	Triplicate
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016	0.0016U	0.0016U	0.0016U	0.0016U	0.0016U	0.0016U
PCB-1221	0.0033U	0.0033U	0.0033U	0.0033U	0.0033U	0.0033U
PCB-1232	0.0033U	0.0033U	0.0033U	0.0033U	0.0033U	0.0033U
PCB-1242	0.0016U	0.0016U	0.0016U	0.0016U	0.0016U	0.0016U
PCB-1248	0.0016U	0.0016U	0.0016U	0.0016U	0.0016U	0.0016U
PCB-1254	0.0016U	0.0016U	0.0016U	0.0016U	0.0016U	0.0016U
PCB-1260	2.100J	1.500J	1.200J	1.500J	2.200J	1.800J
PCB-1262	0.0016U	0.0016U	0.0016U	NA	NA	NA
PCB-1268	0.0016U	0.0016U	0.0016U	NA	NA	NA
Total PCBs	2.100J	1.500J	1.200J	1.500J	2.200J	1.800J
Standard Deviation	458.26			351.19		
Average	1600			1833.33		
Relative Standard Deviation (RSD)	29%			19%		

Notes:

% - percent

mg/kg-milligrams per kilogram

J - Data is an estimated concentration

NA - Not Analyzed

Bold results indicate positively detected value or RSD above 35% (approximately 35% or less indicates the amount of estimated total error is within a reasonable range for decisionmaking per the State of Hawaii Department of Health Technical Guidance Manual).

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

ND - Non-detected

Highlighted results exceeds PAL of 1.1 mg/kg

Table 14: Relative Standard Deviation for Increment Sampling Methodology Quality Assurance/Quality Control Results

Sample Identification	MBT603	MBT604	MBT605	MBT488	MBT489	MBT490
Lab Identification	320-6695-1	320-6695-2	320-6695-3	580-36921-1	580-36921-1	580-36921-1
Sample Delivery Group (SDG)	320-6695-1	320-6695-1	320-6695-1	1/30/2013	1/30/2013	1/30/2013
Date Sampled	3/19/2014	3/19/2014	3/19/2014	1/30/2013	1/30/2013	1/30/2013
Location	Transformer F-678/678 - Electrical Shop Decision Unit A	Transformer F-678/678 - Electrical Shop Decision Unit A	Transformer F-678/678 - Electrical Shop Decision Unit A	Transformer 1255 - Laundromat	Transformer 1255 - Laundromat	Transformer 1255 - Laundromat
Sample Type	Parent	Replicate	Triplicate	Parent	Replicate	Triplicate
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	R	0.100U	0.200U	0.0017 U	0.0017 U	0.0016 U
PCB-1221	0.200U	0.200U	0.300U	0.0033 U	0.0033 U	0.0033 U
PCB-1232	0.150U	0.150U	0.300U	0.0033 U	0.0033 U	0.0033 U
PCB-1242	0.100U	0.100U	0.200U	0.0017 U	0.0017 U	0.0016 U
PCB-1248	0.100U	0.100U	0.200U	0.0017 U	0.0017 U	0.0016 U
PCB-1254	0.100U	0.100U	0.200U	0.0017 UJ	0.0017 UJ	0.0016 UJ
PCB-1260	1.000J	1.200J	2.400J	0.25J	0.14J	0.16
PCB-1262	NA	NA	NA	0.0017 U	0.0017 U	0.0016 U
PCB-1268	NA	NA	NA	0.0017 UJ	0.0017 UJ	0.0016 UJ
Total PCBs	1.000J	1.200J	2.400J	0.25J	0.14J	0.16
Standard Deviation	757.19			0.06		
Average	1533.33			0.18		
Relative Standard Deviation (RSD)	49%			32%		

Notes:

% - percent

mg/kg-milligrams per kilogram

J - Data is an estimated concentration

NA - Not Analyzed

Bold results indicate positively detected value or RSD above 35% (approximately 35% or less indicates the amount of estimated total error is within a reasonable range for decisionmaking per the State of Hawaii Department of Health Technical Guidance Manual).

Highlighted results exceeds PAL of 1.1 mg/kg

Figures



LEGEND

- Removal Action Transformer Site
- Wetlands
- Ponds
- Airfield
- Buildings and Structures

NOTES

1. The accuracy of this map is limited to the quality and scale of the source information and is not suitable for mapping engineering applications or for "As Built" use.
2. The accuracy of this map is limited to the source information due to on-going construction at MCB Hawaii.
3. Transformers are labeled by their Unit Identification Code.
4. Map projection is North American Datum 1983 HARN.

SOURCES

1. MCBH Kaneohe Bay Facilities Geodatabase (2010)
2. Preliminary Assessment/Site Investigation (AECOM 2012)

REVISIONS:

No.	Date	By	CHK	Remarks



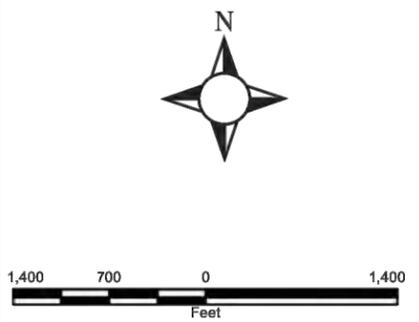
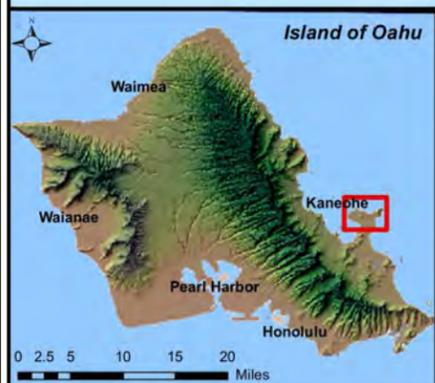
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 FOR VARIOUS TRANSFORMERS (SITE 0026)
 MARINE CORPS BASE HAWAII
 KANEOHE, OAHU, HAWAII

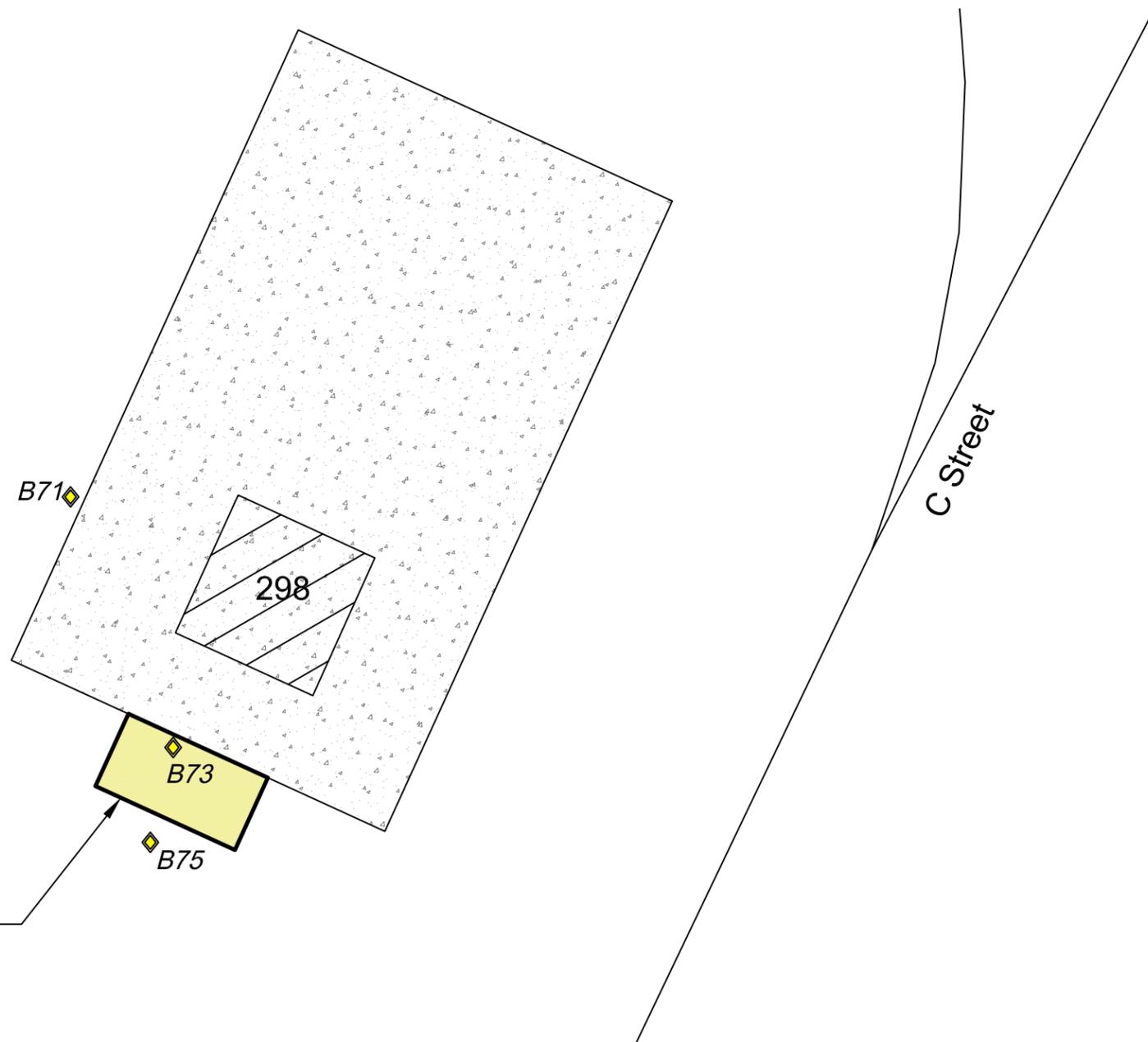
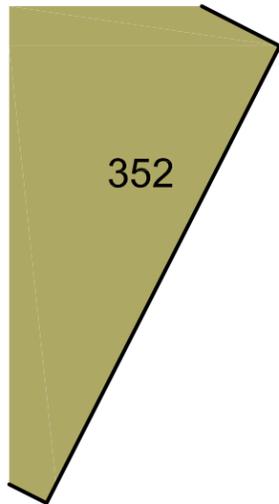
SHEET TITLE
 TRANSFORMER LOCATIONS

CONTRACT NO:
 N62742-10-D-1804, HC11
 JOB NO:
 01804.111.006.001
 CHECKED BY:
 J.BORR
 DRAWN BY:

 DATE:
 October 14
 FILE NAME:
 HC11 Fig1_Transformer locations
 SHEET NUMBER:

FIGURE 1





Post Excavation ISM
Confirmation Soil Sample Result

MBT485 (mg/kg)

0.046 J



LEGEND

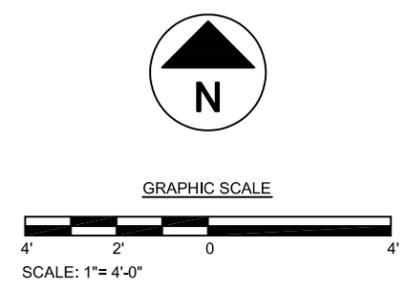
- Discrete Soil Sampling Location below Clean-up goals
- bgs Below Ground Surface
- J Estimated Result
- ISM Incremental Subsampling Methodology
- mg/kg Milligrams per kilogram
- Building
- Transformer Concrete Pad
- Transformer
- Non-Hazardous Soil Excavation (0-1 ft. bgs)

NOTES

- The accuracy of this map is limited to the quality and scale of the source information and is not suitable for mapping engineering applications or for "As Built" use.
- The accuracy of this map is limited to the source information due to on-going construction at MCB Hawaii
- Transformers are labeled by their Unit Identification Code.
- Map projection is North American Datum 1983 HARN.
- All results are Total PCB concentrations
- Total PCB Clean-up goal is 1.1 mg/kg.

SOURCES

- MCBH Kaneohe Bay Facilities Geodatabase (2010)
- Draft Preliminary Assessment/Site Investigation, Various Transformers (Site 0026) Marine Corps Base Hawaii, Kaneohe, Hawaii (AECOM 2012)



REVISIONS:

No.	Date	By	Chk	Remarks



PROJECT NAME

TIME CRITICAL REMOVAL ACTION
FOR VARIOUS TRANSFORMERS (SITE 0026)
MARINE CORPS BASE HAWAII
KANEHOE, OAHU, HAWAII

SHEET TITLE

TRANSFORMER 298
EXCAVATION AREA AND
SAMPLING RESULTS

CONTRACT NO:
N62742-10-D-1804, HC11

JOB NO:
01804.111.006.001

CHECKED BY:
J.BORR

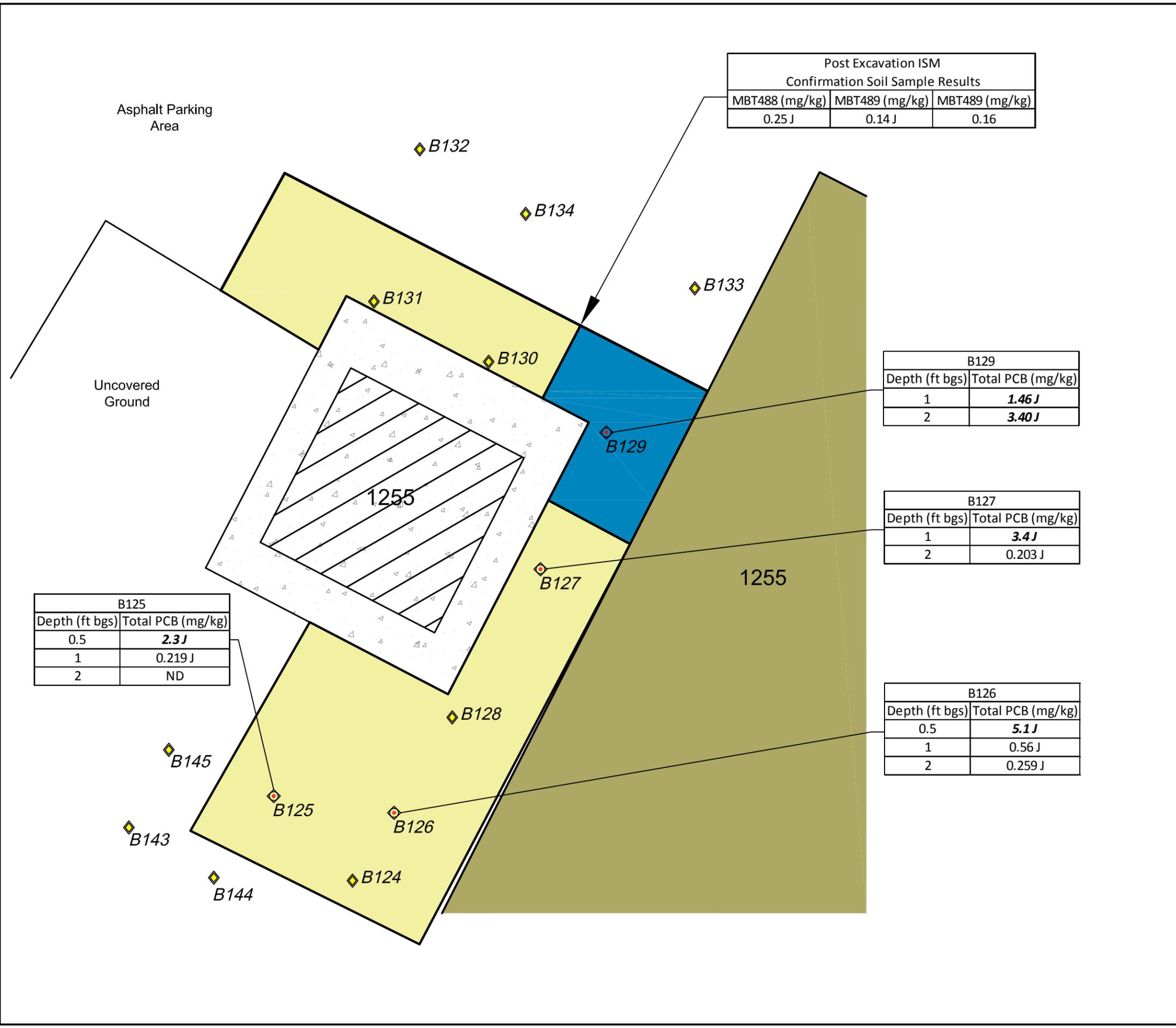
DRAWN BY:
Crios

DATE:
October 2014

FILE NAME:
HC11-FIG2_298 Motor Pool

SHEET NUMBER:

FIGURE 2



LEGEND

- ◆ Discrete Soil Sampling Location below Clean-up Goal
- ◇ Delineation Soil Sample Result above Clean-up Goal
- bgs Below Ground Surface
- J Estimate Result
- ISM Incremental Subsampling Methodology
- ND Non-detect
- mg/kg Milligrams per kilogram
- Building
- ▨ Transformer Concrete Pad
- ▧ Transformer
- Non-Hazardous Soil Excavation (0-1 ft. bgs)
- Non-Hazardous Soil Excavation (0-2.5 ft. bgs)

- NOTES**
- The accuracy of this map is limited to the quality and scale of the source information and is not suitable for mapping engineering applications or for "As Built" use.
 - The accuracy of this map is limited to the source information due to on-going construction at MCB Hawaii
 - Transformers are labeled by their Unit Identification Code.
 - Map projection is North American Datum 1983 HARN.
 - All results are Total PCB concentrations
 - Total PCB Clean-up goal is 1.1 mg/kg.

- SOURCES**
- MCBH Kaneohe Bay Facilities Geodatabase (2010)
 - Draft Preliminary Assessment/Site Investigation, Various Transformers (Site 0026) Marine Corps Base Hawaii, Kaneohe, Hawaii (AECOM 2012)

N
 GRAPHIC SCALE

 SCALE: 1"= 2'-0"

REVISIONS:

No.	Date	By	Chk	Remarks

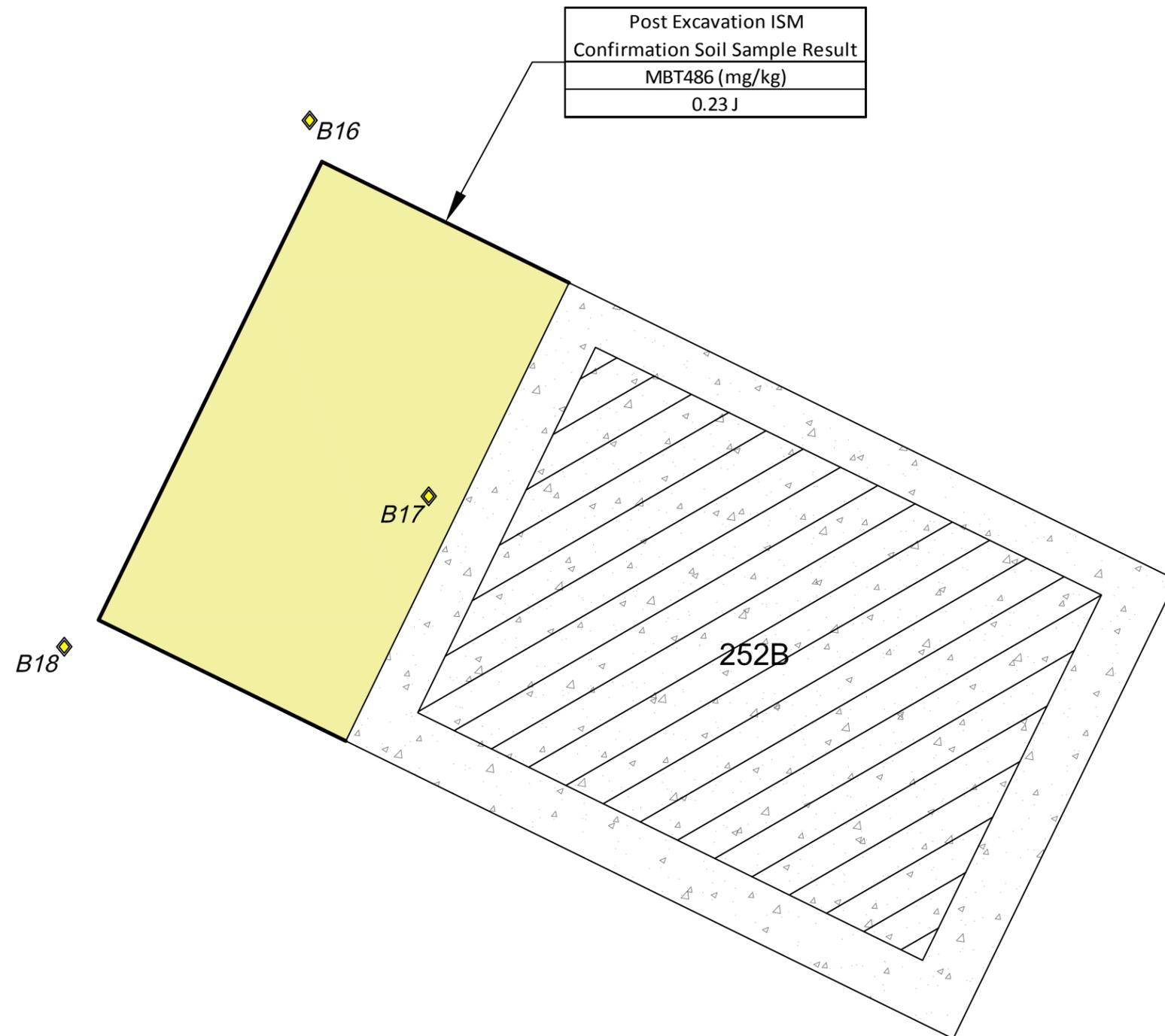


PROJECT NAME
 TIME CRITICAL REMOVAL ACTION
 FOR VARIOUS TRANSFORMERS (SITE 0026)
 MARINE CORPS BASE HAWAII
 KANEOHE, OAHU, HAWAII

SHEET TITLE
 TRANSFORMER 1255
 EXCAVATION AREA AND
 SAMPLING RESULTS

CONTRACT NO:
 N62742-10-D-1804, HC11
 JOB NO:
 01804.111.006.001
 CHECKED BY:
 J.BORR
 DRAWN BY:
 Crios
 DATE:
 October 2014
 FILE NAME:
 HC11-FIG3_1255 Laundromat Addl Det
 SHEET NUMBER:

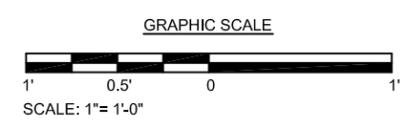
FIGURE 3



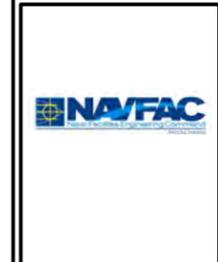
LEGEND	
	Discrete Soil Sampling Location below Clean-up goals
bgs	Below Ground Surface
J	Estimate Result
ISM	Incremental Subsampling Methodology
mg/kg	Milligrams per kilogram
	Transformer Concrete Pad
	Transformer
	Non-Hazardous Soil Excavation (0-1 ft. bgs)

NOTES	
1.	The accuracy of this map is limited to the quality and scale of the source information and is not suitable for mapping engineering applications or for "As Built" use.
2.	The accuracy of this map is limited to the source information due to on-going construction at MCB Hawaii
3.	Transformers are labeled by their Unit Identification Code.
4.	Map projection is North American Datum 1983 HARN.
5.	All results are Total PCB concentrations
6.	Total PCB Clean-up goal is 1.1 mg/kg.

SOURCES	
1.	MCBH Kaneohe Bay Facilities Geodatabase (2010)
2.	Draft Preliminary Assessment/Site Investigation, Various Transformers (Site 0026) Marine Corps Base Hawaii, Kaneohe, Hawaii (AECOM 2012)



REVISIONS:	No.	Date	By	Chk	Remarks

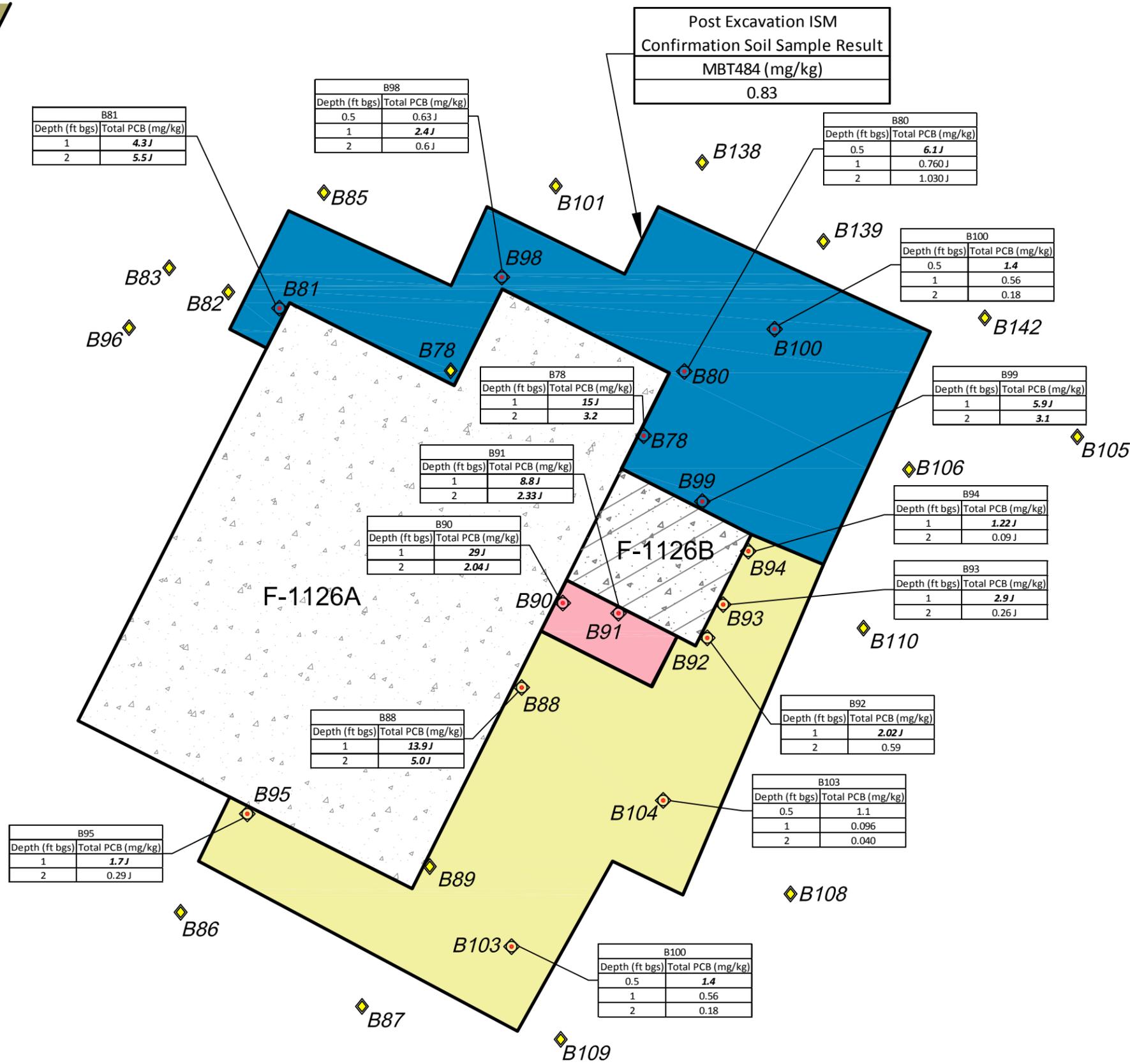
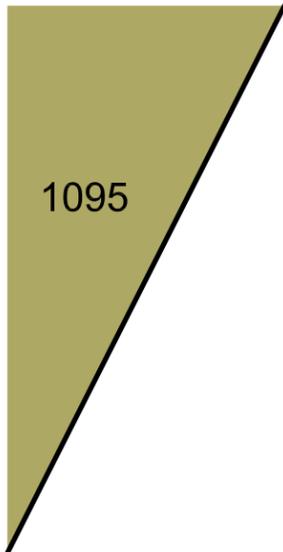


PROJECT NAME
TIME CRITICAL REMOVAL ACTION
FOR VARIOUS TRANSFORMERS (SITE 0026)
MARINE CORPS BASE HAWAII
KANEOHE, OAHU, HAWAII

SHEET TITLE
TRANSFORMER 252B
EXACAVATION AREA AND
SAMPLING RESULTS

CONTRACT NO:	N62742-10-D-1804, HC11
JOB NO:	01804.111.006.001
CHECKED BY:	J.BORR
DRAWN BY:	Crios
DATE:	October 2014
FILE NAME:	HC11-FIG4_252B Swimming Pool
SHEET NUMBER:	

FIGURE 4



LEGEND

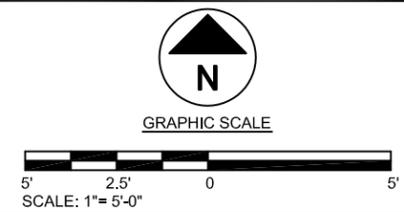
- ◆ Discrete Soil Sampling Location below Clean-up Goal
- ◆◊ Discrete Soil Sampling Result above Clean-up Goal
- bgs Below Ground Surface
- J Estimate Result
- ISM Incremental Subsampling Methodology
- mg/kg Milligrams per kilogram
- Building
- ▨ Transformer Concrete Pad
- ▨ Transformer
- Non-Hazardous Soil Excavation (0-2.5 ft. bgs)
- Non-Hazardous Soil Excavation (0-1.5 ft. bgs)
- Hazardous Soil Excavation (0-1 ft. bgs)

NOTES

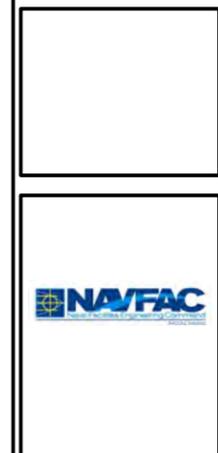
- The accuracy of this map is limited to the quality and scale of the source information and is not suitable for mapping engineering applications or for "As Built" use.
- The accuracy of this map is limited to the source information due to on-going construction at MCB Hawaii
- Transformers are labeled by their Unit Identification Code.
- Map projection is North American Datum 1983 HARN.
- All results are Total PCB concentrations
- Total PCB Clean-up goal is 1.1 mg/kg.

SOURCES

- MCBH Kaneohe Bay Facilities Geodatabase (2010)
- Draft Preliminary Assessment/Site Investigation, Various Transformers (Site 0026) Marine Corps Base Hawaii, Kaneohe, Hawaii (AECOM 2012)



No.	Date	By	Chk	Remarks



PROJECT NAME
 TIME CRITICAL REMOVAL ACTION
 FOR VARIOUS TRANSFORMERS (SITE 0026)
 MARINE CORPS BASE HAWAII
 KANEOHE, OAHU, HAWAII

SHEET TITLE
 TRANSFORMER 1126A/1126B
 EXCAVATION AREA AND
 SAMPLING RESULTS

CONTRACT NO:
 N62742-10-D-1804, HC11
 JOB NO:
 01804.111.006.001
 CHECKED BY:
 J.BORR
 DRAWN BY:
 Crios
 DATE:
 October 2014
 FILE NAME:
 HC11-FIG5_1126 MP ADDI Del
 SHEET NUMBER:

FIGURE 5



No.	Date	By	Chk	Remarks



PROJECT NAME
 TIME CRITICAL REMOVAL ACTION
 FOR VARIOUS TRANSFORMERS (SITE 0026)
 MARINE CORPS BASE HAWAII
 KANEHOE, OAHU, HAWAII

SHEET TITLE
 TRANSFORMER 898/SS245A/SS245F
 EXCAVATION AREA AND
 SAMPLING RESULTS

CONTRACT NO:
 N62742-10-D-1804, HC11
 JOB NO:
 01804.111.006.001
 CHECKED BY:
 J.BORR
 DRAWN BY:
 Crios
 DATE:
 October 2014
 FILE NAME:
 HC11-FIG6_SS245A WW Treatment Plant Del
 SHEET NUMBER:

FIGURE 6

LEGEND

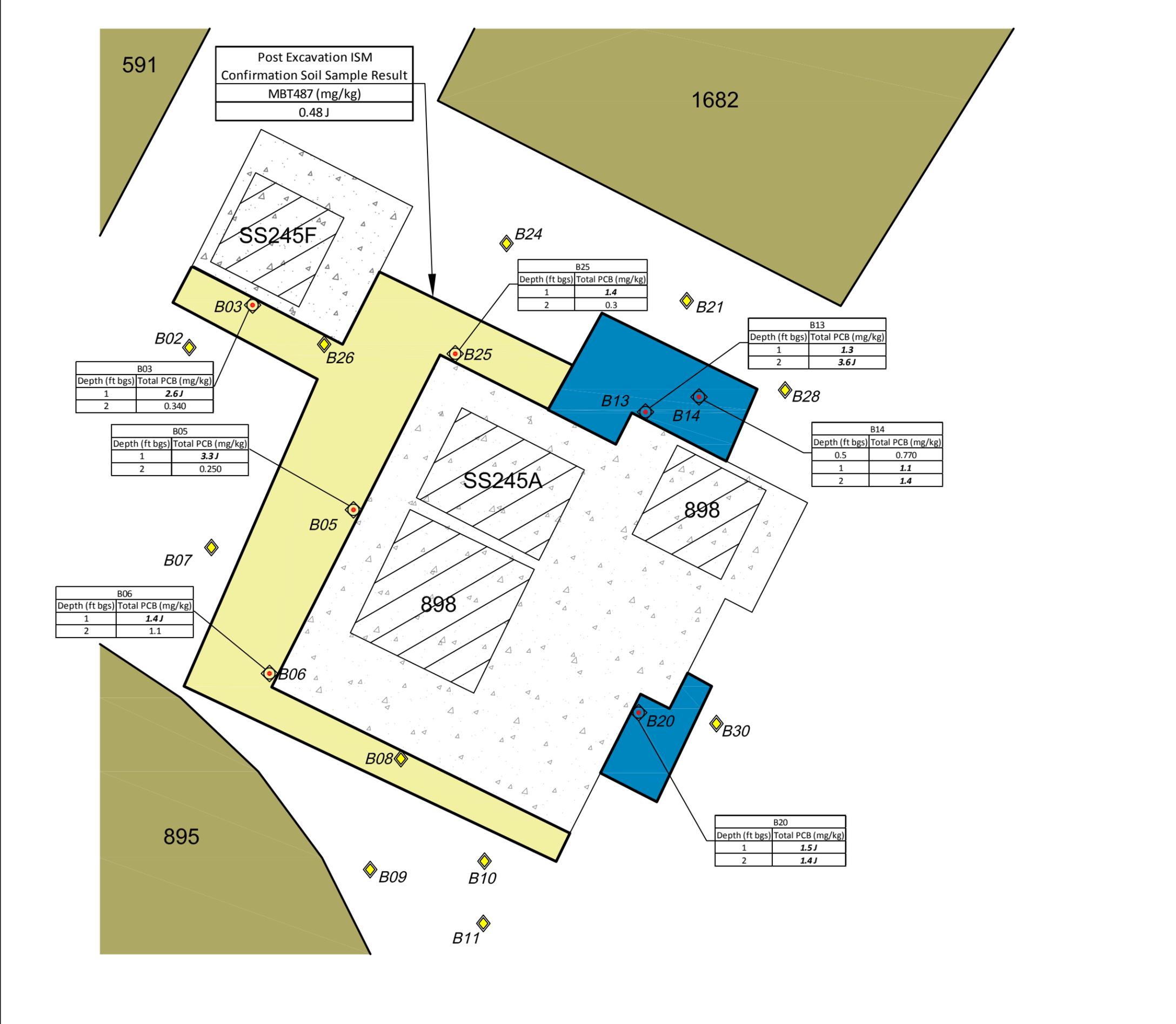
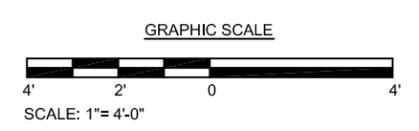
- Discrete Soil Sampling Location below Clean-up Goal
- Discrete Soil Sampling Result above Clean-up Goal
- bgs Below Ground Surface
- J Estimate Result
- ISM Incremental Subsampling Methodology
- mg/kg Milligrams per kilogram
- Buildings
- Transformer Concrete Pad
- Transformer
- Non-Hazardous Soil Excavation (0-2.5 ft. bgs)
- Non-Hazardous Soil Excavation (0-1.5 ft. bgs)

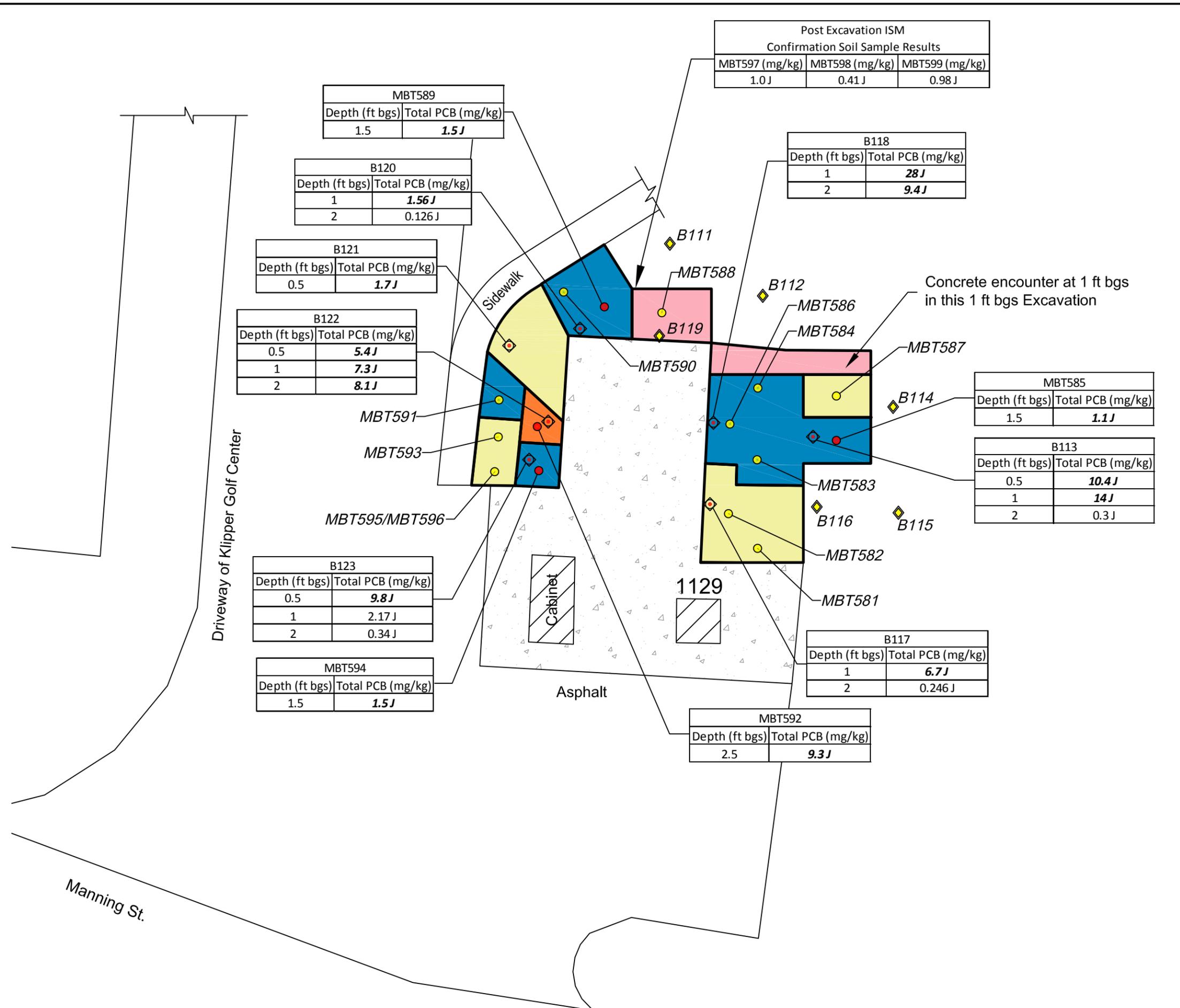
NOTES

1. The accuracy of this map is limited to the quality and scale of the source information and is not suitable for mapping engineering applications or for "As Built" use.
2. The accuracy of this map is limited to the source information due to on-going construction at MCB Hawaii
3. Transformers are labeled by their Unit Identification Code.
4. Map projection is North American Datum 1983 HARN.
5. All results are Total PCB concentrations
6. Total PCB Clean-up goal is 1.1 mg/kg.

SOURCES

1. MCBH Kaneohe Bay Facilities Geodatabase (2010)
2. Draft Preliminary Assessment/Site Investigation, Various Transformers (Site 0026) Marine Corps Base Hawaii, Kaneohe, Hawaii (AECOM 2012)





Post Excavation ISM Confirmation Soil Sample Results		
MBT597 (mg/kg)	MBT598 (mg/kg)	MBT599 (mg/kg)
1.0J	0.41J	0.98J

MBT589	
Depth (ft bgs)	Total PCB (mg/kg)
1.5	1.5J

B120	
Depth (ft bgs)	Total PCB (mg/kg)
1	1.56J
2	0.126J

B121	
Depth (ft bgs)	Total PCB (mg/kg)
0.5	1.7J

B122	
Depth (ft bgs)	Total PCB (mg/kg)
0.5	5.4J
1	7.3J
2	8.1J

B123	
Depth (ft bgs)	Total PCB (mg/kg)
0.5	9.8J
1	2.17J
2	0.34J

MBT594	
Depth (ft bgs)	Total PCB (mg/kg)
1.5	1.5J

MBT592	
Depth (ft bgs)	Total PCB (mg/kg)
2.5	9.3J

B118	
Depth (ft bgs)	Total PCB (mg/kg)
1	28J
2	9.4J

MBT585	
Depth (ft bgs)	Total PCB (mg/kg)
1.5	1.1J

B113	
Depth (ft bgs)	Total PCB (mg/kg)
0.5	10.4J
1	14J
2	0.3J

B117	
Depth (ft bgs)	Total PCB (mg/kg)
1	6.7J
2	0.246J



LEGEND

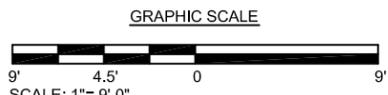
- ◆ Discrete Soil Sampling Location below Clean-up Goal
- ◆ Discrete Soil Sampling Result above Clean-up Goal
- Post Excavation Discrete Sample collected from Excavation Floor. Result below Clean-up Goal
- Post Excavation Discrete Sample collected from Excavation. Result Equal or above Clean-up Goal and Over-excavation
- bgs Below Ground Surface
- J Estimate Result
- ISM Incremental Subsampling Methodology
- mg/kg Milligrams per kilogram
- Transformer Concrete Pad
- Transformer
- Non-Hazardous Soil Excavation (0-1 ft. bgs)
- Non-Hazardous Soil Excavation (0-1.5 ft. bgs)
- Non-Hazardous Soil Excavation (0-2.5 ft. bgs)
- Non-Hazardous Soil Excavation (0-3 ft. bgs)

NOTES

1. The accuracy of this map is limited to the quality and scale of the source information and is not suitable for mapping engineering applications or for "As Built" use.
2. The accuracy of this map is limited to the source information due to on-going construction at MCB Hawaii
3. Transformers are labeled by their Unit Identification Code.
4. Map projection is North American Datum 1983 HARN.
5. All results are Total PCB concentrations
6. Total PCB Clean-up goal is 1.1 mg/kg.

SOURCES

1. MCBH Kaneohe Bay Facilities Geodatabase (2010)
2. Draft Preliminary Assessment/Site Investigation, Various Transformers (Site 0026) Marine Corps Base Hawaii, Kaneohe, Hawaii (AECOM 2012)



REVISIONS:			
No.	Date	By	Remarks

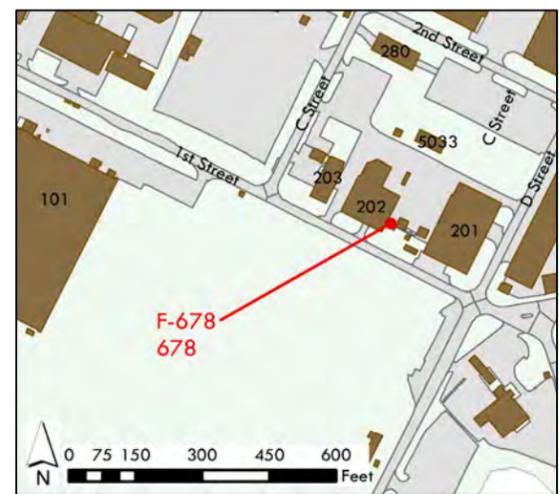
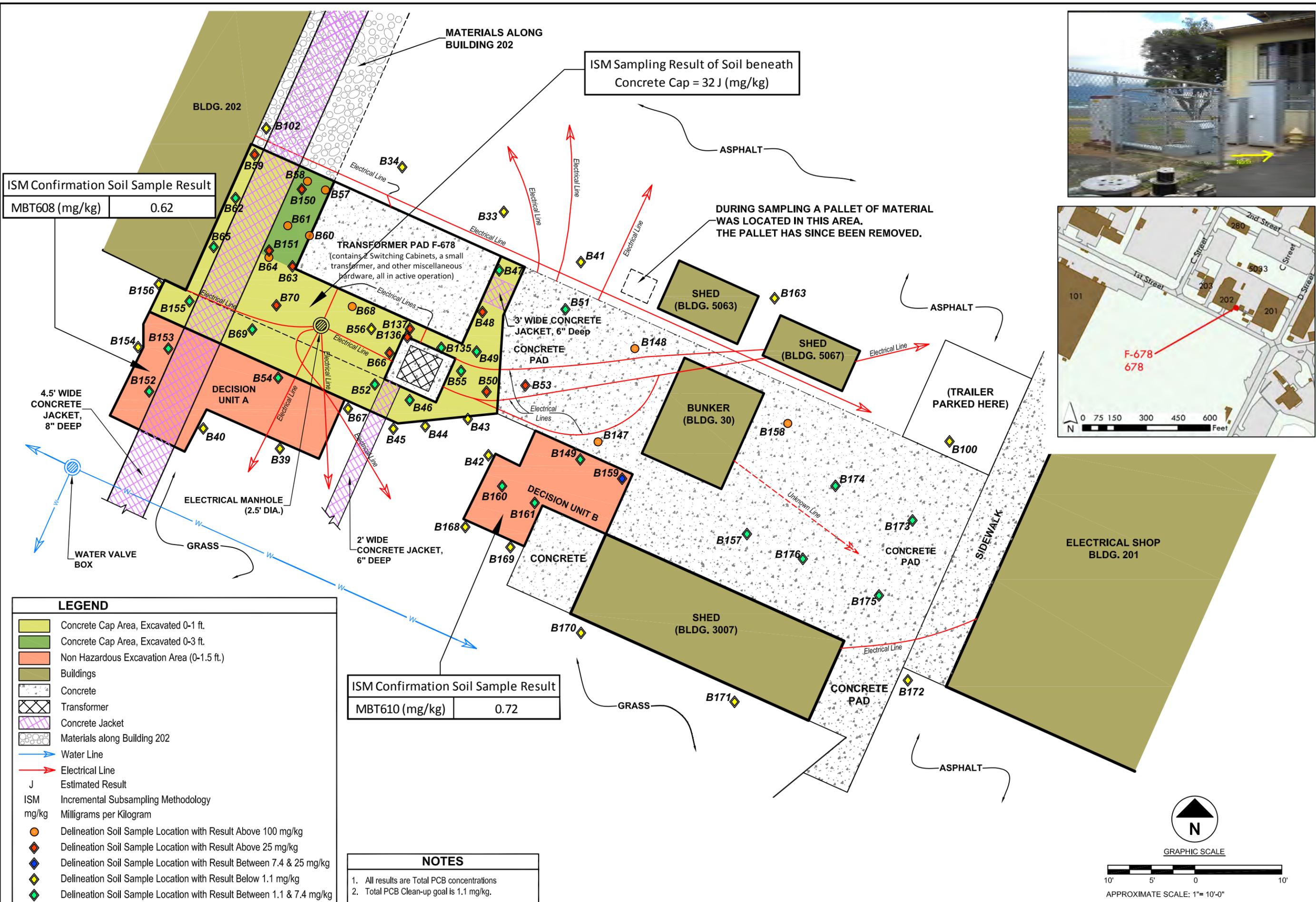


PROJECT NAME
 TIME CRITICAL REMOVAL ACTION
 FOR VARIOUS TRANSFORMERS (SITE 0026)
 MARINE CORPS BASE HAWAII
 KANEHOE, OAHU, HAWAII

SHEET TITLE
 TRANSFORMER 1129
 EXCAVATION AREA AND
 SAMPLING RESULTS

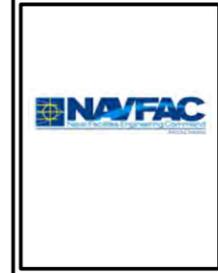
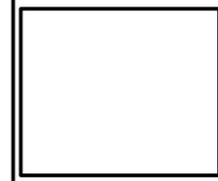
CONTRACT NO:
 N62742-10-D-1804, HC11
 JOB NO:
 01804.111.006.001
 CHECKED BY:
 J.BORR
 DRAWN BY:
 Crios
 DATE:
 October 2014
 FILE NAME:
 HC11-FIG7_1129 Tiki Island Del
 SHEET NUMBER:

FIGURE 7



REVISIONS:

No.	Date	By	Chk	Remarks

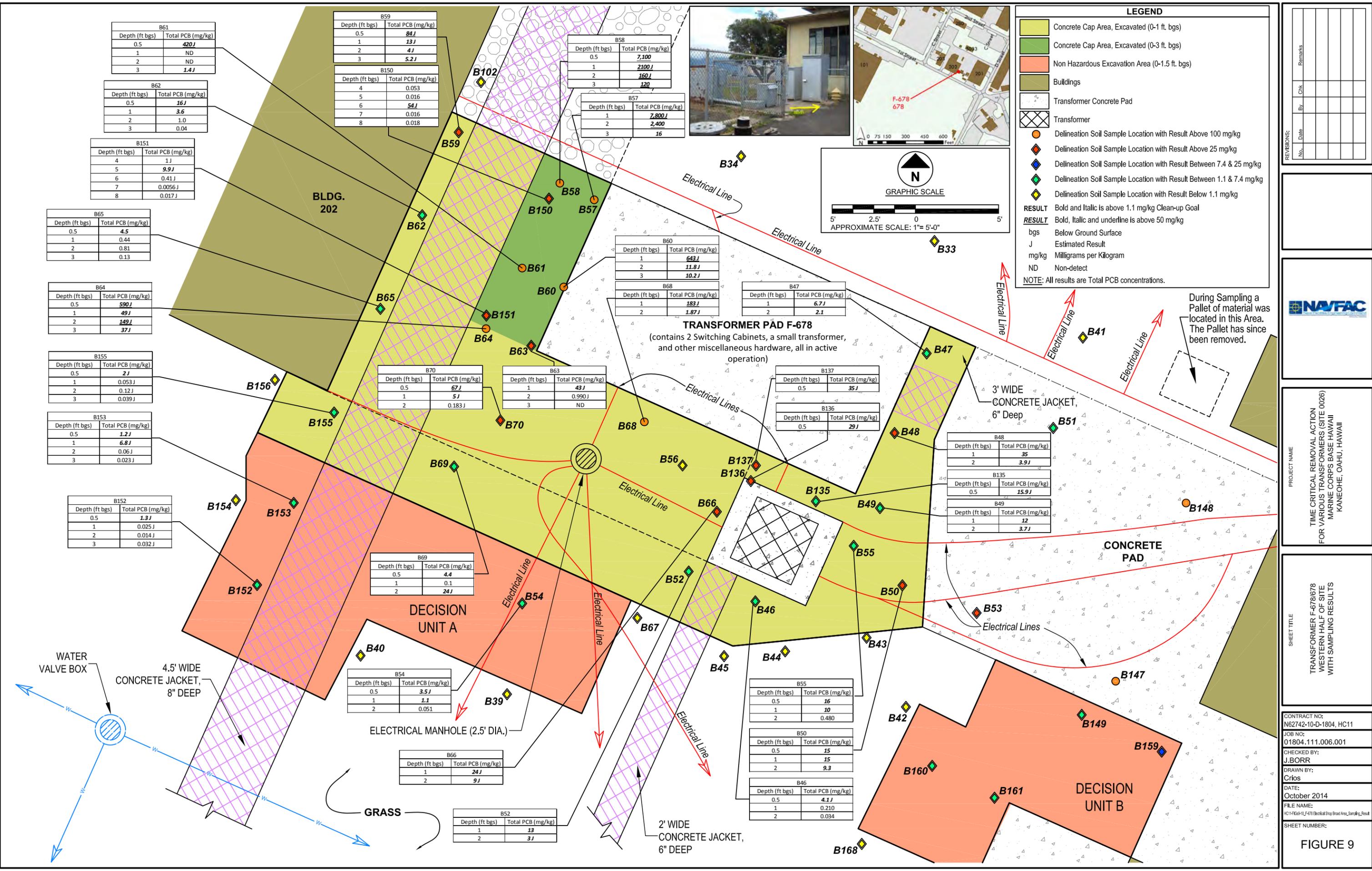


PROJECT NAME
 TIME CRITICAL REMOVAL ACTION
 FOR VARIOUS TRANSFORMERS (SITE 0026)
 MARINE CORPS BASE HAWAII
 KANEOHE, OAHU, HAWAII

SHEET TITLE
 TRANSFORMER F-678/678
 EXCAVATION AREA AND
 SAMPLING RESULTS

CONTRACT NO:
 N62742-10-D-1804, HC11
 JOB NO:
 01804.111.006.001
 CHECKED BY:
 J.BORR
 DRAWN BY:
 Crios
 DATE:
 October 2014
 FILE NAME:
 HC11-FIG8_F-678 Electrical Shop Broad Area
 SHEET NUMBER:

FIGURE 8



No.	Date	By	Chk	Remarks

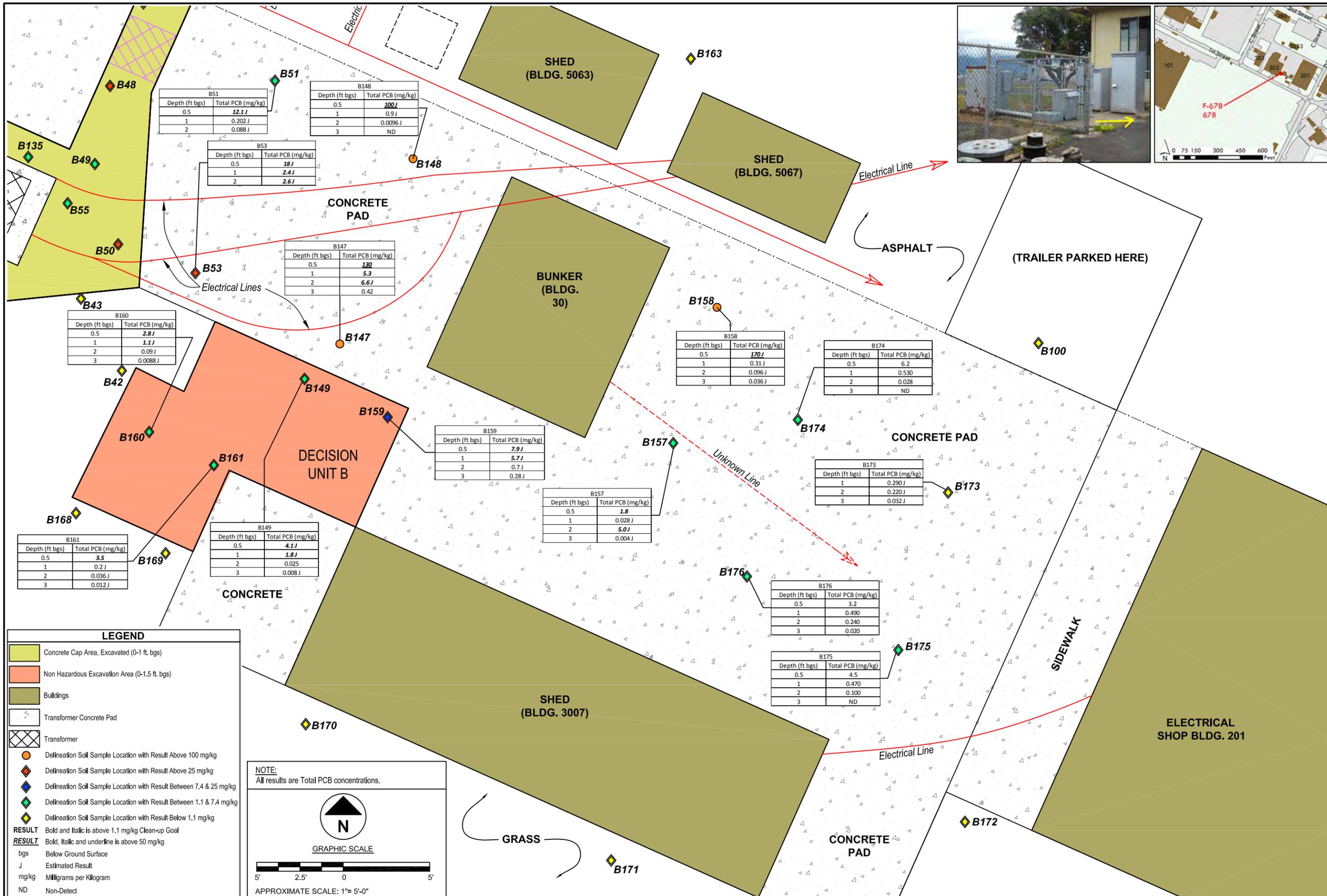
PROJECT NAME
 TIME CRITICAL REMOVAL ACTION
 FOR VARIOUS TRANSFORMERS (SITE 0026)
 MARINE CORPS BASE HAWAII
 KANEOHE, OAHU, HAWAII



SHEET TITLE
 TRANSFORMER F-678/678
 WESTERN HALF OF SITE
 WITH SAMPLING RESULTS

CONTRACT NO:
 N62742-10-D-1804, HC11
 JOB NO:
 01804.111.006.001
 CHECKED BY:
 J.BORR
 DRAWN BY:
 Crios
 DATE:
 October 2014
 FILE NAME:
 HC11-F678-10-F478 Electrical Shop Broad Area_Sampling_Result
 SHEET NUMBER:

FIGURE 9



B51

Depth (ft bgs)	Total PCB (mg/kg)
0.5	12.1 J
1	0.202 J
2	0.088 J

B148

Depth (ft bgs)	Total PCB (mg/kg)
0.5	100 J
1	0.9 J
2	0.0096 J
3	ND

B53

Depth (ft bgs)	Total PCB (mg/kg)
0.5	18 J
1	2.4 J
2	2.6 J

B147

Depth (ft bgs)	Total PCB (mg/kg)
0.5	130
1	5.3
2	6.6 J
3	0.42

B160

Depth (ft bgs)	Total PCB (mg/kg)
0.5	2.8 J
1	1.1 J
2	0.09 J
3	0.0088 J

B158

Depth (ft bgs)	Total PCB (mg/kg)
0.5	170 J
1	0.31 J
2	0.096 J
3	0.036 J

B174

Depth (ft bgs)	Total PCB (mg/kg)
0.5	6.2
1	0.530
2	0.028
3	ND

B159

Depth (ft bgs)	Total PCB (mg/kg)
0.5	7.9 J
1	5.7 J
2	0.7 J
3	0.28 J

B173

Depth (ft bgs)	Total PCB (mg/kg)
1	0.290 J
2	0.220 J
3	0.032 J

B157

Depth (ft bgs)	Total PCB (mg/kg)
0.5	1.8
1	0.028 J
2	5.0 J
3	0.004 J

B176

Depth (ft bgs)	Total PCB (mg/kg)
0.5	3.2
1	0.490
2	0.240
3	0.020

B175

Depth (ft bgs)	Total PCB (mg/kg)
0.5	4.5
1	0.470
2	0.100
3	ND

B161

Depth (ft bgs)	Total PCB (mg/kg)
0.5	3.5
1	0.2 J
2	0.036 J
3	0.012 J

B149

Depth (ft bgs)	Total PCB (mg/kg)
0.5	4.1 J
1	1.8 J
2	0.025
3	0.008 J

LEGEND

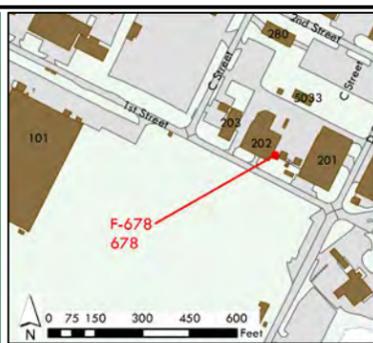
- Concrete Cap Area, Excavated (0-1 ft. bgs)
- Non Hazardous Excavation Area (0-1.5 ft. bgs)
- Buildings
- Transformer Concrete Pad
- Transformer
- Delineation Soil Sample Location with Result Above 100 mg/kg
- Delineation Soil Sample Location with Result Above 25 mg/kg
- Delineation Soil Sample Location with Result Between 7.4 & 25 mg/kg
- Delineation Soil Sample Location with Result Between 1.1 & 7.4 mg/kg
- Delineation Soil Sample Location with Result Below 1.1 mg/kg

RESULT
RESULT
 bgs Below Ground Surface
 J Estimated Result
 mg/kg Milligrams per Kilogram
 ND Non-Detect

NOTE:
 All results are Total PCB concentrations.

GRAPHIC SCALE

APPROXIMATE SCALE: 1"= 5'-0"



REVISIONS:

No.	Date	By	Chk	Remarks

NAFAC

PROJECT NAME
 TIME CRITICAL REMOVAL ACTION
 FOR VARIOUS TRANSFORMERS (SITE 0026)
 MARINE CORPS BASE HAWAII
 KANEOHE, OAHU, HAWAII

SHEET TITLE
 TRANSFORMER F-678/678
 EASTERN HALF OF SITE
 WITH SAMPLING RESULTS

CONTRACT NO:
 N62742-10-D-1804, HC11

JOB NO:
 01804.111.006.001

CHECKED BY:
 J.BORR

DRAWN BY:
 Crios

DATE:
 October 2014

FILE NAME:
 HC11-FIGs-10-F-678 Electrical Shop Broad Area_Sampling_Result

SHEET NUMBER:
FIGURE 10

Attachment 1
Daily Production and Quality Control Reports
(see attached CD)

**Attachment 2
Photograph Log**

320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	1	DATE TAKEN:	30-Oct-13
Description:	Toning for underground utilities at Transformer Site 1129		



PHOTO NUMBER:	2	DATE TAKEN:	30-Oct-14
Description:	Toning for underground utilities at Transformer Site 1126/1126B.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	3	DATE TAKEN:	31-Oct-12
Description:	Underground utility toning results marked on the ground at the Transformer F-678/678 Site.		



PHOTO NUMBER:	4	DATE TAKEN:	20-Dec-13
Description:	Collecting addition step out soil borings at the Transformer 1126A/1126B Site.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	5	DATE TAKEN:	13-Feb-13
Description:	Collecting additional slide hammer soil borings at the Transformer F-678/678 Site.		



PHOTO NUMBER:	6	DATE TAKEN:	15-Jan-13
Description:	The originally constructed laydown yard for equipment, material, and IDW storage.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	7	DATE TAKEN:	25-Jan-13
----------------------	---	--------------------	-----------

Description: Excavating non-hazardous soil at the Transformer 1126A/1126B Site



The photograph shows an active excavation site. A yellow CAT excavator is positioned on the left, with its arm extended. To its right is a large yellow dumpster with the phone number 847-7780 and 'WEST OAHU AGGREGATE' printed on it. In the foreground, a worker wearing a blue hard hat, a yellow safety vest, and blue jeans stands with a shovel, looking towards the excavation. The ground is a mix of dirt and concrete, with several pink survey markers placed around the excavation area. A white building is visible in the background.

PHOTO NUMBER:	8	DATE TAKEN:	26-Jan-13
----------------------	---	--------------------	-----------

Description: Completed excavation area at the Transformer 1126A/1126B Site.



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	9	DATE TAKEN:	29-Jan-13
Description:	Finishing up the excavation of non-hazardous soil at the Transformer 898/SS245A/SS245F Site.		



PHOTO NUMBER:	10	DATE TAKEN:	29-Jan-13
Description:	Final clean up of loose soil in the excavation at the Transformer 898/SS245A/SS245F Site.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	11	DATE TAKEN:	29-Jan-13
Description:	Completed excavation at the Transformer 1255 Site.		



PHOTO NUMBER:	12	DATE TAKEN:	29-Jan-13
Description:	Completed excavation at the Transformer 1255 Site.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	13	DATE TAKEN:	23-Jan-13
Description:	Completed excavation at the Transformer 298 Site.		



PHOTO NUMBER:	14	DATE TAKEN:	23-Jan-13
Description:	Completed excavation at the Transformer 252B Site.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	15	DATE TAKEN:	14-Feb-13
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Description: Backfilling at the Transformer 1126A/1126B Site.



PHOTO NUMBER:	16	DATE TAKEN:	19-Apr-13
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Description: Grass about established at the Transformer 1126A/1126B Site.



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	17	DATE TAKEN:	21-Feb-13
Description:	Backfilling at the Transformer 898/SS245A/SS245F Site.		



PHOTO NUMBER:	18	DATE TAKEN:	12-Mar-13
Description:	Transformer Site 252B backfilled.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	19	DATE TAKEN:	15-Jul-13
Description:	Example of the safety set up, this one was at the Transformer 1129 Site.		



PHOTO NUMBER:	20	DATE TAKEN:	15-Jul-13
Description:	Hand verifying the depth of marked underground utilities.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	21	DATE TAKEN:	16-Jul-13
Description:	MCBH facilities completing lock out / tagout of electrical.		



PHOTO NUMBER:	22	DATE TAKEN:	16-Jul-13
Description:	Excavating at Transformer Site 1129.		



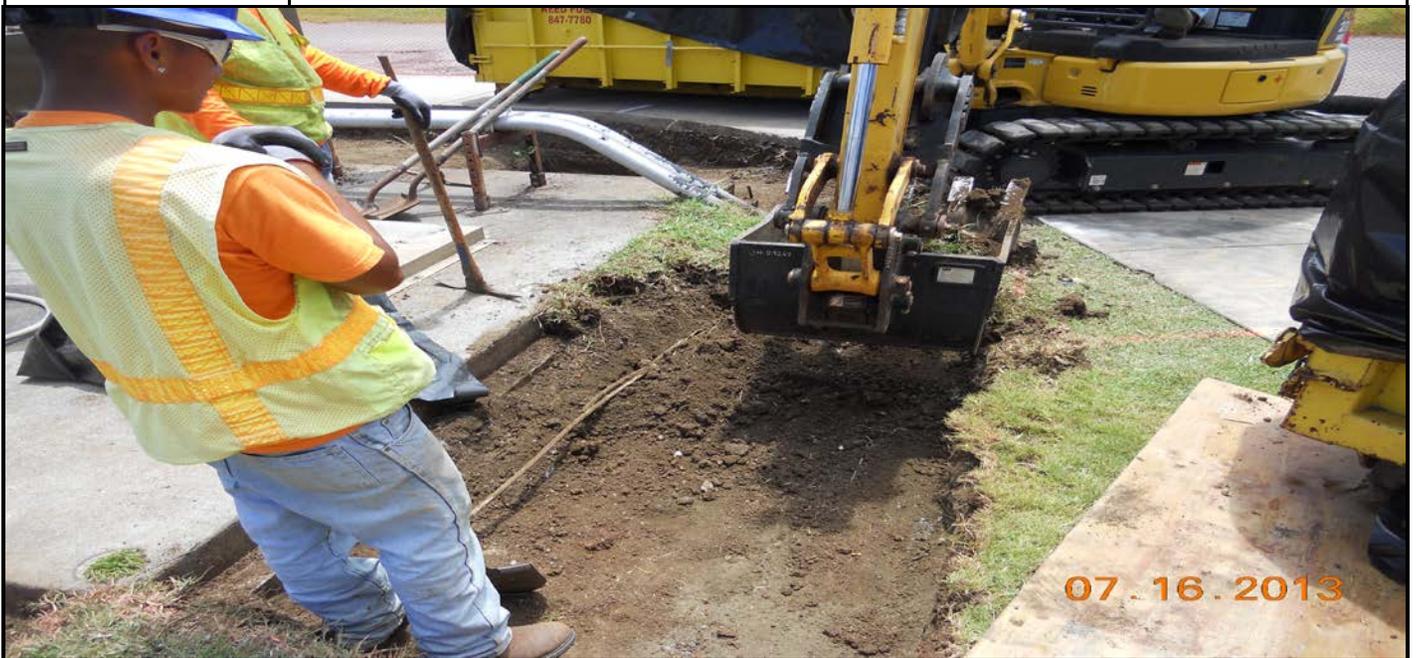
320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	23	DATE TAKEN:	16-Jul-13
Description:	The completed excavation east of the transformer pad at the Transformer 1129 Site.		



PHOTO NUMBER:	24	DATE TAKEN:	16-Jul-13
Description:	Excavating north of the transformer pad at the Transformer 1129 Site.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	25	DATE TAKEN:	16-Jul-14
Description:	The completed excavation north of the transformer pad at the Transformer 1129 Site.		



PHOTO NUMBER:	26	DATE TAKEN:	17-Oct-14
Description:	Hand verifying location of underground utilities or confirming underground utility depth is greater than the excavation depth.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	27	DATE TAKEN:	6-Nov-13
Description:	Excavating the TSCA regulated PCB soil in Level C at the Transformer F-678/678 Site.		



PHOTO NUMBER:	28	DATE TAKEN:	6-Nov-13
Description:	Supersacking the TSCA regulated PCB soil in Level C at the Transformer F-678/678 Site.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

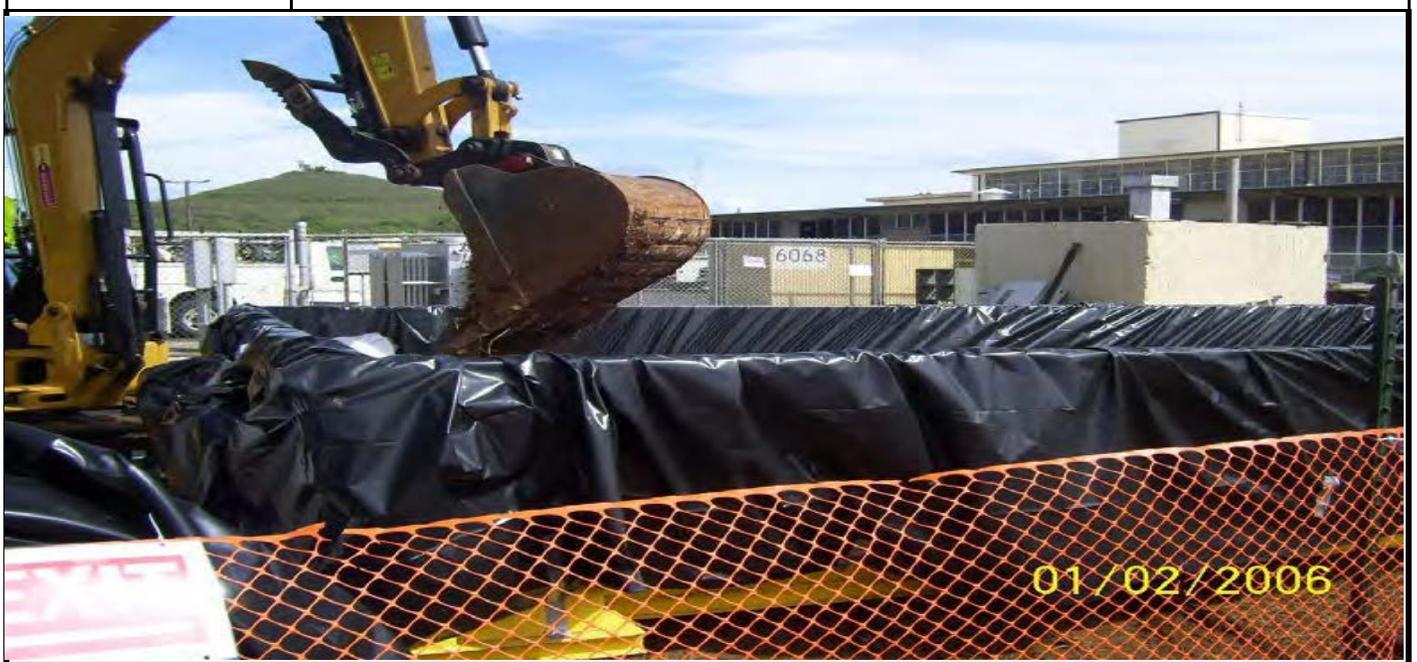
PHOTO NUMBER:	29	DATE TAKEN:	7-Nov-14
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Description: Excavating the non-hazardous soil area at the Transformer F-678/678 Site.



PHOTO NUMBER:	30	DATE TAKEN:	7-Nov-14
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Description: Loading the non-hazardous soil into a lined bin at the Transformer F-678/678 Site.



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	31	DATE TAKEN:	12-Nov-13
Description:	Backfilling at the Transformer 1129 Site, this is an example of placing electrical line warning tape and washed sand where an active electrical line had crossed the excavation.		



PHOTO NUMBER:	32	DATE TAKEN:	12-Nov-13
Description:	Compacting the recently placed lift of backfill material at the Transformer 1129 Site.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	33	DATE TAKEN:	12-Nov-13
Description:	Raking the final backfilled lift of topsoil for site restoration at Transformer Site 1129.		



PHOTO NUMBER:	34	DATE TAKEN:	16-Apr-14
Description:	Over-excavating the non-hazardous soil area (Decision Unit B) an additional 6 inches at Transformer Site F-678/678.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	35	DATE TAKEN:	7-May-14
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Description: Washed sand placed around underground electrical at the Transformer F-678/678 Site.



PHOTO NUMBER:	36	DATE TAKEN:	7-May-14
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Description: Placing electrical line warning tape as needed at the Transformer F-678/678 Site.



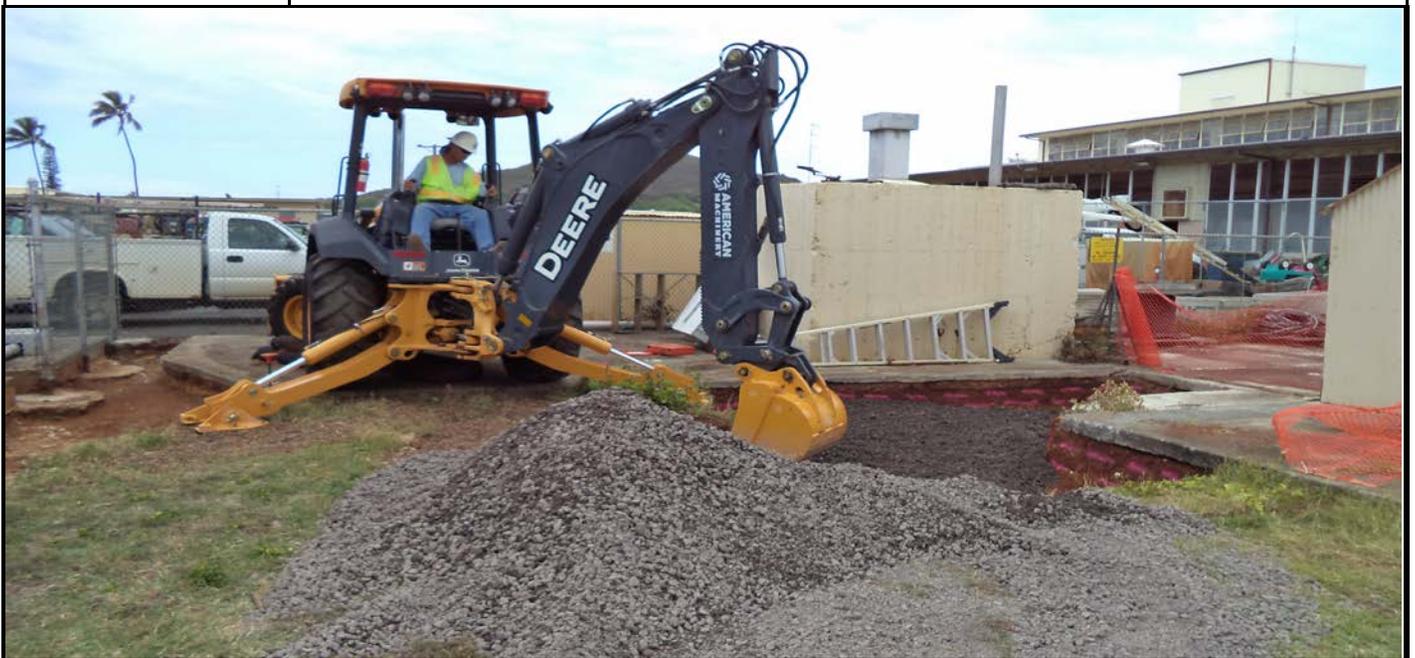
320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	37	DATE TAKEN:	7-May-14
Description:	Compacting soil in the non-hazardous soil area to bring it to grade at the Transformer F-678/678 Site.		



PHOTO NUMBER:	38	DATE TAKEN:	7-May-14
Description:	Placing backfill in a non-hazardous soil area at the Transformer F-678/678 Site.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	39	DATE TAKEN:	8-May-14
Description:	After backfilling and compacting, crew is laying out formwork to install the concrete cap over the TSCA regulated PCB soil area at the Transformer F-678/678 Site.		



PHOTO NUMBER:	40	DATE TAKEN:	8-May-14
Description:	Installing formwork for the concrete cap at the Transformer F-678/678 Site.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	41	DATE TAKEN:	9-May-14
Description:	Installing formwork for the concrete cap at the Transformer F-678/678 Site.		



PHOTO NUMBER:	42	DATE TAKEN:	9-May-14
Description:	Formwork at wire mesh installation about finished for the concrete cap at the Transformer F-678/678 Site.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	43	DATE TAKEN:	10-May-14
Description:	Starting the pour for the concrete cap at Transformer Site F-678/678.		



PHOTO NUMBER:	44	DATE TAKEN:	10-May-14
Description:	Screeding concrete for the concrete cap at Transformer Site F-678/678.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	45	DATE TAKEN:	10-May-14
Description:	Bull floating the concrete for the concrete cap at Transformer Site F-678/678.		



PHOTO NUMBER:	46	DATE TAKEN:	10-May-14
Description:	Finishing the concrete for the concrete cap at Transformer Site F-678/678.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	47	DATE TAKEN:	13-May-14
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Description: Looking north at the restored area and concrete cap at Transformer Site F-678/678.



PHOTO NUMBER:	48	DATE TAKEN:	13-May-14
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Description: Looking east at the restored area and concrete cap at Transformer Site F-678/678.



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	49	DATE TAKEN:	2-Sep-14
Description:	Removing the chipped out concrete to modify the concrete cap to a higher elevation based off the electrical manhole raised by MCBH at the Transformer F-678/678 Site.		



PHOTO NUMBER:	50	DATE TAKEN:	2-Sep-14
Description:	Laying out formwork for concrete cap modifications at the Transformer F-678/678 Site.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	51	DATE TAKEN:	11-Sep-14
Description:	Laying out formwork and the wire mesh for concrete cap modifications at the Transformer F-678/678 Site.		



PHOTO NUMBER:	52	DATE TAKEN:	16-Sep-14
Description:	Commencing the pour for the concrete cap modifications at the Transformer F-678/678 Site.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	53	DATE TAKEN:	16-Sep-14
Description:	Placing the concrete for the concrete cap modifications at the Transformer F-678/678 Site.		



PHOTO NUMBER:	54	DATE TAKEN:	16-Sep-14
Description:	Finishing the concrete for the concrete cap modifications at the Transformer F-678/678 Site.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	55	DATE TAKEN:	16-Sep-14
Description:	Post pour view of the modified concrete cap at the Transformer F-678/678 Site.		



PHOTO NUMBER:	56	DATE TAKEN:	16-Sep-14
Description:	View of the Transformer F-678/678 site after it was cleaned, formwork pulled, topsoil placed as needed at the concrete edge, weeds pulled and additional seed/fertilizer added.		



320-14A - PHOTO RECORD

Contract Number:	N62742-10-D-1804	Task Order No:	CTO HC11
CAPE Project No.:	1804.111		
Project Location:	MCBH Kaneohe Bay		

PHOTO NUMBER:	57	DATE TAKEN:	18-Aug-14
Description:	Cleaning out the stained soil in the concrete channel located within the transformer pad at the Transformer F-678/678 Site.		



PHOTO NUMBER:	58	DATE TAKEN:	18-Aug-14
Description:	View of the cleaned out concrete channel at the Transformer F-678/678 Site.		



Attachment 3
Waste Disposal Documentation

Number	Ticket Number	Date Delivered	Contents	Site or Site's of Orgination	Waste Tracking Number	Weight	Weight Subtotal	Weight	Weight Subtotal
						<i>lbs</i>		<i>tons</i>	<i>tons</i>
1	698087	2/19/2013	Soil	Transformer 298, 1255, 252B, F-1126A/F-1126B	20271	20320	20320	10.16	10
2	698090	2/19/2013	Soil	Transformers 898/SS245A/SS245F	20270	32880	53200	16.44	27
3	698052	2/19/2013	Soil	Transformer F-1126A/F- 1126B	20272	25500	78700	12.75	39
4	896187	2/20/2013	Soil	Transformers 898/SS245A/SS245F	20273	16720	95420	9.36	49
5	723038	7/17/2013	Soil	Transformer 1129	21198	17000	112420	8.5	57
6	723039	7/17/2013	Soil	Transformer 1129	21199	12580	125000	6.29	64
7	723068	7/17/2013	Soil	Transformer 1129	21218	17940	142940	8.97	72
8	744969	11/12/2013	Soil	Tranformer F678/678	23117	16560	159500	8.29	81
9	745000	11/12/2013	Soil	Tranformer F678/678 & Transformer 1129	23118	25100	184600	12.55	93
10	770493	4/17/2014	Soil	Tranformer F678/678	23635	16160	200760	8.08	101
11	796961	10/8/2014	drummed Rinse water/soil	Tranformer F678/678	24531	1911	202671	0.96	102

1544
PCS

PVT LAND COMPANY LTD.
87-2020 FARRINGTON HWY.
WAIANA, HI 96792

Ticket #: 698187

Bill To: WEST OAHU AGGREGATE COMPANY INC
Haul Acct/Veh #: WESAGG /WESAG-117
PO/Job #: 8587-01/8587
Date: 02/20/13 Time I/O: 10:31 /10:55
Clr #: 82393 - Bldg 1380 Mokapu Drive Ka

Material: 7000 - CERCLA
Gross: 47640 Tare: 28920 Net: 18720 lbs
9.36 Tons @ \$120.00/tn \$ 1123.20
Fees: 0.00
Tax 52.93

TOTAL \$1176.13

COD Customer: 1 - 1 Not Specified
Notes:

STATE OF HAWAII CERTIFICATE OF MEASURES
DIVISION OF MEASUREMENT STANDARDS

This certifies to the accuracy and
identity of the quantity & commodity
shown, is suitable for all deliveries
when sealed by a measurement:
STATE OF HAWAII MEASUREMASTER
NO.3348 Registered Int'l MD

Print Type: 1 - Charge (Invoice)
Fee codes:

<<< COVER YOUR LOAD >>>

WEST OAHU AGGREGATE CO., INC.

855 Umi Street
Honolulu, HI 96819

Phone: (808) 847-7780 / Scale House: (808) 668-1950
Fax: (808) 847-7782

N^o 10293

DATE: 2/20/13	POINT OF CONTACT: Ferry 349-5207		
PO # / Job #	DELIVER TO: (Street Name Required)		
TRUCK #:	Kaneohe Marine Corp Base		
117	CUSTOMER'S NAME:		
CAN #	PCS		
1544	JOB NAME OR JOB NUMBER:		
TICKET #	DRIVER: Cornelius		
WEIGHT (TONS)	(CIRCLE ONE)	ROLL-OFF	FLAT BED
		PICK-UP TRK	READY MIX
		FRONT LOADER	FORK TRK

RECEIVED IN GOOD ORDER EXCEPT AS NOTED

[Signature] 02/20/13

CONTAINER DEL/PICK-UP

40 CY Roll Off	Low
30 CY Roll Off	Medium
20 CY Roll Off	High
15 CY Roll Off	Covered
10 CY Roll Off	
8CY Front End Loader	
6CY Front End Loader	
4CY Front End Loader	
3CY Front End Loader	
2CY Front End Loader	

DUMP LOCATION

PVT
H-Power
Land Fill
H.E.P.
W.O.A.
Schnitzer Steel
Island Recycling
Other

Signature

Signature of Measure Master

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number
HI6 170 022 762

2. Page 1 of 1

3. Emergency Response Phone
1-800-645-8265

4. Waste Tracking Number
000020273

5. Generator's Name and Mailing Address
MARINE CORP BASE HAWAII C/O COMMANDING OFFICER
BOX 63062 (ENVIRONMENTAL) ATTN: RANDALL HU
MCBH KANEHOE BAY, HI 96863-3062
Generator's Phone: 808-257-2794

Generator's Site Address (if different than mailing address)
BLDG 1360 MOKAPU ROAD
KANEHOE BAY, HI 96863-3062
HIC8587-05

6. Transporter 1 Company Name
WEST OAHU AGGREGATE
808-668-1969

U.S. EPA ID Number
NOT APPLICABLE

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
PVI LAND COMPANY, LTD.
87-2020 FARRINGTON HIGHWAY
WAIANA'E, HI 96792
Facility's Phone: 808-668-4561

U.S. EPA ID Number
NOT APPLICABLE

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit Wt/Vol.

1. MATERIAL NOT REGULATED BY DOT
(SOIL WITH TRACE PCB, CERCLA-REGULATED)

No. Type

001 CM

30000

P

NON-RCRA

2.

3.

4.

13. Special Handling Instructions and Additional Information

9b2: * NK 82393
9b3: *
9b4: *

2008 9b1:
ERG# 9b2:
DO/JOE 9b3:
8587 9b4:

SEND COPY TO:
PCS LLC
P.O. BOX 235117
HONOLULU, HI 96823

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name

Signature

Month Day Year
02 19 13

15. International Shipments Import to U.S. Export from U.S.

Port of entry/exit:
Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year
2 20 13

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year
2 20 13

2034
RUB

PVT LAND COMPANY LTD.
87-2020 FARRINGTON HWY.
WAIANAE, HI 96792

Ticket #: 898952

Bil To: LATTE CONSULTING LLC
Haul Acct/Veh #: WESAGG /WESAG-117
PO/Job #: 8597-07/8587
Date: 02/19/13 Time I/O: 13:24 /13:42
Clt #: 82393 - Bldg 1360 Makapu Drive Ka

Material: 7000 - CERCLA
Gross: 55700 Tare: 30200 Net: 25500 lbs
12.75 Tons @ \$120.00/tn \$ 1530.00
Fees: 0.00
Tax 72.09

TOTAL \$1802.09

Customer: 1 - 1 Not Specified
Notes:

STATE OF HAWAII CERTIFICATE OF MEASURES
DIVISION OF MEASUREMENT STANDARDS

This certifies to the accuracy and identity of the quantity & commodity shown, is suitable for all deliveries when sealed by a measurmaster.
STATE OF HAWAII MEASUREMENT STANDARDS
NO. 3348 Registered Int'l's MO
Print Type: 1 - Charge (Invoice)
Fee codes:
<<< COVER YOUR LOAD >>>

WEST OAHU AGGREGATE CO., INC.
855 Umi Street
Honolulu, HI 96819
Phone: (808) 847-7780 / Scale House: (808) 668-1950
Fax: (808) 847-7782

No 10291

CONTAINER DELIVERY/PICK-UP

- 40 CY Roll Off
- 30 CY Roll Off
- 20 CY Roll Off
- 15 CY Roll Off
- 10 CY Roll Off
- 8CY Front End Loader
- 6CY Front End Loader
- 4CY Front End Loader
- 3CY Front End Loader
- 2CY Front End Loader

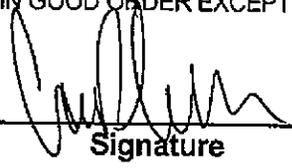
- Low
- Medium
- High
- Covered

DUMP LOCATION

- PVT
- H-Power
- Land Fill
- H.E.P.
- W.O.A.
- Schnitzer Steel
- Island Recycling
- Other

DATE: 2/19/13	POINT OF CONTACT: Kerry 349-5207	
PO # / Job #	DELIVER TO: (Street Name Required) Kaneohe Marine Corp Base	
TRUCK #: 117	CUSTOMER'S NAME: PCS	
CAN # 2034	JOB NAME OR JOB NUMBER:	
TICKET # 698052	DRIVER: Amehs	
WEIGHT (TONS) 12.75	(CIRCLE ONE) ROLL-OFF FLAT BED PICK-UP TRK FRONT LOADER FORK TRK READY MIX	RATE

RECEIVED IN GOOD ORDER EXCEPT AS NOTED


Signature

Signature of Measure Master

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: **HI6 170 022 762** 2. Page 1 of **1** 3. Emergency Response Phone: **1-800-645-8265** 4. Waste Tracking Number: **000020272**

5. Generator's Name and Mailing Address: **MARINE CORP BASE HAWAII C/O COMMANDING OFFICER BOX 63062 (ENVIRONMENTAL) ATTN: RANDALL HU MCBH KANEOHE BAY, HI 96863-3062**
 Generator's Site Address (if different than mailing address): **BLDG 1360 MOKAPU ROAD KANEOHE BAY, HI 96863-3062**
 Generator's Phone: **808-257-2794** HIC8587-04

6. Transporter 1 Company Name: **WEST OAHU AGGREGATE** U.S. EPA ID Number: **NOT APPLICABLE**
 808-668-1969

7. Transporter 2 Company Name: _____ U.S. EPA ID Number: _____

8. Designated Facility Name and Site Address: **PVT LAND COMPANY, LTD. 87-2020 FARRINGTON HIGHWAY WAIANAE, HI 96792**
 Facility's Phone: **808-668-4561** U.S. EPA ID Number: **NOT APPLICABLE**

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
	No.	Type			
1. MATERIAL NOT REGULATED BY DOT (SOIL WITH TRACE PCB, CERCLA-REGULATED)	001	CM	30000	P	NON-RCRA
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information: **9b1: NR 82393** 2008 9b1: SEND COPY TO:
 9b2: * ERG# 9b2: PCS LLC
 9b3: * DO/JOE 9b3: P.O. BOX 235117
 9b4: * 8587 9b4: HONOLULU, HI 96823

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offero's Printed/Typed Name: **Timothy L. Caulton** Signature: *Timothy L. Caulton* Month: **02** Day: **19** Year: **13**

15. International Shipments: Import to U.S. Export from U.S. Port of entry/exit: _____
 Transporter Signature (for exports only): _____ Date leaving U.S.: _____

16. Transporter Acknowledgment of Receipt of Materials
 Transporter 1 Printed/Typed Name: **Conaluis A. B. Ayala** Signature: *Conaluis A. B. Ayala* Month: **2** Day: **19** Year: **13**
 Transporter 2 Printed/Typed Name: _____ Signature: _____ Month: _____ Day: _____ Year: _____

17. Discrepancy
 17a. Discrepancy Indication Space: Quantity Type Residue Partial Rejection Full Rejection

17b. Alternate Facility (or Generator): _____ Manifest Reference Number: _____ U.S. EPA ID Number: _____
 Facility's Phone: _____

17c. Signature of Alternate Facility (or Generator): _____ Month: _____ Day: _____ Year: _____

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
 Printed/Typed Name: **Margie Debo** Signature: *Margie Debo* Month: **2** Day: **19** Year: **13**

GENERATOR
INT'L
TRANSPORTER
DESIGNATED FACILITY

PCS 2030

PVT LAND COMPANY LTD.
87-2020 FARRINGTON HWY.
WAIANAE, HI 96792

Ticket #: 698986

B117 To: LATITE CONSULTING LLC
Haul Acct/Veh #: MESA92 / MESA9-120
Job # : 858Z-03/6687

Date: 02/19/13 Time 1/0:14:24 /14:53
Clr #: 82393 - Bldg 1360 Makapu Drive Ka

Material: 7000 - CERCLA

Gross: 62800 Tare: 29920 Net: 32880 lbs
16.44 Tons @ \$120.00/tn \$ 1972.80

Fees: 0.00
Tax 92.96

TOTAL \$2065.76

OOD Customer: 1 - 1 Not Specified

Notes:

STATE OF HAWAII CERTIFICATE OF MEASURES
DIVISION OF MEASUREMENT STANDARDS

This certifies to the accuracy and
identity of the quantity & commodity
shown, is suitable for all deliveries
when sealed by a measurmaster.
STATE OF HAWAII MEASUREMENT
NO. 3348 Registered Int'l's MD

Print Type: 1 - Charge (Invoice)
Fee codes:
<<< COVER YOUR LOAD >>>

WEST OAHU AGGREGATE CO., INC.

855 Umi Street
Honolulu, HI 96819

No. 8818

Phone: (808) 847-7780 / Scale House: (808) 668-1950

Fax: (808) 847-7782

CONTAINER DE/PICK-UP

- 40 CY Roll Off
- 30 CY Roll Off
- 20 CY Roll Off
- 15 CY Roll Off
- 10 CY Roll Off
- 8CY Front End Loader
- 6CY Front End Loader
- 4CY Front End Loader
- 3CY Front End Loader
- 2CY Front End Loader

- Low
- Medium
- High
- Covered

DUMP LOCATION

- PVT
- H-Power
- Land Fill
- H.E.P.
- W.O.A.
- Schnitzer Steel
- Island Recycling
- Other

DATE: <i>2/19/13</i>	POINT OF CONTACT: <i>Karen</i>	
PO # / Job #	DELIVER TO: (Street Name Required) <i>KNICKS</i>	
TRUCK #: <i>120</i>	CUSTOMER'S NAME: <i>PCS</i>	
CAN # <i>2030</i>	JOB NAME OR JOB NUMBER:	
TICKET #	DRIVER: <i>Grato</i>	
WEIGHT (TONS)	(CIRCLE ONE) <input checked="" type="checkbox"/> ROLL-OFF <input type="checkbox"/> FLAT BED <input type="checkbox"/> PICK-UP TRK <input type="checkbox"/> FRONT LOADER <input type="checkbox"/> FORK TRK <input type="checkbox"/> READY MIX	RATE

RECEIVED IN GOOD ORDER EXCEPT AS NOTED

[Signature]

Signature

Signature of Measure Master

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number
HI6 170 022 762

2. Page 1 of
1

3. Emergency Response Phone
1-800-645-8265

4. Waste Tracking Number
000020270

5. Generator's Name and Mailing Address
MARINE CORP BASE HAWAII C/O COMMANDING OFFICER
BOX 63062 (ENVIRONMENTAL) ATTN: RANDALL HU
MCBH KANEHOE BAY, HI 96863-3062
Generator's Phone: 808-257-2794

Generator's Site Address (if different than mailing address)
HIC8587-02
BLDG 1360 MOKAPU ROAD
KANEHOE BAY, HI 96863-3062

6. Transporter 1 Company Name
WEST OAHU AGGREGATE
808-668-1969

U.S. EPA ID Number
NOT APPLICABLE

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
PVT LAND COMPANY, LTD.
87-2020 FARRINGTON HIGHWAY
WAIANAE, HI 96792
Facility's Phone: 808-668-4561

U.S. EPA ID Number
NOT APPLICABLE

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit Wt./Vol.

1. MATERIAL NOT REGULATED BY DOT
(SOIL WITH TRACE PCB, CERCLA-REGULATED)

No.

Type

001 CM

30000

P

NON-RCRA

2.

3.

4.

13. Special Handling Instructions and Additional Information

9b1: NR 82393
9b2: *
9b3: *
9b4: *

2008 9b1:
ERG# 9b2:
DO/JOE 9b3:
8587 9b4:

SEND COPY TO:
PCS LLC
P.O. BOX 235117
HONOLULU, HI 96823

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeor's Printed/Typed Name
Timothy L. Caldwell

Signature
Timothy L. Caldwell

Month Day Year
02 19 13

15. International Shipment Import to U.S. Export from U.S.

Port of entry/exit:
Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

James Maito

Signature
James Maito

Month Day Year
2 19 13

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space Quantity Type Residue Partial Rejection Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator. Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name
Margaret Osoto

Signature
Margaret Osoto

Month Day Year
2 19 13

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

STATE OF HAWAII CERTIFICATE OF MEASURES
DIVISION OF MEASUREMENT STANDARDS

This certifies to the accuracy and identity of the quantity & commodity shown, is suitable for all deliveries when sealed by a measurmaster.

STATE OF HAWAII MEASUREMENT MASTER
NO. 3348 Registered Int'l's MD

Print Type: 1 - Charge (Invoice)
Fee codes:
<<< COVER YOUR LOAD >>>

Notes:
COD Customer: 1 - 1 Not Specified

TOTAL \$1276.65

Material: 7000 - CERCLA
Gross: 49440 Tare: 29120 Net: 20320 lbs
10.16 Tons @ \$120.00/tn \$ 1219.20
Fees: 0.00
Tax 57.45

Bill To: LATTE CONSULTING LLC
Haul (Acct/Veh #): MESSAG- /MESSAG-122
PD/Job #: 89887-01/8987
Date: 02/19/13 Time I/O: 14:22 /14:49
CIR #: 82393 - Bldg 1360 Kikapu Drive Ka
Ticket #: 898987

POS
KBS
#K1806

WEST OAHU AGGREGATE CO., INC.
855 Umi Street
Honolulu, HI 96819
Phone: (808) 847-7780 / Scale House: (808) 668-1950
Fax: (808) 847-7782

No 9455

CONTAINER DEL/PICK-UP

- 40 CY Roll Off Low
- 30 CY Roll Off Medium
- 20 CY Roll Off High
- 15 CY Roll Off Covered
- 10 CY Roll Off
- 8CY Front End Loader
- 6CY Front End Loader
- 4CY Front End Loader
- 3CY Front End Loader
- 2CY Front End Loader

DUMP LOCATION

- PVT
- H-Power
- Land Fill
- H.E.P.
- W.O.A.
- Schnitzer Steel
- Island Recycling
- Other

DATE: 2-19-13	POINT OF CONTACT: Carrie 349-5207	
PO # / Job #	DELIVER TO: (Street Name Required) Pick up Kneone Marine Corp Base	
TRUCK #: 122	CUSTOMER'S NAME: PCS	
CAN # K1806	JOB NAME OR JOB NUMBER:	
TICKET # 698087	DRIVER: Will	
WEIGHT (TONS) 10.16	(CIRCLE ONE) <input checked="" type="checkbox"/> ROLL-OFF <input type="checkbox"/> FLAT BED <input type="checkbox"/> PICK-UP TRK <input type="checkbox"/> FRONT LOADER <input type="checkbox"/> FORK TRK <input type="checkbox"/> READY MIX	RATE

RECEIVED IN GOOD ORDER EXCEPT AS NOTED

[Signature]

Signature

Signature of Measure Master

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number
HI6 170 022 762

2. Page 1 of
1

3. Emergency Response Phone
1-800-645-8265

4. Waste Tracking Number
000020271

5. Generator's Name and Mailing Address
MARINE CORP BASE HAWAII C/O COMMANDING OFFICER
BOX 63062 (ENVIRONMENTAL) ATTN: RANDALL HU
MCBH KANEHOE BAY, HI 96863-3062
808-257-2794

Generator's Site Address (if different than mailing address)
BLDG 1360 MOKAPU ROAD
KANEHOE BAY, HI 96863-3062
HIC8587-03

6. Transporter 1 Company Name
WEST OAHU AGGREGATE
808-668-1969

U.S. EPA ID Number
NOT APPLICABLE

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
PVI LAND COMPANY, LTD.
87-2020 FARRINGTON HIGHWAY
WAIANAE, HI 96792
808-668-4561

U.S. EPA ID Number
NOT APPLICABLE

Facility's Phone:

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit W/LVol.

1. MATERIAL NOT REGULATED BY DOT
(SOIL WITH TRACE PCB, CERCLA-REGULATED)

No.	Type
001	CM

30000

P

NON-RCRA

2.

3.

4.

13. Special Handling Instructions and Additional Information

9b1: *
9b2: *
9b3: *
9b4: *

2008 9b1:
ERG# 9b2:
DO/JOE 9b3:
8587 9b4:

SEND COPY TO:
PCS LLC
P.O. BOX 235117
HONOLULU, HI 96823

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name

Signature

Month Day Year
02 | 19 | 13

15. International Shipments Import to U.S. Export from U.S.

Port of entry/exit:
Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year
02 | 19 | 13

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year
2 | 19 | 13

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

5383

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number HI6 170 022 762	2. Page 1 of 1	3. Emergency Response Phone 1-800-645-8265	4. Waste Tracking Number 000021198			
	5. Generator's Name and Mailing Address MARINE CORP BASE HAWAII C/O COMMANDING OFFICER BOX 63062 (ENVIRONMENTAL) ATTN: RANDALL HU MCBH KANEHOE BAY, HI 96863-3062 Generator's Phone: 808-257-2794		Generator's Site Address (if different than mailing address) BLDG 1360 MOKAPU ROAD KANEHOE BAY, HI 96863-3062 HIC8587-06				
6. Transporter 1 Company Name WEST OAHU AGGREGATE		808-668-1969	U.S. EPA ID Number NOT APPLICABLE				
7. Transporter 2 Company Name			U.S. EPA ID Number				
8. Designated Facility Name and Site Address PVT LAND COMPANY, LTD. 87-2020 FARRINGTON HIGHWAY WAIANA, HI 96792 Facility's Phone: 808-668-4561		U.S. EPA ID Number NOT APPLICABLE					
GENERATOR	9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.		
		No.	Type				
	1. MATERIAL NOT REGULATED BY DOT (SOIL WITH TRACE PCB, CERCLA-REGULATED)	001	CM	30000	P		NON-RCRA
	2.						
	3.						
13. Special Handling Instructions and Additional Information 9b1: NR 82393 2008 9b1: SEND COPY TO: 9b2: ERG# 9b2: PCS LLC 9b3: DO/JOE 9b3: P.O. BOX 235117 9b4: 8587 9b4: HONOLULU, HI 96823							
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.							
Generator's/Offeor's Printed/Typed Name Tom CAWTHON		Signature <i>Timothy Cawthon</i>		Month	Day	Year	
				07	17	13	
INT'L	15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:				
	Transporter Signature (for exports only):						
TRANSPORTER	16. Transporter Acknowledgment of Receipt of Materials		Signature		Month	Day	Year
	Transporter 1 Printed/Typed Name John Amin a IV 343 TIG		<i>John Amin a IV</i>		07	17	13
	Transporter 2 Printed/Typed Name		Signature				
DESIGNATED FACILITY	17. Discrepancy						
	17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
	17b. Alternate Facility (or Generator)			U.S. EPA ID Number			
	Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)				Month	Day	Year	
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a							
Printed/Typed Name Margie D. Soto		Signature <i>Margie D. Soto</i>		Month	Day	Year	
				7	17	13	

53564

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number HI6 170 022 762	2. Page 1 of 1	3. Emergency Response Phone 1-800-645-8265	4. Waste Tracking Number 000021199
5. Generator's Name and Mailing Address MARINE CORP BASE HAWAII C/O COMMANDING OFFICER BOX 63062 (ENVIRONMENTAL) ATTN: RANDALL HU MCBH KANEHOE BAY, HI 96863-3062 Generator's Phone: 808-257-2794			Generator's Site Address (if different than mailing address) BLDG 1360 MOKAPU ROAD KANEHOE BAY, HI 96863-3062 HIC8587-07		
6. Transporter 1 Company Name WEST OAHU AGGREGATE		808-668-1969		U.S. EPA ID Number NOT APPLICABLE	
7. Transporter 2 Company Name				U.S. EPA ID Number	
8. Designated Facility Name and Site Address PVT LAND COMPANY, LTD. 87-2020 FARRINGTON HIGHWAY WAIANAE, HI 96792 Facility's Phone: 808-668-4561			U.S. EPA ID Number NOT APPLICABLE		
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
1. MATERIAL NOT REGULATED BY DOT (SOIL WITH TRACE PCB, CERCLA-REGULATED)		001	CM	30000	P
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information		2008 9b1: ERG# 9b2: DO/JOE 9b3: 8587 9b4:		SEND COPY TO: PCS LLC P.O. BOX 235117 HONOLULU, HI 96823	
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offeror's Printed/Typed Name Tom Cawthon		Signature <i>Tom Cawthon</i>		Month Day Year 07 17 13	
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:			
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name San Kalilikel		Signature <i>San Kalilikel</i>		Month Day Year 7 17 13	
Transporter 2 Printed/Typed Name		Signature		Month Day Year	
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
17b. Alternate Facility (or Generator)		Manifest Reference Number:		U.S. EPA ID Number	
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator)				Month Day Year	
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name Margil Oseto		Signature <i>Margil Oseto</i>		Month Day Year 7 17 13	

GENERATOR
INT'L
TRANSPORTER
DESIGNATED FACILITY

53562

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number
HI6 170 022 762

2. Page 1 of
1

3. Emergency Response Phone
1-800-645-8265

4. Waste Tracking Number
000021218

5. Generator's Name and Mailing Address
MARINE CORP BASE HAWAII C/O COMMANDING OFFICER
BOX 63062 (ENVIRONMENTAL) ATTN: RANDALL HU
MCBH KANEOHE BAY, HI 96863-3062
Generator's Phone: 808-257-2794

Generator's Site Address (if different than mailing address)
BLDG 1360 MOKAPU ROAD
KANEOHE BAY, HI 96863-3062
HIC8587-08

6. Transporter 1 Company Name
WEST OAHU AGGREGATE
808-668-1969

U.S. EPA ID Number
NOT APPLICABLE

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
PVT LAND COMPANY, LTD.
87-2020 FARRINGTON HIGHWAY
WAIANAE, HI 96792
Facility's Phone: 808-668-4561

U.S. EPA ID Number
NOT APPLICABLE

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit Wt./Vol.

1. MATERIAL NOT REGULATED BY DOT
(SOIL WITH TRACE PCB, CERCLA-REGULATED)

No. Type

001 CM

30000 P

NON-RCRA

13. Special Handling Instructions and Additional Information
9b1: NR 82393

9b2: *
9b3: *
9b4: *
2008 9b1: SEND COPY TO:
ERG# 9b2: PCS LLC
DO/JOE 9b3: P.O. BOX 235117
8587 9b4: HONOLULU, HI 96823

288 TRC

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offorer's Printed/Typed Name

Tim Cawthon

Signature

Timothy J. Cawthon

Month Day Year
07 | 17 | 13

15. International Shipments
 Import to U.S.
 Export from U.S.

Port of entry/exit:
Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

WOA Zachary G. Bustafas

Signature

Zachary G. Bustafas

Month Day Year
7 | 17 | 13

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space
 Quantity Type Residue Partial Rejection Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Margot DeSoto

Signature

Margot DeSoto

Month Day Year
7 | 17 | 13

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

P.C.S # 1507
HIC 8587-06

PVT LAND COMPANY LTD.
87-2020 FARRINGTON HWY.
WAIANA'E, HI 96792

Ticket #: 723038

Bill To: LATTE CONSULTING LLC
Haul Acct/Veh #: WESAGG /WESAG-120
PO/Job #: 8587-04/8587
Date: 07/17/13 Time I/O:13:26 /13:52
Clr #: 82393 - Bldg 1360 Mokapu Drive Ka

Material: 7000 - CERCLA
Gross: 44680 Tare: 27680 Net: 17000 lbs
8.50 Tons @ \$120.00/tn \$ 1020.00
Fees: 0.00
Tax 48.06

TOTAL \$1068.06

COD Customer: 1 - 1 Not Specified
Notes:

STATE OF HAWAII CERTIFICATE OF MEASURES
DIVISION OF MEASUREMENT STANDARDS

This certifies to the accuracy and identity of the quantity & commodity shown, is suitable for all deliveries when sealed by a measurmaster.
STATE OF HAWAII MEASUREMASTER
NO.3348 Registered Int'l's MD

Print Type: 1 - Charge (Invoice)
Fee codes:
<<< COVER YOUR LOAD >>>

P.C.S. 63524
Kaneohe Marine Basin

PVT LAND COMPANY LTD.
87-2020 FARRINGTON HWY.
WAIANA'E, HI 96792

Ticket #: 723039

Bill To: LATTE CONSULTING LLC
Haul Acct/Veh #: WESAGG /WESAG-118
PO/Job #: 8587-04/8587
Date: 07/17/13 Time I/O:13:31 /13:54
Clr #: 82393 - Bldg 1360 Mokapu Drive Ka

Material: 7000 - CERCLA
Gross: 41100 Tare: 26520 Net: 14580 lbs
6.29 Tons @ \$120.00/tn \$ 754.80
Fees: 0.00
Tax 35.57

TOTAL \$790.37

COD Customer: 1 - 1 Not Specified
Notes:

STATE OF HAWAII CERTIFICATE OF MEASURES
DIVISION OF MEASUREMENT STANDARDS

This certifies to the accuracy and identity of the quantity & commodity shown, is suitable for all deliveries when sealed by a measurmaster.
STATE OF HAWAII MEASUREMASTER
NO.3348 Registered Int'l's MD

Print Type: 1 - Charge (Invoice)
Fee codes:
<<< COVER YOUR LOAD >>>

5 3562
Can # 1548
HIC - 8587-08

PVT LAND COMPANY LTD.
87-2020 FARRINGTON HWY.
WAIANA'E, HI 96792

Ticket #: 723068

Bill To: LATTE CONSULTING LLC
Haul Acct/Veh #: WESAGG /WESAG-115
PO/Job #: 8587-01/8587
Date: 07/17/13 Time I/O:14:11 /14:32
Clr #: 82393 - Bldg 1360 Mokapu Drive Ka

Material: 7000 - CERCLA
Gross: 46260 Tare: 28340 Net: 17940 lbs
8.97 Tons @ \$120.00/tn \$ 1076.40
Fees: 0.00
Tax 50.72

TOTAL \$1127.12

COD Customer: 1 - 1 Not Specified
Notes:

STATE OF HAWAII CERTIFICATE OF MEASURES
DIVISION OF MEASUREMENT STANDARDS

This certifies to the accuracy and identity of the quantity & commodity shown, is suitable for all deliveries when sealed by a measurmaster.
STATE OF HAWAII MEASUREMASTER
NO.3348 Registered Int'l's MD

Print Type: 1 - Charge (Invoice)
Fee codes:
<<< COVER YOUR LOAD >>>

1515

00002318

HIC 8587-10

PVT LAND COMPANY LTD.
87-2020 FARRINGTON HWY.
WAIANAE, HI 96792

Ticket #: 745000

Bill To: LATTE CONSULTING LLC
Haul Acct/Veh #: WESAGG /WESAG-137
PO/Job #: 8587-01/8587
Date: 11/13/13 Time I/O: 07:59 /08:17
Clr #: 86314 - Bldg 1360 Makapu Drive Ka

Material: 7000 - CERCLA
Gross: 51840 Tare: 26740 Net: 25100 lbs
12.55 Tons @ \$120.00/tn \$ 1506.00
Fees: 0.00
Tax 70.96

TOTAL \$1576.96

Notes: COD Customer: 1 - 1 Not Specified

STATE OF HAWAII CERTIFICATE OF MEASURES
DIVISION OF MEASUREMENT STANDARDS

This certifies to the accuracy and
identity of the quantity & commodity
shown, is suitable for all deliveries
when sealed by a measurmaster.

STATE OF HAWAII MEASUREMENT
REGISTERED INTLS MD
NO. 3348

Print Type: 1 - Charge (Invoice)
Fee codes:
<<< COVER YOUR LOAD >>>

2005

00002317

HIC 8587-09

PVT LAND COMPANY LTD.
87-2020 FARRINGTON HWY.
WAIANAE, HI 96792

Ticket #: 744969

Bill To: LATTE CONSULTING LLC
Haul Acct/Veh #: WESAGG /WESAG-137
PO/Job #: 8587-01/8587
Date: 11/13/13 Time I/O: 07:02 /07:28
Clr #: 86314 - Bldg 1360 Makapu Drive Ka

Material: 7000 - CERCLA
Gross: 43560 Tare: 26980 Net: 16580 lbs
8.29 Tons @ \$120.00/tn \$ 994.80
Fees: 0.00
Tax 46.88

TOTAL \$1041.68

Notes: COD Customer: 1 - 1 Not Specified

STATE OF HAWAII CERTIFICATE OF MEASURES
DIVISION OF MEASUREMENT STANDARDS

This certifies to the accuracy and
identity of the quantity & commodity
shown, is suitable for all deliveries
when sealed by a measurmaster.

STATE OF HAWAII MEASUREMENT
REGISTERED INTLS MD
NO. 3348

Print Type: 1 - Charge (Invoice)
Fee codes:
<<< COVER YOUR LOAD >>>

#1515

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

HI 6170022762

2. Page 1 of

1

3. Emergency Response Phone

1-800-645-8265

4. Waste Tracking Number

000023118

5. Generator's Name and Mailing Address

MARINE CORPS BASE HAWAII C/O COMMANDING OFFICER
BOX 63062 (ENVIRONMENTAL) ATTN: LE/TIM CAWTHON
MCBH KANEOHE BAY, HI 96863-3062
Generator's Phone: 808-257-2860

Generator's Site Address (if different than mailing address)

BLDG 1360 MOKAPU RD
KANEOHE BAY, HI 96863

HIC8587-10

6. Transporter 1 Company Name

WEST OAHU AGGREGATE

808-668-1969

U.S. EPA ID Number

NOT APPLICABLE

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

PVT LAND COMPANY, LTD.
87-2020 FARRINGTON HIGHWAY
WAIANAE, HI 96792
Facility's Phone: 808-668-4561

U.S. EPA ID Number

NOT APPLICABLE

9. Waste Shipping Name and Description

1. MATERIAL NOT REGULATED BY DOT
(SOIL WITH TRACE PCB, CERCLA-REGULATED)

10. Containers

No.

Type

11. Total Quantity

12. Unit Wt./Vol.

001

CM

30000

P

NON-RCRA

13. Special Handling Instructions and Additional Information

9b1: NR 86314
9b2: *
9b3: *
9b4: *

2012 9b1:
ERG# 9b2:
DO/JOE 9b3:
8587 9b4:

SEND COPY TO:
PCS LLC
P.O. BOX 235117
HONOLULU, HI 96823

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name

Timothy L CAWTHON

Signature

Timothy L Cawthon

Month Day Year
11 12 13

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

William Wallace

Signature

William Wallace

Month Day Year
11 12 13

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

U.S. EPA ID Number

17b. Alternate Facility (or Generator)

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Margit DeSoto

Signature

Margit DeSoto

Month Day Year
11 13 13

DESIGNATED FACILITY TO GENERATOR

#2005

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: HI 6170022762
2. Page 1 of 1
3. Emergency Response Phone: 1-800-645-8265
4. Waste Tracking Number: 000023117

5. Generator's Name and Mailing Address: MARINE CORPS BASE HAWAII C/O COMMANDING OFFICER BOX 63062 (ENVIRONMENTAL) ATTN: LE/TIM CAWTHON MCBH KANEOHE BAY, HI 96863-3062
Generator's Site Address (if different than mailing address): BLDG 1360 MOKAPU RD KANEOHE BAY, HI 96863
Generator's Phone: 808-257-2860
HIC8587-09

6. Transporter 1 Company Name: WEST OAHU AGGREGATE
808-668-1969
U.S. EPA ID Number: NOT APPLICABLE

7. Transporter 2 Company Name: _____
U.S. EPA ID Number: _____

8. Designated Facility Name and Site Address: PVT LAND COMPANY, LTD. 87-2020 FARRINGTON HIGHWAY WAIANAE, HI 96792
Facility's Phone: 808-668-4561
U.S. EPA ID Number: NOT APPLICABLE

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	NON-RCRA
	No.	Type			
1. MATERIAL NOT REGULATED BY DOT (SOIL WITH TRACE PCB, CERCLA-REGULATED)	001	CM	30000	P	
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
9b1: NR 86314
9b2: *
9b3: */
9b4: *
2012 9b1: SEND COPY TO:
ERG# 9b2: PCS LLC
DO/JOE 9b3: P.O. BOX 235117
8587 9b4: HONOLULU, HI 96823

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name: Timothy L CAWTHON
Signature: Timothy L Cawthon
Month: 11 Day: 12 Year: 13

15. International Shipments: Import to U.S. Export from U.S.
Port of entry/exit: _____
Date leaving U.S.: _____

16. Transporter Acknowledgment of Receipt of Materials
Transporter Signature (for exports only): _____
Transporter 1 Printed/Typed Name: William Wallace
Signature: [Signature]
Month: 11 Day: 12 Year: 13
Transporter 2 Printed/Typed Name: _____
Signature: _____
Month: _____ Day: _____ Year: _____

17. Discrepancy
17a. Discrepancy Indication Space: Quantity Type Residue Partial Rejection Full Rejection

Manifest Reference Number: _____
U.S. EPA ID Number: _____

17b. Alternate Facility (or Generator): _____
Facility's Phone: _____

17c. Signature of Alternate Facility (or Generator): _____
Month: _____ Day: _____ Year: _____

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a
Printed/Typed Name: Margaret DeSoto
Signature: Margaret DeSoto
Month: 11 Day: 13 Year: 13

GENERATOR

TRANSPORTER INT'L

DESIGNATED FACILITY

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator ID Number: **H I 6 1 7 0 0 2 2 7 6 2**
 2. Page 1 of: **1**
 3. Emergency Response Phone: **1-800-645-8265**
 4. Waste Tracking Number: **000023635**

5. Generator's Name and Mailing Address: **MARINE CORPS BASE HAWAII C/O COMMANDING OFFICER
 BOX 63062 (ENVIRONMENTAL) ATTN: LE/TIM CAWTHON
 MCBH KANEHOE BAY, HI 96863-3062**
 Generator's Site Address (if different than mailing address): **BLDG 1360 MOKAPU RD
 KANEHOE BAY, HI 96863**
 Generator's Phone: **808-257-2860**
HIC8587-11

6. Transporter 1 Company Name: **WEST OAHU AGGREGATE**
 U.S. EPA ID Number: **808-668-1969**
NOT APPLICABLE

7. Transporter 2 Company Name: _____
 U.S. EPA ID Number: _____

8. Designated Facility Name and Site Address: **PVT LAND COMPANY, LTD.
 87-2020 FARRINGTON HIGHWAY
 WAIANAE, HI 96792**
 Facility's Phone: **808-668-4561**
 U.S. EPA ID Number: **NOT APPLICABLE**

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
	No.	Type			
1. MATERIAL NOT REGULATED BY DOT (SOIL WITH TRACE PCB, CERCLA-REGULATED)	001	CM	30000	P	NON-RCRA
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
 9b1: NR 86314
 9b2: * 2012 9b1: SEND COPY TO:
 9b3: * ERG# 9b2: PCS LLC
 9b4: * DO/JOE 9b3: P.O. BOX 235117
 8587 9b4: HONOLULU, HI 96823

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: **Tim Cawthon**
 Signature: *Timothy J. Cawthon*
 Month: **04** Day: **17** Year: **14**

15. International Shipments Import to U.S. Export from U.S.
 Port of entry/exit: _____
 Date leaving U.S.: _____

16. Transporter Acknowledgment of Receipt of Materials
 Transporter 1 Printed/Typed Name: **LOPATI TOO**
 Signature: *Joseph Joio*
 Month: **4** Day: **17** Year: **14**
 Transporter 2 Printed/Typed Name: _____
 Signature: _____
 Month: _____ Day: _____ Year: _____

17. Discrepancy
 17a. Discrepancy Indication Space Quantity Type Residue Partial Rejection Full Rejection

17b. Alternate Facility (or Generator) _____
 Manifest Reference Number: _____
 U.S. EPA ID Number: _____

Facility's Phone: _____
 17c. Signature of Alternate Facility (or Generator) _____
 Month: _____ Day: _____ Year: _____

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
 Printed/Typed Name: **Margit O. Solo**
 Signature: *Margit O. Solo*
 Month: **4** Day: **17** Year: **14**

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

Upati
#1505
PCS

4-17-14

PVT LAND COMPANY LTD.
87-2020 FARRINGTON HWY.
WAIANAE, HI 96792

Ticket #: 770493

Bill To: LATTE CONSULTING LLC
Haul Acct/Veh #: WESAGG /WESAG-121
PO/Job #:8587-01/8587
Date: 04/17/14 Time I/O:09:11 /09:29
Clr #: 86314 - Bldg 1360 Mokapu Drive Ka

Material: 7000 - CERCLA
Gross: 43880 Tare: 27720 Net:16160 lbs
8.08 Tons @ \$120.00/tn \$ 969.60
Fees: 0.00
Tax 45.69

TOTAL \$1015.29

COD Customer: 1 - 1 Not Specified
Notes:

STATE OF HAWAII CERTIFICATE OF MEASURES
DIVISION OF MEASUREMENT STANDARDS

This certifies to the accuracy and
identity of the quantity & commodity
shown, is suitable for all deliveries
when sealed by a measuremaster.

STATE OF HAWAII MEASUREMASTER
NO.3348 Registered Intls MD

Pmnt Type: 1 - Charge (Invoice)
Fee codes:

<<< COVER YOUR LOAD >>>

PVT LAND COMPANY LTD.
87-2020 FARRINGTON HWY.
WAIANAE, HI 96792

Ticket #: 796961

Bill To: LATTE CONSULTING LLC
Haul Acct/Veh #: PACICO /PACIC-V21
PO/Job #:300121-01/300121
Date: 10/08/14 Time I/O:12:43 /13:15
Clr #: 91524 - Bldg 1360 Mokapu Drive

Material: 7000 - CERCLA
Gross: 12520 Tare: 10260 Net: 2260 lbs
1.13 Tons @ \$120.00/tn \$ 135.60
Fees:CS-127 127.13

Tax 12.38

TOTAL \$275.11

=====

COD Customer: 1 - 1 Not Specified
Notes:

STATE OF HAWAII CERTIFICATE OF MEASURES
DIVISION OF MEASUREMENT STANDARDS

This certifies to the accuracy and
identity of the quantity & commodity
shown, is suitable for all deliveries
when sealed by a measuremaster.

STATE OF HAWAII MEASUREMASTER
NO.3348 Registered Intls MD

Pmnt Type: 1 - Charge (Invoice)
Fee codes: CS-CERCLA Solidification F

<<< COVER YOUR LOAD >>>

Load Number	Date Transported Off-site	Manifest Document Number	Number of Supersacks	Site of Orgination	Subtotal	Weight	Weight Subtotal	Weight Subtotal	Weight Subtotal	Container Arrival Date
						<i>kg</i>	<i>kg</i>	<i>pounds</i>	<i>tons</i>	
1	11/12/2013	008802080 JJK	5	Tranformer F678/678	5	4603	4603	10148	5	1/2/2014
2	11/12/2013	008802080 JJK	20	Tranformer F678/678	25	18413	23016	50742	25	1/2/2014
3	12/12/2013	008802122 JJK	1	Transformer F-1126A/F-1126B	26	694	23710	52272	26	1/23/2014

432238

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number HI 6 1 7 0 0 2 2 7 6 2	2. Page 1 of 13	3. Emergency Response Phone 1-800-645-8265	4. Manifest Tracking Number 008802080 JJK			
5. Generator's Name and Mailing Address MARINE CORPS BASE HAWAII C/O COMMANDING OFFICER BOX 63062 (ENVIRONMENTAL) ATTN: LE/TIM CAWTHON MCBH KANEOHE BAY, HI 96863-3062 Generator's Phone: 808-257-2860				Generator's Site Address (if different than mailing address) BLDG 1360 MOKAPU RD KANEOHE BAY, HI 96863 HIC8587-12				
6. Transporter 1 Company Name PACIFIC COMMERCIAL SERVICES, LLC.			808-545-4599	U.S. EPA ID Number H I R 0 0 0 0 9 7 8 2 4				
7. Transporter 2 Company Name NORTHLAND SERVICES, INC.			800-327-7739	U.S. EPA ID Number WAH000011486				
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT OF THE NW 17629 CEDAR SPRINGS LANE ARLINGTON, OR 97812 Facility's Phone: 541-454-2643				U.S. EPA ID Number O R D 0 8 9 4 5 2 3 5 3				
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	X	RQ, UN3432, POLYCHLORINATED BIPHENYLS, SOLID, 9, PGII (SOIL WITH PCB) 'MARINE POLLUTANT'		7-F 05 BA		4500 05454	K	NON-RCRA
	2.							
	3.							
	4.							
14. Special Handling Instructions and Additional Information 9b1: * OR323409 2012 9b1: 171 SEND COPY TO: 9b2: * OSD: 11/06/13 ERG# 9b2: PCS LLC 9b3: * ID#8587-21 TO 26 DO/JOE 9b3: P.O. BOX 235117 9b4: * HONOLULU, HI 96822								
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.								
Generators/Offeror's Printed/Typed Name Timothy L Cawthon		Signature [Signature]		Month Day Year 11 12 13				
TRANSPORTER INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:							
	17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name: TAIKI FUATAGA Signature: [Signature] Month Day Year: 11 12 13 Transporter 2 Printed/Typed Name: Tom Signature: [Signature] Month Day Year: 11 14 13							
DESIGNATED FACILITY	18. Discrepancy 18a. Discrepancy Indication Space <input checked="" type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection Quantity changed per Jingbo Chang Pacific Commercial sm-1-3-14 Manifest Reference Number:							
	18b. Alternate Facility (or Generator) Facility's Phone:				U.S. EPA ID Number			
	18c. Signature of Alternate Facility (or Generator)						Month Day Year	
	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 1. H132 2. 3. 4.							
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name: Sue McAhren Signature: [Signature] Month Day Year: 11 12 14								

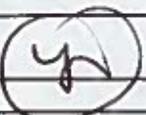
13/14

sm

432238

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number H I 6 1 7 0 0 2 2 7 6 2	22. Page 2	23. Manifest Tracking Number 008802080JJK			
24. Generator's Name MARINE CORPS BASE HAWAII C/O COMMANDING OFFICER		HIC8587-12					
25. Transporter <u>3</u> Company Name R Transport ROADONE INTERMODALOGISTICS		U.S. EPA ID Number WAH00002838					
26. Transporter <u>4</u> Company Name Union Pacific Railroad		U.S. EPA ID Number NE0001792910					
GENERATOR	27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No. Type		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes
32. Special Handling Instructions and Additional Information							
TRANSPORTER	33. Transporter <u>4</u> Acknowledgment of Receipt of Materials	Printed/Typed Name Cindi Cuy		Signature 	Month Day Year 11 23 13		
	34. Transporter Acknowledgment of Receipt of Materials	Printed/Typed Name See attached sm-13-14		Signature	Month Day Year		
DESIGNATED FACILITY	35. Discrepancy						
	36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						

432 238

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number H16170022762	22. Page 3/3	23. Manifest Tracking Number 008802080 JJK				
24. Generator's Name MARINE CORPS BASE HAWAII								
25. Transporter 5 Company Name CRLRL				U.S. EPA ID Number OR0987173457				
26. Transporter _____ Company Name				U.S. EPA ID Number				
GENERATOR	27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No. Type		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes	
32. Special Handling Instructions and Additional Information								
TRANSPORTER	33. Transporter 5 Acknowledgment of Receipt of Materials							
	Printed/Typed Name BOWIE SHAW				Signature [Signature]		Month Day Year 12 25 13	
DESIGNATED FACILITY	34. Transporter Acknowledgment of Receipt of Materials							
	Printed/Typed Name				Signature		Month Day Year	
35. Discrepancy								
36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								



**Chemical Waste Management
Of The Northwest**

17629 Cedar Springs Lane
Arlington, Oregon 97812
541-454-2643

EPA I.D.# ORDO89452353

LOAD NO. _____

4052A

MANIFEST DOC. NO. _____

INBOUND

T/D: 09:53:51 2014-01-02
ID: 432239 TRK ID: 432238
115300 lb G

OUTBOUND

T/D: 14:58:27 2014-01-02
ID: 432239 TRK ID: 432238
115300 lb G
64560 lb PT
50740 lb N

NET 25.37 TONS

23016K

432238 5BA 4603K
432239 20BA 18413K

GENERATOR _____

432 239

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number H I 6 1 7 0 0 2 2 7 6 2	2. Page 1 of 23	3. Emergency Response Phone 1-800-645-8265	4. Manifest Tracking Number 008802079 JJK		
5. Generator's Name and Mailing Address MARINE CORPS BASE HAWAII C/O COMMANDING OFFICER BOX 63062 (ENVIRONMENTAL) ATTN: LE/TIM CAWTHON MCBH KANEOHE BAY, HI 96863-3062 Generator's Phone: 808-257-2860			Generator's Site Address (if different than mailing address) BLDG 1360 MOKAPU RD KANEOHE BAY, HI 96863 HIC8587-11				
6. Transporter 1 Company Name PACIFIC COMMERCIAL SERVICES, LLC.			808-545-4599	U.S. EPA ID Number H I R 0 0 0 0 9 7 8 2 4			
7. Transporter 2 Company Name NORTHLAND SERVICES, INC.			800-327-7739	U.S. EPA ID Number WAH000011486			
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT OF THE NW 17629 CEDAR SPRINGS LANE ARLINGTON, OR 97812 Facility's Phone: 541-454-2643			U.S. EPA ID Number O R D 0 8 9 4 5 2 3 5 3				
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	X ¹	RQ, UN3432, POLYCHLORINATED BIPHENYLS, SOLID, 9, PGII (SOIL WITH PCB) MARINE POLLUTANT	020	BA	18000	K	NON-RCRA
14. Special Handling Instructions and Additional Information							
9b1: * OR323409		NSU-405219		2012	9b1: 171	SEND COPY TO:	
9b2: * OSD: 11/06/13				ERG#	9b2:	PCS LLC	
9b3: * ID#8587-01 TO 20				DO/JOE	9b3:	P.O. BOX 235117	
9b4: *							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offeror's Printed/Typed Name Tim Cawthon			Signature Timothy J Cawthon		Month Day Year 11 12 13		
TRANSPORTER INTL	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
	17. Transporter Acknowledgment of Receipt of Materials						
TRANSPORTER	Transporter 1 Printed/Typed Name TAIJI FUJITAGA			Signature 		Month Day Year 11 12 13	
	Transporter 2 Printed/Typed Name See attached on 1-2-14			Signature		Month Day Year	
DESIGNATED FACILITY	18. Discrepancy						
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
	18b. Alternate Facility (or Generator)			Manifest Reference Number: _____ U.S. EPA ID Number _____			
	Facility's Phone: _____						
18c. Signature of Alternate Facility (or Generator)					Month Day Year		
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H132		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name Sue Mahren			Signature Sue Mahren		Month Day Year 11 12 14		

11/3/14

EMS



**Chemical Waste Management
Of The Northwest**

17629 Cedar Springs Lane
Arlington, Oregon 97812
541-454-2843
EPA I.D.# ORD089452353

LOAD NO. 4052A

MANIFEST DOC. NO. _____

INBOUND

T/D: 09:53:51 2014-01-02
ID: 432239 TRK ID: 432238
115300 lb G

OUTBOUND

T/D: 14:58:27 2014-01-02
ID: 432239 TRK ID: 432238
115300 lb G
64560 lb PT
50740 lb N

NET 25.37 TONS

23016K

432238 5BA 4603K
432239 20BA 18413K

GENERATOR _____

4133002

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number HI 6170022762	2. Page 1 of 23	3. Emergency Response Phone 1-800-645-8265	4. Manifest Tracking Number 008802122 JJK
----------------------------------	---	--------------------	---	--

5. Generator's Name and Mailing Address MARINE CORPS BASE HAWAII C/O COMMANDING OFFICER BOX 63062 (ENVIRONMENTAL) ATTN: LE/TIM CAWTHON MCBH KANEHOE BAY, HI 96863-3062 Generator's Phone: 808-257-2860	Generator's Site Address (if different than mailing address) BLDG 1360 MOKAPU RD KANEHOE BAY, HI 96863 HIC8587-13
--	--

6. Transporter 1 Company Name PACIFIC COMMERCIAL SERVICES, LLC.	808-545-4599	U.S. EPA ID Number HIR000097824
--	--------------	------------------------------------

7. Transporter 2 Company Name NORTHLAND SERVICES, INC.	800-327-7739	U.S. EPA ID Number WAH000011486
---	--------------	------------------------------------

8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT OF THE NW 17629 CEDAR SPRINGS LANE ARLINGTON, OR 97812 Facility's Phone: 541-454-2643	U.S. EPA ID Number ORD089452353
--	------------------------------------

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
		No.	Type					
X	RO, UN3432, POLYCHLORINATED BIPHENYLS, SOLID, 9, PGLI (SOIL WITH PCB) 'MARINE POLLUTANT'	001	BA	00694	K			NON-RCRA
2.								
3.								
4.								

14. Special Handling Instructions and Additional Information 8b1: * OR323409 8b2: * OSD: 11/06/13 8b3: * ID#8587-26	supersack	2012	8b1: 171	SEND COPY TO: PCS LLC P.O. BOX 235117
--	-----------	------	----------	---

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offoror's Printed/Typed Name Tim CAWTHON	Signature <i>Timothy L. Cawthon</i>	Month Day Year 12 12 13
---	--	--------------------------------

16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.	Port of entry/exit: Date leaving U.S.:
--	---

17. Transporter Acknowledgment of Receipt of Materials	Signature <i>MA MA</i>	Month Day Year 12 12 13
Transporter 1 Printed/Typed Name LYLE RAGRAGOLA	Signature <i>Tom Cawthon</i>	Month Day Year 12 00 13

18. Discrepancy	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection
-----------------	--

18b. Alternate Facility (or Generator)	U.S. EPA ID Number
Facility's Phone:	

18c. Signature of Alternate Facility (or Generator)	Month Day Year
---	----------------

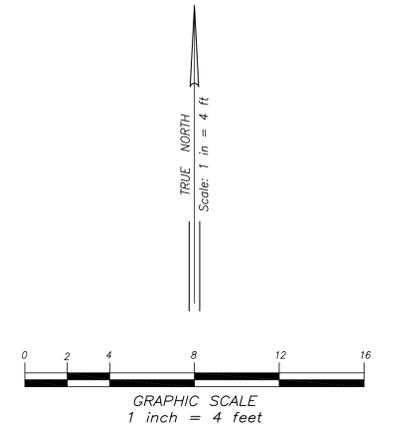
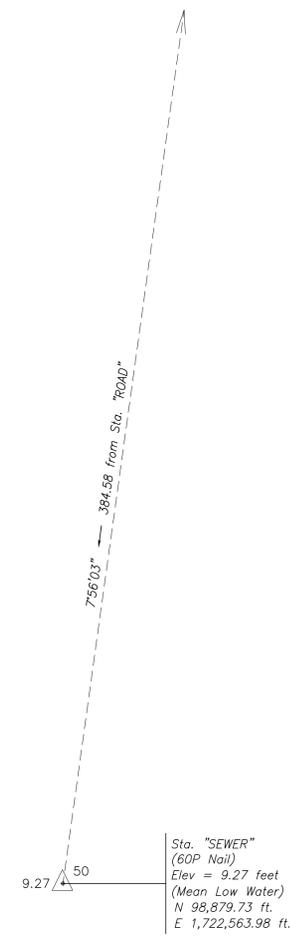
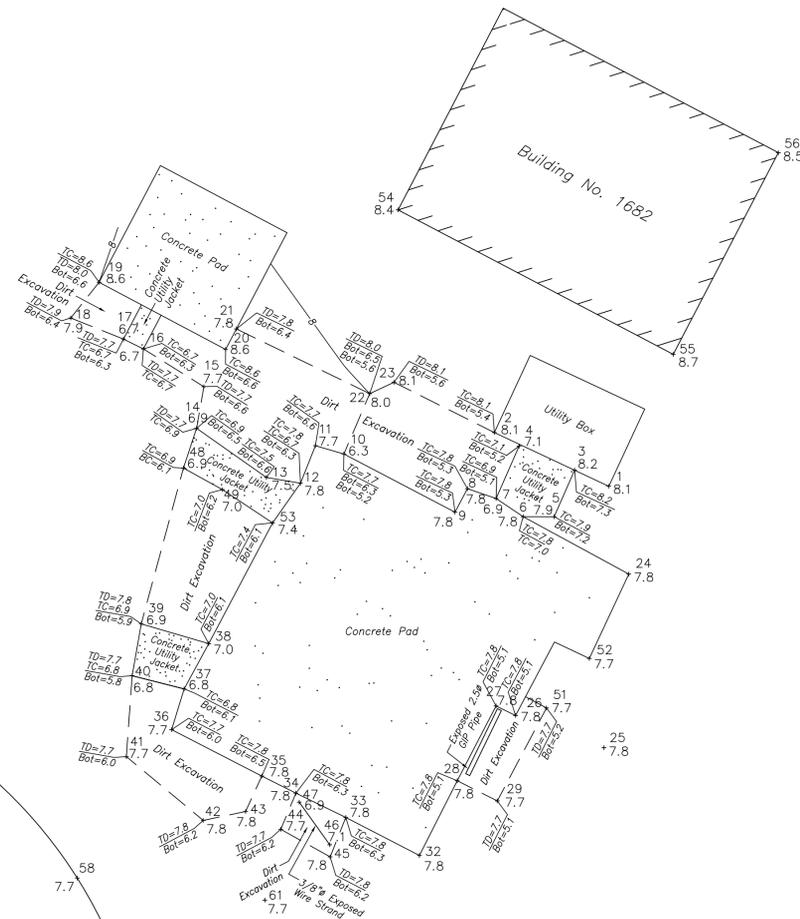
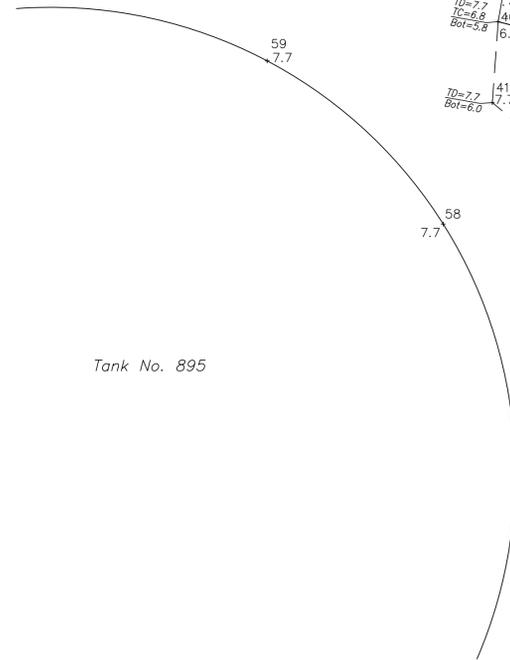
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)	1. H132	2.	3.	4.
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20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a	Signature <i>Sue McAhren</i>	Month Day Year 11 23 13
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**Attachment 4
Survey Drawings**

POINT	HAWAII STATE PLANE NAD 83 (1993) NORTHING (Ft)	EASTING (Ft)	ELEV (Feet) (MLW)	DESCRIP
1	98,891.62	1,722,546.24	8.1	TC
2	98,894.14	1,722,540.83	8.1	TC
			5.4	Bot
3	98,892.38	1,722,544.62	8.2	TC
			7.3	Bot
4	98,893.50	1,722,542.00	7.1	TC
			5.2	Bot
5	98,890.19	1,722,543.66	7.9	TC
			7.2	Bot
6	98,890.19	1,722,542.19	7.8	TC
			7.0	TC
7	98,891.05	1,722,540.92	6.9	TC
			5.1	Bot
8	98,891.50	1,722,539.56	7.8	TC
			5.3	Bot
9	98,890.40	1,722,538.98	7.8	TC
			5.3	Bot
10	98,893.14	1,722,533.74	7.7	TC
			6.3	Bot
			5.2	Bot
11	98,893.53	1,722,532.39	7.7	TC
			6.6	Bot
SAMPLING LOCATION MBT 487				
12	98,891.76	1,722,531.69	7.8	TC
			6.7	TC
			6.3	Bot
13	98,892.03	1,722,530.08	7.5	TC
			6.6	Bot
14	98,894.34	1,722,526.78	7.7	TD
			6.9	TC
			6.5	Bot
15	98,896.30	1,722,527.13	7.7	TD
			6.6	Bot
16	98,898.07	1,722,524.28	7.7	TD
			6.7	TC
			6.3	Bot
17	98,898.53	1,722,523.34	7.7	TD
			6.7	TC
			6.3	Bot
18	98,899.52	1,722,520.85	7.9	TD
			6.4	Bot
19	98,901.20	1,722,522.18	8.6	TC
			8.0	TD
			6.6	Bot
20	98,898.05	1,722,528.16	8.6	TC
			6.6	Bot
21	98,899.01	1,722,528.66	7.8	TD
			6.4	Bot
22	98,895.97	1,722,534.95	8.0	TD
			6.5	Bot
			5.6	Bot
23	98,896.50	1,722,536.10	8.1	TD
			5.6	Bot
24	98,897.50	1,722,547.18	7.8	TC
25	98,879.34	1,722,546.00	7.8	Topo
26	98,880.85	1,722,541.84	7.8	TC
			5.1	Bot
27	98,881.30	1,722,540.91	7.8	TC
			5.1	Bot
28	98,877.79	1,722,539.08	7.8	TC
			5.1	Bot
29	98,876.84	1,722,540.97	7.7	TD
			5.1	Bot
32	98,874.28	1,722,537.30	7.8	TC
33	98,876.07	1,722,533.83	7.8	TC
			6.3	Bot
34	98,877.20	1,722,531.47	7.8	TC
			6.3	Bot
35	98,878.01	1,722,529.86	7.8	TC
			6.5	Bot
36	98,880.19	1,722,525.61	7.7	TC
			6.0	Bot
37	98,882.10	1,722,526.20	6.8	TC
			6.1	Bot
38	98,884.23	1,722,527.36	7.0	TC
			6.1	Bot
39	98,885.16	1,722,524.17	7.8	TD
			6.9	TC
			5.9	Bot
40	98,882.72	1,722,523.75	7.7	TD
			6.8	TC
			5.8	Bot

POINT	HAWAII STATE PLANE NAD 83 (1993) NORTHING (Ft)	EASTING (Ft)	ELEV (Feet) (MLW)	DESCRIP
41	98,878.92	1,722,523.47	7.7	TD
			6.0	Bot
42	98,875.93	1,722,527.10	7.8	TD
			6.2	Bot
43	98,876.34	1,722,529.10	7.8	TD
44	98,875.51	1,722,530.76	7.7	TD
			6.2	Bot
45	98,874.21	1,722,533.09	7.8	TD
			6.2	Bot
46	98,874.78	1,722,533.07	7.1	Wire
47	98,876.78	1,722,531.63	6.9	Wire
48	98,892.47	1,722,526.17	6.9	TC
			6.1	Bot
49	98,891.46	1,722,528.00	7.0	TC
			6.2	Bot
50	98,879.73	1,722,563.98	9.27	"SEWER"
51	98,881.21	1,722,543.30	7.7	TD
			5.2	Bot
52	98,883.53	1,722,545.31	7.7	TC
53	98,889.90	1,722,530.37	7.4	TC
			6.1	Bot
54	98,904.60	1,722,536.29	8.4	B1682
55	98,897.82	1,722,549.27	8.7	B1682
56	98,907.29	1,722,554.24	8.5	B1682
57	98,861.10	1,722,524.55	8.2	T895
58	98,873.22	1,722,521.15	7.7	T895
59	98,880.88	1,722,512.85	7.7	T895
60	98,870.17	1,722,538.21	7.8	Topo
61	98,872.18	1,722,530.01	7.7	Topo



LEGEND:
 Bot= Bottom Excavation
 GIP Galvanized Iron Pipe
 TC= Top of Concrete
 TD= Top of Dirt

NOTES:
 1. Elevations were referred to Sta. 114 (brass disk) of the MCBH Bench Mark Survey on September 7, 2000 with an elevation of 9.43 feet (MLW).
 2. Azimuths and coordinates were referred to Government Triangulation Station "Mokapu" (TU1056) NAD 83 (1993): 104,553.855 feet North; 1,731,597.716 feet East.



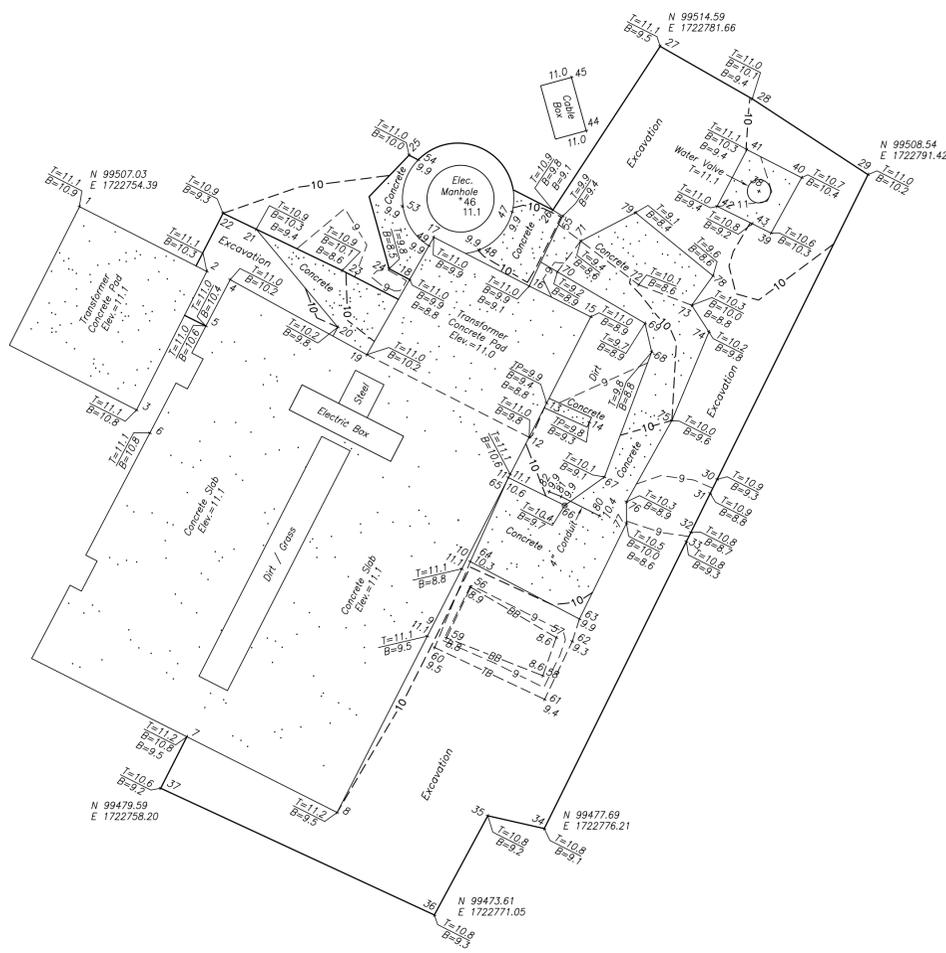
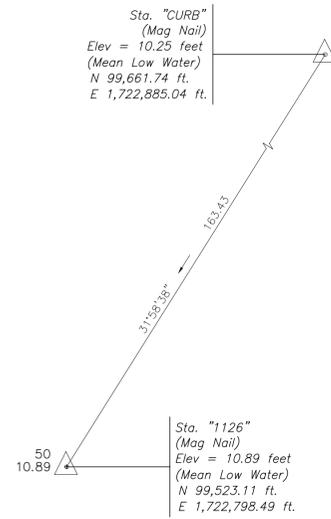
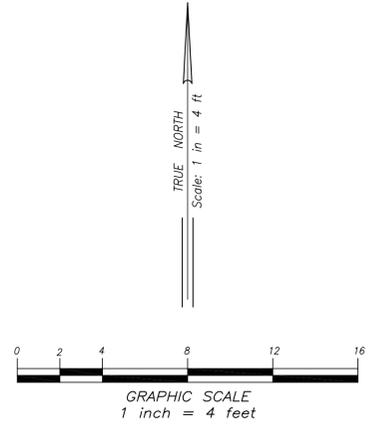
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Gil P. Bumanglag
 Gil P. BUMANGLAG
 Licensed Professional Land Surveyor
 Certificate Number 8948

TOPOGRAPHIC SURVEY MAP
 TRANSFORMERS 898, SS245A & SS245F
 POST EXCAVATION
 MARINE CORPS BASE HAWAII
 KANEOHE, OAHU, HAWAII

POINT	HAWAII STATE PLANE NAD 83 (1993) NORTHING (Ft)	EASTING (Ft)	ELEV (Feet) (MLW)	DESCRIP
1	99,507.03	1,722,754.39	11.1	TC
			10.9	TD
2	99,503.97	1,722,760.36	11.1	TC
			10.3	BEX
3	99,497.44	1,722,757.06	11.1	TC
			10.8	TD
4	99,503.58	1,722,761.46	11.0	TC
			10.2	BEX
5	99,501.40	1,722,760.32	11.0	TC
			10.6	TD
			10.4	BEX
6	99,496.35	1,722,757.69	11.1	TC
			10.8	TD
7	99,482.02	1,722,759.43	11.2	TC
			10.8	TD
			9.5	BEX
8	99,478.45	1,722,766.48	11.2	TC
			9.5	BEX
9	99,486.76	1,722,770.72	11.1	TC
			9.5	BEX
10	99,489.94	1,722,772.34	11.1	TC
			8.8	BEX
11	99,494.40	1,722,774.61	11.1	TC
			10.6	BEX
12	99,496.15	1,722,775.50	11.0	TC
			9.8	TD
13	99,497.76	1,722,776.32	9.9	TC
			9.4	BEX
			8.8	BEX
14	99,496.86	1,722,778.33	9.8	TC
			9.3	BEX
15	99,501.83	1,722,778.40	11.0	TC
			8.9	BEX
16	99,503.28	1,722,775.51	11.0	TC
			9.9	TC
			9.1	BEX
17	99,505.59	1,722,771.02	11.0	TC
			9.9	BEX
18	99,503.59	1,722,769.89	11.0	TC
			9.9	TC
			8.8	TD
19	99,500.05	1,722,767.88	11.0	TC
			10.2	TC
20	99,501.34	1,722,766.52	10.2	TC
			9.8	BEX
21	99,505.97	1,722,762.68	10.9	TC
			10.3	TC
			9.4	BEX
22	99,506.72	1,722,761.13	10.9	TD
			9.3	BEX
23	99,504.02	1,722,766.72	10.9	TC
			10.1	TD
			8.6	BEX
24	99,504.10	1,722,768.93	9.8	TD
			8.5	TC
25	99,509.46	1,722,769.86	11.0	TD
			10.0	TC
26	99,506.87	1,722,776.62	10.9	TD
			9.8	TC
			9.1	BEX
27	99,514.59	1,722,781.66	11.1	TD
			9.5	BEX
28	99,512.12	1,722,785.98	11.0	TD
			10.1	BEX
			9.4	BEX
29	99,508.54	1,722,791.42	11.0	TD
			10.2	BEX
30	99,494.16	1,722,784.33	10.9	TD
			9.3	BEX
31	99,493.50	1,722,784.01	10.9	TD
			8.8	BEX
32	99,491.66	1,722,783.10	10.8	TD
			8.8	BEX
33	99,491.23	1,722,782.89	10.8	TD
			9.3	BEX
34	99,477.69	1,722,776.21	10.8	TD
			9.1	BEX
35	99,478.29	1,722,773.56	10.8	TD
			9.2	BEX
36	99,473.61	1,722,771.05	10.8	TD
			9.3	BEX
37	99,479.59	1,722,758.20	10.6	TD
			9.2	BEX
38	99,507.76	1,722,786.30	11.1	WV
39	99,505.78	1,722,786.86	10.6	TC
			10.3	BEX
40	99,508.40	1,722,788.30	10.7	TC
			10.4	BEX
41	99,509.72	1,722,785.73	11.1	TC
			10.3	BEX
42	99,507.05	1,722,784.33	11.0	TC
			9.4	BEX
43	99,506.22	1,722,785.98	10.8	TC
			9.2	BEX
44	99,510.61	1,722,778.18	11.0	CB
45	99,513.13	1,722,777.49	11.0	CB

POINT	HAWAII STATE PLANE NAD 83 (1993) NORTHING (Ft)	EASTING (Ft)	ELEV (Feet) (MLW)	DESCRIP
46	99,507.41	1,722,772.28	11.1	EMH
47	99,506.78	1,722,774.71	9.9	TC
48	99,504.99	1,722,773.15	9.9	TC
49	99,505.18	1,722,770.79	9.9	TC
50	99,523.11	1,722,798.49	10.89	"1126"
51	99,661.74	1,722,885.04	10.25	"CURB"
53	99,507.05	1,722,769.55	9.9	TC
54	99,509.24	1,722,770.29	11.0	TD
			10.0	TC
55	99,506.58	1,722,777.08	9.9	TC
			9.4	BEX
56	99,489.07	1,722,772.76	8.9	BEX
57	99,486.70	1,722,776.78	8.6	BEX
58	99,484.90	1,722,776.14	8.6	BEX
59	99,486.68	1,722,771.62	8.8	BEX
60	99,486.23	1,722,771.07	9.5	BEX
61	99,483.78	1,722,776.23	9.4	BEX
62	99,486.52	1,722,777.53	9.3	BEX
63	99,487.57	1,722,777.87	9.9	BEX
64	99,490.28	1,722,772.74	10.3	TC
65	99,494.25	1,722,774.53	10.6	TC
66	99,492.93	1,722,777.17	10.4	TC
			9.7	BEX
67	99,494.28	1,722,779.04	10.1	TC
			9.1	BEX
68	99,500.17	1,722,781.26	9.8	TC
			8.8	BEX
69	99,501.53	1,722,780.94	9.7	TC
			8.9	BEX
70	99,503.95	1,722,776.83	9.2	TC
			8.9	BEX
71	99,505.40	1,722,777.92	9.4	TC
			8.6	BEX
72	99,503.34	1,722,780.65	10.1	TC
			8.6	BEX
73	99,502.38	1,722,783.14	10.3	TC
			10.0	BEX
			8.8	BEX
74	99,501.12	1,722,783.95	10.2	TC
			9.8	BEX
75	99,496.94	1,722,782.21	10.0	TC
			9.6	BEX
76	99,493.10	1,722,780.07	10.3	TC
			8.9	BEX
77	99,492.09	1,722,780.07	10.5	TC
			10.0	BEX
			8.6	BEX
78	99,503.77	1,722,784.14	9.6	TC
			8.6	BEX
79	99,506.75	1,722,780.50	9.1	TC
			8.4	BEX
80	99,492.44	1,722,778.80	10.4	CNT
81	99,493.35	1,722,777.00	9.9	CNT
82	99,493.58	1,722,776.45	9.9	CNT



TOPOGRAPHIC SURVEY MAP
TRANSFORMER F-1126A / F-1126B
POST EXCITATION
 MARINE CORPS BASE HAWAII
 KANEOHE, OAHU, HAWAII



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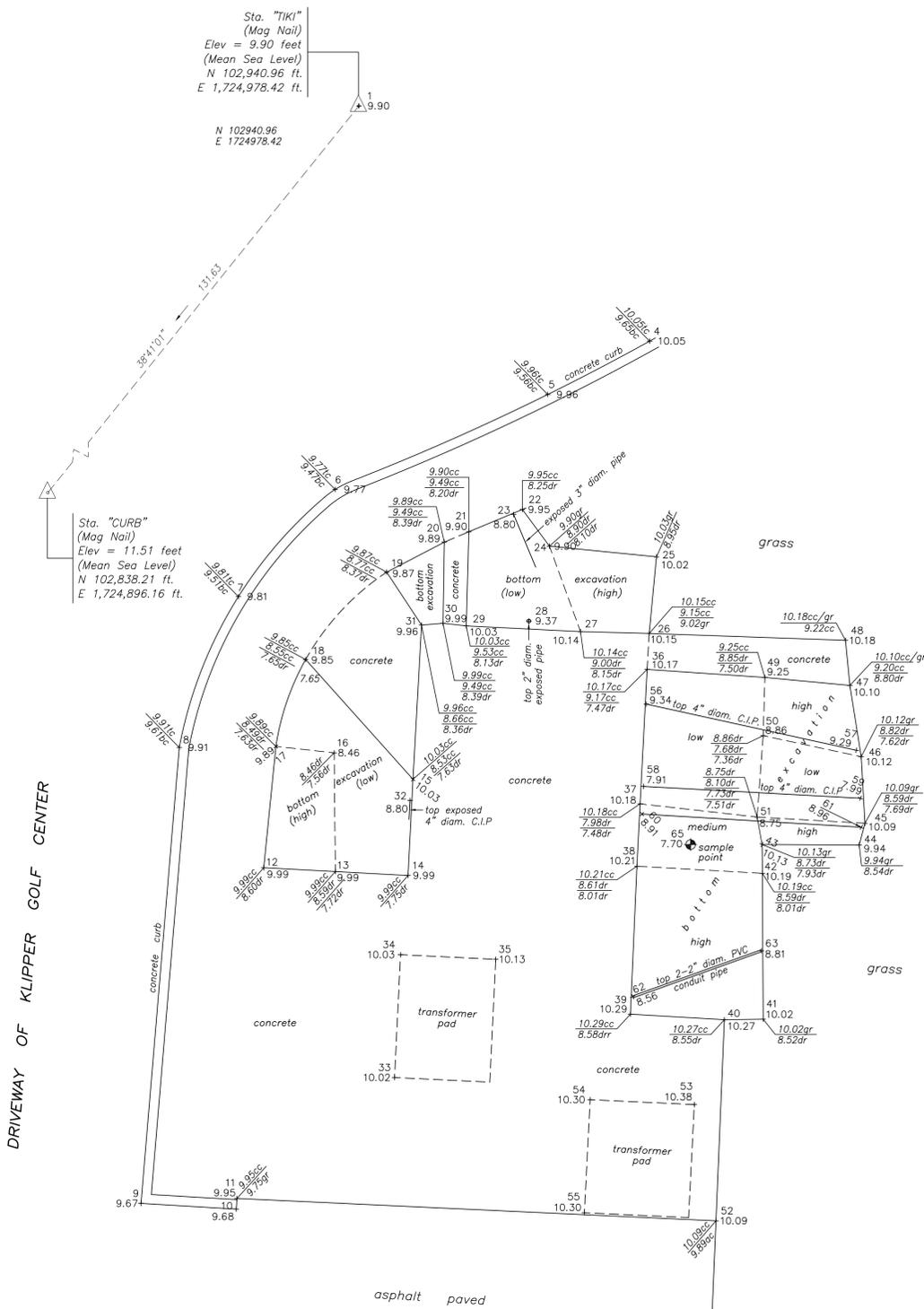
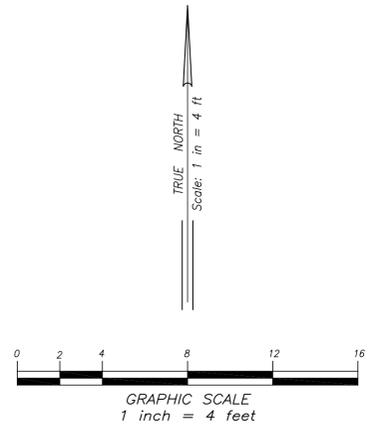
Gil P. Bumanglag
 Gil P. BUMANGLAG
 Licensed Professional Land Surveyor
 Certificate Number 8948

- LEGEND:**
- B= Bottom
 - BB= Bottom Bank
 - BEX= Bottom Excavation
 - CB= Cable Box
 - CNT= Conduit
 - Elev.= Elevation
 - EMH= Electrical Manhole
 - T= Top
 - TB= Top Bank
 - TC= Top Concrete
 - TD= Top Dirt
 - TP= Top Pipe
 - WV= Water Valve

- NOTES:**
- Elevations were referred to Sta. 114 (brass disk) of the MCBH Bench Mark Survey on September 7, 2000 with an elevation of 9.43 feet (MLW).
 - Azimuths and coordinates were referred to Government Triangulation Station "Mokapu" (TU1056) NAD 83 (1993): 104,553.855 feet North; 1,731,597.716 feet East.

POINT	HAWAII STATE PLANE NAD 83 (1993) NORTHING (Ft)	EASTING (Ft)	ELEV (Feet) (MSL)	DESCRIP
1	102,940.96	1,724,978.42	9.90	"TIKI"
2	102,838.21	1,724,896.16	11.51	"CURB"
4	102,928.59	1,724,993.65	10.05	TC
			9.65	BC
5	102,925.79	1,724,988.31	9.96	TC
			9.56	BC
6	102,920.94	1,724,977.31	9.77	TC
			9.47	BC
7	102,915.15	1,724,972.11	9.81	TC
			9.51	BC
8	102,907.22	1,724,969.02	9.91	TC
			9.61	BC
9	102,883.24	1,724,967.02	9.67	TC
10	102,882.94	1,724,972.00	9.68	TC
11	102,883.50	1,724,972.06	9.95	Cc
			9.75	Gr
12	102,900.90	1,724,973.44	9.99	Cc
			8.60	Dr
13	102,900.70	1,724,977.19	9.99	Cc
			8.59	Dr
			7.72	Dr
14	102,900.49	1,724,981.00	9.99	Cc
			7.75	Dr
15	102,905.55	1,724,981.25	10.03	Cc
			8.53	Dr
			7.63	Dr
16	102,906.94	1,724,977.13	8.46	Dr
			7.56	Dr
17	102,907.28	1,724,974.08	9.89	Cc
			8.49	Dr
			7.63	Dr
18	102,911.85	1,724,975.64	9.85	Cc
			8.55	Dr
			7.65	Dr
19	102,916.44	1,724,979.88	9.87	Cc
			8.77	Cc
			8.37	Dr
20	102,918.02	1,724,982.90	9.89	Cc
			9.49	Cc
			8.39	Dr
21	102,918.57	1,724,984.18	9.90	Cc
			9.49	Cc
			8.20	Dr
22	102,919.74	1,724,986.98	9.95	Cc
			8.25	Dr
23	102,919.42	1,724,986.60	8.80	Pipe
24	102,917.81	1,724,988.40	9.90	Gr
			8.90	Dr
			8.10	Dr
25	102,917.25	1,724,994.00	10.03	Gr
			8.95	Dr
26	102,913.22	1,724,993.62	10.15	Cc
			9.15	Cc
			9.02	Gr
27	102,913.31	1,724,990.03	10.14	Cc
			9.00	Dr
			8.15	Dr
28	102,913.87	1,724,987.32	9.37	Pipe
29	102,913.61	1,724,894.04	10.03	Cc
			9.53	Cc
			8.13	Dr
30	102,913.76	1,724,982.83	9.99	Cc
			9.49	Cc
			8.39	Dr
31	102,913.66	1,724,981.71	9.96	Cc
			8.36	Dr
32	102,904.47	1,724,981.03	8.80	Pipe
33	102,889.86	1,724,980.29	10.02	Pad
34	102,896.32	1,724,980.60	10.03	Pad
35	102,986.08	1,724,985.59	10.13	Pad
36	102,911.32	1,724,993.51	10.17	Cc
			9.17	Cc
			7.47	Dr
37	102,904.26	1,724,993.15	10.18	Cc
			7.98	Dr
			7.48	Dr
38	102,900.97	1,724,992.98	10.21	Cc
			8.61	Dr
			8.01	Dr
39	102,893.19	1,724,992.64	10.29	Cc
			8.58	Dr
40	102,892.90	1,724,997.56	10.27	Cc
			8.55	Dr
41	102,892.93	1,724,999.59	10.02	Gr
			8.52	Dr
42	102,900.60	1,724,999.55	10.19	Cc
			8.59	Dr
			8.01	Dr
43	102,902.12	1,724,999.53	10.13	Gr
			8.73	Dr
			7.93	Dr
44	102,902.09	1,725,004.62	9.94	Gr
			8.54	Dr
45	102,903.23	1,725,004.92	10.09	Gr
			8.59	Dr
			7.69	Dr

POINT	HAWAII STATE PLANE NAD 83 (1993) NORTHING (Ft)	EASTING (Ft)	ELEV (Feet) (MSL)	DESCRIP
46	102,906.73	1,725,004.72	10.12	Gr
			8.82	Dr
			7.62	Dr
47	102,910.49	1,725,004.13	10.10	Cc
			9.20	Cc
			8.80	Dr
48	102,912.86	1,725,003.90	10.18	Cc/Gr
			9.22	Cc
49	102,910.90	1,724,999.68	9.25	Cc
			8.85	Dr
			7.50	Dr
50	102,907.84	1,724,999.59	8.86	Dr
			7.68	Dr
			7.36	Dr
51	102,903.56	1,724,999.27	8.75	Dr
			8.10	Dr
			7.73	Dr
			7.51	Dr
52	102,882.33	1,724,997.12	10.09	Cc
			9.89	Cc
53	102,888.43	1,724,995.99	10.38	Pad
54	102,888.70	1,724,990.53	10.30	Pad
55	102,882.75	1,724,990.23	10.30	Pad
56	102,909.43	1,724,993.79	9.34	Pipe
57	102,907.07	1,725,004.08	9.29	Pipe
58	102,905.10	1,724,993.90	7.91	Pipe
59	102,904.88	1,724,998.84	7.99	Pipe
60	102,903.65	1,724,993.66	8.91	Pipe
61	102,903.07	1,725,003.98	8.96	Pipe
62	102,894.21	1,724,993.06	8.56	Pipe
63	102,896.42	1,724,999.19	8.81	Pipe
65	102,902.11	1,724,995.79	7.70	Sample



TOPOGRAPHIC SURVEY MAP
TRANSFORMER 1129
POST EXCITATION
 MARINE CORPS BASE HAWAII
 KANEOHE, OAHU, HAWAII



This work was prepared by me
 or under my supervision

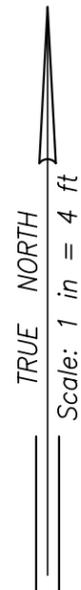
GIL P. BUMANGLAG
 Licensed Professional Land Surveyor
 Certificate Number 8948

- LEGEND:
- bc - Bottom Curb
 - cc - Top Concrete
 - C.I.P. - Cast Iron Pipe
 - dr - Dirt
 - gr - Grass
 - tc - Top Curb

- NOTES:
1. Elevations were referred to Sta. 142 (brass disk) of the MCBH Bench Mark Survey on September 7, 2000 with an elevation of 5.56 feet (MSL).
 2. Azimuths and coordinates were referred to Government Triangulation Station "Mokapu" (TU1056) NAD 83 (1993): 104,553.855 feet North; 1,731,597.716 feet East.

POINT	HAWAII STATE PLANE NAD 83 (1993)		ELEV (Feet) (MLW)	DESCRP
	NORTHING (Ft)	EASTING (Ft)		
1	100,746.72	1,723,216.60	12.0	TGrd
2	100,752.56	1,723,206.29	12.2	TGrd
3	100,743.72	1,723,201.19	12.1	TGrd
4	100,743.30	1,723,216.80	12.1	TpCor
			10.1	Bot
5	100,724.33	1,723,207.12	12.1	Pol/GR
6	100,726.46	1,723,206.20	12.4	Top
			12.2	Bot
7	100,729.26	1,723,207.59	12.4	Top
			12.2	Bot
8	100,731.89	1,723,210.30	11.7	Top
9	100,733.93	1,723,206.44	11.5	Top
10	100,734.74	1,723,211.97	10.9	Top
11	100,747.06	1,723,209.59	11.3	Top
12	100,744.86	1,723,208.42	11.4	Top
13	100,743.15	1,723,214.23	12.5	Top
			11.1	Bot
14	100,745.59	1,723,209.37	12.5	Top
			11.1	Bot
15	100,740.06	1,723,206.54	12.5	Top
			12.1	TGrd
16	100,737.67	1,723,211.51	12.5	Top
SAMPLING LOCATION MBT 488/489/490			11.1	Bot

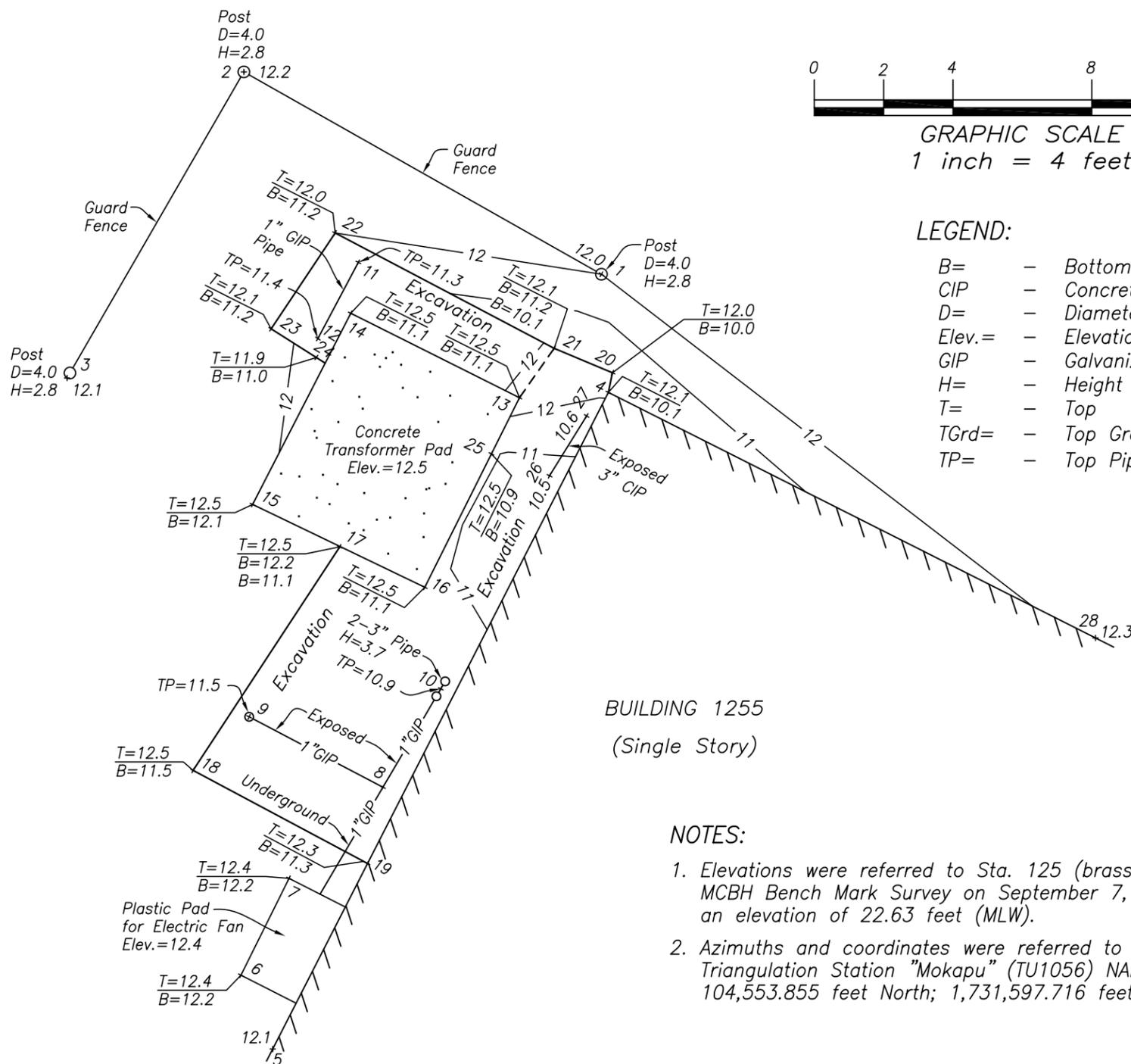
POINT	HAWAII STATE PLANE NAD 83 (1993)		ELEV (Feet) (MLW)	DESCRP
	NORTHING (Ft)	EASTING (Ft)		
17	100,738.84	1,723,209.05	12.5	Top
			12.2	TGrd
			11.1	Bot
18	100,732.38	1,723,204.83	12.5	TGrd
			11.5	Bot
19	100,729.69	1,723,209.85	12.3	Top
			11.3	Bot
20	100,743.87	1,723,216.91	12.0	TGrd
			10.0	Bot
21	100,744.58	1,723,215.23	12.1	TGrd
			11.2	Bot
			10.1	Bot
22	100,747.91	1,723,208.92	12.0	TGrd
			11.2	Bot
23	100,745.14	1,723,207.08	12.1	TGrd
			11.2	Bot
24	100,745.14	1,723,207.08	11.9	TGrd
			11.0	Bot
25	100,741.53	1,723,213.43	12.5	Top
			10.9	Bot
26	100,740.90	1,723,215.10	10.5	Top
27	100,742.62	1,723,216.17	10.6	Top
28	100,736.21	1,723,230.84	12.3	TGrd



GRAPHIC SCALE
1 inch = 4 feet

LEGEND:

- B= - Bottom
- CIP - Concrete Iron Pipe
- D= - Diameter
- Elev.= - Elevation
- GIP - Galvanized Iron Pipe
- H= - Height
- T= - Top
- TGrd= - Top Ground
- TP= - Top Pipe



BUILDING 1255
(Single Story)

NOTES:

- Elevations were referred to Sta. 125 (brass disk) of the MCBH Bench Mark Survey on September 7, 2000 with an elevation of 22.63 feet (MLW).
- Azimuths and coordinates were referred to Government Triangulation Station "Mokapu" (TU1056) NAD 83 (1993): 104,553.855 feet North; 1,731,597.716 feet East.

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GIL P. BUMANGLAG
Licensed Professional Land Surveyor
Certificate Number 8948



TOPOGRAPHIC SURVEY MAP
TRANSFORMER 1255
POST EXCAVATION
MARINE CORPS BASE HAWAII
KANEEOHE, OAHU, HAWAII

Rev. Date: Jan. 5, 2015 (change title name)
Date: February 19, 2013

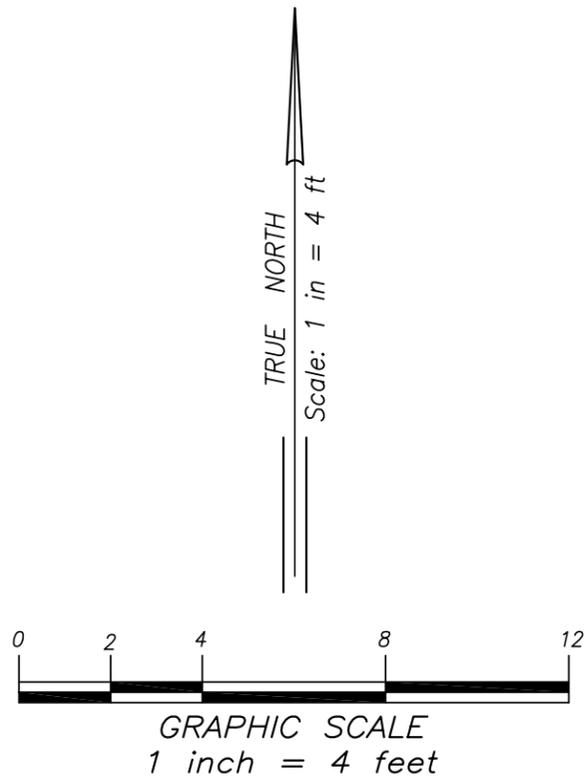
FB No. G-381: 22

c:\proj\CAPE\MARINEtrans1255R2002send10515

GIL SURVEYING SERVICES, inc.
1442 UILA STREET HONOLULU HAWAII 96818

11" x 17" = 1.3 sq. ft.

POINT	HAWAII STATE PLANE NAD 83 (1993)		ELEV (Feet) (MLW)	DESCRP
	NORTHING (Ft)	EASTING (Ft)		
1	100,039.16	1,723,155.38	11.2	TCP
			10.7	TGR
SAMPLING LOCATION MBT 486			9.9	Bot
2	100,056.19	1,723,153.94	11.3	TCP
			11.0	TGR
			10.1	Bot
3	100,058.10	1,723,158.70	11.3	TCP
			11.0	TGR
4	100,055.29	1,723,158.91	11.2	TCP
			10.8	TGR
5	100,055.76	1,723,156.04	10.9	TEB
			10.6	TGR
			9.9	Bot
6	100,061.13	1,723,149.52	10.9	TEB
			10.6	TGR
			9.9	Bot
7	100,063.41	1,723,145.96	11.0	TEB
			10.7	TGR
8	100,059.28	1,723,143.04	10.9	TEB
			10.5	TGR

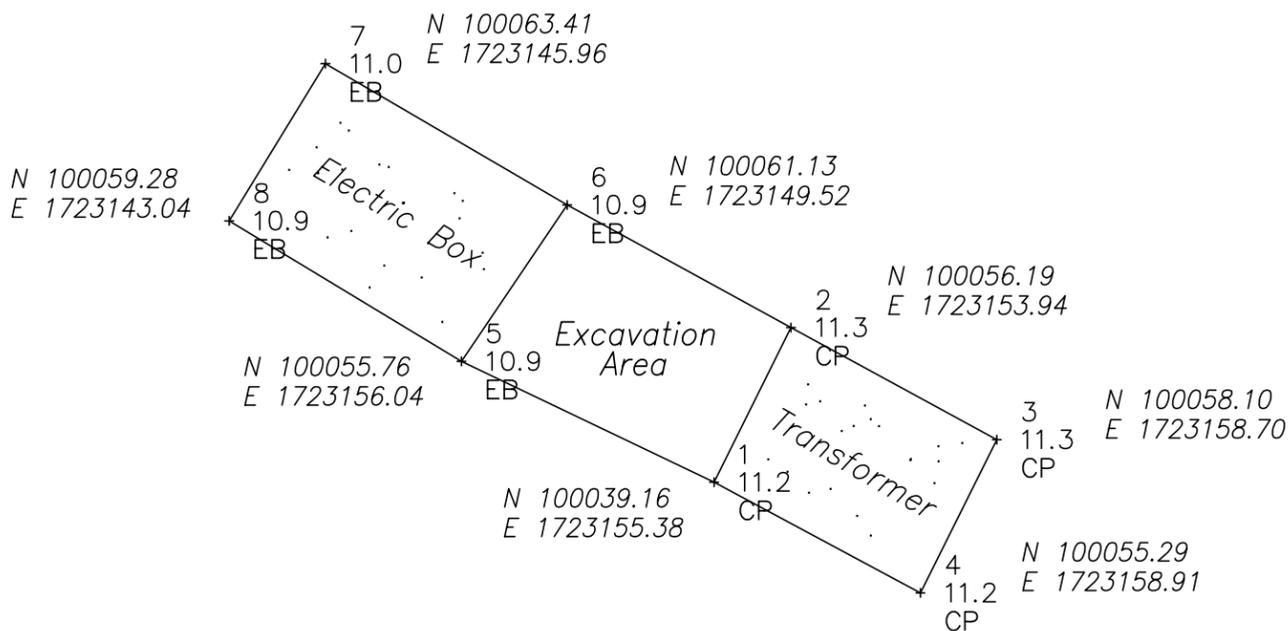


LEGEND:

Bot Bottom Excavation
 TCP Top Concrete Pad
 TEP Top Electric Box
 TGR Top Ground

NOTES:

- Elevations were referred to Sta. 114 (brass disk) of the MCBH Bench Mark Survey on September 7, 2000 with an elevation of 9.43 feet (MLW).
- Azimuths and coordinates were referred to Government Triangulation Station "Mokapu" (TU1056) NAD 83 (1993): 104,553.855 feet North; 1,731,597.716 feet East.



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 Certificate Number 8948

TOPOGRAPHIC SURVEY MAP

**TRANSFORMER 252B
 POST EXCAVATION**

MARINE CORPS BASE HAWAII
 KANEOHE, OAHU, HAWAII

Rev. Date: Jan. 5, 2015 (change title name)
 Date: February 19, 2013

FB No. G-381: 22
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GIL SURVEYING SERVICES, inc.
 1442 UILA STREET HONOLULU HAWAII 96818

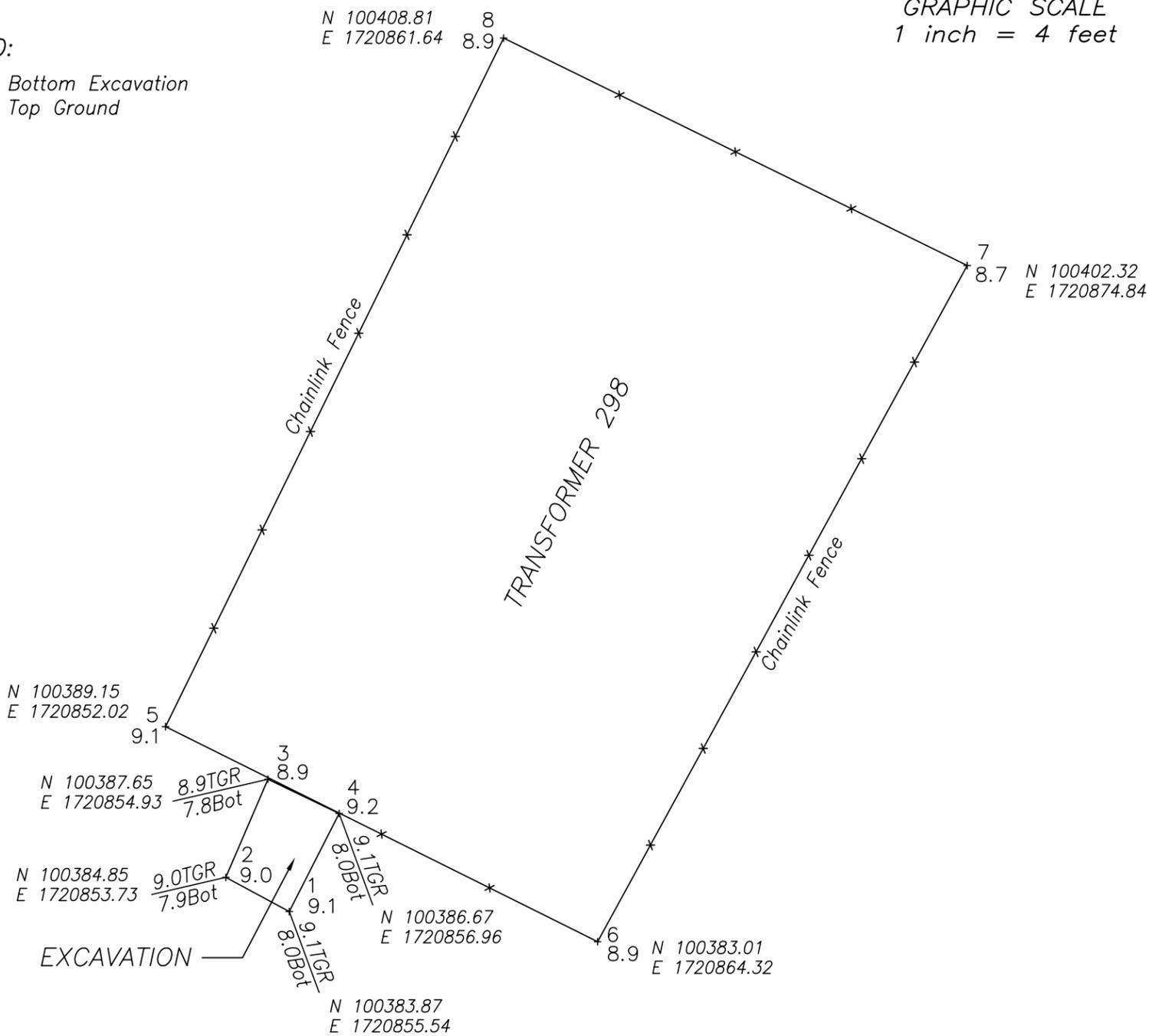
11" x 17" = 1.3 sq. ft.

POINT	HAWAII STATE PLANE NAD 83 (1993)		ELEV (Feet) (MLW)	DESCRP
	NORTHING (Ft)	EASTING (Ft)		
1	100,383.87	1,720,855.54	9.1	TGR
SAMPLING LOCATION MBT 485			8.0	Bot
2	100,384.85	1,720,853.73	9.0	TGR
			7.9	Bot
3	100,387.65	1,720,854.93	8.9	TGR
			7.8	Bot
4	100,386.67	1,720,856.96	9.1	TGR
			8.0	Bot
5	100,389.15	1,720,852.02	9.1	TGR
6	100,383.01	1,720,864.32	8.9	TGR
7	100,402.32	1,720,874.84	8.7	TGR
8	100,408.81	1,720,861.64	8.9	TGR



LEGEND:

Bot Bottom Excavation
TGR Top Ground



NOTES:

1. Elevations were referred to Sta. 126 (brass disk) of the MCBH Bench Mark Survey on September 7, 2000 with an elevation of 9.44 feet (MLW).
2. Azimuths and coordinates were referred to Government Triangulation Station "Mokapu" (TU1056) NAD 83 (1993): 104,553.855 feet North; 1,731,597.716 feet East.



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TOPOGRAPHIC SURVEY MAP
TRANSFORMER 298
POST EXCAVATION

MARINE CORPS BASE HAWAII
KANEEOHE, OAHU, HAWAII

Rev. Date: Jan. 5, 2015 (change title name)
Date: February 19, 2013

FB No. G-381: 22
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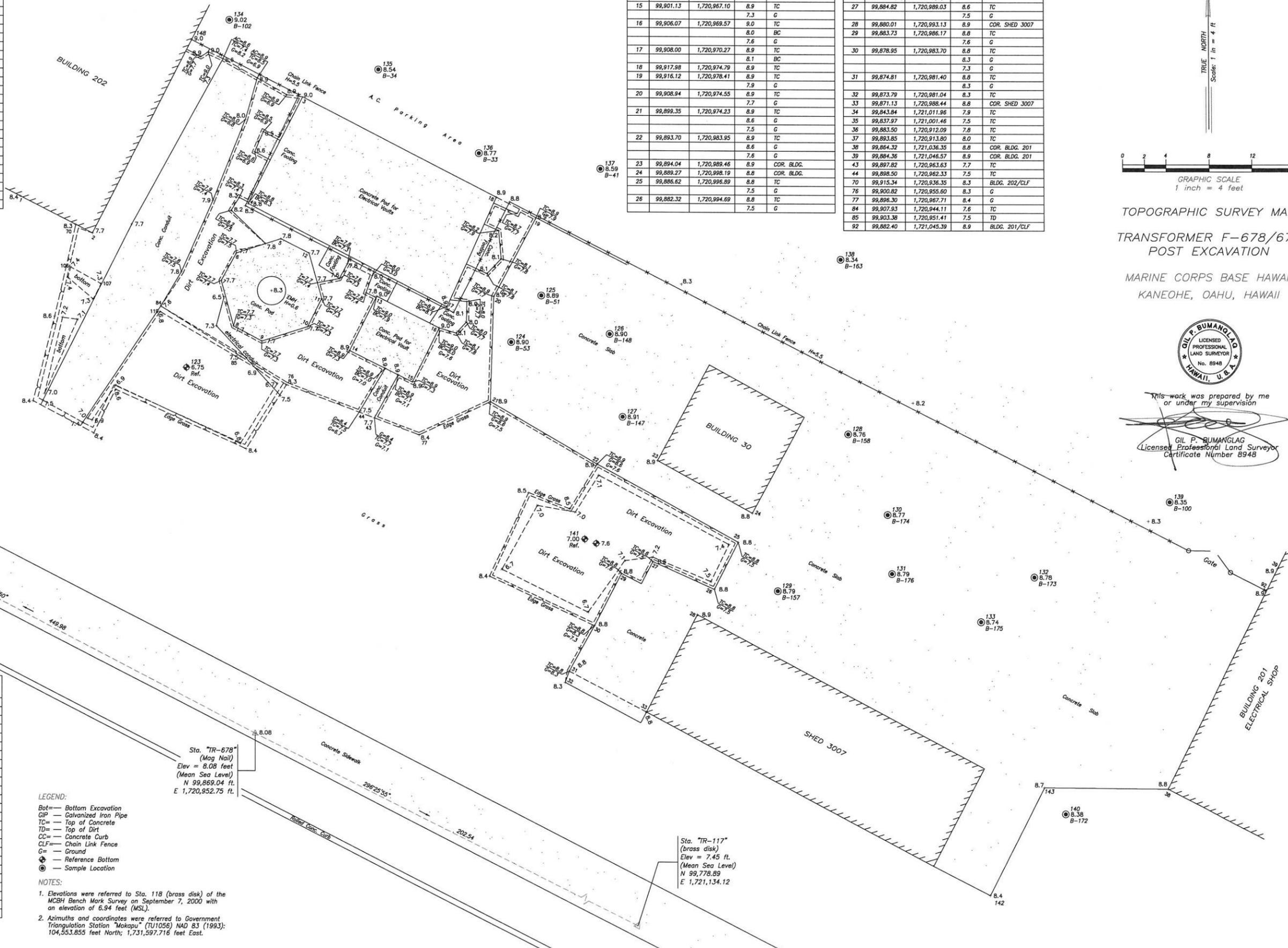
GIL SURVEYING SERVICES, inc.
1442 UILA STREET HONOLULU HAWAII 96818

11" x 17" = 1.3 sq. ft.

POINT	HAWAII STATE PLANE NAD 83 (1993) NORTHING (FT)	EASTING (FT)	ELEV (Feet) (MLW)	DESCRIPTION
1	99,917.92	1,720,931.25	8.4	CDR. BLDG
2	99,914.56	1,720,937.88	7.7	CDR. BLDG
3	99,927.05	1,720,957.09	9.0	TC
4	99,917.31	1,720,952.09	8.8	TC
5	99,914.12	1,720,955.11	7.8	TC
6	99,912.80	1,720,951.02	7.7	TC
7	99,910.30	1,720,949.64	7.7	TC
8	99,906.14	1,720,950.77	7.7	TC
9	99,904.79	1,720,953.37	7.7	TC
10	99,906.13	1,720,957.55	7.7	TC
11	99,908.68	1,720,958.83	7.7	TC
12	99,912.83	1,720,957.66	7.7	TC
13	99,908.93	1,720,963.85	9.0	TC
14	99,903.96	1,720,961.36	8.9	TC
			7.3	G

POINT	HAWAII STATE PLANE NAD 83 (1993) NORTHING (FT)	EASTING (FT)	ELEV (Feet) (MLW)	DESCRIPTION
15	99,901.13	1,720,967.10	8.9	TC
			7.3	G
16	99,906.07	1,720,969.57	9.0	TC
			8.0	BC
			7.6	G
17	99,908.00	1,720,970.27	8.9	TC
			8.1	BC
18	99,917.98	1,720,974.79	8.9	TC
19	99,916.12	1,720,978.41	8.9	TC
			7.9	G
20	99,908.94	1,720,974.55	8.9	TC
			7.7	G
21	99,899.35	1,720,974.23	8.9	TC
			8.6	G
			7.5	G
22	99,893.70	1,720,983.95	8.9	TC
			8.6	G
			7.6	G
23	99,894.04	1,720,989.46	8.9	CDR. BLDG.
24	99,889.27	1,720,988.19	8.8	CDR. BLDG.
25	99,886.62	1,720,996.89	8.8	TC
			7.5	G
26	99,882.32	1,720,994.69	8.8	TC
			7.5	G

POINT	HAWAII STATE PLANE NAD 83 (1993) NORTHING (FT)	EASTING (FT)	ELEV (Feet) (MLW)	DESCRIPTION
27	99,884.82	1,720,988.03	8.6	TC
			7.5	G
28	99,880.01	1,720,993.13	8.9	CDR. SHED 3007
29	99,883.73	1,720,986.17	8.8	TC
			7.6	G
30	99,878.95	1,720,983.70	8.8	TC
			8.3	G
			7.3	G
31	99,874.81	1,720,981.40	8.8	TC
			8.3	G
32	99,873.79	1,720,981.04	8.3	TC
33	99,871.13	1,720,988.44	8.8	CDR. SHED 3007
34	99,843.84	1,721,011.96	7.9	TC
35	99,837.97	1,721,001.46	7.5	TC
36	99,883.50	1,720,912.09	7.8	TC
37	99,883.85	1,720,913.80	8.0	TC
38	99,864.32	1,721,036.35	8.8	CDR. BLDG. 201
39	99,864.36	1,721,046.57	8.9	CDR. BLDG. 201
43	99,897.82	1,720,963.63	7.7	TC
44	99,898.50	1,720,962.33	7.5	TC
70	99,915.34	1,720,936.35	8.3	BLDG. 202/CLF
76	99,900.82	1,720,955.60	8.3	G
77	99,896.30	1,720,967.71	8.4	G
84	99,907.83	1,720,944.11	7.6	TC
85	99,903.38	1,720,951.41	7.5	TD
92	99,882.40	1,721,045.39	8.9	BLDG. 201/CLF



TOPOGRAPHIC SURVEY MAP
 TRANSFORMER F-678/678
 POST EXCAVATION
 MARINE CORPS BASE HAWAII
 KANEOHE, OAHU, HAWAII



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 GIL P. BUMANLAG
 Licensed Professional Land Surveyor
 Certificate Number 8948

Sta. "TR-118"
 (brass disk)
 Elev. = 6.94 ft.
 (Mean Sea Level)
 N 100,075.52
 E 1,720,552.94

Sta. "TR-678"
 (Mag Nail)
 Elev. = 8.08 feet
 (Mean Sea Level)
 N 99,869.04 ft.
 E 1,720,952.75 ft.

Sta. "TR-117"
 (brass disk)
 Elev. = 7.45 ft.
 (Mean Sea Level)
 N 99,778.89
 E 1,721,134.12

POINT	HAWAII STATE PLANE NAD 83 (1993) NORTHING (FT)	EASTING (FT)	ELEV (Feet) (MSL)	DESCRIPTION
106	99,911.45	1,720,935.90	7.4	Bot
107	99,908.54	1,720,937.96	7.4	Bot
119	99,907.44	1,720,944.04	6.8	Bot
123	99,902.35	1,720,946.46	6.75	Reference
124	99,904.79	1,720,976.12	8.90	B-53
125	99,909.05	1,720,978.88	8.89	B-51
126	99,905.58	1,720,985.11	8.90	B-148
127	99,898.02	1,720,986.28	8.91	B-147
128	99,896.51	1,721,007.01	8.76	B-158
129	99,882.18	1,721,000.52	8.79	B-157
130	99,889.17	1,721,010.62	8.77	B-174
131	99,883.79	1,721,011.01	8.79	B-176
132	99,883.51	1,721,024.09	8.78	B-173
133	99,879.43	1,721,019.19	8.74	B-175
134	99,934.02	1,720,950.36	9.02	B-102
135	99,929.57	1,720,963.88	8.54	B-34
136	99,921.99	1,720,973.19	8.77	B-33
137	99,920.61	1,720,984.28	8.59	B-41
138	99,912.43	1,721,006.35	8.34	B-163
139	99,890.41	1,721,036.57	8.35	B-100
140	99,862.00	1,721,026.96	8.38	B-172
141	99,886.84	1,720,982.83	7.00	Reference
142	99,854.58	1,721,020.02	8.4	CC
143	99,864.41	1,721,025.00	8.7	CC
148	99,932.21	1,720,946.91	9.0	BLDG. 202/CLF

LEGEND:
 Bot - Bottom Excavation
 GIP - Galvanized Iron Pipe
 TC - Top of Concrete
 TD - Top of Dirt
 CC - Concrete Curb
 CLF - Chain Link Fence
 G - Ground
 ● - Reference Bottom
 ⊙ - Sample Location

NOTES:
 1. Elevations were referred to Sta. 118 (brass disk) of the MCBH Bench Mark Survey on September 7, 2000 with an elevation of 6.94 feet (MSL).
 2. Azimuths and coordinates were referred to Government Triangulation Station "Mokapu" (TU1056) NAD 83 (1993): 104,553.855 feet North; 1,731,597.716 feet East.

Rev. Date: Jan. 5, 2015 (change title name)
 Rev. Date: April 29, 2014
 Date: November 21, 2013
 FB No. G-381; 53; G-395; 50
 c:\pro\cape\marinetrans678originalREV10515

**Attachment 5
Data Evaluation Report**

DATE: 8 August 2014
RECIPIENT: Jonathan Borr (jborr@cape-inc.com)
PREPARER: Richard Westmoreland (rwestmoreland@cape-inc.com)
COPY: Chemistry svcs@cape-inc.com
PROJECT #: 01804.111.005
PROJECT NAME: Time Critical Removal Action (TCRA) for Various Transformers (Site 26), Marine Corps Base Hawaii (MCBH) Kaneohe Bay, Oahu, Hawaii
DESCRIPTION: Delineation Soil Samples

ITEMS SUBMITTED UNDER THIS TRANSMITTAL:

ITEM CLASSIFICATION	ITEM DESCRIPTION	# OF COPIES
<input type="checkbox"/> Original Analytical Data (Hardcopy/CD)		
<input type="checkbox"/> Lab Reports – Annotated Form 1s	Delineation Soil Samples, 28 Sample Delivery Groups (SDGs)	1
<input type="checkbox"/> EDDs		
<input type="checkbox"/> Quality Assurance Reports		
<input type="checkbox"/> Planning Document		
<input type="checkbox"/> Proposal Information		
<input type="checkbox"/> Lab SOW and Pricing		

ACTION CODE FOR RECIPIENT:

- For Recipient Use
- Revise and Resubmit to Preparer
- No exception taken
- Revise as noted


PREPARER SIGNATURE
PREPARER COMMENTS:

The purpose of this report is to provide an explanation of the data validation results and identify those samples requiring data validation qualifiers.

A total of 459 samples and 46 field duplicate (FD) samples are reported in this Data Evaluation Report (DER). A total of 620 samples, including FDs, were collected, but some were collected and not analyzed, and some were confirmation samples and were included in other reports.

All samples were analyzed for Polychlorinated Biphenyls (PCBs) using the Environmental Protection Agency (EPA) Method SW-846 8082, and were validated using the Naval Facilities Engineering Command (NAVFAC) *Standard and Full Data Validation Procedure for Polychlorinated Biphenyls as Aroclors by SW-846 Method 8082*, Procedure Number II-F, February 2007.

Results reported below the Level of Quantitation (LOQ) were qualified “J”, estimated, because there is a possibility of false positive results or misidentification of PCBs at these quantitation levels.

In the PCB analysis, PCBs generate multiple peaks for each PCB. For this project, there were three PCBs reported: 1254, 1260 and 1262. The peaks from some of these PCBs overlap in the elution pattern, and sometimes it is difficult

to positively identify a specific PCB. When samples report multiple PCBs that share peaks, those PCBs are qualified “J”, estimated, as the identification and quantification of those PCBs are suspect.

Comments on the Data Validation and Qualification of Data by SDG

Only problems identified during the data validation process that caused reported data to be qualified are addressed in this DER. It should be understood some problems were identified that did not cause data to be qualified and thus are not addressed, and some data were qualified that were not reported, so those were not addressed.

Sometimes samples were analyzed at multiple dilutions due to elevated levels of PCBs in the samples. In some cases multiple analyses were reported for the same sample in the data package. The data validator made a determination, based on the results of the data validation process, which of the results to submit for each sample.

Sporadic problems with single peaks in the multi-peak PCB pattern in the calibrations are not cause for qualification alone, as long as at least 3 of the 5 peaks are acceptable. Manual integrations were used successfully to address problems such as overlapping peaks, and were acceptably documented.

SDG 580-35831-1

Samples MBT007, MBT013, MBT015 and MBT037 exhibited elevated surrogate recoveries and positive results were qualified “J” in these samples.

Sample MBT020 was used for the Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses and PCB 1260 exhibited an elevated recovery. PCB 1260 was qualified “J” in this sample.

Samples MBT015 (PCBs 1016/1254), MBT045 (PCBs 1016/1260), and MBT046 (PCB 1260) failed the Relative Percent Difference (RPD) for Second Column Confirmation and the PCBs shown were qualified “J” in these samples.

Samples MBT044, MBT045, MBT046, MBT047, MBT048, MBT050, and MBT051 were qualified “J” for PCBs 1254 and 1260 due to shared peaks. Samples MBT015, MBT045, MBT046, MBT048, MBT050 and MBT051 were qualified “J” for PCBs 1016, 1254 and 1260 due to shared peaks.

SDG 580-35831-2

A Continuing Calibration Verification (CCV) failed criteria for PCBs 1248 and 1268. Samples MBT026 and MBT027 were associated with this CCV and these two PCBs were qualified “UJ”.

SDG 580-35845-1

Sample MBT056 was used for the Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses and PCB 1260 exhibited an elevated recovery. PCB 1260 was qualified “J” in this sample.

SDG 580-35845-2

No qualification of data was required.

SDG 580-35845-3

No qualification of data was required.

SDG 580-35884-1

A number of the samples exhibited elevated surrogate recoveries, but only Samples MBT139, MBT142, MBT145, MBT147, MBT156 and MBT160 required qualification of data. Positive results in these 6 samples were qualified "J".

Sample MBT167 was used for the Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses and PCB 1260 exhibited an elevated recovery. PCB 1260 was qualified "J" in this sample.

Samples MBT131, MBT133, and MBT170 failed the Relative Percent Difference (RPD) for Second Column Confirmation for PCB 1260 and Sample MBT181 failed for PCB 1254. These PCBs were qualified "J" in these samples.

Sample MBT181 was qualified "J" for PCBs 1254, 1260, 1262 and 1268 due to shared peaks.

A number of CCVs failed criteria, but only PCB 1260 in Sample MBT174 was qualified "J".

SDG 580-35884-2

Samples MBT159 and MBT177 exhibited elevated surrogate recoveries and positive results were qualified "J".

Samples MBT126, MBT127, and MBT177 failed the Second Column Confirmation RPD and were qualified "J" for PCB 1260.

Samples MBT125, MBT126, MBT127, MBT152, MBT153 and MBT154 were qualified "J" for PCBs 1260 and 1262 due to shared peaks.

Samples MBT157, MBT158, MBT159, MBT177, MBT178, MBT179 and MBT180 were qualified "UJ" for PCB 1016 and "J" for PCB 1260 due to problems with the CCV. Samples MBT122, MBT123, and MBT124 were qualified "UJ" for PCB 1260 and Samples MBT125, MBT126, and MBT127 were qualified "J" for PCB 1260 due to problems with the CCV.

PCB 1260 in Samples MBT158 and MBT159 were reported from a re-analyzed sample that missed holding time and were qualified "J".

SDG 580-35890-1

Sample MBT207 exhibited elevated surrogate recoveries and positive results were qualified "J" in this sample.

Sample MBT207 was used for the Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses and PCB 1260 exhibited an elevated recovery. PCB 1260 was qualified "J" in this sample.

Samples MBT218 and MBT219 failed the Second Column Confirmation RPD and were qualified "J" for PCB 1262.

Samples MBT182, MBT183, MBT184, MBT187, MBT192, MBT193, MBT194, MBT196, MBT197, MBT198, MBT199, MBT204, MBT205, MBT206, MBT207, MBT210, MBT215, MBT216, MBT217, MBT218 and MBT219 were qualified "J" for positive results due to shared peaks.

Samples MBT187, MBT194, MBT207, MBT208, MBT209, MBT218, MBT219, MBT220, MBT221, MBT225, MBT226, MBT227, MBT231, MBT232 and MBT233 were qualified "UJ" for PCB 1016 due to CCV problems.

Samples MBT182, MBT184, MBT216, MBT217, MBT218, and MBT219 were qualified “J” for PCB 1260 due to CCV problems.

Samples MBT220, MBT221, MBT225, MBT226, MBT227, MBT231, MBT232 and MBT233 were qualified “UJ” for PCB 1260 due to CCV problems.

SDG 580-35890-2

Samples MBT188 and MBT214 did not meet the Second Column Confirmation RPD criteria and PCB 1260 was qualified “J” in these samples.

SDG 580-35890-3

Sample MBT211 exhibited low surrogate recoveries and was reanalyzed outside of holding times. The reanalyzed results were reported and qualified “UJ” for non-detects and “J” for positive results.

SDG 580-35899-1

Sample MBT271 exhibited low surrogate recoveries and non-detects were qualified “UJ” and positive results were qualified “J” in that sample.

Samples MBT252, MBT253, and MBT264 failed the RPD for Second Column Confirmation for PCB 1260 and Samples MBT252, MBT253, MBT278, MBT280 and MBT281 failed for PCB 1262. These PCBs were qualified “J” in these samples.

Samples MBT264-MBT270 were qualified “J/UJ” for PCB 1260 due to CCV problems. Samples MBT284- MBT290 were qualified “UJ” for PCB 1221.

Samples MBT240-MBT241, MBT243-MBT253, MBT259-MBT263, MBT266-MBT272, MBT274-MBT281, and MBT283-MBT292 were qualified “J” for PCBs 1260 and 1262 due to shared peaks.

SDG 580-35900-1

Samples MBT322 and MBT323 failed the RPD for Second Column Confirmation and PCB 1260 was qualified “J” in both samples.

Samples MBT296-MBT299, MBT315-MBT316, and MBT 335-MBT338 were qualified “J” for PCBs 1260 and 1262 due to shared peaks.

Samples MBT322-MBT323, MBT330, and MBT335-MBT338 were qualified “J for PCB 1016 due to CCV problems. Samples MBT336-MBT338 were qualified “J” for PCB 1260 due to CCV problems.

SDG 580-35900-2

Samples MBT333 and MBT334 failed the Second Column Confirmation RPD and PCB 1262 was qualified “J” in both samples.

Samples MBT331-MBT334 were qualified “J” for PCBs 1260 and 1262 due to shared peaks.

Samples MBT333-MBT334 were qualified "UJ" for PCBs 1242, 1248, and 1268 due to CCV problems.

SDG 580-35900-3

Sample MBT317 was qualified "UJ" for PCBs 1016 and 1260 due to CCV problems. Sample MBT318 was qualified "UJ" for PCBs 1242, 1248 and 1268 due to CCV problems.

SDG 580-35926-1

Samples MBT361, MBT369, MBT372, MBT382 and MBT405-MBT407 exhibited elevated surrogate recoveries and positive results in these samples were qualified "J". Sample MBT365 exhibited low surrogate recoveries and results were qualified "J/UJ" in this sample.

Sample MBT348 was used for the MS/MSD and results in this sample were qualified "J/UJ" due to low recoveries.

Samples MBT355, MBT383-MBT384, and MBT392-MBT393 failed the Second Column Confirmation RPD and were qualified "J" for PCB 1262. Samples MBT361, MBT393, MBT404, MBT406 and MBT407 failed the Second Column Confirmation RPD and were qualified "J" for PCB 1260.

Samples MBT339-MBT344, MBT346-MBT348, MBT355-MBT363, MBT365-MBT374, MBT382-MBT393, MBT395, MBT402, and MBT404-MBT407 were qualified "J" for PCBs 1260 and 1262 due to shared peaks.

SDG 580-35926-2

Sample MBT349 was used for the MS/MSD and results in this sample were qualified "J" for PCB 1260.

Samples MBT351 and MBT354 exceeded the Second Column Confirmation RPD and were qualified "J" for PCBs 1260 and 1262.

Samples MBT349-MBT354 were qualified "J" for PCBs 1260 and 1262 for shared peaks.

SDG 580-35926-3

Samples MBT378-MBT380 were qualified "J" for PCBs 1260 and 1262 for shared peaks.

SDG 580-35926-4

No qualification of data was required.

SDG 580-36482-1

Samples MBT424-MBT426, MBT430, MBT438, MBT440-MBT442, and MBT444-MBT445 exceeded the Second Column Confirmation RPD and were qualified "J" for PCB 1260.

Sample MBT411 was qualified "J" for PCBs 1260 and 1262 due to shared peaks.

SDG 580-36483-1

Samples MBT451, MBT457, and MBT459 exceeded the Second Column Confirmation RPD and were qualified "J" for PCB 1260.

Samples MBT458-MBT469 and MBT475-MBT478 were qualified “J” for PCB 1260, and Samples MBT458-MBT463 were qualified “UJ” for PCB 1262 due to CCV problems.

SDG 580-36483-2

All samples in this SDG missed the 14-day holding time (19 days) and all results were qualified “J/UJ” in all samples.

Positive results in Sample MBT480 were qualified “J” due to shared peaks.

Samples MBT470-MBT474 and MBT479-MBT481 exhibited CCV problems for PCBs 1232, 1242, 1248, 1262 and 1268. These PCBs were qualified “J/UJ” in these samples.

SDG 580-37096-1

Sample MBT503 exhibited elevated surrogate recoveries and positive results were qualified “J”.

Samples MBT492-MBT508, and MBT410-MBT411 were qualified “J/UJ” for PCB 1260 due to CCV problems. Samples MBT497-MBT511 were qualified “J/UJ” for PCB 1016 due to CCV problems.

SDG 580-37820-1

PCB 1254 was qualified “J/UJ” in all samples in the SDG due to problems with the Initial Calibration Verification (ICV).

Sample MBT543 was qualified “J” for PCBs 1254 and 1260 due to shared peaks.

Samples MBT538 and MBT543 were qualified “J” for PCB 1260 because they exceeded the Second Column Confirmation RPD.

Samples MBT561-MBT563 were qualified “J” for PCB 1260 due to CCV problems.

SDG 580-37820-2

PCB 1254 was qualified “J/UJ” in all samples in the SDG due to problems with the ICV.

SDG 580-39417-1

PCB 1260 in all three original undiluted analyses were qualified “R” because they exceeded the upper calibration range of the instrument.

PCB 1260 in Samples MBT578DL and MBT579DL were qualified “J” due to elevated surrogate recoveries.

PCB 1260 was qualified “J” in the non-diluted analyses due to an ICV problem. However, these samples were previously qualified “R” because they exceeded the upper calibration range of the instrument.

PCB 1260 was qualified “J” in the DL samples due to CCV problems.

SDG 580-39497-1

Samples MBT592DL and MBT593 exhibited elevated surrogate recoveries. Positive results in both samples were qualified "J".

The ICV for PCB 1260 failed criteria in both columns. PCB 1260 was qualified "J" in all samples.

There were CCV problems with PCB 1260, but all PCB 1260 results were already qualified.

SDG 580-41230-1

The PCB 1260 in all of the undiluted analyses exceeded the upper calibration range and were qualified "R". For the non-detected PCBs, the results were reported off the original undiluted analyses because these results were reported off the primary column and no qualification of this data was required.

PCB 1254 failed criteria for all 5 peaks in the initial calibration (IC), and PCB 1254 data were qualified "UJ" in all three samples.

All of the samples were qualified "UJ" for PCB 1016 and "J" for PCB 1260 due to CCV problems.

All of the PCB 1260 results were qualified "J" due to elevated surrogate recoveries in all of the analyses.

SDG 320-6695-1

Sample MBT603 was used for the MS/MSD. PCBs 1016 and 1260 were outside of criteria and both of these PCBs were qualified "J" for positive results and "R" for non-detects.

Samples MBT603-MBT605 and MBT607 were qualified "J" for PCB 1260 because of shared peaks and the laboratory reported PCB 1254 and 1260 as 1260.

Field Duplicates

A total of 11 FD samples failed the CAPE and NAVFAC 100 RPD limit for one or more PCB compounds. In all but two of the samples, the concentration of the PCB (s) was above 1100 ug/Kg (the Project Cleanup Goal) for at least one of the analyses. These results were reported from diluted samples and any error is multiplied by the dilution. This demonstrates good agreement between the FD analyses.

Enclosed results are Approved for Quality Assurance Release by: Richard Westmoreland, August 8, 2014.

Attachment 6
Quality Assurance Report

Time Critical Removal Action for Various Transformers, Marine Corps Base, Kaneohe Bay, Hawaii (Site 0026)

PREPARED FOR: Naval Facilities Engineering Command (NAVFAC),
Hawaii

COMPLIANCE REVIEW BY: Richard Westmoreland / Senior Chemist *Richard Westmoreland*

SENIOR REVIEW BY: Albert Iannacone / Senior Chemist *Albert Iannacone*

COPIES: Jon Borr / Project Manager

DATE: November 25, 2014 - Revision 1 (Original dated June 24, 2013)

SUBJECT: Quality Assessment for Confirmation Soil Samples, SDGs 580-36879 and 580-36921-1, Sampled January 29-30, 2013

CAPE has prepared this quality assurance report (QAR) for Confirmation soil samples collected at the Time Critical Removal Action (TCRA) for Various Transformers at Marine Corps Base Hawaii (MCBH), Kaneohe Bay, Hawaii, Site 0026, sampled January 29-30, 2013. This QAR addresses the analytical results from 5 soil samples, and one set of replicates collected at the site (A replicate is one sample collected in triplicate). The chain of custody forms provided in Attachment I present a summary of the CAPE sample identification numbers, dates of collection, sample matrices, and the analyses requested.

TestAmerica Laboratories Inc., Tacoma, WA served as the laboratory for this sampling event. Samples were analyzed for:

Total Polychlorinated Biphenyls (PCBs), SW-846 Method 8082.

The samples were analyzed in accordance with U.S. Environmental Protection Agency (EPA), *Test Methods for Evaluating Solid Waste Physical/Chemical Methods, Final Update III, SW-846*, and in accordance with *Department of Defense (DoD) Quality Systems Manual for Environmental Laboratories, Version 4.1, April 2009* and the *Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific, February 2007*.

Samples were validated against Naval Facilities Engineering Command (NAVFAC) Data Validation (DV) Procedures, as found in the *Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific, February 2007*.

The findings of this QAR are based upon the comprehensive review of the following result summaries reported according to the CAPE Level C data deliverables format: chain of custody documentation; holding times; sample preservation; laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries and reproducibilities; laboratory method blank (MB) analyses; matrix spike/matrix spike duplicate (MS/MSD) recoveries and reproducibilities; surrogate compound recoveries; initial and continuing calibration; second source recoveries; target compound identification; compound quantitation and reporting limits; internal standard areas (ISA) and retention times (RT); and evaluation of replicates. During the validation process, laboratory qualifiers applied by the laboratory were removed and replaced by data validation qualifiers, when required.

Any aspects of the data, which are not discussed in this report, should be considered qualitatively and quantitatively valid as reported, based on the deliverables reviewed. Annotated data summary reports presenting the validated results are presented in Attachment II.

GENERAL DATA QUALIFIERS

As required by NAVFAC and DoD protocols, all compounds which were qualitatively identified at concentrations below their respective Reporting Limit (RL) but above the Method Detection Limit (MDL) have been qualified with a "J" qualifier on the data summary reports to indicate they are quantitative estimates. Non-detect results have been reported at the MDL with a "U" qualifier.

COMMENTS ON DATA VALIDATION

SDG 580- 36879-1

This SDG contained one sample. The Initial Calibration Verification (ICV) for Aroclor 1254 exceeded the acceptance criteria. The ICV affects all samples in the SDG. Aroclor 1254 was non-detect (ND) in the sample and was qualified "UJ" per the NAVFAC DV procedure.

The CCVs for Aroclors 1242 and 1268, analyzed just prior to the analysis of the sample, failed criteria on the primary column. Both Aroclors were ND in the sample and qualified "UJ" per the NAVFAC DV procedure.

SDG 580-36921-1

Samples MBT485, MBT488, MBT488DL and MBT489 exceeded the 40%D criteria for the difference between the primary and confirmation columns for Aroclor 1260, and these samples were qualified "J" for Aroclor 1260.

The ICV for Aroclor 1254 exceeded the acceptance criteria. The ICV affects all samples in the SDG. Aroclor 1254 was qualified "J" for positive results and "UJ" for NDs in all samples.

Most of the Continuing Calibration Verifications (CCVs) on the Primary Column (Column 1) failed criteria. However, the laboratory reported all results off the Confirmation Column (Column 2). Four of the Confirmation Column CVs failed criteria. Per the NAVFAC DV

procedure, the samples analyzed directly after these failed CCVs are to be qualified "J" for positive results and "UJ" for NDs. The CCV for Aroclor 1268 failed criteria and all samples except the diluted (DL) samples were qualified "UJ" for Aroclor 1268. The CCVs for Aroclors 1254, 1268, and 1260 analyzed just prior to Samples MBT487DL and MBT488DL failed criteria and these Aroclors were qualified in these samples.

PRECISION

Analytical precision is a measurement of the variability associated with duplicate (two) or replicate (more than two) analyses of the same sample in the laboratory. The analytical precision is measured by the LCS/LCSD and the MS/MSD analyses. The LCS/LCSDs and MS/MSDs exhibited no problems. Analytical precision is acceptable.

Field precision is a measurement of the total variability associated with duplicate (two) or replicate (more than two) samples collected separately in the field. The replicate for this project is composed of three individual samples (triplicates). They are Samples MBT488/MBT489/MBT490. The Hawaii Department of Health (HDOH) limit for the Relative Standard Deviation (RSD) for replicates is 35%. The calculated RSD for the replicate was 32.2%. The replicate sample met the HDOH requirement. Each triplicate sample consist of 30 increments (where each increment is approximately 33 grams), resulting in an approximate 1,000 gram incremental sampling method (ISM) sample. Field precision is acceptable.

ACCURACY

Accuracy is the degree of agreement found between an observed value and an accepted reference value. Accuracy includes components of random error (variability due to imprecision) and systematic error (bias); components which are due to sampling and analytical operations and is a data quality indicator. Accuracy, therefore, reflects the total error associated with a measurement. A measurement is accurate when the value reported does not differ from the true value. Analytical accuracy is evaluated by measuring the percent recovery (%R) of known concentrations of target analytes that are spiked into site specific samples (matrix spike) or reagent water (LCS) before extraction, at known concentrations. Surrogate recoveries are also used as a measure of accuracy. Recoveries of the LCS/LCSDs and MS/MSDs are acceptable. There were no surrogate recovery problems with these samples. Accuracy is acceptable.

REPRESENTATIVENESS

Representativeness is a measure of the degree to which data accurately and precisely represent a characteristic of a population, a parameter variation at a sampling point, a process condition, or an environmental condition. Representativeness was evaluated through the review of holding time criteria and laboratory method blanks. Representativeness has also been achieved through use of the DoD, NAVFAC and EPA-approved sampling procedures and analytical methodologies. Samples were collected by CAPE following the procedures detailed in the

project-specific Sampling and Analysis Plan (SAP) and submitted for analysis using the EPA-approved analytical methods detailed in the project SAP.

Samples were shipped to the laboratory under chain of custody, received intact, and properly preserved. There was no sample receipt exceptions noted for the samples. Adherence to the procedures described in the project SAP for this sampling event ensured that the results generated are representative of environmental conditions at the time of sampling.

COMPARABILITY

Comparability is qualitative measure designed to express the confidence with which one data set may be compared with another. Adherence to proper sample collection and handling techniques described in the project SAP, and the use of the promulgated EPA analytical methods described by the project SAP ensure that this data set would be comparable with another future data set collected under the same conditions and analyzed by the same methods.

COMPLETENESS

Completeness is calculated from the aggregation of data for each method for any particular sampling event. For each method and each site, the number of valid results, divided by the number of individual analyte results initially planned, expressed as a percentage, determine the completeness for the data set. The objective for completeness for this project is 95 percent. Valid results used to meet completeness objectives are those results that provide defensible estimates of the true concentration of an analyte in a sample. These valid results include data that are not qualified and data for which QC results indicate qualification is necessary, but which may still be used to meet project objectives. Invalid results are those data for which there is an indication that the prescribed sampling or analytical protocols were not followed. There were no instances of invalid or rejected data associated with this data set and completeness was 100% for all analytes in samples reported for this project.

$$\% \text{ Completeness} = \frac{\text{number of valid (non - R flagged) results}}{\text{total \# of reported results}}$$

REPORTING LIMITS AND DATA USABILITY

All samples were analyzed such that the Reporting Limits (RL) were below the Project Cleanup Goal of 1.1 mg/kg total PCBs. No PCB results exceeded the Project Cleanup goal.

SUMMARY

The analyses were performed acceptably. Any aspect of the data not discussed in this report should be considered qualitatively and quantitatively valid, as reported, based on the deliverables reviewed. A support documentation package has been prepared for this quality assurance review and is filed in the TCRA HC-11 (Site 26) project file.

Attachment I
Chains of Custody

CAPESM **CHAIN-OF-CUSTODY RECORD**
 2302 Parklake Drive, Suite 200, Atlanta, GA 30345-2907
 Tel No: (770) 908-7200 Fax No: (770) 908-7219

¹ COC NUMBER
6195

² PROJECT NAME TCRA	⁵ PROJECT NUMBER 01664-111	⁸ LAB NAME AND CONTACT Melissa Armstrong	¹¹ FAX AND MAIL REPORTS/EDD TO RECIPIENT 1 (Name and Company) Chemistryservices	¹⁴ RECIPIENT 1 (Address, Tel. No., and Fax No.) chemistrysvcs@cape-inc.com
³ PROJECT PHASE/SITE/TASK Confirmation	⁴ CTO OR TO NUMBER HC11	⁹ LAB PHONE NUMBER Tel No: 853-922-2310	¹² FAX AND MAIL REPORTS/EDD TO RECIPIENT 2 (Name and Company) Jim Barr	¹⁵ RECIPIENT 2 (Address, Tel. No., and Fax No.) jbarr@cape-inc.com
⁶ PROJECT CONTACT Jim Barr	⁷ PROJECT TEL NO AND FAX NO 800-791-6885	¹⁰ LAB TEL NO AND FAX NO	¹³ FAX AND MAIL REPORTS/EDD TO RECIPIENT 3 (Name and Company) Carrie Plath	¹⁶ RECIPIENT 3 (Address, Tel. No., and Fax No.) cplath@cape-inc.com

¹⁷ ITEM	¹⁸ SAMPLE IDENTIFIER	¹⁹ SAMPLE DESCRIPTION/LOCATION	²⁰ MATRIX (See codes on SOP)	²¹ DATE COLLECTED	²² TIME COLLECTED	²³ DATA PKG LEVEL (see codes on SOP)	²⁴ TAT (calendar days)	²⁵ ANALYSES REQUIRED (include Method Numbers)										²⁶ SAMPLE TYPE (see codes on SOP)	²⁷ COMMENTS/SCREENING READINGS	²⁸ LAB ID (for Lab's use)
								 1. PCBs 2. PAHs 3. Metals 4. VOCs 5. SVOCs 6. Pesticides 7. PCBs 8. PAHs 9. Metals 10. VOCs 11. SVOCs 12. Pesticides 13. PCBs 14. PAHs 15. Metals 16. VOCs 17. SVOCs 18. Pesticides 19. PCBs 20. PAHs 21. Metals 22. VOCs 23. SVOCs 24. Pesticides 25. PCBs 26. PAHs 27. Metals 28. VOCs 29. SVOCs 30. Pesticides 31. PCBs 32. PAHs 33. Metals 34. VOCs 35. SVOCs 36. Pesticides 37. PCBs 38. PAHs 39. Metals 40. VOCs 41. SVOCs 42. Pesticides 43. PCBs 44. PAHs 45. Metals 46. VOCs 47. SVOCs 48. Pesticides 49. PCBs 50. PAHs 51. Metals 52. VOCs 53. SVOCs 54. Pesticides 55. PCBs 56. PAHs 57. Metals 58. VOCs 59. SVOCs 60. Pesticides 61. PCBs 62. PAHs 63. Metals 64. VOCs 65. SVOCs 66. Pesticides 67. PCBs 68. PAHs 69. Metals 70. VOCs 71. SVOCs 72. Pesticides 73. PCBs 74. PAHs 75. Metals 76. VOCs 77. SVOCs 78. Pesticides 79. PCBs 80. PAHs 81. Metals 82. VOCs 83. SVOCs 84. Pesticides 85. PCBs 86. PAHs 87. Metals 88. VOCs 89. SVOCs 90. Pesticides 91. PCBs 92. PAHs 93. Metals 94. VOCs 95. SVOCs 96. 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Pesticides 703. PCBs 704. PAHs 705. Metals 706. VOCs 707. SVOCs 708. Pesticides 709. PCBs 710. PAHs 711. Metals 712. VOCs 713. SVOCs 714. Pesticides 715. PCBs 716. PAHs 717. Metals 718. VOCs 719. SVOCs 720. Pesticides 721. PCBs 722. PAHs 723. Metals 724. VOCs 725. SVOCs 726. Pesticides 727. PCBs 728. PAHs 729. Metals 730. VOCs 731. SVOCs 732. Pesticides 733. PCBs 734. PAHs 735. Metals 736. VOCs 737. SVOCs 738. Pesticides 739. PCBs 740. PAHs 741. Metals 742. VOCs 743. SVOCs 744. Pesticides 745. PCBs 746. PAHs 747. Metals 748. VOCs 749. SVOCs 750. Pesticides 751. PCBs 752. PAHs 753. Metals 754. VOCs 755. SVOCs 756. Pesticides 757. PCBs 758. PAHs 759. Metals 760. VOCs 761. SVOCs 762. Pesticides 763. PCBs 764. PAHs 765. Metals 766. VOCs 767. SVOCs 768. Pesticides 769. PCBs 770. PAHs 771. Metals 772. VOCs 773. SVOCs 774. Pesticides 775. PCBs 776. PAHs 777. Metals 778. VOCs 779. SVOCs 780. Pesticides 781. PCBs 782. PAHs 783. Metals 784. VOCs 785. SVOCs 786. Pesticides 787. PCBs 788. PAHs 789. Metals 790. VOCs 791. SVOCs 792. Pesticides 793. PCBs 794. PAHs 795. Metals 796. VOCs 797. SVOCs 798. Pesticides 799. PCBs 800. PAHs 801. Metals 802. VOCs 803. SVOCs 804. Pesticides 805. PCBs 806. PAHs 807. Metals 808. VOCs 809. SVOCs 810. Pesticides 811. PCBs 812. PAHs 813. Metals 814. VOCs 815. SVOCs 816. Pesticides 817. PCBs 818. PAHs 819. Metals 820. VOCs 821. SVOCs 822. Pesticides 823. PCBs 824. PAHs 825. Metals 826. VOCs 827. SVOCs 828. Pesticides 829. PCBs 830. PAHs 831. Metals 832. VOCs 833. SVOCs 834. Pesticides 835. PCBs 836. PAHs 837. Metals 838. VOCs 839. SVOCs 840. Pesticides 841. PCBs 842. PAHs 843. Metals 844. VOCs 845. SVOCs 846. Pesticides 847. PCBs 848. PAHs 849. Metals 850. VOCs 851. SVOCs 852. Pesticides 853. PCBs 854. PAHs 855. Metals 856. VOCs 857. SVOCs 858. Pesticides 859. PCBs 860. PAHs 861. Metals 862. VOCs 863. SVOCs 864. Pesticides 865. PCBs 866. PAHs 867. Metals 868. VOCs 869. SVOCs 870. Pesticides 871. PCBs 872. PAHs 873. Metals 874. VOCs 875. SVOCs 876. Pesticides 877. PCBs 878. PAHs 879. Metals 880. VOCs 881. SVOCs 882. Pesticides 883. PCBs 884. PAHs 885. Metals 886. VOCs 887. SVOCs 888. Pesticides 889. PCBs 890. PAHs 891. Metals 892. VOCs 893. SVOCs 894. Pesticides 895. PCBs 896. PAHs 897. Metals 898. VOCs 899. SVOCs 900. Pesticides 901. PCBs 902. PAHs 903. Metals 904. VOCs 905. SVOCs 906. Pesticides 907. PCBs 908. PAHs 909. Metals 910. VOCs 911. SVOCs 912. Pesticides 913. PCBs 914. PAHs 915. Metals 916. VOCs 917. SVOCs 918. Pesticides 919. PCBs 920. PAHs 921. Metals 922. VOCs 923. SVOCs 924. Pesticides 925. PCBs 926. PAHs 927. Metals 928. VOCs 929. SVOCs 930. Pesticides 931. PCBs 932. PAHs 933. Metals 934. VOCs 935. SVOCs 936. Pesticides 937. PCBs 938. PAHs 939. Metals 940. VOCs 941. SVOCs 942. Pesticides 943. PCBs 944. PAHs 945. Metals 946. VOCs 947. SVOCs 948. Pesticides 949. PCBs 950. PAHs 951. Metals 952. VOCs 953. SVOCs 954. Pesticides 955. PCBs 956. PAHs 957. Metals 958. VOCs 959. SVOCs 960. Pesticides 961. 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36879

Subcontract Order - TestAmerica Honolulu (HWA0096)

Please enter the following code into the Job PO Number field for automated UDZ transfer files: Sub HON HWA0096

<u>SENDING LABORATORY:</u>	<u>RECEIVING LABORATORY:</u>
TestAmerica Honolulu 99-193 Aiea Heights Drive, Suite 121 Aiea, HI 96701 Phone: 808-486-5227 Fax: 808-486-2456 Project Manager: Kristie Reilly Client: TestAmerica Seattle	TestAmerica Seattle 5755 8th Street East Tacoma, WA 98424 Phone: (253) 922-2310 Fax: 253 Project Location: Washington Receipt Temperature: _____ °C Ice: Y / N

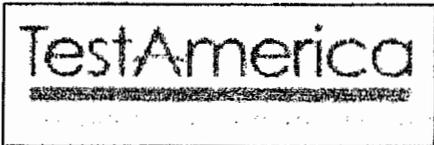
Include the following: Receipt Checklist, MI prep Bench Sheet, Client COC+Documents, SubCOC, WO Ack.

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
Sample ID: HWA0096-01 (MBT484 - Solid/Soil)						
			Sampled: 01/29/13 11:00			
Incremental Subsample Pass-through Containers Supplied: Incremental Sub-sample (analyze entire content) (B)	Hr	02/01/13	03/30/13 11:00	\$0.00	160%	

w/cS
 Sm Blue/White
 Ice other IR
 Cor: 5.9% Unc: 6.4%
 Fedex PO

Nirakim
 Released By _____
 Date/Time 1/30/13 1136

[Signature]
 Received By _____
 Date/Time 1/31/13 1000



Rush TAT Confirmation (Initial/Date) _____

Sample Receipt Checklist

Client Name: CAPE Date/ Time Received: 1/29/13 1520

Received By: Nina Kirin

Matrices: Soil Carrier: Hand Airbill#: _____

- Shipping container/cooler in good condition? Yes No Not Present
- Chain of Custody present? Yes No
- Chain of Custody Signed when relinquished and received? Yes No
- Chain of Custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sample containers on ice? Yes No Type: WCF
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Water - VOA Vials have Zero Headspace? Yes No No VOA vials present:
- Water - pH acceptable upon receipt? Yes No Not Checked:
- pH Adjusted? Yes No Final pH: _____
- Encores / MI-VOC / 5035 Vials Present? Yes No Location: _____
- Sample Filtration Needed? Yes No Filtered in Field:
- Dry Weight Corrected Results? Yes No Take Action:
- DODQSM / QAPP Project? Yes No Type: _____
- Temperature Blank Present? Yes No
- Sample Container Temperature: 4.4 °C

Comments/ Sampling Handling Notes:

Login Sample Receipt Checklist

Client: Cape Environmental Management, Inc.

Job Number: 580-36879-1

Login Number: 36879

List Source: TestAmerica Seattle

List Number: 1

Creator: Riley, Nicole

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Subcontract Order - TestAmerica Honolulu (HWB0001)

Please enter the following code into the Job PO Number field for automated UDZ transfer files: **SUB HON HWB0001**

SENDING LABORATORY:

TestAmerica Honolulu
99-193 Aiea Heights Drive, Suite 121
Aiea, HI 96701
Phone: 808-486-5227
Fax: 808-486-2456
Project Manager: Kristie Reilly
Client: TestAmerica Seattle

RECEIVING LABORATORY:

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: (253) 922-2310
Fax: 253
Project Location: Washington
Receipt Temperature: _____ °C Ice: Y / N

Copy from HWA0096. Include the following: Receipt Checklist, MI prep Bench Sheet, Client COC+Documents, SubCOC, WO Ack.

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
Sample ID: HWB0001-01 (MBTU85 - Solid/Soil)						
			Sampled: 01/30/13 09:00			
Incremental Subsample Pass-through	Hr	02/04/13	03/31/13 09:00	\$0.00	160%	
<i>Containers Supplied:</i>						
Incremental Sub-sample (analyze entire content) (B)						
Sample ID: HWB0001-02 (MBTU86 - Solid/Soil)						
			Sampled: 01/30/13 09:45			
Incremental Subsample Pass-through	Hr	02/04/13	03/31/13 09:45	\$0.00	160%	
<i>Containers Supplied:</i>						
Incremental Sub-sample (analyze entire content) (B)						
Sample ID: HWB0001-03 (MBTU87 - Solid/Soil)						
			Sampled: 01/30/13 12:00			
Incremental Subsample Pass-through	Hr	02/04/13	03/31/13 12:00	\$0.00	160%	
<i>Containers Supplied:</i>						
Incremental Sub-sample (analyze entire content) (B)						
Sample ID: HWB0001-04 (MBTU88 - Solid/Soil)						
			Sampled: 01/30/13 13:30			
Incremental Subsample Pass-through	Hr	02/04/13	03/31/13 13:30	\$0.00	160%	
<i>Containers Supplied:</i>						
Incremental Sub-sample (analyze entire content) (B)						

Ninakin
Released By _____ Date/Time 2/1/13 1130

Kristie Reilly
Received By _____ Date/Time 02/02/2013 1045

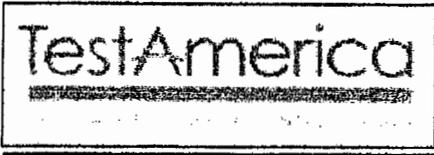
Subcontract Order - TestAmerica Honolulu (HWB0001)

Please enter the following code into the Job PO Number field for automated UDZ transfer files: **Sub HON HWB0001**

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
Sample ID: HWB0001-05 (MBTU89 - Solid/Soil)						
			Sampled: 01/30/13 13:35			
Incremental Subsample Pass-through	Hr	02/04/13	03/31/13 13:35	\$0.00	160%	
<i>Containers Supplied:</i>						
Incremental Sub-sample (analyze entire content) (B)						
Sample ID: HWB0001-06 (MBTU90 - Solid/Soil)						
			Sampled: 01/30/13 12:55			
Incremental Subsample Pass-through	Hr	02/04/13	03/31/13 12:55	\$0.00	160%	
<i>Containers Supplied:</i>						
Incremental Sub-sample (analyze entire content) (B)						

Cooler/FB-Dig(IR) cor 6.0 unc ⁵⁻⁸
 Cooler Dsc Lrg Blu/wht@ Lab
 Wet/Packs Packing Bubble
 w/cs Fed Ex Sat.

Cooler/FB-Dig(IR) cor 5.4 unc ⁵⁻²
 Cooler Dsc Lrg Blu/wht@ Lab
 Wet/Packs Packing Bubble
 w/cs Fed Ex Sat.



Rush TAT Confirmation (Initial/Date) _____

Sample Receipt Checklist

Client Name: CAPE Date/ Time Received: 1/30/13 1800

Received By: Mnakim

Matrices: Soil

Carrier: Hand

Airbill# :

- Shipping container/cooler in good condition? Yes No Not Present
- Chain of Custody present? Yes No
- Chain of Custody Signed when relinquished and received? Yes No
- Chain of Custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sample containers on ice? Yes No Type: Wet
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Water - VOA Vials have Zero Headspace? Yes No No VOA vials present:
- Water - pH acceptable upon receipt? Yes No Not Checked:
- pH Adjusted? Yes No Final pH: _____
- Encores / MI-VOC / 5035 Vials Present? Yes No Location: _____
- Sample Filtration Needed? Yes No Filtered in Field:
- Dry Weight Corrected Results? Yes No Take Action:
- DODQSM / QAPP Project? Yes No Type: _____
- Temperature Blank Present? Yes No
- Sample Container Temperature: 5-6 °C

Comments/ Sampling Handling Notes:

Login Sample Receipt Checklist

Client: Cape Environmental Management, Inc.

Job Number: 580-36921-1

Login Number: 36921

List Source: TestAmerica Seattle

List Number: 1

Creator: Riley, Nicole

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Sample 6: Time on Honolulu COC doesn't match client COC-logged in per client COC
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ ($1/4"$).	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Attachment II
Data Summary Reports

**Time Critical Removal Action for
Various Transformers
(IRP Site 0026)
Marine Corps Base Hawaii
Confirmation Soil Data for Transformers: F-1126A and F-1126B, 298, 252B, 898/SS245A and SS245F, and 1255**

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT484	MBT485	MBT486	MBT487	MBT488	MBT489	MBT490
Lab Identification		580-36879-1	580-36921-1	580-36921-2	580-36921-3	580-36921-4	580-36921-5	580-36921-6
Date Sampled		1/29/2013	1/30/2013	1/30/2013	1/30/2013	1/30/2013	1/30/2013	1/30/2013
Sample Location		Transformer F-1126A and F-1126B	Transformer 298	Transformer 252B	Transformers 898/SS245A and SS245F	Transformer 1255	Transformer 1255	Transformer 1255
Quality Control							Replicate to MBT488	Replicate to MBT488
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	1.1	0.0016 U	0.0016 U	0.0017 U	0.0016 U	0.0017 U	0.0017 U	0.0016 U
PCB-1221	1.1	0.0032 U	0.0032 U	0.0033 U	0.0032 U	0.0033 U	0.0033 U	0.0033 U
PCB-1232	1.1	0.0032 U	0.0032 U	0.0033 U	0.0032 U	0.0033 U	0.0033 U	0.0033 U
PCB-1242	1.1	0.0016 UJ	0.0016 U	0.0017U	0.0016 U	0.0017 U	0.0017 U	0.0016 U
PCB-1248	1.1	0.0016 U	0.0016 U	0.0017 U	0.0016 U	0.0017 U	0.0017 U	0.0016 U
PCB-1254	1.1	0.0016 UJ	0.0016 UJ	0.15J	0.0016 UJ	0.0017 UJ	0.0017 UJ	0.0016 UJ
PCB-1260	1.1	0.83	0.046J	0.076	0.48J	0.25J	0.14J	0.16
PCB-1262	1.1	0.0016 U	0.0016 U	0.0017 U	0.0016 U	0.0017 U	0.0017 U	0.0016 U
PCB-1268	1.1	0.0016 UJ	0.0016 UJ	0.0017 UJ	0.0016 UJ	0.0017 UJ	0.0017 UJ	0.0016 UJ
Total PCBs	1.1	0.83	0.046J	0.226J	0.48J	0.25J	0.14J	0.16

Notes:

¹ EAL - Environmental Action Level
DOH - Department of Health, State of Hawaii

mg/kg - milligrams per kilogram

U - Result is not detected

J - Result is estimated

UJ - Result is not detected and estimated

ANALYTICAL REPORT

Job Number: 580-36879-1

Job Description: HC11

For:

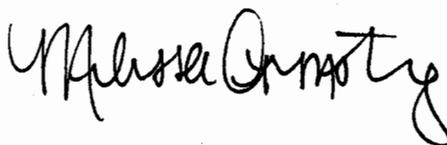
Cape Environmental Management, Inc.

155 Kapalulu Place

Suite 111

Honolulu, HI 96819

Attention: Mr. John Borr



Approved for release
Melissa Armstrong
Project Manager I
2/4/2013 2:32 PM

Melissa Armstrong

Project Manager I

melissa.armstrong@testamericainc.com

02/04/2013

cc: Chemistry Services
Richard Westmoreland

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The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted in the case narrative.

TestAmerica Laboratories, Inc.

TestAmerica Seattle 5755 8th Street East, Tacoma, WA 98424

Tel (253) 922-2310 Fax (253) 922-5047 www.testamericainc.com



CASE NARRATIVE

Client: Cape Environmental Management, Inc.

Project: HC11

Report Number: 580-36879-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

Following DoD QSM guidelines, manual integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure, Acceptable Manual Integration Practices, SOP No.: Q-S-002. The reason(s) for manual integration have been documented on the affected chromatogram(s), which is/are provided in the raw data package. The raw data also includes the original chromatogram(s) prior to any manual integration being performed. Manual integrations are detailed in the manual integration summary forms following this narrative.

It should be noted that samples with elevated Limits of Quantitation (LOQs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the LOQs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The sample was received at TestAmerica Honolulu on 1/29/2013 15:20 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.4° C.

The sample was received at TestAmerica Seattle on 1/31/2013 10:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.9° C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

POLYCHLORINATED BIPHENYLS WITH INCREMENTAL PREPARATION

Sample MBT484 (580-36879-1) was analyzed for polychlorinated biphenyls with incremental preparation in accordance with EPA SW-846 Method 8082 with incremental preparation. The samples were prepared on 01/31/2013 and analyzed on 02/01/2013.

Sample MBT484 (580-36879-1)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

A deviation from the Standard Operating Procedure (SOP) occurred. Details are as follows: There was not enough sample volume to extract a MS/MSD, as such a LCSD was extracted instead.

No other difficulties were encountered during the PCBs analysis.

All other quality control parameters were within the acceptance limits.

INCREMENTAL PREPARATION

TestAmerica Honolulu, a NELAC certified laboratory performed the Incremental Preparation of sample MBT484 (580-36879-1). The certifications are different from those listed on the TestAmerica cover page of this final report

SAMPLE SUMMARY

Client: Cape Environmental Management, Inc.

Job Number: 580-36879-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
580-36879-1	MBT484	Solid	01/29/2013 1100	01/31/2013 1000

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-36879-1

Client Sample ID: MBT484

Lab Sample ID: 580-36879-1

Date Sampled: 01/29/2013 1100

Client Matrix: Solid

Date Received: 01/31/2013 1000

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatographys

Analysis Method: 8082	Analysis Batch: 580-129286	Instrument ID: TAC042
Prep Method: 3550B	Prep Batch: 580-129263	Initial Weight/Volume: 31.1125 g
Dilution: 1.0		Final Weight/Volume: 10 mL
Analysis Date: 02/01/2013 0835		Injection Volume: 1 uL
Prep Date: 01/31/2013 1350		Result Type: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1016		0.0016	U	0.0010	0.0032
PCB-1221		0.0032	U	0.0026	0.0035
PCB-1232		0.0032	U	0.0022	0.0035
PCB-1242		0.0016	UJ	0.00067	0.0032
PCB-1248		0.0016	U	0.00096	0.0032
PCB-1254		0.0016	UJ	0.00067	0.0032
PCB-1262		0.0016	U	0.00061	0.0032
PCB-1268		0.0016	UJ	0.00067	0.0032

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	93		45 - 155
DCB Decachlorobiphenyl	98		60 - 125

Handwritten signature and date: 6/24/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-36879-1

Client Sample ID: MBT484

Lab Sample ID: 580-36879-1

Date Sampled: 01/29/2013 1100

Client Matrix: Solid

Date Received: 01/31/2013 1000

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatographys

Analysis Method:	8082	Analysis Batch:	580-129286	Instrument ID:	TAC042
Prep Method:	3550B	Prep Batch:	580-129263	Initial Weight/Volume:	31.1125 g
Dilution:	10			Final Weight/Volume:	10 mL
Analysis Date:	02/01/2013 0951	Run Type:	DL	Injection Volume:	1 uL
Prep Date:	01/31/2013 1350			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1260		0.83	D	0.0096	0.032

Raw
6/24/13

ANALYTICAL REPORT

Job Number: 580-36921-1

Job Description: HC11

For:

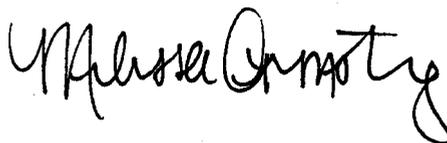
Cape Environmental Management, Inc.

155 Kapalulu Place

Suite 111

Honolulu, HI 96819

Attention: Mr. John Borr



Approved for release.
Melissa Armstrong
Project Manager I
2/8/2013 10:54 AM

Melissa Armstrong
Project Manager I
melissa.armstrong@testamericainc.com
02/08/2013

cc: Chemistry Services
Richard Westmoreland

TestAmerica Seattle is a part of TestAmerica Laboratories, Inc.

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This report shall not be reproduced except in full, without prior express written approval by the laboratory. The results relate only to the item(s) tested and the sample(s) as received by the laboratory.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted in the case narrative.

TestAmerica Laboratories, Inc.

TestAmerica Seattle 5755 8th Street East, Tacoma, WA 98424

Tel (253) 922-2310 Fax (253) 922-5047 www.testamericainc.com



CASE NARRATIVE

Client: Cape Environmental Management, Inc.
Project: HC11
Report Number: 580-36921-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

Following DoD QSM guidelines, manual integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure, Acceptable Manual Integration Practices, SOP No.: Q-S-002. The reason(s) for manual integration have been documented on the affected chromatogram(s), which is/are provided in the raw data package. The raw data also includes the original chromatogram(s) prior to any manual integration being performed. Manual integrations are detailed in the manual integration summary forms following this narrative.

It should be noted that samples with elevated Limits of Quantitation (LOQs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the LOQs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 1/30/2013 15:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt time was 5.6° C.

The samples were received on 2/2/2013 10:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 5.4° C and 6.0° C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

POLYCHLORINATED BIPHENYLS WITH INCREMENTAL PREPARATION

Samples MBT485 (580-36921-1), MBT486 (580-36921-2), MBT 487 (580-36921-3), MBT 488 (580-36921-4), MBT 489 (580-36921-5) and MBT 490 (580-36921-6) were analyzed for polychlorinated biphenyls with incremental preparation in accordance with EPA SW-846 Method 8082 with incremental preparation. The samples were prepared on 02/05/2013 and analyzed on 02/06/2013 and 02/07/2013.

Samples MBT 487 (580-36921-3)[10X] and MBT 488 (580-36921-4)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the PCBs analyses.

All quality control parameters were within the acceptance limits.

INCREMENTAL PREPARATION

TestAmerica Honolulu, a NELAC certified laboratory performed the Incremental Preparation of samples MBT485 (580-36921-1), MBT486 (580-36921-2), MBT 487 (580-36921-3), MBT 488 (580-36921-4), MBT 489 (580-36921-5) and MBT 490 (580-36921-6). The certifications are different from those listed on the TestAmerica cover page of this final report.

SAMPLE SUMMARY

Client: Cape Environmental Management, Inc.

Job Number: 580-36921-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
580-36921-1	MBT485	Solid	01/30/2013 0900	02/02/2013 1045
580-36921-2	MBT486	Solid	01/30/2013 0945	02/02/2013 1045
580-36921-3	MBT 487	Solid	01/30/2013 1200	02/02/2013 1045
580-36921-4	MBT 488	Solid	01/30/2013 1330	02/02/2013 1045
580-36921-5	MBT 489	Solid	01/30/2013 1335	02/02/2013 1045
580-36921-6	MBT 490	Solid	01/30/2013 1338	02/02/2013 1045
580-36921-6MS	MBT 490	Solid	01/30/2013 1338	02/02/2013 1045
580-36921-6MSD	MBT 490	Solid	01/30/2013 1338	02/02/2013 1045

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-36921-1

Client Sample ID: **MBT485**

Lab Sample ID: 580-36921-1

Date Sampled: 01/30/2013 0900

Client Matrix: Solid

Date Received: 02/02/2013 1045

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatographys

Analysis Method:	8082	Analysis Batch:	580-129478	Instrument ID:	TAC042
Prep Method:	3550B	Prep Batch:	580-129526	Initial Weight/Volume:	31.0856 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	02/06/2013 1419			Injection Volume:	1 uL
Prep Date:	02/05/2013 1027			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1016		0.0016	U	0.0010	0.0032
PCB-1221		0.0032	U	0.0026	0.0035
PCB-1232		0.0032	U	0.0023	0.0035
PCB-1242		0.0016	U	0.00068	0.0032
PCB-1248		0.0016	U	0.00097	0.0032
PCB-1254		0.0016	U	0.00068	0.0032
PCB-1260		0.046	U	0.00097	0.0032
PCB-1262		0.0016	U	0.00061	0.0032
PCB-1268		0.0016	U	0.00068	0.0032

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	66		45 - 155
DCB Decachlorobiphenyl	100		60 - 125

[Handwritten Signature]
6/24/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-36921-1

Client Sample ID: MBT486

Lab Sample ID: 580-36921-2

Date Sampled: 01/30/2013 0945

Client Matrix: Solid

Date Received: 02/02/2013 1045

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatographys

Analysis Method:	8082	Analysis Batch:	580-129478	Instrument ID:	TAC042
Prep Method:	3550B	Prep Batch:	580-129526	Initial Weight/Volume:	30.0227 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	02/06/2013 1432			Injection Volume:	1 uL
Prep Date:	02/05/2013 1027			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1016		0.0017	U	0.0011	0.0033
PCB-1221		0.0033	U	0.0027	0.0037
PCB-1232		0.0033	U	0.0023	0.0037
PCB-1242		0.0017	U	0.00070	0.0033
PCB-1248		0.0017	U	0.0010	0.0033
PCB-1254		0.15	J	0.00070	0.0033
PCB-1260		0.076		0.0010	0.0033
PCB-1262		0.0017	U	0.00063	0.0033
PCB-1268		0.0017	UJ	0.00070	0.0033

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	76		45 - 155
DCB Decachlorobiphenyl	78		60 - 125

Handwritten signature and date: 6/24/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-36921-1

Client Sample ID: MBT 487

Lab Sample ID: 580-36921-3

Date Sampled: 01/30/2013 1200

Client Matrix: Solid

Date Received: 02/02/2013 1045

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatographys

Analysis Method: 8082	Analysis Batch: 580-129478	Instrument ID: TAC042
Prep Method: 3550B	Prep Batch: 580-129526	Initial Weight/Volume: 31.0248 g
Dilution: 1.0		Final Weight/Volume: 10 mL
Analysis Date: 02/06/2013 1444		Injection Volume: 1 uL
Prep Date: 02/05/2013 1027		Result Type: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1016		0.0016	U	0.0010	0.0032
PCB-1221		0.0032	U	0.0026	0.0035
PCB-1232		0.0032	U	0.0023	0.0035
PCB-1242		0.0016	U	0.00068	0.0032
PCB-1248		0.0016	U	0.00097	0.0032
PCB-1254		0.0016	UJ	0.00068	0.0032
PCB-1262		0.0016	U	0.00061	0.0032
PCB-1268		0.0016	UJ	0.00068	0.0032

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	82		45 - 155
DCB Decachlorobiphenyl	100		60 - 125

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-36921-1

Client Sample ID: MBT 487

Lab Sample ID: 580-36921-3

Date Sampled: 01/30/2013 1200

Client Matrix: Solid

Date Received: 02/02/2013 1045

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatographys

Analysis Method:	8082	Analysis Batch:	580-129701	Instrument ID:	TAC042
Prep Method:	3550B	Prep Batch:	580-129526	Initial Weight/Volume:	31.0248 g
Dilution:	10			Final Weight/Volume:	10 mL
Analysis Date:	02/07/2013 1235	Run Type:	RADL	Injection Volume:	1 uL
Prep Date:	02/05/2013 1027			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1260		0.48	J	0.0097	0.032

Handwritten signature and date: 6/24/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-36921-1

Client Sample ID: MBT 488

Lab Sample ID: 580-36921-4

Date Sampled: 01/30/2013 1330

Client Matrix: Solid

Date Received: 02/02/2013 1045

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method: 8082	Analysis Batch: 580-129478	Instrument ID: TAC042
Prep Method: 3550B	Prep Batch: 580-129526	Initial Weight/Volume: 30.2107 g
Dilution: 1.0		Final Weight/Volume: 10 mL
Analysis Date: 02/06/2013 1457		Injection Volume: 1 uL
Prep Date: 02/05/2013 1027		Result Type: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1016		0.0017	U	0.0011	0.0033
PCB-1221		0.0033	U	0.0026	0.0036
PCB-1232		0.0033	U	0.0023	0.0036
PCB-1242		0.0017	U	0.00070	0.0033
PCB-1248		0.0017	U	0.00099	0.0033
PCB-1254		0.0017	UJ	0.00070	0.0033
PCB-1262		0.0017	U	0.00063	0.0033
PCB-1268		0.0017	UJ	0.00070	0.0033

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	79		45 - 155
DCB Decachlorobiphenyl	104		60 - 125

RAW
6/24/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-36921-1

Client Sample ID: MBT 488

Lab Sample ID: 580-36921-4

Date Sampled: 01/30/2013 1330

Client Matrix: Solid

Date Received: 02/02/2013 1045

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatographys

Analysis Method:	8082	Analysis Batch:	580-129701	Instrument ID:	TAC042
Prep Method:	3550B	Prep Batch:	580-129526	Initial Weight/Volume:	30.2107 g
Dilution:	10			Final Weight/Volume:	10 mL
Analysis Date:	02/07/2013 1248	Run Type:	RADL	Injection Volume:	1 uL
Prep Date:	02/05/2013 1027			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1260		0.25 J	Ø	0.0099	0.033

RAW
6/24/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-36921-1

Client Sample ID: MBT 489

Lab Sample ID: 580-36921-5

Date Sampled: 01/30/2013 1335

Client Matrix: Solid

Date Received: 02/02/2013 1045

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatographys

Analysis Method: 8082	Analysis Batch: 580-129478	Instrument ID: TAC042
Prep Method: 3550B	Prep Batch: 580-129526	Initial Weight/Volume: 30.3016 g
Dilution: 1.0		Final Weight/Volume: 10 mL
Analysis Date: 02/06/2013 1510		Injection Volume: 1 uL
Prep Date: 02/05/2013 1027		Result Type: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1016		0.0017	U	0.0011	0.0033
PCB-1221		0.0033	U	0.0026	0.0036
PCB-1232		0.0033	U	0.0023	0.0036
PCB-1242		0.0017	U	0.00069	0.0033
PCB-1248		0.0017	U	0.00099	0.0033
PCB-1254		0.0017	U	0.00069	0.0033
PCB-1260		0.14	U	0.00099	0.0033
PCB-1262		0.0017	U	0.00063	0.0033
PCB-1268		0.0017	U	0.00069	0.0033

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	83		45 - 155
DCB Decachlorobiphenyl	101		60 - 125

Handwritten signature and date: 6/24/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-36921-1

Client Sample ID: MBT 490

Lab Sample ID: 580-36921-6

Date Sampled: 01/30/2013 1338

Client Matrix: Solid

Date Received: 02/02/2013 1045

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method: 8082	Analysis Batch: 580-129478	Instrument ID: TAC042
Prep Method: 3550B	Prep Batch: 580-129526	Initial Weight/Volume: 30.6933 g
Dilution: 1.0		Final Weight/Volume: 10 mL
Analysis Date: 02/06/2013 1523		Injection Volume: 1 uL
Prep Date: 02/05/2013 1027		Result Type: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1016		0.0016	U	0.0010	0.0033
PCB-1221		0.0033	U	0.0026	0.0036
PCB-1232		0.0033	U	0.0023	0.0036
PCB-1242		0.0016	U	0.00068	0.0033
PCB-1248		0.0016	U	0.00098	0.0033
PCB-1254		0.0016	U J	0.00068	0.0033
PCB-1260		0.16		0.00098	0.0033
PCB-1262		0.0016	U	0.00062	0.0033
PCB-1268		0.0016	U J	0.00068	0.0033

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	82		45 - 155
DCB Decachlorobiphenyl	108		60 - 125

Handwritten signature and date: 6/29/13



Time Critical Removal Action (TCRA) for Various Transformers (IRP Site 0026), Tiki Island, Marine Corps Base Hawaii (MCBH), HC-11

PREPARED FOR: Confirmation Soil Sampling for TCRA at Tiki Island, MCBH, HC-11

COMPLIANCE REVIEW BY: Richard Westmoreland / Senior Chemist 

SENIOR REVIEW BY: Albert Iannacone / Senior Chemist 

COPIES: Jon Borr / Project Manager

DATE: October 13, 2013

SUBJECT: Quality Assessment Report (QAR) for Confirmation Soil using Incremental Sampling Methodology (ISM), Sampled September 23, 2013, SDG 580-40506-1

CAPE has prepared this QAR for samples collected for remediation of soil. Samples were collected September 23, 2013. A total of 3 ISM soil samples were collected. No field quality control samples were required. The ISM samples were collected using the approach as presented in the *Hawaii Office of Hazard Evaluation and Emergency Response (HEER) Technical Guidance Manual (TGM)*, November 12, 2009, Section 4, Soil Sample Collection Approaches.

The chain of custody (COC) forms provided in Attachment I present a summary of the CAPE sample identification numbers, dates of collection, sample matrices, and the analyses requested.

TestAmerica Laboratories, Inc., Tacoma, Washington served as the laboratory for this sampling event. The samples were analyzed by EPA SW-846 Method 8082 in accordance with U.S. Environmental Protection Agency (EPA), *Test Methods for Evaluating Solid Waste Physical/Chemical Methods, Final Update III, SW-846*, and the *Department of Defense (DoD) Quality Systems Manual for Environmental Laboratories*, Version 4.1, April 2009.

Results have been validated and/or qualified according to the guidance of *NAVFAC Pacific ER Program Standard and Full Data Validation for Polychlorinated Biphenyls (PCBs) as Aroclors by SW-846 8082, Procedure II-F, February 2007*, as found in *Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific, February 2007*.

The findings of this QAR are based upon the comprehensive review of the following organic chemistry result summaries reported according to the CAPE Level C data deliverables format: chain of custody documentation; holding times; sample preservation; laboratory control sample and laboratory control sample duplicate (LCS/LCSD) recoveries and reproducibilities; laboratory

method blank analyses; surrogate compound recoveries; initial and continuing calibration; second source recoveries; second column confirmation; target compound identification; compound quantitation and reporting limits and retention times.

Any aspects of the data, which are not discussed in this report, should be considered qualitatively and quantitatively valid as reported, based on the deliverables reviewed. Annotated data summary reports presenting the validated results are presented in Attachment II.

GENERAL DATA QUALIFIERS

As required by DoD protocols, all compounds which were qualitatively identified at concentrations below their respective Level of Quantitation (LOQ) have been qualified with a "J" qualifier on the data summary reports to indicate they are quantitative estimates.

Comments on Data Validation (DV)

Surrogate recoveries were elevated in Samples MBT 597DL, MBT 598, MBT 599, and MBT599DL. Per the NAVFAC DV procedure, positive results are qualified "J" in these samples (Aroclor 1260).

Samples MBT 597DL and MBT 599DL failed the criteria for Second Column Confirmation of Aroclor 1260 and per the NAVFAC DV procedure, Aroclor 1260 was qualified "J" in these samples.

Aroclor 1254 exceeded the acceptance criteria for both the Primary and Confirmation columns in the Initial Calibration Verification (ICV) (Second Source Standard), and per the NAVFAC DV procedure, Aroclor 1254 was qualified "UJ" in all three samples.

The Continuing Calibration Verification (CCV) performed prior to the analysis of Samples MBT 597 and MBT 598 failed criteria for Aroclor 1016 on the Primary column, and Aroclor 1260 on the Confirmation column. Aroclor 1016 was reported off the Primary column and was qualified "UJ" in these two samples. Aroclor 1260 in these two samples was reported off the Primary column, which was acceptable in the CCV, so no qualification of data was required.

The CCV analyzed prior to Sample MBT 599 failed criteria for Aroclor 1260 on both the Primary and Confirmation columns. Per the NAVFAC DV procedure, Sample MBT 599 was qualified "J" for Aroclor 1260.

The field sampling team collected the samples in plastic bags. Per EPA requirements, soil samples for PCB analyses are to be collected in glass containers. No qualification of data was required.

Samples MBT 597 and MBT 599 exceeded the upper calibration range of the instrument for Aroclor 1260. Per the method, the samples were re-analyzed at a dilution, and both analyses were reported. Aroclor 1260 in the two original undiluted samples were qualified "R", rejected, and the Aroclor 1260 results from the two samples analyzed at a dilution were reported. All other PCBs were reported from the original undiluted analysis.

The laboratory only reported 7 of the usual 9 Aroclors. They did not report Aroclors 1262 and 1268. No data were qualified. No explanation was provided by the laboratory.

PRECISION

Analytical precision is a measurement of the variability associated with duplicate (two) or replicate (more than two) analyses of the same sample in the laboratory. The analytical precision is measured by the LCS/LCSD samples and the matrix spike/matrix spike duplicate (MS/MSD) samples. MS/MSD analyses were not performed on these samples. All LCS/LCSD were acceptable.

Field precision is a measurement of the total variability associated with duplicate (two) or replicate (more than two) samples collected separately in the field and analyzed together in the laboratory.

The three samples were collected for this project using ISM. They are collected as triplicate samples. The Average for the three samples is 0.8 mg/Kg. The Standard Deviation is 0.33 and the Relative Standard Deviation (RSD) is 41%. The RSD exceeds the NAVFAC 35%RSD criteria, but for results from only three samples, this is not unusual. Following Hawaii Department of Health protocol for presenting ISM results, the overall result for this sampling event is 0.8 ± 0.33 mg/Kg Total PCBs. None of the 3 samples collected exceeded the Department of Health, State of Hawaii, Environmental Action Level (EAL) of 1.1 mg/Kg Total PCBs. However, mathematically, using the Standard Deviation, the highest calculated result ($0.8 + 0.33 = 1.13$ mg/Kg) slightly exceeds the EAL of 1.1 mg/Kg Total PCBs.

ACCURACY

Accuracy is the degree of agreement found between an observed value and an accepted reference value. Accuracy includes components of random error (variability due to imprecision) and systematic error (bias); components which are due to sampling and analytical operations and is a data quality indicator. Accuracy, therefore, reflects the total error associated with a measurement. A measurement is accurate when the value reported does not differ from the true value. Analytical accuracy is evaluated by measuring the percent recovery (%R) of known concentrations of target analytes that are spiked into site specific samples (matrix spike) or reagent water (LCS) before extraction, at known concentrations. Surrogate recoveries are also used as a measure of accuracy.

Surrogates and LCS/LCSD were acceptable for all methods, with the few surrogate exceptions discussed above. There were no MS/MSDs collected.

REPRESENTATIVENESS

Representativeness is a measure of the degree to which data accurately and precisely represent a characteristic of a population, a parameter variation at a sampling point, a process condition, or an environmental condition. Representativeness was evaluated through the review of holding time criteria and laboratory method blanks. Representativeness has also been achieved through use of the DoD and EPA-approved sampling procedures and analytical methodologies. Samples

were collected by CAPE following the procedures detailed in the project-specific QA planning documents for the project and submitted for analysis using the EPA-approved analytical methods detailed in the project Sampling and Analysis Plan (SAP).

Samples were shipped to the laboratory under chain of custody, received intact, and properly preserved. The only sample receipt exception noted for the samples was the collection of the samples in plastic bags. Adherence to the procedures described in the project SAP for this sampling event ensured that the results generated are representative of environmental conditions at the time of sampling. Collecting the samples as ISM samples helps to insure representativeness of the samples.

COMPARABILITY

Comparability is a qualitative measure designed to express the confidence with which one data set may be compared with another. Adherence to proper sample collection and handling techniques described in the project SAP, and the use of the promulgated EPA analytical methods described by the project SAP ensure that this data set would be comparable with another future data set collected under the same conditions and analyzed by the same methods. The analytical data generated were reported with adequate sensitivity for comparison against applicable EALs. It should be noted that samples with elevated limit of quantitation (LOQ) resulting from a dilution may not be able to satisfy reporting limits in some cases. Such increases in the LOQs are an unavoidable, but acceptable, consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences, thereby enabling the quantification of target analytes. Since the non-detected PCBs were reported from the undiluted samples, all LOQs were below the environmental action levels (EALs).

COMPLETENESS

Completeness is calculated from the aggregation of data for each method for any particular sampling event. For each method and each site, the number of valid results, divided by the number of individual analyte results initially planned, expressed as a percentage, determines the completeness for the data set. The objective for completeness for this project is 95 percent. Valid results used to meet completeness objectives are those results that provide defensible estimates of the true concentration of an analyte in a sample. These valid results include data that are not qualified and data for which QC results indicate qualification is necessary, but which may still be used to meet project objectives. Invalid results are those data for which there is an indication that the prescribed sampling or analytical protocols were not followed. Data rejected due to analyses at multiple dilutions do not count against the % completeness. There were no instances of invalid or rejected data associated with this data set and completeness was 100% for all analytes in samples reported for this project.

$$\% \text{ Completeness} = \frac{\text{number of valid (non - R flagged) results}}{\text{total \# of reported results}}$$

SUMMARY

The analyses were performed acceptably. Any aspect of the data not discussed in this report should be considered qualitatively and quantitatively valid as reported based on the deliverables reviewed. A support documentation package has been prepared for this quality assurance review and is filed in the TCRA HC-11, IRP Site 0026 project file.

Attachment I
Chains of Custody

Login Sample Receipt Checklist

Client: Cape Environmental Management, Inc.

Job Number: 580-40506-1

Login Number: 40506

List Source: TestAmerica Seattle

List Number: 1

Creator: Blankinship, Tom X

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	False	Only the IDs are on the bags
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	Plastic bags/semivolatiles.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Attachment II
Data Summary Reports

Table 9: Post Over-Excavation Confirmation Soil Sampling Results at Transformer 1129

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT597	MBT598	MBT599
Lab Identification		580-40506-1	580-40506-2	580-40506-3
Sample Delivery Group (SDG)		580-40506-1	580-40506-1	580-40506-1
Sample Date		9/23/2013	9/23/2013	9/23/2013
Location		Transformer 1129 - Tiki Island	Transformer 1129 - Tiki Island	Transformer 1129 - Tiki Island
Depth (in feet below ground surface) ²		Excavation Floor	Excavation Floor	Excavation Floor
Sample Type		ISM Parent	ISM Replicate	ISM Triplicate
Polychlorinated Biphenyls (PCBs) by SW846 8082	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1016	--	0.0016UJ	0.0016UJ	0.0016U
PCB-1221	--	0.0033U	0.0032U	0.0033U
PCB-1232	--	0.0033U	0.0032U	0.0033U
PCB-1242	--	0.0016U	0.0016U	0.0016U
PCB-1248	--	0.0016U	0.0016U	0.0016U
PCB-1254	--	0.0016UJ	0.0016UJ	0.0016UJ
PCB-1260	--	1.0J	0.41J	0.98J
Total PCBs	1.1	1.0J	0.41J	0.98J

Notes:

¹ EAL Environmental Action Level
DOH Department of Health, State of Hawaii

² Excavation floor depths vary depending on delineation sampling results.
mg/kg-milligrams per kilogram

J - Preliminary data qualifier for an estimated concentration

ISM - Incremental Sampling Methodology

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

Bold results indicate positively detected value

Highlighted results exceeds PALs

ANALYTICAL REPORT

Job Number: 580-40506-1

Job Description: Various Transformers MLBH

For:

Cape Environmental Management, Inc.
155 Kapalulu Place
Suite 111
Honolulu, HI 96819
Attention: Mr. John Borr

Kristine D. Allen

Approved for release.
Kristine D Allen
Project Manager I
10/7/2013 4:14 PM

Designee for
Melissa A Armstrong, Project Manager I
5755 8th Street East, Tacoma, WA, 98424
(253)922-2310 x135
melissa.armstrong@testamericainc.com
10/07/2013

cc: Chemistry Services
Richard Westmoreland

TestAmerica Seattle is a part of TestAmerica Laboratories, Inc.

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This report shall not be reproduced except in full, without prior express written approval by the laboratory. The results relate only to the item(s) tested and the sample(s) as received by the laboratory.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any

TestAmerica Laboratories, Inc.

TestAmerica Seattle 5755 8th Street East, Tacoma, WA 98424
Tel (253) 922-2310 Fax (253) 922-5047 www.testamericainc.com



CASE NARRATIVE

Client: Cape Environmental Management, Inc.
Project: Various Transformers MLBH
Report Number: 580-40506-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

Following DoD QSM guidelines, manual integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure, Acceptable Manual Integration Practices, SOP No.: Q-S-002. The reason(s) for manual integration have been documented on the affected chromatogram(s), which is/are provided in the raw data package. The raw data also includes the original chromatogram(s) prior to any manual integration being performed. Manual integrations are detailed in the manual integration summary forms following this narrative.

It should be noted that samples with elevated Limits of Quantitation (LOQs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the LOQs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 09/25/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 6.0 C.

The containers for all samples have only the IDs written on them. Logged in per chain of custody.

The following samples were collected in improper containers: MBT 597 (580-40506-1), MBT 598 (580-40506-2), MBT 599 (580-40506-3). The containers are plastic bags and the analysis requested is semivolatiles.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

POLYCHLORINATED BIPHENYLS WITH INCREMENTAL PREPARATION

Samples MBT 597 (580-40506-1), MBT 598 (580-40506-2) and MBT 599 (580-40506-3) were analyzed for polychlorinated biphenyls with incremental preparation in accordance with EPA SW-846 Method 8082 with incremental preparation. The samples were leached on 09/30/2013, prepared on 10/01/2013 and analyzed on 10/03/2013 and 10/04/2013.

Samples MBT 597 (580-40506-1)[10X] and MBT 599 (580-40506-3)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

DCB Decachlorobiphenyl failed the surrogate recovery criteria high for MBT 597 (580-40506-1)[10X] on the secondary column only. The surrogate met the acceptance criteria on the undiluted sample on the primary column.

DCB Decachlorobiphenyl failed the surrogate recovery criteria high for MBT 598 (580-40506-2), MBT 599 (580-40506-3). Evidence of matrix interference is present, seen in the sample chromatograms; therefore, re-extraction and/or re-analysis was not performed.

No other difficulties were encountered during the PCBs analysis.

All other quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: Cape Environmental Management, Inc.

Job Number: 580-40506-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
580-40506-1	MBT 597	Solid	09/23/2013 1330	09/25/2013 0950
580-40506-2	MBT 598	Solid	09/23/2013 1345	09/25/2013 0950
580-40506-3	MBT 599	Solid	09/23/2013 1400	09/25/2013 0950

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-40506-1

Client Sample ID: MBT 597

Lab Sample ID: 580-40506-1

Date Sampled: 09/23/2013 1330

Client Matrix: Solid

Date Received: 09/25/2013 0950

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	580-146462	Instrument ID:	TAC042
Prep Method:	3550B	Prep Batch:	580-146197	Initial Weight/Volume:	30.7580 g
Dilution:	1.0	Leach Batch:	580-146166	Final Weight/Volume:	10 mL
Analysis Date:	10/03/2013 1814			Injection Volume:	1 uL
Prep Date:	10/01/2013 1120			Result Type:	PRIMARY
Leach Date:	09/30/2013 1413				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1016		0.0016	U \checkmark	0.0010	0.0033
PCB-1221		0.0033	U	0.0026	0.0036
PCB-1232		0.0033	U	0.0023	0.0036
PCB-1242		0.0016	U	0.00068	0.0033
PCB-1248		0.0016	U	0.00098	0.0033
PCB-1254		0.0016	U \checkmark	0.00068	0.0033

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	82		45 - 155
DCB Decachlorobiphenyl	95		60 - 125

DM
10/13/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-40506-1

Client Sample ID: MBT 597

Lab Sample ID: 580-40506-1

Date Sampled: 09/23/2013 1330

Client Matrix: Solid

Date Received: 09/25/2013 0950

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatographys

Analysis Method:	8082	Analysis Batch:	580-146462	Instrument ID:	TAC042
Prep Method:	3550B	Prep Batch:	580-146197	Initial Weight/Volume:	30.7580 g
Dilution:	1.0	Leach Batch:	580-146166	Final Weight/Volume:	10 mL
Analysis Date:	10/03/2013 1814			Injection Volume:	1 uL
Prep Date:	10/01/2013 1120			Result Type:	SECONDARY
Leach Date:	09/30/2013 1413				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1260		0.86 R ✓		0.00098	0.0033
Surrogate		%Rec	Qualifier	Acceptance Limits	
Tetrachloro-m-xylene		86		45 - 155	
DCB Decachlorobiphenyl		93		60 - 125	

Ruby
10/13/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-40506-1

Client Sample ID: MBT 597

Lab Sample ID: 580-40506-1

Date Sampled: 09/23/2013 1330

Client Matrix: Solid

Date Received: 09/25/2013 0950

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	580-146565	Instrument ID:	TAC042
Prep Method:	3550B	Prep Batch:	580-146197	Initial Weight/Volume:	30.7580 g
Dilution:	10	Leach Batch:	580-146166	Final Weight/Volume:	10 mL
Analysis Date:	10/04/2013 1053	Run Type:	DL	Injection Volume:	1 uL
Prep Date:	10/01/2013 1120			Result Type:	PRIMARY
Leach Date:	09/30/2013 1413				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1260		1.0	J	0.0098	0.033

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	80		45 - 155
DCB Decachlorobiphenyl	88		60 - 125

RAW
10/3/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-40506-1

Client Sample ID: **MBT 597**

Lab Sample ID: 580-40506-1

Date Sampled: 09/23/2013 1330

Client Matrix: Solid

Date Received: 09/25/2013 0950

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	580-146565	Instrument ID:	TAC042
Prep Method:	3550B	Prep Batch:	580-146197	Initial Weight/Volume:	30.7580 g
Dilution:	10	Leach Batch:	580-146166	Final Weight/Volume:	10 mL
Analysis Date:	10/04/2013 1053	Run Type:	DL	Injection Volume:	1 uL
Prep Date:	10/01/2013 1120			Result Type:	SECONDARY
Leach Date:	09/30/2013 1413				

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	115		45 - 155
DCB Decachlorobiphenyl	191	Q	60 - 125

Handwritten signature and date:
10/13/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-40506-1

Client Sample ID: MBT 598

Lab Sample ID: 580-40506-2

Date Sampled: 09/23/2013 1345

Client Matrix: Solid

Date Received: 09/25/2013 0950

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatographys

Analysis Method: 8082	Analysis Batch: 580-146462	Instrument ID: TAC042
Prep Method: 3550B	Prep Batch: 580-146197	Initial Weight/Volume: 30.9187 g
Dilution: 1.0	Leach Batch: 580-146166	Final Weight/Volume: 10 mL
Analysis Date: 10/03/2013 1828		Injection Volume: 1 uL
Prep Date: 10/01/2013 1120		Result Type: PRIMARY
Leach Date: 09/30/2013 1413		

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1016		0.0016	U J	0.0010	0.0032
PCB-1221		0.0032	U	0.0026	0.0036
PCB-1232		0.0032	U	0.0023	0.0036
PCB-1242		0.0016	U	0.00068	0.0032
PCB-1248		0.0016	U	0.00097	0.0032
PCB-1254		0.0016	U J	0.00068	0.0032
PCB-1260		0.41	J	0.00097	0.0032
Surrogate		%Rec	Qualifier	Acceptance Limits	
Tetrachloro-m-xylene		70		45 - 155	
DCB Decachlorobiphenyl		137	Q	60 - 125	

Handwritten signature and date: 10/13/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-40506-1

Client Sample ID: MBT 598

Lab Sample ID: 580-40506-2

Date Sampled: 09/23/2013 1345

Client Matrix: Solid

Date Received: 09/25/2013 0950

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatographys

Analysis Method:	8082	Analysis Batch:	580-146462	Instrument ID:	TAC042
Prep Method:	3550B	Prep Batch:	580-146197	Initial Weight/Volume:	30.9187 g
Dilution:	1.0	Leach Batch:	580-146166	Final Weight/Volume:	10 mL
Analysis Date:	10/03/2013 1828			Injection Volume:	1 uL
Prep Date:	10/01/2013 1120			Result Type:	SECONDARY
Leach Date:	09/30/2013 1413				

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	81		45 - 155
DCB Decachlorobiphenyl	128	Q	60 - 125

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-40506-1

Client Sample ID: MBT 599

Lab Sample ID: 580-40506-3

Date Sampled: 09/23/2013 1400

Client Matrix: Solid

Date Received: 09/25/2013 0950

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	580-146462	Instrument ID:	TAC042
Prep Method:	3550B	Prep Batch:	580-146197	Initial Weight/Volume:	30.5943 g
Dilution:	1.0	Leach Batch:	580-146166	Final Weight/Volume:	10 mL
Analysis Date:	10/03/2013 1913			Injection Volume:	1 uL
Prep Date:	10/01/2013 1120			Result Type:	PRIMARY
Leach Date:	09/30/2013 1413				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1016		0.0016	U	0.0010	0.0033
PCB-1221		0.0033	U	0.0026	0.0036
PCB-1232		0.0033	U	0.0023	0.0036
PCB-1242		0.0016	U	0.00069	0.0033
PCB-1248		0.0016	U	0.00098	0.0033
PCB-1254		0.0016	U J	0.00069	0.0033

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	104		45 - 155
DCB Decachlorobiphenyl	127	Q	60 - 125

R. [Signature]
10/13/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-40506-1

Client Sample ID: MBT 599

Lab Sample ID: 580-40506-3

Date Sampled: 09/23/2013 1400

Client Matrix: Solid

Date Received: 09/25/2013 0950

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatographys

Analysis Method:	8082	Analysis Batch:	580-146462	Instrument ID:	TAC042
Prep Method:	3550B	Prep Batch:	580-146197	Initial Weight/Volume:	30.5943 g
Dilution:	1.0	Leach Batch:	580-146166	Final Weight/Volume:	10 mL
Analysis Date:	10/03/2013 1913			Injection Volume:	1 uL
Prep Date:	10/01/2013 1120			Result Type:	SECONDARY
Leach Date:	09/30/2013 1413				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1260		11 R	J	0.00098	0.0033
Surrogate		%Rec	Qualifier	Acceptance Limits	
Tetrachloro-m-xylene		95		45 - 155	
DCB Decachlorobiphenyl		138	Q	60 - 125	

Ramp
10/13/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-40506-1

Client Sample ID: MBT 599

Lab Sample ID: 580-40506-3

Date Sampled: 09/23/2013 1400

Client Matrix: Solid

Date Received: 09/25/2013 0950

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	580-146565	Instrument ID:	TAC042
Prep Method:	3550B	Prep Batch:	580-146197	Initial Weight/Volume:	30.5943 g
Dilution:	10	Leach Batch:	580-146166	Final Weight/Volume:	10 mL
Analysis Date:	10/04/2013 1110	Run Type:	DL	Injection Volume:	1 uL
Prep Date:	10/01/2013 1120			Result Type:	PRIMARY
Leach Date:	09/30/2013 1413				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
PCB-1260		0.98 <i>J</i>	D	0.0098	0.033

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	88		45 - 155
DCB Decachlorobiphenyl	90		60 - 125

Handwritten signature and date: 10/13/13

Analytical Data

Client: Cape Environmental Management, Inc.

Job Number: 580-40506-1

Client Sample ID: MBT 599

Lab Sample ID: 580-40506-3

Date Sampled: 09/23/2013 1400

Client Matrix: Solid

Date Received: 09/25/2013 0950

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatographys

Analysis Method:	8082	Analysis Batch:	580-146565	Instrument ID:	TAC042
Prep Method:	3550B	Prep Batch:	580-146197	Initial Weight/Volume:	30.5943 g
Dilution:	10	Leach Batch:	580-146166	Final Weight/Volume:	10 mL
Analysis Date:	10/04/2013 1110	Run Type:	DL	Injection Volume:	1 uL
Prep Date:	10/01/2013 1120			Result Type:	SECONDARY
Leach Date:	09/30/2013 1413				

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	123		45 - 155
DCB Decachlorobiphenyl	193	Q	60 - 125

Handwritten signature and date:
DOW
10/13/13



Time Critical Removal Action (TCRA) for Transformer 678, Marine Corps Base Hawaii (MCBH) HC-11, Kaneohe Bay, Hawaii (Site 0026)

PREPARED FOR: Naval Facilities Engineering Command (NAVFAC), Hawaii

COMPLIANCE REVIEW BY: Richard Westmoreland / Senior Chemist *Richard Westmoreland*

SENIOR REVIEW BY: Albert Iannacone / Senior Chemist *Albert Iannacone*

COPIES: Jon Borr / Project Manager

DATE: December 3, 2013

SUBJECT: Quality Assessment for TCRA MCBH HC-11 Confirmation Soil Samples, SDG 580-41230-1, Sampled November 11, 2013

CAPE has prepared this quality assurance report (QAR) for Confirmation soil samples collected at the TCRA for Transformer 678 at MCBH, HC-11, Kaneohe Bay, Hawaii, Site 0026, sampled November 11, 2013. This QAR addresses the analytical results from one set of triplicates collected at the site. The chain of custody forms provided in Attachment I present a summary of the CAPE sample identification numbers, dates of collection, sample matrices, and the analyses requested.

TestAmerica Laboratories Inc., Tacoma, WA served as the laboratory for this sampling event. Samples were analyzed for:

Total Polychlorinated Biphenyls (PCBs), SW-846 Method 8082.

The samples were analyzed in accordance with U.S. Environmental Protection Agency (EPA), *Test Methods for Evaluating Solid Waste Physical/Chemical Methods, Final Update III, SW-846*, and in accordance with *Department of Defense (DoD) Quality Systems Manual for Environmental Laboratories, Version 4.1, April 2009* and the *Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific, February 2007*.

Samples were validated against Naval Facilities Engineering Command (NAVFAC) Data Validation (DV) Procedures, as found in the *Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific, February 2007*.

The findings of this QAR are based upon the comprehensive review of the following result summaries reported according to the CAPE Level C data deliverables format: chain of custody

documentation; holding times; sample preservation; laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries and reproducibilities; laboratory method blank (MB) analyses; matrix spike/matrix spike duplicate (MS/MSD) recoveries and reproducibilities; surrogate compound recoveries; initial and continuing calibration; second source recoveries; target compound identification; compound quantitation and reporting limits; and evaluation of replicates. During the validation process, laboratory qualifiers applied by the laboratory were removed and replaced by data validation qualifiers, when required.

Any aspects of the data, which are not discussed in this report, should be considered qualitatively and quantitatively valid as reported, based on the deliverables reviewed. Annotated data summary reports presenting the validated results are presented in Attachment II.

GENERAL DATA QUALIFIERS

As required by NAVFAC and DoD protocols, all compounds which were qualitatively identified at concentrations below their Limit of Quantitation (LOQ) have been qualified with a "J" qualifier on the data summary reports to indicate they are quantitative estimates. Non-detect results have been reported at the Level of Detection (LOD) with a "U" qualifier.

COMMENTS ON DATA VALIDATION

All three samples were analyzed without dilution (MBT600, MBT601, MBT602) and at a 20 times dilution (MBT600DL, MBT601DL, and MBT602DL). At least one surrogate recovery was outside of acceptance criteria in every analysis. Per the analytical method, the laboratory is required to re-analyze these samples. The laboratory re-analyzed all 6 samples as required (MBT600RA, MBT601RA, MBT602RA and MBT600RADL, MBT601RADL, MBT602RADL). All of these analyses also failed surrogate recoveries. The laboratory reported all 12 results, as required by the method. The laboratory stated the reason the surrogates failed was due to evidence of matrix interference. This could be a logical explanation if one only looked at the sample analyses. However, surrogates also failed recoveries in all the MBs and the LCS/LCSDs analyzed with these samples. MBs are a clean matrix, and, therefore, cannot have a matrix interference problem. LCS/LCSDs are clean matrix with low levels of Aroclor 1016 and 1260 spiked into them. Again, there is no matrix interference in these samples. The bottom line is the laboratory has a major surrogate recovery problem in the PCB analysis. Since the recoveries were all above the upper control limit, only positive results are qualified "J" and non-detected (ND) results are not qualified. Aroclor 1260 was qualified "J" in all analyses.

A decision had to be made as to which of the results to report for each of the three samples. Aroclor 1260 in all of the samples analyzed undiluted exceeded the upper calibration range of the instrument, so Aroclor 1260 in all the undiluted samples were qualified "R", rejected (MBT600, MBT601, MBT602, MBT600RA, MBT601RA and MBT602RA). In all of the diluted samples, the lab only reported Aroclor 1260. This means the Aroclors reported as ND had to be reported from one of the non-diluted analyses. As will be discussed later in this report, some other quality control (QC) parameters failed on the original analyses so the ND results were reported from the undiluted re-analyzed samples (MBT600RA, MBT601RA and MBT602RA) and

the original undiluted samples were qualified "R", rejected for the ND Aroclors (MBT600, MBT601 and MBT602). For the Aroclor 1260 results, it was decided to use the higher of the two results from the two diluted samples (MBT600RADL, MBT601RADL and MBT602DL) and qualify the other result "R", rejected (MBT600DL, MBT601DL and MBT602RADL).

All of the samples were analyzed on two different chromatographic columns (primary Column and confirmation Column). The laboratory would normally report off the primary column if it meets all QC parameters, but has the option to report off the confirmation column if the primary column has QC problems and the confirmation column has acceptable QC. In this case the laboratory reported all results off the confirmation column because of problems on the primary column QC. See discussion below.

There were a number of problems with Aroclor 1260 in the Continuing Calibration Verification (CCV) analyses, however, they were mostly associated with the primary column and results were reported off the confirmation column. There was one CCV outside acceptance criteria on the confirmation column associated with the Samples MBT601DL and MBT602DL for Aroclor 1260. These two samples would be qualified "J" due to the CCV problem but were already qualified "J" due to surrogate problems.

The matrix spike/matrix spike duplicate was performed on Sample MBT600 and exhibited elevated recoveries for Aroclor 1260. Since the concentration of Aroclor 1260 in the sample was more than 4 times the concentration in the spike, no qualification of data was required.

The initial calibration verification (ICV) failed criteria for Aroclor 1254 on both the primary and confirmation columns for the samples analyzed on 11-19-13 (All of the original analyses). The ICV analyzed on 11-22-13 was acceptable and is associated with the re-analyzed samples. Aroclor 1254 in the original analyses were to be qualified "UJ" because they were ND, however, as addressed above, the results for the NDs were reported off the re-analyzed samples.

From the problems observed and discussed in this report, and from problems observed during the validation of other data from this laboratory, it is also evident the laboratory has recurring ICV and CCV problems in the PCB analyses.

The laboratory did perform a number of manual integrations; however, they were acceptably performed and documented.

The format the laboratory uses to present data on the Form 1's is somewhat confusing. The PCB method uses dual columns (a primary column and a confirmation column). The primary column is ZB-XLB-HT and the confirmation column is ZB-35-HT, as shown on the Form 1's. For each analysis, the first Form 1 is the primary column and the second Form 1 is the confirmation column. As addressed earlier, most of the Aroclors were reported off the confirmation column and that is why there are no results shown on the primary column Form 1's.

PRECISION

Analytical precision is a measurement of the variability associated with duplicate (two) or replicate (more than two) analyses of the same sample in the laboratory. The analytical precision

is measured by the LCS/LCSD and the MS/MSD analyses. The LCS/LCSDs exhibited no problems and the MS/MSD results are not useful due to elevated levels of Aroclor 1260 in the samples. Analytical precision is acceptable.

Field precision is a measurement of the total variability associated with duplicate (two) or replicate (more than two) samples collected separately in the field and analyzed together in the laboratory. A total of one replicate (one sample collected in triplicate) was collected for these samples using the HAWAII Incremental Subsampling Methodology (ISM) (Section 4, *Hawaii HEER TGM*, November 12, 2008). The samples are MBT600/MBT601/MBT602. The project limit for the Relative Standard Deviation (RSD) was 35%. The calculated RSD for the replicate was 19% which met the project limit. Analytical precision is acceptable.

ACCURACY

Accuracy is the degree of agreement found between an observed value and an accepted reference value. Accuracy includes components of random error (variability due to imprecision) and systematic error (bias); components which are due to sampling and analytical operations and is a data quality indicator. Accuracy, therefore, reflects the total error associated with a measurement. A measurement is accurate when the value reported does not differ from the true value. Analytical accuracy is evaluated by measuring the percent recovery (%R) of known concentrations of target analytes that are spiked into site specific samples (matrix spike) or reagent water (LCS) before extraction, at known concentrations. Surrogate recoveries are also used as a measure of accuracy. Recoveries of the LCS/LCSDs are acceptable. The surrogate recoveries exhibited major problems and the MS/MSD recoveries were not useful, as addressed above. Accuracy is somewhat questionable.

REPRESENTATIVENESS

Representativeness is a measure of the degree to which data accurately and precisely represent a characteristic of a population, a parameter variation at a sampling point, a process condition, or an environmental condition. Representativeness was evaluated through the review of holding time criteria and laboratory method blanks. Representativeness has also been achieved through use of the DoD, NAVFAC and EPA-approved sampling procedures and analytical methodologies. Samples were collected by CAPE following the procedures detailed in the project-specific Sampling and Analysis Plan (SAP) and submitted for analysis using the EPA-approved analytical methods detailed in the project SAP.

Samples were shipped to the laboratory under chain of custody, received intact, and properly preserved. There was no sample receipt exceptions noted for the samples. Adherence to the procedures described in the project SAP for this sampling event ensured that the results generated are representative of environmental conditions at the time of sampling.

COMPARABILITY

Comparability is qualitative measure designed to express the confidence with which one data set may be compared with another. Adherence to proper sample collection and handling

techniques described in the project SAP, and the use of the promulgated EPA analytical methods described by the project SAP ensure that this data set would be comparable with another future data set collected under the same conditions and analyzed by the same methods.

COMPLETENESS

Completeness is calculated from the aggregation of data for each method for any particular sampling event. For each method and each site, the number of valid results, divided by the number of individual analyte results initially planned, expressed as a percentage, determine the completeness for the data set. The objective for completeness for this project is 95 percent. Valid results used to meet completeness objectives are those results that provide defensible estimates of the true concentration of an analyte in a sample. These valid results include data that are not qualified and data for which QC results indicate qualification is necessary, but which may still be used to meet project objectives. Invalid results are those data for which there is an indication that the prescribed sampling or analytical protocols were not followed. There were no instances of invalid or rejected data associated with this data set and completeness was 100% for all analytes in samples reported for this project. Data rejected due to multiple analyses do not count against the completeness criteria.

$$\% \text{ Completeness} = \frac{\text{number of valid (non - R flagged) results}}{\text{total \# of reported results}}$$

REPORTING LIMITS AND DATA USABILITY

All samples were analyzed such that the Reporting Limits (RL) were below the Project Cleanup Goal of 1.1 mg/kg total PCBs. All Aroclor 1260 results exceeded the Project Cleanup goal.

SUMMARY

The analyses were performed acceptably. Any aspect of the data not discussed in this report should be considered qualitatively and quantitatively valid, as reported, based on the deliverables reviewed. A support documentation package has been prepared for this quality assurance review and is filed in the TCRA HC-11 (Site 26) project file.

Attachment I
Chains of Custody

Login Sample Receipt Checklist

Client: Cape Environmental Management, Inc.

Job Number: 580-41230-1

Login Number: 41230

List Source: TestAmerica Seattle

List Number: 1

Creator: McDaniel, Ronald T

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Attachment II
Data Summary Reports

Table 10: Post Initial Excavation Soil Sampling Results at Transformer F-678/678

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT600	MBT601	MBT602
Lab Identification		580-41230-1	580-41230-2	580-41230-3
Sample Delivery Group (SDG)		580-41230-1	580-41230-1	580-41230-1
Date Sampled		11/11/2013	11/11/2013	11/11/2013
Location		Transformers F-678/678	Transformers F-678/678	Transformers F-678/678
Depth (in feet below ground surface) ²		Excavation Floor	Excavation Floor	Excavation Floor
Sample Type	ISM Parent	ISM Replicate	ISM Triplicate	
<i>Polychlorinated Biphenyls (PCBs) by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	--	0.0016UJ	0.0016UJ	0.0016UJ
PCB-1221	--	0.0033U	0.0033U	0.0032U
PCB-1232	--	0.0033U	0.0033U	0.0032U
PCB-1242	--	0.0016U	0.0016U	0.0016U
PCB-1248	--	0.0016U	0.0016U	0.0016U
PCB-1254	--	0.0016UJ	0.0016UJ	0.0016UJ
PCB-1260	--	1.500J	2.200J	1.800J
PCB-1262	--	NA	NA	NA
PCB-1268	--	NA	NA	NA
Total PCBs	1.100	1.500J	2.200J	1.800J

Notes:

¹EAL Environmental Action Level
DOH Department of Health, State of Hawaii

² Excavation floor depths vary depending on delineation sampling results.
mg/kg-milligrams per kilogram

J - Data is an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

NA - Not Analyzed

ISM - Increment Sampling Methodology

Bold results indicate positively detected value

Highlighted results exceeds PALs

ANALYTICAL REPORT

Job Number: 580-41230-1

Job Description: HC11

For:

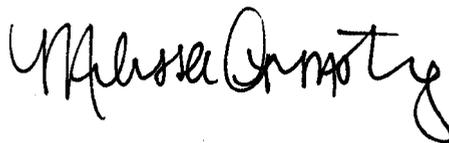
Cape Environmental Management, Inc.

155 Kapalulu Place

Suite 111

Honolulu, HI 96819

Attention: Mr. John Borr



Approved for release.
Melissa A. Armstrong
Project Manager I
11/26/2013 3:49 PM

Melissa A Armstrong, Project Manager I
5755 8th Street East, Tacoma, WA, 98424
(253)922-2310 x135
melissa.armstrong@testamericainc.com
11/26/2013

cc: Chemistry Services
Richard Westmoreland

TestAmerica Seattle is a part of TestAmerica Laboratories, Inc.

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This report shall not be reproduced except in full, without prior express written approval by the laboratory. The results relate only to the item(s) tested and the sample(s) as received by the laboratory.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted in the case narrative.

TestAmerica Laboratories, Inc.

TestAmerica Seattle 5755 8th Street East, Tacoma, WA 98424
Tel (253) 922-2310 Fax (253) 922-5047 www.testamericainc.com



CASE NARRATIVE

Client: Cape Environmental Management, Inc.
Project: HC11
Report Number: 580-41230-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

Following DoD QSM guidelines, manual integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure, Acceptable Manual Integration Practices, SOP No.: Q-S-002. The reason(s) for manual integration have been documented on the affected chromatogram(s), which is/are provided in the raw data package. The raw data also includes the original chromatogram(s) prior to any manual integration being performed. Manual integrations are detailed in the manual integration summary forms following this narrative.

It should be noted that samples with elevated Limits of Quantitation (LOQs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the LOQs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 11/12/2013 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.1° C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

POLYCHLORINATED BIPHENYLS WITH INCREMENTAL PREPARATION

Samples MBT600 (580-41230-1), MBT601 (580-41230-2) and MBT602 (580-41230-3) were analyzed for polychlorinated biphenyls with incremental preparation in accordance with EPA SW-846 Method 8082 with incremental preparation. The samples were leached on 11/14/2013, prepared on 11/15/2013 and analyzed on 11/19/2013 and 11/22/2013.

Samples MBT600 (580-41230-1)[20X], MBT601 (580-41230-2)[20X] and MBT602 (580-41230-3)[20X] required dilution prior to bring PCB-1260 within calibration range of the instrument. The reporting limits have been adjusted accordingly.

In analytical batch 580-149495 surrogate recovery for samples MBT600 (580-41230-1), (580-41230-1 MS), (580-41230-1 MSD), MBT601 (580-41230-2) and MBT602 (580-41230-3) from preparation batch 580-149384 were outside upper control limits for DCB Decachlorobiphenyl. Evidence of matrix interference is present, as samples contain a large amount of PCB-1260; therefore, re-extraction and/or re-analysis was not performed. Affected data has been "Q" qualified and reported.

In analytical batch 580-149729, surrogate recovery of DCB Decachlorobiphenyl for samples MBT600 (580-41230-1), (580-41230-1 MS) and MBT601 (580-41230-2) was outside control limits. Evidence of matrix interference is present, as these samples required a 20X dilution due to high target analytes; therefore, re-extraction and/or re-analysis was not performed. Affected data has been "Q" qualified and reported.

The continuing calibration verification (CCVRT1) for analytical batch 580-149495 recovered outside upper control limits, for DCB Decachlorobiphenyl, PCB-1260, PCB-1016 and Tetrachloro-m-xylene on the confirmation column but passed on the primary column. CCV14 and CCV21 had the same problems as CCVRT1 but failed for DCB Decachlorobiphenyl on both columns. The QC is all within control limits. The CCV failure on CCV14 is attributed to matrix interference from the client samples having a large amount of PCB-1260. The affected samples are: (580-41230-1 MS), (580-41230-1 MSD), (CCB 580-149495/15), (CCV 580-149495/14), (CCV 580-149495/21), (LCS 580-149384/2-A), (LCS 580-149384/3-A), (MB 580-149384/1-A), MBT600 (580-41230-1), MBT601 (580-41230-2) and MBT602 (580-41230-3).

All samples have been re-analyzed in analytical batch 580-149729 within a passing CCV bracket for all analytes. Both sets of data have been reported with client approval. Affected data has been "Q" qualified and reported.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for sample MBT600 (580-41230-1) in preparation batch 580-149384 were outside control limits for PCB-1260 and/ or PCB-1016. In addition PCB-1260 exceeded the RPD limit. The associated laboratory control sample (LCS) recovery met acceptance criteria. The presence of the '4' qualifier in the data indicates analytes where the concentration in

the unspiked sample exceeded four times the spiking amount. Both the MS/MSD and the associated parent sample have been qualified "J" for the affected analytes.

Due to an error in the LIMS there is replicate surrogates reporting for the MS/MSD of batch 580-149384. All recoveries are present and therefore been reported.

No other difficulties were encountered during the PCBs analysis.

All other quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: Cape Environmental Management, Inc.

Job Number: 580-41230-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
580-41230-1	MBT600	Solid	11/11/2013 0930	11/12/2013 0940
580-41230-2	MBT601	Solid	11/11/2013 0940	11/12/2013 0940
580-41230-3	MBT602	Solid	11/11/2013 0950	11/12/2013 0940

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT600 Lab Sample ID: 580-41230-1
 Matrix: Solid Lab File ID: OP0303573.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:30
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.6843(g) Date Analyzed: 11/19/2013 08:58
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: ZB-XLB-HT ID: 0.25 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149495 Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	125	Q	45-155
2051-24-3	DCB Decachlorobiphenyl	109	Q	60-125

Handwritten signature and date:
12/13/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT600 Lab Sample ID: 580-41230-1
 Matrix: Solid Lab File ID: OP0303573.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:30
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.6843(g) Date Analyzed: 11/19/2013 08:58
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: ZB-35-HT ID: 0.25 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149495 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
12674-11-2	PCB-1016	0.0016 U U R		0.0033	0.0010
11104-28-2	PCB-1221	0.0033 U		0.0036	0.0026
11141-16-5	PCB-1232	0.0033 U		0.0036	0.0023
53469-21-9	PCB-1242	0.0016 U		0.0033	0.00068
12672-29-6	PCB-1248	0.0016 U		0.0033	0.00098
11097-69-1	PCB-1254	0.0016 U		0.0033	0.00068
11096-82-5	PCB-1260	0.0016 U V		0.0033	0.00098

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	108		45-155
2051-24-3	DCB Decachlorobiphenyl	168	Q	60-125

RAW
11/21/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT600 RA Lab Sample ID: 580-41230-1 RA
 Matrix: Solid Lab File ID: OP0303691.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:30
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.6843(g) Date Analyzed: 11/22/2013 12:38
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: ZB-XLB-HT ID: 0.25(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149729 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
12674-11-2	PCB-1016	0.0016	U	0.0033	0.0010
11104-28-2	PCB-1221	0.0033	U	0.0036	0.0026
11141-16-5	PCB-1232	0.0033	U	0.0036	0.0023
53469-21-9	PCB-1242	0.0016	U	0.0033	0.00068
12672-29-6	PCB-1248	0.0016	U	0.0033	0.00098
11097-69-1	PCB-1254	0.0016	U	0.0033	0.00068

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	71		45-155
2051-24-3	DCB Decachlorobiphenyl	75		60-125

RAW
11/23/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT600 RA Lab Sample ID: 580-41230-1 RA
 Matrix: Solid Lab File ID: OP0303691.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:30
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.6843(g) Date Analyzed: 11/22/2013 12:38
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: ZB-35-HT ID: 0.25 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149729 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
11096-82-5	PCB-1260	<i>L2</i>	<i>✓ R</i>	0.0033	0.00098

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	89		45-155
2051-24-3	DCB Decachlorobiphenyl	158	Q	60-125

RAV
11/23/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT600 DL Lab Sample ID: 580-41230-1 DL
 Matrix: Solid Lab File ID: OP0303578.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:30
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.6843(g) Date Analyzed: 11/19/2013 10:08
 Con. Extract Vol.: 10(mL) Dilution Factor: 20
 Injection Volume: 1(uL) GC Column: ZB-XLB-HT ID: 0.25(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149495 Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	128	Q	45-155
2051-24-3	DCB Decachlorobiphenyl	207	M Q	60-125

Raw
12/3/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT600 DL Lab Sample ID: 580-41230-1 DL
 Matrix: Solid Lab File ID: OP0303578.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:30
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.6843(g) Date Analyzed: 11/19/2013 10:08
 Con. Extract Vol.: 10 (mL) Dilution Factor: 20
 Injection Volume: 1 (uL) GC Column: ZB-35-HT ID: 0.25 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149495 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
11096-82-5	PCB-1260	<i>14</i>	<i>IBR</i>	0.065	0.020

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	118		45-155
2051-24-3	DCB Decachlorobiphenyl	195	Q	60-125

AMM
12/10/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT600 RADL Lab Sample ID: 580-41230-1 RADL
 Matrix: Solid Lab File ID: OP0303693.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:30
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.6843(g) Date Analyzed: 11/22/2013 13:06
 Con. Extract Vol.: 10 (mL) Dilution Factor: 20
 Injection Volume: 1 (uL) GC Column: ZB-XLB-HT ID: 0.25 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149729 Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	125		45-155
2051-24-3	DCB Decachlorobiphenyl	133	Q	60-125

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 11/26/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT600 RADL Lab Sample ID: 580-41230-1 RADL
 Matrix: Solid Lab File ID: OP0303693.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:30
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.6843(g) Date Analyzed: 11/22/2013 13:06
 Con. Extract Vol.: 10 (mL) Dilution Factor: 20
 Injection Volume: 1 (uL) GC Column: ZB-35-HT ID: 0.25 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149729 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
11096-82-5	PCB-1260	1.5	J	0.065	0.020

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	114		45-155
2051-24-3	DCB Decachlorobiphenyl	204	Q	60-125

RAM
12/31/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT601 Lab Sample ID: 580-41230-2
 Matrix: Solid Lab File ID: OP0303576.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:40
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.5373(g) Date Analyzed: 11/19/2013 09:40
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: ZB-XLB-HT ID: 0.25 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149495 Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	118	Q	45-155
2051-24-3	DCB Decachlorobiphenyl	115	Q	60-125

ADW
12/3/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT601 Lab Sample ID: 580-41230-2
 Matrix: Solid Lab File ID: OP0303576.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:40
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.5373(g) Date Analyzed: 11/19/2013 09:40
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: ZB-35-HT ID: 0.25(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149495 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
12674-11-2	PCB-1016	0.0016 U	R ↓ J	0.0033	0.0010
11104-28-2	PCB-1221	0.0033 U		0.0036	0.0026
11141-16-5	PCB-1232	0.0033 U		0.0036	0.0023
53469-21-9	PCB-1242	0.0016 U		0.0033	0.00069
12672-29-6	PCB-1248	0.0016 U		0.0033	0.00098
11097-69-1	PCB-1254	0.0016 U		0.0033	0.00069
11096-82-5	PCB-1260	L.R. J		0.0033	0.00098

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	98		45-155
2051-24-3	DCB Decachlorobiphenyl	153	Q	60-125

RAW
11/23/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT601 RA Lab Sample ID: 580-41230-2 RA
 Matrix: Solid Lab File ID: OP0303698.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:40
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.5373(g) Date Analyzed: 11/22/2013 14:16
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: ZB-XLB-HT ID: 0.25(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149729 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
12674-11-2	PCB-1016	0.0016	U	0.0033	0.0010
11104-28-2	PCB-1221	0.0033	U	0.0036	0.0026
11141-16-5	PCB-1232	0.0033	U	0.0036	0.0023
53469-21-9	PCB-1242	0.0016	U	0.0033	0.00069
12672-29-6	PCB-1248	0.0016	U	0.0033	0.00098
11097-69-1	PCB-1254	0.0016	U	0.0033	0.00069

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	87		45-155
2051-24-3	DCB Decachlorobiphenyl	92		60-125

RAW
12/3/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT601 RA Lab Sample ID: 580-41230-2 RA
 Matrix: Solid Lab File ID: OP0303698.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:40
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.5373(g) Date Analyzed: 11/22/2013 14:16
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: ZB-35-HT ID: 0.25(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149729 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
11096-82-5	PCB-1260	20	R	0.0033	0.00098

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	103		45-155
2051-24-3	DCB Decachlorobiphenyl	179	Q	60-125

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 11/23/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT601 DL Lab Sample ID: 580-41230-2 DL
 Matrix: Solid Lab File ID: OP0303583.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:40
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.5373(g) Date Analyzed: 11/19/2013 11:20
 Con. Extract Vol.: 10(mL) Dilution Factor: 20
 Injection Volume: 1(uL) GC Column: ZB-XLB-HT ID: 0.25(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149495 Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	139	Q	45-155
2051-24-3	DCB Decachlorobiphenyl	214	Q	60-125

Row
11/13/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT601 DL Lab Sample ID: 580-41230-2 DL
 Matrix: Solid Lab File ID: OP0303583.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:40
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.5373(g) Date Analyzed: 11/19/2013 11:20
 Con. Extract Vol.: 10(mL) Dilution Factor: 20
 Injection Volume: 1(uL) GC Column: ZB-35-HT ID: 0.25(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149495 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
11096-82-5	PCB-1260	<u>20</u>	<u>DR</u>	0.065	0.020

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	118		45-155
2051-24-3	DCB Decachlorobiphenyl	198	Q	60-125

DRW
11/19/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT601 RADL Lab Sample ID: 580-41230-2 RADL
 Matrix: Solid Lab File ID: OP0303701.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:40
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.5373(g) Date Analyzed: 11/22/2013 14:58
 Con. Extract Vol.: 10(mL) Dilution Factor: 20
 Injection Volume: 1(uL) GC Column: ZB-XLB-HT ID: 0.25(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149729 Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	125	M	45-155
2051-24-3	DCB Decachlorobiphenyl	145	Q	60-125

RAW
11/26/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT601 RADL Lab Sample ID: 580-41230-2 RADL
 Matrix: Solid Lab File ID: OP0303701.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:40
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.5373(g) Date Analyzed: 11/22/2013 14:58
 Con. Extract Vol.: 10 (mL) Dilution Factor: 20
 Injection Volume: 1 (uL) GC Column: ZB-35-HT ID: 0.25 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149729 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
11096-82-5	PCB-1260	2.2	<i>✓ J</i>	0.065	0.020

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	116		45-155
2051-24-3	DCB Decachlorobiphenyl	210	Q	60-125

RAW
12/3/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT602 Lab Sample ID: 580-41230-3
 Matrix: Solid Lab File ID: OP0303577.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:50
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.9244(g) Date Analyzed: 11/19/2013 09:54
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: ZB-XLB-HT ID: 0.25(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149495 Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	119	Q	45-155
2051-24-3	DCB Decachlorobiphenyl	106	Q	60-125

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 11/23/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT602 Lab Sample ID: 580-41230-3
 Matrix: Solid Lab File ID: OP0303577.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:50
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.9244(g) Date Analyzed: 11/19/2013 09:54
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: ZB-35-HT ID: 0.25(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149495 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
12674-11-2	PCB-1016	0.0016 U	R ↓	0.0032	0.0010
11104-28-2	PCB-1221	0.0032 U		0.0036	0.0026
11141-16-5	PCB-1232	0.0032 U		0.0036	0.0023
53469-21-9	PCB-1242	0.0016 U		0.0032	0.00068
12672-29-6	PCB-1248	0.0016 U		0.0032	0.00097
11097-69-1	PCB-1254	0.0016 U		0.0032	0.00068
11096-82-5	PCB-1260	1.7 U		0.0032	0.00097

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	103		45-155
2051-24-3	DCB Decachlorobiphenyl	153	Q	60-125

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11/23/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT602 RA Lab Sample ID: 580-41230-3 RA
 Matrix: Solid Lab File ID: OP0303699.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:50
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.9244(g) Date Analyzed: 11/22/2013 14:30
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: ZB-XLB-HT ID: 0.25(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149729 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
12674-11-2	PCB-1016	0.0016	U	0.0032	0.0010
11104-28-2	PCB-1221	0.0032	U	0.0036	0.0026
11141-16-5	PCB-1232	0.0032	U	0.0036	0.0023
53469-21-9	PCB-1242	0.0016	U	0.0032	0.00068
12672-29-6	PCB-1248	0.0016	U	0.0032	0.00097
11097-69-1	PCB-1254	0.0016	U	0.0032	0.00068

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	86		45-155
2051-24-3	DCB Decachlorobiphenyl	88		60-125

Raw
12/3/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT602 RA Lab Sample ID: 580-41230-3 RA
 Matrix: Solid Lab File ID: OP0303699.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:50
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.9244(g) Date Analyzed: 11/22/2013 14:30
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: ZB-35-HT ID: 0.25(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149729 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
11096-82-5	PCB-1260	1.8	R	0.0032	0.00097

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	108		45-155
2051-24-3	DCB Decachlorobiphenyl	175	Q	60-125

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12/3/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT602 DL Lab Sample ID: 580-41230-3 DL
 Matrix: Solid Lab File ID: OP0303584.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:50
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.9244(g) Date Analyzed: 11/19/2013 11:34
 Con. Extract Vol.: 10 (mL) Dilution Factor: 20
 Injection Volume: 1 (uL) GC Column: ZB-XLB-HT ID: 0.25 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149495 Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	133	Q	45-155
2051-24-3	DCB Decachlorobiphenyl	214	Q	60-125

PAW
12/31/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT602 DL Lab Sample ID: 580-41230-3 DL
 Matrix: Solid Lab File ID: OP0303584.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:50
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.9244(g) Date Analyzed: 11/19/2013 11:34
 Con. Extract Vol.: 10(mL) Dilution Factor: 20
 Injection Volume: 1(uL) GC Column: ZB-35-HT ID: 0.25(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149495 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
11096-82-5	PCB-1260	1.8	Q	0.065	0.019

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	116		45-155
2051-24-3	DCB Decachlorobiphenyl	202	Q	60-125

RAW
12/3/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT602 RADL Lab Sample ID: 580-41230-3 RADL
 Matrix: Solid Lab File ID: OP0303702.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:50
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.9244(g) Date Analyzed: 11/22/2013 15:12
 Con. Extract Vol.: 10 (mL) Dilution Factor: 20
 Injection Volume: 1 (uL) GC Column: ZB-XLB-HT ID: 0.25 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149729 Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	105	M	45-155
2051-24-3	DCB Decachlorobiphenyl	106		60-125

RAW
11/23/13

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Seattle Job No.: 580-41230-1
 SDG No.: _____
 Client Sample ID: MBT602 RADL Lab Sample ID: 580-41230-3 RADL
 Matrix: Solid Lab File ID: OP0303702.D
 Analysis Method: 8082 Date Collected: 11/11/2013 09:50
 Extraction Method: 3550B Date Extracted: 11/15/2013 14:04
 Sample wt/vol: 30.9244(g) Date Analyzed: 11/22/2013 15:12
 Con. Extract Vol.: 10(mL) Dilution Factor: 20
 Injection Volume: 1(uL) GC Column: ZB-35-HT ID: 0.25(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 149729 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
11096-82-5	PCB-1260	1.5	0 R	0.065	0.019

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	96		45-155
2051-24-3	DCB Decachlorobiphenyl	162	Q	60-125

RAW
12/3/13



Time Critical Removal Action (TCRA) for Various Transformers (IRP Site 0026), Tiki Island, Marine Corps Base Hawaii (MCBH), HC-11

PREPARED FOR: Soil Sampling for TCRA at Tiki Island, MCBH, HC-11

COMPLIANCE REVIEW BY: Richard Westmoreland / Senior Chemist 

SENIOR REVIEW BY: Albert Iannacone / Senior Chemist 

COPIES: Jon Borr / Project Manager

DATE: May 1, 2014

SUBJECT: Quality Assessment Report (QAR) for Soils Sampled March 19-20, 2014, SDG 320-6695-1

CAPE has prepared this QAR for samples collected for remediation of soil. Samples were collected March 19-20, 2014. A total of 21 soil samples were collected. No field quality control samples were required. A total of 13 samples were analyzed and only three of the samples (MBT606, MBT608, and MBT610) are included in this QAR. Six of the samples were placed on hold for later analysis, if required, and another two were not analyzed.

The chain of custody (COC) forms provided in Attachment I present a summary of the CAPE sample identification numbers, dates of collection, sample matrices, and the analyses requested.

TestAmerica Laboratories, Inc., West Sacramento, California served as the laboratory for this sampling event. The samples were analyzed by EPA SW-846 Method 8082 in accordance with U.S. Environmental Protection Agency (EPA), *Test Methods for Evaluating Solid Waste Physical/Chemical Methods, Final Update III, SW-846*, and the *Department of Defense (DoD) Quality Systems Manual for Environmental Laboratories, Version 4.1, April 2009*.

Results have been validated and/or qualified according to the guidance of *NAVFAC Pacific ER Program Standard and Full Data Validation for Polychlorinated Biphenyls (PCBs) as Aroclors by SW-846 8082, Procedure II-F, February 2007*, as found in *Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific, February 2007*.

The findings of this QAR are based upon the comprehensive review of the following organic chemistry result summaries reported according to the CAPE Level C data deliverables format: chain of custody documentation; holding times; sample preservation; laboratory control sample and laboratory control sample duplicate (LCS/LCSD) recoveries and reproducibilities; laboratory method blank analyses; surrogate compound recoveries; initial and continuing calibration;

second source recoveries; second column confirmation; target compound identification; compound quantitation and reporting limits and retention times.

Any aspects of the data, which are not discussed in this report, should be considered qualitatively and quantitatively valid as reported, based on the deliverables reviewed. Annotated data summary reports presenting the validated results are presented in Attachment II.

GENERAL DATA QUALIFIERS

As required by DoD protocols, all compounds which were qualitatively identified at concentrations below their respective Limit of Detection (LOD) have been qualified with a "J" qualifier on the data summary reports to indicate they are quantitative estimates.

Comments on Data Validation (DV)

Manual integrations were performed for some samples, but all were properly justified and documented, and no qualification of data was required.

Surrogate recoveries were outside of acceptance criteria in Sample MBT606. Per the NAVFAC DV procedure, positive results are qualified "J" in this sample (Aroclor 1260) and non-detects are qualified "R". Since the LCS/LCSDs are acceptable, this is most likely due to a matrix interference problem. The sample was not reanalyzed as required by the method. No explanation was provided by the laboratory as to why the sample was not reanalyzed.

Sample MBT603 was used for the MS/MSD analyses. Problems with the MS/MSD affected only Sample MBT603, which is not reported in this QAR.

One of the method blanks (MBs) reported Aroclor 1248. This MB was not associated with any of the samples reported in this QAR, and Aroclor 1248 is non-detect in all samples anyway.

All three samples in this QAR were analyzed at a dilution.

Aroclors 1254 and 1260 coeluted in Samples MBT603-607 and were reported as Aroclor 1260. Aroclor 1260 was qualified "J" in these samples. This affects only Sample MBT606 included in this report.

PRECISION

Analytical precision is a measurement of the variability associated with duplicate (two) or replicate (more than two) analyses of the same sample in the laboratory. The analytical precision is measured by the LCS/LCSD samples and the matrix spike/matrix spike duplicate (MS/MSD) samples. The MS/MSD experienced recovery problems, but it affected only Sample MBT603, which was not included in this QAR. All LCS/LCSD were acceptable.

Field precision is a measurement of the total variability associated with duplicate (two) or replicate (more than two) samples collected separately in the field and analyzed together in the laboratory. There were no field duplicates in this package.

ACCURACY

Accuracy is the degree of agreement found between an observed value and an accepted reference value. Accuracy includes components of random error (variability due to imprecision) and systematic error (bias); components which are due to sampling and analytical operations and is a data quality indicator. Accuracy, therefore, reflects the total error associated with a measurement. A measurement is accurate when the value reported does not differ from the true value. Analytical accuracy is evaluated by measuring the percent recovery (%R) of known concentrations of target analytes that are spiked into site specific samples (matrix spike) or reagent water (LCS) before extraction, at known concentrations. Surrogate recoveries are also used as a measure of accuracy.

Surrogates and LCS/LCSDs were acceptable for all methods, with the few surrogate exceptions discussed above. Only Sample MBT606 was affected in this QAR. The MS/MSD experienced recovery problems, but it affected only Sample MBT603, which was not included in this QAR.

REPRESENTATIVENESS

Representativeness is a measure of the degree to which data accurately and precisely represent a characteristic of a population, a parameter variation at a sampling point, a process condition, or an environmental condition. Representativeness was evaluated through the review of holding time criteria and laboratory method blanks. Representativeness has also been achieved through use of the DoD and EPA-approved sampling procedures and analytical methodologies. Samples were collected by CAPE following the procedures detailed in the project-specific QA planning documents for the project and submitted for analysis using the EPA-approved analytical methods detailed in the project Sampling and Analysis Plan (SAP).

Samples were shipped to the laboratory under chain of custody, received intact, and properly preserved. Adherence to the procedures described in the project SAP for this sampling event ensured that the results generated are representative of environmental conditions at the time of sampling.

COMPARABILITY

Comparability is a qualitative measure designed to express the confidence with which one data set may be compared with another. Adherence to proper sample collection and handling techniques described in the project SAP, and the use of the promulgated EPA analytical methods described by the project SAP ensure that this data set would be comparable with another future data set collected under the same conditions and analyzed by the same methods. The analytical data generated were reported with adequate sensitivity for comparison against applicable environmental action levels (EALs). All LODs were below the EALs.

COMPLETENESS

Completeness is calculated from the aggregation of data for each method for any particular sampling event. For each method and each site, the number of valid results, divided by the number of individual analyte results initially planned, expressed as a percentage, determines the

completeness for the data set. The objective for completeness for this project is 95 percent. Valid results used to meet completeness objectives are those results that provide defensible estimates of the true concentration of an analyte in a sample. These valid results include data that are not qualified and data for which QC results indicate qualification is necessary, but which may still be used to meet project objectives. Invalid results are those data for which there is an indication that the prescribed sampling or analytical protocols were not followed. Data rejected due to analyses at multiple dilutions do not count against the % completeness. There were 6 instances of invalid or rejected data associated with this data set and completeness was 75% for all analytes in samples reported for this project. This does not meet the project goal of 95%.

$$\% \text{ Completeness} = \frac{\text{number of valid (non - R flagged) results}}{\text{total \# of reported results}}$$

SUMMARY

All sample preservation; holding times; LCS/LCSDs; initial and continuing calibrations; initial calibration verification checks; and retention times were within project and method acceptance criteria, or exhibited minor issues, and did not require and qualification of data.

Sample MBT606 failed acceptance criteria for the surrogate, and Aroclor 1260 was qualified "J" and the other Aroclors were non-detect and were qualified "R". The sample was not reanalyzed, as required by the method, and no explanation was provided by the laboratory. This failure is most likely due to matrix interference problems since the LCS/LCSD recoveries were acceptable. The rejected data count against the completeness criteria (75% for this project). This does not meet the project goal of 95% completeness.

Problems with the MS/MSD affect only Sample MBT603 which is not included in this QAR.

Aroclors 1254 and 1260 coeluted in Sample MBT606 and were reported as Aroclor 1260. Aroclor 1260 was qualified "J" in this sample.

Overall, the quality of the analytical results meets the QC limits established by the project DQOs, the analytical methods, and the data validation criteria, with the exceptions noted. Results may be used to support project decisions; however, data may not be used to support decisions regarding the non-detected values in Sample MBT606.

Any aspect of the data not discussed in this report should be considered qualitatively and quantitatively valid, as reported, based on the deliverables reviewed. A support documentation package has been prepared for this quality assurance review and is filed in the TCRA HC-11, IRP Site 0026 project file.

Attachment I
Chains of Custody

Chain of Custody / Analysis Request Form

Report to JONATHAN BORK / Maria Rios		Project identification		Indicate analyses requested	
Company name CAPE		Job name Various Transformers MUSH		 320-6695 Chain of Custody	
Address 155 Kapulana Pl Suite 111		Job number 01804.111			
City Honolulu HI		PO number 7882			
State HI		ZIP 96814			
Phone 808-554-4815		Contact email address jborric@cape-inc.com		Date results needed 7 day TAT	
Fax 808-554-6480		Date results needed			
Sampler J. Bork		# samples in shipment 21			
		Part 1 of 3			

Item no.	Client sample ID	Multi incremental	Composite	Matrix										Sampling		No. of containers	Laboratory ID no.		
				Grab	Water	Soil	Wastewater	Drinking water	Sediment	Liquid	Solid	Oil	Other	Preservation method	Date			Time	
1	MBT603	X		X											IR	3-11-14	0920	1	X
2	MBT604	X		X													0936	1	X
3	MBT605	X		X													0946	1	X
4	MBT606	X		X													1045	1	X
5	MBT607	X		X													1145	1	X
6	MBT608	X		X													1530	1	X
7	MBT609	X		X													3-20-14 1500	1	X
8	MBT610	X		X													1000	1	X
9	MBT611	X		X													1600	1	X
10	MBT 612	X	X	X													1240	6	X

Released by (print / sign) JON BORK / [Signature]	Date / time released 03/21/14	Delivery method Drop Off	Received by (print / sign) Eloh Nylkim Mcgee	Company / Agency affiliation Test America	Date / time received 03/20/2014	Condition noted Entered on Ice 4°C
			Cityville [Signature]	Floris	3-22-14 1000	

Comments: _____

Please check one:
 Dispose by lab
 Return to client
 Archive (fee may apply)

92°C, 5.8°C

Chain of Custody / Analysis Request Form

Report to: <u>JONATHAN BORR / Maria Rios</u>		Project identification				Indicate analyses requested			
Company name: <u>CAPR</u>		Job name: <u>Various Transformers MCBH</u>							
Address: <u>155 Kapiolani Pl Suite 111</u>		Job number: <u>01404.111</u>							
City: <u>Honolulu</u> State: <u>HI</u> ZIP: <u>96819</u>		PO number: <u>7482</u>							
Phone: <u>808-554-4815</u> Fax: <u>808-591-6888</u>		Contact email address: <u>jborr@capr-inc.com</u>		Date results needed: <u>7 day FAT</u>					
Sampler: <u>J. Borr</u>		# samples in shipment: <u>21 Page 2 of 3</u>		Chain of custody email: <u>chainofcustody@capr-inc.com</u>					

Item no.	Client sample ID	Multi Incremental	Composite	Matrix								Sampling		No. of containers	Laboratory ID no.			
				Grab	Water	Soil	Wastewater	Drinking water	Sludge	Liquid	Solid	Oil	Other			Preservation method	Date	Time
1	MBT613			X	X								Ice	3-20-14	1245	1	X	
2	MBT614			X	X										1250	1	X	
3	MBT615			X	X										1300	1	X	
4	MBT616			X	X										1305	1	X	
5	MBT617			X	X										1310	1	X	
6	MBT618			X	X										1340	1	X	
7	MBT619			X	X										1345	1	X	
8	MBT620			X	X										1350	1	X	
9	MBT621			X	X										1400	1	X	
10	MBT622			X	X										1405	1	X	

Released by (print / sign)	Date / time released	Delivery method	Received by (print / sign)	Company / Agency affiliation	Date / time received	Condition noted
<u>JON BORR / [Signature]</u>	<u>3/21/14</u>	<u>Drop Off</u>	<u>Eloh Njukam-Mcgee</u>	<u>Eloh Njukam-Mcgee</u>	<u>03/20/2014</u>	<u>intact on ice 4°C</u>
<u>Eloh Njukam-Mcgee</u>	<u>03/21/14 10:20A</u>		<u>[Signature]</u>	<u>TAWS</u>	<u>3/24/1000</u>	

Comments:

Please check one:
 Dispose by lab
 Return to client
 Archive (fee may apply)

Login Sample Receipt Checklist

Client: Cape Environmental Management, Inc.

Job Number: 320-6695-1

Login Number: 6695

List Source: TestAmerica Sacramento

List Number: 1

Creator: Hytrek, Cheryl

Question	Answer	Comment
Radioactivity wasn't checked or is \neq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Cape Environmental Management, Inc.

Job Number: 320-6695-1

Login Number: 6695

List Source: TestAmerica Denver

List Number: 1

List Creation: 03/25/14 06:20 PM

Creator: O'Tormey, Stephanie R

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Cape Environmental Management, Inc.

Job Number: 320-6695-1

Login Number: 6695

List Source: TestAmerica Denver

List Number: 2

List Creation: 03/26/14 12:00 PM

Creator: O'Tormey, Stephanie R

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Attachment II
Data Summary Reports

**Time Critical Removal Action for
Various Transformers
(IRP Site 0026)
Marine Corps Base Hawaii
Soil Samples Collected March 19-20, 2014**

Sample Identification	Project Cleanup Goal (DOH EAL) ¹	MBT606	MBT608	MBT610
Lab Identification		320-6695-4	320-6695-6	320-6695-8
Date Sampled		3/19/2014	3/19/2014	3/20/2014
Sample Location		Capped Area	Decision Unit A, 6"	Decision Unit B, 6"
<i>PCBs by SW846 8082</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
PCB-1016	--	R	0.03U	0.03U
PCB-1221	--	R	0.06U	0.06U
PCB-1232	--	R	0.045U	0.045U
PCB-1242	--	R	0.03U	0.03U
PCB-1248	--	R	0.03U	0.03U
PCB-1254	--	R	0.03U	0.03U
PCB-1260	--	32J	0.620	0.720
Total PCBs	1.1	32J	0.620	0.720

Notes:

¹EAL Environmental Action Level
DOH Department of Health, State of Hawaii

mg/kg-miligrams per kilogram

J - Preliminary data qualifier for an estimated concentration

U - Result is not detected

UJ - Result is not detected and a quantitative estimate

R - Result is rejected as unusable

Bold results indicate positively detected value

Highlighted results exceeds Project Cleanup Goal

ANALYTICAL REPORT

Job Number: 320-6695-1

Job Description: HC11

For:

Cape Environmental Management, Inc.
155 Kapalulu Place
Suite 111
Honolulu, HI 96819
Attention: Mr. John Borr



Approved for release
David R Alltucker
Project Management Assistant II
4/21/2014 12:25 PM

David R Alltucker, Project Management Assistant II
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4383
david.alltucker@testamericainc.com
04/21/2014

TestAmerica Laboratories, Inc.

TestAmerica Sacramento 880 Riverside Parkway, West Sacramento, CA 95605

Tel (916) 373-5600 Fax (916) 372-1059 www.testamericainc.com



Job Narrative
320-6695-1

Receipt

The samples were received on 3/22/2014 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.2° C and 5.8° C.

GC Semi VOA

Method(s) 8082, 8082A: Batch: 218838 / 8082

The method blank for batch Prep Batch 218458 contained Aroclor-1248 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8082: The following sample(s) required a sulfuric acid clean-up, via EPA Method 3665A, to reduce matrix interferences: MBT603 (320-6695-1), MBT603 (320-6695-1 MS), MBT603 (320-6695-1 MSD), MBT604 (320-6695-2), MBT605 (320-6695-3), MBT606 (320-6695-4), MBT607 (320-6695-5), MBT614 (320-6695-12).

Method(s) 8082: The following sample(s) contained more than one Aroclor with insufficient separation to quantify individually. The samples contained a combination of aroclor 1254 and 1260. The PCBs present are quantified as the predominant Aroclor which was 1260: MBT603 (320-6695-1), MBT604 (320-6695-2), MBT605 (320-6695-3), MBT606 (320-6695-4), MBT607 (320-6695-5).

The following samples were diluted to bring the concentration of target analytes within the calibration range: MBT608 (320-6695-6), MBT610 (320-6695-8) Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method(s) 3546: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 219494, 3546_8082.

Method(s) 3546: The 8081/8082 Surrogate_00064 used in this batch has yet to be verified, verification is pending as of 4.2.14.

In addition, these samples have been homogenized.

No other analytical or quality issues were noted.

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 320-6695-1

SDG No.: _____

Instrument ID: SGC_P3a Analysis Batch Number: 215113

Lab Sample ID: STD71248 280-215113/3 IC Client Sample ID: _____

Date Analyzed: 03/03/14 15:22 Lab File ID: 0303A003.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 1	3.56	Baseline Smoothing	jacksono	03/04/14 07:15
PCB-1248 Peak 2	4.02	Baseline Smoothing	jacksono	03/04/14 07:15
PCB-1248 Peak 3	4.61	Baseline Smoothing	jacksono	03/04/14 07:15
PCB-1248 Peak 4	5.32	Baseline Smoothing	jacksono	03/04/14 07:15
PCB-1248 Peak 5	5.86	Baseline Smoothing	jacksono	03/04/14 07:15

Lab Sample ID: STD61248 280-215113/4 IC Client Sample ID: _____

Date Analyzed: 03/03/14 15:43 Lab File ID: 0303A004.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 1	3.56	Baseline Smoothing	jacksono	03/04/14 07:15
PCB-1248 Peak 2	4.02	Baseline Smoothing	jacksono	03/04/14 07:15
PCB-1248 Peak 3	4.62	Baseline Smoothing	jacksono	03/04/14 07:15
PCB-1248 Peak 4	5.32	Baseline Smoothing	jacksono	03/04/14 07:15
PCB-1248 Peak 5	5.86	Baseline Smoothing	jacksono	03/04/14 07:15

Lab Sample ID: STD51248 280-215113/5 IC Client Sample ID: _____

Date Analyzed: 03/03/14 16:04 Lab File ID: 0303A005.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 1	3.56	Baseline Smoothing	jacksono	03/04/14 07:16
PCB-1248 Peak 2	4.02	Baseline Smoothing	jacksono	03/04/14 07:16
PCB-1248 Peak 3	4.61	Baseline Smoothing	jacksono	03/04/14 07:16
PCB-1248 Peak 4	5.32	Baseline Smoothing	jacksono	03/04/14 07:16
PCB-1248 Peak 5	5.86	Baseline Smoothing	jacksono	03/04/14 07:16

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 320-6695-1

SDG No.: _____

Instrument ID: SGC_P3a Analysis Batch Number: 215113

Lab Sample ID: STDL41248 280-215113/6 IC Client Sample ID: _____

Date Analyzed: 03/03/14 16:26 Lab File ID: 0303A006.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 1	3.56	Baseline Smoothing	jacksono	03/04/14 07:16
PCB-1248 Peak 2	4.02	Baseline Smoothing	jacksono	03/04/14 07:16
PCB-1248 Peak 3	4.61	Baseline Smoothing	jacksono	03/04/14 07:16
PCB-1248 Peak 4	5.32	Baseline Smoothing	jacksono	03/04/14 07:16
PCB-1248 Peak 5	5.86	Baseline Smoothing	jacksono	03/04/14 07:16

Lab Sample ID: STDL31248 280-215113/7 IC Client Sample ID: _____

Date Analyzed: 03/03/14 16:47 Lab File ID: 0303A007.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 1	3.56	Baseline Smoothing	jacksono	03/04/14 07:17
PCB-1248 Peak 2	4.02	Baseline Smoothing	jacksono	03/04/14 07:17
PCB-1248 Peak 3	4.62	Baseline Smoothing	jacksono	03/04/14 07:17
PCB-1248 Peak 4	5.32	Baseline Smoothing	jacksono	03/04/14 07:17
PCB-1248 Peak 5	5.86	Baseline Smoothing	jacksono	03/04/14 07:17

Lab Sample ID: STDL21248 280-215113/8 IC Client Sample ID: _____

Date Analyzed: 03/03/14 17:08 Lab File ID: 0303A008.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 1	3.56	Baseline Smoothing	jacksono	03/04/14 07:17
PCB-1248 Peak 2	4.02	Baseline Smoothing	jacksono	03/04/14 07:17
PCB-1248 Peak 3	4.61	Baseline Smoothing	jacksono	03/04/14 07:17
PCB-1248 Peak 4	5.32	Baseline Smoothing	jacksono	03/04/14 07:17
PCB-1248 Peak 5	5.86	Baseline Smoothing	jacksono	03/04/14 07:17

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 320-6695-1

SDG No.: _____

Instrument ID: SGC_P3a Analysis Batch Number: 215113

Lab Sample ID: STD11248 280-215113/9 IC Client Sample ID: _____

Date Analyzed: 03/03/14 17:30 Lab File ID: 0303A009.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 1	3.56	Instrument noise	jacksono	03/04/14 07:17
PCB-1248 Peak 2	4.02	Instrument noise	jacksono	03/04/14 07:17
PCB-1248 Peak 3	4.61	Instrument noise	jacksono	03/04/14 07:17
PCB-1248 Peak 4	5.32	Instrument noise	jacksono	03/04/14 07:17
PCB-1248 Peak 5	5.86	Instrument noise	jacksono	03/04/14 07:17

Lab Sample ID: STD141660 280-215113/20 I Client Sample ID: _____

Date Analyzed: 03/03/14 21:25 Lab File ID: 0303A020.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 1	3.56	Instrument noise	jacksono	03/04/14 07:19
PCB-1016 Peak 2	4.02	Instrument noise	jacksono	03/04/14 07:19
PCB-1016 Peak 3	4.16	Instrument noise	jacksono	03/04/14 07:19
PCB-1016 Peak 4	4.23	Instrument noise	jacksono	03/04/14 07:19
PCB-1016 Peak 5	4.61	Instrument noise	jacksono	03/04/14 07:19
PCB-1260 Peak 1	6.10	Instrument noise	jacksono	03/04/14 07:19
PCB-1260 Peak 2	6.83	Instrument noise	jacksono	03/04/14 07:19
PCB-1260 Peak 3	7.32	Instrument noise	jacksono	03/04/14 07:19
PCB-1260 Peak 4	7.75	Instrument noise	jacksono	03/04/14 07:19
PCB-1260 Peak 5	8.14	Instrument noise	jacksono	03/04/14 07:19
DCB Decachlorobiphenyl	9.72	Instrument noise	jacksono	03/04/14 07:19

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 320-6695-1

SDG No.: _____

Instrument ID: SGC_P3a Analysis Batch Number: 215113Lab Sample ID: STD131660 280-215113/21 1 Client Sample ID: _____Date Analyzed: 03/03/14 21:46 Lab File ID: 0303A021.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 1	3.56	Instrument noise	jacksono	03/04/14 07:19
PCB-1016 Peak 2	4.02	Instrument noise	jacksono	03/04/14 07:19
PCB-1016 Peak 3	4.16	Instrument noise	jacksono	03/04/14 07:19
PCB-1016 Peak 4	4.23	Instrument noise	jacksono	03/04/14 07:19
PCB-1016 Peak 5	4.61	Instrument noise	jacksono	03/04/14 07:19
PCB-1260 Peak 1	6.09	Instrument noise	jacksono	03/04/14 07:19
PCB-1260 Peak 2	6.83	Instrument noise	jacksono	03/04/14 07:19
PCB-1260 Peak 3	7.32	Instrument noise	jacksono	03/04/14 07:19
PCB-1260 Peak 4	7.75	Instrument noise	jacksono	03/04/14 07:19
PCB-1260 Peak 5	8.14	Instrument noise	jacksono	03/04/14 07:19
DCB Decachlorobiphenyl	9.73	Instrument noise	jacksono	03/04/14 07:19

Lab Sample ID: STD11660 280-215113/23 1 Client Sample ID: _____Date Analyzed: 03/03/14 22:29 Lab File ID: 0303A023.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 1	3.56	Instrument noise	jacksono	03/04/14 07:20
PCB-1016 Peak 2	4.02	Instrument noise	jacksono	03/04/14 07:20
PCB-1016 Peak 3	4.16	Instrument noise	jacksono	03/04/14 07:20
PCB-1016 Peak 4	4.23	Instrument noise	jacksono	03/04/14 07:20
PCB-1016 Peak 5	4.61	Instrument noise	jacksono	03/04/14 07:20
PCB-1260 Peak 1	6.09	Instrument noise	jacksono	03/04/14 07:20
PCB-1260 Peak 2	6.83	Instrument noise	jacksono	03/04/14 07:20
PCB-1260 Peak 3	7.32	Instrument noise	jacksono	03/04/14 07:20
PCB-1260 Peak 4	7.76	Instrument noise	jacksono	03/04/14 07:20
PCB-1260 Peak 5	8.14	Instrument noise	jacksono	03/04/14 07:20

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 320-6695-1

SDG No.: _____

Instrument ID: SGC_P3a Analysis Batch Number: 219270

Lab Sample ID: STD71248 280-219270/3 IC Client Sample ID: _____

Date Analyzed: 04/01/14 14:47 Lab File ID: 0401A003.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 1	3.55	Baseline Smoothing	jacksono	04/02/14 07:34
PCB-1248 Peak 2	4.01	Baseline Smoothing	jacksono	04/02/14 07:34
PCB-1248 Peak 3	4.61	Baseline Smoothing	jacksono	04/02/14 07:34
PCB-1248 Peak 4	5.31	Baseline Smoothing	jacksono	04/02/14 07:34
PCB-1248 Peak 5	5.85	Baseline Smoothing	jacksono	04/02/14 07:34

Lab Sample ID: STD61248 280-219270/4 IC Client Sample ID: _____

Date Analyzed: 04/01/14 15:08 Lab File ID: 0401A004.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 1	3.56	Baseline Smoothing	jacksono	04/02/14 07:34
PCB-1248 Peak 2	4.02	Baseline Smoothing	jacksono	04/02/14 07:34
PCB-1248 Peak 3	4.61	Baseline Smoothing	jacksono	04/02/14 07:34
PCB-1248 Peak 4	5.31	Baseline Smoothing	jacksono	04/02/14 07:34
PCB-1248 Peak 5	5.85	Baseline Smoothing	jacksono	04/02/14 07:34

Lab Sample ID: STD51248 280-219270/5 IC Client Sample ID: _____

Date Analyzed: 04/01/14 15:30 Lab File ID: 0401A005.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 1	3.55	Baseline Smoothing	jacksono	04/02/14 07:34
PCB-1248 Peak 2	4.01	Baseline Smoothing	jacksono	04/02/14 07:34
PCB-1248 Peak 3	4.61	Baseline Smoothing	jacksono	04/02/14 07:34
PCB-1248 Peak 4	5.31	Baseline Smoothing	jacksono	04/02/14 07:34
PCB-1248 Peak 5	5.85	Baseline Smoothing	jacksono	04/02/14 07:34

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 320-6695-1

SDG No.: _____

Instrument ID: SGC_P3a Analysis Batch Number: 219270

Lab Sample ID: STD41248 280-219270/6 IC Client Sample ID: _____

Date Analyzed: 04/01/14 15:51 Lab File ID: 0401A006.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 1	3.56	Baseline Smoothing	jacksono	04/02/14 07:35
PCB-1248 Peak 2	4.01	Baseline Smoothing	jacksono	04/02/14 07:35
PCB-1248 Peak 3	4.61	Baseline Smoothing	jacksono	04/02/14 07:35
PCB-1248 Peak 4	5.31	Baseline Smoothing	jacksono	04/02/14 07:35
PCB-1248 Peak 5	5.85	Baseline Smoothing	jacksono	04/02/14 07:35

Lab Sample ID: STD71660 280-219270/17 I Client Sample ID: _____

Date Analyzed: 04/01/14 19:46 Lab File ID: 0401A017.D GC Column: CLP1 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1260 Peak 1	6.09	Baseline Smoothing	jacksono	04/02/14 07:35
PCB-1260 Peak 2	6.82	Baseline Smoothing	jacksono	04/02/14 07:35
PCB-1260 Peak 3	7.31	Baseline Smoothing	jacksono	04/02/14 07:35
PCB-1260 Peak 4	7.75	Baseline Smoothing	jacksono	04/02/14 07:35
PCB-1260 Peak 5	8.13	Baseline Smoothing	jacksono	04/02/14 07:35

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 320-6695-1

SDG No.: _____

Instrument ID: SGC_P3b Analysis Batch Number: 215197

Lab Sample ID: STD131248 280-215197/7 IC Client Sample ID: _____

Date Analyzed: 03/03/14 17:08 Lab File ID: 0303B007.D GC Column: CLP2 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 1	4.21	Instrument noise	jacksono	03/04/14 07:35
PCB-1248 Peak 2	4.59	Instrument noise	jacksono	03/04/14 07:35
PCB-1248 Peak 3	5.03	Instrument noise	jacksono	03/04/14 07:35
PCB-1248 Peak 4	5.34	Instrument noise	jacksono	03/04/14 07:35
PCB-1248 Peak 5	5.39	Instrument noise	jacksono	03/04/14 07:35

Lab Sample ID: STD122154 280-215197/15 I Client Sample ID: _____

Date Analyzed: 03/03/14 19:59 Lab File ID: 0303B015.D GC Column: CLP2 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1	5.39	Instrument noise	jacksono	03/04/14 07:36
PCB-1254 Peak 2	5.63	Instrument noise	jacksono	03/04/14 07:36
PCB-1254 Peak 3	6.06	Instrument noise	jacksono	03/04/14 07:36
PCB-1254 Peak 4	6.76	Instrument noise	jacksono	03/04/14 07:36
PCB-1254 Peak 5	7.23	Instrument noise	jacksono	03/04/14 07:36

Lab Sample ID: STD112154 280-215197/16 I Client Sample ID: _____

Date Analyzed: 03/03/14 20:21 Lab File ID: 0303B016.D GC Column: CLP2 ID: 0.32 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1	5.39	Instrument noise	jacksono	03/04/14 07:37
PCB-1254 Peak 2	5.63	Instrument noise	jacksono	03/04/14 07:37
PCB-1254 Peak 3	6.06	Instrument noise	jacksono	03/04/14 07:37
PCB-1254 Peak 4	6.76	Instrument noise	jacksono	03/04/14 07:37
PCB-1254 Peak 5	7.23	Instrument noise	jacksono	03/04/14 07:37

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 320-6695-1
 SDG No.: _____
 Client Sample ID: MBT606 Lab Sample ID: 320-6695-4
 Matrix: Solid Lab File ID: 0403A014.D
 Analysis Method: 8082 Date Collected: 03/19/2014 10:45
 Extraction Method: 3546 Date Extracted: 03/28/2014 09:40
 Sample wt/vol: 30.0(g) Date Analyzed: 04/03/2014 15:50
 Con. Extract Vol.: 10(mL) Dilution Factor: 200
 Injection Volume: 1(uL) GC Column: CLP1 ID: 0.32(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 219555 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
12674-11-2	PCB-1016	2000	U R	6600	2000	1000
11104-28-2	PCB-1221	4000	U	9400	4000	3100
11141-16-5	PCB-1232	3000	U	6600	3000	1000
53469-21-9	PCB-1242	2000	U	6600	2000	1800
12672-29-6	PCB-1248	2000	U	6600	2000	1100
11097-69-1	PCB-1254	2000	U	6600	2000	1100
11096-82-5	PCB-1260	32000	U J	6600	2000	530

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	-100	D Q	59-130

RAW
5/1/14

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 320-6695-1
 SDG No.: _____
 Client Sample ID: MBT606 Lab Sample ID: 320-6695-4
 Matrix: Solid Lab File ID: 0403B014.D
 Analysis Method: 8082 Date Collected: 03/19/2014 10:45
 Extraction Method: 3546 Date Extracted: 03/28/2014 09:40
 Sample wt/vol: 30.0(g) Date Analyzed: 04/03/2014 16:11
 Con. Extract Vol.: 10(mL) Dilution Factor: 200
 Injection Volume: 1(uL) GC Column: CLP2 ID: 0.32(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 219557 Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	274	Q D	59-130

Handwritten signature and date:
 [Signature]
 5/1/14

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 320-6695-1
 SDG No.: _____
 Client Sample ID: MBT608 Lab Sample ID: 320-6695-6
 Matrix: Solid Lab File ID: 0410A042.D
 Analysis Method: 8082 Date Collected: 03/19/2014 15:30
 Extraction Method: 3546 Date Extracted: 04/02/2014 22:54
 Sample wt/vol: 30.1(g) Date Analyzed: 04/11/2014 08:10
 Con. Extract Vol.: 10(mL) Dilution Factor: 3
 Injection Volume: 1(uL) GC Column: CLP1 ID: 0.32(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 220561 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
12674-11-2	PCB-1016	30	U	99	30	15
11104-28-2	PCB-1221	60	U	140	60	47
11141-16-5	PCB-1232	45	U	99	45	15
53469-21-9	PCB-1242	30	U	99	30	27
12672-29-6	PCB-1248	30	U	99	30	17
11097-69-1	PCB-1254	30	U	99	30	17
11096-82-5	PCB-1260	620		99	30	7.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	90		59-130

RAW
5/1/14

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 320-6695-1
 SDG No.: _____
 Client Sample ID: MBT608 Lab Sample ID: 320-6695-6
 Matrix: Solid Lab File ID: 0410B042.D
 Analysis Method: 8082 Date Collected: 03/19/2014 15:30
 Extraction Method: 3546 Date Extracted: 04/02/2014 22:54
 Sample wt/vol: 30.1(g) Date Analyzed: 04/11/2014 08:31
 Con. Extract Vol.: 10 (mL) Dilution Factor: 3
 Injection Volume: 1 (uL) GC Column: CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 220562 Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	104		59-130

Raw
5/11/14

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 320-6695-1
 SDG No.: _____
 Client Sample ID: MBT610 Lab Sample ID: 320-6695-8
 Matrix: Solid Lab File ID: 0410A044.D
 Analysis Method: 8082 Date Collected: 03/20/2014 10:00
 Extraction Method: 3546 Date Extracted: 04/02/2014 22:54
 Sample wt/vol: 30.0(g) Date Analyzed: 04/11/2014 08:52
 Con. Extract Vol.: 10(mL) Dilution Factor: 3
 Injection Volume: 1(uL) GC Column: CLP1 ID: 0.32(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 220561 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
12674-11-2	PCB-1016	30	U	99	30	15
11104-28-2	PCB-1221	60	U	140	60	47
11141-16-5	PCB-1232	45	U	99	45	15
53469-21-9	PCB-1242	30	U	99	30	27
12672-29-6	PCB-1248	30	U	99	30	17
11097-69-1	PCB-1254	30	U	99	30	17
11096-82-5	PCB-1260	720		99	30	8.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	81		59-130

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 320-6695-1
 SDG No.: _____
 Client Sample ID: MBT610 Lab Sample ID: 320-6695-8
 Matrix: Solid Lab File ID: 0410B044.D
 Analysis Method: 8082 Date Collected: 03/20/2014 10:00
 Extraction Method: 3546 Date Extracted: 04/02/2014 22:54
 Sample wt/vol: 30.0(g) Date Analyzed: 04/11/2014 09:14
 Con. Extract Vol.: 10(mL) Dilution Factor: 3
 Injection Volume: 1(uL) GC Column: CLP2 ID: 0.32(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 220562 Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	101		59-130

Handwritten signature:
R. [unclear]
5/1/14

Attachment 7
Level C Data Packages
(see attached CD)

Attachment 8
Final Inspection and BOD Letter

Construction Acceptance Report

1. DATE 7 Oct 2014	2. ACTIVITY MCBH	3. CQC QA REP:
4. CONTRACT NUMBER N62742-10-D-1804	5. PROJECT TITLE TCRA Various Transformers	6. D.O.# WR# HC11
7. FINAL <input checked="" type="checkbox"/>	8. PRE FINAL <input type="checkbox"/>	9. BOD <input checked="" type="checkbox"/> 7 OCT 2014

10. Attendance Log

Name	Organization	Phone\Fax
Dennis Makabe	NAVFAC HI / FEAD	282-1886
WAYNE CHUN	FAZ DEPT MAINT SPVSR	257-2040
Pete Madrigal	NAVFAC HI	471-1171

11. Partial <input type="checkbox"/> BOD Date: Description of phase accepted. <div style="text-align: center; font-size: 1.2em;">Electric Shop Site</div>	12. Full <input checked="" type="checkbox"/> BOD Date: <div style="text-align: center; font-size: 1.2em;">7 OCT 2014</div>
---	--

13. Project acceptable for occupancy:

Customer


 ROICC QA Rep.


 Contractor

14. list of discrepancies:	Dispose of 4 ea 55-gal drums containing sediment and rinse water.



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND, HAWAII
400 MARSHALL ROAD
JBPBH, HAWAII 96860-3139

4330
Ser PRJ211/00081
January 28, 2015

Mr. Jonathan Borr
CAPE Environmental Management, Inc.
500 Pinnacle Court, Ste. 100
Norcross, GA 30071-3662

Dear Mr. Borr:

SUBJECT: BENEFICIAL OCCUPANCY DATE FOR CONTRACT NO.
N62742-10-D-1804, TASK ORDER NO. HC11, TIME CRITICAL
REMOVAL ACTION FOR VARIOUS TRANSFORMERS (SITE 0026),
JBPBH, MARINE CORPS BASE HAWAII, OAHU, HAWAII

Final inspection of the fieldwork under the subject task order on October 7, 2014 revealed that all fieldwork had been substantially completed. The personnel in attendance and the punchlist items are attached as enclosure (1).

Final acceptance of the inspected fieldwork was made on October 7, 2014. Government possession through "Beneficial Occupancy" of the completed fieldwork under this contract task order was taken on October 7, 2014.

Upon acceptance or Government possession through beneficial occupancy, custody and responsibility for security, maintenance, and operation of the completed work are hereby transferred from the Contractor to the using activity.

Please notify our office at (808) 474-3220, ext. 267/280 as soon as possible if there are any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "O. R. Peralta", is written over a circular stamp or seal.

O. R. PERALTA
Outlying Team Leader
Facilities Engineering and
Acquisition Division
By direction of the
Commanding Officer

Enclosure: 1. Construction Acceptance Report

Construction Acceptance Report

1. DATE 7 Oct 2014	2. ACTIVITY MCBH	3. CQC QA REP:
4. CONTRACT NUMBER N62742-10-D-1804	5. PROJECT TITLE TCRA Various Transformers	6. D.O.# WR# HC11
7. FINAL <input checked="" type="checkbox"/>	8. PRE FINAL <input type="checkbox"/>	9. BOD <input checked="" type="checkbox"/> 7 OCT 2014

10. Attendance Log

Name	Organization	Phone\Fax
Dennis Makabe	NAVFAC HI / FEAD	282-1886
WAYNE CHUN	FAZ DEPT MAINT SPVSR	257-2046
Pete Madrigal	NAVFAC HI	471-1171

11. Partial <input type="checkbox"/> BOD Date: Description of phase accepted.	12. Full <input checked="" type="checkbox"/> BOD Date:
Electric Shop Site	7 OCT 2014

13. Project acceptable for occupancy:

Randell P. Hu
Customer

Dennis Makabe
ROICC QA Rep.

[Signature]
Contractor

14. list of discrepancies:	Dispose of 4 ea 55 gal drums containing sediment and rinse water.