



UNITED STATES MARINE CORPS

MARINE CORPS BASE HAWAII
BOX 63002
KANEHOE BAY HAWAII 96863-3002

IN REPLY REFER TO
5090
LFE/006-24
January 25, 2024

Mr. Darryl Lum, P.E., Chief
Clean Water Branch
State of Hawaii Department of Health
2827 Waimano Home Road
Pearl City, Hawaii 96782

Dear Mr. Lum:

SUBJECT: MARINE CORPS BASE HAWAII STORM WATER MANAGEMENT PROGRAM
ANNUAL MONITORING REPORT – FISCAL YEAR 23

INTRODUCTION

In accordance with Part G.2 of National Pollutant Discharge Elimination System (NPDES) Permit No. HI S000007, Marine Corps Base Hawaii (MCBH) has prepared the following Storm Water Management Program (SWMP) annual monitoring report. This monitoring report summarizes monitoring activities conducted in accordance with MCBH's Municipal Separate Storm Sewer (MS4) Permit requirements for Fiscal Year (FY) 2023 (October 1, 2022, to September 30, 2023). In March 2023, MCBH published the revised SWMP Plan which was designed to address the requirements of the permit and reduce, to the Maximum Extent Practicable (MEP), the discharge of pollutants to and from MCBH's MS4 to protect water quality and to satisfy the appropriate water quality requirements of the Clean Water Act (CWA). Additionally, the SWMP Plan incorporates all requirements established in the Federal Facilities Compliance Agreement (FFCA) between MCBH and the U.S. Environmental Protection Agency, Region 9 (EPA).

Part G.2.b.(1) Discussion on the activities/work implemented to meet each objective, as outlined in Part F.1.a, including any additional objectives identified by the Permittee, and the results [e.g., assessment of the water quality issues in each watershed resulting from storm water discharges, refer to Part F.1.a.(7)] and conclusions.

MCBH's Annual Monitoring Plan, prepared in accordance with Part F.1.a of NPDES Permit No. HI S000007, was submitted to the Hawaii Department of Health (HDOH) Clean Water Branch (CWB) on May 24, 2023 (LFE/073-23). The objectives outlined in the annual monitoring plan were developed in accordance MCBH's SWMP Plan (LFE/71-2022) and individual Stormwater Pollution Prevention Plans (SWPPPs) for industrial and commercial facilities. A discussion of the activities and work completed in FY 23 to meet each objective as outlined in part F.1.a. is provided below.

Objective 1: Assess compliance with this permit (including TMDL Implementation and Management Plans and demonstrating consistency with Wasteload Allocations, if required).

The monitoring provisions of the Permit are intended to conform to existing discharge prohibitions, numeric and narrative effluent limitations, and any applicable water quality standards for the receiving waters. MCBH must sample the industrial facilities for their applicable pollutants as described

in the permit, SWMP Plan and SWPPPs. Compliance is assessed by comparing the analytical results with numerical water quality (chemistry values) limits under sector specific requirements defined in the permit. NPDES Permit No. HI S000007 does not include any Total Maximum Daily Load (TMDL) Implementation and Management Plans or Wasteload Allocations (WLA). The Permit does include the following four types of required analytical monitoring:

(1) Quarterly Benchmark Monitoring

The quarterly benchmark monitoring data are primarily used to determine the overall effectiveness of MCBH’s control measures and may be used to determine when additional corrective actions may be necessary. Benchmark exceedances are not permit violations; however, if corrective action is required as a result of a benchmark exceedance, failure to conduct the required action is a permit violation. Benchmark monitoring is sector specific and MCBH conducts quarterly benchmark sampling at Sector L (Landfills, Land Application Sites and Open Dumps), Sector N (Scrap Recycling and Waste Recycling Facilities), and Sector Q (Water Transportation) industrial facilities.

Autosamplers are deployed at three of four benchmark sites to automatically collect quarterly benchmark samples for laboratory analysis: Sanitary Landfill, Recycling Center, and WFO Lab/Boat Shop. The fourth benchmark sampling site (Small Boat Harbor) relies on manual sampling during a storm event. Table 1 summarizes quarterly benchmarking monitoring efforts for MCBH’s four sector-specific monitoring sites. Samples were not collected from the sanitary landfill in FY 23 as no stormwater discharge was observed. Samples were also not collected from the small boat harbor as rain events either occurred on short notice or at night during FY 23. MCBH has initiated the process of adding an autosampler to this site in FY 24.

Table 1 – Summary of FY 23 Quarterly Benchmark Monitoring

Location	Sampling Quarter	Sample Collection Date
Sanitary Landfill 002 (Sector L)	Oct-Dec 2022	C
	Jan-Mar 2023	C
	Apr-Jun 2023	C
	Jul-Sep 2023	C
Recycling Center (Bldg. 132) 007 (Sector N)	Oct-Dec 2022	19-Oct-2022
	Jan-Mar 2023	28-Mar-2023
	Apr-Jun 2023	16-Jun-2023
	Jul-Sep 2023	14-Sep-2023
WFO Lab/Boat Shop (Bldg. 6802) 008 (Sector Q)	Oct-Dec 2022	C
	Jan-Mar 2023	27-Jan-2023
	Apr-Jun 2023	16-Jun-2023
	Jul-Sep 2023	14-Sep-2023
Small Boat Harbor (Bldg. 1698) 009 (Sector Q)	Oct-Dec 2022	C
	Jan-Mar 2023	C
	Apr-Jun 2023	C
	Jul-Sep 2023	C

C – Not Data Indicator (NODI) – No Discharge

(2) Annual Effluent Limitations Guidelines Monitoring

In accordance with Appendix 1, Part 6.2.2 of NPDES Permit No. HI S000007, MCBH conducts annual effluent monitoring at the on-base landfill. However, as described above, no discharge was observed in FY 23. The lack of an observed discharge is typical at the landfill’s two discharge points (Outfall IDs LF-1 and LF-2) because flow is first routed through a detention basin and only significant storms will pass through. MCBH will continue to maintain an autosampler at the landfill discharge point in the event a sample can be collected in FY 24.

Table 2 – Summary of FY2023 Annual Effluent Limitations Monitoring

Location	Sampling Period	Sample Collection Date
Sanitary Landfill 002(Sector L)	Oct-2022 to Sep 2023	C

C – Not Data Indicator (NODI) – No Discharge

(3) Impaired Waters Monitoring

In June 2022, the U.S. EPA approved HDOH’s 2022 Integrated Report which included the State’s Clean Water Act Section 303(d) list of impaired waterbodies. None of the waterbodies identified in NPDES Permit No. HI S000007 (Kaneohe Bay, Nuupia, Halekou, and Kalapuhi Ponds, Kailua Bay, and Mokapu Central Drainage Channel) are included in the latest version of the 303(d) list. Therefore, no impaired waters monitoring is required at this time. However, MCBH will continue to monitor HDOH and U.S. EPA efforts to identify and list impaired water bodies and will implement a sampling program in the future if necessary.

(4) Other Monitoring as required by the HDOH

No additional monitoring is required by the HDOH at this time. However, in accordance with Appendix 1, Part 6.2.5 of NPDES Permit No. HI S000007, MCBH will continue to coordinate with HDOH regarding any future monitoring requirements.

Objective 2: Ensure that practices to control pollutants in storm water discharges are evaluated and revised, as necessary, to meet changing conditions at MCBH.

The monitoring program is intended to provide information that can be used to reflect changes in facilities, operational procedures, or materials handled that could lead to changes in the quality of storm water discharges. Visual observations were made during the quarterly benchmark monitoring. Sediment collection devices at WFO Lab/Boat Shop appeared to effectively remove excessive sediment from the large trench drain at the site, resulting in the site meeting the Sector Q Benchmark Monitoring Concentrations. The detention basin at the landfill prevented any stormwater discharge during the year.

In addition to the Permit required monitoring, the MCBH Environmental Compliance and Protection Division (ECPD) conducts routine inspections of all facilities on-base (including permitted industrial and commercial operations) annually (at a minimum) and identifies additional practices for military units to implement that may further control pollutants from entering the MS4. If ECPD identifies a potential pollutant pathway or illicit discharge, a corrective action plan is developed and implemented

(i.e., temporary vs. permanent corrective measures). Most issues identified during ECPD inspections are associated with the rapid turnover of base personnel (typically two years) and a lack of continuity between responsible parties. To address this issue, ECPD is focusing on training, coordination, and outreach within the MCBH community. Further assessment of these efforts is discussed in the SWMP Annual Report (LFE/007-24)

Objective 3: Measure the effectiveness of the Permittee's SWMP Plan.

In February 2022, MCBH submitted the Program Effectiveness Assessment Plan (PEAP) for NPDES Permit No HI S000007 to HDOH. As part of the PEAP, water quality assessments (Outcome Levels 5 and 6) are conducted as part of MCBH's ongoing monitoring program. As data is collected over time, the results can be used to evaluate long-term trends in pollutant reductions and assist in determining the effectiveness of the various programs in the SWMP Plan. MCBH may also utilize water quality monitoring analysis results conducted by other agencies such as the City and County of Honolulu (CCH), the United States Geological Survey (USGS), and HDOH to provide a comparison between discharges from the MS4 and water quality in receiving waters. The water quality monitoring results from sampling the MS4 will be used to compare relative contributions and progress towards improving water quality. The monitoring program provides data assessment measures to assess the program at levels 4 through 6 and sets the framework for an integrated assessment between all outcome levels.

Objective 4: Qualitatively measure the effectiveness of BMPs in preventing minimizing or removing pollutants in storm water discharges.

The SWMP Plan requires implementation of Best Management Practices (BMPs) that are selected on a site-by-site basis to reduce storm water pollutants from certain identified sources. The process of evaluating sources and selecting BMPs is usually done prior to wet weather. Thus, certain decisions are made without the benefit of visual observations and analytical results. In addition, storm water quality BMPs may not result in a predictable reduction in pollutant concentrations. Analytical and visual monitoring should eventually provide a means for evaluating the effectiveness of selected BMPs. Site-specific BMPs are evaluated during ECPD's facility inspections discussed above. In general, BMPs employed throughout MCBH are an effective measure in preventing, minimizing, or removing pollutants in storm water discharges.

During significant storm events, ECPD conducts a thorough base-wide assessment of the MS4 and often deploys temporary BMPs in problem areas. For example, ECPD maintains a supply of sorbent filter socks to place around storm drain inlets when storm flow exceeds a permanent BMP's effectiveness. If an area presents a significant potential for repeated pollutant discharge (typically sediment), the temporary BMP is maintained and assessed continuously until a permanent BMP or remedy can be implemented.

Objectives 5/6/7: Assess the overall health based on the chemical, physical, and biological impacts to receiving waters resulting from storm water discharges and an evaluation of the long-term trends; characterize stormwater discharges; Identify sources of specific pollutants.

During FY 23, MCBH attempted to collect benchmark monitoring samples in accordance with the Permit from the four monitoring locations as shown in Table 1. As discussed above, samples were not collected from the sanitary landfill or small boat harbor as no stormwater discharge was observed. FY 23

benchmark monitoring data from the two facilities where samples were able to be collected (WFO/Boat Lab – Building 6802 and Recycling Center – Building 132) are presented in Table 3.

Table 3 Benchmark Monitoring Sample Results

Analyte	Method	Units	Sector Q - Water Transportation Benchmark Limits	BLDG 6802	BLDG 6802	BLDG 6802	BLDG 6802	BLDG 6802
				FY 23 Q3	FY 23 Q4	FY 24 Q3	FY 23 Q4	AVERAGE
				Result	Result	Result	Result	Result
Aluminum	200.8_CWA	mg/L	0.75	C	1.1	0.31	0.072	0.4
Iron	200.8_CWA	mg/L	1	C	1.1	0.4	0.063 J	0.5
Lead	200.8_CWA	mg/L	0.21	C	0.055	0.0064	0.0026	0.0176
Zinc	200.8_CWA	mg/L	0.09	C	0.12	0.041	0.027	0.057
Analyte	Method	Units	Sector N - Scrap Recycling Benchmark Limits	BLDG 132	BLDG 132	BLDG 132	BLDG 132	BLDG 132
				FY 23 Q1	FY 23 Q2	FY 23 Q3	FY 23 Q4	AVERAGE
				Result	Result	Result	Result	Result
Aluminum	200.8_CWA	mg/L	0.75	1.2	1.5	1.4	0.7	1.2
Copper	200.8_CWA	mg/L	0.0048	0.032	0.04	0.047	0.02	0.035
Iron	200.8_CWA	mg/L	1	1.6	2.3	2	1	1.7
Lead	200.8_CWA	mg/L	0.21	0.0051	0.0093	0.01	0.0022	0.0067
Zinc	200.8_CWA	mg/L	0.09	0.054	0.11	0.1	0.025	0.072
Total Suspended Solids (TSS)	2540D	mg/L	100	17	35	20	5	19
Chemical Oxygen Demand (COD)	5220D	mg/L	120	38	15	39	39	33
Notes:								
Results with bold red text indicates a benchmark exceedance.								
J – Result exceeded Method Detection Limit (MDL) but fell below Laboratory Reporting Limit (MRL).								
C – NODI No Discharge mg/L – milligrams per liter								

Data not exceeding benchmarks: After collection of four quarterly samples, if the average of the four monitoring values for any parameter does not exceed the benchmark, MCBH has fulfilled monitoring requirements for that parameter for the permit term. During FY 23 there were no samples collected at the landfill and building 1698 (small boat repair). There were samples collected quarters 2 through 4 for building 6802 (WFO boat lab). Results from building 6802 indicate that the benchmarks for this location in Sector Q will likely be met during FY 24 sampling. Sampling will continue at all four locations, but the need to continue benchmark monitoring (site- and parameter-specific) will be re-evaluated in the FY 24 Annual Monitoring Plan.

Data exceeding benchmarks: After collection of four quarterly samples, if the average of the four monitoring values for any parameter exceeds the benchmark, reviewing the selection, design, installation, and implementation of control measures is done to determine if modifications are necessary to meet the effluent limits in this permit, and either:

- Make the necessary modifications and continue quarterly monitoring until four additional quarters of monitoring are completed for which the average does not exceed the benchmark; or
- Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology-based effluent limits or are necessary to meet the water-quality-based effluent limitations, in which case monitoring must continue once per year. Furthermore, documentation of the rationale for concluding that no further pollutant reductions are achievable must be completed and all records related to this documentation shall be retained with the site SWPPP.

Control measures must be reviewed, and any required corrective action performed immediately (or document why no corrective action is required), without waiting for the full four quarters of monitoring data, when an exceedance of the four-quarter average is mathematically certain. If after modifying control measures and conducting four additional quarters of monitoring, the average still exceeds the benchmark (or if an exceedance of the benchmark by the four-quarter average is mathematically certain prior to conducting the full four additional quarters of monitoring), review of control measures will be conducted and take one of the two actions above. Benchmark monitoring Data from Building 132, recycling center indicate that aluminum, copper, and iron failed to meet benchmark criteria. All other analyses met the criteria.

The exceedances reported at the Recycling Center align with the reported TSS values. The metals that failed to meet the benchmark criteria are found in Hawaii soils at similar proportions to the values measured in the monitored samples. Data from the HDOH Hazard Evaluation and Emergency Response (HEER) Office's Soil Background Study indicate that soil samples from nearby soils are composed of approximately the following percentages:

Table 4 – Kaneohe Area Metals in Background Soils

Metal	% composition
Copper	0.013
Lead	0.00033
Zinc	0.0062
Aluminum	0.8
Iron	4.6

Based on the allowable benchmark TSS value of 100 mg/L, the following conclusions can be predicted based on runoff containing native soil:

Table 5 – Predicted Metals Concentrations from Soil in Storm Water

Predicted SW (mg/L)		Bldg. 132 NTEs	Likely to Exceed Factor
Copper	0.013	0.0048	3
Lead	0.00033	0.21	0.0
Zinc	0.0062	0.09	0.1
Aluminum	0.8	0.75	1
Iron	4.6	1	5

NTEs: Non-essential Trace Elements

The actual water sampling results presented in Table 2 indicate that exceedances occur as would be predicted from naturally occurring background metals in the regional soils. Actual pollutants from the site would likely yield a higher concentration than measured. Further work obtaining background soil values around the site is planned for FY 24.

Objective 8: Detect and eliminate illicit discharges and illegal connections to the MS4.

Detections of chemical pollutants were evaluated as potential illicit connections or illegal discharges. The pollutants detected at the two sampled sites did not indicate any illicit discharges. MCBH contracted Element Environmental (E2) to perform an industrial inspections illicit discharge training in 2023. Although not a specific illicit discharge survey, one component of the industrial inspections was to observe potential illegal connections to the MS4. As discussed above, no contaminants were discovered above what would be anticipated from the background. See Enclosure 2 for the location of all industrial facilities at MCBH.

During FY 23 the ECPD team completed 51 inspections of construction sites with no Critical findings, 27 Major deficiencies, and 51 Minor deficiencies. There were 24 inspections at industrial sites and 6 inspections at commercial sites with no Critical findings. All inspections were completed, and all deficiencies were corrected in the appropriate time frame in accordance with the Enforcement Response Plan (SWMP Plan Appendix 3-4). There were not no illegal connections found during any site inspections. Four illicit discharges were identified and reported to HDOH in FY 23:

- December 7, 2022: 1,000-gallons of untreated effluent spilled from a manhole into residential housing lawns and the MS4. (LFE/156-22)
- February 5, 2023: 750-gallons of untreated effluent spilled from a manhole into Lawrence Road and the MS4. (LFE/155-23)
- March 27, 2023: An oily sheen was observed discharging into a storm drain from a malfunctioning oil water separator. (LFE/045-23)
- June 19, 2023: 500-gallons of untreated effluent spilled from a manhole into an asphalt parking lot and the MS4. (LFE/086-23).

Additional preventative measures have been taken by the MCBH Facilities department to address the recurring untreated effluent spills including routine maintenance on lift stations and working with ECPD to develop outreach programs to address sewage blockages (e.g., what not to flush).

Objective 9: Assess the water quality issues in watershed resulting from storm water discharges to receiving waters.

Receiving water quality was assessed in the by comparing numerical water quality chemistry values to the allowable limits provided in the permit (see Table 3). Additional water quality assessment is conducted through quarterly visual sampling at MCBH’s industrial facilities in accordance with the SWPPPs submitted to HDOH in March 2023 (SWMP Plan Appendix 11-2). MCBH’s quarterly visual assessment program is still being implemented. Several site-specific sampling points routinely have no discharge and therefore were unable to be evaluated. These sites and the entire quarterly visual assessment program will be reevaluated in FY 24. A full assessment of the program, including a summary of the results will be included in the FY 24 Annual Monitoring Report.

Part G.2.b.(2) Written narrative of the past fiscal year's activities, including those coordinated with other agencies, objectives of activities, results and conclusions.

During FY 23 MCBH coordinated with EPA on the implementation of the FFCA agreement to ensure compliance with all requirements. In accordance with Section 41 of the FFCA, MCBH contracted with an independent, third-party to complete a full compliance audit of the base’s stormwater management program. The Audit Summary Response (LFE/132-23) was submitted to the EPA and DOH in October 2023. No critical or major deficiencies were identified during the third-party evaluation. Additional FFCA stormwater submittals prepared in FY 23 are summarized below in Table 6.

Table 6 – Federal Facilities Compliance Agreement FY 23 Requirements

Section	Requirement	Completed Date	Description
Training and Outreach	33.a. Employee Survey and Awareness Survey	10/18/2023	ECPD surveyed all ECC's to assess their knowledge regarding storm water awareness and pollution prevention. Each year MCBH shall ensure that no less than 80% of the ECC's respond to the survey. See FFCA Section 33.a. for more details.
Training and Outreach	33.c. Illicit Discharge Detection and Elimination Program Training - SW Personnel	1/31/2023	ECPD received specialized training from a Qualified Consultant. See Section 33.c. for training requirements.
Training and Outreach	33.d. Illicit Discharge Detection and Elimination Program Training - ECC Personnel	10/18/2023	ECPD provided IDDE training (covered in Section 33.c.) to the ECC's (including Spill Response and On-Base Housing Personnel) (80% Attendance REQUIRED). ECC's were instructed to disseminate information provided in training to individuals in their organization.
Asset Management System	34.b. Asset Management System - Storm Sewer System Map Schedule Approval	10/26/2022	MCBH submitted to EPA a schedule to develop a comprehensive GIS- based storm sewer system map. See Section 34.b. for details and requirements.
Illicit Discharge Detection and Elimination Program	35.a.i. Outfall Field Screening Plan - Plan Approval	10/28/2022	ECPD completed within 90 days from the Effective Date, MCBH submitted to EPA for review and approval, an Outfall Screening Plan. See Section 35.a.i. for details and requirements.
Illicit Discharge Detection and Elimination Program	35.a.i.5. Outfall Field Screening Plan - Implementation	3/2023	The Outfall Screening Plan was implemented.

Illicit Discharge Detection and Elimination Program	35.b.i. Storm Sewer System Inspections	4/1/2023	MCBH conducted physical inspections of the storm sewer system to identify any dry weather flows, visually observable pollutant indicators, structural defects, trash and debris accumulation, and any other potential sources of pollutants. MCBH inspected all Outfalls. See Section 35.b. for more details and requirements.
Illicit Discharge Detection and Elimination Program	35.b.i/ii. Storm Sewer System Inspections - Reporting and Record Keeping	1/30/2023	Newly identified high priority components found during the inspections have been listed in the Annual Report and documented in the Asset Management System.
Post-Construction Storm Water Management in New Development and Redevelopment Program	37.b. Post-Construction BMP Inspections	08/04/2023	ECPD conducted and documented, annual inspections of all Post-Construction BMP measures to determine if controls and BMPs are in place and functioning properly and if the operation and maintenance plan (Section 37.d.) has been fully implemented.
Post-Construction Storm Water Management in New Development and Redevelopment Program	37.c. Retrofits of Recently Completed Projects	08/04/2023	MCBH created an inventory of New Development and Redevelopment projects with ground disturbing activity that have been completed since October 15, 2014. See Section 37.c. for more details and requirements.
Third Party Audit	38.b.iii. Final Audit Report	8/11/2023	ECPD completed the Final Audit Report, along with proposed corrective actions and was submitted to EPA, with a courtesy copy to DOH.
Reporting and Sampling	41. Implantation Status of Compliance Program Elements	10/26/2022	MCBH submitted an initial written report to EPA regarding the implantation status of each element of the Compliance Program set forth in Section VI (Sections 32-38). See Section 41 for more details and requirements.
Reporting and Sampling	41. Implantation Status of Compliance Program Elements	4/20/2023	MCBH submitted a follow-up written report to EPA regarding the implantation status of each element of the Compliance Program set forth in Section VI (Sections 32-38) every one hundred eighty (180) days after the initial report. See Section 41 for more details and requirements.

Part G.2.b.(3) Data gathered on levels of pollutants in non-storm water discharges to the Permittee's MS4

There were no non-storm water samples collected during FY 23. The four illicit discharges reported in FY 23 were previously reported to HDOH and are discussed in further detail above.

Part G.2.b.(4) Using rainfall data collected by the Permittee and other agencies, the Permittee shall relate rainfall events, measured pollutant loads, and discharge volumes from the watershed and other watersheds that may be identified from time to time by the DOH or Permittee.

Rainfall data and discharge volumes were obtained from each benchmark monitoring event at each monitoring site across MCBH throughout the year. Rainfall data was obtained from automated sampling equipment using tipping rain gauges. Automated samplers were equipped with area velocity sensors to obtain discharge data. Rain data was obtained from the nearest rain gauge for samples collected manually. Manual sample discharge was calculated using the *Rules Relating to Storm Drainage Standards, Department of Planning and Permitting, City and County of Honolulu, Honolulu, Hawaii. January 2000, revised June 2012.* For discharge volume of each monitoring event, refer to the quarterly benchmark monitoring reports included as Enclosure 1.

Part G.2.b.(5) Dates when monitoring occurred for each industrial facility covered under this permit. The monitoring event shall be of a representative storm event, where results were available for all required parameters following the QA/QC measures as described in the Annual Monitoring Plan.

The Permit requires MCBH to collect and analyze samples by manual or automatic monitoring methods, from a representative storm event. A representative storm event is defined as *a storm event that produces flow and that occurs at least 72 hours after any previous storm event*. All samples were taken in accordance with the QA/QC measures described in Section 12.5 of the Annual Monitoring Plan (LFE/073-23). See Table 1 for benchmark monitoring sample dates. Quarterly benchmark monitoring reports are included as Enclosure 1.

Part G.2.b.(6) Discharge Monitoring Reports (DMRs) for industrial facilities shall be included in the Annual Monitoring Report and be submitted via NetDMR. NetDMR is a Web-based tool that allows NPDES permittees to electronically sign and submit their DMRs to EPA's Integrated Compliance Information System (ICIS-NPDES) via the Environmental Information Exchange Network. NetDMR is accessed from <http://www.epa.gov/netdmr>. A DMR must be submitted for the facility which is scheduled to be monitored even if sampling was not conducted. An explanation as to why sampling was not conducted shall be explained with the submittal.

DMRs were submitted via NetDMR for all sample events and copies of the submittals are included as Enclosure 3 of this report.

CONCLUSION

MCBH maintains a robust storm water monitoring program and FY 23 results reflect ECPD's efforts to reduce, to the MEP, the discharge of pollutants to and from MCBH's MS4 to protect water quality and to satisfy the appropriate water quality requirements of the CWA. MCBH will continue to implement and improve the base's monitoring program in FY 24.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines or imprisonment for knowing violations.

LFE/006-24
January 25, 2024

Should you have any questions regarding this notification, please contact Ms. Katy Smith of the MCBH ECPD at (808) 496-4359 or Katherine.smith.civ@USMC.mil.

Sincerely,

J. P. HART
By Direction

Enclosures: 1 – FY 23 Quarterly Water Quality Monitoring Reports
2 – FY 23 MCB-Hawaii Industrial Facilities
3 – FY 23 MCB-Hawaii DMR Reports

Copy to: EPA – Andrew Zellinger

FY 23 Annual Monitoring Report

FY 23 Quarterly Water Quality Monitoring Reports



Marine Corps Base Hawaii
Kaneohe, Oahu, Hawaii

Quarterly Storm Water Report

NPDES File No. HI S000007

Final

Building 6802 WFO LAB/BOAT SHOP

February 2023

Prepared for MCBH by
Element Environmental, LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

N62742-17-D-1802
CTO N6274222F0208

This page intentionally left blank.

Table of Contents

Table of Contents	i
List of Tables	i
List of Appendices	i
Acronyms and Abbreviations	ii
1.0 Project Purpose and Location	1-1
2.0 Methodology and Storm Event Summary	2-1
3.0 Quarterly Visual Assessment	3-1
4.0 Quarterly Benchmark Samples	4-1
4.1.1 Data not exceeding benchmarks	4-1
4.1.2 Data exceeding benchmarks	4-1

List of Tables

Table 2-1 Storm Event Summary	2-1
Table 3-1 Visual Assessment Form	3-1
Table 4-1 Quarterly Benchmark Sample Results	4-2

List of Figures

Figure 1-1 Site Contributory Area	1-3
---	-----

List of Appendices

Appendix A: Photographs of Storm Event	A-1
Appendix B: Analytical Laboratory Report	B-1

Acronyms and Abbreviations

°C	<i>degrees Celsius</i>
COD	<i>Chemical Oxygen Demand</i>
CTO.....	<i>Contract Task Order</i>
DL.....	<i>Detection Limit</i>
E2.....	<i>Element Environmental, LLC</i>
HAR.....	<i>Hawaii Administrative Rules</i>
LOD.....	<i>Limit of Detection</i>
LOQ.....	<i>Limit of Quantitation</i>
MCBH.....	<i>Marine Corps Base Hawaii</i>
ug/L	<i>Microgram per liter</i>
mg/L	<i>Milligram per liter</i>
mph	<i>Mile per hour</i>
NOAA.....	<i>National Oceanic and Atmospheric Administration</i>
NPDES.....	<i>National Pollutant Discharge Elimination System</i>
QA/QC.....	<i>Quality Assurance/Quality Control</i>
SSHP	<i>Site Safety and Health Plan</i>
SWPPP	<i>Stormwater Pollution Prevention Plan</i>
TSS	<i>Total Suspended Solids</i>

1.0 Project Purpose and Location

The purpose of this project is to fulfill the requirements of the National Pollutant Discharge Elimination System (NPDES), Permit Number HI S000007, which includes collection and analyses of storm water from a representative storm water event, as defined by the NPDES permit.

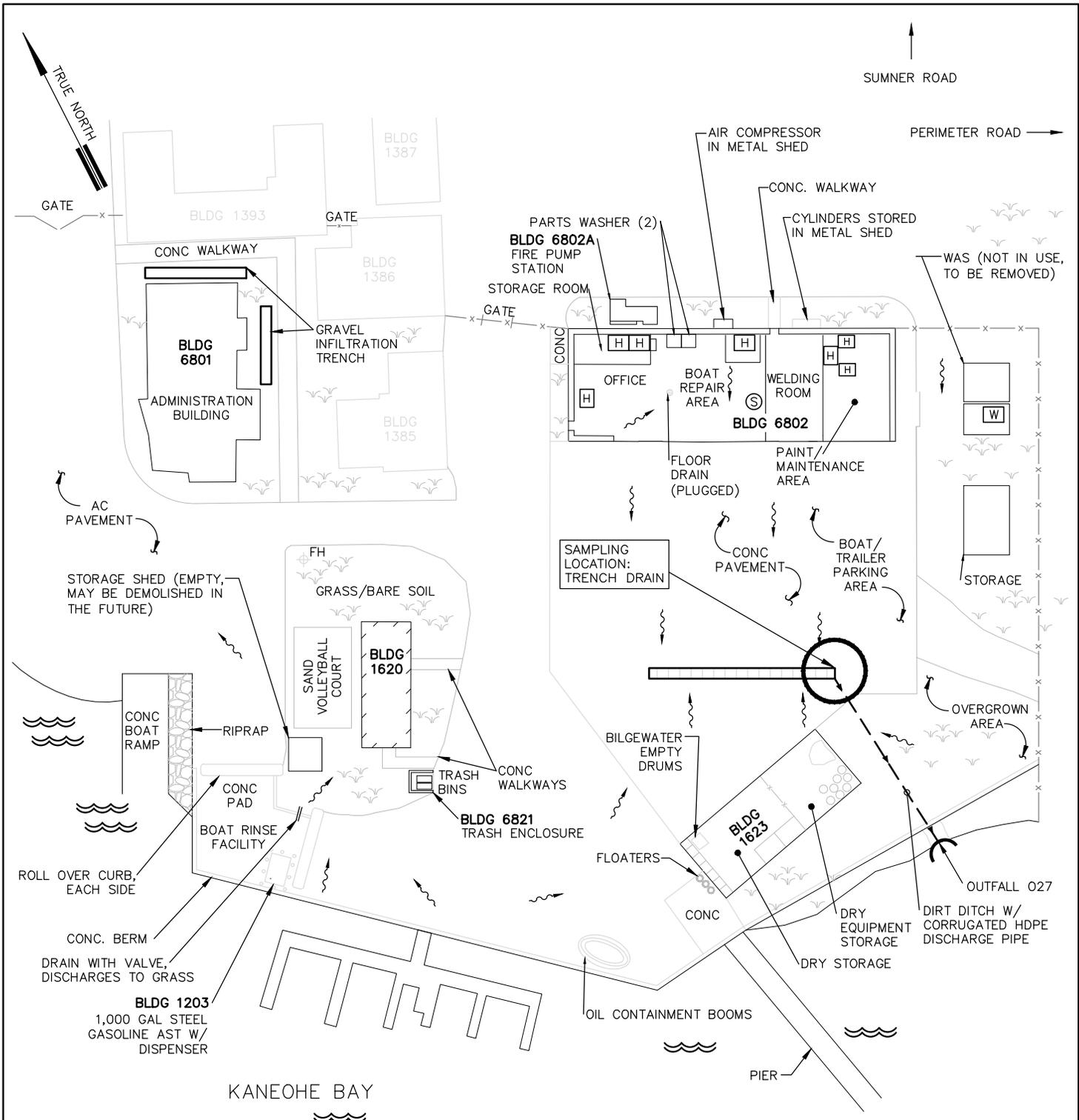
The NPDES program is designed to determine the presence of contaminants in surface flow of rain water from designated contributory areas at a site following representative rain events. Figure 1-1 shows the contributory area for the site.

The WFO Lab/Boat Shop, Building 6802 is considered to be under industrial activity sector Q- Water Transportation, and thus is required to perform Quarterly Benchmark Sampling. Benchmark monitoring data are primarily for MCBH's use to determine the overall effectiveness of control measures and to assist in determining when additional corrective action(s) may be necessary. A benchmark exceedance is not a permit violation, however, if corrective action is required as a result of a benchmark exceedance, failure to conduct required corrective action is a permit violation.

Quarterly Benchmark Sampling of storm water discharge from the representative sampling location at the WFO Lab/Boat Shop (Figure 1-1) will be monitored in accordance with Table 3-1 from the SWPPP. A Quarterly Visual Assessment of storm water discharge is also required for all industrial facilities at MCBH. Storm water samples for this visual assessment but must be collected in such a manner that the samples are representative of the storm water discharge from the facility. Therefore, the water sample must be collected at the designated storm water monitoring point, as shown in Figure 1-1. The Quarterly Visual Assessment checklist presented in this report shall be maintained by the current facility ECC and kept onsite as part of this Quarterly report.

All work conducted during this project was performed in accordance with the NPDES Permit Number HI S000007; and the applicable Quality Assurance/Quality Control (QA/QC) Plan and Site Safety and Health Plan (SSHP) prepared for this project. Performance Work Statement entitled "*Clean Water Program Services for Marine Corps Base Hawaii, FY22*" dated July 22, 2022. Work was performed by Element Environmental, LLC (E2) and its subcontractors under Contract Number N62742-17-D-1802, Contract Task Order (CTO) N6274222F0208.

This page intentionally left blank.



LEGEND

- H HAZARDOUS MATERIALS LOCKER
- W WASTE ACCUMULATION SITE
- S SPILL KIT
- STORM DRAIN SYSTEM
- STORM DRAIN INLET
- FLOW ARROW

NOTES:

1. STORM WATER, FROM APPROXIMATELY 3.2 ACRES ASSOCIATED WITH BUILDING 6802 (FORMERLY BUILDING 1388) IS DISCHARGED TO KANEOHE BAY VIA OUTFALL 027.
2. CONCRETE FLOORS IN BUILDINGS UNLESS OTHERWISE NOTED.

LAB/BOAT SHOP (BUILDING 1388)

NOT TO SCALE

MHESKETT
 5/31/2022, 1:45:16 PM
 FIG 12-8 Bldg 6802 - Lab_Boat Shop.dwg

	DATE:	PROJECT TITLE:	
	MAY 2022	STORM WATER MONITORING PLAN MCBH, KANEOHE BAY, OAHU, HAWAII	
FIGURE TITLE:		FIGURE NO.:	
WFO LAB/BOAT SHOP (BUILDING 6802) SITE CONTRIBUTORY AREA		1-1	

This page intentionally left blank.

2.0 Methodology and Storm Event Summary

As per the NPDES permit, stormwater samples are to be collected from a qualifying storm, defined as follows:

A minimum of one grab sample shall be collected from a discharge resulting from a measurable storm event. Samples must be collected within the first 30 minutes of a discharge associated with a measurable storm event. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample must be collected as soon as practicable after the first 30 minutes and documentation must be kept with the report explaining why it was not possible to take samples within the first 30 minutes.

Samples were collected using an ISCO automated sampler. The Storm Event Summary is shown in Table 2-1 below.

Table 2-1 Storm Event Summary

Storm Event Summary

Storm Event Start Date and Time	1/27/23 10:30 PM
Flow Start Date and Time	1/28/23 12:50 AM
Sample Collection Date and Time	1/28/23 12:55 AM
Event Flow Duration at Monitoring Point (hour)	3.67
Approximate Event Rainfall Duration (hour)	6.0
Event Rainfall Total (from ISCO gauge) (inch)	0.18
Drainage Area (A) (Acres)	3.2
Run-off Coefficient (C)*	0.7
Discharge Volume in gallons (Estimated using rational method)	10857
Peak Discharge (from calculation) in cubic feet per second (cfs)	0.07
Rainfall Event >0.1 during previous 72 hours?	No
Weather Conditions	moderate rainfall event
Sample Appearance	slight yellow color, some settled solids, and suspended sediments and pollen
Sample Collection Method	automated - ISCO Avalanche
Field Parameter Instrument	N/A

Note:

*Runoff co-efficient for industrial areas from the *City and County of Honolulu Department of Planning and Permitting, Rules Relating to Storm Drainage Standards*, Table 4, page 52, January 2000, Revised September 2012.

This page intentionally left blank.

3.0 Quarterly Visual Assessment

The visual assessment was conducted:

- Of a sample collected in a clean, colorless glass or plastic container, and examined in a well-lit area;
- On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and documented why it was not possible to take the sample within the first 30 minutes; and
- For storm events, on discharges that occur at least 72 hours (three days) from the previous discharge.

The results of the Visual Assessment are shown in Table 3-1 below.

Table 3-1 Visual Assessment Form

Visual Assessment	
Color	slight yellow
Odor	none
Clarity	clear
Oil sheen present	none
Floating Solids Present	none
Settled Solids Present	some
Suspended Solids present	sediments and pollen
Foam present	none
Other signs of pollution	none
Nature of the discharge	Storm event runoff on asphalt to trench drain
Results of observations of the storm water discharge	BMPs and stormwater pollution prevention measures appear to be working and intact.
Probable sources of stormwater contamination	Not Applicable
If applicable, why was it not possible to collect samples within the first 30 minutes	Not Applicable

This page intentionally left blank.

4.0 Quarterly Benchmark Samples

Samples were collected from the sampling location designated in the SWPPP as seen in Figure 1-1 and submitted to the Analytical Laboratory identified in the Table 3-1 of the SWPPP. Photographs demonstrating the stormwater control measures were taken and included in Appendix A. Laboratory results are compared to their respective Benchmark values as shown in Table 4-1.

4.1.1 Data not exceeding benchmarks

After collection of four quarterly samples, if the average of the four monitoring values for any parameter does not exceed the benchmark value, MCBH has fulfilled monitoring requirements for that parameter for the permit term.

4.1.2 Data exceeding benchmarks

After collection of four quarterly samples, if the average of the four monitoring values for any parameter exceeds the benchmark, review the selection, design, installation, and implementation of control measures to determine if modifications are necessary to meet the effluent limits in this permit, and either:

- Make the necessary modifications and continue quarterly monitoring until four additional quarters of monitoring are completed for which the average does not exceed the benchmark; or
- Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology based effluent limits or are necessary to meet the water-quality-based effluent limitations, in which case monitoring must continue once per year. Furthermore, documentation of the rationale for concluding that no further pollutant reductions are achievable must be completed and all records related to this documentation shall be retained with the site SWPPP.

Control measures must be reviewed, and any required corrective action performed immediately (or document why no corrective action is required), without waiting for the full four quarters of monitoring data, when an exceedance of the four-quarter average is mathematically certain. If after modifying control measures and conducting four additional quarters of monitoring, the average still exceeds the benchmark (or if an exceedance of the benchmark by the four-quarter average is mathematically certain prior to conducting the full four additional quarters of monitoring), review of control measures must be conducted and take one of the two actions above.

APPENDIX A

Photographs of Storm Event

This page intentionally left blank.



Photo A-1. Location of autosampler and sample point

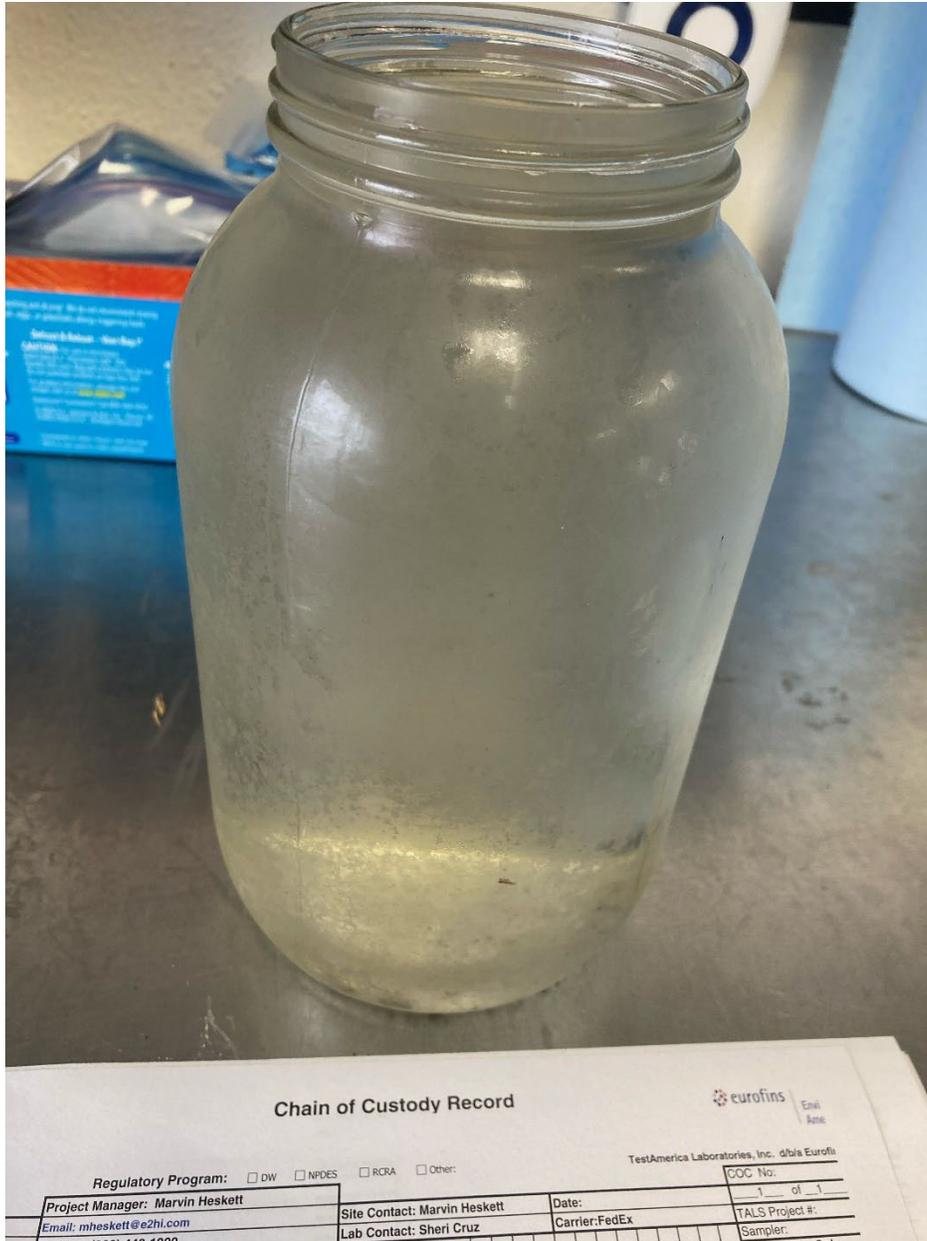


Photo A-2. 2023 Q1 Benchmark sample in 2-liter glass sample jar- side view

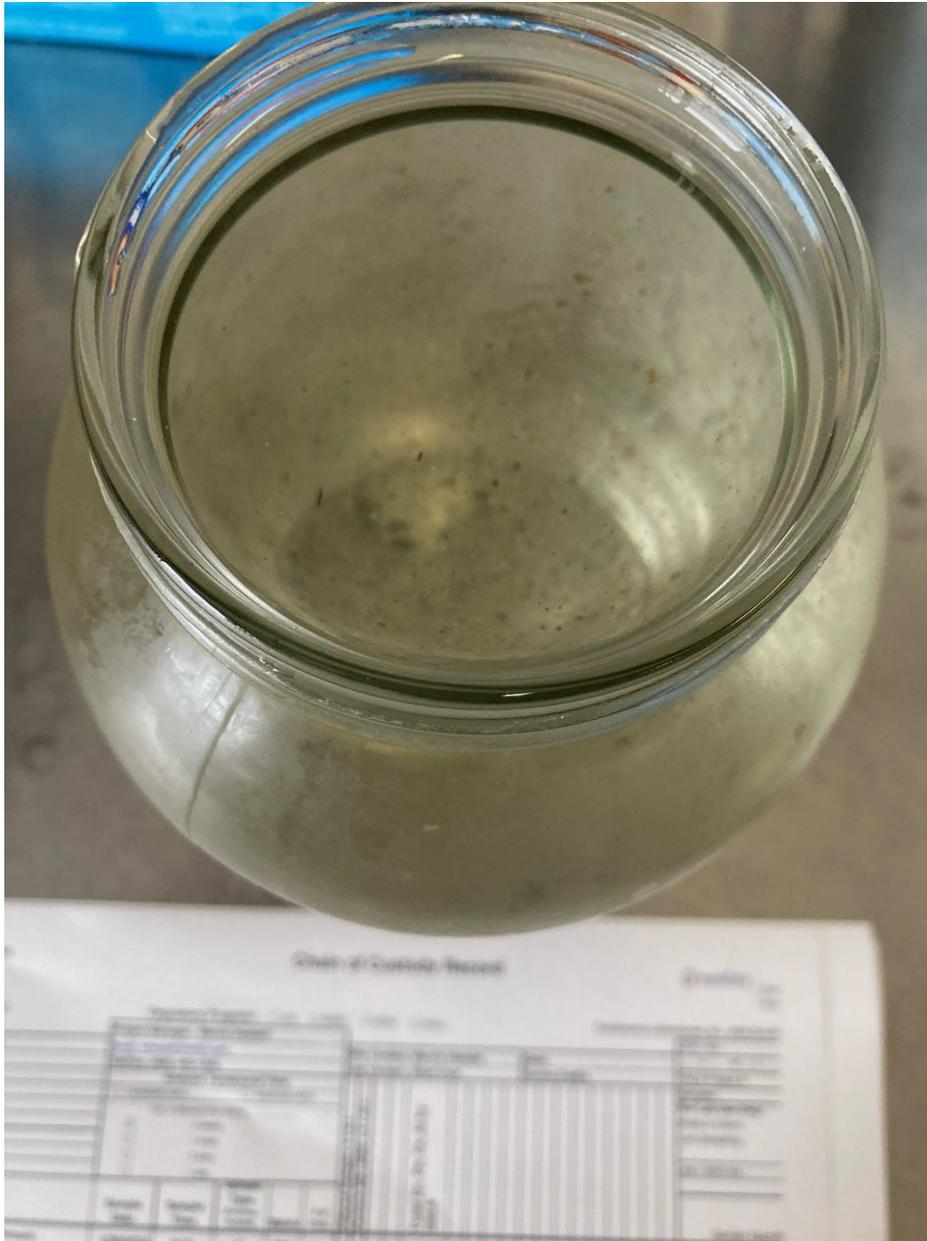


Photo A-3. 2023 Q1 Benchmark sample in 2-liter glass sample jar- top view

This page intentionally left blank.

APPENDIX B

Analytical Laboratory Report

This page intentionally left blank

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Marvin Heskett
Element Environmental, LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

Generated 2/8/2023 3:44:23 PM

JOB DESCRIPTION

MCBH 2023 Stormwater
SDG NUMBER MCBH 2023 Stormwater

JOB NUMBER

580-122883-1

Job Notes

This report is issued solely for the use of the person or company to whom it is addressed. Any use, copying or disclosure other than by the intended recipient is unauthorized. If you have received this report in error, please notify the sender and destroy this report immediately. This report shall not be reproduced except in full, without prior express written approval by the laboratory.

The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

Authorization



Generated
2/8/2023 3:44:23 PM

Authorized for release by
Katie Grant, Project Manager I
Katie.Grant@et.eurofinsus.com
Designee for
Sheri Cruz, Project Manager I
Sheri.Cruz@et.eurofinsus.com
(253)922-2310

Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Definitions	5
Detection Summary	6
Client Sample Results	7
QC Sample Results	8
Chronicle	9
Certification Summary	10
Sample Summary	11
Chain of Custody	12
Receipt Checklists	13



Case Narrative

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-122883-1
SDG: MCBH 2023 Stormwater

Job ID: 580-122883-1

Laboratory: Eurofins Seattle

Narrative

Job Narrative
580-122883-1

Comments

No additional comments.

Receipt

The sample was received on 1/31/2023 10:40 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.5° C.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

1

2

3

4

5

6

7

8

9

10

11

12

Definitions/Glossary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-122883-1
SDG: MCBH 2023 Stormwater

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Detection Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-122883-1
SDG: MCBH 2023 Stormwater

Client Sample ID: Bldg 6802 - 2023 Q1 Benchmark

Lab Sample ID: 580-122883-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	1.1		0.040	0.0058	mg/L	1		200.8	Total/NA
Iron	1.1		0.10	0.013	mg/L	1		200.8	Total/NA
Lead	0.055	B	0.00040	0.000040	mg/L	1		200.8	Total/NA
Zinc	0.12	B	0.0070	0.00093	mg/L	1		200.8	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Seattle

Client Sample Results

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-122883-1
SDG: MCBH 2023 Stormwater

Client Sample ID: Bldg 6802 - 2023 Q1 Benchmark

Lab Sample ID: 580-122883-1

Date Collected: 01/28/23 00:55

Matrix: Water

Date Received: 01/31/23 10:40

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.1		0.040	0.0058	mg/L		02/02/23 18:10	02/03/23 13:43	1
Iron	1.1		0.10	0.013	mg/L		02/02/23 18:10	02/03/23 13:43	1
Lead	0.055	B	0.00040	0.000040	mg/L		02/02/23 18:10	02/03/23 13:43	1
Zinc	0.12	B	0.0070	0.00093	mg/L		02/02/23 18:10	02/03/23 13:43	1

QC Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater

Job ID: 580-122883-1
 SDG: MCBH 2023 Stormwater

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-416971/26-A
Matrix: Water
Analysis Batch: 417048

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416971

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.040	0.0058	mg/L		02/02/23 18:10	02/03/23 12:13	1
Iron	ND		0.10	0.013	mg/L		02/02/23 18:10	02/03/23 12:13	1
Lead	0.000273	J	0.00040	0.000040	mg/L		02/02/23 18:10	02/03/23 12:13	1
Zinc	0.00326	J	0.0070	0.00093	mg/L		02/02/23 18:10	02/03/23 12:13	1

Lab Sample ID: LCS 580-416971/27-A
Matrix: Water
Analysis Batch: 417048

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416971

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	20.0	21.0		mg/L		105	85 - 115
Iron	20.0	21.2		mg/L		106	85 - 115
Lead	1.00	1.11		mg/L		111	85 - 115
Zinc	1.00	1.06		mg/L		106	85 - 115

Lab Sample ID: LCSD 580-416971/28-A
Matrix: Water
Analysis Batch: 417048

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416971

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	20.0	21.5		mg/L		107	85 - 115	2	20
Iron	20.0	21.1		mg/L		106	85 - 115	0	20
Lead	1.00	1.09		mg/L		109	85 - 115	2	20
Zinc	1.00	1.08		mg/L		108	85 - 115	2	20

Lab Chronicle

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-122883-1
SDG: MCBH 2023 Stormwater

Client Sample ID: Bldg 6802 - 2023 Q1 Benchmark

Lab Sample ID: 580-122883-1

Date Collected: 01/28/23 00:55

Matrix: Water

Date Received: 01/31/23 10:40

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	200.8			416971	TMH	EET SEA	02/02/23 18:10
Total/NA	Analysis	200.8		1	417048	FCW	EET SEA	02/03/23 13:43

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Accreditation/Certification Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-122883-1
SDG: MCBH 2023 Stormwater

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-07-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Sample Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-122883-1
SDG: MCBH 2023 Stormwater

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-122883-1	Bldg 6802 - 2023 Q1 Benchmark	Water	01/28/23 00:55	01/31/23 10:40

1

2

3

4

5

6

7

8

9

10

11

12

Login Sample Receipt Checklist

Client: Element Environmental, LLC

Job Number: 580-122883-1
SDG Number: MCBH 2023 Stormwater

Login Number: 122883

List Number: 1

Creator: Groves, Elizabeth

List Source: Eurofins Seattle

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?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Marine Corps Base Hawaii
Kaneohe, Oahu, Hawaii

Quarterly Storm Water Report

NPDES File No. HI S000007

Final

Building 6802 WFO LAB/BOAT SHOP

July 2023

Prepared for MCBH by
Element Environmental, LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

N62742-17-D-1802
CTO N6274222F0208

This page intentionally left blank.

Table of Contents

Table of Contents	i
List of Tables	i
List of Appendices	i
Acronyms and Abbreviations	ii
1.0 Project Purpose and Location	1-1
2.0 Methodology and Storm Event Summary	2-1
3.0 Quarterly Visual Assessment	3-1
4.0 Quarterly Benchmark Samples	4-1
4.1.1 Data not exceeding benchmarks	4-1
4.1.2 Data exceeding benchmarks	4-1

List of Tables

Table 2-1 Storm Event Summary	2-1
Table 3-1 Visual Assessment Form	3-1
Table 4-1 Quarterly Benchmark Sample Results	4-2

List of Figures

Figure 1-1 Site Contributory Area	1-3
---	-----

List of Appendices

Appendix A: Photographs of Storm Event	A-1
Appendix B: Analytical Laboratory Report	B-1

Acronyms and Abbreviations

°C	<i>degrees Celsius</i>
COD	<i>Chemical Oxygen Demand</i>
CTO	<i>Contract Task Order</i>
DL	<i>Detection Limit</i>
E2	<i>Element Environmental, LLC</i>
HAR	<i>Hawaii Administrative Rules</i>
LOD	<i>Limit of Detection</i>
LOQ	<i>Limit of Quantitation</i>
MCBH	<i>Marine Corps Base Hawaii</i>
ug/L	<i>Microgram per liter</i>
mg/L	<i>Milligram per liter</i>
mph	<i>Mile per hour</i>
NOAA	<i>National Oceanic and Atmospheric Administration</i>
NPDES	<i>National Pollutant Discharge Elimination System</i>
QA/QC	<i>Quality Assurance/Quality Control</i>
SSHP	<i>Site Safety and Health Plan</i>
SWPPP	<i>Stormwater Pollution Prevention Plan</i>
TSS	<i>Total Suspended Solids</i>

1.0 Project Purpose and Location

The purpose of this project is to fulfill the requirements of the National Pollutant Discharge Elimination System (NPDES), Permit Number HI S000007, which includes collection and analyses of storm water from a representative storm water event, as defined by the NPDES permit.

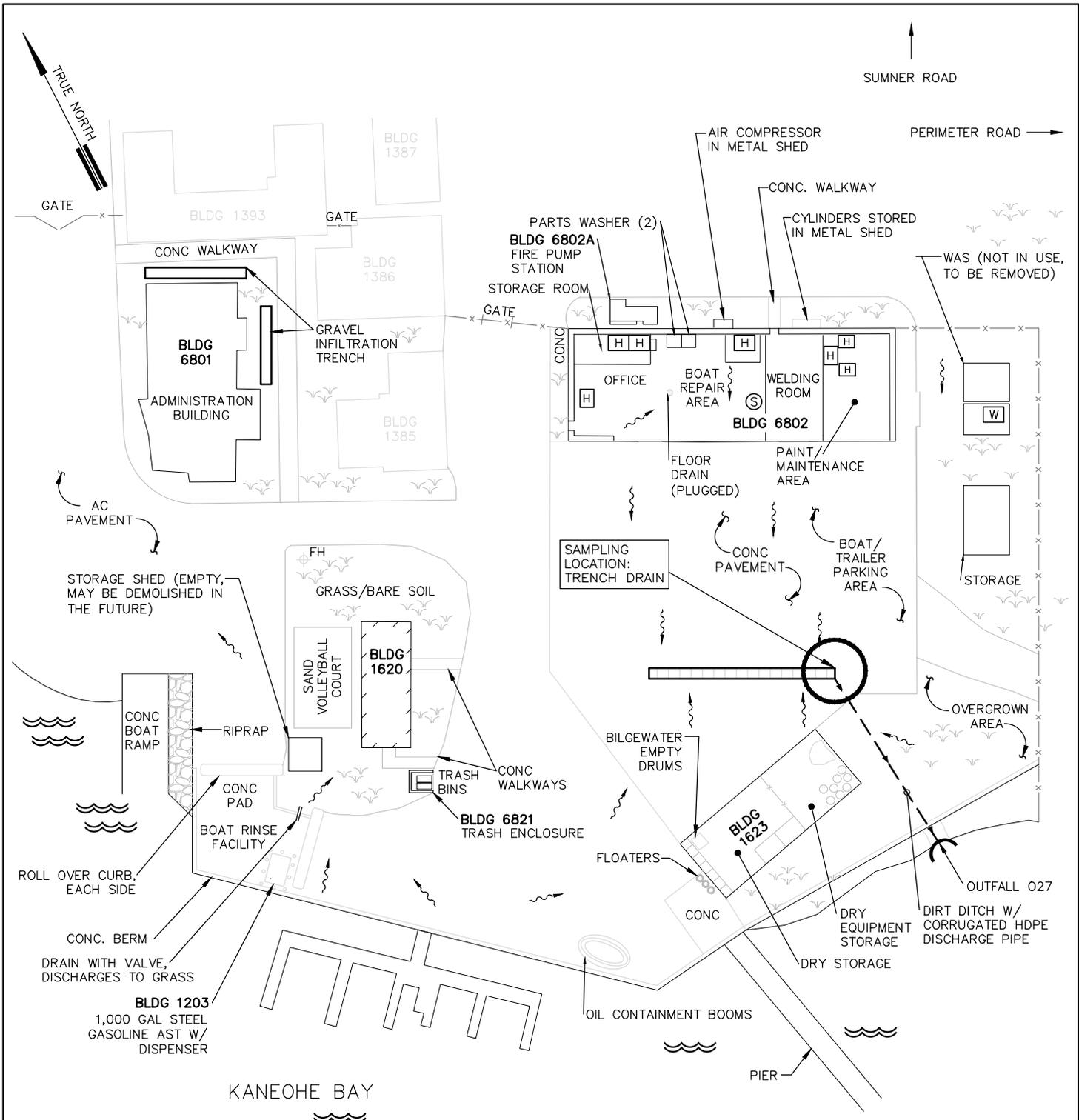
The NPDES program is designed to determine the presence of contaminants in surface flow of rain water from designated contributory areas at a site following representative rain events. Figure 1-1 shows the contributory area for the site.

The WFO Lab/Boat Shop, Building 6802 is considered to be under industrial activity sector Q- Water Transportation, and thus is required to perform Quarterly Benchmark Sampling. Benchmark monitoring data are primarily for MCBH's use to determine the overall effectiveness of control measures and to assist in determining when additional corrective action(s) may be necessary. A benchmark exceedance is not a permit violation, however, if corrective action is required as a result of a benchmark exceedance, failure to conduct required corrective action is a permit violation.

Quarterly Benchmark Sampling of storm water discharge from the representative sampling location at the WFO Lab/Boat Shop (Figure 1-1) will be monitored in accordance with Table 3-1 from the SWPPP. A Quarterly Visual Assessment of storm water discharge is also required for all industrial facilities at MCBH. Storm water samples for this visual assessment but must be collected in such a manner that the samples are representative of the storm water discharge from the facility. Therefore, the water sample must be collected at the designated storm water monitoring point, as shown in Figure 1-1. The Quarterly Visual Assessment checklist presented in this report shall be maintained by the current facility ECC and kept onsite as part of this Quarterly report.

All work conducted during this project was performed in accordance with the NPDES Permit Number HI S000007; and the applicable Quality Assurance/Quality Control (QA/QC) Plan and Site Safety and Health Plan (SSHP) prepared for this project. Performance Work Statement entitled "*Clean Water Program Services for Marine Corps Base Hawaii, FY22*" dated July 22, 2022. Work was performed by Element Environmental, LLC (E2) and its subcontractors under Contract Number N62742-17-D-1802, Contract Task Order (CTO) N6274222F0208.

This page intentionally left blank.



LEGEND

- H HAZARDOUS MATERIALS LOCKER
- W WASTE ACCUMULATION SITE
- S SPILL KIT
- STORM DRAIN SYSTEM
- STORM DRAIN INLET
- FLOW ARROW

NOTES:

1. STORM WATER, FROM APPROXIMATELY 3.2 ACRES ASSOCIATED WITH BUILDING 6802 (FORMERLY BUILDING 1388) IS DISCHARGED TO KANEOHE BAY VIA OUTFALL 027.
2. CONCRETE FLOORS IN BUILDINGS UNLESS OTHERWISE NOTED.

LAB/BOAT SHOP (BUILDING 1388)

NOT TO SCALE

MHESKETT
 5/31/2022, 1:45:16 PM
 FIG 12-8 Bldg 6802 - Lab_Boat Shop.dwg

	DATE:	PROJECT TITLE:	
	MAY 2022	STORM WATER MONITORING PLAN MCBH, KANEOHE BAY, OAHU, HAWAII	
FIGURE TITLE:		FIGURE NO.:	
WFO LAB/BOAT SHOP (BUILDING 6802) SITE CONTRIBUTORY AREA		1-1	

This page intentionally left blank.

2.0 Methodology and Storm Event Summary

As per the NPDES permit, stormwater samples are to be collected from a qualifying storm, defined as follows:

A minimum of one grab sample shall be collected from a discharge resulting from a measurable storm event. Samples must be collected within the first 30 minutes of a discharge associated with a measurable storm event. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample must be collected as soon as practicable after the first 30 minutes and documentation must be kept with the report explaining why it was not possible to take samples within the first 30 minutes.

Samples were collected using an ISCO automated sampler. The Storm Event Summary is shown in Table 2-1 below.

Table 2-1 Storm Event Summary

Storm Event Summary

Storm Event Start Date and Time	6/16/23 1:50 AM
Flow Start Date and Time	6/16/23 1:55 AM
Sample Collection Date and Time	6/16/23 2:05 AM
Flow Duration at Monitoring Point (hour)	0.58
Approximate Event Rainfall Duration (hour)	0.7
Event Rainfall Total (from ISCO gauge) (inch)	0.15
Drainage Area (A) (Acres)	3.2
Run-off Coefficient (C)*	0.7
Discharge Volume in gallons (Estimated using rational method)	9048
Peak Discharge (from calculation) in cubic feet per second (cfs)	0.50
Rainfall Event >0.1 during previous 72 hours?	No
Weather Conditions	moderate rainfall event
Sample Appearance	clear color, some settled solids, and suspended none
Sample Collection Method	automated - ISCO Avalanche

Note:

*Runoff co-efficient for industrial areas from the *City and County of Honolulu Department of Planning and Permitting, Rules Relating to Storm Drainage Standards*, Table 4, page 52, January 2000, Revised September 2012.

This page intentionally left blank.

3.0 Quarterly Visual Assessment

The visual assessment was conducted:

- Of a sample collected in a clean, colorless glass or plastic container, and examined in a well-lit area;
- On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and documented why it was not possible to take the sample within the first 30 minutes; and
- For storm events, on discharges that occur at least 72 hours (three days) from the previous discharge.

The results of the Visual Assessment are shown in Table 3-1 below.

Table 3-1 Visual Assessment Form

Visual Assessment	
Color	clear
Odor	none
Clarity	clear
Oil sheen present	none
Floating Solids Present	none
Settled Solids Present	some
Suspended Solids present	none
Foam present	none
Other signs of pollution	none
Nature of the discharge	Storm event runoff on asphalt to trench drain
Results of observations of the storm water discharge	BMPs and stormwater pollution prevention measures appear to be working and intact.
Probable sources of stormwater contamination	Not Applicable
If applicable, why was it not possible to collect samples within the first 30 minutes	Not Applicable

This page intentionally left blank.

4.0 Quarterly Benchmark Samples

Samples were collected from the sampling location designated in the SWPPP as seen in Figure 1-1 and submitted to the Analytical Laboratory identified in the Table 3-1 of the SWPPP. Photographs demonstrating the stormwater control measures were taken and included in Appendix A. Laboratory results are compared to their respective Benchmark values as shown in Table 4-1.

4.1.1 Data not exceeding benchmarks

After collection of four quarterly samples, if the average of the four monitoring values for any parameter does not exceed the benchmark value, MCBH has fulfilled monitoring requirements for that parameter for the permit term.

4.1.2 Data exceeding benchmarks

After collection of four quarterly samples, if the average of the four monitoring values for any parameter exceeds the benchmark, review the selection, design, installation, and implementation of control measures to determine if modifications are necessary to meet the effluent limits in this permit, and either:

- Make the necessary modifications and continue quarterly monitoring until four additional quarters of monitoring are completed for which the average does not exceed the benchmark; or
- Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology based effluent limits or are necessary to meet the water-quality-based effluent limitations, in which case monitoring must continue once per year. Furthermore, documentation of the rationale for concluding that no further pollutant reductions are achievable must be completed and all records related to this documentation shall be retained with the site SWPPP.

Control measures must be reviewed, and any required corrective action performed immediately (or document why no corrective action is required), without waiting for the full four quarters of monitoring data, when an exceedance of the four-quarter average is mathematically certain. If after modifying control measures and conducting four additional quarters of monitoring, the average still exceeds the benchmark (or if an exceedance of the benchmark by the four-quarter average is mathematically certain prior to conducting the full four additional quarters of monitoring), review of control measures must be conducted and take one of the two actions above.

Table 4-1 Quarterly Benchmark Sample Results

Analyte	method	Units	Sector Q - Water Transportation Benchmark	BLDG 6802		BLDG 6802		BLDG 6802		BLDG 6802	
				Result	RL/ Qualifier	Result	RL/ Qualifier	Result	RL/ Qualifier	Result	RL/ Qualifier
Aluminum	200.8_CW	mg/L	0.75								
Iron	200.8_CW	mg/L	1								
Lead	200.8_CW	mg/L	0.21								
Zinc	200.8_CW	mg/L	0.09								
Notes:											
Results with bold red text indicates a benchmark exceedance											

APPENDIX A

Photographs of Storm Event

This page intentionally left blank.



Photo A-1. Location of autosampler and sample point



Photo A-2. 2023 FY23Q3 Benchmark sample in 2-liter glass sample jar.

APPENDIX B

Analytical Laboratory Report

This page intentionally left blank



ANALYTICAL REPORT

PREPARED FOR

Attn: Marvin Heskett
Element Environmental, LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

Generated 6/29/2023 4:40:58 PM

JOB DESCRIPTION

MCBH 2023 Stormwater
SDG NUMBER BLDG 132

JOB NUMBER

580-128660-1

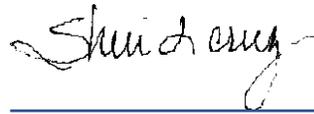
Eurofins Seattle

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

Authorization



Generated
6/29/2023 4:40:58 PM

Authorized for release by
Sheri Cruz, Project Manager I
Sheri.Cruz@et.eurofinsus.com
(253)922-2310



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Definitions	5
Detection Summary	6
Client Sample Results	7
QC Sample Results	8
Chronicle	10
Certification Summary	11
Sample Summary	12
Chain of Custody	13
Receipt Checklists	14

Case Narrative

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-128660-1
SDG: BLDG 132

Job ID: 580-128660-1

Laboratory: Eurofins Seattle

Narrative

Job Narrative
580-128660-1

Comments

No additional comments.

Receipt

The sample was received on 6/22/2023 9:20 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.0° C.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

1

2

3

4

5

6

7

8

9

10

11

12

Definitions/Glossary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-128660-1
SDG: BLDG 132

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Detection Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-128660-1
SDG: BLDG 132

Client Sample ID: BLDG 6802

Lab Sample ID: 580-128660-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	0.31		0.040	0.0058	mg/L	1		200.8	Total/NA
Copper	0.013		0.0020	0.00060	mg/L	1		200.8	Total/NA
Iron	0.40		0.10	0.013	mg/L	1		200.8	Total/NA
Lead	0.0064		0.00040	0.000040	mg/L	1		200.8	Total/NA
Zinc	0.041		0.0070	0.00093	mg/L	1		200.8	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Seattle

Client Sample Results

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-128660-1
SDG: BLDG 132

Client Sample ID: BLDG 6802

Lab Sample ID: 580-128660-1

Date Collected: 06/16/23 02:05

Matrix: Water

Date Received: 06/22/23 09:20

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.31		0.040	0.0058	mg/L		06/27/23 15:58	06/28/23 15:41	1
Copper	0.013		0.0020	0.00060	mg/L		06/27/23 15:58	06/28/23 15:41	1
Iron	0.40		0.10	0.013	mg/L		06/27/23 15:58	06/28/23 15:41	1
Lead	0.0064		0.00040	0.000040	mg/L		06/27/23 15:58	06/28/23 15:41	1
Zinc	0.041		0.0070	0.00093	mg/L		06/27/23 15:58	06/28/23 15:41	1

QC Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater

Job ID: 580-128660-1
 SDG: BLDG 132

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-430111/26-A
Matrix: Water
Analysis Batch: 430320

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 430111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.040	0.0058	mg/L		06/27/23 15:58	06/28/23 15:35	1
Copper	ND		0.0020	0.00060	mg/L		06/27/23 15:58	06/28/23 15:35	1
Iron	ND		0.10	0.013	mg/L		06/27/23 15:58	06/28/23 15:35	1
Lead	ND		0.00040	0.000040	mg/L		06/27/23 15:58	06/28/23 15:35	1
Zinc	ND		0.0070	0.00093	mg/L		06/27/23 15:58	06/28/23 15:35	1

Lab Sample ID: LCS 580-430111/27-A
Matrix: Water
Analysis Batch: 430320

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 430111

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	20.0	19.7		mg/L		99	85 - 115
Copper	1.00	1.04		mg/L		104	85 - 115
Iron	20.0	19.3		mg/L		97	85 - 115
Lead	1.00	0.997		mg/L		100	85 - 115
Zinc	1.00	0.975		mg/L		97	85 - 115

Lab Sample ID: LCSD 580-430111/28-A
Matrix: Water
Analysis Batch: 430320

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 430111

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	20.0	19.1		mg/L		96	85 - 115	3	20
Copper	1.00	1.04		mg/L		104	85 - 115	1	20
Iron	20.0	18.9		mg/L		94	85 - 115	2	20
Lead	1.00	1.02		mg/L		102	85 - 115	2	20
Zinc	1.00	0.981		mg/L		98	85 - 115	1	20

Lab Sample ID: 580-128660-1 MS
Matrix: Water
Analysis Batch: 430320

Client Sample ID: BLDG 6802
Prep Type: Total/NA
Prep Batch: 430111

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.31		20.0	21.0		mg/L		103	70 - 130
Copper	0.013		1.00	1.08		mg/L		106	70 - 130
Iron	0.40		20.0	20.3		mg/L		99	70 - 130
Lead	0.0064		1.00	1.02		mg/L		101	70 - 130
Zinc	0.041		1.00	1.02		mg/L		98	70 - 130

Lab Sample ID: 580-128660-1 MSD
Matrix: Water
Analysis Batch: 430320

Client Sample ID: BLDG 6802
Prep Type: Total/NA
Prep Batch: 430111

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	0.31		20.0	20.8		mg/L		102	70 - 130	1	20
Copper	0.013		1.00	1.08		mg/L		107	70 - 130	0	20
Iron	0.40		20.0	20.5		mg/L		101	70 - 130	1	20
Lead	0.0064		1.00	1.05		mg/L		104	70 - 130	3	20
Zinc	0.041		1.00	1.04		mg/L		100	70 - 130	2	20

Eurofins Seattle

QC Sample Results

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-128660-1
SDG: BLDG 132

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-128660-1 DU
Matrix: Water
Analysis Batch: 430320

Client Sample ID: BLDG 6802
Prep Type: Total/NA
Prep Batch: 430111

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Aluminum	0.31		0.313		mg/L		0.5	20
Copper	0.013		0.0130		mg/L		0.4	20
Iron	0.40		0.416		mg/L		3	20
Lead	0.0064		0.00665		mg/L		4	20
Zinc	0.041		0.0399		mg/L		3	20

Lab Chronicle

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-128660-1
SDG: BLDG 132

Client Sample ID: BLDG 6802

Lab Sample ID: 580-128660-1

Date Collected: 06/16/23 02:05

Matrix: Water

Date Received: 06/22/23 09:20

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	200.8			430111	JLS	EET SEA	06/27/23 15:58
Total/NA	Analysis	200.8		1	430320	TMH	EET SEA	06/28/23 15:41

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Accreditation/Certification Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-128660-1
SDG: BLDG 132

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-07-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Sample Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-128660-1
SDG: BLDG 132

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
580-128660-1	BLDG 6802	Water	06/16/23 02:05	06/22/23 09:20

1

2

3

4

5

6

7

8

9

10

11

12

Login Sample Receipt Checklist

Client: Element Environmental, LLC

Job Number: 580-128660-1

SDG Number: BLDG 132

Login Number: 128660

List Number: 1

Creator: Groves, Elizabeth

List Source: Eurofins Seattle

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?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Marine Corps Base Hawaii
Kaneohe, Oahu, Hawaii

Quarterly Storm Water Report

NPDES File No. HI S000007

Final

Building 6802 WFO LAB/BOAT SHOP

October 2023

Prepared for MCBH by
Element Environmental, LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

N62742-17-D-1802
CTO N6274222F0208

This page intentionally left blank.

Table of Contents

Table of Contents	i
List of Tables	i
List of Appendices	i
Acronyms and Abbreviations	ii
1.0 Project Purpose and Location	1-1
2.0 Methodology and Storm Event Summary	2-1
3.0 Quarterly Visual Assessment	3-1
4.0 Quarterly Benchmark Samples	4-1
4.1.1 Data not exceeding benchmarks	4-1
4.1.2 Data exceeding benchmarks	4-1

List of Tables

Table 2-1 Storm Event Summary	2-1
Table 3-1 Visual Assessment Form	3-1
Table 4-1 Quarterly Benchmark Sample Results	4-3

List of Figures

Figure 1-1 Site Contributory Area	1-3
---	-----

List of Appendices

Appendix A: Photographs of Storm Event	A-1
Appendix B: Analytical Laboratory Report	B-1

Acronyms and Abbreviations

°C	<i>degrees Celsius</i>
COD	<i>Chemical Oxygen Demand</i>
CTO	<i>Contract Task Order</i>
DL	<i>Detection Limit</i>
E2	<i>Element Environmental, LLC</i>
HAR	<i>Hawaii Administrative Rules</i>
LOD	<i>Limit of Detection</i>
LOQ	<i>Limit of Quantitation</i>
MCBH	<i>Marine Corps Base Hawaii</i>
ug/L	<i>Microgram per liter</i>
mg/L	<i>Milligram per liter</i>
mph	<i>Mile per hour</i>
NOAA	<i>National Oceanic and Atmospheric Administration</i>
NPDES	<i>National Pollutant Discharge Elimination System</i>
QA/QC	<i>Quality Assurance/Quality Control</i>
SSHP	<i>Site Safety and Health Plan</i>
SWPPP	<i>Stormwater Pollution Prevention Plan</i>
TSS	<i>Total Suspended Solids</i>

1.0 Project Purpose and Location

The purpose of this project is to fulfill the requirements of the National Pollutant Discharge Elimination System (NPDES), Permit Number HI S000007, which includes collection and analyses of storm water from a representative storm water event, as defined by the NPDES permit.

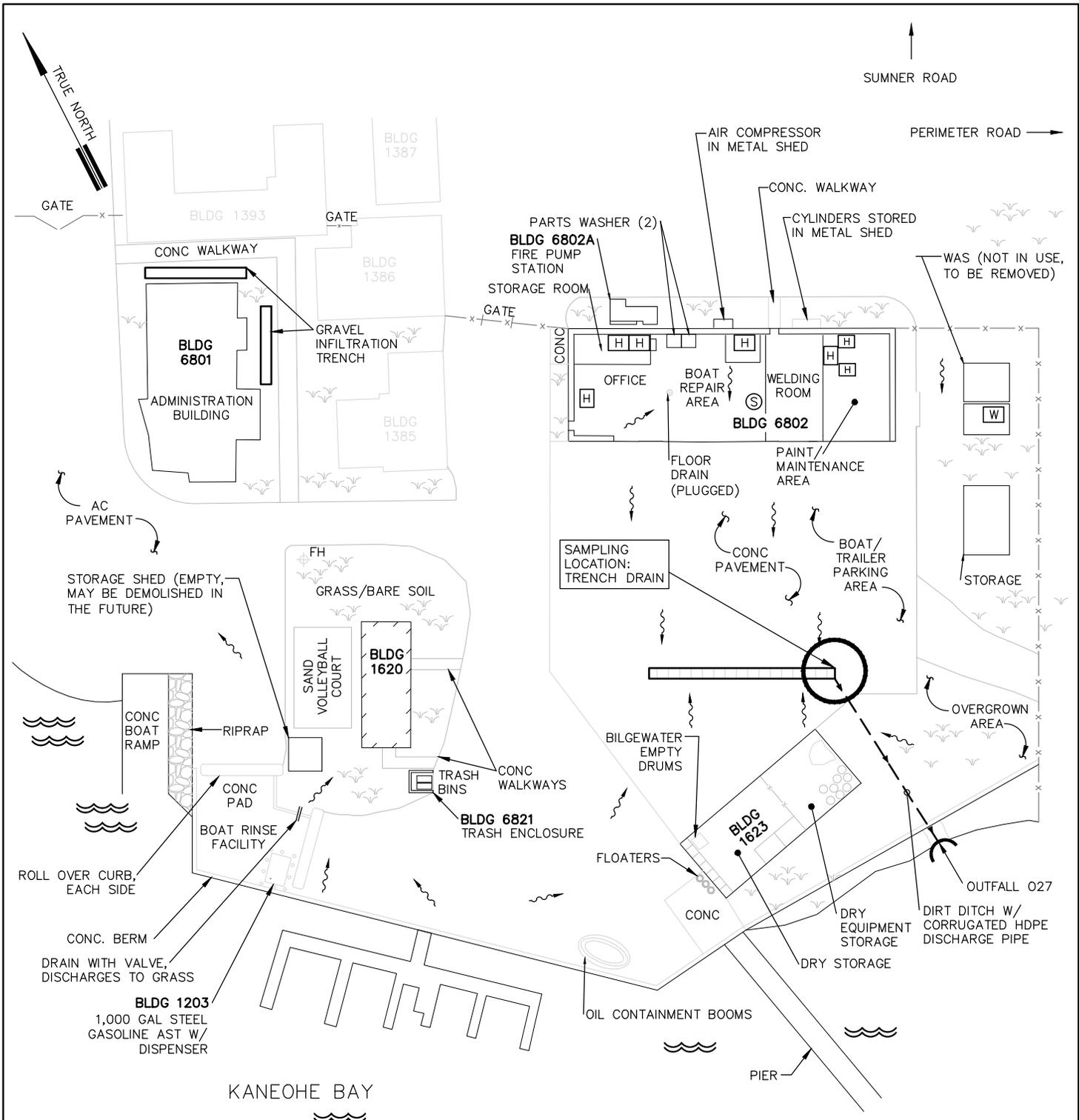
The NPDES program is designed to determine the presence of contaminants in surface flow of rain water from designated contributory areas at a site following representative rain events. Figure 1-1 shows the contributory area for the site.

The WFO Lab/Boat Shop, Building 6802 is considered to be under industrial activity sector Q- Water Transportation, and thus is required to perform Quarterly Benchmark Sampling. Benchmark monitoring data are primarily for MCBH's use to determine the overall effectiveness of control measures and to assist in determining when additional corrective action(s) may be necessary. A benchmark exceedance is not a permit violation, however, if corrective action is required as a result of a benchmark exceedance, failure to conduct required corrective action is a permit violation.

Quarterly Benchmark Sampling of storm water discharge from the representative sampling location at the WFO Lab/Boat Shop (Figure 1-1) will be monitored in accordance with Table 3-1 from the SWPPP. A Quarterly Visual Assessment of storm water discharge is also required for all industrial facilities at MCBH. Storm water samples for this visual assessment but must be collected in such a manner that the samples are representative of the storm water discharge from the facility. Therefore, the water sample must be collected at the designated storm water monitoring point, as shown in Figure 1-1. The Quarterly Visual Assessment checklist presented in this report shall be maintained by the current facility ECC and kept onsite as part of this Quarterly report.

All work conducted during this project was performed in accordance with the NPDES Permit Number HI S000007; and the applicable Quality Assurance/Quality Control (QA/QC) Plan and Site Safety and Health Plan (SSHP) prepared for this project. Performance Work Statement entitled "*Clean Water Program Services for Marine Corps Base Hawaii, FY22*" dated July 22, 2022. Work was performed by Element Environmental, LLC (E2) and its subcontractors under Contract Number N62742-17-D-1802, Contract Task Order (CTO) N6274222F0208.

This page intentionally left blank.



LEGEND

- H HAZARDOUS MATERIALS LOCKER
- W WASTE ACCUMULATION SITE
- S SPILL KIT
- STORM DRAIN SYSTEM
- STORM DRAIN INLET
- FLOW ARROW

NOTES:

1. STORM WATER, FROM APPROXIMATELY 3.2 ACRES ASSOCIATED WITH BUILDING 6802 (FORMERLY BUILDING 1388) IS DISCHARGED TO KANEOHE BAY VIA OUTFALL 027.
2. CONCRETE FLOORS IN BUILDINGS UNLESS OTHERWISE NOTED.

LAB/BOAT SHOP (BUILDING 1388)

NOT TO SCALE

MHESKETT
 5/31/2022, 1:45:16 PM
 FIG 12-8 Bldg 6802 - Lab_Boat Shop.dwg

	DATE:	PROJECT TITLE:	
	MAY 2022	STORM WATER MONITORING PLAN MCBH, KANEOHE BAY, OAHU, HAWAII	
FIGURE TITLE:		FIGURE NO.:	
WFO LAB/BOAT SHOP (BUILDING 6802) SITE CONTRIBUTORY AREA		1-1	

This page intentionally left blank.

2.0 Methodology and Storm Event Summary

As per the NPDES permit, stormwater samples are to be collected from a qualifying storm, defined as follows:

A minimum of one grab sample shall be collected from a discharge resulting from a measurable storm event. Samples must be collected within the first 30 minutes of a discharge associated with a measurable storm event. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample must be collected as soon as practicable after the first 30 minutes and documentation must be kept with the report explaining why it was not possible to take samples within the first 30 minutes.

Samples were collected using an ISCO automated sampler. The Storm Event Summary is shown in Table 2-1 below.

Table 2-1 Storm Event Summary

Storm Event Summary

Storm Event Start Date and Time	9/14/23 6:05 PM
Flow Start Date and Time	9/14/23 6:30 PM
Sample Collection Date and Time	9/14/23 8:05 PM
Flow Duration at Monitoring Point (hour)	3.50
Approximate Event Rainfall Duration (hour)	3.8
Event Rainfall Total (from ISCO gauge) (inch)	0.2
Drainage Area (A) (Acres)	3.2
Run-off Coefficient (C)*	0.7
Discharge Volume in gallons (Estimated using rational method)	12064
Peak Discharge (from calculation) in cubic feet per second (cfs)	0.12
Rainfall Event >0.1 during previous 72 hours?	No
Weather Conditions	moderate rainfall event
Sample Appearance	clear color, no settled solids or other signs of pollution
Sample Collection Method	automated - ISCO Avalanche
Field Parameter Instrument	N/A

Note:

*Runoff co-efficient for industrial areas from the *City and County of Honolulu Department of Planning and Permitting, Rules Relating to Storm Drainage Standards*, Table 4, page 52, January 2000, Revised September 2012.

This page intentionally left blank.

3.0 Quarterly Visual Assessment

The visual assessment was conducted:

- Of a sample collected in a clean, colorless glass or plastic container, and examined in a well-lit area;
- On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and documented why it was not possible to take the sample within the first 30 minutes; and
- For storm events, on discharges that occur at least 72 hours (three days) from the previous discharge.

The results of the Visual Assessment are shown in Table 3-1 below.

Table 3-1 Visual Assessment Form

Visual Assessment	
Color	clear
odor	no
clarity	very clear
oil sheen present	no
Floating Solids Present	no
Settled Solids Present	no
Suspended Solids present	no
Foam present	no
Other signs of pollution	no
Nature of the discharge	Storm event runoff on asphalt to trench drain
results of observations of the storm water discharge	BMPs and stormwater pollution prevention measures appear to be working and intact.
probable sources of stormwater contamination	Not Applicable
If applicable, why was it not possible to collect samples within the first 30 minutes	Not Applicable

This page intentionally left blank.

4.0 Quarterly Benchmark Samples

Samples were collected from the sampling location designated in the SWPPP as seen in Figure 1-1 and submitted to the Analytical Laboratory identified in the Table 3-1 of the SWPPP. Photographs demonstrating the stormwater control measures were taken and included in Appendix A. Laboratory results are compared to their respective Benchmark values as shown in Table 4-1.

4.1.1 Data not exceeding benchmarks

After collection of four quarterly samples, if the average of the four monitoring values for any parameter does not exceed the benchmark value, MCBH has fulfilled monitoring requirements for that parameter for the permit term.

4.1.2 Data exceeding benchmarks

After collection of four quarterly samples, if the average of the four monitoring values for any parameter exceeds the benchmark, review the selection, design, installation, and implementation of control measures to determine if modifications are necessary to meet the effluent limits in this permit, and either:

- Make the necessary modifications and continue quarterly monitoring until four additional quarters of monitoring are completed for which the average does not exceed the benchmark; or
- Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology based effluent limits or are necessary to meet the water-quality-based effluent limitations, in which case monitoring must continue once per year. Furthermore, documentation of the rationale for concluding that no further pollutant reductions are achievable must be completed and all records related to this documentation shall be retained with the site SWPPP.

Control measures must be reviewed, and any required corrective action performed immediately (or document why no corrective action is required), without waiting for the full four quarters of monitoring data, when an exceedance of the four-quarter average is mathematically certain. If after modifying control measures and conducting four additional quarters of monitoring, the average still exceeds the benchmark (or if an exceedance of the benchmark by the four-quarter average is mathematically certain prior to conducting the full four additional quarters of monitoring), review of control measures must be conducted and take one of the two actions above.

APPENDIX A

Photographs of Storm Event

This page intentionally left blank.



Photo A-1. Location of autosampler and sample point.



Photo A-2. FY23Q4 Benchmark sample in 2-liter glass sample jars.

APPENDIX B

Analytical Laboratory Report

This page intentionally left blank

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Marvin Heskett
Element Environmental, LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

Generated 9/29/2023 2:07:45 PM

JOB DESCRIPTION

MCBH 2023 Clean Water Services.

JOB NUMBER

580-131922-1

Eurofins Seattle

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

Authorization



Generated
9/29/2023 2:07:45 PM

Authorized for release by
Katie Grant, Project Manager I
Katie.Grant@et.eurofinsus.com
Designee for
Sheri Cruz, Project Manager I
Sheri.Cruz@et.eurofinsus.com
(253)922-2310



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Definitions	5
Detection Summary	6
Client Sample Results	7
QC Sample Results	8
Chronicle	9
Certification Summary	10
Sample Summary	11
Chain of Custody	12
Receipt Checklists	13

Case Narrative

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Clean Water Services.

Job ID: 580-131922-1

Job ID: 580-131922-1

Laboratory: Eurofins Seattle

Narrative

**Job Narrative
580-131922-1**

Receipt

The sample was received on 9/23/2023 9:20 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.4° C.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

1

2

3

4

5

6

7

8

9

10

11

12

Definitions/Glossary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Clean Water Services.

Job ID: 580-131922-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Detection Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Clean Water Services.

Job ID: 580-131922-1

Client Sample ID: BLDG 6802 - FY2023 Q4 Benchmark

Lab Sample ID: 580-131922-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	0.072		0.040	0.0058	mg/L	1		200.8	Total/NA
Iron	0.063	J	0.10	0.013	mg/L	1		200.8	Total/NA
Lead	0.0026		0.00040	0.000040	mg/L	1		200.8	Total/NA
Zinc	0.027		0.0070	0.00093	mg/L	1		200.8	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Seattle

Client Sample Results

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Clean Water Services.

Job ID: 580-131922-1

Client Sample ID: BLDG 6802 - FY2023 Q4 Benchmark

Lab Sample ID: 580-131922-1

Date Collected: 09/14/23 20:05

Matrix: Water

Date Received: 09/23/23 09:20

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.072		0.040	0.0058	mg/L		09/27/23 16:12	09/28/23 19:54	1
Iron	0.063	J	0.10	0.013	mg/L		09/27/23 16:12	09/28/23 19:54	1
Lead	0.0026		0.00040	0.000040	mg/L		09/27/23 16:12	09/28/23 19:54	1
Zinc	0.027		0.0070	0.00093	mg/L		09/27/23 16:12	09/28/23 19:54	1

QC Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Clean Water Services.

Job ID: 580-131922-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-438966/26-A
Matrix: Water
Analysis Batch: 439195

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 438966

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.040	0.0058	mg/L		09/27/23 16:12	09/28/23 18:12	1
Iron	ND		0.10	0.013	mg/L		09/27/23 16:12	09/28/23 18:12	1
Lead	ND		0.00040	0.000040	mg/L		09/27/23 16:12	09/28/23 18:12	1
Zinc	ND		0.0070	0.00093	mg/L		09/27/23 16:12	09/28/23 18:12	1

Lab Sample ID: LCS 580-438966/27-A
Matrix: Water
Analysis Batch: 439195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 438966

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	20.0	20.1		mg/L		100	85 - 115
Iron	20.0	19.7		mg/L		99	85 - 115
Lead	1.00	0.962		mg/L		96	85 - 115
Zinc	1.00	1.01		mg/L		101	85 - 115

Lab Sample ID: LCSD 580-438966/28-A
Matrix: Water
Analysis Batch: 439195

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 438966

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	20.0	20.1		mg/L		101	85 - 115	0	20
Iron	20.0	20.1		mg/L		100	85 - 115	2	20
Lead	1.00	0.972		mg/L		97	85 - 115	1	20
Zinc	1.00	0.986		mg/L		99	85 - 115	2	20

Lab Chronicle

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Clean Water Services.

Job ID: 580-131922-1

Client Sample ID: BLDG 6802 - FY2023 Q4 Benchmark

Lab Sample ID: 580-131922-1

Date Collected: 09/14/23 20:05

Matrix: Water

Date Received: 09/23/23 09:20

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	200.8			438966	JL	EET SEA	09/27/23 16:12
Total/NA	Analysis	200.8		1	439195	FCW	EET SEA	09/28/23 19:54

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



Accreditation/Certification Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Clean Water Services.

Job ID: 580-131922-1

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-07-24

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Sample Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Clean Water Services.

Job ID: 580-131922-1

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
580-131922-1	BLDG 6802 - FY2023 Q4 Benchmark	Water	09/14/23 20:05	09/23/23 09:20

1

2

3

4

5

6

7

8

9

10

11

12

Login Sample Receipt Checklist

Client: Element Environmental, LLC

Job Number: 580-131922-1

Login Number: 131922

List Source: Eurofins Seattle

List Number: 1

Creator: Groves, Elizabeth

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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.	True	
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	



Marine Corps Base Hawaii

Kaneohe, Oahu, Hawaii

Quarterly Storm Water Report

Marine Corps Base Hawaii

NPDES File No. HI S000007

Final

Building 132, Recycle Center

November 2022

Prepared for MCBH by
Element Environmental, LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

N62742-17-D-1802
CTO N6274222F0208

This page intentionally left blank.

Table of Contents

Table of Contents	i
List of Tables.....	i
List of Appendices.....	i
Acronyms and Abbreviations.....	ii
1.0 Project Purpose and Location	1-1
2.0 Methodology and Storm Event Summary.....	2-1
3.0 Quarterly Visual Assessment	3-1
4.0 Quarterly Benchmark Samples	4-1
4.1.1 Data not exceeding benchmarks	4-1
4.1.2 Data exceeding benchmarks.....	4-1

List of Tables

Table 2-1 Storm Event Summary	2-1
Table 3-1 Visual Assessment Form	3-1
Table 4-1 Quarterly Benchmark Sample Results.....	4-2

List of Figures

Figure 1:1 Site Contributory Area	1-3
---	-----

List of Appendices

Appendix A: Site Photographs	A-1
Appendix B: Analytical Laboratory Report.....	B-1

Acronyms and Abbreviations

°C	degrees Celsius
COD	Chemical Oxygen Demand
CTO	Contract Task Order
DL	Detection Limit
E2	Element Environmental, LLC
HAR	Hawaii Administrative Rules
LOD	Limit of Detection
LOQ	Limit of Quantitation
MCBH	Marine Corps Base Hawaii
ug/L	Microgram per liter
mg/L	Milligram per liter
mph	Mile per hour
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
QA/QC	Quality Assurance/Quality Control
SSHP	Site Safety and Health Plan
SWPPP	Stormwater Pollution Prevention Plan
TSS	Total Suspended Solids

1.0 Project Purpose and Location

The purpose of this project is to fulfill the requirements of the National Pollutant Discharge Elimination System (NPDES), Permit Number HI S000007, which includes collection and analyses of storm water from a representative storm water event, as defined by the NPDES permit.

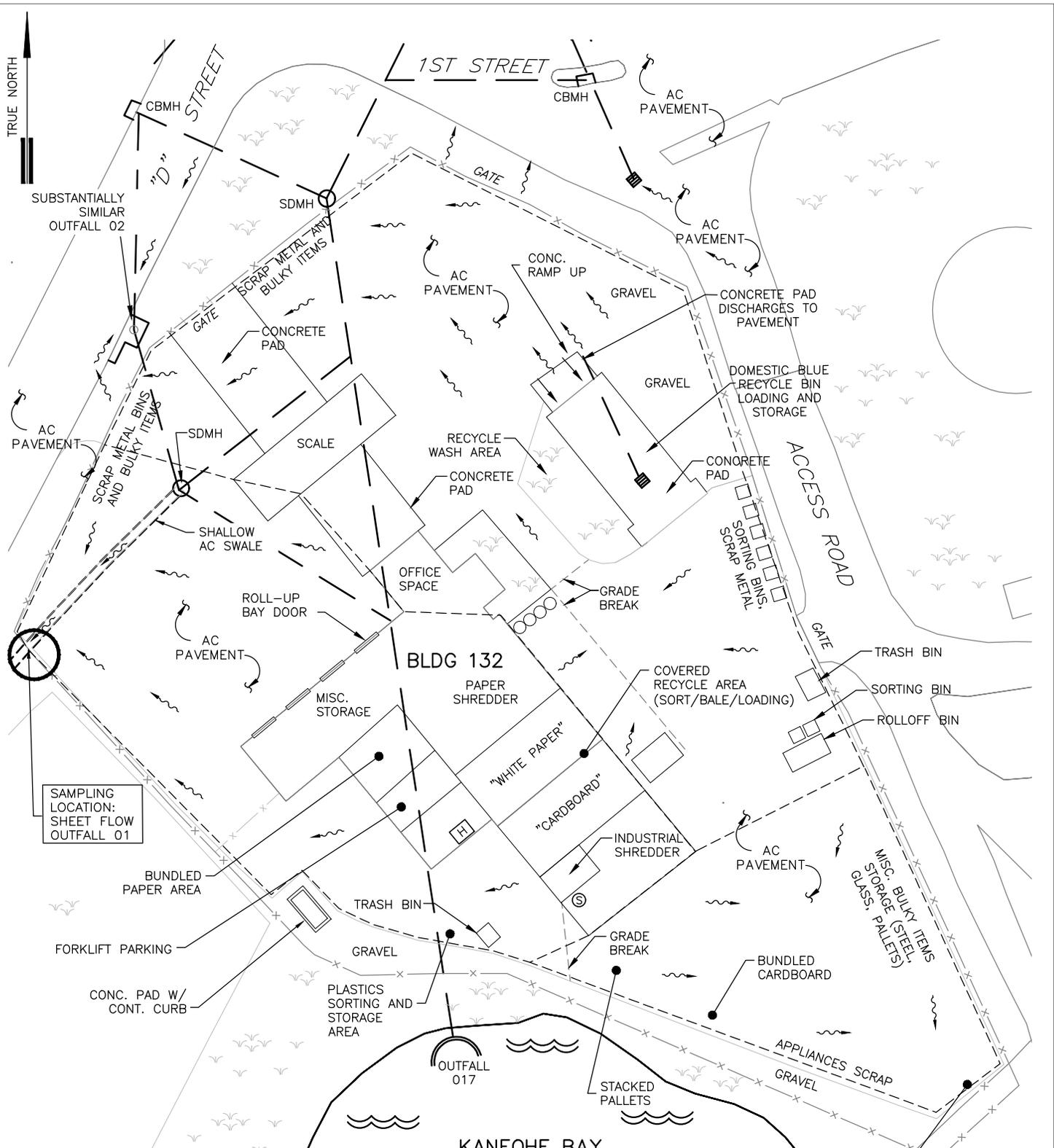
The NPDES program is designed to determine the presence of contaminants in surface flow of rain water from designated contributory areas at a site following representative rain events. Figure 1-1 shows the contributory area for the site.

The Recycle Center, Building 132 is considered to be under industrial activity sector N-Scrap Recycling and Waste Recycling Facilities, and thus is required to perform Quarterly Benchmark Sampling. Benchmark monitoring data are primarily for MCBH's use to determine the overall effectiveness of control measures and to assist in determining when additional corrective action(s) may be necessary. A benchmark exceedance is not a permit violation, however, if corrective action is required as a result of a benchmark exceedance, failure to conduct required corrective action is a permit violation.

Quarterly Benchmark Sampling of storm water discharge from the representative sampling location at the Recycle Center (Figure 1-1) will be monitored in accordance with Table 3-1 from the SWPPP. A Quarterly Visual Assessment of storm water discharge is also required for all industrial facilities at MCBH. Storm water samples for this visual assessment but must be collected in such a manner that the samples are representative of the storm water discharge from the facility. Therefore, the water sample must be collected at the designated storm water monitoring point, at the end of the drainage swale just outside of the gate on the northwest side of the facility, as shown in Figure 1-1. The Quarterly Visual Assessment checklist presented in this report shall be maintained by the current facility ECC and kept onsite as part of this Quarterly report.

All work conducted during this project was performed in accordance with the NPDES Permit Number HI S000007; and the applicable Quality Assurance/Quality Control (QA/QC) Plan and Site Safety and Health Plan (SSHP) prepared for this project. Performance Work Statement entitled "*Clean Water Program Services for Marine Corps Base Hawaii, FY22*" dated July 22, 2022. Work was performed by Element Environmental, LLC (E2) and its subcontractors under Contract Number N62742-17-D-1802, Contract Task Order (CTO) N6274222F0208.

This page intentionally left blank.



LEGEND

- [H] HAZARDOUS MATERIALS LOCKER
- [S] SPILL KIT
- STORM WATER CONVEYANCE
- ~ FLOW ARROW
- - - DRAINAGE AREA BOUNDARY

NOTES:

1. STORM WATER, FROM APPROXIMATELY 2.0 ACRES ASSOCIATED WITH BUILDING 132, DISCHARGES TO KANEOHE BAY VIA SURFACE RUNOFF AND OUTFALL 017.
2. STORM WATER CONVEYANCE PIPE LOCATIONS ARE APPROXIMATE.
3. NOT TO SCALE.

STORM WATER DIRECTED OFFSITE, NO DEFINED CHANNEL OR OUTFLET. SUBSTANTIALLY SIMILAR OUTFALL 03

11/15/2022 10:58:57 PM FIG 1-1 Bldg 132 - Recycle Center.dwg

	DATE: JULY 2022	PROJECT TITLE: STORM WATER POLLUTION PREVENTION PLAN MCBH, KANEOHE BAY, OAHU, HAWAII
	FIGURE TITLE: RECYCLE CENTER (BUILDING 132)	
		FIGURE NO.: 1-1

This page intentionally left blank.

2.0 Methodology and Storm Event Summary

As per the NPDES permit, stormwater samples are to be collected from a qualifying storm, defined as follows:

A minimum of one grab sample shall be collected from a discharge resulting from a measurable storm event. Samples must be collected within the first 30 minutes of a discharge associated with a measurable storm event. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample must be collected as soon as practicable after the first 30 minutes and documentation must be kept with the report explaining why it was not possible to take samples within the first 30 minutes.

Samples were collected using an ISCO automated sampler.

Table 2-1 Storm Event Summary

Storm Event Date	19-Oct-22
Event Flow Duration at Monitoring Point (hour)	4.5
Approximate Event Rainfall Duration (hour)	5
Event Rainfall Total (from ISCO gauge) (inch)	0.36
Drainage Area (A) (Acres)	2
Run-off Coefficient (C)*	0.7
Discharge Volume in gallons (Estimated using rational method)	13572
Peak Discharge (from calculation) in cubic feet per second (cfs)	0.101
Rainfall Event >0.1 during previous 72 hours?	No
Weather Conditions	moderate rainfall event, light SW wind
Sample Appearance	0
Sample Collection Method	ISCO Avalanche
Field Parameter Instrument	YSI 3

Note:

*Runoff co-efficient for industrial areas from the *City and County of Honolulu Department of Planning and Permitting, Rules Relating to Storm Drainage Standards*, Table 4, page 52, January 2000, Revised September 2012.

This page intentionally left blank.

3.0 Quarterly Visual Assessment

The visual assessment was conducted:

- Of a sample collected in a clean, colorless glass or plastic container, and examined in a well-lit area;
- On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and documented why it was not possible to take the sample within the first 30 minutes; and
- For storm events, on discharges that occur at least 72 hours (three days) from the previous discharge.

Table 3-1 Visual Assessment Form

Visual Assessment	
Color	Light Tan
Odor	None
Clarity	Moderately Clear
Oil sheen present	None
Floating Solids Present	None
Settled Solids Present	Trace
Suspended Solids present	Trace
Foam present	None
Other signs of pollution	None
Nature of the discharge	Storm event runoff downstream of filter sock near the western property boundary.
Results of observations of the storm water discharge	BMPs and stormwater pollution prevention measures appear to be working and intact.
Probable sources of stormwater contamination	Not Applicable
If applicable, why was it not possible to collect samples within the first 30 minutes	Not Applicable
Custody	
Name of person releasing custody	Marvin Heskett
Date of custody release	10/20/2022
Time of custody release	14:00
Lab to which custody is released to	Eurofins Seattle

This page intentionally left blank.

4.0 Quarterly Benchmark Samples

Samples were collected from the sampling location designated in the SWPPP as seen in figure 1-1 and submitted to the Analytical Laboratory identified in the table 3-1. Photographs demonstrating the stormwater control measures were taken and included in Appendix A. Laboratory results are compared to their respective permit required Not to Exceed Limits in table 4-1.

4.1.1 Data not exceeding benchmarks

After collection of four quarterly samples, if the average of the four monitoring values for any parameter does not exceed the benchmark, MCBH has fulfilled monitoring requirements for that parameter for the permit term.

4.1.2 Data exceeding benchmarks

After collection of four quarterly samples, if the average of the four monitoring values for any parameter exceeds the benchmark, review the selection, design, installation, and implementation of control measures to determine if modifications are necessary to meet the effluent limits in this permit, and either:

- Make the necessary modifications and continue quarterly monitoring until four additional quarters of monitoring are completed for which the average does not exceed the benchmark; or
- Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology based effluent limits or are necessary to meet the water-quality-based effluent limitations, in which case monitoring must continue once per year. Furthermore, documentation of the rationale for concluding that no further pollutant reductions are achievable must be completed and all records related to this documentation shall be retained with the site SWPPP.

Control measures must be reviewed, and any required corrective action performed immediately (or document why no corrective action is required), without waiting for the full four quarters of monitoring data, when an exceedance of the four-quarter average is mathematically certain. If after modifying control measures and conducting four additional quarters of monitoring, the average still exceeds the benchmark (or if an exceedance of the benchmark by the four-quarter average is mathematically certain prior to conducting the full four additional quarters of monitoring), review of control measures must be conducted and take one of the two actions above.

Table 4-1 Quarterly Benchmark Sample Results

Analyte	method	Units	Sector N - Scrap Recycling Benchmark	BLDG 132									
				580-119081-1		580-119081-1		580-119081-1		580-119081-1		580-119081-1	
				Q4 - 2022		Q1 - 2023		Q2 - 2023		Q3- 2023		AVERAGE	
				Result	RL/ Qualifier								
Aluminum	200.8_CWA	mg/L	0.75	1.2								1.2	
Copper	200.8_CWA	mg/L	0.0048	0.032								0.032	
Iron	200.8_CWA	mg/L	1	1.6								1.6	
Lead	200.8_CWA	mg/L	0.21	0.0051								0.0051	
Zinc	200.8_CWA	mg/L	0.09	0.054								0.054	
Total Suspended Solids	2540D	mg/L	100	17								17	
Chemical Oxygen Demand	5220D	mg/L	120	38								38	

Notes:

Red text in bold indicates a benchmark exceedance

APPENDIX A

Photographs of Storm Event

This page intentionally left blank.



Quarterly benchmark photograph of stormwater control measures and sample location taken shortly after storm.



Photograph of Visual Inspection



This page intentionally left blank.

APPENDIX B

Analytical Laboratory Report

This page intentionally left blank.



Environment Testing

ANALYTICAL REPORT

Eurofins Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-119081-1

Client Project/Site: MCBH 2023 Stormwater - BLDG 132

For:

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

Attn: Marvin Heskett

Authorized for release by:
10/31/2022 3:57:12 PM

Sheri Cruz, Project Manager I
(253)922-2310

Sheri.Cruz@et.eurofinsus.com

LINKS

Review your project
results through



Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

1

2

3

4

5

6

7

8

9

10

11

12



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions	4
Detection Summary	5
Client Sample Results	6
QC Sample Results	7
Chronicle	9
Certification Summary	10
Sample Summary	11
Chain of Custody	12
Receipt Checklists	13

Case Narrative

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater - BLDG 132

Job ID: 580-119081-1

Job ID: 580-119081-1

Laboratory: Eurofins Seattle

Narrative

**Job Narrative
580-119081-1**

Comments

No additional comments.

Receipt

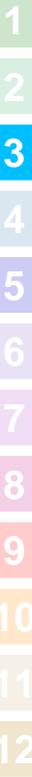
The sample was received on 10/21/2022 9:45 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was -1.7° C.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Definitions/Glossary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater - BLDG 132

Job ID: 580-119081-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Detection Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater - BLDG 132

Job ID: 580-119081-1

Client Sample ID: BLDG 132

Lab Sample ID: 580-119081-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	1.2		0.040	0.0058	mg/L	1		200.8	Total/NA
Copper	0.032		0.0020	0.00060	mg/L	1		200.8	Total/NA
Iron	1.6		0.10	0.013	mg/L	1		200.8	Total/NA
Lead	0.0051		0.00040	0.000040	mg/L	1		200.8	Total/NA
Zinc	0.054		0.0070	0.00093	mg/L	1		200.8	Total/NA
Total Suspended Solids	17		2.2	2.2	mg/L	1		SM 2540D	Total/NA
Chemical Oxygen Demand	38		10	10	mg/L	1		SM 5220D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Seattle

Client Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater - BLDG 132

Job ID: 580-119081-1

Client Sample ID: BLDG 132

Lab Sample ID: 580-119081-1

Date Collected: 10/19/22 16:19

Matrix: Water

Date Received: 10/21/22 09:45

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.2		0.040	0.0058	mg/L		10/27/22 19:45	10/28/22 14:37	1
Copper	0.032		0.0020	0.00060	mg/L		10/27/22 19:45	10/28/22 14:37	1
Iron	1.6		0.10	0.013	mg/L		10/27/22 19:45	10/28/22 14:37	1
Lead	0.0051		0.00040	0.000040	mg/L		10/27/22 19:45	10/28/22 14:37	1
Zinc	0.054		0.0070	0.00093	mg/L		10/27/22 19:45	10/28/22 14:37	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	17		2.2	2.2	mg/L			10/25/22 14:33	1
Chemical Oxygen Demand (SM 5220D)	38		10	10	mg/L		10/27/22 19:01	10/27/22 23:12	1

QC Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater - BLDG 132

Job ID: 580-119081-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-408227/26-A
Matrix: Water
Analysis Batch: 408379

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 408227

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.040	0.0058	mg/L		10/27/22 19:45	10/28/22 13:13	1
Copper	ND		0.0020	0.00060	mg/L		10/27/22 19:45	10/28/22 13:13	1
Iron	ND		0.10	0.013	mg/L		10/27/22 19:45	10/28/22 13:13	1
Lead	ND		0.00040	0.000040	mg/L		10/27/22 19:45	10/28/22 13:13	1
Zinc	ND		0.0070	0.00093	mg/L		10/27/22 19:45	10/28/22 13:13	1

Lab Sample ID: LCS 580-408227/27-A
Matrix: Water
Analysis Batch: 408379

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 408227

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	20.0	19.5		mg/L		98	85 - 115
Copper	1.00	0.984		mg/L		98	85 - 115
Iron	20.0	19.1		mg/L		95	85 - 115
Lead	1.00	0.995		mg/L		99	85 - 115
Zinc	1.00	0.986		mg/L		99	85 - 115

Lab Sample ID: LCSD 580-408227/28-A
Matrix: Water
Analysis Batch: 408379

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 408227

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	20.0	19.7		mg/L		98	85 - 115	1	20
Copper	1.00	0.970		mg/L		97	85 - 115	1	20
Iron	20.0	19.3		mg/L		97	85 - 115	1	20
Lead	1.00	0.999		mg/L		100	85 - 115	0	20
Zinc	1.00	0.971		mg/L		97	85 - 115	2	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 580-407847/1
Matrix: Water
Analysis Batch: 407847

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		2.0	2.0	mg/L			10/25/22 14:33	1

Lab Sample ID: LCS 580-407847/2
Matrix: Water
Analysis Batch: 407847

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	500	476		mg/L		95	80 - 120

QC Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater - BLDG 132

Job ID: 580-119081-1

Method: SM 5220D - COD

Lab Sample ID: MB 580-408225/3-A
Matrix: Water
Analysis Batch: 408242

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 408225

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	10	mg/L		10/27/22 19:01	10/27/22 23:12	1

Lab Sample ID: LCS 580-408225/4-A
Matrix: Water
Analysis Batch: 408242

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 408225

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	75.0	76.1		mg/L		101	80 - 120

Lab Sample ID: LCSD 580-408225/5-A
Matrix: Water
Analysis Batch: 408242

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 408225

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chemical Oxygen Demand	75.0	76.1		mg/L		101	80 - 120	0	20

Lab Chronicle

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater - BLDG 132

Job ID: 580-119081-1

Client Sample ID: BLDG 132

Lab Sample ID: 580-119081-1

Date Collected: 10/19/22 16:19

Matrix: Water

Date Received: 10/21/22 09:45

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	200.8			408227	TMH	EET SEA	10/27/22 19:45
Total/NA	Analysis	200.8		1	408379	FCW	EET SEA	10/28/22 14:37
Total/NA	Analysis	SM 2540D		1	407847	AUA	EET SEA	10/25/22 14:33
Total/NA	Prep	SM 5220			408225	MLT	EET SEA	10/27/22 19:01
Total/NA	Analysis	SM 5220D		1	408242	MLT	EET SEA	10/27/22 23:12

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



Accreditation/Certification Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater - BLDG 132

Job ID: 580-119081-1

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-08-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Sample Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater - BLDG 132

Job ID: 580-119081-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-119081-1	BLDG 132	Water	10/19/22 16:19	10/21/22 09:45

1

2

3

4

5

6

7

8

9

10

11

12

Login Sample Receipt Checklist

Client: Element Environmental, LLC

Job Number: 580-119081-1

Login Number: 119081

List Number: 1

Creator: Holdener, Heather D

List Source: Eurofins Seattle

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?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Marine Corps Base Hawaii
Kaneohe, Oahu, Hawaii

Quarterly Storm Water Report

NPDES File No. HI S000007

Final

Building 132 Recycle Center

April 2023

Prepared for MCBH by
Element Environmental, LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

N62742-17-D-1802
CTO N6274222F0208

This page intentionally left blank.

Table of Contents

Table of Contents	i
List of Tables.....	i
List of Appendices	i
Acronyms and Abbreviations.....	ii
1.0 Project Purpose and Location	1-1
2.0 Methodology and Storm Event Summary.....	2-1
3.0 Quarterly Visual Assessment	3-1
4.0 Quarterly Benchmark Samples	4-1
4.1.1 Data Not Exceeding Benchmarks.....	4-1
4.1.2 Data Exceeding Benchmarks.....	4-1

List of Tables

Table 2-1 Storm Event Summary	2-1
Table 3-1 Visual Assessment Form.....	3-1
Table 4-1 Quarterly Benchmark Sample Results.....	4-2

List of Figures

Figure 1-1 Site Contributory Area.....	1-3
--	-----

List of Appendices

Appendix A: Photographs of Storm Event.....	A-1
Appendix B: Analytical Laboratory Report.....	B-1

Acronyms and Abbreviations

°C	degrees Celsius
COD	Chemical Oxygen Demand
CTO	Contract Task Order
DL	Detection Limit
E2	Element Environmental, LLC
HAR	Hawaii Administrative Rules
LOD	Limit of Detection
LOQ	Limit of Quantitation
MCBH	Marine Corps Base Hawaii
ug/L	Microgram per liter
mg/L	Milligram per liter
mph	Mile per hour
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
QA/QC	Quality Assurance/Quality Control
RL	Reporting Limit
SSHP	Site Safety and Health Plan
SWPPP	Stormwater Pollution Prevention Plan
TSS	Total Suspended Solids

1.0 Project Purpose and Location

The purpose of this project is to fulfill the requirements of the National Pollutant Discharge Elimination System (NPDES), Permit Number HI S000007, which includes collection and analyses of storm water from a representative storm water event, as defined by the NPDES permit.

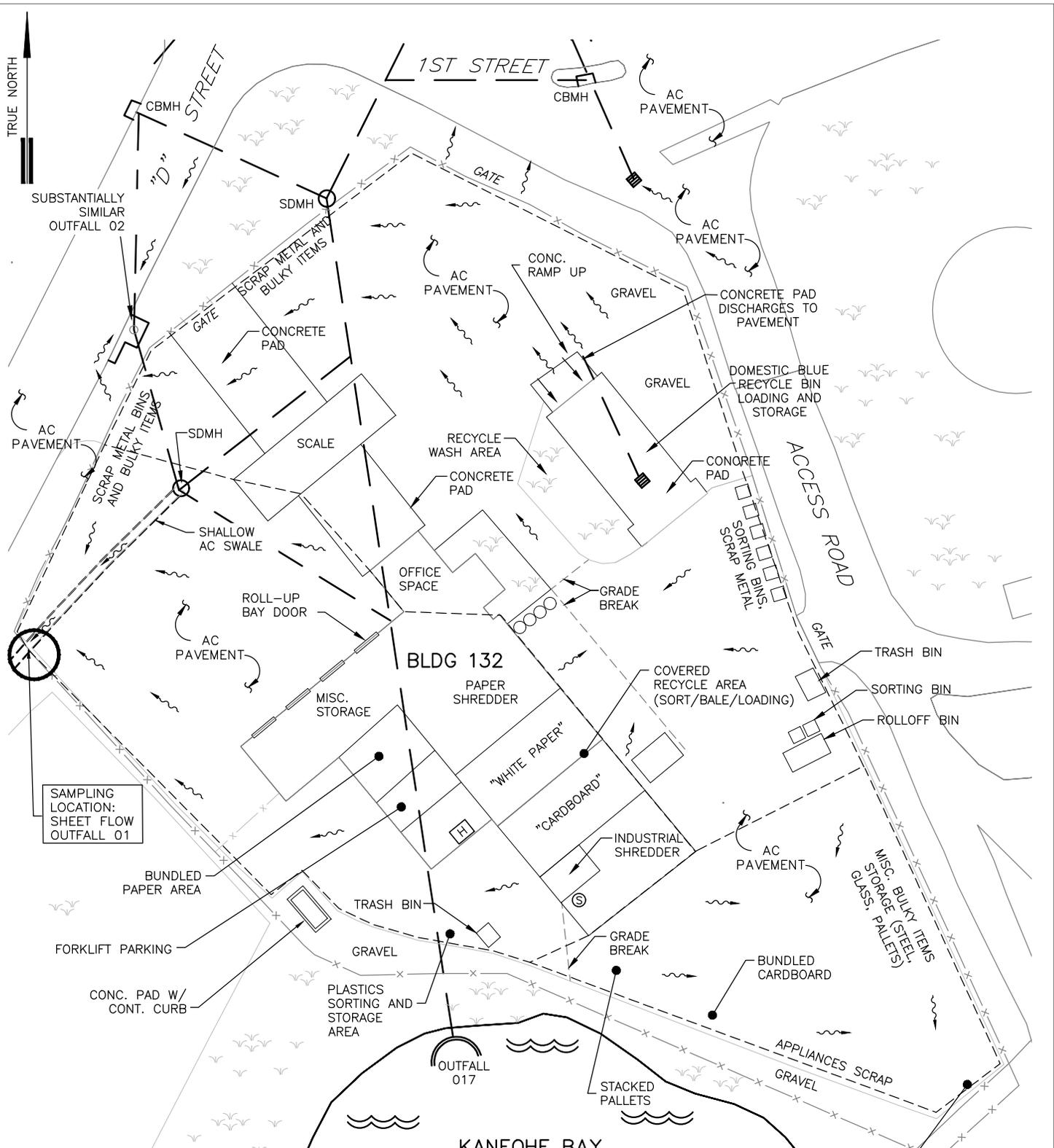
The NPDES program is designed to determine the presence of contaminants in surface flow of rain water from designated contributory areas at a site following representative rain events. Figure 1-1 shows the contributory area for the site.

The Recycle Center, Building 132 is considered to be under industrial activity sector N-Scrap Recycling, and thus is required to perform Quarterly Benchmark Sampling. Benchmark monitoring data are primarily for MCBH's use to determine the overall effectiveness of control measures and to assist in determining when additional corrective action(s) may be necessary. A benchmark exceedance is not a permit violation, however, if corrective action is required as a result of a benchmark exceedance, failure to conduct required corrective action is a permit violation.

Quarterly Benchmark Sampling of storm water discharge from the representative sampling location at the Recycle Center (Figure 1-1) will be monitored in accordance with Table 3-1 from the SWPPP. A Quarterly Visual Assessment of storm water discharge is also required for all industrial facilities at MCBH. Storm water samples for this visual assessment but must be collected in such a manner that the samples are representative of the storm water discharge from the facility. Therefore, the water sample must be collected at the designated storm water monitoring point, as shown in Figure 1-1. The Quarterly Visual Assessment checklist presented in this report shall be maintained by the current facility ECC and kept onsite as part of this Quarterly report.

All work conducted during this project was performed in accordance with the NPDES Permit Number HI S000007; and the applicable Quality Assurance/Quality Control (QA/QC) Plan and Site Safety and Health Plan (SSHP) prepared for this project. Performance Work Statement entitled "*Clean Water Program Services for Marine Corps Base Hawaii, FY22*" dated July 22, 2022. Work was performed by Element Environmental, LLC (E2) and its subcontractors under Contract Number N62742-17-D-1802, Contract Task Order (CTO) N6274222F0208.

This page intentionally left blank.



- LEGEND**
- [H] HAZARDOUS MATERIALS LOCKER
 - [S] SPILL KIT
 - STORM WATER CONVEYANCE
 - ~ FLOW ARROW
 - - - DRAINAGE AREA BOUNDARY

- NOTES:**
1. STORM WATER, FROM APPROXIMATELY 2.0 ACRES ASSOCIATED WITH BUILDING 132, DISCHARGES TO KANEOHE BAY VIA SURFACE RUNOFF AND OUTFALL 017.
 2. STORM WATER CONVEYANCE PIPE LOCATIONS ARE APPROXIMATE.
 3. NOT TO SCALE.

STORM WATER DIRECTED OFFSITE, NO DEFINED CHANNEL OR OUTLET. SUBSTANTIALLY SIMILAR OUTFALL 03

	DATE: JULY 2022	PROJECT TITLE: STORM WATER POLLUTION PREVENTION PLAN MCBH, KANEOHE BAY, OAHU, HAWAII
	FIGURE TITLE: RECYCLE CENTER (BUILDING 132)	

11/15/2022 10:58:57 PM FIG 1-1 Bldg 132 - Recycle Center.dwg

This page intentionally left blank.

2.0 Methodology and Storm Event Summary

As per the NPDES permit, stormwater samples are to be collected from a qualifying storm, defined as follows:

A minimum of one grab sample shall be collected from a discharge resulting from a measurable storm event. Samples must be collected within the first 30 minutes of a discharge associated with a measurable storm event. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample must be collected as soon as practicable after the first 30 minutes and documentation must be kept with the report explaining why it was not possible to take samples within the first 30 minutes.

Samples were collected using an ISCO automated sampler. The Storm Event Summary is shown in Table 2-1 below.

Table 2-1 Storm Event Summary

Storm Event Start Date and Time	3/28/23 3:45 PM
Flow Start Date and Time	3/28/23 10:00 PM
Sample Collection Date and Time	3/29/23 10:06 PM
Event Flow Duration at Monitoring Point (hour)	15.75
Approximate Event Rainfall Duration (hour)	20.0
Event Rainfall Total (from ISCO gauge) (inch)	0.94
Drainage Area (A) (Acres)	0.33
Run-off Coefficient (C)*	0.7
Discharge Volume in gallons (Estimated using rational method)	5847
Peak Discharge (from calculation) in cubic feet per second (cfs)	0.01
Rainfall Event >0.1 during previous 72 hours?	No
Weather Conditions	moderate rainfall event
Sample Appearance	Clear color, sediment at bottom of sample jar
Sample Collection Method	automated - ISCO sampler
Field Parameter Instrument	N/A

Note:

*Runoff co-efficient for industrial areas from the *City and County of Honolulu Department of Planning and Permitting, Rules Relating to Storm Drainage Standards*, Table 4, page 52, January 2000, Revised September 2012.

This page intentionally left blank.

3.0 Quarterly Visual Assessment

The visual assessment was conducted:

- Of a sample collected in a clean, colorless glass or plastic container, and examined in a well-lit area;
- On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and documented why it was not possible to take the sample within the first 30 minutes; and
- For storm events, on discharges that occur at least 72 hours (three days) from the previous discharge.

The results of the Visual Assessment are shown in Table 3-1 below.

Table 3-1 Visual Assessment Form

Visual Assessment	
Color	clear
Odor	none
Clarity	clear
Oil sheen present	No
Floating Solids Present	No
Settled Solids Present	Sediment at bottom of jar
Suspended Solids present	No
Foam present	No
Other signs of pollution	No
Nature of the discharge	runoff ponded offsite at perimeter fence
Results of observations of the storm water discharge	sediments from exposed soil
Probable sources of stormwater contamination	none / background
If applicable, why was it not possible to collect samples within the first 30 minutes	Not Applicable

This page intentionally left blank.

4.0 Quarterly Benchmark Samples

Samples were collected from the sampling location designated in the SWPPP as seen in Figure 1-1 and submitted to the Analytical Laboratory identified in the Table 3-1 of the SWPPP. Photographs demonstrating the stormwater control measures were taken and included in Appendix A. Laboratory results are compared to their respective Benchmark values as shown in Table 4-1.

4.1.1 Data Not Exceeding Benchmarks

After collection of four quarterly samples, if the average of the four monitoring values for any parameter does not exceed the benchmark value, MCBH has fulfilled monitoring requirements for that parameter for the permit term.

4.1.2 Data Exceeding Benchmarks

After collection of four quarterly samples, if the average of the four monitoring values for any parameter exceeds the benchmark, review the selection, design, installation, and implementation of control measures to determine if modifications are necessary to meet the effluent limits in this permit, and either:

- Make the necessary modifications and continue quarterly monitoring until four additional quarters of monitoring are completed for which the average does not exceed the benchmark; or
- Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology based effluent limits or are necessary to meet the water-quality-based effluent limitations, in which case monitoring must continue once per year. Furthermore, documentation of the rationale for concluding that no further pollutant reductions are achievable must be completed and all records related to this documentation shall be retained with the site SWPPP.

Control measures must be reviewed, and any required corrective action performed immediately (or document why no corrective action is required), without waiting for the full four quarters of monitoring data, when an exceedance of the four-quarter average is mathematically certain. If after modifying control measures and conducting four additional quarters of monitoring, the average still exceeds the benchmark (or if an exceedance of the benchmark by the four-quarter average is mathematically certain prior to conducting the full four additional quarters of monitoring), review of control measures must be conducted and take one of the two actions above.

Table 4-1 Quarterly Benchmark Sample Results

Analyte	method	Units	Sector N - Scrap Recycling Benchmark	BLDG 132		BLDG 132		BLDG 132		BLDG 132	
				580-119081-1	580-125383-1	580-125383-1	580-125383-1	580-125383-1	580-125383-1		
				Q4 - 2022	Q1 - 2023	Q2 - 2023	Q3 - 2023	Q4 - 2022	Q1 - 2023	Q2 - 2023	Q3 - 2023
				Result	Result	Result	Result	Result	Result	Result	Result
				RL/Qualifier	RL/Qualifier	RL/Qualifier	RL/Qualifier	RL/Qualifier	RL/Qualifier	RL/Qualifier	RL/Qualifier
Aluminum	200.8_CWA	mg/L	0.75	1.2	1.5						
Copper	200.8_CWA	mg/L	0.0048	0.032	0.040						
Iron	200.8_CWA	mg/L	1	1.6	2.3						
Lead	200.8_CWA	mg/L	0.21	0.0051	0.0093						
Zinc	200.8_CWA	mg/L	0.09	0.054	0.11						
Total Suspended Solids	2540D	mg/L	100	17	35						
Chemical Oxygen Demand	5220D	mg/L	120	38	15						
Notes:											
				Results with bold red text indicates a benchmark exceedance							

APPENDIX A

Photographs of Storm Event

This page intentionally left blank.



Photo A-1. Location of autosampler and sample point



Photo A-2. Close up of sample point at Building 132 perimeter fence



Photo A-3. 2023 Q1 Benchmark samples in 2-liter glass sample jars at sample point

This page intentionally left blank.

APPENDIX B

Analytical Laboratory Report

This page intentionally left blank



ANALYTICAL REPORT

PREPARED FOR

Attn: Marvin Heskett
Element Environmental, LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

Generated 4/13/2023 1:30:39 PM

JOB DESCRIPTION

MCBH 2023 Stormwater BLDG 132

JOB NUMBER

580-125383-1

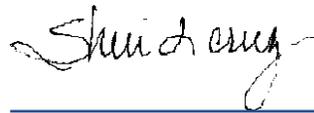
Job Notes

This report is issued solely for the use of the person or company to whom it is addressed. Any use, copying or disclosure other than by the intended recipient is unauthorized. If you have received this report in error, please notify the sender and destroy this report immediately. This report shall not be reproduced except in full, without prior express written approval by the laboratory.

The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

Authorization



Generated
4/13/2023 1:30:39 PM

Authorized for release by
Sheri Cruz, Project Manager I
Sheri.Cruz@et.eurofinsus.com
(253)922-2310



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Definitions	5
Detection Summary	6
Client Sample Results	7
QC Sample Results	8
Chronicle	10
Certification Summary	11
Sample Summary	12
Chain of Custody	13
Receipt Checklists	14

Case Narrative

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater BLDG 132

Job ID: 580-125383-1

Job ID: 580-125383-1

Laboratory: Eurofins Seattle

Narrative

Job Narrative
580-125383-1

Comments

No additional comments.

Receipt

The sample was received on 3/30/2023 9:30 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.3° C.

1

2

3

4

5

6

7

8

9

10

11

12

Definitions/Glossary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater BLDG 132

Job ID: 580-125383-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Detection Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater BLDG 132

Job ID: 580-125383-1

Client Sample ID: BLDG 132

Lab Sample ID: 580-125383-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	1.5		0.040	0.0058	mg/L	1		200.8	Total/NA
Copper	0.040		0.0020	0.00060	mg/L	1		200.8	Total/NA
Iron	2.3		0.10	0.013	mg/L	1		200.8	Total/NA
Lead	0.0093		0.00040	0.000040	mg/L	1		200.8	Total/NA
Zinc	0.11		0.0070	0.00093	mg/L	1		200.8	Total/NA
Total Suspended Solids	35		0.40	0.40	mg/L	1		SM 2540D	Total/NA
Chemical Oxygen Demand	15		10	10	mg/L	1		SM 5220D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Seattle

Client Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater BLDG 132

Job ID: 580-125383-1

Client Sample ID: BLDG 132

Lab Sample ID: 580-125383-1

Date Collected: 03/28/23 22:06

Matrix: Water

Date Received: 03/30/23 09:30

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.5		0.040	0.0058	mg/L		04/10/23 15:57	04/11/23 16:45	1
Copper	0.040		0.0020	0.00060	mg/L		04/10/23 15:57	04/11/23 16:45	1
Iron	2.3		0.10	0.013	mg/L		04/10/23 15:57	04/11/23 16:45	1
Lead	0.0093		0.00040	0.000040	mg/L		04/10/23 15:57	04/11/23 16:45	1
Zinc	0.11		0.0070	0.00093	mg/L		04/10/23 15:57	04/11/23 16:45	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	35		0.40	0.40	mg/L			04/03/23 09:33	1
Chemical Oxygen Demand (SM 5220D)	15		10	10	mg/L		04/08/23 21:21	04/09/23 00:48	1



QC Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater BLDG 132

Job ID: 580-125383-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-422848/26-A
Matrix: Water
Analysis Batch: 423038

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 422848

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.040	0.0058	mg/L		04/10/23 15:57	04/11/23 13:38	1
Copper	ND		0.0020	0.00060	mg/L		04/10/23 15:57	04/11/23 13:38	1
Iron	ND		0.10	0.013	mg/L		04/10/23 15:57	04/11/23 13:38	1
Lead	ND		0.00040	0.000040	mg/L		04/10/23 15:57	04/11/23 13:38	1
Zinc	ND		0.0070	0.00093	mg/L		04/10/23 15:57	04/11/23 13:38	1

Lab Sample ID: LCS 580-422848/27-A
Matrix: Water
Analysis Batch: 423038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 422848

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	20.0	21.5		mg/L		108	85 - 115
Copper	1.00	1.07		mg/L		107	85 - 115
Iron	20.0	20.4		mg/L		102	85 - 115
Lead	1.00	1.11		mg/L		111	85 - 115
Zinc	1.00	1.04		mg/L		104	85 - 115

Lab Sample ID: LCSD 580-422848/28-A
Matrix: Water
Analysis Batch: 423038

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 422848

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	20.0	20.4		mg/L		102	85 - 115	5	20
Copper	1.00	1.05		mg/L		105	85 - 115	1	20
Iron	20.0	19.9		mg/L		100	85 - 115	2	20
Lead	1.00	1.06		mg/L		106	85 - 115	5	20
Zinc	1.00	1.04		mg/L		104	85 - 115	1	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 580-422103/1
Matrix: Water
Analysis Batch: 422103

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		0.40	0.40	mg/L			04/03/23 09:33	1

Lab Sample ID: LCS 580-422103/2
Matrix: Water
Analysis Batch: 422103

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	500	458		mg/L		92	80 - 120

QC Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater BLDG 132

Job ID: 580-125383-1

Method: SM 5220D - COD

Lab Sample ID: MB 580-422725/3-A
Matrix: Water
Analysis Batch: 422727

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 422725

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	10	mg/L		04/08/23 21:21	04/09/23 00:48	1

Lab Sample ID: LCS 580-422725/4-A
Matrix: Water
Analysis Batch: 422727

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 422725

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	75.0	73.3		mg/L		98	80 - 120

Lab Sample ID: LCSD 580-422725/5-A
Matrix: Water
Analysis Batch: 422727

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 422725

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chemical Oxygen Demand	75.0	71.3		mg/L		95	80 - 120	3	20

Lab Chronicle

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater BLDG 132

Job ID: 580-125383-1

Client Sample ID: BLDG 132

Lab Sample ID: 580-125383-1

Date Collected: 03/28/23 22:06

Matrix: Water

Date Received: 03/30/23 09:30

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	200.8			422848	JLS	EET SEA	04/10/23 15:57
Total/NA	Analysis	200.8		1	423008	FCW	EET SEA	04/11/23 16:45
Total/NA	Analysis	SM 2540D		1	422103	AUA	EET SEA	04/03/23 09:33
Total/NA	Prep	SM 5220			422725	MLT	EET SEA	04/08/23 21:21
Total/NA	Analysis	SM 5220D		1	422727	MLT	EET SEA	04/09/23 00:48

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



Accreditation/Certification Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater BLDG 132

Job ID: 580-125383-1

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-07-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Sample Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater BLDG 132

Job ID: 580-125383-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-125383-1	BLDG 132	Water	03/28/23 22:06	03/30/23 09:30

1

2

3

4

5

6

7

8

9

10

11

12

Login Sample Receipt Checklist

Client: Element Environmental, LLC

Job Number: 580-125383-1

Login Number: 125383

List Number: 1

Creator: Prigge, Madison

List Source: Eurofins Seattle

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?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Marine Corps Base Hawaii
Kaneohe, Oahu, Hawaii

Quarterly Storm Water Report

NPDES File No. HI S000007

Final

Building 132 Recycle Center

July 2023

Prepared for MCBH by
Element Environmental, LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

N62742-17-D-1802
CTO N6274222F0208

This page intentionally left blank.

Table of Contents

Table of Contents	i
List of Tables	i
List of Appendices	i
Acronyms and Abbreviations	ii
1.0 Project Purpose and Location	1-1
2.0 Methodology and Storm Event Summary	2-1
3.0 Quarterly Visual Assessment	3-1
4.0 Quarterly Benchmark Samples	4-1
4.1.1 Data Not Exceeding Benchmarks	4-1
4.1.2 Data Exceeding Benchmarks	4-1

List of Tables

Table 2-1 Storm Event Summary	2-1
Table 3-1 Visual Assessment Form	3-1
Table 4-1 Quarterly Benchmark Sample Results	4-2

List of Figures

Figure 1-1 Site Contributory Area	1-3
---	-----

List of Appendices

Appendix A: Photographs of Storm Event	A-1
Appendix B: Analytical Laboratory Report	B-1

Acronyms and Abbreviations

°C	degrees Celsius
COD	Chemical Oxygen Demand
CTO	Contract Task Order
DL	Detection Limit
E2	Element Environmental, LLC
HAR	Hawaii Administrative Rules
LOD	Limit of Detection
LOQ	Limit of Quantitation
MCBH	Marine Corps Base Hawaii
ug/L	Microgram per liter
mg/L	Milligram per liter
mph	Mile per hour
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
QA/QC	Quality Assurance/Quality Control
RL	Reporting Limit
SSHP	Site Safety and Health Plan
SWPPP	Stormwater Pollution Prevention Plan
TSS	Total Suspended Solids

1.0 Project Purpose and Location

The purpose of this project is to fulfill the requirements of the National Pollutant Discharge Elimination System (NPDES), Permit Number HI S000007, which includes collection and analyses of storm water from a representative storm water event, as defined by the NPDES permit.

The NPDES program is designed to determine the presence of contaminants in surface flow of rain water from designated contributory areas at a site following representative rain events. Figure 1-1 shows the contributory area for the site.

The Recycle Center, Building 132 is considered to be under industrial activity sector N-Scrap Recycling, and thus is required to perform Quarterly Benchmark Sampling. Benchmark monitoring data are primarily for MCBH's use to determine the overall effectiveness of control measures and to assist in determining when additional corrective action(s) may be necessary. A benchmark exceedance is not a permit violation, however, if corrective action is required as a result of a benchmark exceedance, failure to conduct required corrective action is a permit violation.

Quarterly Benchmark Sampling of storm water discharge from the representative sampling location at the Recycle Center (Figure 1-1) will be monitored in accordance with Table 3-1 from the SWPPP. A Quarterly Visual Assessment of storm water discharge is also required for all industrial facilities at MCBH. Storm water samples for this visual assessment but must be collected in such a manner that the samples are representative of the storm water discharge from the facility. Therefore, the water sample must be collected at the designated storm water monitoring point, as shown in Figure 1-1. The Quarterly Visual Assessment checklist presented in this report shall be maintained by the current facility ECC and kept onsite as part of this Quarterly report.

All work conducted during this project was performed in accordance with the NPDES Permit Number HI S000007; and the applicable Quality Assurance/Quality Control (QA/QC) Plan and Site Safety and Health Plan (SSHP) prepared for this project. Performance Work Statement entitled "*Clean Water Program Services for Marine Corps Base Hawaii, FY22*" dated July 22, 2022. Work was performed by Element Environmental, LLC (E2) and its subcontractors under Contract Number N62742-17-D-1802, Contract Task Order (CTO) N6274222F0208.

This page intentionally left blank.

This page intentionally left blank.

2.0 Methodology and Storm Event Summary

As per the NPDES permit, stormwater samples are to be collected from a qualifying storm, defined as follows:

A minimum of one grab sample shall be collected from a discharge resulting from a measurable storm event. Samples must be collected within the first 30 minutes of a discharge associated with a measurable storm event. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample must be collected as soon as practicable after the first 30 minutes and documentation must be kept with the report explaining why it was not possible to take samples within the first 30 minutes.

Samples were collected using an ISCO automated sampler. The Storm Event Summary is shown in Table 2-1 below.

Table 2-1 Storm Event Summary

Storm Event Start Date and Time	6/16/23 1:45 AM
Flow Start Date and Time	6/16/23 1:55 AM
Sample Collection Date and Time	6/16/23 2:00 AM
Flow Duration at Monitoring Point (hour)	1.00
Approximate Event Rainfall Duration (hour)	1.0
Event Rainfall Total (from ISCO gauge) (inch)	0.17
Drainage Area (A) (Acres)	0.33
Run-off Coefficient (C)*	0.7
Discharge Volume in gallons (Estimated using rational method)	1057
Peak Discharge (from calculation) in cubic feet per second (cfs)	0.04
Rainfall Event >0.1 during previous 72 hours?	No
Weather Conditions	moderate rainfall event
Sample Appearance	Yellow color, some sediment at bottom of sample jar
Sample Collection Method	automated - ISCO sampler
Field Parameter Instrument	N/A

Note:

*Runoff co-efficient for industrial areas from the *City and County of Honolulu Department of Planning and Permitting, Rules Relating to Storm Drainage Standards*, Table 4, page 52, January 2000, Revised September 2012.

This page intentionally left blank.

3.0 Quarterly Visual Assessment

The visual assessment was conducted:

- Of a sample collected in a clean, colorless glass or plastic container, and examined in a well-lit area;
- On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and documented why it was not possible to take the sample within the first 30 minutes; and
- For storm events, on discharges that occur at least 72 hours (three days) from the previous discharge.

The results of the Visual Assessment are shown in Table 3-1 below.

Table 3-1 Visual Assessment Form

Visual Assessment	
Color	yellow
Odor	none
Clarity	slightly turbid
Oil sheen present	No
Floating Solids Present	No
Settled Solids Present	Some sediment at bottom of jar
Suspended Solids present	No
Foam present	No
Other signs of pollution	No
Nature of the discharge	runoff ponded offsite at perimeter fence
Results of observations of the storm water discharge	sediments from exposed soil
Probable sources of stormwater contamination	none / background
If applicable, why was it not possible to collect samples within the first 30 minutes	Not Applicable

This page intentionally left blank.

4.0 Quarterly Benchmark Samples

Samples were collected from the sampling location designated in the SWPPP as seen in Figure 1-1 and submitted to the Analytical Laboratory identified in the Table 3-1 of the SWPPP. Photographs demonstrating the stormwater control measures were taken and included in Appendix A. Laboratory results are compared to their respective Benchmark values as shown in Table 4-1.

4.1.1 Data Not Exceeding Benchmarks

After collection of four quarterly samples, if the average of the four monitoring values for any parameter does not exceed the benchmark value, MCBH has fulfilled monitoring requirements for that parameter for the permit term.

4.1.2 Data Exceeding Benchmarks

After collection of four quarterly samples, if the average of the four monitoring values for any parameter exceeds the benchmark, review the selection, design, installation, and implementation of control measures to determine if modifications are necessary to meet the effluent limits in this permit, and either:

- Make the necessary modifications and continue quarterly monitoring until four additional quarters of monitoring are completed for which the average does not exceed the benchmark; or
- Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology based effluent limits or are necessary to meet the water-quality-based effluent limitations, in which case monitoring must continue once per year. Furthermore, documentation of the rationale for concluding that no further pollutant reductions are achievable must be completed and all records related to this documentation shall be retained with the site SWPPP.

Control measures must be reviewed, and any required corrective action performed immediately (or document why no corrective action is required), without waiting for the full four quarters of monitoring data, when an exceedance of the four-quarter average is mathematically certain. If after modifying control measures and conducting four additional quarters of monitoring, the average still exceeds the benchmark (or if an exceedance of the benchmark by the four-quarter average is mathematically certain prior to conducting the full four additional quarters of monitoring), review of control measures must be conducted and take one of the two actions above.

Table 4-1 Quarterly Benchmark Sample Results

Analyte	method	Units	Sector N - Scrap Recycling Benchmark	BLDG 132		BLDG 132		BLDG 132		BLDG 132		BLDG 132	
				Result	RL/ Qualifier	Result	RL/ Qualifier	Result	RL/ Qualifier	Result	RL/ Qualifier	Result	RL/ Qualifier
Aluminum	200.8_CWA	mg/L	0.75	1.2	1.5	0.04	1.4	0.04	1.4			1.4	
Copper	200.8_CWA	mg/L	0.0048	0.032	0.040	0.002	0.047	0.002	0.040			0.040	
Iron	200.8_CWA	mg/L	1	1.6	2.3	0.013	2.0	0.10	2.0			2.0	
Lead	200.8_CWA	mg/L	0.21	0.0051	0.0093	0.000040	0.010	0.000040	0.0081			0.0081	
Zinc	200.8_CWA	mg/L	0.09	0.054	0.11	0.00093	0.10	0.007	0.088			0.088	
Total Suspended Solids	2540D	mg/L	100	17	35	0.40	20	1.0	24			24	
Chemical Oxygen Demand	5220D	mg/L	120	38	15	10	39	10	31			31	
Notes:													
Results with bold red text indicates a benchmark exceedance													

APPENDIX A

Photographs of Storm Event

This page intentionally left blank.



Photo A-1. Location of autosampler and sample point



Photo A-2. Sample jars in refrigerated autosampler at Building 132



Photo A-3. FY23Q3 Benchmark samples in 2-liter glass sample jars.

This page intentionally left blank.

APPENDIX B

Analytical Laboratory Report

This page intentionally left blank

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Marvin Heskett
Element Environmental, LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

Generated 7/5/2023 4:31:40 PM

JOB DESCRIPTION

MCBH 2023 Stormwater

JOB NUMBER

580-128541-1

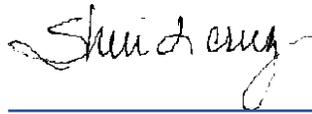
Eurofins Seattle

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

Authorization



Generated
7/5/2023 4:31:40 PM

Authorized for release by
Sheri Cruz, Project Manager I
Sheri.Cruz@et.eurofinsus.com
(253)922-2310



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Definitions	5
Detection Summary	6
Client Sample Results	7
QC Sample Results	8
Chronicle	10
Certification Summary	11
Sample Summary	12
Chain of Custody	13
Receipt Checklists	14

Case Narrative

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-128541-1

Job ID: 580-128541-1

Laboratory: Eurofins Seattle

Narrative

**Job Narrative
580-128541-1**

Comments

No additional comments.

Receipt

The sample was received on 6/20/2023 7:45 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.0° C.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

1

2

3

4

5

6

7

8

9

10

11

12

Definitions/Glossary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-128541-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Detection Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-128541-1

Client Sample ID: BLDG 132

Lab Sample ID: 580-128541-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	1.4		0.040	0.0058	mg/L	1		200.8	Total/NA
Copper	0.047		0.0020	0.00060	mg/L	1		200.8	Total/NA
Iron	2.0		0.10	0.013	mg/L	1		200.8	Total/NA
Lead	0.010		0.00040	0.000040	mg/L	1		200.8	Total/NA
Zinc	0.10		0.0070	0.00093	mg/L	1		200.8	Total/NA
Total Suspended Solids	20		1.0	1.0	mg/L	1		SM 2540D	Total/NA
Chemical Oxygen Demand	39		10	10	mg/L	1		SM 5220D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Seattle

Client Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater

Job ID: 580-128541-1

Client Sample ID: BLDG 132

Lab Sample ID: 580-128541-1

Date Collected: 06/16/23 02:00

Matrix: Water

Date Received: 06/20/23 07:45

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.4		0.040	0.0058	mg/L		06/26/23 17:14	06/27/23 18:04	1
Copper	0.047		0.0020	0.00060	mg/L		06/26/23 17:14	06/27/23 18:04	1
Iron	2.0		0.10	0.013	mg/L		06/26/23 17:14	06/27/23 18:04	1
Lead	0.010		0.00040	0.000040	mg/L		06/26/23 17:14	06/27/23 18:04	1
Zinc	0.10		0.0070	0.00093	mg/L		06/26/23 17:14	06/27/23 18:04	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	20		1.0	1.0	mg/L			06/22/23 19:07	1
Chemical Oxygen Demand (SM 5220D)	39		10	10	mg/L		07/01/23 21:12	07/01/23 23:28	1

QC Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater

Job ID: 580-128541-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-430036/26-A
Matrix: Water
Analysis Batch: 430151

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 430036

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.040	0.0058	mg/L		06/26/23 17:14	06/27/23 17:02	1
Copper	ND		0.0020	0.00060	mg/L		06/26/23 17:14	06/27/23 17:02	1
Iron	ND		0.10	0.013	mg/L		06/26/23 17:14	06/27/23 17:02	1
Lead	ND		0.00040	0.000040	mg/L		06/26/23 17:14	06/27/23 17:02	1
Zinc	ND		0.0070	0.00093	mg/L		06/26/23 17:14	06/27/23 17:02	1

Lab Sample ID: LCS 580-430036/27-A
Matrix: Water
Analysis Batch: 430151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 430036

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	20.0	20.2		mg/L		101	85 - 115
Copper	1.00	1.01		mg/L		101	85 - 115
Iron	20.0	19.9		mg/L		99	85 - 115
Lead	1.00	0.972		mg/L		97	85 - 115
Zinc	1.00	0.986		mg/L		99	85 - 115

Lab Sample ID: LCSD 580-430036/28-A
Matrix: Water
Analysis Batch: 430151

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 430036

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	20.0	20.3		mg/L		101	85 - 115	1	20
Copper	1.00	1.01		mg/L		101	85 - 115	1	20
Iron	20.0	20.3		mg/L		102	85 - 115	2	20
Lead	1.00	0.982		mg/L		98	85 - 115	1	20
Zinc	1.00	0.993		mg/L		99	85 - 115	1	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 580-429696/1
Matrix: Water
Analysis Batch: 429696

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		0.40	0.40	mg/L			06/22/23 19:01	1

Lab Sample ID: LCS 580-429696/2
Matrix: Water
Analysis Batch: 429696

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	500	514		mg/L		103	80 - 120

Lab Sample ID: 580-128541-1 DU
Matrix: Water
Analysis Batch: 429696

Client Sample ID: BLDG 132
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	20		22.5		mg/L		14	20

Eurofins Seattle

QC Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater

Job ID: 580-128541-1

Method: SM 5220D - COD

Lab Sample ID: MB 580-430542/3-A
Matrix: Water
Analysis Batch: 430544

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 430542

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	10	mg/L		07/01/23 21:12	07/01/23 23:28	1

Lab Sample ID: LCS 580-430542/4-A
Matrix: Water
Analysis Batch: 430544

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 430542

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	75.0	75.3		mg/L		100	80 - 120

Lab Sample ID: LCSD 580-430542/5-A
Matrix: Water
Analysis Batch: 430544

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 430542

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chemical Oxygen Demand	75.0	76.3		mg/L		102	80 - 120	1	20

Lab Chronicle

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-128541-1

Client Sample ID: BLDG 132

Lab Sample ID: 580-128541-1

Date Collected: 06/16/23 02:00

Matrix: Water

Date Received: 06/20/23 07:45

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	200.8			430036	JLS	EET SEA	06/26/23 17:14
Total/NA	Analysis	200.8		1	430151	FCW	EET SEA	06/27/23 18:04
Total/NA	Analysis	SM 2540D		1	429696	AUA	EET SEA	06/22/23 19:07
Total/NA	Prep	SM 5220			430542	FCG	EET SEA	07/01/23 21:12
Total/NA	Analysis	SM 5220D		1	430544	FCG	EET SEA	07/01/23 23:28

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



Accreditation/Certification Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-128541-1

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-07-23

1

2

3

4

5

6

7

8

9

10

11

12

Sample Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-128541-1

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
580-128541-1	BLDG 132	Water	06/16/23 02:00	06/20/23 07:45

1

2

3

4

5

6

7

8

9

10

11

12

Login Sample Receipt Checklist

Client: Element Environmental, LLC

Job Number: 580-128541-1

Login Number: 128541

List Number: 1

Creator: Prigge, Madison

List Source: Eurofins Seattle

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?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Marine Corps Base Hawaii
Kaneohe, Oahu, Hawaii

Quarterly Storm Water Report

NPDES File No. HI S000007

Final

Building 132 Recycle Center

October 2023

Prepared for MCBH by
Element Environmental, LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

N62742-17-D-1802
CTO N6274222F0208

This page intentionally left blank.

Table of Contents

Table of Contents	i
List of Tables	i
List of Appendices	i
Acronyms and Abbreviations	ii
1.0 Project Purpose and Location	1-1
2.0 Methodology and Storm Event Summary	2-1
3.0 Quarterly Visual Assessment	3-1
4.0 Quarterly Benchmark Samples	4-1
4.1.1 Data Not Exceeding Benchmarks	4-1
4.1.2 Data Exceeding Benchmarks	4-1

List of Tables

Table 2-1 Storm Event Summary	2-1
Table 3-1 Visual Assessment Form	3-1
Table 4-1 Quarterly Benchmark Sample Results	4-2

List of Figures

Figure 1-1 Site Contributory Area	1-3
---	-----

List of Appendices

Appendix A: Photographs of Storm Event	A-1
Appendix B: Analytical Laboratory Report	B-1

Acronyms and Abbreviations

°C	degrees Celsius
COD	Chemical Oxygen Demand
CTO	Contract Task Order
DL	Detection Limit
E2	Element Environmental, LLC
HAR	Hawaii Administrative Rules
LOD	Limit of Detection
LOQ	Limit of Quantitation
MCBH	Marine Corps Base Hawaii
ug/L	Microgram per liter
mg/L	Milligram per liter
mph	Mile per hour
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
QA/QC	Quality Assurance/Quality Control
RL	Reporting Limit
SSHP	Site Safety and Health Plan
SWPPP	Stormwater Pollution Prevention Plan
TSS	Total Suspended Solids

1.0 Project Purpose and Location

The purpose of this project is to fulfill the requirements of the National Pollutant Discharge Elimination System (NPDES), Permit Number HI S000007, which includes collection and analyses of storm water from a representative storm water event, as defined by the NPDES permit.

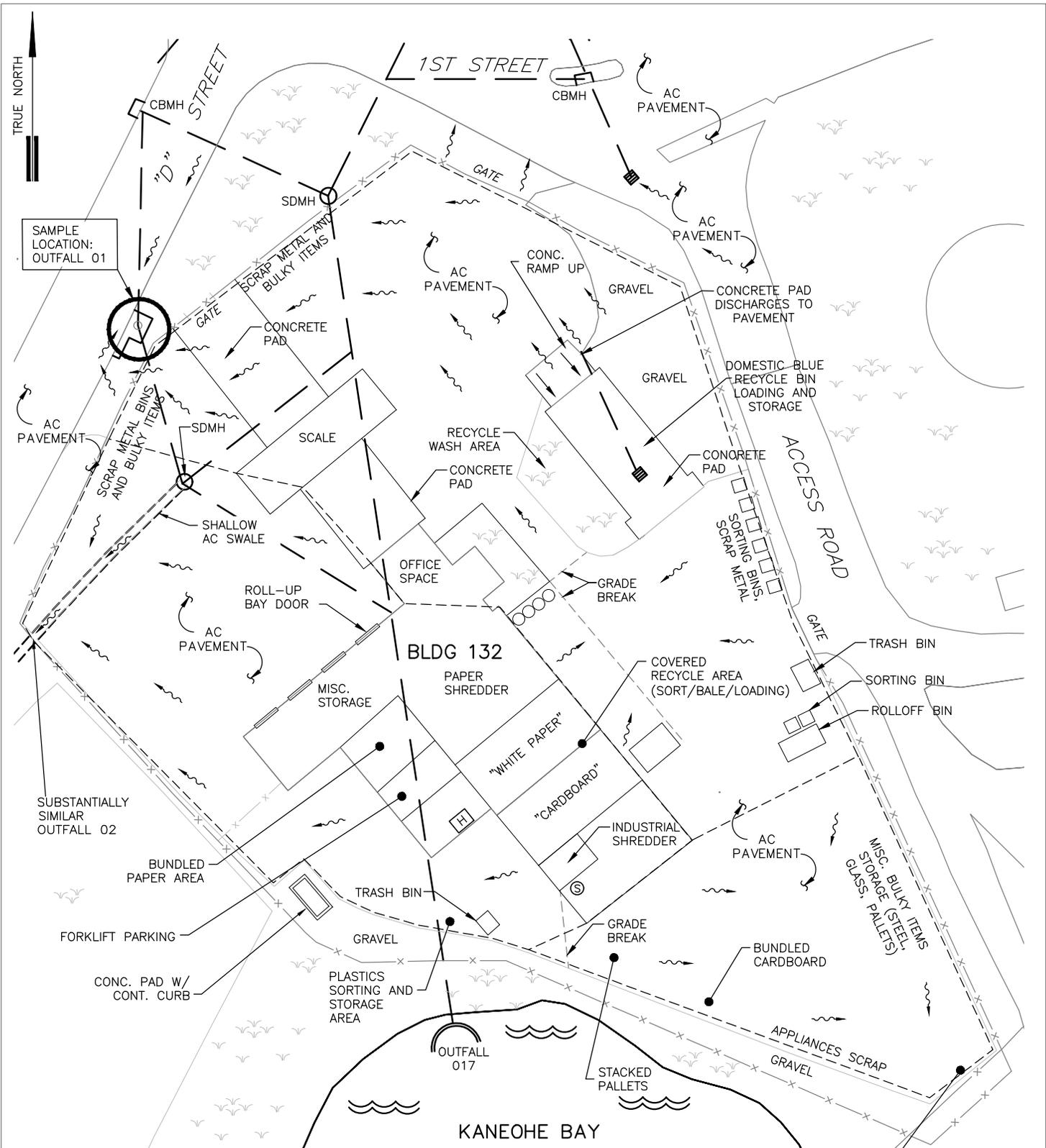
The NPDES program is designed to determine the presence of contaminants in surface flow of rain water from designated contributory areas at a site following representative rain events. Figure 1-1 shows the contributory area for the site.

The Recycle Center, Building 132 is considered to be under industrial activity sector N-Scrap Recycling, and thus is required to perform Quarterly Benchmark Sampling. Benchmark monitoring data are primarily for MCBH's use to determine the overall effectiveness of control measures and to assist in determining when additional corrective action(s) may be necessary. A benchmark exceedance is not a permit violation, however, if corrective action is required as a result of a benchmark exceedance, failure to conduct required corrective action is a permit violation.

Quarterly Benchmark Sampling of storm water discharge from the representative sampling location at the Recycle Center (Figure 1-1) will be monitored in accordance with Table 3-1 from the SWPPP. A Quarterly Visual Assessment of storm water discharge is also required for all industrial facilities at MCBH. Storm water samples for this visual assessment but must be collected in such a manner that the samples are representative of the storm water discharge from the facility. Therefore, the water sample must be collected at the designated storm water monitoring point, as shown in Figure 1-1. The Quarterly Visual Assessment checklist presented in this report shall be maintained by the current facility ECC and kept onsite as part of this Quarterly report.

All work conducted during this project was performed in accordance with the NPDES Permit Number HI S000007; and the applicable Quality Assurance/Quality Control (QA/QC) Plan and Site Safety and Health Plan (SSHP) prepared for this project. Performance Work Statement entitled "*Clean Water Program Services for Marine Corps Base Hawaii, FY22*" dated July 22, 2022. Work was performed by Element Environmental, LLC (E2) and its subcontractors under Contract Number N62742-17-D-1802, Contract Task Order (CTO) N6274222F0208.

This page intentionally left blank.



SAMPLE LOCATION:
OUTFALL 01

SUBSTANTIALLY
SIMILAR
OUTFALL 02

STORM WATER DIRECTED
OFFSITE, NO DEFINED
CHANNEL OR OUTLET.
SUBSTANTIALLY SIMILAR
OUTFALL 03

LEGEND

- [H] HAZARDOUS MATERIALS LOCKER
- [S] SPILL KIT
- STORM WATER CONVEYANCE
- ~ FLOW ARROW
- - - DRAINAGE AREA BOUNDARY

NOTES:

1. STORM WATER, FROM APPROXIMATELY 2.0 ACRES ASSOCIATED WITH BUILDING 132, DISCHARGES TO KANEOHE BAY VIA SURFACE RUNOFF AND OUTFALL 017.
2. NOT TO SCALE

	DATE: OCT 2023	PROJECT TITLE: STORM WATER MONITORING PLAN MCBH, KANEOHE BAY, OAHU, HAWAII
	FIGURE TITLE: RECYCLE CENTER (BUILDING 132)	FIGURE NO.: 1-1

10/12/2023 2:00:38 PM FIG 4-2 Bldg 132 - Recycling Center.dwg

This page intentionally left blank.

2.0 Methodology and Storm Event Summary

As per the NPDES permit, stormwater samples are to be collected from a qualifying storm, defined as follows:

A minimum of one grab sample shall be collected from a discharge resulting from a measurable storm event. Samples must be collected within the first 30 minutes of a discharge associated with a measurable storm event. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample must be collected as soon as practicable after the first 30 minutes and documentation must be kept with the report explaining why it was not possible to take samples within the first 30 minutes.

Samples were collected using an ISCO automated sampler. The Storm Event Summary is shown in Table 2-1 below.

Table 2-1 Storm Event Summary

Storm Event Summary

Storm Event Start Date and Time	9/14/23 6:15 PM
Flow Start Date and Time	9/14/23 6:20 PM
Sample Collection Date and Time	9/14/23 6:24 PM
Flow Duration at Monitoring Point (hour)	3.67
Approximate Event Rainfall Duration (hour)	3.6
Event Rainfall Total (from ISCO gauge) (inch)	0.2
Drainage Area (A) (Acres)	0.33
Run-off Coefficient (C)*	0.7
Discharge Volume in gallons (Estimated using rational method)	1244
Peak Discharge (from calculation) in cubic feet per second (cfs)	0.01
Rainfall Event >0.1 during previous 72 hours?	No
Weather Conditions	moderate rainfall event
Sample Appearance	Light beige color, slightly opaque, some sediment and suspended solids
Sample Collection Method	automated - ISCO sampler
Field Parameter Instrument	N/A

Note:

*Runoff co-efficient for industrial areas from the *City and County of Honolulu Department of Planning and Permitting, Rules Relating to Storm Drainage Standards*, Table 4, page 52, January 2000, Revised September 2012.

This page intentionally left blank.

3.0 Quarterly Visual Assessment

The visual assessment was conducted:

- Of a sample collected in a clean, colorless glass or plastic container, and examined in a well-lit area;
- On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and documented why it was not possible to take the sample within the first 30 minutes; and
- For storm events, on discharges that occur at least 72 hours (three days) from the previous discharge.

The results of the Visual Assessment are shown in Table 3-1 below.

Table 3-1 Visual Assessment Form

Visual Assessment	
Color	light beige
Odor	no
Clarity	slightly opaque
Oil sheen present	No
Floating Solids Present	No
Settled Solids Present	light sediment
Suspended Solids present	some
Foam present	No
Other signs of pollution	No
Nature of the discharge	discharge to curb inlet adjacent to Building 132
Results of observations of the storm water discharge	none / background
Probable sources of stormwater contamination	none / background
If applicable, why was it not possible to collect samples within the first 30 minutes	Not Applicable

This page intentionally left blank.

4.0 Quarterly Benchmark Samples

Samples were collected from the sampling location designated in the SWPPP as seen in Figure 1-1 and submitted to the Analytical Laboratory identified in the Table 3-1 of the SWPPP. Photographs demonstrating the stormwater control measures were taken and included in Appendix A. Laboratory results are compared to their respective Benchmark values as shown in Table 4-1.

4.1.1 Data Not Exceeding Benchmarks

After collection of four quarterly samples, if the average of the four monitoring values for any parameter does not exceed the benchmark value, MCBH has fulfilled monitoring requirements for that parameter for the permit term.

4.1.2 Data Exceeding Benchmarks

After collection of four quarterly samples, if the average of the four monitoring values for any parameter exceeds the benchmark, review the selection, design, installation, and implementation of control measures to determine if modifications are necessary to meet the effluent limits in this permit, and either:

- Make the necessary modifications and continue quarterly monitoring until four additional quarters of monitoring are completed for which the average does not exceed the benchmark; or
- Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology based effluent limits or are necessary to meet the water-quality-based effluent limitations, in which case monitoring must continue once per year. Furthermore, documentation of the rationale for concluding that no further pollutant reductions are achievable must be completed and all records related to this documentation shall be retained with the site SWPPP.

Control measures must be reviewed, and any required corrective action performed immediately (or document why no corrective action is required), without waiting for the full four quarters of monitoring data, when an exceedance of the four-quarter average is mathematically certain. If after modifying control measures and conducting four additional quarters of monitoring, the average still exceeds the benchmark (or if an exceedance of the benchmark by the four-quarter average is mathematically certain prior to conducting the full four additional quarters of monitoring), review of control measures must be conducted and take one of the two actions above.

Table 4-1 Quarterly Benchmark Sample Results

Analyte	method	Units	Sector N - Scrap Recycling Benchmark	BLDG 132 580-119081-1 FY23Q1		BLDG 132 580-125383-1 FY23Q2		BLDG 132 580-128541-1 FY23Q3		BLDG 132 FY23Q4		BLDG 132 AVERAGE	
				Result	RL/ Qualifier	Result	RL/ Qualifier	Result	RL/ Qualifier	Result	RL/ Qualifier	Result	RL/ Qualifier
Aluminum	200.8_CWA	mg/L	0.75	1.2	1.5	0.04	1.4	0.04	0.67	0.04	1.2		
Copper	200.8_CWA	mg/L	0.0048	0.032	0.040	0.002	0.047	0.002	0.020	0.0020	0.035		
Iron	200.8_CWA	mg/L	1	1.6	2.3	0.013	2.0	0.10	0.96	0.10	1.7		
Lead	200.8_CWA	mg/L	0.21	0.0051	0.0093	0.000040	0.010	0.000040	0.0022	B 0.00004	0.0067		
Zinc	200.8_CWA	mg/L	0.09	0.054	0.11	0.00093	0.10	0.007	0.025	0.0070	0.072		
Total Suspended Solids	2540D	mg/L	100	17	35	0.40	20	1.0	4.8	2.0	19		
Chemical Oxygen Demand	5220D	mg/L	120	38	15	10	39	10	39	10	33		
Notes:													

Results with bold red text indicates a benchmark exceedance

APPENDIX A

Photographs of Storm Event

This page intentionally left blank.



Photo A-1. Location of autosampler and sample point.



Photo A-2. Sample jars collected from the autosampler at Building 132.



Photo A-3. Surface of stormwater sample in a 2-liter glass sample jar.

This page intentionally left blank.

APPENDIX B

Analytical Laboratory Report

This page intentionally left blank

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Marvin Heskett
Element Environmental, LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

Generated 10/5/2023 3:16:12 PM

JOB DESCRIPTION

MCBH 2023 Stormwater
SDG NUMBER BLDG 132

JOB NUMBER

580-131923-1

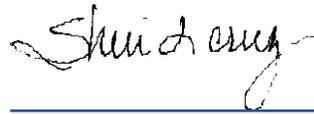
Eurofins Seattle

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

Authorization



Generated
10/5/2023 3:16:12 PM

Authorized for release by
Sheri Cruz, Project Manager I
Sheri.Cruz@et.eurofinsus.com
(253)922-2310



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Definitions	5
Detection Summary	6
Client Sample Results	7
QC Sample Results	8
Chronicle	10
Certification Summary	11
Sample Summary	12
Chain of Custody	13
Receipt Checklists	14

Case Narrative

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-131923-1
SDG: BLDG 132

Job ID: 580-131923-1

Laboratory: Eurofins Seattle

Narrative

Job Narrative 580-131923-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 9/23/2023 9:20 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

Method 2540D: The following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: BLDG 132 (580-131923-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Definitions/Glossary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-131923-1
SDG: BLDG 132

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Detection Summary

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater

Job ID: 580-131923-1
 SDG: BLDG 132

Client Sample ID: BLDG 132

Lab Sample ID: 580-131923-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	0.67		0.040	0.0058	mg/L	1		200.8	Total/NA
Copper	0.020		0.0020	0.00060	mg/L	1		200.8	Total/NA
Iron	0.96		0.10	0.013	mg/L	1		200.8	Total/NA
Lead	0.0022	B	0.00040	0.000040	mg/L	1		200.8	Total/NA
Zinc	0.025		0.0070	0.00093	mg/L	1		200.8	Total/NA
Total Suspended Solids	4.8	H H3	2.0	2.0	mg/L	1		SM 2540D	Total/NA
Chemical Oxygen Demand	39		10	10	mg/L	1		SM 5220D	Total/NA

This Detection Summary does not include radiochemical test results.



Client Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater

Job ID: 580-131923-1
 SDG: BLDG 132

Client Sample ID: BLDG 132

Lab Sample ID: 580-131923-1

Date Collected: 09/14/23 18:24

Matrix: Water

Date Received: 09/23/23 09:20

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.67		0.040	0.0058	mg/L		09/28/23 16:06	09/29/23 12:39	1
Copper	0.020		0.0020	0.00060	mg/L		09/28/23 16:06	09/29/23 12:39	1
Iron	0.96		0.10	0.013	mg/L		09/28/23 16:06	09/29/23 12:39	1
Lead	0.0022	B	0.00040	0.000040	mg/L		09/28/23 16:06	09/29/23 12:39	1
Zinc	0.025		0.0070	0.00093	mg/L		09/28/23 16:06	09/29/23 12:39	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	4.8	H H3	2.0	2.0	mg/L			09/25/23 18:01	1
Chemical Oxygen Demand (SM 5220D)	39		10	10	mg/L		09/23/23 17:45	09/23/23 21:22	1

QC Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater

Job ID: 580-131923-1
 SDG: BLDG 132

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-439134/26-A
Matrix: Water
Analysis Batch: 439419

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 439134

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.040	0.0058	mg/L		09/28/23 16:06	09/29/23 12:36	1
Copper	ND		0.0020	0.00060	mg/L		09/28/23 16:06	09/29/23 12:36	1
Iron	ND		0.10	0.013	mg/L		09/28/23 16:06	09/29/23 12:36	1
Lead	0.000175	J	0.00040	0.000040	mg/L		09/28/23 16:06	09/29/23 12:36	1
Zinc	ND		0.0070	0.00093	mg/L		09/28/23 16:06	09/29/23 12:36	1

Lab Sample ID: LCS 580-439134/27-A
Matrix: Water
Analysis Batch: 439419

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 439134

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	20.0	20.3		mg/L		101	85 - 115
Copper	1.00	1.05		mg/L		105	85 - 115
Iron	20.0	21.2		mg/L		106	85 - 115
Lead	1.00	0.979		mg/L		98	85 - 115
Zinc	1.00	1.05		mg/L		105	85 - 115

Lab Sample ID: LCSD 580-439134/28-A
Matrix: Water
Analysis Batch: 439419

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 439134

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	20.0	20.5		mg/L		103	85 - 115	1	20
Copper	1.00	1.05		mg/L		105	85 - 115	0	20
Iron	20.0	20.9		mg/L		104	85 - 115	2	20
Lead	1.00	0.983		mg/L		98	85 - 115	0	20
Zinc	1.00	1.05		mg/L		105	85 - 115	0	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 580-438703/1
Matrix: Water
Analysis Batch: 438703

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		2.0	2.0	mg/L			09/25/23 18:01	1

Lab Sample ID: LCS 580-438703/2
Matrix: Water
Analysis Batch: 438703

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	500	414		mg/L		83	80 - 120

QC Sample Results

Client: Element Environmental, LLC
 Project/Site: MCBH 2023 Stormwater

Job ID: 580-131923-1
 SDG: BLDG 132

Method: SM 5220D - COD

Lab Sample ID: MB 580-438512/3-A
Matrix: Water
Analysis Batch: 438514

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 438512

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	10	mg/L		09/23/23 17:45	09/23/23 21:22	1

Lab Sample ID: LCS 580-438512/4-A
Matrix: Water
Analysis Batch: 438514

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 438512

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	75.0	81.2		mg/L		108	80 - 120

Lab Sample ID: LCSD 580-438512/5-A
Matrix: Water
Analysis Batch: 438514

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 438512

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chemical Oxygen Demand	75.0	83.2		mg/L		111	80 - 120	2	20

Lab Chronicle

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-131923-1
SDG: BLDG 132

Client Sample ID: BLDG 132

Lab Sample ID: 580-131923-1

Date Collected: 09/14/23 18:24

Matrix: Water

Date Received: 09/23/23 09:20

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	200.8			439134	TMH	EET SEA	09/28/23 16:06
Total/NA	Analysis	200.8		1	439419	FCW	EET SEA	09/29/23 12:39
Total/NA	Analysis	SM 2540D		1	438703	CSS	EET SEA	09/25/23 18:01
Total/NA	Prep	SM 5220			438512	MLT	EET SEA	09/23/23 17:45
Total/NA	Analysis	SM 5220D		1	438514	MLT	EET SEA	09/23/23 21:22

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



Accreditation/Certification Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-131923-1
SDG: BLDG 132

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-07-24

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Sample Summary

Client: Element Environmental, LLC
Project/Site: MCBH 2023 Stormwater

Job ID: 580-131923-1
SDG: BLDG 132

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
580-131923-1	BLDG 132	Water	09/14/23 18:24	09/23/23 09:20

1

2

3

4

5

6

7

8

9

10

11

12

Login Sample Receipt Checklist

Client: Element Environmental, LLC

Job Number: 580-131923-1

SDG Number: BLDG 132

Login Number: 131923

List Number: 1

Creator: Groves, Elizabeth

List Source: Eurofins Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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.	True	
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	



FY 23 Annual Monitoring Report

FY 23 MCB-Hawaii Industrial Facilities

Marine Corps Base Hawaii Industrial Sites

Building No.	General Category	Description
3073	Maintenance	Helicopter Wash Facility
132	Recycling Facility	Recycle Center
1698	Maintenance	Marina Small Boat Repair Shop
351	Maintenance	Vehicle Maintenance Shop
6874	Maintenance	3rd Radio Battalion
1170, 1171	POL Storage	Aircraft Fuel Islands
1252, 1253	Storage	Fuel Division Supply Department
6802 (1388)	Maintenance	Waterfront Ops Lab/Boat Shop
1619	Maintenance	Ground Support Equipment Shop
1631	Maintenance	Aircraft Wash & Rinse Facility
6107	Maintenance	Aircraft Rinse Facility
6182	Storage	Fuel Delivery Branch & Refueler Truck Parking
6183	Maintenance	Engine Test Facility
6479	Storage	Aircraft Ready Fuel Storage
Sanitary Landfill	Sanitary Landfill	Sanitary Landfill
Water Reclamation Facility (WRF)	Utility	Water Reclamation Facility
3014	Maintenance	Combat Logistics Battalion (CLB-3) Support Company Transportation Services
5000, 5001, 5011	Maintenance	12th Marine Motor T
6751, 1400	Maintenance	4THFORRECON Auto Org Shop/Boat Shop, Wash Rack (Potential CNEE Site)
6892	Maintenance	Aircraft Wash Facility (across Hangar 104)
1551	Storage	1/12 Auto Org/Maintenance Facility (Potential CNEE Site)
146	Storage	ATC Company M Vehicle Maintenance Shop/Parking Vehicles (Potential CNEE Site)
4079	Maintenance	3DMAR Construction Engineer Shop (Potential CNEE Site)
4050	Maintenance	Golf Cart Maintenance/Storage Shed (Potential CNEE Site)
1295	Maintenance	Golf Course Maintenance Shed
6846	Maintenance	MALS-24 Airframes Composite Shop (Potential CNEE Site)



FY 23 Annual Monitoring Report

FY 23 MCB-Hawaii DMR Reports

10/1/2022 to 9/20/2023

(Enclosure 3)

Quarter 1

10/1/2022 to 12/31/2022

FY 23

DMR Copy of Record

Permit

Permit #:	HIS000007	Permittee:	U.S. Marine Corps	Facility:	MARINE CORPS BASE HAWAII KANEOHE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major:	No	Permittee Address:	UNKNOWN UNKNOWN, HI 00000	Facility Location:	BOX 63002, BUILDING 1360 MCBH KANEOHE BAY KANEOHE , HI 96863-3002
Permitted Feature:	002 Internal Outfall	Discharge:	002-Q MSGP L Benchmarks - Quarterly		

Report Dates & Status

Monitoring Period:	From 10/01/22 to 12/31/22	DMR Due Date:	01/28/23	Status:	NetDMR Validated
---------------------------	----------------------------------	----------------------	-----------------	----------------	-------------------------

Considerations for Form Completion

Principal Executive Officer

First Name:	Jeffry	Title:	Director, ECPD	Telephone:	808-257-5640
Last Name:	Hart				

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type		
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3	Units
00530	Solids, total suspended	SW - Storm Water	0	--	Sample														
					Permit Req.														
					Value NODI														
00980	Iron, total recoverable	SW - Storm Water	0	--	Sample														
					Permit Req.														
					Value NODI														

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

Attachments

No attachments.

Report Last Saved By

U.S. Marine Corps

User: WHITNEYA11
 Name: WHITNEY ANDERSON
 E-Mail: whitney.anderson@usmc.mil
 Date/Time: 2023-01-06 09:05 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART
 Name: Jeffry Hart
 E-Mail: jeffry.hart@usmc.mil
 Date/Time: 2023-01-10 13:51 (Time Zone: -10:00)

DMR Copy of Record

Permit
Permit #: HIS000007 | **Permittee:** U.S. Marine Corps | **Facility:** MARINE CORPS BASE HAWAII KANEOHE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major: No | **Permittee Address:** UNKNOWN UNKNOWN, HI 00000 | **Facility Location:** BOX 63002, BUILDING 1360 MCBH KANEOHE BAY KANEOHE , HI 96863-3002
Permitted Feature: 007 Internal Outfall | **Discharge:** 007-Q MSGP N Benchmarks - Quarterly

Report Dates & Status
Monitoring Period: From 10/01/22 to 12/31/22 | **DMR Due Date:** 01/28/23 | **Status:** NetDMR Validated

Considerations for Form Completion

1 Saltwater, 2 Freshwater

Principal Executive Officer

First Name: Jeffry | **Title:** Director, ECPD | **Telephone:** 808-257-5640
Last Name: Hart

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type	
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3
00530	Solids, total suspended	SW - Storm Water	0	--	Sample						=	17.0				19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	100.0 QRTR MAX				19 - mg/L	01/90 - Quarterly	GR - GRAB
					Value NODI													
00900	Hardness, total [as CaCO3]	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX						
					Value NODI							9 - Conditional Monitoring - Not Required This Period						
X 00980	Iron, total recoverable	SW - Storm Water	0	--	Sample						=	1.6				19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	1.0 QRTR MAX				19 - mg/L	01/90 - Quarterly	GR - GRAB
					Value NODI													
01094	Zinc, total recoverable	SW - Storm Water	1	--	Sample						=	0.054				19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.09 QRTR MAX				19 - mg/L	01/90 - Quarterly	GR - GRAB
					Value NODI													
01094	Zinc, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX						
					Value NODI							9 - Conditional Monitoring - Not Required This Period						
X 01104	Aluminum, total recoverable	SW - Storm Water	0	--	Sample						=	1.2				19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.75 QRTR MAX				19 - mg/L	01/90 - Quarterly	GR - GRAB
					Value NODI													
01114	Lead, total recoverable	SW - Storm Water	1	--	Sample						=	0.0051				19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.21 QRTR MAX				19 - mg/L	01/90 - Quarterly	GR - GRAB
					Value NODI													
01114	Lead, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX						
					Value NODI							9 - Conditional Monitoring - Not Required This Period						
X 01119	Copper, total recoverable	SW - Storm Water	1	--	Sample						=	0.032				19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.0048 QRTR MAX				19 - mg/L	01/90 - Quarterly	GR - GRAB
					Value NODI													
01119	Copper, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX						
					Value NODI							9 - Conditional Monitoring - Not Required This Period						
80103	Chemical oxygen demand [COD]	SW - Storm Water	0	--	Sample						=	38.0				19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	120.0 QRTR MAX				19 - mg/L	01/90 - Quarterly	GR - GRAB
					Value NODI													

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

Parameter		Monitoring Location	Field	Type	Description	Acknowledge
Code	Name					

01104	Aluminum, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
01119	Copper, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
00980	Iron, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes

Comments

Attachments

Name	Type	Size
MCBH_2022_SW_132_Q1_FINAL.pdf	pdf	1296984.0

Report Last Saved By

U.S. Marine Corps

User: WHITNEYA11
 Name: WHITNEY ANDERSON
 E-Mail: whitney.anderson@usmc.mil
 Date/Time: 2023-01-06 09:04 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART
 Name: Jeffry Hart
 E-Mail: jeffry.hart@usmc.mil
 Date/Time: 2023-01-10 13:51 (Time Zone: -10:00)

DMR Copy of Record

Permit
Permit #: HIS000007 | **Permittee:** U.S. Marine Corps | **Facility:** MARINE CORPS BASE HAWAII KANEOHE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major: No | **Permittee Address:** UNKNOWN UNKNOWN, HI 00000 | **Facility Location:** BOX 63002, BUILDING 1360 MCBH KANEOHE BAY KANEOHE , HI 96863-3002
Permitted Feature: 008 External Outfall | **Discharge:** 008-Q MSGP Q Benchmarks - Quarterly

Report Dates & Status
Monitoring Period: From 10/01/22 to 12/31/22 | **DMR Due Date:** 01/28/23 | **Status:** NetDMR Validated

Considerations for Form Completion

1 Saltwater, 2 Freshwater

Principal Executive Officer

First Name: Jeffry | **Title:** Director, ECPD | **Telephone:** 808-257-5640
Last Name: Hart

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type	
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3
00900	Hardness, total [as CaCO3]	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.													
					Value NODI													
00980	Iron, total recoverable	SW - Storm Water	0	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	1.0 QRTR MAX						
					Value NODI							C - No Discharge						
01094	Zinc, total recoverable	SW - Storm Water	1	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.09 QRTR MAX						
					Value NODI							C - No Discharge						
01094	Zinc, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.													
					Value NODI													
01104	Aluminum, total recoverable	SW - Storm Water	0	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.75 QRTR MAX						
					Value NODI							C - No Discharge						
01114	Lead, total recoverable	SW - Storm Water	1	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.21 QRTR MAX						
					Value NODI							C - No Discharge						
01114	Lead, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.													
					Value NODI													

Submission Note
 If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

Attachments

No attachments.

Report Last Saved By

U.S. Marine Corps
User: WHITNEYA11
Name: WHITNEY ANDERSON
E-Mail: whitney.anderson@usmc.mil

Date/Time: 2023-01-06 09:04 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART

Name: Jeffry Hart
E-Mail: jeffry.hart@usmc.mil
Date/Time: 2023-01-10 13:51 (Time Zone: -10:00)

DMR Copy of Record

Permit
Permit #: HIS000007 | **Permittee:** U.S. Marine Corps | **Facility:** MARINE CORPS BASE HAWAII KANEHOE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major: No | **Permittee Address:** UNKNOWN UNKNOWN, HI 00000 | **Facility Location:** BOX 63002, BUILDING 1360 MCBH KANEHOE BAY KANEHOE , HI 96863-3002
Permitted Feature: 009 Internal Outfall | **Discharge:** 009-Q MSGP Q Benchmarks - Quarterly

Report Dates & Status
Monitoring Period: From 10/01/22 to 12/31/22 | **DMR Due Date:** 01/28/23 | **Status:** NetDMR Validated

Considerations for Form Completion

1 Saltwater, 2 Freshwater

Principal Executive Officer

First Name: Jeffry | **Title:** Director, ECPD | **Telephone:** 808-257-5640
Last Name: Hart

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type	
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3
00900	Hardness, total [as CaCO3]	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.													
					Value NODI													
00980	Iron, total recoverable	SW - Storm Water	0	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	1.0 QRTR MAX						
					Value NODI							C - No Discharge						
01094	Zinc, total recoverable	SW - Storm Water	1	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.09 QRTR MAX						
					Value NODI							C - No Discharge						
01094	Zinc, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.													
					Value NODI													
01104	Aluminum, total recoverable	SW - Storm Water	0	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.75 QRTR MAX						
					Value NODI							C - No Discharge						
01114	Lead, total recoverable	SW - Storm Water	1	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.21 QRTR MAX						
					Value NODI							C - No Discharge						
01114	Lead, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.													
					Value NODI													

Submission Note
 If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

Attachments

No attachments.

Report Last Saved By

U.S. Marine Corps
 User: WHITNEYA11
 Name: WHITNEY ANDERSON
 E-Mail: whitney.anderson@usmc.mil

Date/Time: 2023-01-06 09:03 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART

Name: Jeffry Hart
E-Mail: jeffry.hart@usmc.mil
Date/Time: 2023-01-10 13:51 (Time Zone: -10:00)

Quarter 2

1/1/2023 to 3/31/2023

FY 2023

(Enclosure 3)

DMR Copy of Record

Permit

Permit #:	HIS000007	Permittee:	U.S. Marine Corps	Facility:	MARINE CORPS BASE HAWAII KANEOHE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major:	No	Permittee Address:	UNKNOWN UNKNOWN, HI 00000	Facility Location:	BOX 63002, BUILDING 1360 MCBH KANEOHE BAY KANEOHE , HI 96863-3002
Permitted Feature:	002 Internal Outfall	Discharge:	002-Q MSGP L Benchmarks - Quarterly		

Report Dates & Status

Monitoring Period:	From 01/01/23 to 03/31/23	DMR Due Date:	04/28/23	Status:	NetDMR Validated
---------------------------	---	----------------------	-----------------	----------------	-------------------------

Considerations for Form Completion

Principal Executive Officer

First Name:	Jeffry	Title:	Director, ECPD	Telephone:	808-257-5640
Last Name:	Hart				

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type		
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3	Units
00530	Solids, total suspended	SW - Storm Water	0	--	Sample														
					Permit Req.														
					Value NODI														
00980	Iron, total recoverable	SW - Storm Water	0	--	Sample														
					Permit Req.														
					Value NODI														

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

No discharge observed at Landfill during FY2023 Quarter 2 monitoring period.

Attachments

No attachments.

Report Last Saved By

U.S. Marine Corps

User: PATRICK.CRILE@USMC.MIL
 Name: Patrick Crile
 E-Mail: patrick.crile@usmc.mil
 Date/Time: 2023-04-26 08:16 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART
 Name: Jeffry Hart
 E-Mail: jeffry.hart@usmc.mil
 Date/Time: 2023-04-26 10:07 (Time Zone: -10:00)

DMR Copy of Record

Permit
Permit #: HIS000007 | **Permittee:** U.S. Marine Corps | **Facility:** MARINE CORPS BASE HAWAII KANEOHE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major: No | **Permittee Address:** UNKNOWN UNKNOWN, HI 00000 | **Facility Location:** BOX 63002, BUILDING 1360 MCBH KANEOHE BAY KANEOHE , HI 96863-3002
Permitted Feature: 007 Internal Outfall | **Discharge:** 007-Q MSGP N Benchmarks - Quarterly

Report Dates & Status
Monitoring Period: From 01/01/23 to 03/31/23 | **DMR Due Date:** 04/28/23 | **Status:** NetDMR Validated

Considerations for Form Completion

1 Saltwater, 2 Freshwater

Principal Executive Officer

First Name: Jeffry | **Title:** Director, ECPD | **Telephone:** 808-257-5640
Last Name: Hart

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type		
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3	Units
00530	Solids, total suspended	SW - Storm Water	0	--	Sample						=	35.0				19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	100.0 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
00900	Hardness, total [as CaCO3]	SW - Storm Water	2	--	Sample											19 - mg/L		01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX							
					Value NODI							9 - Conditional Monitoring - Not Required This Period							
X00980	Iron, total recoverable	SW - Storm Water	0	--	Sample						=	2.3				19 - mg/L	1	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	1.0 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
X01094	Zinc, total recoverable	SW - Storm Water	1	--	Sample						=	0.11				19 - mg/L	1	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.09 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
01094	Zinc, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L		01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX							
					Value NODI							9 - Conditional Monitoring - Not Required This Period							
X01104	Aluminum, total recoverable	SW - Storm Water	0	--	Sample						=	1.5				19 - mg/L	1	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.75 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
01114	Lead, total recoverable	SW - Storm Water	1	--	Sample						=	0.0093				19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.21 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
01114	Lead, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L		01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX							
					Value NODI							9 - Conditional Monitoring - Not Required This Period							
X01119	Copper, total recoverable	SW - Storm Water	1	--	Sample						=	0.04				19 - mg/L	1	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.0048 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
01119	Copper, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L		01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX							
					Value NODI							9 - Conditional Monitoring - Not Required This Period							
80103	Chemical oxygen demand [COD]	SW - Storm Water	0	--	Sample						=	15.0				19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	120.0 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

Parameter		Monitoring Location	Field	Type	Description	Acknowledge
Code	Name					

01119	Copper, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
01104	Aluminum, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
01094	Zinc, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
00980	Iron, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes

Comments

Attachments

No attachments.

Report Last Saved By

U.S. Marine Corps

User: PATRICK.CRILE@USMC.MIL
 Name: Patrick Crile
 E-Mail: patrick.crile@usmc.mil
 Date/Time: 2023-04-26 08:40 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART
 Name: Jeffry Hart
 E-Mail: jeffry.hart@usmc.mil
 Date/Time: 2023-04-26 10:07 (Time Zone: -10:00)

DMR Copy of Record

Permit			
Permit #:	HIS000007	Permittee:	U.S. Marine Corps
Major:	No	Permittee Address:	UNKNOWN UNKNOWN, HI 00000
Permitted Feature:	008 External Outfall	Discharge:	008-Q MSGP Q Benchmarks - Quarterly
Facility:	MARINE CORPS BASE HAWAII KANEHOE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)		
Facility Location:	BOX 63002, BUILDING 1360 MCBH KANEHOE BAY KANEHOE , HI 96863-3002		

Report Dates & Status			
Monitoring Period:	From 01/01/23 to 03/31/23	DMR Due Date:	04/28/23
Status:	NetDMR Validated		

Considerations for Form Completion
1 Saltwater, 2 Freshwater

Principal Executive Officer			
First Name:	Jeffry	Title:	Director, MCBH ECPD
Last Name:	Hart	Telephone:	808-257-5640

No Data Indicator (NODI)
Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading				Quality or Concentration				# of Ex.	Frequency of Analysis	Sample Type				
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2				Value 2	Qualifier 3	Value 3	Units
00900	Hardness, total [as CaCO3]	SW - Storm Water	2	--	Sample														
					Permit Req.									Req Mon QRTR MAX	19 - mg/L		01/90 - Quarterly	GR - GRAB	
					Value NODI										9 - Conditional Monitoring - Not Required This Period				
X 00980	Iron, total recoverable	SW - Storm Water	0	--	Sample														
					Permit Req.									= 1.1	19 - mg/L	1	01/90 - Quarterly	GR - GRAB	
					Value NODI										<= 1.0 QRTR MAX	19 - mg/L	1	01/90 - Quarterly	GR - GRAB
X 01094	Zinc, total recoverable	SW - Storm Water	1	--	Sample														
					Permit Req.									= 0.12	19 - mg/L	1	01/90 - Quarterly	GR - GRAB	
					Value NODI										<= 0.09 QRTR MAX	19 - mg/L	1	01/90 - Quarterly	GR - GRAB
01094	Zinc, total recoverable	SW - Storm Water	2	--	Sample														
					Permit Req.										Req Mon QRTR MAX	19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI										9 - Conditional Monitoring - Not Required This Period				
X 01104	Aluminum, total recoverable	SW - Storm Water	0	--	Sample														
					Permit Req.										= 1.1	19 - mg/L	1	01/90 - Quarterly	GR - GRAB
					Value NODI										<= 0.75 QRTR MAX	19 - mg/L	1	01/90 - Quarterly	GR - GRAB
01114	Lead, total recoverable	SW - Storm Water	1	--	Sample														
					Permit Req.										= 0.055	19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Value NODI										<= 0.21 QRTR MAX	19 - mg/L	0	01/90 - Quarterly	GR - GRAB
01114	Lead, total recoverable	SW - Storm Water	2	--	Sample														
					Permit Req.										Req Mon QRTR MAX	19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI										9 - Conditional Monitoring - Not Required This Period				

Submission Note
If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors						
Code	Parameter Name	Monitoring Location	Field	Type	Description	Acknowledge
01104	Aluminum, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
01094	Zinc, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
00980	Iron, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes

Comments
Sample report attached.

Attachments		
Name	Type	Size

Report Last Saved By

U.S. Marine Corps

User: PATRICK.CRILE@USMC.MIL
Name: Patrick Crile
E-Mail: patrick.crile@usmc.mil
Date/Time: 2023-04-26 08:46 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART
Name: Jeffry Hart
E-Mail: jeffry.hart@usmc.mil
Date/Time: 2023-04-26 10:07 (Time Zone: -10:00)

DMR Copy of Record

Permit

Permit #: HIS000007	Permittee: U.S. Marine Corps	Facility: MARINE CORPS BASE HAWAII KANEOHE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major: No	Permittee Address: UNKNOWN UNKNOWN, HI 00000	Facility Location: BOX 63002, BUILDING 1360 MCBH KANEOHE BAY KANEOHE , HI 96863-3002
Permitted Feature: 009 Internal Outfall	Discharge: 009-Q MSGP Q Benchmarks - Quarterly	

Report Dates & Status

Monitoring Period: From 01/01/23 to 03/31/23 | **DMR Due Date:** 04/28/23 | **Status:** NetDMR Validated

Considerations for Form Completion

1 Saltwater, 2 Freshwater

Principal Executive Officer

First Name: Jeffry | **Title:** Director, ECPD | **Telephone:** 808-257-5640
Last Name: Hart

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type		
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3	Units
00900	Hardness, total [as CaCO3]	SW - Storm Water	2	--	Sample												19 - mg/L	01/90 - Quarterly	3R - GRAB
					Permit Req.											Req Mon QRTR MAX			
					Value NODI											C - No Discharge			
00980	Iron, total recoverable	SW - Storm Water	0	--	Sample											19 - mg/L	01/90 - Quarterly	3R - GRAB	
					Permit Req.														<= 1.0 QRTR MAX
					Value NODI														C - No Discharge
01094	Zinc, total recoverable	SW - Storm Water	1	--	Sample											19 - mg/L	01/90 - Quarterly	3R - GRAB	
					Permit Req.														<= 0.09 QRTR MAX
					Value NODI														C - No Discharge
01094	Zinc, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	3R - GRAB	
					Permit Req.														Req Mon QRTR MAX
					Value NODI														C - No Discharge
01104	Aluminum, total recoverable	SW - Storm Water	0	--	Sample											19 - mg/L	01/90 - Quarterly	3R - GRAB	
					Permit Req.														<= 0.75 QRTR MAX
					Value NODI														C - No Discharge
01114	Lead, total recoverable	SW - Storm Water	1	--	Sample											19 - mg/L	01/90 - Quarterly	3R - GRAB	
					Permit Req.														<= 0.21 QRTR MAX
					Value NODI														C - No Discharge
01114	Lead, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	3R - GRAB	
					Permit Req.														Req Mon QRTR MAX
					Value NODI														C - No Discharge

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

No discharge observed at Small Boat Repair Shop (Building 1698) during FY2023 Quarter 2 monitoring period.

Attachments

No attachments.

Report Last Saved By

U.S. Marine Corps

User: PATRICK.CRILE@USMC.MIL
Name: Patrick Crile
E-Mail: patrick.crile@usmc.mil
Date/Time: 2023-04-25 10:15 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART

Name: Jeffry Hart
E-Mail: jeffry.hart@usmc.mil
Date/Time: 2023-04-26 10:07 (Time Zone: -10:00)

Quarter 3

4/1/2023 to 6/30/2023

FY 2023

(Enclosure 3)

DMR Copy of Record

Permit

Permit #:	HIS000007	Permittee:	U.S. Marine Corps	Facility:	MARINE CORPS BASE HAWAII KANEOHE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major:	No	Permittee Address:	UNKNOWN UNKNOWN, HI 00000	Facility Location:	BOX 63002, BUILDING 1360 MCBH KANEOHE BAY KANEOHE , HI 96863-3002
Permitted Feature:	002 Internal Outfall	Discharge:	002-Q MSGP L Benchmarks - Quarterly		

Report Dates & Status

Monitoring Period:	From 04/01/23 to 06/30/23	DMR Due Date:	07/28/23	Status:	NetDMR Validated
--------------------	------------------------------	---------------	----------	---------	------------------

Considerations for Form Completion

Principal Executive Officer

First Name:	Jeffry	Title:	Director, MCBH ECPD	Telephone:	808-257-5640
Last Name:	Hart				

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type	
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3
00530	Solids, total suspended	SW - Storm Water	0	--	Sample													
					Permit Req.													
					Value NODI													
00980	Iron, total recoverable	SW - Storm Water	0	--	Sample													
					Permit Req.													
					Value NODI													

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

Attachments

No attachments.

Report Last Saved By

U.S. Marine Corps

User: PATRICK.CRILE@USMC.MIL
 Name: Patrick Crile
 E-Mail: patrick.crile@usmc.mil
 Date/Time: 2023-07-25 12:17 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART
 Name: Jeffry Hart
 E-Mail: jeffry.hart@usmc.mil
 Date/Time: 2023-07-27 09:12 (Time Zone: -10:00)

DMR Copy of Record

Permit
Permit #: HIS000007 | **Permittee:** U.S. Marine Corps | **Facility:** MARINE CORPS BASE HAWAII KANEOHE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major: No | **Permittee Address:** UNKNOWN UNKNOWN, HI 00000 | **Facility Location:** BOX 63002, BUILDING 1360 MCBH KANEOHE BAY KANEOHE , HI 96863-3002
Permitted Feature: 007 Internal Outfall | **Discharge:** 007-Q MSGP N Benchmarks - Quarterly

Report Dates & Status
Monitoring Period: From 04/01/23 to 06/30/23 | **DMR Due Date:** 07/28/23 | **Status:** NetDMR Validated

Considerations for Form Completion

1 Saltwater, 2 Freshwater

Principal Executive Officer

First Name: Jeffry | **Title:** Director, MCBH ECPD | **Telephone:** 808-257-5640
Last Name: Hart

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type		
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3	Units
00530	Solids, total suspended	SW - Storm Water	0	--	Sample						=	20.0				19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	100.0 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
00900	Hardness, total [as CaCO3]	SW - Storm Water	2	--	Sample											19 - mg/L		01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX							
					Value NODI							9 - Conditional Monitoring - Not Required This Period							
X00980	Iron, total recoverable	SW - Storm Water	0	--	Sample						=	2.0				19 - mg/L	1	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	1.0 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
X01094	Zinc, total recoverable	SW - Storm Water	1	--	Sample						=	0.1				19 - mg/L	1	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.09 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
01094	Zinc, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L		01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX							
					Value NODI							9 - Conditional Monitoring - Not Required This Period							
X01104	Aluminum, total recoverable	SW - Storm Water	0	--	Sample						=	1.4				19 - mg/L	1	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.75 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
01114	Lead, total recoverable	SW - Storm Water	1	--	Sample						=	0.01				19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.21 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
01114	Lead, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L		01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX							
					Value NODI							9 - Conditional Monitoring - Not Required This Period							
X01119	Copper, total recoverable	SW - Storm Water	1	--	Sample						=	0.047				19 - mg/L	1	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.0048 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
01119	Copper, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L		01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX							
					Value NODI							9 - Conditional Monitoring - Not Required This Period							
80103	Chemical oxygen demand [COD]	SW - Storm Water	0	--	Sample						=	31.0				19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	120.0 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

Parameter		Monitoring Location	Field	Type	Description	Acknowledge
Code	Name					

01119	Copper, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
01104	Aluminum, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
01094	Zinc, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
00980	Iron, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes

Comments

Sampling Report Attached

Attachments

Name	Type	Size
007-RecycleCenter(Building132)FY23-Q3MonitoringReport.pdf	pdf	1855547.0

Report Last Saved By

U.S. Marine Corps

User: PATRICK.CRILE@USMC.MIL
 Name: Patrick Crile
 E-Mail: patrick.crile@usmc.mil
 Date/Time: 2023-07-25 12:17 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART
 Name: Jeffry Hart
 E-Mail: jeffry.hart@usmc.mil
 Date/Time: 2023-07-27 09:12 (Time Zone: -10:00)

DMR Copy of Record

Permit
Permit #: HIS000007 | **Permittee:** U.S. Marine Corps | **Facility:** MARINE CORPS BASE HAWAII KANEOHE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major: No | **Permittee Address:** UNKNOWN UNKNOWN, HI 00000 | **Facility Location:** BOX 63002, BUILDING 1360 MCBH KANEOHE BAY KANEOHE , HI 96863-3002
Permitted Feature: 008 External Outfall | **Discharge:** 008-Q MSGP Q Benchmarks - Quarterly

Report Dates & Status
Monitoring Period: From 04/01/23 to 06/30/23 | **DMR Due Date:** 07/28/23 | **Status:** NetDMR Validated

Considerations for Form Completion

1 Saltwater, 2 Freshwater

Principal Executive Officer

First Name: Jeffry | **Title:** Director, MCBH ECPD | **Telephone:** 808-257-5640
Last Name: Hart

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type	
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3
00900	Hardness, total [as CaCO3]	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.													
					Value NODI													
00980	Iron, total recoverable	SW - Storm Water	0	--	Sample						=	0.4			19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	1.0 QRTR MAX			19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI													
01094	Zinc, total recoverable	SW - Storm Water	1	--	Sample						=	0.041			19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.09 QRTR MAX			19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI													
01094	Zinc, total recoverable	SW - Storm Water	2	--	Sample										19 - mg/L	01/90 - Quarterly	GR - GRAB	
					Permit Req.													
					Value NODI													
01104	Aluminum, total recoverable	SW - Storm Water	0	--	Sample						=	0.31			19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.75 QRTR MAX			19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI													
01114	Lead, total recoverable	SW - Storm Water	1	--	Sample						=	0.006			19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.21 QRTR MAX			19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI													
01114	Lead, total recoverable	SW - Storm Water	2	--	Sample										19 - mg/L	01/90 - Quarterly	GR - GRAB	
					Permit Req.													
					Value NODI													

Submission Note
 If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

Sample Report Attached

Attachments

Name	Type	Size
008-WFOBoatLab(Building6802)FY23-Q3MonitoringReport.pdf	pdf	1991391.0

Report Last Saved By

U.S. Marine Corps

User: PATRICK.CRILE@USMC.MIL

Name: Patrick Crile
E-Mail: patrick.crile@usmc.mil
Date/Time: 2023-07-25 12:06 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART
Name: Jeffry Hart
E-Mail: jeffry.hart@usmc.mil
Date/Time: 2023-07-27 09:12 (Time Zone: -10:00)

DMR Copy of Record

Permit
Permit #: HIS000007 | **Permittee:** U.S. Marine Corps | **Facility:** MARINE CORPS BASE HAWAII KANEOHE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major: No | **Permittee Address:** UNKNOWN UNKNOWN, HI 00000 | **Facility Location:** BOX 63002, BUILDING 1360 MCBH KANEOHE BAY KANEOHE , HI 96863-3002
Permitted Feature: 009 Internal Outfall | **Discharge:** 009-Q MSGP Q Benchmarks - Quarterly

Report Dates & Status
Monitoring Period: From 04/01/23 to 06/30/23 | **DMR Due Date:** 07/28/23 | **Status:** NetDMR Validated

Considerations for Form Completion

1 Saltwater, 2 Freshwater

Principal Executive Officer

First Name: Jeffry | **Title:** Director, ECPD | **Telephone:** 808-257-5640
Last Name: Hart

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type	
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3
00900	Hardness, total [as CaCO3]	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.													
					Value NODI													
00980	Iron, total recoverable	SW - Storm Water	0	--	Sample										19 - mg/L	01/90 - Quarterly	GR - GRAB	
					Permit Req.						<=	1.0 QRTR MAX						
					Value NODI							C - No Discharge						
01094	Zinc, total recoverable	SW - Storm Water	1	--	Sample										19 - mg/L	01/90 - Quarterly	GR - GRAB	
					Permit Req.						<=	0.09 QRTR MAX						
					Value NODI							C - No Discharge						
01094	Zinc, total recoverable	SW - Storm Water	2	--	Sample										19 - mg/L	01/90 - Quarterly	GR - GRAB	
					Permit Req.													
					Value NODI													
01104	Aluminum, total recoverable	SW - Storm Water	0	--	Sample										19 - mg/L	01/90 - Quarterly	GR - GRAB	
					Permit Req.						<=	0.75 QRTR MAX						
					Value NODI							C - No Discharge						
01114	Lead, total recoverable	SW - Storm Water	1	--	Sample										19 - mg/L	01/90 - Quarterly	GR - GRAB	
					Permit Req.						<=	0.21 QRTR MAX						
					Value NODI							C - No Discharge						
01114	Lead, total recoverable	SW - Storm Water	2	--	Sample										19 - mg/L	01/90 - Quarterly	GR - GRAB	
					Permit Req.													
					Value NODI													

Submission Note
 If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

No discharge observed at Small Boat Repair Shop (Building 1698) during FY2023 Quarter 2 monitoring period.

Attachments

No attachments.

Report Last Saved By

U.S. Marine Corps
 User: PATRICK.CRILE@USMC.MIL
 Name: Patrick Crile
 E-Mail: patrick.crile@usmc.mil

Date/Time: 2023-07-25 12:18 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART

Name: Jeffry Hart
E-Mail: jeffry.hart@usmc.mil
Date/Time: 2023-07-27 09:12 (Time Zone: -10:00)

Quarter 4

7/1/2023 to 9/30/2023

FY 2023

(Enclosure 3)

DMR Copy of Record

Permit

Permit #:	HIS000007	Permittee:	U.S. Marine Corps	Facility:	MARINE CORPS BASE HAWAII KANEOHE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major:	No	Permittee Address:	UNKNOWN UNKNOWN, HI 00000	Facility Location:	BOX 63002, BUILDING 1360 MCBH KANEOHE BAY KANEOHE , HI 96863-3002
Permitted Feature:	002 Internal Outfall	Discharge:	002-Q MSGP L Benchmarks - Quarterly		

Report Dates & Status

Monitoring Period:	From 07/01/23 to 09/30/23	DMR Due Date:	10/28/23	Status:	NetDMR Validated
---------------------------	----------------------------------	----------------------	-----------------	----------------	-------------------------

Considerations for Form Completion

Principal Executive Officer

First Name:	Jeffry	Title:	Director, MCBH Environmental	Telephone:	808-496-5640
Last Name:	Hart				

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type		
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3	Units
00530	Solids, total suspended	SW - Storm Water	0	--	Sample														
					Permit Req.														
					Value NODI														
00980	Iron, total recoverable	SW - Storm Water	0	--	Sample														
					Permit Req.														
					Value NODI														

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

FY23 Q4,002 Landfill, no discharge.

Attachments

No attachments.

Report Last Saved By

U.S. Marine Corps

User: KATHERINE.SMITH.CIV
 Name: Katherine Smith
 E-Mail: katherine.smith.civ@usmc.mil
 Date/Time: 2023-10-25 15:06 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART
 Name: Jeffry Hart
 E-Mail: jeffry.hart@usmc.mil
 Date/Time: 2023-10-26 15:35 (Time Zone: -10:00)

DMR Copy of Record

Permit
Permit #: HIS000007 | **Permittee:** U.S. Marine Corps | **Facility:** MARINE CORPS BASE HAWAII KANEOHE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major: No | **Permittee Address:** UNKNOWN UNKNOWN, HI 00000 | **Facility Location:** BOX 63002, BUILDING 1360 MCBH KANEOHE BAY KANEOHE , HI 96863-3002
Permitted Feature: 007 Internal Outfall | **Discharge:** 007-Q MSGP N Benchmarks - Quarterly

Report Dates & Status
Monitoring Period: From 07/01/23 to 09/30/23 | **DMR Due Date:** 10/28/23 | **Status:** NetDMR Validated

Considerations for Form Completion

1 Saltwater, 2 Freshwater

Principal Executive Officer

First Name: Jeffry | **Title:** Director, MCBH Environmental | **Telephone:** 808-496-5640
Last Name: Hart

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type		
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3	Units
00530	Solids, total suspended	SW - Storm Water	0	--	Sample						=	4.8				19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	100.0 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
00900	Hardness, total [as CaCO3]	SW - Storm Water	2	--	Sample											19 - mg/L		01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX							
					Value NODI							9 - Conditional Monitoring - Not Required This Period							
00980	Iron, total recoverable	SW - Storm Water	0	--	Sample						=	0.96				19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	1.0 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
01094	Zinc, total recoverable	SW - Storm Water	1	--	Sample						=	0.03				19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.09 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
01094	Zinc, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L		01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX							
					Value NODI							9 - Conditional Monitoring - Not Required This Period							
01104	Aluminum, total recoverable	SW - Storm Water	0	--	Sample						=	0.67				19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.75 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
01114	Lead, total recoverable	SW - Storm Water	1	--	Sample						=	0.0022				19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.21 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
01114	Lead, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L		01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX							
					Value NODI							9 - Conditional Monitoring - Not Required This Period							
X 01119	Copper, total recoverable	SW - Storm Water	1	--	Sample						=	0.02				19 - mg/L	1	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.0048 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														
01119	Copper, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L		01/90 - Quarterly	GR - GRAB
					Permit Req.							Req Mon QRTR MAX							
					Value NODI							9 - Conditional Monitoring - Not Required This Period							
80103	Chemical oxygen demand [COD]	SW - Storm Water	0	--	Sample						=	39.0				19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	120.0 QRTR MAX				19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI														

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

Parameter		Monitoring Location	Field	Type	Description	Acknowledge
Code	Name					

01119	Copper, total recoverable	SW - Storm Water	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
-------	---------------------------	------------------	---	------	--	-----

Comments

FY23 Q4 007 Recycle Center one exceedance

Attachments

Name	Type	Size
2023_Q4_007_Bldg_132.pdf	pdf	1645062.0

Report Last Saved By

U.S. Marine Corps

User: KATHERINE.SMITH.CIV
 Name: Katherine Smith
 E-Mail: katherine.smith.civ@usmc.mil
 Date/Time: 2023-10-25 15:06 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART
 Name: Jeffry Hart
 E-Mail: jeffry.hart@usmc.mil
 Date/Time: 2023-10-26 15:37 (Time Zone: -10:00)

DMR Copy of Record

Permit
Permit #: HIS000007 | **Permittee:** U.S. Marine Corps | **Facility:** MARINE CORPS BASE HAWAII KANEOHE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major: No | **Permittee Address:** UNKNOWN UNKNOWN, HI 00000 | **Facility Location:** BOX 63002, BUILDING 1360 MCBH KANEOHE BAY KANEOHE , HI 96863-3002
Permitted Feature: 008 External Outfall | **Discharge:** 008-Q MSGP Q Benchmarks - Quarterly

Report Dates & Status
Monitoring Period: From 07/01/23 to 09/30/23 | **DMR Due Date:** 10/28/23 | **Status:** NetDMR Validated

Considerations for Form Completion

1 Saltwater, 2 Freshwater

Principal Executive Officer

First Name: Jeffry | **Title:** Director, MCBH Environmental | **Telephone:** 808-496-5640
Last Name: Hart

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type	
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3
00900	Hardness, total [as CaCO3]	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	GR - GRAB
					Permit Req.													
					Value NODI													
00980	Iron, total recoverable	SW - Storm Water	0	--	Sample						=	0.063			19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	1.0 QRTR MAX			19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI													
01094	Zinc, total recoverable	SW - Storm Water	1	--	Sample						=	0.027			19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.09 QRTR MAX			19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI													
01094	Zinc, total recoverable	SW - Storm Water	2	--	Sample										19 - mg/L	01/90 - Quarterly	GR - GRAB	
					Permit Req.													
					Value NODI													
01104	Aluminum, total recoverable	SW - Storm Water	0	--	Sample						=	0.072			19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.75 QRTR MAX			19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI													
01114	Lead, total recoverable	SW - Storm Water	1	--	Sample						=	0.0026			19 - mg/L	0	01/90 - Quarterly	GR - GRAB
					Permit Req.						<=	0.21 QRTR MAX			19 - mg/L		01/90 - Quarterly	GR - GRAB
					Value NODI													
01114	Lead, total recoverable	SW - Storm Water	2	--	Sample										19 - mg/L	01/90 - Quarterly	GR - GRAB	
					Permit Req.													
					Value NODI													

Submission Note
 If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

FY23 Q4, 008, Boat lab, Bldg 6802, No exceedances

Attachments

Name	Type	Size
2023_Q4_008_Bldg_6802.pdf	pdf	1903035.0

Report Last Saved By

U.S. Marine Corps

User: JEFFRY.HART

Name: Jeffry Hart
E-Mail: jeffry.hart@usmc.mil
Date/Time: 2023-10-26 15:38 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART
Name: Jeffry Hart
E-Mail: jeffry.hart@usmc.mil
Date/Time: 2023-10-26 15:39 (Time Zone: -10:00)

DMR Copy of Record

Permit

Permit #: HIS000007	Permittee: U.S. Marine Corps	Facility: MARINE CORPS BASE HAWAII KANEOHE BAY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
Major: No	Permittee Address: UNKNOWN UNKNOWN, HI 00000	Facility Location: BOX 63002, BUILDING 1360 MCBH KANEOHE BAY KANEOHE , HI 96863-3002
Permitted Feature: 009 Internal Outfall	Discharge: 009-Q MSGP Q Benchmarks - Quarterly	

Report Dates & Status

Monitoring Period: From 07/01/23 to 09/30/23 | **DMR Due Date:** 10/28/23 | **Status:** NetDMR Validated

Considerations for Form Completion

1 Saltwater, 2 Freshwater

Principal Executive Officer

First Name: Jeffry | **Title:** Director, MCBH Environmental | **Telephone:** 808-496-5640
Last Name: Hart

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type		
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3	Units
00900	Hardness, total [as CaCO3]	SW - Storm Water	2	--	Sample												19 - mg/L	01/90 - Quarterly	3R - GRAB
					Permit Req.											Req Mon QRTR MAX			
					Value NODI											C - No Discharge			
00980	Iron, total recoverable	SW - Storm Water	0	--	Sample											19 - mg/L	01/90 - Quarterly	3R - GRAB	
					Permit Req.														<= 1.0 QRTR MAX
					Value NODI														C - No Discharge
01094	Zinc, total recoverable	SW - Storm Water	1	--	Sample											19 - mg/L	01/90 - Quarterly	3R - GRAB	
					Permit Req.														<= 0.09 QRTR MAX
					Value NODI														C - No Discharge
01094	Zinc, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	3R - GRAB	
					Permit Req.														Req Mon QRTR MAX
					Value NODI														C - No Discharge
01104	Aluminum, total recoverable	SW - Storm Water	0	--	Sample											19 - mg/L	01/90 - Quarterly	3R - GRAB	
					Permit Req.														<= 0.75 QRTR MAX
					Value NODI														C - No Discharge
01114	Lead, total recoverable	SW - Storm Water	1	--	Sample											19 - mg/L	01/90 - Quarterly	3R - GRAB	
					Permit Req.														<= 0.21 QRTR MAX
					Value NODI														C - No Discharge
01114	Lead, total recoverable	SW - Storm Water	2	--	Sample											19 - mg/L	01/90 - Quarterly	3R - GRAB	
					Permit Req.														Req Mon QRTR MAX
					Value NODI														C - No Discharge

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

FY23 Q4, 009, Bldg 1698, Small boat repair shop, no sample taken, no discharge

Attachments

No attachments.

Report Last Saved By

U.S. Marine Corps

User: KATHERINE.SMITH.CIV
Name: Katherine Smith
E-Mail: katherine.smith.civ@usmc.mil
Date/Time: 2023-10-25 15:07 (Time Zone: -10:00)

Report Last Signed By

User: JEFFRY.HART

Name: Jeffry Hart
E-Mail: jeffry.hart@usmc.mil
Date/Time: 2023-10-26 15:40 (Time Zone: -10:00)