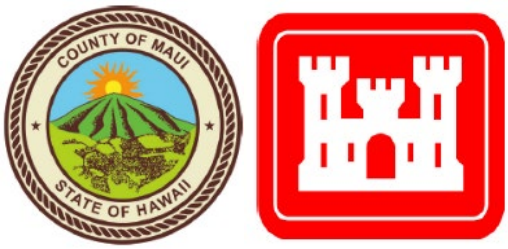
Environmental Monitoring Quarterly Report 3
West Maui Temporary Debris Storage Site
October 2024

Pursuant to Ordinance 5596, Bill 120, CD1, FD2 (2023)

Monitoring Period: 7/19/2024 – 10/17/2024

Prepared by:



The County of Maui Department of Environmental Management

The U.S. Army Corps of Engineers

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Abbreviations

Abbreviation	Definition
AMSP	air monitoring and surveillance plan
ATP	archaeological treatment plan
DLNR	Hawai'i Department of Land and Natural Resources
DOH	Hawai'i Department of Health
ECC	Environmental Chemical Corporation
ERP	emergency response plan
FEMA	Federal Emergency Management Agency
MCDEM	Maui County Department of Environmental Management
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
OSHA	Occupational Safety and Health Administration
SHPO	state historic preservation officer
SWPPP	storm water pollution prevention plan
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency

1. Introduction and Overview

On October 27, 2023, the Hawai'i Department of Land and Natural Resources (DLNR) approved an immediate management right-of-entry permit the County of Maui. This permit applied to land parcels in West Maui that were to be occupied by a temporary debris storage (TDS) site; subsequently, this site was subject to a license agreement between the County of Maui and Environmental Chemical Corporation (ECC), a contractor for the United States Army Corps of Engineers (USACE), on November 27, 2023. The agreement, with an initial 12-month term (beginning on November 24, 2023) was for the installation of the TDS site subject to terms and conditions for the design, construction, operation, and maintenance of the site.

Regarding the TDS site, on January 21, 2024, the County of Maui approved Bill 120 of Ordinance 5596. The bill authorized the mayor of the county to enter into an agreement with DLNR. Among other recordkeeping, operational, and planning requirements, the ordinance required environmental monitoring of the TDS site. USACE and ECC, which constructed and operate the TDS site, are therefore collaborating with the Maui County Department of Environmental Management (MCDEM) Solid Waste Division, the Hawai'i Department of Health (DOH), and the United States Environmental Protection Agency (USEPA) to comply with the ordinance. A weekly coordination meeting is facilitated by Maui County Solid Waste Division personnel to ensure ongoing dialogue, communication and coordination on all matters relating to the TDS site. In addition, USACE is working with their contractor, ECC, to ensure that best practices are being employed at the TDS site to ensure that there are no impacts to human health and the environment from TDS site operations.

Section 2.3.a of Bill 120 requires quarterly environmental monitoring reports for the TDS site. This document is third such report; it applies to the monitoring period beginning on July 19, 2024, and ending on October 17, 2024. After specifying the requirements from Bill 120, this report assesses the TDS site's public availability, work plans, and monitoring data.

Similar quarterly reports will be generated every 90 days (quarterly) for the duration of TDS site operations until (1) ash and debris at the site is transferred to the Central Maui Landfill (CML), (2) the TDS site is removed, and (3) the TDS site is restored.

Overall, over 1550 residential and commercial properties have been cleared of nearly 360,000 tons ash and debris in Lahaina. Additionally, over 21,000 truckloads of ash and debris have safely arrived from

Lahaina to the TDS site. There have been minimal reports or complaints received by the County of Maui regarding odors, dust, or environmental issues related to the management of ash and debris.

2. Requirements from Bill 120

Bill 120 requires recordkeeping as well as operational, planning, and environmental monitoring of the TDS site in West Maui. It specifies monitoring of the following:

- Leachate (liquids from the waste) quantity, quality, and treatment processes, if required
- Surface water runoff, including any impacts on nearby waterways
- Surrounding air quality regarding toxins and contaminants

Table 1 details provisions in Bill 120 that pertain to this report:

Table 1 — Bill 120 Provisions

Section	Description	Notes
2.3. a.	Recordkeeping and Reporting	Detailed records of leachate quantity, quality, and treatment processes be logged because these records are important for regulatory compliance and for making informed decisions about site management. All designs and construction documents, operating plans, stormwater pollution prevention plans, and sampling and analysis plans must be submitted to the county and made available to the public. The TDS site must be monitored for runoff, including nearby waterways and surrounding air quality for toxins and contaminants.
2.3. b	Compliance with Regulations	Leachate treatment and disposal will adhere to county, state, and federal environmental regulations to include the reuse of leachate as dust mitigation within the TDS site.

Section	Description	Notes
2.3. c.	Emergency Response Plan	An emergency response plan will be in place to handle any unexpected leachate breaches or spills, including the following: • Alerting relevant authorities and response teams as soon as the spill is identified • Implementing barriers, absorbents, or other containment methods to minimize environmental impact • Conducting a rapid assessment to understand potential environmental and health impacts • Monitoring for changes in water quality, soil contamination, and impacts on local wildlife and vegetation • Implementing cleanup procedures such as skimming, vacuuming, or neutralizing agents, as needed • Implementing immediate and long-term remediation to restore the affected area, such as soil remediation, water treatment, or habitat restoration, as needed • Keeping all stakeholders, including the public, informed about response measures • Documenting the incident and response actions in a report for the appropriate regulatory authorities, as required by law • Updating the emergency response plan following a review of the response based on new insights • Ensuring that all relevant personnel are trained in emergency response • Collaborating with local emergency services, environmental experts, and other relevant agencies to ensure a coordinated and effective response
2.3. d.	Preparation for Storm Events	Develop a plan to prevent stormwater pollution and comply with Appendix B, "NPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP)" of Chapter 55, Title 11 of the *Hawai'i Administrative Rules*. Before heavy rain or extreme weather events, enhanced safety measures will be implemented to prevent flooding, mitigate potential overflow, and control erosion, including the following: • Deploying stormwater BMPs, such as barriers, absorbents, or other containment measures • Converting and stabilizing materials within the cell • Implementing erosion control measures on loose soils and cinder around the containment area

3. Public Availability

Section 2.3.a. of Bill #120 requires detailed records, data, design and construction documents, operating plans and other pertinent documents be submitted to the County and made available to the public consistent with chapter 92F, *Hawai'i Revised Statutes*. In addition, Bill #120 requires that this information be presented in a public forum every 90 days for the duration of the right-of-entry agreement.

3.1. Website

A website currently communicates official information about the wildfire recovery. The website also includes a copy of this report on its webpage for debris containment. Additionally, the website contains periodic data summaries that provide the public with updated information regarding the TDS site.

3.2. Public Meetings

On October 16, 2024, MCDEM Director Shayne Agawa attended the Lahaina community's weekly disaster recovery meeting. Director Agawa made a presentation—available on the recovery website—summarizing the contents of this report.

The County of Maui will continue to provide quarterly updates at the weekly disaster recovery meetings to meet the requirements of Chapter 92F of the *Hawai'i Revised Statutes*.

4. Work Documents

The work documents for the TDS site address preconstruction, noise, compliance with the National Historic Preservation Act, site design and construction, and operation.

4.1. Preconstruction Assessment

Prior to construction of the TDS site, existing soil was sampled at the site according to a pre-characterization soil sampling program dated December 20, 2023. For the evaluation, the TDS area was divided into five decision units, with soil samples taken from each unit and sent to a Eurofins Scientific laboratory in Seattle for analysis. Samples underwent analysis for 22 metals via Methods 6020B and

7471B, total petroleum hydrocarbon (TPH) diesel range organics and residual range organics via Method 8015D, and TPH gasoline range organics via Method 8260. All sampling adhered to DOH's technical guidance manual. Section 5.4 summarizes the results of this analysis, and the full sampling report is available in Attachment 3 of Environmental Monitoring Quarterly Report 1 (April 19, 2024).

4.2. Nuisance Noise Assessment

In December 2023, a noise assessment was conducted in the vicinity of the TDS site. The assessment was a response to concerns about nighttime noise affecting surrounding residential areas during heavy equipment operations while the site was under construction. One particular concern was noise related to backup alarms on heavy equipment, such as bulldozers, excavators, and loaders. The assessment involved the installation of noise monitoring stations (Figure 1) at three locations: (1) at the TDS site entrance, above the recycling drop-off center (Station 1); (2) in the North Olowalu residential area (Station 2); and (3) near Olowalu general stores (Station 3).

Results from the assessment found noise readings ranging from 32.2 to 59.7 decibels. For reference, noises above 70 decibels are usually considered disturbing. Additionally, the Occupational Safety and Health Administration (OSHA) permissible exposure limit for noise is 90 A-weighted decibels for all workers for an 8-hour day.

Figure 1 — Noise Assessment Decibel Meter

The full sampling report is available in Attachment 4 of Environmental Monitoring Quarterly Report 1 (April 19, 2024).

4.3. Compliance with the National Historic Preservation Act (NHPA) and National Environmental Policy Act (NEPA)

The National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA) are separate laws which require federal agencies to take into consideration potential impacts to historic properties and the human environment prior to taking actions. Consultations were made in planning, design and construction of the TDS in accordance with these laws as described in this section.

On March 20, 2024, the State of Hawai'i Historic Preservation Division received a letter from the Federal Emergency Management Agency (FEMA) requesting the state historic preservation officer's (SHPO) concurrence with a FEMA finding. The finding—pursuant to Stipulation II.C.4 of the 2016 programmatic agreement (as extended in 2023)—is that there are no historic properties affected by the TDS site. The agreement is between FEMA, the Hawai'i SHPO, the Office of Hawai'ian Affairs, and the State of Hawai'i Department of Defense as part of the National Historic Preservation Act. The SHPO submitted a letter of concurrence on March 25, 2024, which can be found in Attachment 5 of Environmental Monitoring Quarterly Report 1 (April 19, 2024).

Additionally, to comply with Bill 120, USACE installed temporary groundwater detection monitoring wells at the TDS site in June – July 2024. On March 25, 2024, the Hawai'i SHPO reviewed and provided concurrence with the 'U.S. Department of Homeland Security's Federal Emergency Management Agency's (FEMA) proposed Olowalu Temporary Debris Staging Site Water Monitoring Wells Project.'

Other consultations involved the State of Hawai'i Office of Planning and Sustainable Development related to compliance with the Coastal Zone Management Act (August 25, 2023), Hawai'i Department of Health related to permitting considerations for the TDS (September 9, 2023), US EPA related to the applicability of the household waste exemption (November 3, 2023) and FEMA related to Executive Order 12898 – Environmental Justice review.

Documentation related to NEPA and NHPA compliance is included in Attachment 5 of Environmental Monitoring Quarterly Report 1 (April 19, 2024).

4.4. Design and Construction

The West Maui TDS site is underlain by a thick (80-mil or 0.08-inch), plastic liner that protects the soil, groundwater, and ocean. ECC developed the site so that ash and debris do not impact the surrounding area or marine environment. The design also protects against leachate or rainwater runoff. The County of Maui, DOH, and USEPA also contributed to the design to incorporate standards that are protective of human health and the environment.

Full design plans for the TDS site are found in Attachment 6 of Environmental Monitoring Quarterly Report 1 (April 19, 2024).

4.5. Operations

To ensure safe, efficient, and environmentally protective operations at the TDS site, ECC and Tetra Tech, Inc. (Tetra Tech), a sub-contractor to ECC, developed a manual for operations in January 2024. A copy of the manual can be found in Attachment 7 of Environmental Monitoring Quarterly Report 1 (April 19, 2024).

4.5.1. Access and Traffic

ECC developed a traffic plan in coordination with the Hawai'i Department of Transportation and the Highways Division of the Maui County Department of Public Works. The plan's purpose is to mitigate disruption to local traffic and maximize safety precautions for highway users, particularly those on the Honoapi'ilani Highway. A copy of this plan, along with associated drawings and permits, can be found in Attachment 8 of Environmental Monitoring Quarterly Report 1 (April 19, 2024).

4.5.2. Stormwater Pollution Prevention

To protect the surrounding environment from stormwater runoff, Haley & Aldrich—on behalf of ECC—prepared a stormwater pollution prevention plan (SWPPP) for the TDS site in December 2023. A copy of this plan can be found in Attachment 9 of Environmental Monitoring Quarterly Report 1 (April 19, 2024). The SWPPP corresponds to the requirements contained in Chapter 11-55 of the *Hawai'i Administrative Rules*. Although the TDS site is exempt from permitting for a national pollutant discharge elimination system—following an emergency proclamation regarding the Lahaina Wildfires—the SWPPP follows the

format of such a permit and is intended to meet SWPPP requirements established in the *Hawai'i Administrative Rules*.

4.5.3. Emergency Responses

ECC developed an emergency response plan (ERP), which outlines procedures for unexpected leachate breaches or spills. It includes the practices listed in Table 1 regarding Section 2.3.c of Bill 120. The ERP can be found on the webpage for debris containment.

4.6. Other Considerations

The TDS site also required an archaeological treatment plan and protocol for biosecurity.

4.6.1. Archaeological Treatment

On October 2, 2023, FEMA developed an archaeological treatment plan (ATP) for the TDS site as part of environmental and historic preservation efforts. A copy of this plan can be found in Attachment 10 of Environmental Monitoring Quarterly Report 1 (April 19, 2024). The ATP outlines a process to avoid, minimize, or mitigate anticipated adverse effects involved with activities for the TDS site while limiting unexpected and potentially extensive operational delays that could otherwise result without an established protocol. It provides a programmatic approach toward treatment measures for a historic property that may be encountered.

4.6.2. Biosecurity

TDS site contractors are following protocols outlined in an environmental compliance memorandum dated February 25, 2019, which can be found in Attachment 11 of Environmental Monitoring Quarterly Report 1 (April 19, 2024). The memorandum pertains to biosecurity for Hawai'i and establishes protocols, either required by statute or deemed appropriate, to prevent the introduction of harmful, invasive species into local natural areas and native habitats.

5. Monitoring and Data

In compliance with Bill 120, the TDS site is subject to monitoring of the air, personnel, leachate, soil, surface water, and groundwater. Monitoring applies to the entire life cycle of the project.

5.1. Air

Particulate matter (PM) in the air can penetrate the respiratory system, either causing or exacerbating respiratory health problems. (More information on the health effects of PM is provided by the USEPA.) Considering the potential health effects, air monitoring for PM is required at the TDS site.

Air monitoring is conducted pursuant to an air monitoring and surveillance plan (AMSP) prepared by ECC for USACE. The AMSP, dated January 2024, can be found in Attachment 12 of Environmental Monitoring Quarterly Report 1 (April 19, 2024). Per the AMSP, air monitors, known as Dustrak monitors, are placed in the vicinity of the TDS site (Figure 2). Tetra Tech, as a USACE contractor, maintains and operates these monitors according to the AMSP that includes all debris removal work zones as well as the TDS site itself.

Figure 2 — Approximate Locations of Air Monitors

Table 2 summarizes the air monitoring readings collected to date at the TDS site:

Table 2 — Air Monitoring Measurements

Date	Average PM_{10} ($\mu g/m^3$)	Average $PM_{2.5}$ ($\mu g/m^3$)	Monitor Identification Number
23-Jan-24	10.62	8.42	4, 5, 11
28-Jan-24	16.55	13.49	9, 10, 11
2-Feb-24	9.74	7.6	1, 10, 11
3-Feb-24	7.46	5.52	9
8-Feb-24	7.53	2.64	6, 11, 13
28-Feb-24	9.46	7.36	3, 4
6-Mar-24	4.33	6.06	3, 8
13-Mar-24	14.24	11.78	1, 4
14-Mar-24	5.75	3.24	1, 11
20-Mar-24	8.54	6.62	4, 10
27-Mar-24	10.24	8.35	5, 10
3-Apr-24	4.42	3.23	8, 14
10-Apr-24	8.87	6.95	8,14
17-Apr-24	11.54	8.52	1,6
24-Apr-24	5.18	3.89	11,14
1-May-24	8.76	5.72	4,12
8-May-24	12.26	9.53	1,13
15-May-24	9.47	8.87	9,10
22-May-24	11.27	8.64	10,11
29-May-24	8.36	6.38	3,16
5-Jun-24	14.61	12.62	6,9
12-Jun-24	6.08	5.74	6,15
19-Jun-24	7.95	6.84	9,14
26-Jun-24	5.97	5.13	3,9

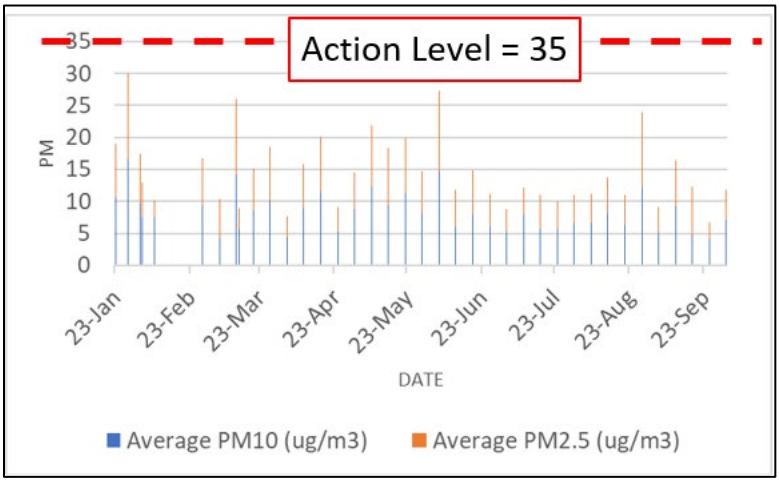
Date	Average PM_{10} ($\mu g/m^3$)	Average $PM_{2.5}$ ($\mu g/m^3$)	Monitor Identification Number
3-Jul-24	5.2	3.53	15,16
10-Jul-24	8.02	4.15	6,15
17-Jul-24	5.7	5.25	9,14
24-Jul-24	5.65	4.46	4,14
31-Jul-24	6.55	4.53	11,12
7-Aug-24	6.64	4.57	12,16
14-Aug-24	8.17	5.48	12,16
21-Aug-24	6.39	4.64	12,16
28-Aug-24	12.29	11.65	12,16
4-Sept-24	5.06	3.95	12,16
11-Sept-24	9.18	7.25	12,16
18-Sept-24	4.84	7.42	12,16
25-Sept-24	4.13	2.48	12,16
2-Oct-24	7.16	4.58	12,16
9-Oct-24	4.47	3.2	11,16

Abbreviations:

- $\mu g/m^3$: micrograms per cubic meter
- PM_{10}: particulate matter with diameters of 10 microns or less
- $PM_{2.5}$: particulate matter with diameters of 2.5 microns or less

USACE established an acceptable threshold, or "action limit," of 35 micrograms per cubic meter ($\mu g/m^3$) for particulate matter (PM 2.5) at the TDS site. If measurements show concentrations of particulate matter in the air above the action level, engineering, or operating controls—such as water sprays and truck speed limits—are implemented to reduce the concentrations. Both Table 2 and Figure 3 show that there have been no measured readings of PM above the action limit.

Figure 3 — Air Monitoring Data for Particulate Matter (PM) Compared to Action Level



Abbreviations:

- µg/m^3: micrograms per cubic meter
- PM_{10}: particulate matter with diameters of 10 microns or less
- $PM_{2.5}$: particulate matter with diameters of 2.5 microns or less

USACE has also implemented wind restrictions on operations at the TDS site: 25 miles per hour as sustained for 15 minutes. If wind speeds are faster than this limit, large truck dumping is restricted. This restriction is done for safety reasons, as the trucks are subject to tipping over. Additionally—with respect to particulate matter—high, sustained winds may blow dust or debris; ECC prepares dust monitoring reports, included as Attachment 1, to document such circumstances. To date, wind-speed restrictions have occurred only on February 4, 2024, and April 4–6, 2024.

Lastly, DOH operates and maintains several other air monitoring stations at the locations shown in Figure 4. Specifically, DOH uses PurpleAir sensors. Data from these sensors are visualized on dashboards found on AirNow and the PurpleAir website.

Figure 4 — Locations of PurpleAir Sensors in Olowalu

Both the PurpleAir and Dustrak monitoring systems provide data for particulate matter with diameters of (1) 10 microns or less, and (2) 2.5 microns or less. The measurement units are expressed as µg/m^3, which characterizes the weight of the matter (in microns) in a defined area of space (one cubic meter).

For additional information, USACE and DOH prepared a fact sheet to present and explain air monitoring around the TDS site. The fact sheet can be found in Attachment 14 of Environmental Monitoring Quarterly Report 1 (April 19, 2024). Additionally, DOH prepared and posted a different fact that explains air monitoring readings. This fact sheet can be found in Attachment 15 of Environmental Monitoring Quarterly Report 1 (April 19, 2024).

5.2. Personnel

Personnel monitoring adheres to the AMSP, which outlines air sampling procedures to assess the health and safety of ECC and contractor staff during activities that may disturb surface soil at the TDS site. The air sampling procedures apply to activities conducted by ECC and its subcontractors; they evaluate whether emission control measures are adequate to mitigate personal exposure risks. The monitoring results also provide insight regarding whether (1) site workers are using the appropriate personal protective equipment, (2) the dust emission controls are adequate to eliminate hazardous concentrations of airborne particulate matter in the worker's breathing zone, and (3) the off-site migration of dust is mitigated.

The AMSP identifies sample collection and analytical methods and associated quality assurance and quality control procedures for personnel air monitoring. Sample analytical results are evaluated against OSHA's permissible exposure limits or threshold limit values established by the American Conference of Governmental Industrial Hygienists. The samples are analyzed by SGS Galson in Galson, New York.

ECC provided USACE with a daily air monitoring report for personnel at the TDS site until June 23, 2024. Since all air sampling results collected near excavator operators and laborers through June 23, 2024 had not detected any violations of health-based criteria established in the AMSP, this practice is only periodically conducted to maintain compliance with worker protection standards.

5.3. Leachate

Leachate is a liquid, usually rainwater, that percolates through ash and debris within a lined area of working boundaries. It differs from rainwater or surface water runoff, which is diverted around the TDS working area from the surrounding hills. Stormwater is intentionally diverted around the TDS debris to minimize leachate generation.

For the TDS site, although most leachate is either absorbed into the waste mass or evaporates into the air, some may pass through ash and debris. There, the water may collect contaminants in the ash and debris—including heavy metals (such as arsenic, lead, and cobalt)—as detected by DOH ash samples collected in Lahaina.

5.3.1. Leachate Basin

All leachate collected within the TDS area is drained by gravity to a low spot in the ash and debris storage area, called a sump, where it is drained via a drainpipe to a leachate basin (Figure 5). This basin is directly below the TDS working area; it is constructed with a thick, plastic liner underneath it to prevent any infiltration into underlying soil. It differs from the percolation basin, which is below the TDS site. This percolation basin is designed to receive rainwater runoff, which is then diverted around the TDS working area. The water in this second basin does not contact ash or debris. The purpose of the percolation basin is to allow rainwater runoff to percolate into the natural soils while avoiding the roadway and drainage channels.

Figure 5 — Leachate Basin Adjacent to Ash and Debris Storage Area

The leachate basin has a design capacity of 1.375 million gallons, which is more than is expected to be collected, even when accounting for a significant rain event in West Maui. As an example, during a rainstorm on January 9, 2024—during which over 3 inches of rain fell in less than 24 hours—the leachate basin successfully collected all the rainwater that fell directly into the empty TDS working area as well as the surrounding area (because construction was incomplete on the stormwater diversion canals). The leachate basin filled with approximately 500,000 gallons of rainwater, approximately one-third of its total holding capacity. A subsequent storm in early April – during which approximately 2 inches of rain fell in less than 24 hours – generated approximately 100,000 gallons of leachate.

For dust suppression, and to maintain capacity in the basin, leachate generated at the TDS site is being applied to debris via wet spray. During this process, most of the liquid evaporates. Personnel apply the spray throughout the workday, especially on drier days. The leachate basin continues to be mostly empty —as shown in Table 3—so fresh water is being used for dust control.

Table 3 — Leachate Basin Level Monitoring Results

Date	Water Level	Estimated Gallons
11-Jan-24	One-third of the total basin capacity	480,000
15-Feb-24	5’	100,000
22-Feb-24	< 1’	2,000
14-Mar-24	< 1’	2,000
24-Mar-24	0’	0
15-Apr-24	5’	100,000
15-May-24	5’	100,000
23-May-24	2’	40,000
20-Jun-24	2’	40,000
11-Jul-24	1’	25,000
1-Aug-24	< 1’	< 10,000
28-Aug-24	< 1’	< 10,000
10-Sept-24	< 1’	< 10,000
9-Oct-24	< 1’	< 10,000

5.3.2. Leachate Sampling

Because of dry conditions in West Maui, ECC collected baseline samples of runoff water directly from the leachate basin 2 days after the significant storm event on January 9, 2024 (see Section 5.3.1). At the time of the storm, no ash or debris had been placed in the TDS working area, so the runoff represented typical precipitation runoff that is unaffected by waste; therefore, it was exemplary of what normally runs off the natural soils in the area.

Since the preliminary, baseline sampling event, USACE has sampled the leachate basin periodically. USACE continues sampling leachate monthly directly from the leachate basin only if sufficient leachate is available in the basin to conduct the analysis. No samples analyzed during the current reporting period. To date, USACE’s samples underwent analyses for the parameters shown in Table 4. Analyses were conducted wither by FQ Labs in Oahu or Eurofins Scientific in Seattle. The laboratories did not always analyze samples for all the parameters shown in the table, as additional parameters were added at the

request of DOH and Maui County after the baseline sampling event. In addition, certain parameters were eliminated for analysis in subsequent sampling events if they were not detected in previous sampling events.

Table 4 — Leachate Sampling Analytical Results

Parameter	Method	11-Jan-24 (Baseline)	15-Apr-24 Sample	20-May-24 Sample	Unit
Ammonia	4500	NS	ND	0.11	mg/L
Antimony	6010D	< 0.010	ND	ND	mg/L
Arsenic	6010D	< 0.010	ND	ND	mg/L
Barium	6010D	0.251	0.037	0.025	mg/L
Beryllium	6010D	< 0.010	ND	ND	mg/L
Cadmium	6010D	< 0.010	ND	ND	mg/L
Carbonate	6010D	NS	6	5.6	mg/L
Chlorine	330.4	NS	ND	ND	mg/L
Chromium	6010D	0.136	0.024	0.0055	mg/L
Cobalt	6010D	0.026	0.0028	0.0020	mg/L
COD	410.4	NS	38	59	mg/L
Copper	6010D	0.042	ND	ND	mg/L
Dioxins and Furans (2,3,7,8-TCDD)	8290A	NS	ND	2.1	pg/L
Dissolved Oxygen	360.1	NS	6.5	5.0	mg/L
Herbicides	8151A	NS	0.78	ND	
Lead	6010D	< 0.010	ND	ND	mg/L
Mercury	7470A	< 0.0002	0.14	ND	mg/L
Molybdenum	6010D	< 0.010	0.0074	0.0061	mg/L
Nickel	6010D	0.078	0.0085	ND	mg/L
Nitrates	353.2	NS	21	15	mg/L
Nitrites	353.2	NS	0.32	1.5	mg/L
Oil & Grease	1664A	< 5.0	1.5	1.4	mg/L

Parameter	Method	11-Jan-24 (Baseline)	15-Apr-24 Sample	20-May-24 Sample	Unit
Pesticides	8081B	NS	ND	ND	µg/L
pH	9040C	NS	7.4	8.5	
Selenium	6010D	< 0.010	ND	ND	mg/L
Silver	6010D	< 0.010	ND	ND	mg/L
Sulfate	300	NS	230	240	mg/L
Sulfide	9034	NS	ND	ND	mg/L
SVOCs	8270D/E	NS	ND	ND	µg/L
TDS	2540C	NS	670	730	mg/L
Thallium	6010D	< 0.010	ND	ND	mg/L
TOC	5310C	NS	7.0	11.0	mg/L
Total Alkalinity	2320B	NS	44	42	mg/L
Total Nitrogen	351.2	NS	22	21	mg/L
Total PCBs	8082A	NS	ND	ND	mg/L
TPH	1664A	< 5.0	4.1	4.0	mg/L
TSS	SM 2450D	316	39	23	mg/L
Turbidity	180.1	650	80	11	NTU
Vanadium	6010D	0.13	0.017	0.011	mg/L
VOCs	8260D	NS	ND	ND	µg/L
Zinc	6010D	< 0.100	0.0048	ND	mg/L

Note: Laboratory methods may vary.

Abbreviations and Symbols:

- <: less than
- µg/L: micrograms per liter
- COD: chemical oxygen demand
- mg/L: milligrams per liter
- ND: nondetect
- NS: not sampled
- NTU: nephelometric turbidity unit
- PCB: polychlorinated biphenyl
- SVOC: semivolatile organic compound
- TCDD: Tetrachlorodibenzo-P-dioxin
- TOC: total organic carbon
- TDS: total dissolved solids
- TPH: total petroleum hydrocarbons – oil
- TSS: total suspended solids
- VOC: volatile organic compound

5.4. Soil

A preconstruction assessment (see Section 4.1) divided the TDS site into five decision units—or set areas—to analyze preexisting soil conditions for contaminants. Analytical results from this assessment, summarized in Table 5, will be used once debris has been removed from the site, as the soil will be sampled at similar locations for the analysis of constituents; the preassessment measurements will serve as a data comparison. Both the preconstruction and postconstruction data will be evaluated by the County of Maui and DOH to conclude whether any action is necessary prior to grading the TDS area.

Table 5 — Preconstruction Soil Sample Analysis Results

Constituent (mg/kg)	DU -1 (mg/kg)	DU- 2 (mg/kg)	DU- 3 (mg/kg)	DU- 4 (mg/kg)	DU- 5 (mg/kg)
Antimony	0.18	0.19	0.19	0.19	0.19
Arsenic	1.4	1.5	0.73	0.584	0.94
Barium	15	15	32	40	39
Beryllium	0.56	0.66	0.6	0.75	0.66
Cadmium	0.093	0.13	0.094	0.099	0.1
Chromium	0.81	1	0.84	0.53	7
Cobalt	1.1	1.4	1.2	1.2	3
Copper	1.6	4.9	1.6	0.86	4.9
Diesel Range Organics	32	33	28	30	16
Gasoline Range Organics	2.9	1.1	1.6	1.7	1.5
Lead	2.1	1	1.1	0.97	2.2
Mercury	0.010	0.011	0.0096	0.010	0.011
Molybdenum	0.51	0.54	0.5	0.67	0.9
Nickel	0.79	1	0.92	0.53	9
Oil Range Organics	18	26	30	29	30
Selenium	4.9	5.4	3.6	3.2	3.7
Silver	0.046	0.021	0.047	0.048	0.047
Thallium	0.14	0.15	0.14	0.14	0.14

Constituent (mg/kg)	DU -1 (mg/kg)	DU- 2 (mg/kg)	DU- 3 (mg/kg)	DU- 4 (mg/kg)	DU- 5 (mg/kg)
Vanadium	1.2	1.4	1.2	1.0	8.5
Zinc	48	51	44	49	52

Abbreviations:

- DU: decision unit
- mg/kg: milligrams per kilogram

A summary of the sampling approach is included in Attachment 3 of Environmental Monitoring Quarterly Report 1 (April 19, 2024).

5.5. Surface Water

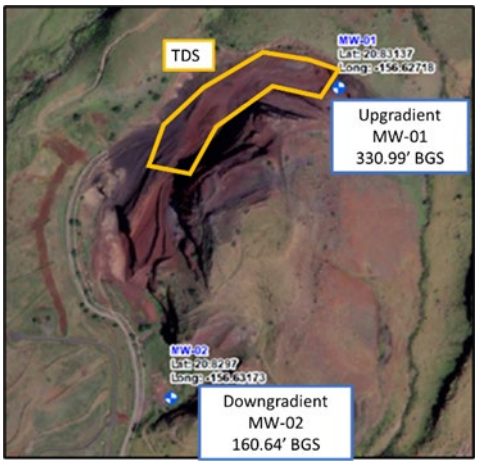
Because there have been no observable releases of leachate from the TDS site, there has been no need to sample surface water in creeks or drainage ditches adjacent to the TDS; however, DOH reviewed coastal water quality data from the University of Hawai'i and the Surfrider Foundation Maui. From the review, DOH affirms that these data show that there are no ash- or fire-related chemicals present in the surface water at concentrations that threaten human health.

DOH initiated a water quality monitoring program that covers nearshore monitoring and includes eight locations from Olowalu to Kaanapali. Results are available on the DOH website as well as the webpage for debris containment.

5.6. Groundwater

To comply with Bill 120, FEMA directed USACE to install temporary groundwater detection monitoring wells around the TDS site. In response, contractors to USACE installed one upgradient (MW-01) and one downgradient (MW-02), as shown in Figure 6. Groundwater monitoring wells are used to specifically to measure or monitor the level, quality, quantity, or movement of subsurface water. More information on the installation methods can be found at https://www.epa.gov/quality/design-and-installation-monitoring-wells.

Figure 6 — Locations of Groundwater Monitoring Wells



Abbreviations: GW: groundwater, BGS: below ground surface

The upgradient groundwater monitoring well (MW-01) was installed to a depth of approximately 330' below ground surface (BGS) and the downgradient groundwater monitoring well (MW-02) was installed to a depth of 160' BGS. The difference in drilling depths reflects the approximate difference in ground surface elevation. The finished well (MW-02) is shown in Figure 7.

Figure 7 — Drill Rig Installing Groundwater Monitoring Well at TDS Site

The groundwater monitoring wells were installed using a hollow stem auger, which uses a series of hollow, interconnected augers to bore into the ground and create a hole, which is encased in impermeable grout and sealed to eliminate the infiltration of liquids into the casing above the target groundwater source being monitored. The bottom of the casing consists of a permeable screen which allows the groundwater to enter the well casing so it can be sampled at the desired depth.

The first samples were collected by USACE on July 7, 2024, with results found in Attachment 2 and shown in Table 6. Samples will continue to be collected and analyzed quarterly (every 3 months), which is a typical frequency for waste storage and disposal facilities. A second set of samples were taken the week of October 7, 2024, with laboratory analysis and reporting pending at the time of this report. The results to be reported in the next quarterly report.

The first samples taken on July 7, 2024 are considered 'baseline' samples, and since MW-01 and MW-02 are newly installed, and there are no previous sampling data from them to compare. The analysis performed includes the analytes and parameters found in Table 6, which includes contaminants or indicators of contaminants present in the TDS leachate (see Section 1, Table 2).

Table 6 — Sampling Parameters for TDS Site Groundwater Monitoring Wells

Major cations & anions	Method	7-Jul-24 MW-01 (baseline)	7-Jul-24 MW-02 (baseline)	Units
Magnesium	6020B	12000	17000	ug/L
Sodium	6020B	78000	130000	ug/L
Calcium	6020B	15000	21000	ug/L
Potassium	6020B	5400	7600	ug/L
Chloride	300	100	190	mg/L
Carbonate	2320B	ND	ND	mg/L
Sulfate	300	19	25	mg/L

Major Leachate Indicators	Method	7-Jul-24 MW-01 (baseline)	7-Jul-24 MW-02 (baseline)	Units
Total Dissolved Solids	2540C	210	350	mg/L
Total Organic Carbon	5310C	4.6	0.58	mg/L
Total Alkalinity	2320B	69	67	mg/L
Nitrogen-Ammonia	350.1	ND	0.05	mg/L
Iron	6020B	140	380	ug/L
Field Parameters				
pH	9040C	7.2	7.5	
Turbidity	180.1	2.5	18	NTU
Metals				
Arsenic	6020B	ND	ND	ug/L
Lead	6020B	ND	ND	ug/L
Antimony	6020B	ND	ND	ug/L
Cobalt	6020B	0.84	0.19	ug/L
Copper	6020B	2.5	0.72	ug/L

Abbreviations & Symbols:
mg/L: milligrams per liter
MW: monitoring well
ND: nondetect or below detection limit
NTU: nephelometric turbidity unit
TDS: total dissolved solids
TOC: total organic carbon
µg/L: micrograms per liter

Results are posted in the Environmental Monitoring Summary posted on the webpage for debris containment.

Attachment 1. Dust Monitoring Reports

Daily Dust Monitoring Report: July 17, 2024
Temporary Disposal Site
Summary:

The ECC field staff and field crews continued to follow the prescribed methods of dust suppression and notification procedures.

The crews continue to use water for dust suppression all day.

No exceedances occurred.

Weather Summary- Station 2

Temperature (F range): 72.8-89.1

RH (% range): 44-71

Precipitation total (in):0

Avg. Wind Speed (mph): 4.94

Wind Direction: W SW

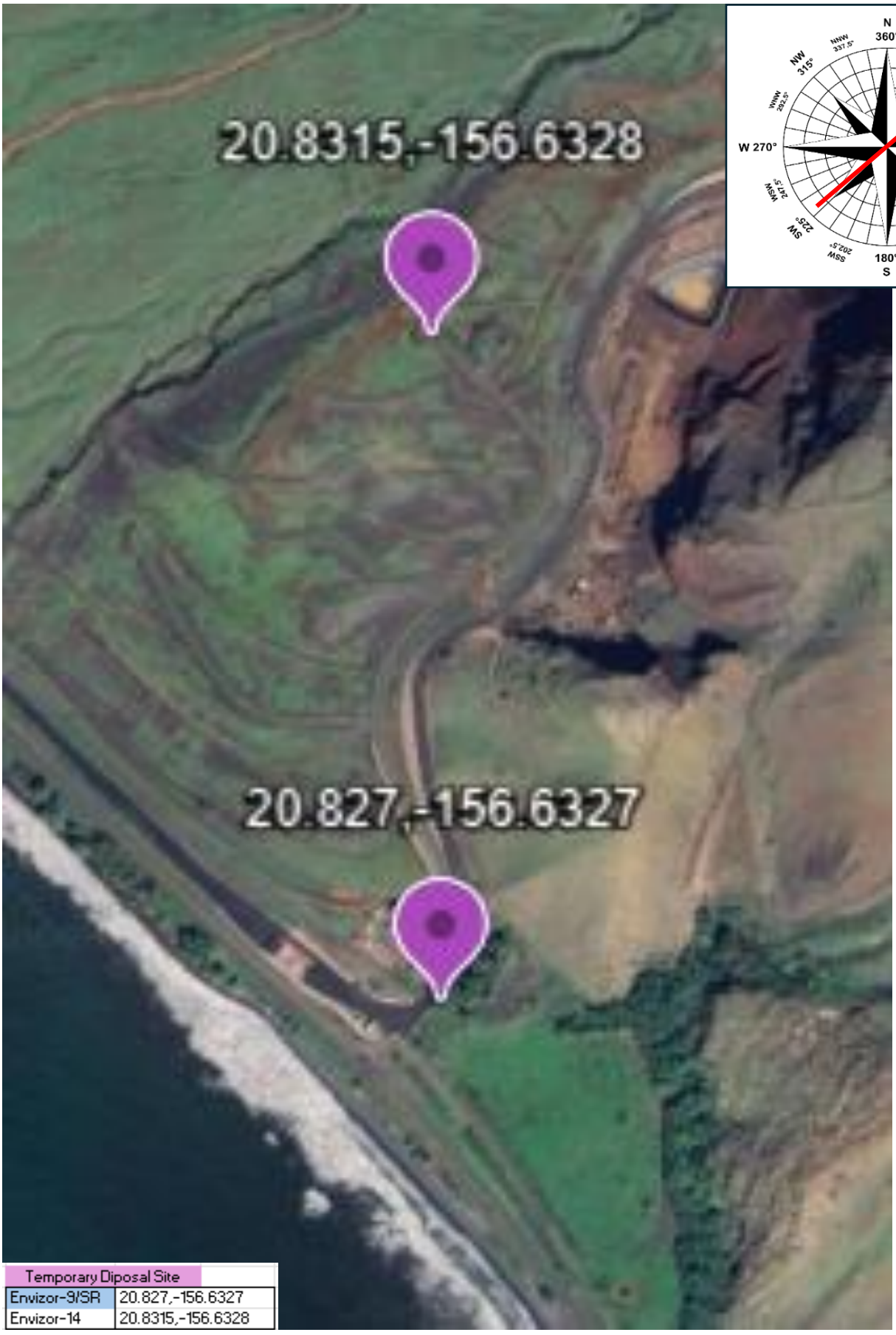
Station Location Summary:

Station 9+ Sensitive Receptor and Station 14 were set up around **The Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

- Temporary Disposal Site

		Envizor-9	Envizor-14	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	8.69	1.80	70	35
PM 10	Avg, ug/M3	9.38	2.02	300	150



Temporary Diposal Site	
Envizor-9/SR	20.827,-156.6327
Envizor-14	20.8315,-156.6328

Daily Dust Monitoring Report: July 24, 2024
Temporary Disposal Site

Summary:

The ECC field staff and field crews continued to follow the prescribed methods of dust suppression and notification procedures.

The crews continue to use water for dust suppression all day.

No exceedances occurred.

Weather Summary- Station 2

Temperature (F range): 75.5-86.8

RH (% range): 45-74

Precipitation total (in):0

Avg. Wind Speed (mph): 4.11

Wind Direction: W SW

Station Location Summary:

Station 4 and Station 14 were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-4	Envizor-14	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	5.40	3.52	70	35
PM 10	Avg, ug/M3	7.34	3.97	300	150

Daily Dust Monitoring Report: July 31, 2024
Temporary Disposal Site

Summary:

The ECC field staff and field crews continued to follow the prescribed methods of dust suppression and notification procedures.

The crews continue to use water for dust suppression all day.

No exceedances occurred.

Weather Summary- Station 2

Temperature (F range): 73.1-86.7

RH (% range): 54-72

Precipitation total (in):0

Avg. Wind Speed (mph): 4.40

Wind Direction: W SW

Station Location Summary:

Station 11+ Sensitive Receptor and Station 12 were set up around **the Temporary Disposal site.** for continued debris removal air monitoring.

Station Data:

		Envizor-11	Envizor-12	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	6.64	2.42	70	35
PM 10	Avg, ug/M3	9.40	3.71	300	150

Temporary Disposal Site	
Envizor-11/SR	20.827, -156.6328
Envizor-12	20.8313,-156.6323

Daily Dust Monitoring Report: August 7, 2024
Temporary Debris Storage

Summary:

The ECC field staff and field crews continued to follow the prescribed methods of dust suppression and notification procedures.

The crews continue to use water for dust suppression all day.

No exceedances occurred.

Weather Summary- Station 2

Temperature (F range): 74.9-87.4

RH (% range): 55-74

Precipitation total (in):0

Avg. Wind Speed (mph): 4.53

Wind Direction: W SW

Station Location Summary:

Station 16 and Station 12 were set up around **The Temporary Debris Storage** for continued debris removal air monitoring.

Station Data:

		Envizor-12	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	2.19	6.95	70	35
PM 10	Avg, ug/M3	3.16	10.12	300	150

Temporary Debris Storage	
Envizor-12	20.8316,-156.6328
Envizor-16	20.827,-156.6328

Daily Dust Monitoring Report: August 14, 2024
Temporary Disposal Site

Summary:

The ECC field staff and field crews continued to follow the prescribed methods of dust suppression and notification procedures.

The crews continue to use water for dust suppression all day.

No exceedances occurred.

Weather Summary- Station 2

Temperature (F range): 74.9-88.9

RH (% range): 48-72

Precipitation total (in):0

Avg. Wind Speed (mph): 5.35

Wind Direction: W SW

Station Location Summary:

Station 12 and Station 16+ Sensitive Receptor were set up around **the Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-12	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	3.74	7.21	70	35
PM 10	Avg, ug/M3	5.59	10.74	300	150

Debris Removal	
Envizor-12	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: August 21, 2024
Temporary Disposal Site
Summary:

The ECC field staff and field crews continued to follow the prescribed methods of dust suppression and notification procedures.

The crews continue to use water for dust suppression all day.

No exceedances occurred.

Weather Summary- Station 5

Temperature (F range): 78.7-88.2

RH (% range): 63-81

Precipitation total (in):0

Avg. Wind Speed (mph): 3.

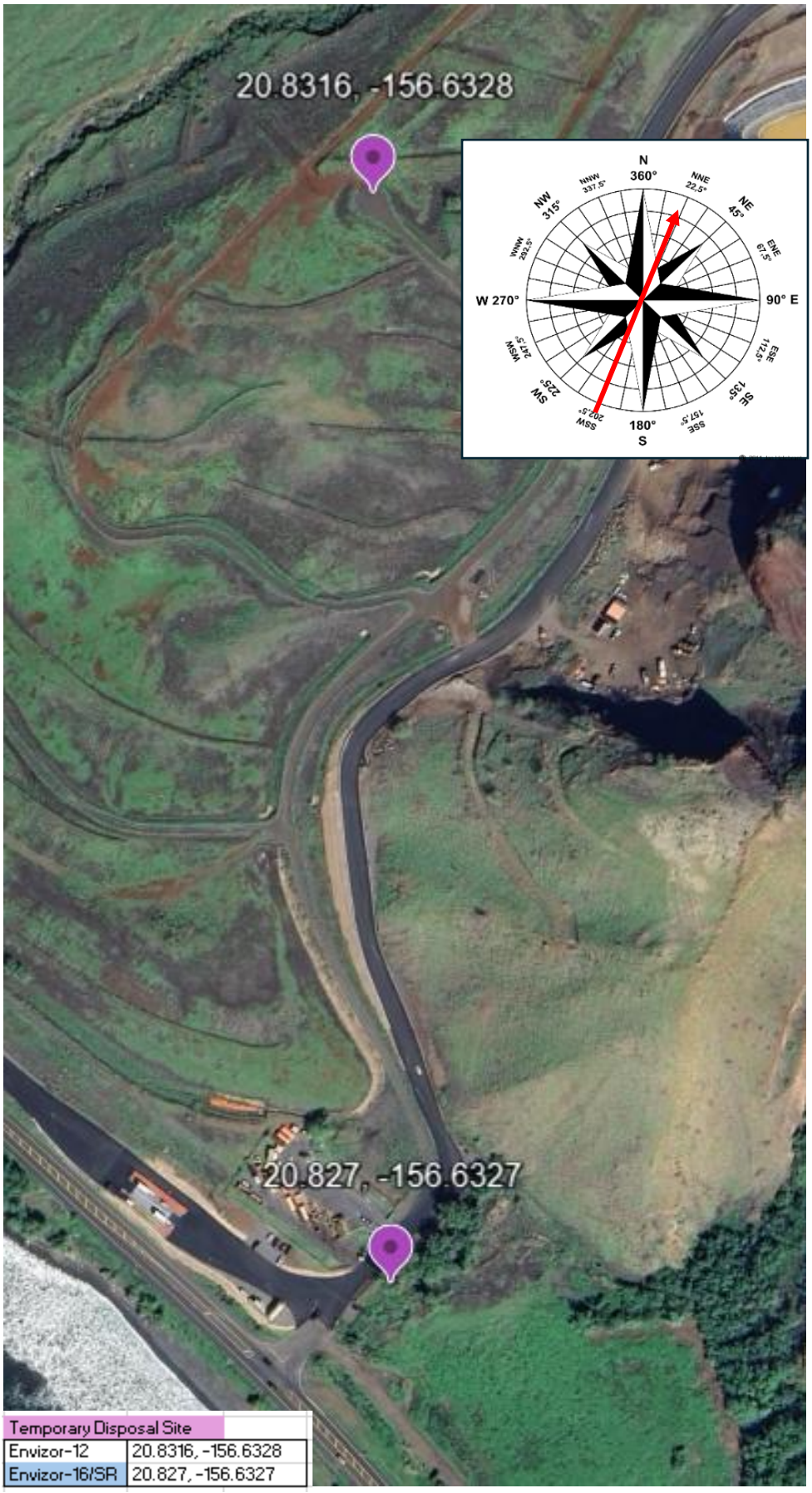
Wind Direction: W SW

Station Location Summary:

Station 12 and Station 16+ Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-12	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	3.82	5.66	70	35
PM 10	Avg, ug/M3	5.20	7.58	300	150



Temporary Disposal Site	
Envizor-12	20.8316, -156.6328
Envizor-16/SR	20.827, -156.6327

Daily Dust Monitoring Report: August 28, 2024
Temporary Disposal Site

Summary:

The ECC field staff and field crews continued to follow the prescribed methods of dust suppression and notification procedures.

The crews continue to use water for dust suppression all day.

No exceedances occurred.

Weather Summary- Station 5

Temperature (F range): 78.3-86.9

RH (% range): 62-76

Precipitation total (in):0

Avg. Wind Speed (mph): 3.27

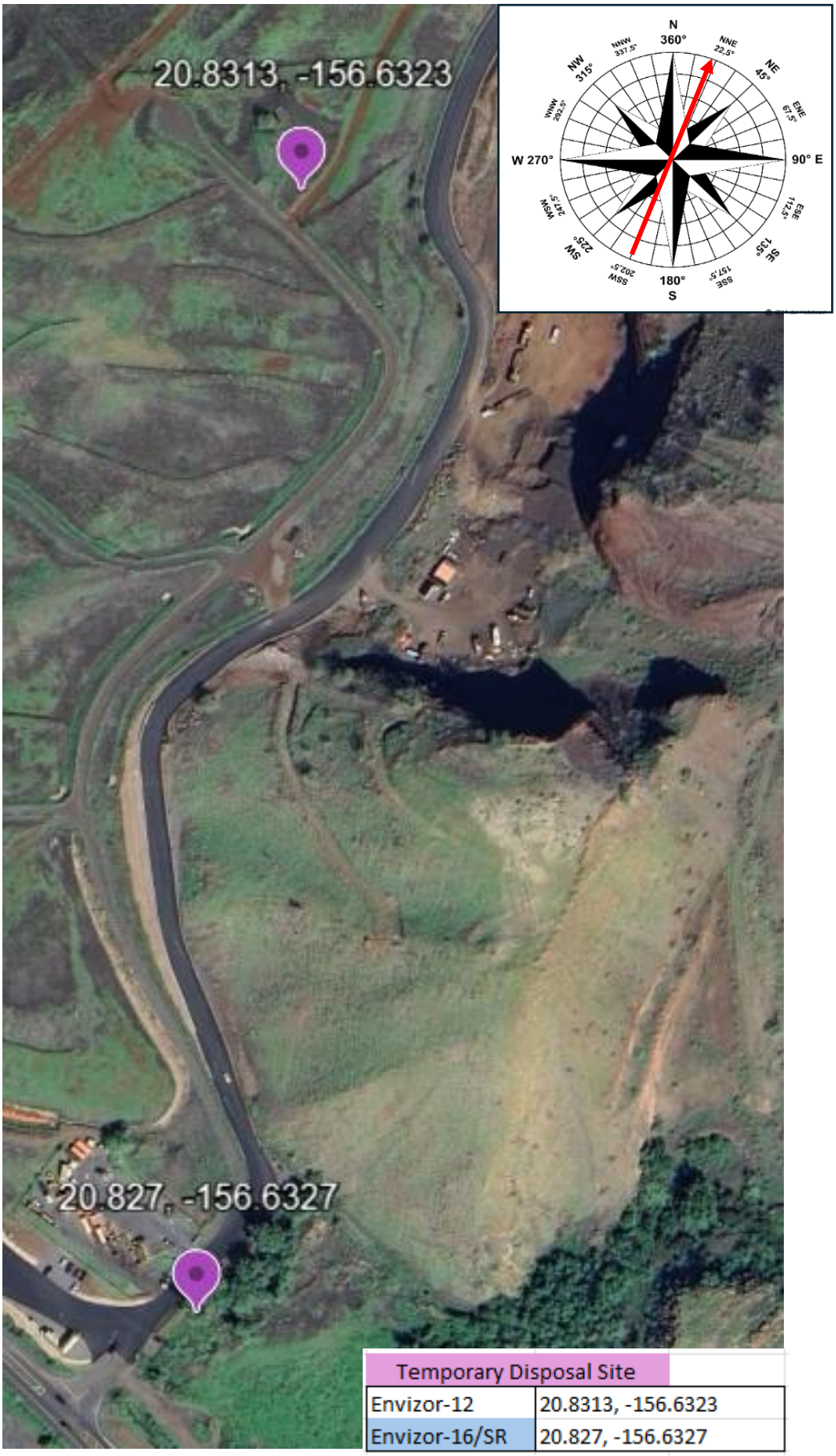
Wind Direction: W SW

Station Location Summary:

Station 12 and Station 16+ Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-12	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	7.00	16.29	70	35
PM 10	Avg, ug/M3	7.62	16.97	300	150



Temporary Disposal Site	
Envizor-12	20.8313, -156.6323
Envizor-16/SR	20.827, -156.6327

Daily Dust Monitoring Report: September 4, 2024
Temporary Disposal Site

Summary:

The ECC field staff and field crews continued to follow the prescribed methods of dust suppression and notification procedures.

The crews continue to use water for dust suppression all day.

No exceedances occurred.

Weather Summary- Station 5

Temperature (F range): 75.8-87.3

RH (% range): 63

Precipitation total (in):0

Avg. Wind Speed (mph): 4.45

Wind Direction: E SE

Station Location Summary:

Station 12 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-12	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	2.68	5.23	70	35
PM 10	Avg, ug/M3	3.80	6.32	300	150

Debris Removal	
Envizor-12	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: September 11, 2024
Temporary Disposal Site

Summary:

The ECC field staff and field crews continued to follow the prescribed methods of dust suppression and notification procedures.

The crews continue to use water for dust suppression all day.

No exceedances occurred.

Weather Summary

No weather stations were active.

Station Location Summary:

Station 12 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-12	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	7.34	7.17	70	35
PM 10	Avg, ug/M3	8.23	10.14	300	150

Debris Removal	
Envizor-12	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: September 18, 2024
Temporary Disposal Site

Summary:

The ECC field staff and field crews continued to follow the prescribed methods of dust suppression and notification procedures.

The crews continue to use water for dust suppression all day.

No exceedances occurred.

Weather Summary

No weather data was transmitted today

Station Location Summary:

Station 12 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-12	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	2.56	4.86	70	35
PM 10	Avg, ug/M3	3.90	5.78	300	150

Debris Removal	
Envizor-12	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: September 25, 2024
Temporary Disposal Site

Summary:

The ECC field staff and field crews continued to follow the prescribed methods of dust suppression and notification procedures.

The crews continue to use water for dust suppression all day.

No exceedances occurred.

Weather Summary

No weather data was transmitted today

Station Location Summary:

Station 12 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-12	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	3.10	1.87	70	35
PM 10	Avg, ug/M3	4.93	3.34	300	150

Debris Removal	
Envizor-12	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: October 2, 2024
Temporary Disposal Site

Summary:

The ECC field staff and field crews continued to follow the prescribed methods of dust suppression and notification procedures.

The crews continue to use water for dust suppression all day.

No exceedances occurred.

Weather Summary

No weather data was transmitted today

Station Location Summary:

Station 12 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-12	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	5.06	4.10	70	35
PM 10	Avg, ug/M3	9.20	5.12	300	150

Temporary Disposal Site	
Envizor-12	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Attachment 2. Groundwater Analysis Laboratory Data Report

(Reagent Traceability, Data Sheets and Shipping/Receiving pages 33 – 1339 available upon request)

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Jackson Kiker
Environmental Chemical Corp.
43 Broad St
Suite A301
Hudson MA 01749

Generated 7/18/2024 1:01 AM

JOB DESCRIPTION

TDSS MW Sampling 3Q-2024 / Baseline
410-179201

JOB NUMBER

410-179201-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

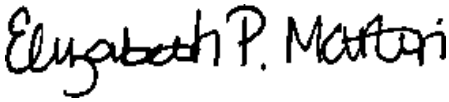
Eurofins Lancaster Laboratories Environment Testing, LLC

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.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
7/18/2024 1:01 AM

Authorized for release by
Elizabeth Martin, Project Manager
Elizabeth.Martin@et.eurofinsus.com
717 205-3949

Eurofins Lancaster Laboratories Environment Testing, LLC

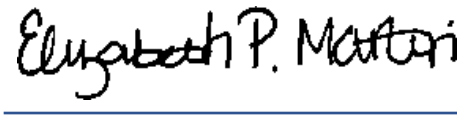
Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· 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 is 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.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.



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Qualifiers

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

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.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TNTC	Too Numerous To Count

Job Narrative
410-179201-1

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.

Receipt
The samples were received on 7/10/2024 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.8°C.

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

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

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

Detection Summary

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

Client Sample ID: TDSS-MW01-3Q24 — Lab Sample ID: 410-179201-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	19	D M	7.5	5.0	2.5	mg/L	5		300.0	Total/NA
Chloride	100	D	75	60	30	mg/L	50		300.0	Total/NA
Calcium	15000		120	100	50	ug/L	1		6020B	Total Recoverable
Cobalt	0.84		0.50	0.40	0.16	ug/L	1		6020B	Total Recoverable
Copper	2.5		1.0	0.90	0.36	ug/L	1		6020B	Total Recoverable
Iron	140		50	40	20	ug/L	1		6020B	Total Recoverable
Magnesium	12000		50	32	16	ug/L	1		6020B	Total Recoverable
Potassium	5400		200	180	65	ug/L	1		6020B	Total Recoverable
Sodium	78000		200	180	90	ug/L	1		6020B	Total Recoverable
Turbidity	2.5	H H3	1.0	0.70	1.0	NTU	1		180.1	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	69	Q	8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Bicarbonate Alkalinity as CaCO3	69		8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Total Dissolved Solids	210		30	25	12	mg/L	1		2540C - 2015	Total/NA
pH	7.2	HF	0.01	0.01	0.01	S.U.	1		9040C	Total/NA
Total Organic Carbon	4.6		2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 1	4.5		2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 2	4.4		2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 3	4.9		2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA

Client Sample ID: TDSS-MW02-3Q24 — Lab Sample ID: 410-179201-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	25	D M	7.5	5.0	2.5	mg/L	5		300.0	Total/NA
Chloride	190	D	75	60	30	mg/L	50		300.0	Total/NA
Calcium	21000		120	100	50	ug/L	1		6020B	Total Recoverable
Cobalt	0.19	J	0.50	0.40	0.16	ug/L	1		6020B	Total Recoverable
Copper	0.72	J	1.0	0.90	0.36	ug/L	1		6020B	Total Recoverable
Iron	380		50	40	20	ug/L	1		6020B	Total Recoverable
Magnesium	17000		50	32	16	ug/L	1		6020B	Total Recoverable
Potassium	7600		200	180	65	ug/L	1		6020B	Total Recoverable
Sodium	130000	D	2000	1800	900	ug/L	10		6020B	Total Recoverable
Turbidity	18	H H3	1.0	0.70	1.0	NTU	1		180.1	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	67	Q	8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Bicarbonate Alkalinity as CaCO3	67		8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Total Dissolved Solids	350		60	50	24	mg/L	1		2540C - 2015	Total/NA
pH	7.5	HF	0.01	0.01	0.01	S.U.	1		9040C	Total/NA
Ammonia as N	0.050	J	0.10	0.090	0.050	mg/L	1		EPA 350.1	Total/NA
Total Organic Carbon	0.58	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: TDSS-MW02-3Q24 (Continued) — Lab Sample ID: 410-179201-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
TOC Result 1	0.64	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 2	0.67	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA

Client Sample ID: TDSS-ER-3Q24 — Lab Sample ID: 410-179201-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Calcium	300		120	100	50	ug/L	1		6020B	Total Recoverable
Copper	1.9		1.0	0.90	0.36	ug/L	1		6020B	Total Recoverable
Iron	75		50	40	20	ug/L	1		6020B	Total Recoverable
Magnesium	76		50	32	16	ug/L	1		6020B	Total Recoverable
Potassium	70	J	200	180	65	ug/L	1		6020B	Total Recoverable
Sodium	790		200	180	90	ug/L	1		6020B	Total Recoverable
Turbidity	3.0	H H3	1.0	0.70	1.0	NTU	1		180.1	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	2.8	J Q	8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Bicarbonate Alkalinity as CaCO3	2.8	J	8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Total Dissolved Solids	14000		3000	2500	1200	mg/L	1		2540C - 2015	Total/NA
pH	6.4	HF	0.01	0.01	0.01	S.U.	1		9040C	Total/NA
Ammonia as N	0.056	J	0.10	0.090	0.050	mg/L	1		EPA 350.1	Total/NA
Total Organic Carbon	0.86	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 1	0.86	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 2	0.86	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 3	0.85	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: TDSS-MW01-3Q24 — Lab Sample ID: 410-179201-1

Date Collected: 07/07/24 10:30 — **Matrix: Water**
Date Received: 07/10/24 09:35

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**19**	**D M**	7.5	5.0	2.5	mg/L		07/11/24 12:15	5
Chloride	**100**	**D**	75	60	30	mg/L		07/11/24 12:45	50

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	0.50	U	1.0	0.50	0.20	ug/L		07/17/24 09:05	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		07/17/24 09:05	1
Calcium	**15000**		120	100	50	ug/L		07/17/24 09:05	1
Cobalt	**0.84**		0.50	0.40	0.16	ug/L		07/17/24 09:05	1
Copper	**2.5**		1.0	0.90	0.36	ug/L		07/17/24 09:05	1
Iron	**140**		50	40	20	ug/L		07/17/24 09:05	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		07/17/24 09:05	1
Magnesium	**12000**		50	32	16	ug/L		07/17/24 09:05	1
Potassium	**5400**		200	180	65	ug/L		07/17/24 09:05	1
Sodium	**78000**		200	180	90	ug/L		07/17/24 09:05	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Turbidity (EPA 180.1)	**2.5**	**H H3**	1.0	0.70	1.0	NTU		07/10/24 23:54	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**69**	**Q**	8.0	6.0	2.6	mg/L		07/11/24 09:57	1
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		07/11/24 09:57	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**69**		8.0	6.0	2.6	mg/L		07/11/24 09:57	1
Total Dissolved Solids (SM 2540C - 2015)	**210**		30	25	12	mg/L		07/11/24 21:54	1
pH (SW846 9040C)	**7.2**	**HF**	0.01	0.01	0.01	S.U.		07/11/24 09:57	1
Ammonia as N (EPA 350.1)	0.090	U	0.10	0.090	0.050	mg/L		07/12/24 11:31	1
Total Organic Carbon (SM5310C)	**4.6**		2.0	1.0	0.50	mg/L		07/11/24 19:40	1
TOC Result 1 (SM5310C)	**4.5**		2.0	1.0	0.50	mg/L		07/11/24 19:40	1
TOC Result 2 (SM5310C)	**4.4**		2.0	1.0	0.50	mg/L		07/11/24 19:40	1
TOC Result 3 (SM5310C)	**4.9**		2.0	1.0	0.50	mg/L		07/11/24 19:40	1

Client Sample ID: TDSS-MW02-3Q24 — Lab Sample ID: 410-179201-2

Date Collected: 07/07/24 15:28 — **Matrix: Water**
Date Received: 07/10/24 09:35

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**25**	**D M**	7.5	5.0	2.5	mg/L		07/11/24 12:55	5
Chloride	**190**	**D**	75	60	30	mg/L		07/11/24 13:06	50

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	0.50	U	1.0	0.50	0.20	ug/L		07/17/24 09:03	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		07/17/24 09:03	1
Calcium	**21000**		120	100	50	ug/L		07/17/24 09:03	1
Cobalt	**0.19**	**J**	0.50	0.40	0.16	ug/L		07/17/24 09:03	1
Copper	**0.72**	**J**	1.0	0.90	0.36	ug/L		07/17/24 09:03	1
Iron	**380**		50	40	20	ug/L		07/17/24 09:03	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		07/17/24 09:03	1

Client Sample ID: TDSS-MW02-3Q24

Lab Sample ID: 410-179201-2

Date Collected: 07/07/24 15:28
Matrix: Water
Date Received: 07/10/24 09:35

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Magnesium	**17000**		50	32	16	ug/L		07/17/24 09:03	1
Potassium	**7600**		200	180	65	ug/L		07/17/24 09:03	1
Sodium	**130000**	**D**	2000	1800	900	ug/L		07/17/24 13:51	10

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Turbidity (EPA 180.1)	**18**	**H H3**	1.0	0.70	1.0	NTU		07/10/24 23:54	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**67**	**Q**	8.0	6.0	2.6	mg/L		07/11/24 10:11	1
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		07/11/24 10:11	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**67**		8.0	6.0	2.6	mg/L		07/11/24 10:11	1
Total Dissolved Solids (SM 2540C - 2015)	**350**		60	50	24	mg/L		07/11/24 21:54	1
pH (SW846 9040C)	**7.5**	**HF**	0.01	0.01	0.01	S.U.		07/11/24 10:11	1
Ammonia as N (EPA 350.1)	**0.050**	**J**	0.10	0.090	0.050	mg/L		07/12/24 11:33	1
Total Organic Carbon (SM5310C)	**0.58**	**J**	2.0	1.0	0.50	mg/L		07/11/24 20:00	1
TOC Result 1 (SM5310C)	**0.64**	**J**	2.0	1.0	0.50	mg/L		07/11/24 20:00	1
TOC Result 2 (SM5310C)	**0.67**	**J**	2.0	1.0	0.50	mg/L		07/11/24 20:00	1
TOC Result 3 (SM5310C)	1.0	U	2.0	1.0	0.50	mg/L		07/11/24 20:00	1

Client Sample ID: TDSS-ER-3Q24

Lab Sample ID: 410-179201-3

Date Collected: 07/07/24 17:10
Matrix: Water
Date Received: 07/10/24 09:35

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U M	1.5	1.0	0.50	mg/L		07/11/24 10:02	1
Chloride	1.2	U	1.5	1.2	0.60	mg/L		07/11/24 10:02	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	0.50	U	1.0	0.50	0.20	ug/L		07/17/24 11:31	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		07/17/24 11:31	1
Calcium	**300**		120	100	50	ug/L		07/17/24 11:31	1
Cobalt	0.40	U	0.50	0.40	0.16	ug/L		07/17/24 11:31	1
Copper	**1.9**		1.0	0.90	0.36	ug/L		07/17/24 11:31	1
Iron	**75**		50	40	20	ug/L		07/17/24 11:31	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		07/17/24 11:31	1
Magnesium	**76**		50	32	16	ug/L		07/17/24 11:31	1
Potassium	**70**	**J**	200	180	65	ug/L		07/17/24 11:31	1
Sodium	**790**		200	180	90	ug/L		07/17/24 11:31	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Turbidity (EPA 180.1)	**3.0**	**H H3**	1.0	0.70	1.0	NTU		07/10/24 23:54	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**2.8**	**J Q**	8.0	6.0	2.6	mg/L		07/11/24 10:04	1
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		07/11/24 10:04	1

Client Sample ID: TDSS-ER-3Q24
Lab Sample ID: 410-179201-3

Date Collected: 07/07/24 17:10
Matrix: Water
Date Received: 07/10/24 09:35

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	2.8	J	8.0	6.0	2.6	mg/L		07/11/24 10:04	1
Total Dissolved Solids (SM 2540C - 2015)	14000		3000	2500	1200	mg/L		07/11/24 21:54	1
pH (SW846 9040C)	6.4	HF	0.01	0.01	0.01	S.U.		07/11/24 10:04	1
Ammonia as N (EPA 350.1)	0.056	J	0.10	0.090	0.050	mg/L		07/12/24 11:50	1
Total Organic Carbon (SM5310C)	0.86	J	2.0	1.0	0.50	mg/L		07/11/24 20:20	1
TOC Result 1 (SM5310C)	0.86	J	2.0	1.0	0.50	mg/L		07/11/24 20:20	1
TOC Result 2 (SM5310C)	0.86	J	2.0	1.0	0.50	mg/L		07/11/24 20:20	1
TOC Result 3 (SM5310C)	0.85	J	2.0	1.0	0.50	mg/L		07/11/24 20:20	1

Default Detection Limits

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

Method: 300.0 - Anions, Ion Chromatography

Analyte	LOQ	DL	Units
Chloride	1.5	0.60	mg/L
Sulfate	1.5	0.50	mg/L

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Prep: 3005A

Analyte	LOQ	DL	Units
Antimony	1.0	0.20	ug/L
Arsenic	2.0	0.68	ug/L
Calcium	120	50	ug/L
Cobalt	0.50	0.16	ug/L
Copper	1.0	0.36	ug/L
Iron	50	20	ug/L
Lead	0.50	0.12	ug/L
Magnesium	50	16	ug/L
Potassium	200	65	ug/L
Sodium	200	90	ug/L

General Chemistry

Analyte	LOQ	DL	Units
Turbidity	1.0	1.0	NTU
Bicarbonate Alkalinity as CaCO3	8.0	2.6	mg/L
Carbonate Alkalinity as CaCO3	8.0	2.6	mg/L
Total Alkalinity as CaCO3 to pH 4.5	8.0	2.6	mg/L
Total Dissolved Solids	30	12	mg/L
pH	0.01	0.01	S.U.
Ammonia as N	0.10	0.050	mg/L
TOC Result 1	2.0	0.50	mg/L
TOC Result 2	2.0	0.50	mg/L
TOC Result 3	2.0	0.50	mg/L
Total Organic Carbon	2.0	0.50	mg/L

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 410-526874/5
Matrix: Water
Analysis Batch: 526874

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U M	1.5	1.0	0.50	mg/L		07/11/24 06:07	1
Chloride	1.2	U	1.5	1.2	0.60	mg/L		07/11/24 06:07	1

Lab Sample ID: LCS 410-526874/3
Matrix: Water
Analysis Batch: 526874

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	7.50	7.92	M	mg/L		106	87 - 112
Chloride	3.00	2.90		mg/L		97	87 - 111

Lab Sample ID: LCSD 410-526874/4
Matrix: Water
Analysis Batch: 526874

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	7.50	7.89	M	mg/L		105	87 - 112	0	15
Chloride	3.00	2.91		mg/L		97	87 - 111	0	15

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-526979/1-A
Matrix: Water
Analysis Batch: 529378

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 526979

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	0.50	U	1.0	0.50	0.20	ug/L		07/17/24 10:39	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		07/17/24 10:39	1
Calcium	100	U	120	100	50	ug/L		07/17/24 10:39	1
Cobalt	0.40	U	0.50	0.40	0.16	ug/L		07/17/24 10:39	1
Copper	0.90	U	1.0	0.90	0.36	ug/L		07/17/24 10:39	1
Iron	24.9	J	50	40	20	ug/L		07/17/24 10:39	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		07/17/24 10:39	1
Magnesium	19.6	J	50	32	16	ug/L		07/17/24 10:39	1
Potassium	180	U	200	180	65	ug/L		07/17/24 10:39	1
Sodium	180	U	200	180	90	ug/L		07/17/24 10:39	1

Lab Sample ID: LCS 410-526979/2-A
Matrix: Water
Analysis Batch: 529378

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 526979

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	94.1		ug/L		94	85 - 117
Arsenic	500	468		ug/L		94	84 - 116
Calcium	5000	4560		ug/L		91	87 - 118
Cobalt	500	465		ug/L		93	86 - 115
Copper	500	466		ug/L		93	85 - 118
Iron	5000	4540		ug/L		91	87 - 118
Lead	50.0	47.3		ug/L		95	88 - 115
Magnesium	5000	4530		ug/L		91	83 - 118

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 410-526979/2-A
Matrix: Water
Analysis Batch: 529378

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 526979

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Potassium	5000	4670		ug/L		93	87 - 115
Sodium	5000	4580		ug/L		92	85 - 117

Lab Sample ID: MB 410-526998/1-A
Matrix: Water
Analysis Batch: 529380

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 526998

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	0.50	U	1.0	0.50	0.20	ug/L		07/17/24 08:40	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		07/17/24 08:40	1
Calcium	100	U	120	100	50	ug/L		07/17/24 08:40	1
Cobalt	0.40	U	0.50	0.40	0.16	ug/L		07/17/24 08:40	1
Copper	0.90	U	1.0	0.90	0.36	ug/L		07/17/24 08:40	1
Iron	40	U	50	40	20	ug/L		07/17/24 08:40	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		07/17/24 08:40	1
Magnesium	32	U	50	32	16	ug/L		07/17/24 08:40	1
Potassium	180	U	200	180	65	ug/L		07/17/24 08:40	1
Sodium	180	U	200	180	90	ug/L		07/17/24 08:40	1

Lab Sample ID: LRC 410-529378/9
Matrix: Water
Analysis Batch: 529378

Client Sample ID: Lab Control Sample

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	2000	2140		ug/L		107	90 - 110
Arsenic	2000	2080		ug/L		104	90 - 110
Calcium	200000	200000		ug/L		100	90 - 110
Cobalt	2000	2070		ug/L		103	90 - 110
Copper	2000	2020		ug/L		101	90 - 110
Iron	160000	159000		ug/L		99	90 - 110
Lead	2000	2170		ug/L		108	90 - 110
Magnesium	200000	198000		ug/L		99	90 - 110
Potassium	200000	203000		ug/L		101	90 - 110
Sodium	200000	193000		ug/L		97	90 - 110

Lab Sample ID: LRC 410-529380/9
Matrix: Water
Analysis Batch: 529380

Client Sample ID: Lab Control Sample

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	2000	2190		ug/L		109	90 - 110
Arsenic	2000	2060		ug/L		103	90 - 110
Calcium	200000	197000		ug/L		98	90 - 110
Cobalt	2000	1940		ug/L		97	90 - 110
Copper	2000	2030		ug/L		102	90 - 110
Iron	160000	162000		ug/L		101	90 - 110
Lead	2000	2140		ug/L		107	90 - 110
Magnesium	200000	204000		ug/L		102	90 - 110
Potassium	200000	200000		ug/L		100	90 - 110

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LRC 410-529380/9
Matrix: Water
Analysis Batch: 529380

Client Sample ID: Lab Control Sample

Analyte			Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec Limits		
Sodium			200000	198000		ug/L		99	90 - 110		

Method: 180.1 - Turbidity, Nephelometric

Lab Sample ID: MB 410-526892/3
Matrix: Water
Analysis Batch: 526892

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Turbidity	0.70	U	1.0	0.70	1.0	NTU		07/10/24 23:54	1

Lab Sample ID: LCS 410-526892/4
Matrix: Water
Analysis Batch: 526892

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Turbidity			1.00	1.1		NTU		112	88 - 139		

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 410-527232/128
Matrix: Water
Analysis Batch: 527232

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	6.0	U	8.0	6.0	2.6	mg/L		07/11/24 08:11	1

Lab Sample ID: LCS 410-527232/131
Matrix: Water
Analysis Batch: 527232

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Alkalinity as CaCO3 to pH 4.5			189	208		mg/L		110	80 - 110		

Lab Sample ID: LCSD 410-527232/132
Matrix: Water
Analysis Batch: 527232

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Alkalinity as CaCO3 to pH 4.5			189	184	Q	mg/L		98	80 - 110	12	10

Method: 2540C - 2015 - Total Dissolved Solids (Dried at 180 °C)

Lab Sample ID: MB 410-527364/1
Matrix: Water
Analysis Batch: 527364

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Dissolved Solids	25	U	30	25	12	mg/L		07/11/24 21:54	1

Method: 2540C - 2015 - Total Dissolved Solids (Dried at 180 °C) (Continued)

Lab Sample ID: LCS 410-527364/2
Matrix: Water
Analysis Batch: 527364

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			200	197		mg/L		99	90 - 110		

Method: 9040C - pH

Lab Sample ID: LCS 410-527234/129
Matrix: Water
Analysis Batch: 527234

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
pH			7.00	7.0		S.U.		100	95 - 105		

Lab Sample ID: LCSD 410-527234/130
Matrix: Water
Analysis Batch: 527234

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
pH			7.00	7.0		S.U.		100	95 - 105	0	3

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 410-527694/17
Matrix: Water
Analysis Batch: 527694

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ammonia as N	0.090	U	0.10	0.090	0.050	mg/L		07/12/24 11:06	1

Lab Sample ID: LCS 410-527694/15
Matrix: Water
Analysis Batch: 527694

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia as N			2.00	2.04		mg/L		102	90 - 110		

Lab Sample ID: LCSD 410-527694/16
Matrix: Water
Analysis Batch: 527694

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia as N			2.00	1.99		mg/L		100	90 - 110	3	15

Method: SM5310C - TOC

Lab Sample ID: MB 410-527445/26
Matrix: Water
Analysis Batch: 527445

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	2.0	1.0	0.50	mg/L		07/11/24 18:02	1
TOC Result 1	1.0	U	2.0	1.0	0.50	mg/L		07/11/24 18:02	1
TOC Result 2	1.0	U	2.0	1.0	0.50	mg/L		07/11/24 18:02	1

Method: SM5310C - TOC (Continued)

Lab Sample ID: MB 410-527445/26
Matrix: Water
Analysis Batch: 527445

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
TOC Result 3	1.0	U	2.0	1.0	0.50	mg/L		07/11/24 18:02	1

Lab Sample ID: LCS 410-527445/25
Matrix: Water
Analysis Batch: 527445

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	50.0	49.2		mg/L		98	90 - 110
TOC Result 1	50.0	48.4		mg/L		97	90 - 110
TOC Result 2	50.0	51.1		mg/L		102	90 - 110
TOC Result 3	50.0	48.1		mg/L		96	90 - 110

Lab Sample ID: MRL 410-527445/3
Matrix: Water
Analysis Batch: 527445

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	1.00	0.633	J	mg/L		63	50 - 150
TOC Result 1	1.00	0.725	J	mg/L		72	
TOC Result 2	1.00	0.533	J	mg/L		53	
TOC Result 3	1.00	0.640	J	mg/L		64	

QC Association Summary

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

HPLC/IC

Analysis Batch: 526874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	300.0	
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	300.0	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	300.0	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	300.0	
410-179201-3	TDSS-ER-3Q24	Total/NA	Water	300.0	
MB 410-526874/5	Method Blank	Total/NA	Water	300.0	
LCS 410-526874/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 410-526874/4	Lab Control Sample Dup	Total/NA	Water	300.0	

Metals

Prep Batch: 526979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-3	TDSS-ER-3Q24	Total Recoverable	Water	3005A	
MB 410-526979/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-526979/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 526998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total Recoverable	Water	3005A	
410-179201-2	TDSS-MW02-3Q24	Total Recoverable	Water	3005A	
MB 410-526998/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-526998/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 529378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-3	TDSS-ER-3Q24	Total Recoverable	Water	6020B	526979
MB 410-526979/1-A	Method Blank	Total Recoverable	Water	6020B	526979
LCS 410-526979/2-A	Lab Control Sample	Total Recoverable	Water	6020B	526979
LRC 410-529378/9	Lab Control Sample		Water	6020B	

Analysis Batch: 529380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total Recoverable	Water	6020B	526998
410-179201-2	TDSS-MW02-3Q24	Total Recoverable	Water	6020B	526998
410-179201-2	TDSS-MW02-3Q24	Total Recoverable	Water	6020B	526998
MB 410-526998/1-A	Method Blank	Total Recoverable	Water	6020B	526998
LCS 410-526998/2-A	Lab Control Sample	Total Recoverable	Water	6020B	526998
LRC 410-529380/9	Lab Control Sample		Water	6020B	

General Chemistry

Analysis Batch: 526892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	180.1	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	180.1	
410-179201-3	TDSS-ER-3Q24	Total/NA	Water	180.1	
MB 410-526892/3	Method Blank	Total/NA	Water	180.1	
LCS 410-526892/4	Lab Control Sample	Total/NA	Water	180.1	

QC Association Summary

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

General Chemistry

Analysis Batch: 527232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	2320B-2011	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	2320B-2011	
410-179201-3	TDSS-ER-3Q24	Total/NA	Water	2320B-2011	
MB 410-527232/128	Method Blank	Total/NA	Water	2320B-2011	
LCS 410-527232/131	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 410-527232/132	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 527234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	9040C	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	9040C	
410-179201-3	TDSS-ER-3Q24	Total/NA	Water	9040C	
LCS 410-527234/129	Lab Control Sample	Total/NA	Water	9040C	
LCSD 410-527234/130	Lab Control Sample Dup	Total/NA	Water	9040C	

Analysis Batch: 527364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	2540C - 2015	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	2540C - 2015	
410-179201-3	TDSS-ER-3Q24	Total/NA	Water	2540C - 2015	
MB 410-527364/1	Method Blank	Total/NA	Water	2540C - 2015	
LCS 410-527364/2	Lab Control Sample	Total/NA	Water	2540C - 2015	

Analysis Batch: 527445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	SM5310C	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	SM5310C	
410-179201-3	TDSS-ER-3Q24	Total/NA	Water	SM5310C	
MB 410-527445/26	Method Blank	Total/NA	Water	SM5310C	
LCS 410-527445/25	Lab Control Sample	Total/NA	Water	SM5310C	
MRL 410-527445/3	Lab Control Sample	Total/NA	Water	SM5310C	

Analysis Batch: 527694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-179201-1	TDSS-MW01-3Q24	Total/NA	Water	EPA 350.1	
410-179201-2	TDSS-MW02-3Q24	Total/NA	Water	EPA 350.1	
410-179201-3	TDSS-ER-3Q24	Total/NA	Water	EPA 350.1	
MB 410-527694/17	Method Blank	Total/NA	Water	EPA 350.1	
LCS 410-527694/15	Lab Control Sample	Total/NA	Water	EPA 350.1	
LCSD 410-527694/16	Lab Control Sample Dup	Total/NA	Water	EPA 350.1	

Lab Chronicle

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

Client Sample ID: TDSS-MW01-3Q24

Lab Sample ID: 410-179201-1

Date Collected: 07/07/24 10:30

Matrix: Water

Date Received: 07/10/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		5	526874	L4QM	ELLE	07/11/24 12:15
Total/NA	Analysis	300.0		50	526874	L4QM	ELLE	07/11/24 12:45
Total Recoverable	Prep	3005A			526998	UJL8	ELLE	07/11/24 07:50
Total Recoverable	Analysis	6020B		1	529380	F7JF	ELLE	07/17/24 09:05
Total/NA	Analysis	180.1		1	526892	UDS7	ELLE	07/10/24 23:54
Total/NA	Analysis	2320B-2011		1	527232	DI9Q	ELLE	07/11/24 09:57
Total/NA	Analysis	2540C - 2015		1	527364	UOCA	ELLE	07/11/24 21:54 - 07/12/24 10:25 [1]
Total/NA	Analysis	9040C		1	527234	DI9Q	ELLE	07/11/24 09:57
Total/NA	Analysis	EPA 350.1		1	527694	JCG7	ELLE	07/12/24 11:31
Total/NA	Analysis	SM5310C		1	527445	P684	ELLE	07/11/24 19:40

Client Sample ID: TDSS-MW02-3Q24

Lab Sample ID: 410-179201-2

Date Collected: 07/07/24 15:28

Matrix: Water

Date Received: 07/10/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		5	526874	L4QM	ELLE	07/11/24 12:55
Total/NA	Analysis	300.0		50	526874	L4QM	ELLE	07/11/24 13:06
Total Recoverable	Prep	3005A			526998	UJL8	ELLE	07/11/24 07:50
Total Recoverable	Analysis	6020B		1	529380	F7JF	ELLE	07/17/24 09:03
Total Recoverable	Prep	3005A			526998	UJL8	ELLE	07/11/24 07:50
Total Recoverable	Analysis	6020B		10	529380	F7JF	ELLE	07/17/24 13:51
Total/NA	Analysis	180.1		1	526892	UDS7	ELLE	07/10/24 23:54
Total/NA	Analysis	2320B-2011		1	527232	DI9Q	ELLE	07/11/24 10:11
Total/NA	Analysis	2540C - 2015		1	527364	UOCA	ELLE	07/11/24 21:54 - 07/12/24 10:25 [1]
Total/NA	Analysis	9040C		1	527234	DI9Q	ELLE	07/11/24 10:11
Total/NA	Analysis	EPA 350.1		1	527694	JCG7	ELLE	07/12/24 11:33
Total/NA	Analysis	SM5310C		1	527445	P684	ELLE	07/11/24 20:00

Client Sample ID: TDSS-ER-3Q24

Lab Sample ID: 410-179201-3

Date Collected: 07/07/24 17:10

Matrix: Water

Date Received: 07/10/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	526874	L4QM	ELLE	07/11/24 10:02
Total Recoverable	Prep	3005A			526979	UJL8	ELLE	07/11/24 07:35
Total Recoverable	Analysis	6020B		1	529378	F7JF	ELLE	07/17/24 11:31
Total/NA	Analysis	180.1		1	526892	UDS7	ELLE	07/10/24 23:54
Total/NA	Analysis	2320B-2011		1	527232	DI9Q	ELLE	07/11/24 10:04
Total/NA	Analysis	2540C - 2015		1	527364	UOCA	ELLE	07/11/24 21:54 - 07/12/24 10:25 [1]
Total/NA	Analysis	9040C		1	527234	DI9Q	ELLE	07/11/24 10:04
Total/NA	Analysis	EPA 350.1		1	527694	JCG7	ELLE	07/12/24 11:50

Lab Chronicle

Client: Environmental Chemical Corp.
Job ID: 410-179201-1
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline
SDG: 410-179201

Client Sample ID: TDSS-ER-3Q24
Lab Sample ID: 410-179201-3

Date Collected: 07/07/24 17:10
Matrix: Water
Date Received: 07/10/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM5310C		1	527445	P684	ELLE	07/11/24 20:20

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24

The following analytes are included in this report, but the laboratory is not certified by A2LA Dept. of Defense ELAP 0001.01. This list may include analytes for which the agency does not offer certification:

Analysis Method	Prep Method	Matrix	Analyte
180.1		Water	Turbidity
SM5310C		Water	TOC Result 3

Authority	Program	Identification Number	Expiration Date
Hawaii	State	N/A	01-31-25

The following analytes are included in this report, but the laboratory is not certified by Hawaii State N/A. This list may include analytes for which the agency does not offer certification:

Analysis Method	Prep Method	Matrix	Analyte
180.1		Water	Turbidity
2320B-2011		Water	Bicarbonate Alkalinity as CaCO3
2320B-2011		Water	Carbonate Alkalinity as CaCO3
2320B-2011		Water	Total Alkalinity as CaCO3 to pH 4.5
2540C - 2015		Water	Total Dissolved Solids
300.0		Water	Chloride
300.0		Water	Sulfate
6020B	3005A	Water	Antimony
6020B	3005A	Water	Arsenic
6020B	3005A	Water	Calcium
6020B	3005A	Water	Cobalt
6020B	3005A	Water	Copper
6020B	3005A	Water	Iron
6020B	3005A	Water	Lead
6020B	3005A	Water	Magnesium
6020B	3005A	Water	Potassium
6020B	3005A	Water	Sodium
9040C		Water	pH
EPA 350.1		Water	Ammonia as N
SM5310C		Water	TOC Result 1
SM5310C		Water	TOC Result 2
SM5310C		Water	TOC Result 3
SM5310C		Water	Total Organic Carbon

Method Summary

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
180.1	Turbidity, Nephelometric	EPA	ELLE
2320B-2011	Alkalinity, Total	SM	ELLE
2540C - 2015	Total Dissolved Solids (Dried at 180 °C)	SM	ELLE
9040C	pH	SW846	ELLE
EPA 350.1	Nitrogen, Ammonia	EPA	ELLE
SM5310C	TOC	SM	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 3Q-2024 / Baseline

Job ID: 410-179201-1
SDG: 410-179201

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-179201-1	TDSS-MW01-3Q24	Water	07/07/24 10:30	07/10/24 09:35
410-179201-2	TDSS-MW02-3Q24	Water	07/07/24 15:28	07/10/24 09:35
410-179201-3	TDSS-ER-3Q24	Water	07/07/24 17:10	07/10/24 09:35