Environmental Monitoring Quarterly Report 4
West Maui Temporary Debris Storage Site
January 20255

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

Monitoring Period: 10/18/2024 – 1/15/2025

Prepared by:

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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, was for the installation of the TDS site subject to terms and conditions for the design, construction, operation, and maintenance of the site. The agreement has since been extended for an additional year.

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 fourth such report; it applies to the monitoring period beginning on October 18, 2024, and ending on January 15, 2025. 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, nearly 400,000 tons ash and debris has been cleared from commercial and residential parcels in Lahaina. 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 January 22, 2025, a representative from MC DEM will participate in the Lahaina community's weekly disaster recovery meeting. The presentation, which will be available on the recovery website, summarizes 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 Eurofins Scientific laboratory 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

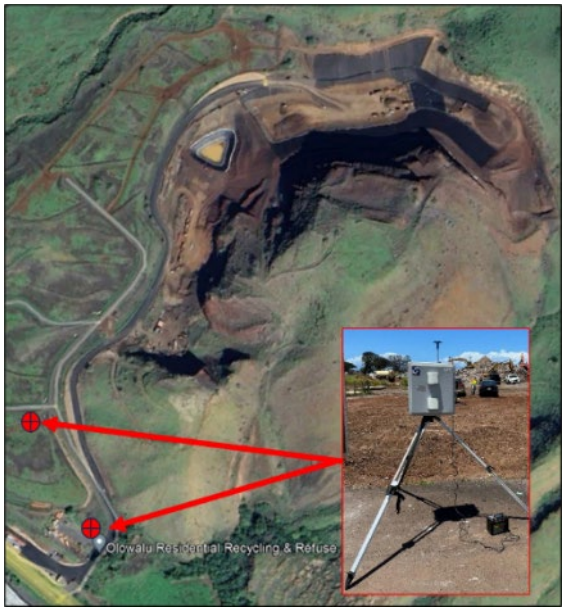


Table 2 summarizes the air monitoring readings collected to date at the TDS site:

Table 2 — Air Monitoring Measurements

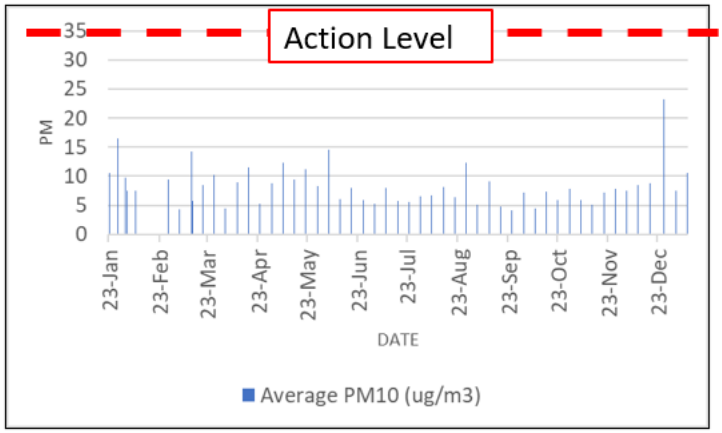
Date	Average PM_{10} ($\mu g/m^3$)	Average $PM_{2.5}$ ($\mu g/m^3$)	Monitor Identification Number
23-Jan-24 to 9-Oct-24	see previous reports		
16-Oct	7.41	5.34	11,16
23-Oct	5.95	4.57	11,16
30-Oct	7.82	6.86	11,16
6-Nov	5.83	5.14	11,16
13-Nov	5.06	4.42	11,16
20-Nov	7.17	6.33	11,16
27-Nov	7.9	6.76	11,16
4-Dec	7.49	6.13	11,16
11-Dec	8.39	7.11	11,16
18-Dec	8.76	7.86	11,16
27-Dec	23.3	21.67	11,16
3-Jan	7.57	6.44	11,16
10-Jan	10.57	9.17	16

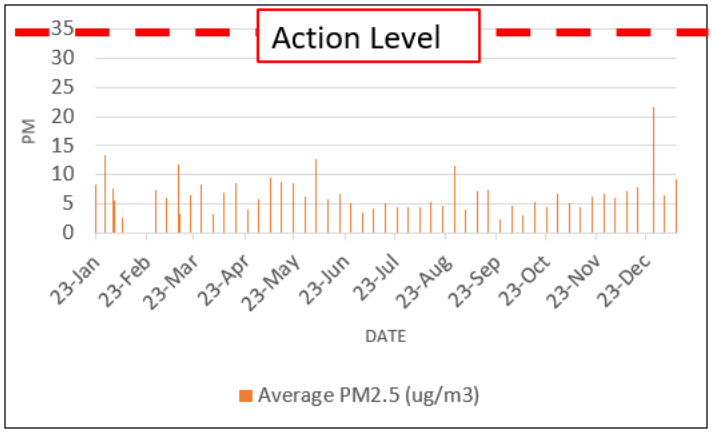
Abbreviations:

- $\mu g/m^3$: 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 10, PM 2.5) 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 to 9-Oct-24	see previous reports	see previous reports
10/30/2024	< 1’	< 10,000
11/20/2024	< 1’	< 10,000
12/30/2024	< 1’	< 10,000
1/15/2025	dry	0

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. 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 Sample 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

Parameter	Method	11-Jan-24 (Baseline)	15-Apr-24 Sample	20-May-24 Sample	Unit
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
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

Parameter	Method	11-Jan-24 (Baseline)	15-Apr-24 Sample	20-May-24 Sample	Unit
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
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

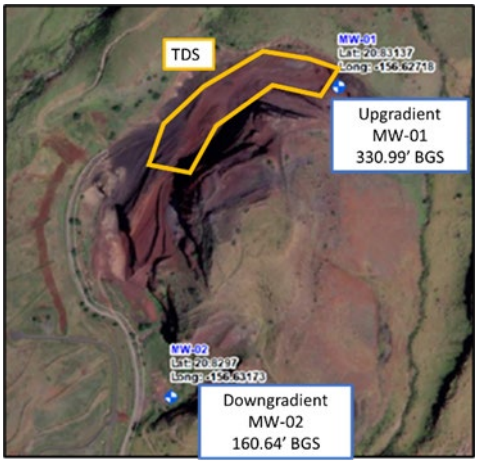
Because there have been no observed releases of leachate from the TDS site, there has been no need to sample surface water in creeks or drainage ditches adjacent to the TDS.

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. Review or 3rd party reports and data collected by DOH affirms that near-shore data show that there are no ash- or fire-related chemicals present in the surface water at concentrations that threaten human health.

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 approximately 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 —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 a second round collected on October 8, 2024. Due to an issue associated with the way the samples were collected in the second round, which impacted results for turbidity and Iron, the County of Maui requested that the wells be re-sampled. The re-sampling was completed on December 3 & 8, 2024 (MW-01), and December 4, 2024 (MW-02). 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.

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 — Groundwater Monitoring Well Sample Results

Cations & anions	Method	7-Jul-24 MW-01 (baseline)	8-Oct-24 MW-01	3-Dec-2024 8-Dec-2024 MW-01 (re-sample)	7-Jul-24 MW-02 (baseline)	8-Oct-24 MW-02	4-Dec-2024 MW-02 (re-sample)	Units
Magnesium	6020B	12000	12000	10000	17000	17000	17000	ug/L
Sodium	6020B	78000	76000	64000	130000	130000	100000	ug/L
Calcium	6020B	15000	14000	12000	21000	22000	19000	ug/L
Potassium	6020B	5400	5200	4900	7600	7700	6700	ug/L
Chloride	300	100	110	110	190	200	220	mg/L
Carbonate	2320B	ND	ND	6.0	ND	ND	6.0	mg/L
Sulfate	300	19	20	16	25	25	27	mg/L
Leachate indicators								
Total Dissolved Solids	2540C	210	340	590	350	500	500	mg/L
Total Organic Carbon	5310C	4.6	9.7	1.5	0.58	0.95	0.57	mg/L
Total Alkalinity	2320B	69	69	64	67	69	66	mg/L
Nitrogen-Ammonia	350.1	ND	0.069	0.090	0.05	0.091	0.090	mg/L
Iron	6020B	140	630*	26*	380	2500*	790*	ug/L
Field Parameters								
pH	9040C	7.2	7.5	7.0	7.5	7.9	7.9	
Turbidity	180.1	2.5	8.1*	0.70*	18	80*	24*	NTU

Metals								
Arsenic	6020B	ND	ND	1.7	ND	1.1	1.7	ug/L
Lead	6020B	ND	0.30	0.47	ND	0.76	0.25	ug/L
Antimony	6020B	ND	0.21	0.5	ND	ND	0.50	ug/L
Cobalt	6020B	0.84	1.9	0.84	0.19	0.41	0.17	ug/L
Copper	6020B	2.5	3.0	2.5	0.72	1.0	0.90	ug/L

***Note:** Elevated readings for Iron and Turbidity in October were due to an issue with sample collection. A re-sample event was conducted in early December to confirm that the issue was corrected. Further explanation is provided in the report in Attachment 2.

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: October 16, 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

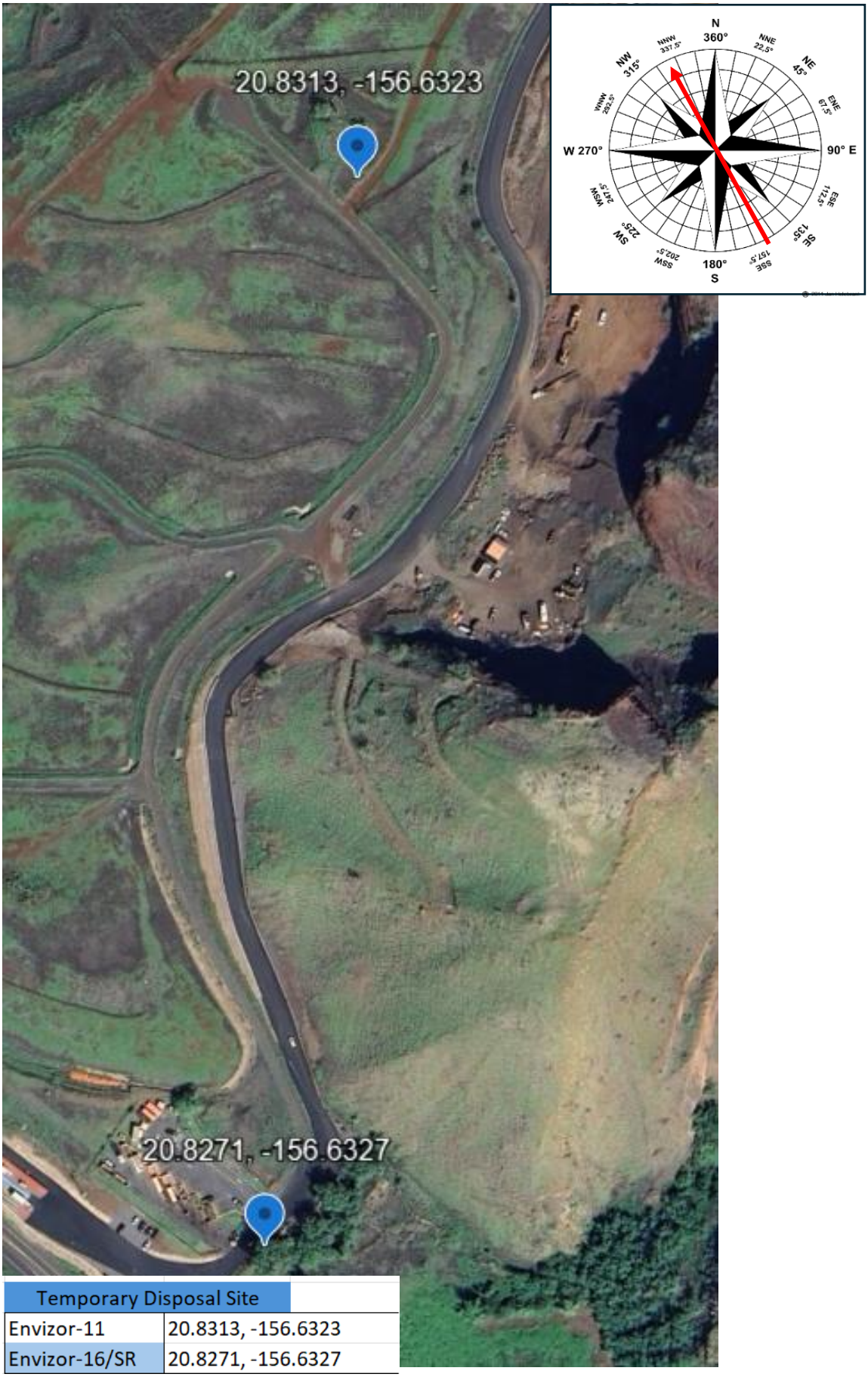
No weather data was transmitted today

Station Location Summary:

Station 11 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-11	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	3.31	7.36	70	35
PM 10	Avg, ug/M3	6.31	8.50	300	150



Temporary Disposal Site	
Envizor-11	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: October 23, 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

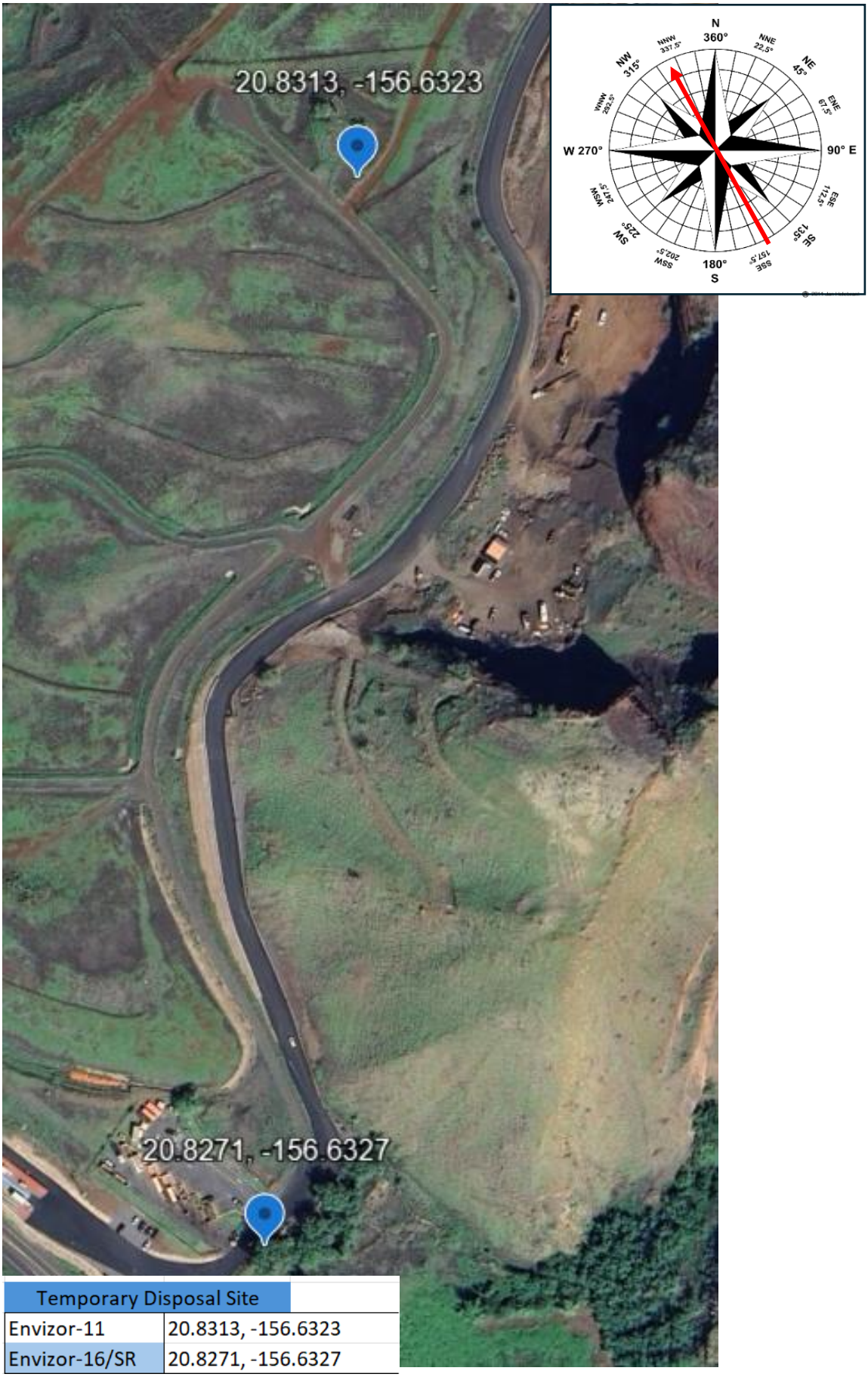
No weather data was transmitted today

Station Location Summary:

Station 11 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-11	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	1.72	7.42	70	35
PM 10	Avg, ug/M3	2.86	9.03	300	150



Temporary Disposal Site	
Envizor-11	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: October 30, 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

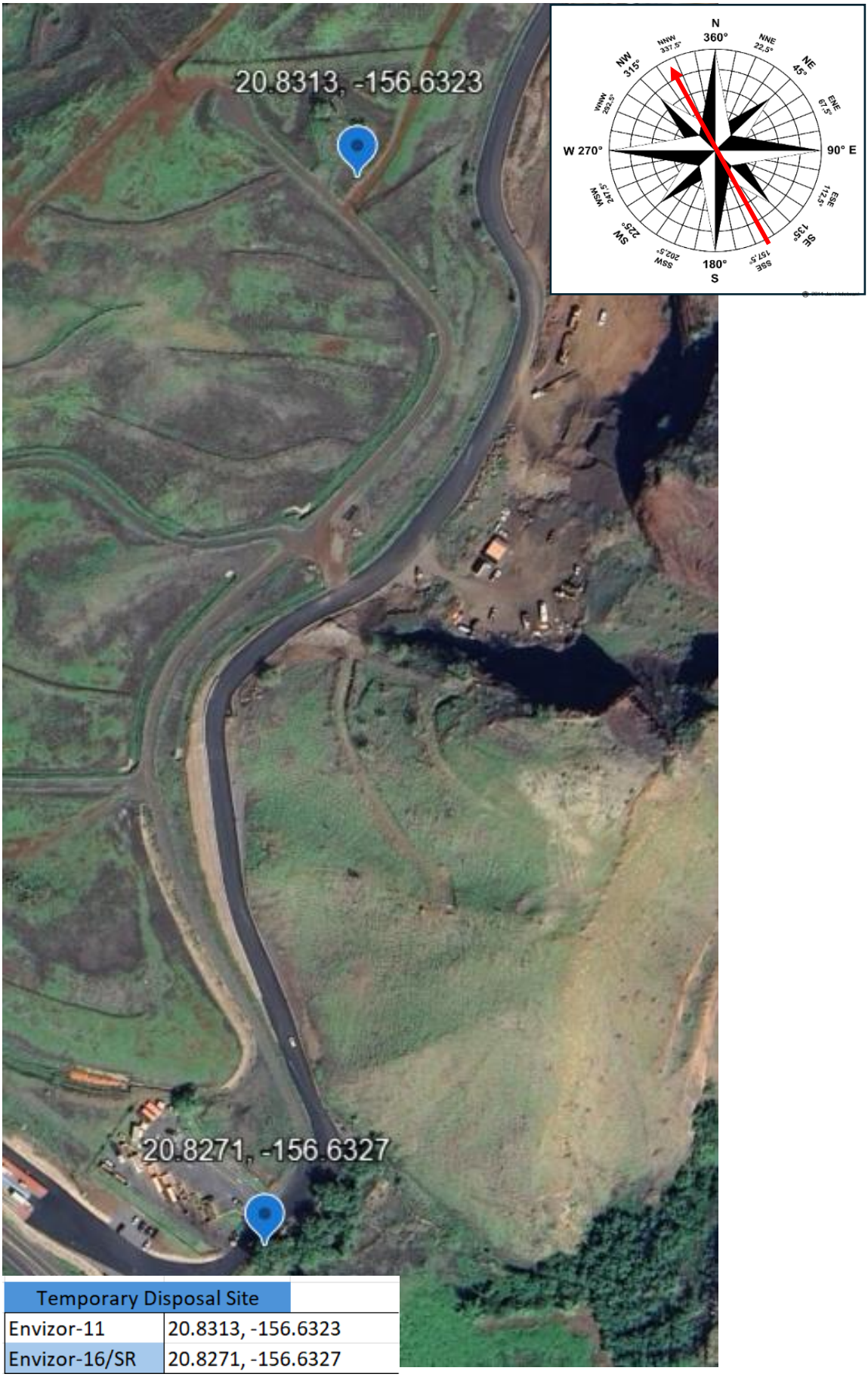
No weather data was transmitted today

Station Location Summary:

Station 11 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-11	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	4.46	9.26	70	35
PM 10	Avg, ug/M3	5.83	9.80	300	150



Temporary Disposal Site	
Envizor-11	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: November 6, 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

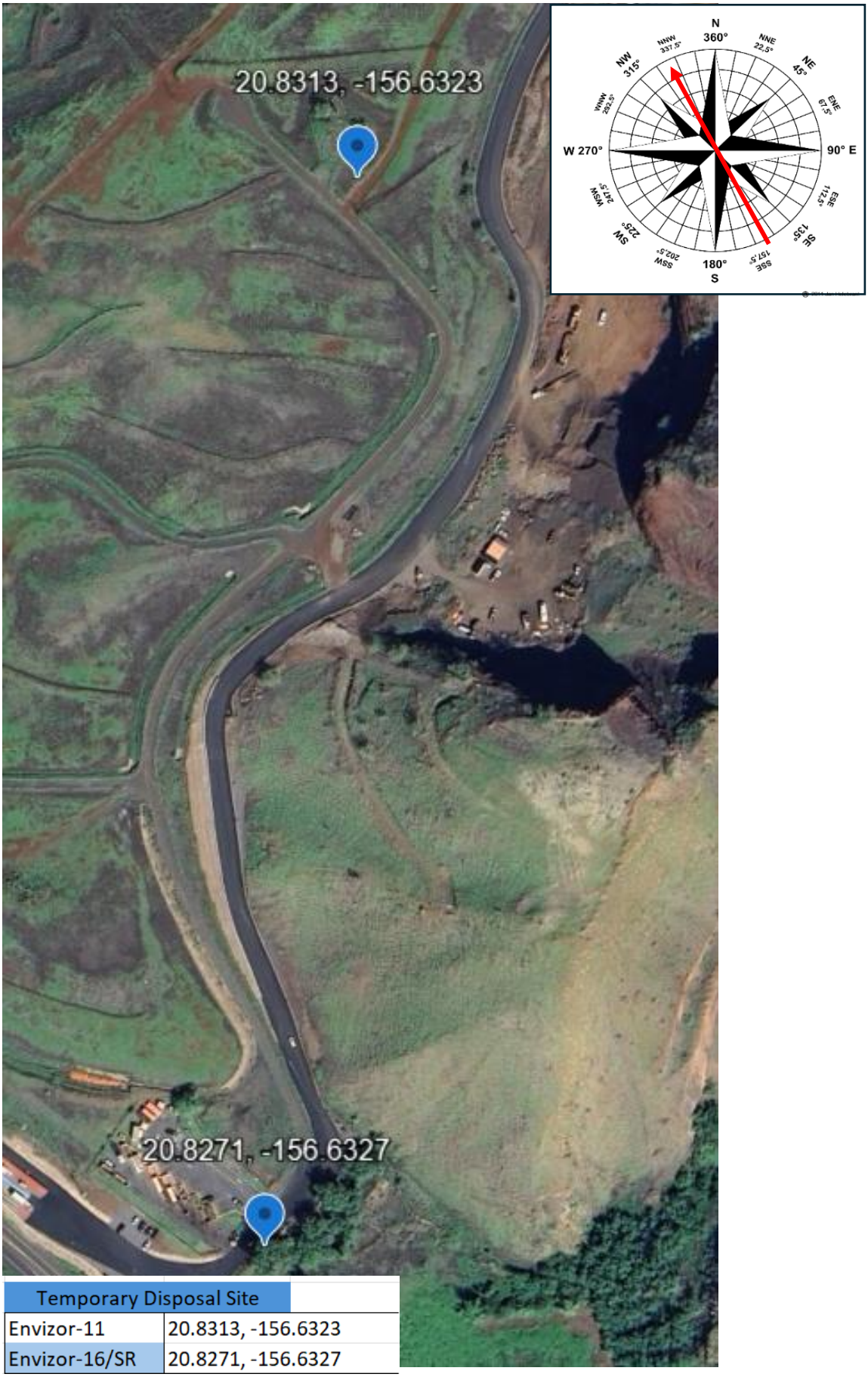
No weather data was transmitted today

Station Location Summary:

Station 11 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-11	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	3.47	6.81	70	35
PM 10	Avg, ug/M3	4.07	7.58	300	150



Temporary Disposal Site	
Envizor-11	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: November 13, 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

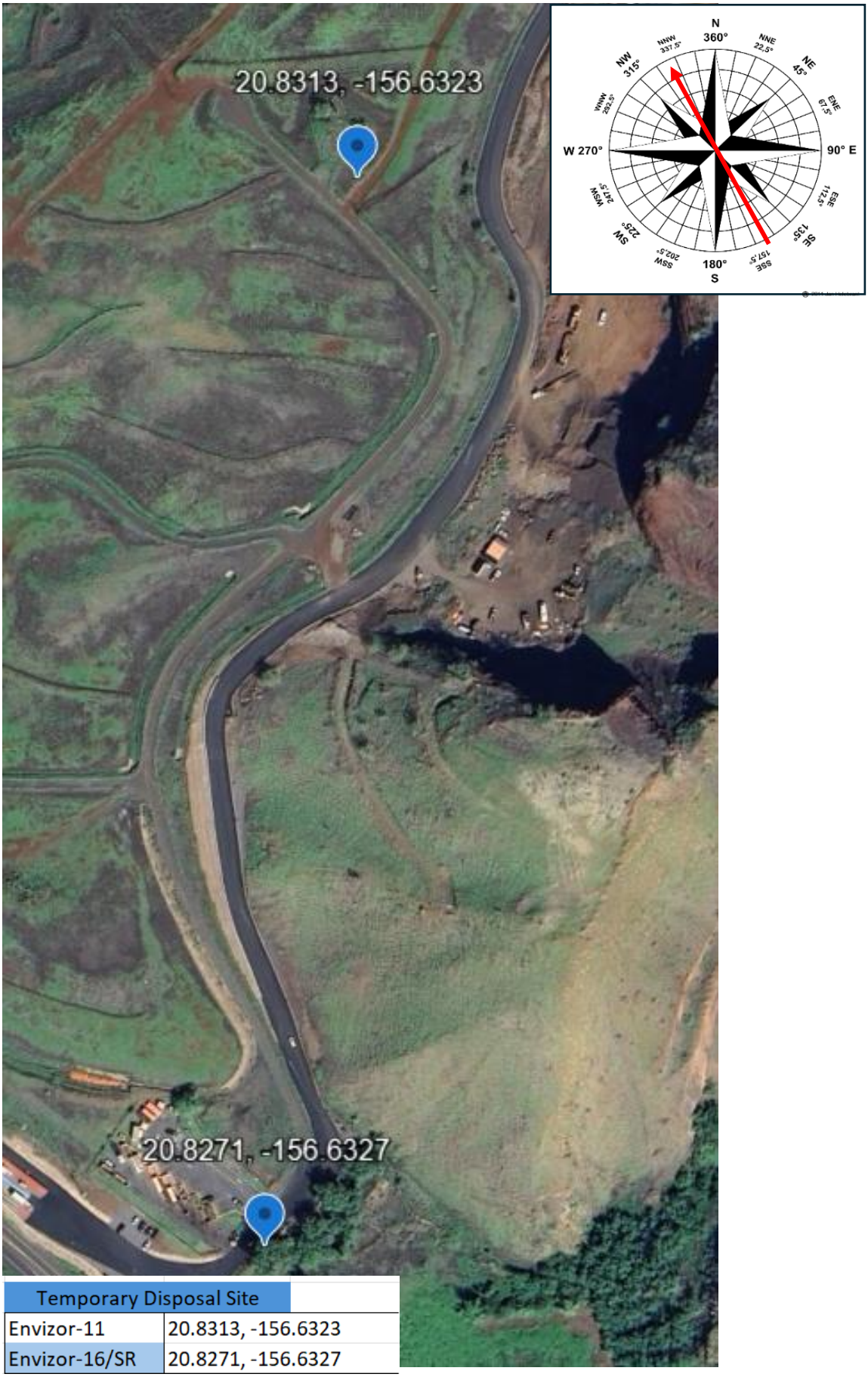
No weather data was transmitted today

Station Location Summary:

Station 11 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-11	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	4.48	4.36	70	35
PM 10	Avg, ug/M3	5.29	4.83	300	150



Temporary Disposal Site	
Envizor-11	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: November 20, 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

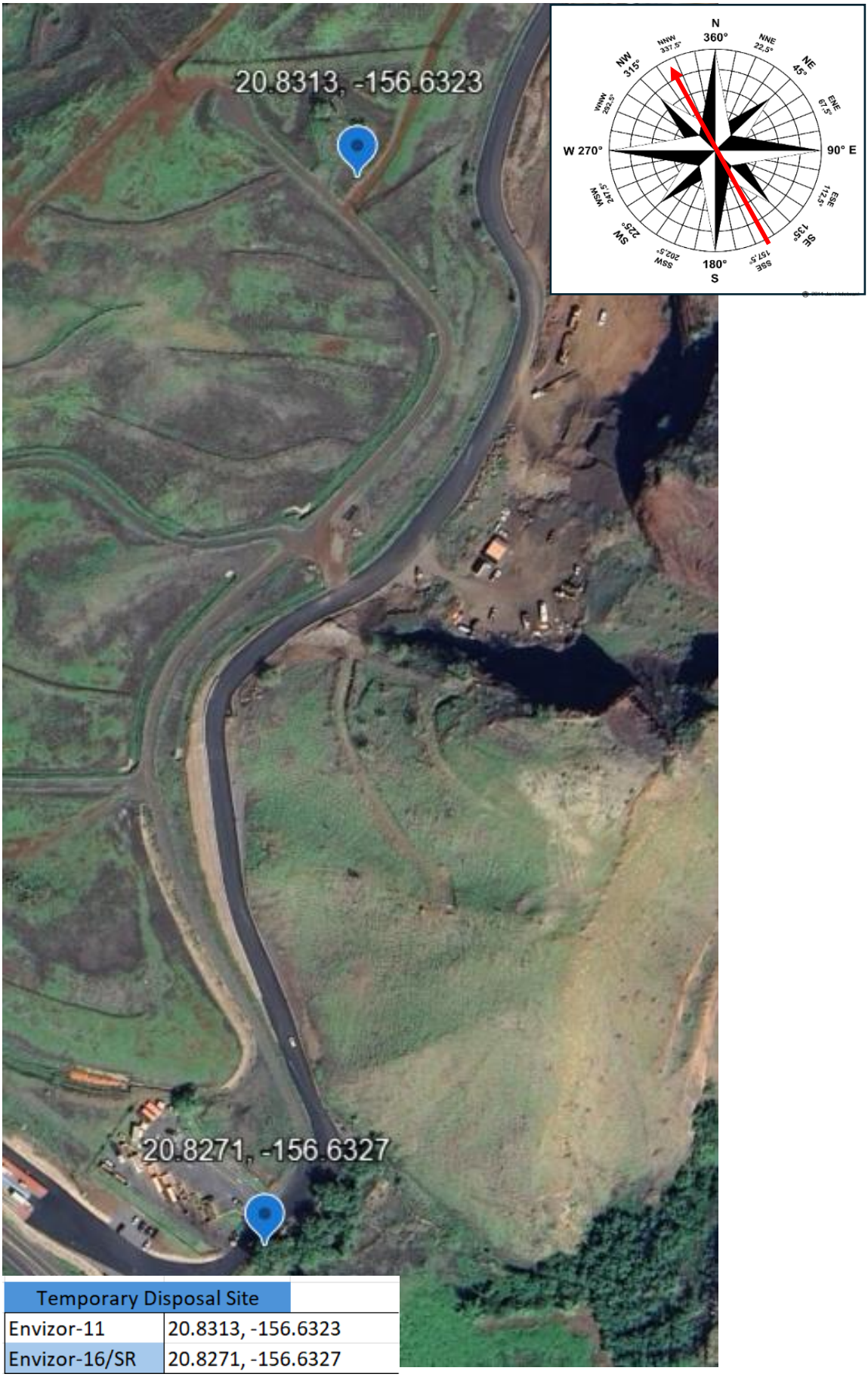
No weather data was transmitted today

Station Location Summary:

Station 11 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-11	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	5.58	7.08	70	35
PM 10	Avg, ug/M3	6.29	8.04	300	150



Temporary Disposal Site	
Envizor-11	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: November 27, 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

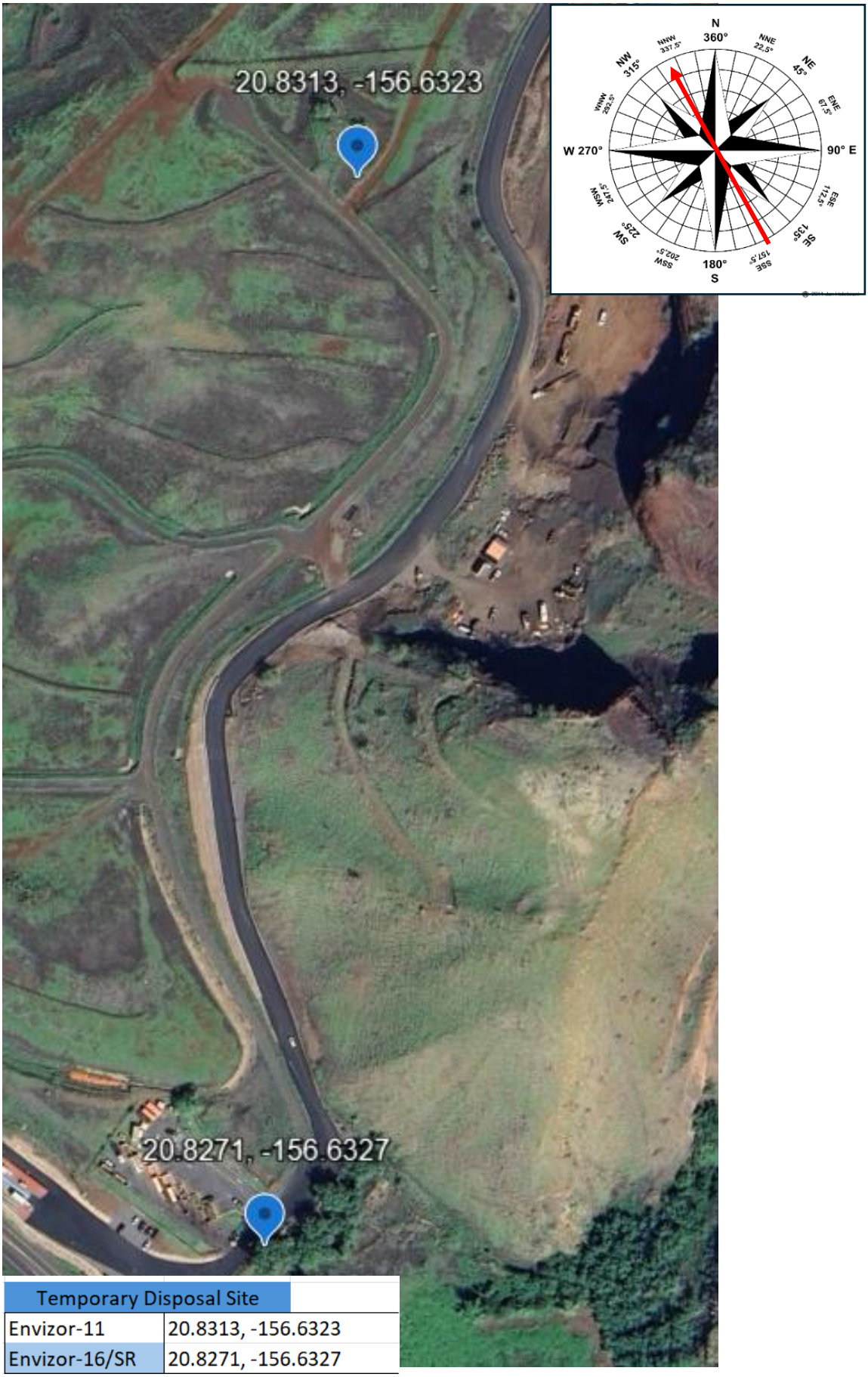
No weather data was transmitted today

Station Location Summary:

Station 11 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-11	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	5.74	7.78	70	35
PM 10	Avg, ug/M3	6.62	9.18	300	150



Temporary Disposal Site	
Envizor-11	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: December 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

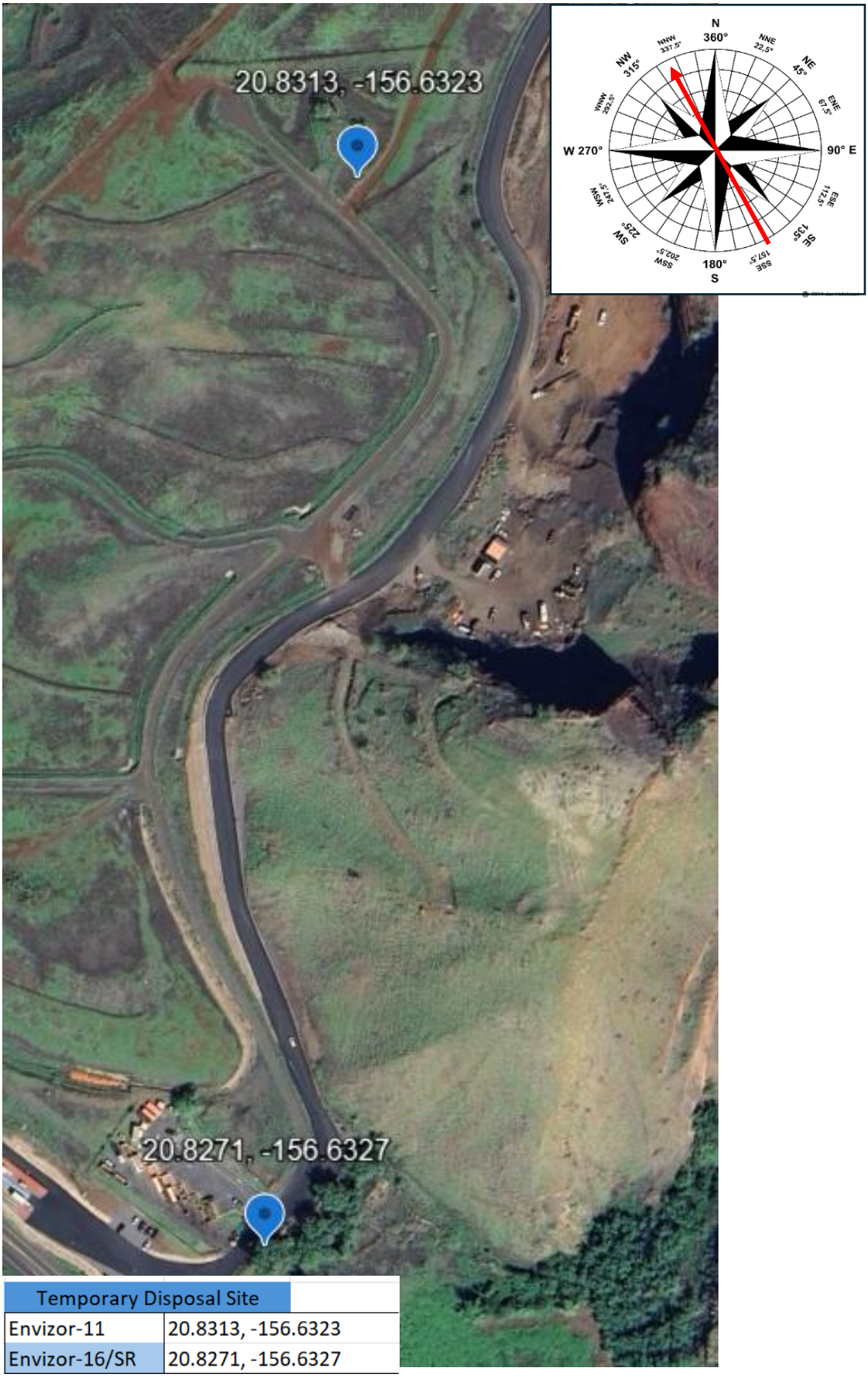
No weather data was transmitted today

Station Location Summary:

Station 11 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-11	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	4.34	7.92	70	35
PM 10	Avg, ug/M3	5.75	9.23	300	150



Temporary Disposal Site	
Envizor-11	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: December 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

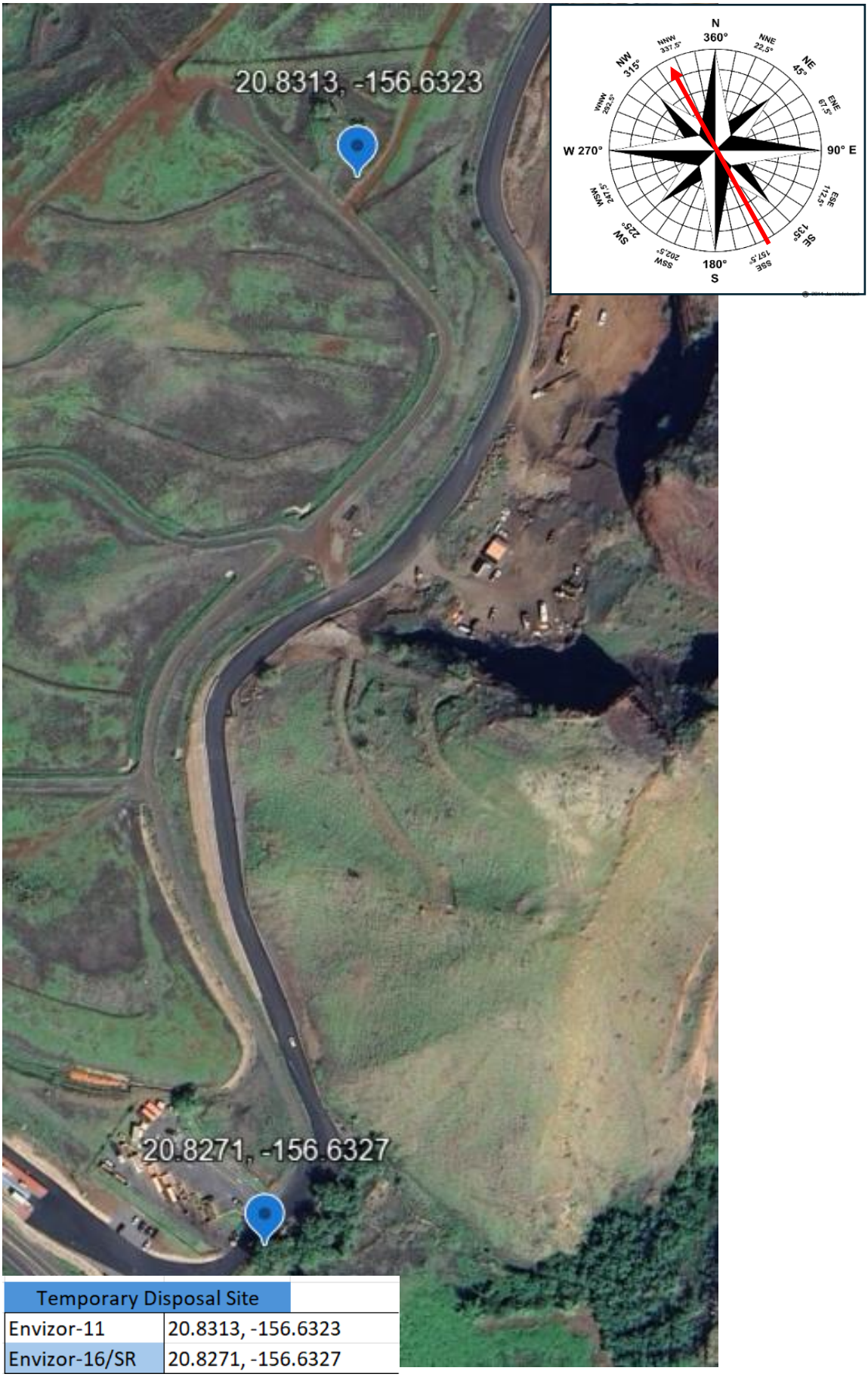
No weather data was transmitted today

Station Location Summary:

Station 11 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-11	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	7.04	7.18	70	35
PM 10	Avg, ug/M3	8.69	8.09	300	150



Temporary Disposal Site	
Envizor-11	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: December 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

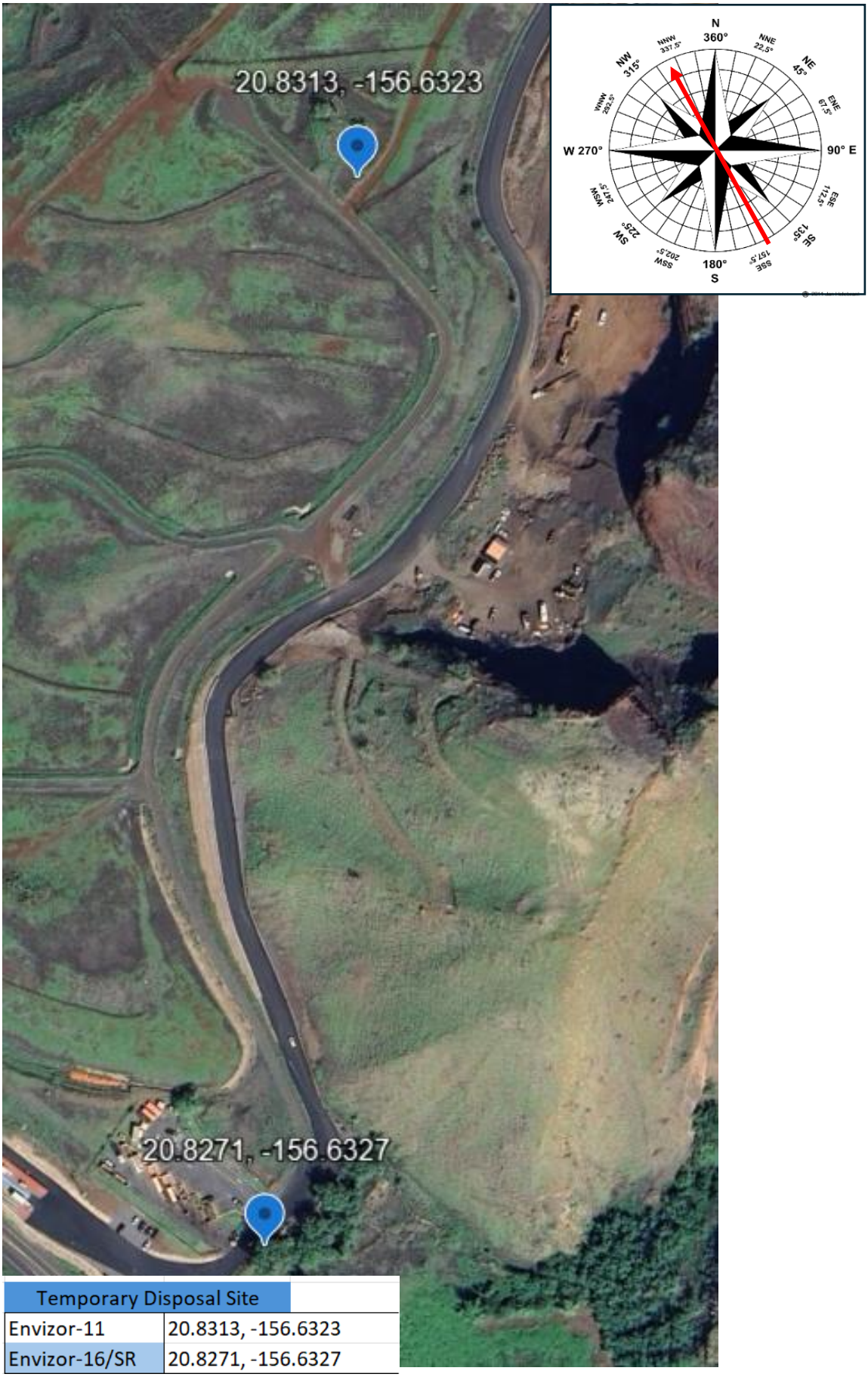
No weather data was transmitted today

Station Location Summary:

Station 11 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-11	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	5.37	10.35	70	35
PM 10	Avg, ug/M3	6.03	11.48	300	150



Temporary Disposal Site	
Envizor-11	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: December 27, 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

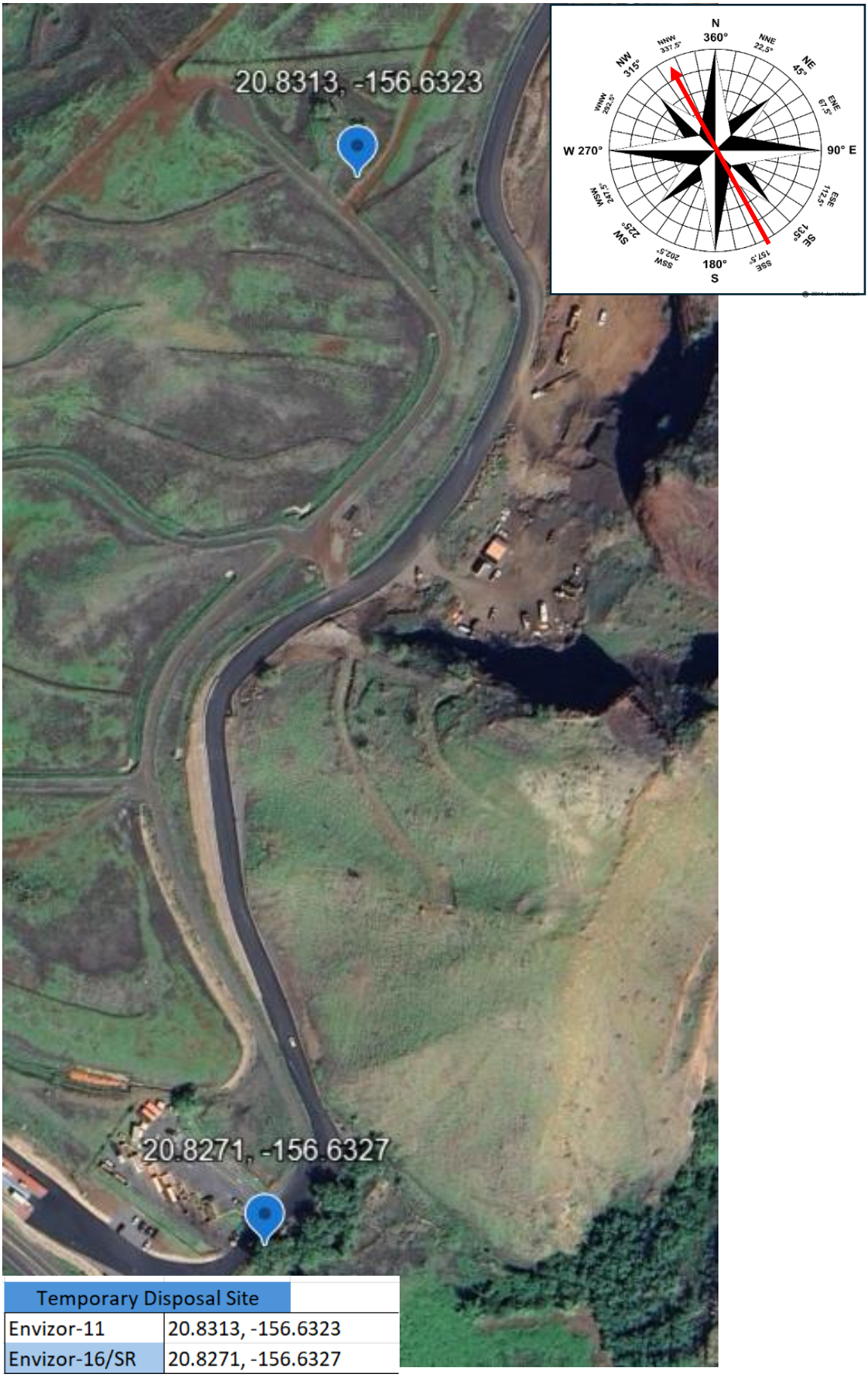
No weather data was transmitted today

Station Location Summary:

Station 11 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-11	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	20.71	22.63	70	35
PM 10	Avg, ug/M3	22.70	23.90	300	150



Temporary Disposal Site	
Envizor-11	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: January 3, 2025
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

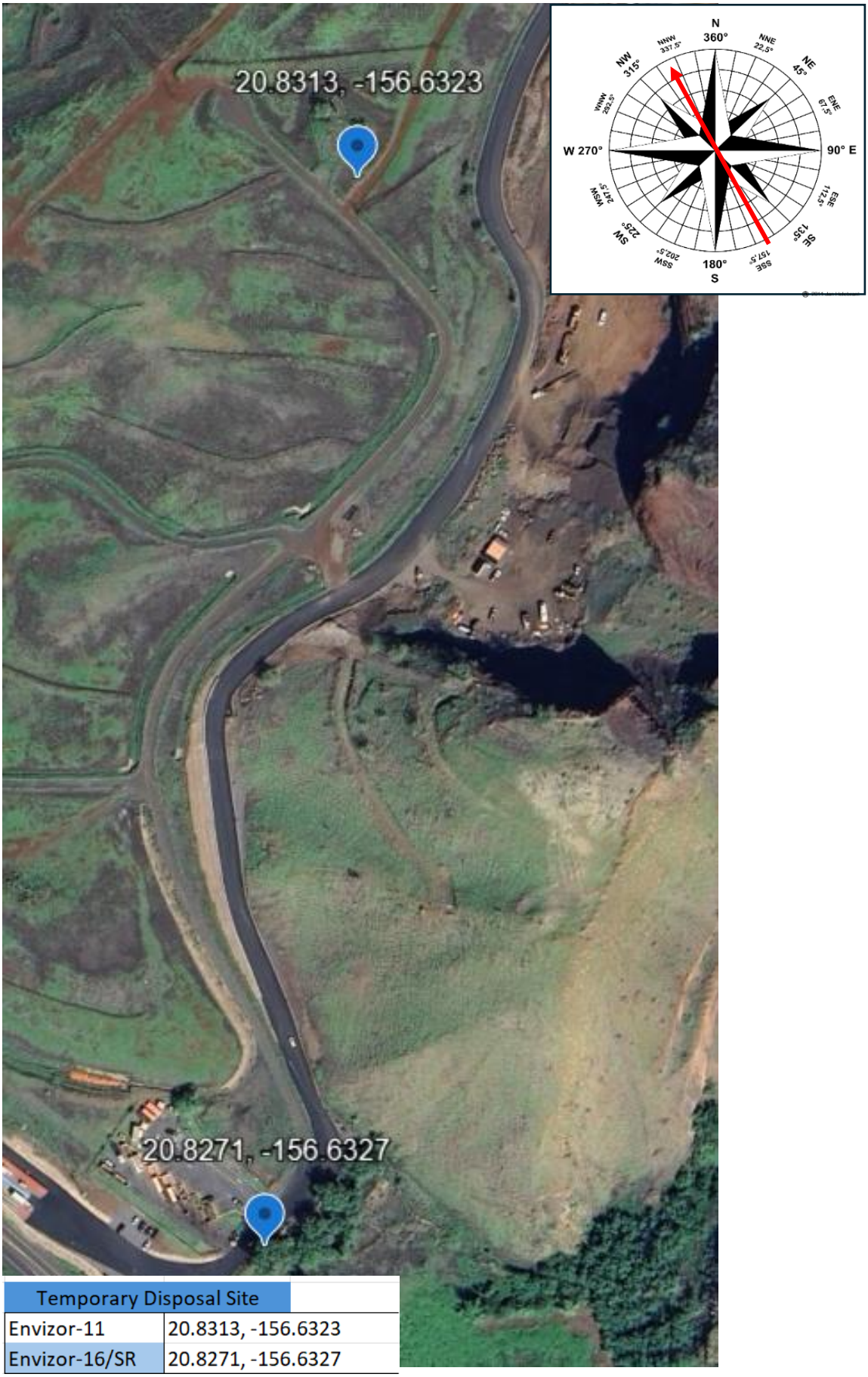
No weather data was transmitted today

Station Location Summary:

Station 11 and Station 16 + Sensitive Receptor were set up around the **Temporary Disposal Site** for continued debris removal air monitoring.

Station Data:

		Envizor-11	Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	5.61	7.27	70	35
PM 10	Avg, ug/M3	6.57	8.57	300	150



Temporary Disposal Site	
Envizor-11	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Daily Dust Monitoring Report: January 10, 2025
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

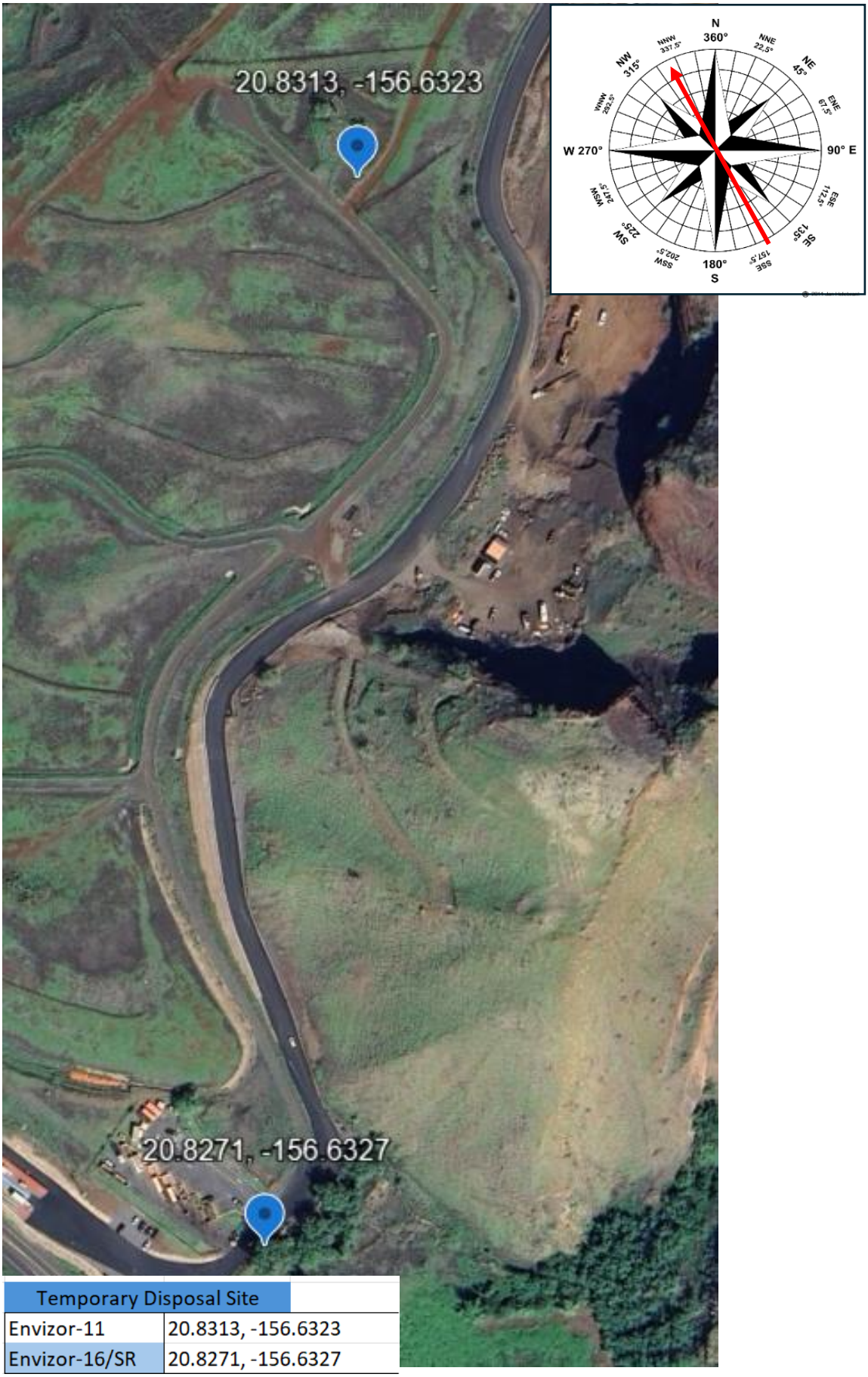
No weather data was transmitted today

Station Location Summary:

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

Station Data:

		Envizor-16	Exceedance Limit	Action Limit
PM 2.5	Avg, ug/M3	9.17	70	35
PM 10	Avg, ug/M3	10.57	300	150



Temporary Disposal Site	
Envizor-11	20.8313, -156.6323
Envizor-16/SR	20.8271, -156.6327

Attachment 2. Groundwater Analysis Laboratory Data Reports

(Reagent Traceability, Data Sheets and Shipping/Receiving available upon request)

Monitoring Well - Sampling Summary Report

Event: 4Q-2024 #2, Dec 2024 Re-sampling

TEMPORARY DISPOSAL SITE

OPERATIONS & MAINTENANCE

Prepared for:

United States Army Corps of Engineers

Honolulu District
Fort Shafter, Hawaii 96858

Contract No. W9128A24C0017

Report Date: 10-Jan-2024
Submittal #: PC-010.00

Prepared by:

ECC Constructors LLC
700 Airport Blvd, Suite 250
Burlingame, CA 94010

10-Jan-2025

1. Introduction

This report summarizes the following sampling event at the Olowalu TDSS in Maui County performed under contract W9128A24C0017.

- **Event ID:** 4Q-2024-02, Dec-2024 Resampling
- **Sample Date(s):** 03-Dec-2024, 04-Dec-2024, & 08-Dec-2024
- **SDG(s):** 410-199687 & 410-200051
- **Wells:** MW-01 (Deep Well / Up-gradient) & MW-02 (Shallow Well / Down-gradient)

Both monitoring wells, MW-01 and MW-02, at the Olowalu TDSS were resampled in December 2024 at the request of Maui County due to anomalous results in MW-02. The original sampling event for the 4Q-2024 event was on 08-Oct-2024. The sample set collected in this re-sampling event will supplement the original results from Oct-2024. The anomalous results from the 4Q-2024 in MW-02 included higher concentrations for iron *(3Q = 380 ug/L / 4Q = 2500 ug/L)* and an elevated turbidity *(3Q = 18 NTU/ 4Q = 80 NTU).*

2. Field Summary

The samples from the Dec-2024 Event (*4Q-2024-02*) were collected via low flow with a bladder pump, the same method as the first round in 3Q-2024. The Oct-2024 (*4Q-2024*) sampling event attempted to sample the wells via low flow with a compressor. However, the compressor was unable to get the up-gradient deep well (MW-01) to produce water, so the sampling crew collected the sample via a bailer.

The resampling event in Dec-2024 utilized compressed nitrogen to attempt to achieve the required PSI for the deep well to collect the samples that the compressor was unable to achieve. While the compressed nitrogen was able to achieve the PSI required to utilize the bladder pump in the deep well, the flow rate for the well exhausted the original supply of compressed nitrogen resulting in a partial sample on 03-Dec-2024 in MW-01. A full sample suite for MW-02 was collected the following day (04-Dec-2024) utilizing a new set of compressed nitrogen tanks. An attempt to collect MW-01 was also performed on 04-Dec-2024, but the compressed gas volume was insufficient to complete the sampling. The first set of samples were shipped out on 05-Dec-2024. Additional compressed gas was acquired in larger cylinders *(60-L vs 300-L)* to complete the sampling of MW-01. The sampling was postponed till Sunday, 08-Dec-2024 due to the shipping availability of FEDEX on the island to avoid hold time issues.

The sampling for MW-01 was completed on Sunday 08-Dec-2024, followed by the collection of the equipment rinsate. The samples were shipped out for analysis on Monday, 09-Dec-2024.

3. Chemistry Data Review

Data Validation was performed on the completed sample analyses. No results were rejected and are suitable for use as qualified. Refer to the attached Data Validation reports for details.

4. Attachments

Data Validation Reports:

- 410-199687 GenChem Validated
- 410-200051 GenChem Validated
- 199687 – Metals Validated
- 200051 – Metals Validated

Laboratory Data Packages:

- L2 SDG Package – 199687 (Dec-2024)
- L2 SDG Package - 200051 (Dec-2024)
- L2 SDG Package - 191987 (Oct-2024)

ECC Data Review Worksheet
Project: TDSS-Maui

General Chem: TDS, Turbidity, ALK, TOC, SO_4, Cl, NH_3
Criteria: TDSS-SAP (July 2024)

Validation Stage	Matrix	Preservation	Temperature Sample Receipt	Laboratory	SDG Number
2B	Groundwater (GW)	Per Method	<6 °C	Eurofins Lancaster	410-199687

FIELD IDENTIFICATION OF SAMPLES EVALUATED:

Field Identification (ID)	Lab Sample Number
TDSS-MW01-4Q24-02	410-199687-1
TDSS-MW02-4Q24-02	410-199687-2

Sample #1 TDS and Turbidity only
Note: Samples are described below in the data worksheets by reference to the last two digits of the Lab Sample Number.

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED / RATIONALE	INVENT-ORY	QUALIFICA-TION	BIAS
Chain of Custody (COC)	Unbroken custody (accept or if broken reject [R]) Temp. < 6 degrees Celsuis (°C) Preservation per method No chemical preservation required; Chloride, and Alkalinity (Alk), Total Organic Compounds (TOC) and chemical oxygen demand (COD) preserved with sulfuric acid (H_2SO_4) Sulfide (ZnAc+NaOH)	Cooler temperature < 6 °C. Sample custody transferred from Field Team Leader to lab sample custodian. Unbroken COC. Sample preservation within limits. No samples qualified. Sample #1 TDS and Turbidity only. Metals was on the CoC, but not reported in this SDG.	X	-	
Holding Time (HT)	28 days (TOC); TDS – 7 days ALK – 14 days Ammonia -28 days 28 days Sulfate/Chloride Turbidity- 48 hours pH – 48 hours (immediate) J –detects, UJ or R –non-detects (ND)	All reported samples analyzed within holding times Except for turbidity measurement	X	UJ/J NTU detection #1/#2 pH sample #1	
Field Duplicate (FD) Relative Percent Difference (RPD)	FD RPD ≤ 30 percent (%) aq FD RPD < 50% soil 1 per 10 samples	Not applicable (NA)	-	-	
Results > Cal Range or <Cal Range	<Limit of Quantitation (LOQ) but > detection limits (DL) – J –detects (estimated)	All detections less than LOQ and greater than DL qualified as J	X	-	
Lab Blanks (method blank or preparation blank)	Blank / Sample / QUAL: <LOQ / <LOQ / U <LOQ / >LOQ / J or none >LOQ / <LOQ / U >LOQ / >LOQ but less / U	Method blanks were ND.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED / RATIONALE	INVENT-ORY	QUALIFICA-TION	BIAS
	<table><tr><td></td><td>than Blank</td><td></td></tr><tr><td>>LOQ</td><td>>LOQ and >Blank</td><td>J</td></tr><tr><td>Gross contam-ination</td><td>Detect</td><td>R</td></tr></table>				
Laboratory Control Sample (LCS) Recovery	See QAPP Appendix C and Worksheet #12 >UCL% J detects <LCL% J detects, and UJ NDs.	All LCS percent recovery (%R) within the laboratory control limits	X	-	
LCS/LCSD RPD	RPD <20%	In limits	X	-	
Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recovery	See QAPP Appendix C and Worksheet #12 >UCL% J detects <LCL% J detects, and UJ NDs.	NA	-	-	
MS/MSD RPD	RPD < 20%	NA	-	-	
Laboratory Replicate RPD (if MSD not analyzed)	RPD <15% Others per method/Lab limits	Sample #2 TDS/NTU In limits	X	-	
Equipment Blank (EB)	<table><tr><td>Blank</td><td>Sample</td><td>QUAL</td></tr><tr><td><LOQ</td><td><LOQ</td><td>U</td></tr><tr><td><LOQ</td><td>>LOQ</td><td>J or none</td></tr><tr><td>>LOQ</td><td><LOQ</td><td>U</td></tr><tr><td>>LOQ</td><td>>LOQ but less than Blank</td><td>U</td></tr><tr><td>>LOQ</td><td>>LOQ and >Blank</td><td>J</td></tr><tr><td>Gross contam-ination</td><td>Detect</td><td>R</td></tr></table>	Not analyzed/collected for this SDG. Reported from SDG 410-200051 <table><tr><td>Method</td><td>Analyte</td><td>Result</td></tr><tr><td>A2320B</td><td>ALKB</td><td>3</td></tr><tr><td>A2320B</td><td>ALK</td><td>3</td></tr><tr><td>SW9040C</td><td>pH</td><td>6.1</td></tr></table> All non-detects except for pH and ALK. pH and AlK are intrinsic parameters of water, so they will only be used to access gross contamination. A comparison of the water sample pH and ALK shows no apparent gross contamination.	-	-	
Initial Calibration (ICal) Multipoint	Min 5 pt ICal Coefficient >0.995 Or method requirments	Instrument calibration In limits.	X	-	
Initial Calibration	<table><tr><td>Blank</td><td>Sample</td><td>QUAL</td></tr><tr><td><LOQ</td><td><LOQ</td><td>U</td></tr></table>	ICB and CCB were ND.	X	-	

ECC Data Review Worksheet
Project: TDSS-Maui

General Chem: TDS, Turbidity, ALK, TOC, SO_4, Cl, NH_3
Criteria: TDSS-SAP (July 2024)

REVIEW ITEMS	ACCEPTANCE CRITERIA			SAMPLES AFFECTED / RATIONALE	INVENT-ORY	QUALIFICA-TION	BIAS
Blanks (ICB) and Continuing Calibration Blank (CCB)	<LOQ	>LOQ	J or none				
	>LOQ	<LOQ	U				
	>LOQ	>LOQ but less than Blank	U				
	>LOQ	>LOQ and >Blank	J				
	Gross contam-ination	Detect	R				
2nd Source ICV	Percent deviation (%D) < 10%			In limits.	X	-	
CCV	%D < 10%			In limits.	X	-	
Overall Evaluation of Data	Appropriate method Evaluate any analytical problems Evaluate sampling errors – field contamination, sample hold times			Analytical Error Evaluation: The sample results are usable for making project decisions. ICAL: Acceptable. ICV: %D in limits CCV: %Ds within MPC limits. Method blank was non-detect. LCS %R within limits. LCSD not analyzed. Lab dup in limits ICB/CCB within limits. Overall Evaluation: Project data is usable as qualified.	X	-	

Lab Correspondence: None.

Project Role	Name	Signature	Date
Chemistry QA Manager	Jackson Kiker	Jackson W. Kiker	7 Jan 2025

ECC Data Review Worksheet
Project: TDSS-Maui

General Chem: Turbidity, ALK, TOC, SO_4, Cl, pH, NH_3
Criteria: TDSS-SAP (July 2024)

Validation Stage	Matrix	Preservation	Temperature Sample Receipt	Laboratory	SDG Number
2B	Groundwater (GW)	Per Method	<6 °C	Eurofins Lancaster	410-200051

FIELD IDENTIFICATION OF SAMPLES EVALUATED:

Field Identification (ID)	Lab Sample Number
TDSS-MW01-4Q24-02B	410-200051-1
TDSS-ER-4Q2024-02	410-200051-2

Sample #1 TDS and Turbidity reported in another SDG.
Note: Samples are described below in the data worksheets by reference to the last two digits of the Lab Sample Number.

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED / RATIONALE	INVENT-ORY	QUALIFICA-TION	BIAS
Chain of Custody (COC)	Unbroken custody (accept or if broken reject [R]) Temp. < 6 degrees Celsuis (°C) Preservation per method No chemical preservation required; Chloride, and Alkalinity (Alk), Total Organic Compounds (TOC) and chemical oxygen demand (COD) preserved with sulfuric acid (H_2SO_4) Sulfide (ZnAc+NaOH)	Cooler temperature < 6 °C. Sample custody transferred from Field Team Leader to lab sample custodian. Unbroken COC. Sample preservation within limits. No samples qualified. Sample #1 TDS and Turbidity only. Metals was on the CoC, but not reported in this SDG.	X	-	
Holding Time (HT)	28 days (TOC); TDS – 7 days ALK – 14 days Ammonia -28 days 28 days Sulfate/Chloride Turbidity- 48 hours pH – 48 hours (immediate) J –detects, UJ or R –non-detects (ND)	All reported samples analyzed within holding times Except for turbidity measurement	X	UJ NTU Sample #2 detection pH sample #2 and #1 as J-	
Field Duplicate (FD) Relative Percent Difference (RPD)	FD RPD ≤ 30 percent (%) aq FD RPD < 50% soil 1 per 10 samples	Not applicable (NA)	-	-	
Results > Cal Range or <Cal Range	<Limit of Quantitation (LOQ) but > detection limits (DL) – J –detects (estimated)	All detections less than LOQ and greater than DL qualified as J	X	-	
Lab Blanks (method blank or preparation blank)	Blank / Sample / QUAL: <LOQ / <LOQ / U <LOQ / >LOQ / J or none >LOQ / <LOQ / U >LOQ / >LOQ but less / U	Method blanks were ND.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED / RATIONALE	INVENT-ORY	QUALIFICA-TION	BIAS
	<table><tr><td></td><td>than Blank</td><td></td></tr><tr><td>>LOQ</td><td>>LOQ and >Blank</td><td>J</td></tr><tr><td>Gross contam-ination</td><td>Detect</td><td>R</td></tr></table>				
Laboratory Control Sample (LCS) Recovery	See QAPP Appendix C and Worksheet #12 >UCL% J detects <LCL% J detects, and UJ NDs.	All LCS percent recovery (%R) within the laboratory control limits	X	-	
LCS/LCSD RPD	RPD <20%	In limits	X	-	
Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recovery	See QAPP Appendix C and Worksheet #12 >UCL% J detects <LCL% J detects, and UJ NDs.	Sample #1 (NH3 only) MS %R in limits	X	-	
MS/MSD RPD	RPD < 20%	NA	-	-	
Laboratory Replicate RPD (if MSD not analyzed)	RPD <15% Others per method/Lab limits	Sample #2 NH3 In limits (all NDs)	X	-	
Equipment Blank (EB)	<table><tr><td>Blank</td><td>Sample</td><td>QUAL</td></tr><tr><td><LOQ</td><td><LOQ</td><td>U</td></tr><tr><td><LOQ</td><td>>LOQ</td><td>J or none</td></tr><tr><td>>LOQ</td><td><LOQ</td><td>U</td></tr><tr><td>>LOQ</td><td>>LOQ but less than Blank</td><td>U</td></tr><tr><td>>LOQ</td><td>>LOQ and >Blank</td><td>J</td></tr><tr><td>Gross contam-ination</td><td>Detect</td><td>R</td></tr></table>	Sample #2 All non-detects except for pH and ALK. pH and AlK are intrinsic parameters of water, so they will only be used to access gross contamination. A comparison of the water sample pH and ALK shows no apparent gross contamination. <table><tr><td>Method</td><td>Analyte</td><td>Result</td></tr><tr><td>A2320B</td><td>ALKB</td><td>3</td></tr><tr><td>A2320B</td><td>ALK</td><td>3</td></tr><tr><td>SW9040C</td><td>pH</td><td>6.1</td></tr></table>	X	-	
Initial Calibration (ICal) Multipoint	Min 5 pt ICal Coefficient >0.995 Or method requirements	Instrument calibration In limits.	X	-	
Initial Calibration Blanks (ICB) and Continuing Calibration Blank (CCB)	<table><tr><td>Blank</td><td>Sample</td><td>QUAL</td></tr><tr><td><LOQ</td><td><LOQ</td><td>U</td></tr><tr><td><LOQ</td><td>>LOQ</td><td>J or none</td></tr><tr><td>>LOQ</td><td><LOQ</td><td>U</td></tr><tr><td>>LOQ</td><td>>LOQ but less than Blank</td><td>U</td></tr><tr><td>>LOQ</td><td>>LOQ and >Blank</td><td>J</td></tr><tr><td>Gross contam-</td><td>Detect</td><td>R</td></tr></table>	ICB and CCB were ND.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED / RATIONALE	INVENT-ORY	QUALIFICA-TION	BIAS
	ination				
2nd Source ICV	Percent deviation (%D) < 10%	In limits.	X	-	
CCV	%D < 10%	In limits.	X	-	
Overall Evaluation of Data	Appropriate method Evaluate any analytical problems Evaluate sampling errors – field contamination, sample hold times	Analytical Error Evaluation: The sample results are usable for making project decisions. ICAL: Acceptable. ICV: %D in limits CCV: %Ds within MPC limits. Method blank was non-detect. MS %R in limits LCS %R within limits. LCSD in limits. Lab dup in limits ICB/CCB within limits. EB collected, see table above Overall Evaluation: Project data is usable as qualified.	X	-	

Lab Correspondence: None.

Project Role	Name	Signature	Date
Chemistry QA Manager	Jackson Kiker	Jackson W. Kiker	7 Jan 2025

Data Review Worksheet
Project: TDSS-Maui

Metals 6020B
Review Criteria: TDSS- SAP (July 2024)

Data Validation Stage	Matrix	Preservation	Temperature Sample Receipt	Laboratory	SDG Number
2B	Groundwater (GW)	HNO_3	<6 °C	Eurofins Lancaster	410-199687

FIELD IDENTIFICATION OF SAMPLES EVALUATED:

Field Identification (ID)	Laboratory (lab) Sample Number
TDSS-MW01-4Q24-02	410-199687-1
TDSS-MW02-4Q24-02	410-199687-2

Note: Samples are described below in the data worksheets by reference to the last one to three digits of the Lab Sample Number.

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative	Inven-tory	QUAL	BIAS
COC	Unbroken custody (accept or if broken R) Preserved with HNO_3 to pH ≤ 2 (polyethylene, glass) J, UJ, or R (function of HT and compound)	Sample preservation adequate. Sample custody transferred from Field Team Leader to lab sample custodian. Unbroken COC.	X	-	
Holding Time	180 days (6010/6020) J –detects, UJ or R –non-detects (function of time)	All samples analyzed within holding times. No samples qualified.	X	-	
Field Dup RPD	RPD ≤ 30% water for (50% solids) Results > X PQL (FD pair only) J-detects (both > X PQL) If one >X PQL, other ND, J-detections, UJ non-detect	Not applicable (NA).	-	-	
% Solids Check (SOLIDS)	30% <Solids: if no sample weight adjustment made <10% R entire sample 10%.> and <30%; J-detects, NDs –R	Not applicable	-	-	
Results > Cal Range or <Cal Range	>Upper Cal Range J-detects - ensure instrument blank performed <LOQ but >DL – J –detects (estimated)	All detects reported less than LOQ but greater than DL qualified as J	X	-	
Lab Blanks (method blank or preparation blank)	Blank / Sample / QUAL: <LOQ / <LOQ / U <LOQ / >LOQ / J or none >LOQ / <LOQ / U >LOQ / >LOQ but less than Blank / U >LOQ / >LOQ and >Blank / J Gross contam-ination / Detect / R	MB was ND for all analytes.	X	-	

<table>
<tr><th>REVIEW ITEMS</th><th>ACCEPTANCE CRITERIA</th><th>SAMPLES AFFECTED Narrative</th><th>Inven-tory</th><th>QUAL</th><th>BIAS</th></tr>
<tr><td>LCS Recovery</td><td>Lab Limits
>UCL% J detects
<LCL% J detects, and UJ NDs.</td><td>All LCS %R's were within MPC for all metals.</td><td>X</td><td>-</td><td></td></tr>
<tr><td>LCS/LCSD RPD</td><td>RPD<20%</td><td>NA</td><td>-</td><td>-</td><td></td></tr>
<tr><td>MS Recovery</td><td>Lab Limits
>UCL% J detects
<LCL% J detects, and UJ NDs.</td><td>Native sample #2
All MS/MSD recoveries within MPC limits, except for Ca</td><td>X</td><td>J+ Ca sample #2</td><td></td></tr>
<tr><td>MS/MSD RPD</td><td>MS/MSD RPD<20%</td><td>All MS/MSD RPDs within MPC limits.</td><td>X</td><td>-</td><td></td></tr>
<tr><td>Laboratory Replicate RPD</td><td>RPD < 20%</td><td>Sample #2 RPDs within MPC limits.</td><td>X</td><td>-</td><td></td></tr>
<tr><td>Internal Standard</td><td>70-130% (lab limits)</td><td>All internal standard results in limits.</td><td>X</td><td>-</td><td></td></tr>
<tr><td>Sensitivity</td><td>Sample results will be reported to the detection limit (DL)
Sample Results that are < LOQ, but >DL, will be reported as J
<u>Dilution factors for samples – impacts to sensitivity</u></td><td>Dilution factor = 1x.
No qualification.</td><td>X</td><td>-</td><td></td></tr>
<tr><td>Equip Blank</td><td><table><tr><th>Blank</th><th>Sample</th><th>QUAL</th></tr><tr><td><LOQ</td><td><LOQ</td><td>U</td></tr><tr><td><LOQ</td><td>>LOQ</td><td>J or none</td></tr><tr><td>>LOQ</td><td><LOQ</td><td>U</td></tr><tr><td>>LOQ</td><td>>LOQ but less than Blank</td><td>U</td></tr><tr><td>>LOQ</td><td>>LOQ and >Blank</td><td>J</td></tr><tr><td>Gross contam-ination</td><td>Detect</td><td>R</td></tr></table></td><td>Reported in SDG 410-200051
<table><tr><th>Metal</th><th>Result</th><th>lab qual</th><th>5X</th></tr><tr><td>CA</td><td>250</td><td></td><td>1250</td></tr><tr><td>MG</td><td>57</td><td></td><td>285</td></tr><tr><td>NA</td><td>530</td><td></td><td>2650</td></tr></table>
All similar metals reported in this SDG had levels >5X the EB levels.
No samples qualified.</td><td>X</td><td>-</td><td></td></tr>
<tr><td>Initial Cal Multipoint</td><td>Daily initial calibration prior to sample analysis
r > 0.995 if multipoint calibration is used.</td><td>All calibrations within MPC limits.</td><td>X</td><td>-</td><td></td></tr>
<tr><td>Tune Check (6020)</td><td>Method SOP</td><td>In limits.</td><td>X</td><td>-</td><td></td></tr>
<tr><td>Initial Calibration Blanks (ICB)</td><td><table><tr><th>Blank</th><th>Sample</th><th>QUAL</th></tr><tr><td><LOQ</td><td><LOQ</td><td>U</td></tr><tr><td><LOQ</td><td>>LOQ</td><td>J or none</td></tr><tr><td>>LOQ</td><td><LOQ</td><td>U</td></tr><tr><td>>LOQ</td><td>>LOQ but less than Blank</td><td>U</td></tr><tr><td>>LOQ</td><td>>LOQ and >Blank</td><td>J</td></tr><tr><td>Gross contam-ination</td><td>Detect</td><td>R</td></tr></table></td><td>ICB results were non-detect.</td><td>X</td><td>-</td><td></td></tr>
<tr><td>Continuing Calibration Blanks (CCB)</td><td><table><tr><th>Blank</th><th>Sample</th><th>QUAL</th></tr><tr><td><LOQ</td><td><LOQ</td><td>U</td></tr><tr><td><LOQ</td><td>>LOQ</td><td>J or none</td></tr><tr><td>>LOQ</td><td><LOQ</td><td>U</td></tr><tr><td>>LOQ</td><td>>LOQ but less</td><td>U</td></tr></table></td><td>Applicable CCB results were non-detect for all metal methods.</td><td>X</td><td>-</td><td></td></tr>
</table>

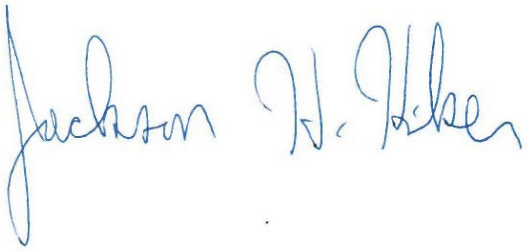
REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative	Inven-tory	QUAL	BIAS
	<table><tr><td></td><td>than Blank</td><td></td></tr><tr><td>>LOQ</td><td>>LOQ and >Blank</td><td>J</td></tr><tr><td>Gross contam-ination</td><td>Detect</td><td>R</td></tr></table> .				
Serial Dilution	%D<10% %D not evaluated if element results is <50X IDL (<LOD) J detects, UJ non-detects.	NA	-	-	
Inter-element checks ICS-A, ICS-AB Instrument performance check	ICS-A: Absolute value of concentration for all non-spiked analytes < LOD (unless they are a verified trace impurity from one of the spiked analytes). ICSAB: Within + 20% of expected value.	Both ICS-A and ICS-AB %R's for within MPC.	X	-	
2nd Source ICV	Once after each initial calibration, prior to sample analysis 90- 110% Recovery	ICV results within limits all metals.	X	-	
CCV and/or CCVL/CRQL	every 10 samples and end of run 90- 110% Recovery CCVL 80-120%	CCV results were within limits all metals. CRQL results were within limits all metals.	X	-	
Post Digestion Spike	Analyze if MS >MPC Lab limits	NA	-	-	
Overall Evaluation of Data	Appropriate method Evaluate any analytical problems Evaluate sampling errors – field contamination, sample hold times	<u>Analytical Error Evaluation:</u> The laboratory accuracy is acceptable. Method Blanks were ND. LCS %Rs were within limits. MS/MSD recoveries within limits except for Ca. MS/MSD RPDs within MPC limits. IS were within limits. ICB was ND. CCB was ND. ICAL: per method. ICV: in limits CCV: in limits. LLCCV: in limits. Data is usable as qualified	X	-	

Completeness Check: Inventory Check Sheet___X_

DV Qualifiers:

J: The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+: The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-: The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
U: The analyte was not detected at or above the associated value (reporting limit).
UJ: The analyte was not detected at or above the associated value (reporting limit), which is considered approximate because of deficiencies in one or more quality control criteria.
R: Rejection of data

Lab Correspondence: None

Project Role	Name	Signature	Date
Chemistry Data Manager	Jackson Kiker		7 Jan 2025

Data Review Worksheet
Project: TDSS-Maui

Metals 6020B
Review Criteria: TDSS- SAP (July 2024)

Data Validation Stage	Matrix	Preservation	Temperature Sample Receipt	Laboratory	SDG Number
2B	Equipment Rinsate (DI water)	HNO_3	<6 °C	Eurofins Lancaster	410-200051

FIELD IDENTIFICATION OF SAMPLES EVALUATED:

Field Identification (ID)	Laboratory (lab) Sample Number
TDSS-ER-4Q2024-02	410-200051-2

Note: Samples are described below in the data worksheets by reference to the last one to three digits of the Lab Sample Number.

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative	Inven-tory	QUAL	BIAS
COC	Unbroken custody (accept or if broken R) Preserved with HNO_3 to pH ≤ 2 (polyethylene, glass) J, UJ, or R (function of HT and compound)	Sample preservation adequate. Sample custody transferred from Field Team Leader to lab sample custodian. Unbroken COC. Water for MW-01 provided on CoC but not used. Only ER sample was reported.	X	-	
Holding Time	180 days (6010/6020) J –detects, UJ or R –non-detects (function of time)	All samples analyzed within holding times. No samples qualified.	X	-	
Field Dup RPD	RPD ≤ 30% water for (50% solids) Results > X PQL (FD pair only) J-detects (both > X PQL) If one >X PQL, other ND, J-detections, UJ non-detect	Not applicable (NA)	-	-	
% Solids Check (SOLIDS)	30% <Solids: if no sample weight adjustment made <10% R entire sample 10%.> and <30%; J-detects, NDs –R	Not applicable	-	-	
Results > Cal Range or <Cal Range	>Upper Cal Range J-detects - ensure instrument blank performed <LOQ but >DL – J –detects (estimated)	Detects less than LOQ qualified as J	X	-	
Lab Blanks (method blank or preparation blank)	<table><tr><th>Blank</th><th>Sample</th><th>QUAL</th></tr><tr><td><LOQ</td><td><LOQ</td><td>U</td></tr><tr><td><LOQ</td><td>>LOQ</td><td>J or none</td></tr><tr><td>>LOQ</td><td><LOQ</td><td>U</td></tr><tr><td>>LOQ</td><td>>LOQ but less than Blank</td><td>U</td></tr><tr><td>>LOQ</td><td>>LOQ and >Blank</td><td>J</td></tr><tr><td>Gross contam-</td><td>Detect</td><td>R</td></tr></table>	MB was ND for all analytes.	X	-	

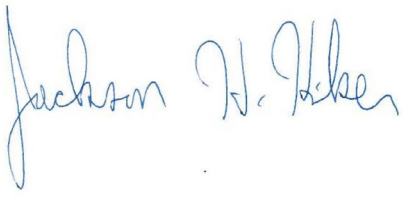
REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative	Inven-tory	QUAL	BIAS
	ination				
LCS Recovery	Lab Limits >UCL% J detects <LCL% J detects, and UJ NDs.	All LCS %R's were within MPC for all metal methods.	X	-	
LCS/LCSD RPD	RPD<20%	All LCS/LCSD RPDs within MPC limits.	X	-	
MS Recovery	Lab Limits >UCL% J detects <LCL% J detects, and UJ NDs.	NA	-	-	
MS/MSD RPD	MS/MSD RPD<20%	NA	-	-	
Laboratory Replicate RPD	RPD < 20%	NA	-	-	
Internal Standard	70-130% (lab limits)	All internal standard results in limits.	X	-	
Sensitivity	Sample results will be reported to the detection limit (DL) Sample Results that are < LOQ, but >DL, will be reported as J Dilution factors for samples – impacts to sensitivity	Dilution factor = 1x for metals	X	-	
Equip Blank	Blank / Sample / QUAL <LOQ / <LOQ / U <LOQ / >LOQ / J or none >LOQ / <LOQ / U >LOQ / >LOQ but less than Blank / U >LOQ / >LOQ and >Blank / J Gross contam-ination / Detect / R	Sample #1. This SDG is reporting only the ER. This result will be applied to associated SDGs Metal / Result / lab qual / 5X CA / 250 / / 1250 MG / 57 / / 285 NA / 530 / / 2650	X	-	
Initial Cal Multipoint	Daily initial calibration prior to sample analysis r > 0.995 if multipoint calibration is used.	All calibrations within MPC limits.	X	-	
Tune Check (6020)	Method SOP	In limits.	X	-	
Initial Calibration Blanks (ICB)	Blank / Sample / QUAL <LOQ / <LOQ / U <LOQ / >LOQ / J or none >LOQ / <LOQ / U >LOQ / >LOQ but less than Blank / U >LOQ / >LOQ and >Blank / J Gross contam-ination / Detect / R	ICB results were non-detect.	X	-	
Continuing Calibration Blanks (CCB)	Blank / Sample / QUAL <LOQ / <LOQ / U <LOQ / >LOQ / J or none >LOQ / <LOQ / U >LOQ / >LOQ but less than Blank / U >LOQ / >LOQ and / J	Applicable CCB results were non-detect for all metal except for Co and Cu. Co was ND in the sample. Cu at 0.454 5X = 2.25	X	Cu qualify as ND (U)	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative	Inven-tory	QUAL	BIAS
	<table><tr><td></td><td>>Blank</td><td></td></tr><tr><td>Gross contam-ination</td><td>Detect</td><td>R</td></tr></table> .				
Serial Dilution	%D<10% %D not evaluated if element results is <50X IDL (<LOD) J detects, UJ non-detects.	NA	-	-	
Inter-element checks ICS-A, ICS-AB Instrument performance check	ICS-A: Absolute value of concentration for all non-spiked analytes < LOD (unless they are a verified trace impurity from one of the spiked analytes). ICSAB: Within + 20% of expected value.	Both ICS-A and ICS-AB %R's for within MPC.	X	-	
2nd Source ICV	Once after each initial calibration, prior to sample analysis 90- 110% Recovery	ICV results within limits all metals.	X	-	
CCV and/or CCVL/CRQL	every 10 samples and end of run 90- 110% Recovery CCVL 80-120%	CCV results were within limits all metals. CRQL results were within limits all metals.	X	-	
Post Digestion Spike	Analyze if MS >MPC Lab limits	NA	-	-	
Overall Evaluation of Data	Appropriate method Evaluate any analytical problems Evaluate sampling errors – field contamination, sample hold times	<u>Analytical Error Evaluation:</u> The laboratory accuracy is acceptable. Method Blanks were ND. LCS %Rs were within limits. LCS/LCSD RPDs within MPC limits. IS were within limits. ICB was ND. CCB was ND, except for Cu and Co. ICAL: per method. ICV: in limits CCV: in limits. <u>Sample Error Evaluation:</u> EB collected as the only reported sample in this SDG. Ca, Cu, Mg, and Na reported in the EB. Cu was removed as a detection due to associated CCB detection.	X	-	

Completeness Check: Inventory Check Sheet___X_

DV Qualifiers:

J: The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+: The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-: The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
U: The analyte was not detected at or above the associated value (reporting limit).
UJ: The analyte was not detected at or above the associated value (reporting limit), which is considered approximate because of deficiencies in one or more quality control criteria.
R: Rejection of data

Project Role	Name	Signature	Date
Chemistry Data Manager	Jackson Kiker		7 Jan 2025

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kane McNeill
Environmental Chemical Corp.
1240 Bayshore Hwy
Burlingame, California 94010

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JOB DESCRIPTION

TDSS / MW Sampling / 4Q-2024-02
410-199687

JOB NUMBER

410-199687-1

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

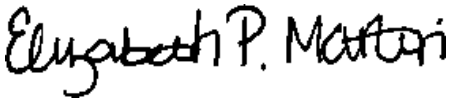
See page two for job notes and contact information.

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



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

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.

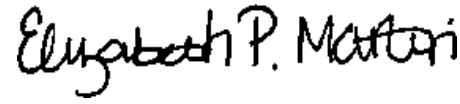

Table of Contents

Definitions/Glossary

Client: Environmental Chemical Corp.
Project/Site: TDSS / MW Sampling / 4Q-2024-02

Job ID: 410-199687-1
SDG: 410-199687

Qualifiers

HPLC/IC

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

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
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
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)
TNTC	Too Numerous To Count

Job ID: 410-199687-1 **Eurofins Lancaster Laboratories Environment**

Job Narrative
410-199687-1

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 and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided 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 12/9/2024 10:00 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 0.7°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 / 4Q-2024-02

Job ID: 410-199687-1
SDG: 410-199687

Client Sample ID: TDSS-MW01-4Q24-02 — Lab Sample ID: 410-199687-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Calcium	12000		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	26	J	50	40	20	ug/L	1		6020B	Total Recoverable
Lead	0.47	J	0.50	0.24	0.12	ug/L	1		6020B	Total Recoverable
Magnesium	10000		50	32	16	ug/L	1		6020B	Total Recoverable
Potassium	4900		200	180	65	ug/L	1		6020B	Total Recoverable
Sodium	64000		200	180	90	ug/L	1		6020B	Total Recoverable
Total Dissolved Solids	590		120	100	48	mg/L	1		2540C - 2015	Total/NA

Client Sample ID: TDSS-MW02-4Q24-02 — Lab Sample ID: 410-199687-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	27		1.5	1.0	0.50	mg/L	1		300.0	Total/NA
Chloride	220	D	75	60	30	mg/L	50		300.0	Total/NA
Calcium	19000	J1	120	100	50	ug/L	1		6020B	Total Recoverable
Cobalt	0.17	J	0.50	0.40	0.16	ug/L	1		6020B	Total Recoverable
Iron	790		50	40	20	ug/L	1		6020B	Total Recoverable
Lead	0.25	J	0.50	0.24	0.12	ug/L	1		6020B	Total Recoverable
Magnesium	17000		50	32	16	ug/L	1		6020B	Total Recoverable
Potassium	6700		200	180	65	ug/L	1		6020B	Total Recoverable
Sodium	100000	J1	200	180	90	ug/L	1		6020B	Total Recoverable
Turbidity	24	H H3	1.0	0.70	1.0	NTU	1		180.1	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	66		8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Bicarbonate Alkalinity as CaCO3	66		8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Total Dissolved Solids	500		60	50	24	mg/L	1		2540C - 2015	Total/NA
pH	7.9	HF	0.01	0.01	0.01	S.U.	1		9040C	Total/NA
TOC Result 2	0.57	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-MW01-4Q24-02

Lab Sample ID: 410-199687-1

Date Collected: 12/03/24 13:14
Matrix: Water
Date Received: 12/09/24 10:00

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		12/11/24 19:22	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		12/11/24 19:22	1
Calcium	**12000**		120	100	50	ug/L		12/11/24 19:22	1
Cobalt	**0.84**		0.50	0.40	0.16	ug/L		12/11/24 19:22	1
Copper	**2.5**		1.0	0.90	0.36	ug/L		12/11/24 19:22	1
Iron	**26**	**J**	50	40	20	ug/L		12/11/24 19:22	1
Lead	**0.47**	**J**	0.50	0.24	0.12	ug/L		12/11/24 19:22	1
Magnesium	**10000**		50	32	16	ug/L		12/11/24 19:22	1
Potassium	**4900**		200	180	65	ug/L		12/11/24 19:22	1
Sodium	**64000**		200	180	90	ug/L		12/11/24 19:22	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Turbidity (EPA 180.1)	0.70	U H H3	1.0	0.70	1.0	NTU		12/11/24 22:03	1
Total Dissolved Solids (SM 2540C - 2015)	**590**		120	100	48	mg/L		12/10/24 23:08	1

Client Sample ID: TDSS-MW02-4Q24-02

Lab Sample ID: 410-199687-2

Date Collected: 12/04/24 10:56
Matrix: Water
Date Received: 12/09/24 10:00

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**27**		1.5	1.0	0.50	mg/L		12/12/24 07:30	1
Chloride	**220**	**D**	75	60	30	mg/L		12/16/24 20:05	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		12/11/24 19:06	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		12/11/24 19:06	1
Calcium	**19000**	**J1**	120	100	50	ug/L		12/11/24 19:06	1
Cobalt	**0.17**	**J**	0.50	0.40	0.16	ug/L		12/11/24 19:06	1
Copper	0.90	U	1.0	0.90	0.36	ug/L		12/11/24 19:06	1
Iron	**790**		50	40	20	ug/L		12/11/24 19:06	1
Lead	**0.25**	**J**	0.50	0.24	0.12	ug/L		12/11/24 19:06	1
Magnesium	**17000**		50	32	16	ug/L		12/12/24 10:45	1
Potassium	**6700**		200	180	65	ug/L		12/11/24 19:06	1
Sodium	**100000**	**J1**	200	180	90	ug/L		12/11/24 19:06	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Turbidity (EPA 180.1)	**24**	**H H3**	1.0	0.70	1.0	NTU		12/11/24 22:03	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**66**		8.0	6.0	2.6	mg/L		12/11/24 07:51	1
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		12/11/24 07:51	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**66**		8.0	6.0	2.6	mg/L		12/11/24 07:51	1
Total Dissolved Solids (SM 2540C - 2015)	**500**		60	50	24	mg/L		12/10/24 23:08	1
pH (SW846 9040C)	**7.9**	**HF**	0.01	0.01	0.01	S.U.		12/11/24 07:51	1
Ammonia as N (EPA 350.1)	0.090	U	0.10	0.090	0.050	mg/L		12/12/24 13:39	1

Client Sample ID: TDSS-MW02-4Q24-02

Date Collected: 12/04/24 10:56
Date Received: 12/09/24 10:00

Lab Sample ID: 410-199687-2

Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon (SM5310C)	1.0	U	2.0	1.0	0.50	mg/L		12/11/24 21:18	1
TOC Result 1 (SM5310C)	1.0	U	2.0	1.0	0.50	mg/L		12/11/24 21:18	1
TOC Result 2 (SM5310C)	**0.57**	**J**	2.0	1.0	0.50	mg/L		12/11/24 21:18	1
TOC Result 3 (SM5310C)	1.0	U	2.0	1.0	0.50	mg/L		12/11/24 21:18	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 410-585049/5
Matrix: Water
Analysis Batch: 585049

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	1.5	1.0	0.50	mg/L		12/12/24 06:35	1
Chloride	1.2	U	1.5	1.2	0.60	mg/L		12/12/24 06:35	1

Lab Sample ID: LCS 410-585049/3
Matrix: Water
Analysis Batch: 585049

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	7.00		mg/L		93	87 - 112
Chloride	3.00	2.87		mg/L		96	87 - 111

Lab Sample ID: LCSD 410-585049/4
Matrix: Water
Analysis Batch: 585049

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	7.12		mg/L		95	87 - 112	2	10
Chloride	3.00	2.87		mg/L		96	87 - 111	0	10

Lab Sample ID: MB 410-586742/5
Matrix: Water
Analysis Batch: 586742

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	1.5	1.0	0.50	mg/L		12/16/24 17:31	1
Chloride	1.2	U	1.5	1.2	0.60	mg/L		12/16/24 17:31	1

Lab Sample ID: LCS 410-586742/3
Matrix: Water
Analysis Batch: 586742

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	7.44		mg/L		99	87 - 112
Chloride	3.00	3.06		mg/L		102	87 - 111

Lab Sample ID: LCSD 410-586742/4
Matrix: Water
Analysis Batch: 586742

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	7.45		mg/L		99	87 - 112	0	10
Chloride	3.00	3.05		mg/L		102	87 - 111	0	10

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-584490/1-A
Matrix: Water
Analysis Batch: 585068

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 584490

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		12/11/24 19:02	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		12/11/24 19:02	1
Calcium	100	U	120	100	50	ug/L		12/11/24 19:02	1
Cobalt	0.40	U	0.50	0.40	0.16	ug/L		12/11/24 19:02	1
Copper	0.90	U	1.0	0.90	0.36	ug/L		12/11/24 19:02	1
Iron	40	U	50	40	20	ug/L		12/11/24 19:02	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		12/11/24 19:02	1
Potassium	180	U	200	180	65	ug/L		12/11/24 19:02	1
Sodium	180	U	200	180	90	ug/L		12/11/24 19:02	1

Lab Sample ID: MB 410-584490/1-A
Matrix: Water
Analysis Batch: 585426

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 584490

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Magnesium	32	U	50	32	16	ug/L		12/12/24 10:40	1

Lab Sample ID: LCS 410-584490/2-A
Matrix: Water
Analysis Batch: 585068

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 584490

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	91.1		ug/L		91	85 - 117
Arsenic	500	452		ug/L		90	84 - 116
Calcium	5000	4490		ug/L		90	87 - 118
Cobalt	500	460		ug/L		92	86 - 115
Copper	500	445		ug/L		89	85 - 118
Iron	5000	4560		ug/L		91	87 - 118
Lead	50.0	46.5		ug/L		93	88 - 115
Potassium	5000	4420		ug/L		88	87 - 115
Sodium	5000	4280		ug/L		86	85 - 117

Lab Sample ID: LCS 410-584490/2-A
Matrix: Water
Analysis Batch: 585426

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 584490

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Magnesium	5000	5190		ug/L		104	83 - 118

Lab Sample ID: 410-199687-2 MS
Matrix: Water
Analysis Batch: 585068

Client Sample ID: TDSS-MW02-4Q24-02
Prep Type: Total Recoverable
Prep Batch: 584490

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.50	U	100	92.2		ug/L		92	85 - 117
Arsenic	1.7	U	500	455		ug/L		91	84 - 116
Calcium	19000	J1	5000	23800		ug/L		89	87 - 118
Cobalt	0.17	J	500	460		ug/L		92	86 - 115
Copper	0.90	U	500	439		ug/L		88	85 - 118

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

Lab Sample ID: 410-199687-2 MS
Matrix: Water
Analysis Batch: 585068

Client Sample ID: TDSS-MW02-4Q24-02
Prep Type: Total Recoverable
Prep Batch: 584490

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	790		5000	5270		ug/L		90	87 - 118
Lead	0.25	J	50.0	46.1		ug/L		92	88 - 115
Potassium	6700		5000	11400		ug/L		94	87 - 115
Sodium	100000	J1	5000	108000	4	ug/L		103	85 - 117

Lab Sample ID: 410-199687-2 MS
Matrix: Water
Analysis Batch: 585426

Client Sample ID: TDSS-MW02-4Q24-02
Prep Type: Total Recoverable
Prep Batch: 584490

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Magnesium	17000		5000	22300		ug/L		112	83 - 118

Lab Sample ID: 410-199687-2 MSD
Matrix: Water
Analysis Batch: 585068

Client Sample ID: TDSS-MW02-4Q24-02
Prep Type: Total Recoverable
Prep Batch: 584490

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	0.50	U	100	94.1		ug/L		94	85 - 117	2	20
Arsenic	1.7	U	500	452		ug/L		90	84 - 116	1	20
Calcium	19000	J1	5000	23600	J1	ug/L		86	87 - 118	1	20
Cobalt	0.17	J	500	461		ug/L		92	86 - 115	0	20
Copper	0.90	U	500	439		ug/L		88	85 - 118	0	20
Iron	790		5000	5220		ug/L		89	87 - 118	1	20
Lead	0.25	J	50.0	47.8		ug/L		95	88 - 115	4	20
Potassium	6700		5000	11300		ug/L		91	87 - 115	1	20
Sodium	100000	J1	5000	107000	4	ug/L		80	85 - 117	1	20

Lab Sample ID: 410-199687-2 MSD
Matrix: Water
Analysis Batch: 585426

Client Sample ID: TDSS-MW02-4Q24-02
Prep Type: Total Recoverable
Prep Batch: 584490

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Magnesium	17000		5000	22300		ug/L		113	83 - 118	0	20

Lab Sample ID: 410-199687-2 DU
Matrix: Water
Analysis Batch: 585068

Client Sample ID: TDSS-MW02-4Q24-02
Prep Type: Total Recoverable
Prep Batch: 584490

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	0.50	U	0.50	U	ug/L		NC	20
Arsenic	1.7	U	1.7	U	ug/L		NC	20
Calcium	19000	J1	19500		ug/L		1	20
Cobalt	0.17	J	0.174	J	ug/L		4	20
Copper	0.90	U	0.90	U	ug/L		NC	20
Iron	790		748		ug/L		5	20
Lead	0.25	J	0.209	J	ug/L		17	20
Potassium	6700		6740		ug/L		0.09	20
Sodium	100000	J1	104000		ug/L		1	20

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

Lab Sample ID: 410-199687-2 DU
Matrix: Water
Analysis Batch: 585426

Client Sample ID: TDSS-MW02-4Q24-02
Prep Type: Total Recoverable
Prep Batch: 584490

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Magnesium	17000			17100		ug/L				2	20

Method: 180.1 - Turbidity, Nephelometric

Lab Sample ID: MB 410-585055/3
Matrix: Water
Analysis Batch: 585055

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		12/11/24 22:03	1

Lab Sample ID: LCS 410-585055/4
Matrix: Water
Analysis Batch: 585055

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	1.2		NTU		123	88 - 139		

Lab Sample ID: 410-199687-2 DU
Matrix: Water
Analysis Batch: 585055

Client Sample ID: TDSS-MW02-4Q24-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Turbidity	24	H H3		25		NTU				4	10

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 410-584818/93
Matrix: Water
Analysis Batch: 584818

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		12/11/24 05:50	1

Lab Sample ID: LCS 410-584818/94
Matrix: Water
Analysis Batch: 584818

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	184		mg/L		97	80 - 110		

Lab Sample ID: LCSD 410-584818/95
Matrix: Water
Analysis Batch: 584818

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	185		mg/L		98	80 - 110	0	10

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

Lab Sample ID: MB 410-584071/1
Matrix: Water
Analysis Batch: 584071

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		12/10/24 23:08	1

Lab Sample ID: LCS 410-584071/2
Matrix: Water
Analysis Batch: 584071

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	202		mg/L		101	90 - 110		

Lab Sample ID: LCSD 410-584071/3
Matrix: Water
Analysis Batch: 584071

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 Dissolved Solids			200	198		mg/L		99	90 - 110	2	10

Lab Sample ID: 410-199687-2 DU
Matrix: Water
Analysis Batch: 584071

Client Sample ID: TDSS-MW02-4Q24-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	500			469		mg/L				6	10

Method: 9040C - pH

Lab Sample ID: LCS 410-584819/96
Matrix: Water
Analysis Batch: 584819

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	7.1		S.U.		101	95 - 105		

Lab Sample ID: LCSD 410-584819/97
Matrix: Water
Analysis Batch: 584819

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	7.1		S.U.		101	95 - 105	0	3

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 410-585439/120
Matrix: Water
Analysis Batch: 585439

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		12/12/24 14:48	1

Method: EPA 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: MB 410-585439/67
Matrix: Water
Analysis Batch: 585439

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		12/12/24 12:57	1

Lab Sample ID: LCS 410-585439/85
Matrix: Water
Analysis Batch: 585439

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	2.14		mg/L		107	90 - 110

Lab Sample ID: LCS 410-585439/86
Matrix: Water
Analysis Batch: 585439

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	2.17		mg/L		108	90 - 110

Lab Sample ID: LCSD 410-585439/119
Matrix: Water
Analysis Batch: 585439

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	1.93		mg/L		96	90 - 110	7	15

Lab Sample ID: LCSD 410-585439/66
Matrix: Water
Analysis Batch: 585439

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	1.88		mg/L		94	90 - 110	14	15

Method: SM5310C - TOC

Lab Sample ID: MB 410-585305/7
Matrix: Water
Analysis Batch: 585305

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		12/11/24 19:17	1
TOC Result 1	1.0	U	2.0	1.0	0.50	mg/L		12/11/24 19:17	1
TOC Result 2	1.0	U	2.0	1.0	0.50	mg/L		12/11/24 19:17	1
TOC Result 3	1.0	U	2.0	1.0	0.50	mg/L		12/11/24 19:17	1

Lab Sample ID: LCS 410-585305/6
Matrix: Water
Analysis Batch: 585305

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	47.4		mg/L		95	90 - 110
TOC Result 1	50.0	46.9		mg/L		94	90 - 110
TOC Result 2	50.0	47.3		mg/L		94	90 - 110

Method: SM5310C - TOC (Continued)

Lab Sample ID: LCS 410-585305/6
Matrix: Water
Analysis Batch: 585305

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
TOC Result 3	50.0	48.2		mg/L		96	90 - 110

Lab Sample ID: MRL 410-585305/3
Matrix: Water
Analysis Batch: 585305

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	0.887	J	mg/L		89	50 - 150
TOC Result 1	1.00	0.877	J	mg/L		88	
TOC Result 2	1.00	0.892	J	mg/L		89	
TOC Result 3	1.00	0.891	J	mg/L		89	

HPLC/IC

Analysis Batch: 585049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-199687-2	TDSS-MW02-4Q24-02	Total/NA	Water	300.0	
MB 410-585049/5	Method Blank	Total/NA	Water	300.0	
LCS 410-585049/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 410-585049/4	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 586742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-199687-2	TDSS-MW02-4Q24-02	Total/NA	Water	300.0	
MB 410-586742/5	Method Blank	Total/NA	Water	300.0	
LCS 410-586742/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 410-586742/4	Lab Control Sample Dup	Total/NA	Water	300.0	

Metals

Prep Batch: 584490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-199687-1	TDSS-MW01-4Q24-02	Total Recoverable	Water	3005A	
410-199687-2	TDSS-MW02-4Q24-02	Total Recoverable	Water	3005A	
MB 410-584490/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-584490/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
410-199687-2 MS	TDSS-MW02-4Q24-02	Total Recoverable	Water	3005A	
410-199687-2 MSD	TDSS-MW02-4Q24-02	Total Recoverable	Water	3005A	
410-199687-2 DU	TDSS-MW02-4Q24-02	Total Recoverable	Water	3005A	

Analysis Batch: 585068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-199687-1	TDSS-MW01-4Q24-02	Total Recoverable	Water	6020B	584490
410-199687-2	TDSS-MW02-4Q24-02	Total Recoverable	Water	6020B	584490
MB 410-584490/1-A	Method Blank	Total Recoverable	Water	6020B	584490
LCS 410-584490/2-A	Lab Control Sample	Total Recoverable	Water	6020B	584490
410-199687-2 MS	TDSS-MW02-4Q24-02	Total Recoverable	Water	6020B	584490
410-199687-2 MSD	TDSS-MW02-4Q24-02	Total Recoverable	Water	6020B	584490
410-199687-2 DU	TDSS-MW02-4Q24-02	Total Recoverable	Water	6020B	584490

Analysis Batch: 585426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-199687-2	TDSS-MW02-4Q24-02	Total Recoverable	Water	6020B	584490
MB 410-584490/1-A	Method Blank	Total Recoverable	Water	6020B	584490
LCS 410-584490/2-A	Lab Control Sample	Total Recoverable	Water	6020B	584490
410-199687-2 MS	TDSS-MW02-4Q24-02	Total Recoverable	Water	6020B	584490
410-199687-2 MSD	TDSS-MW02-4Q24-02	Total Recoverable	Water	6020B	584490
410-199687-2 DU	TDSS-MW02-4Q24-02	Total Recoverable	Water	6020B	584490

General Chemistry

Analysis Batch: 584071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-199687-1	TDSS-MW01-4Q24-02	Total/NA	Water	2540C - 2015	
410-199687-2	TDSS-MW02-4Q24-02	Total/NA	Water	2540C - 2015	
MB 410-584071/1	Method Blank	Total/NA	Water	2540C - 2015	
LCS 410-584071/2	Lab Control Sample	Total/NA	Water	2540C - 2015	
LCSD 410-584071/3	Lab Control Sample Dup	Total/NA	Water	2540C - 2015	

General Chemistry (Continued)

Analysis Batch: 584071 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-199687-2 DU	TDSS-MW02-4Q24-02	Total/NA	Water	2540C - 2015	

Analysis Batch: 584818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-199687-2	TDSS-MW02-4Q24-02	Total/NA	Water	2320B-2011	
MB 410-584818/93	Method Blank	Total/NA	Water	2320B-2011	
LCS 410-584818/94	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 410-584818/95	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 584819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-199687-2	TDSS-MW02-4Q24-02	Total/NA	Water	9040C	
LCS 410-584819/96	Lab Control Sample	Total/NA	Water	9040C	
LCSD 410-584819/97	Lab Control Sample Dup	Total/NA	Water	9040C	

Analysis Batch: 585055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-199687-1	TDSS-MW01-4Q24-02	Total/NA	Water	180.1	
410-199687-2	TDSS-MW02-4Q24-02	Total/NA	Water	180.1	
MB 410-585055/3	Method Blank	Total/NA	Water	180.1	
LCS 410-585055/4	Lab Control Sample	Total/NA	Water	180.1	
410-199687-2 DU	TDSS-MW02-4Q24-02	Total/NA	Water	180.1	

Analysis Batch: 585305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-199687-2	TDSS-MW02-4Q24-02	Total/NA	Water	SM5310C	
MB 410-585305/7	Method Blank	Total/NA	Water	SM5310C	
LCS 410-585305/6	Lab Control Sample	Total/NA	Water	SM5310C	
MRL 410-585305/3	Lab Control Sample	Total/NA	Water	SM5310C	

Analysis Batch: 585439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-199687-2	TDSS-MW02-4Q24-02	Total/NA	Water	EPA 350.1	
MB 410-585439/120	Method Blank	Total/NA	Water	EPA 350.1	
MB 410-585439/67	Method Blank	Total/NA	Water	EPA 350.1	
LCS 410-585439/85	Lab Control Sample	Total/NA	Water	EPA 350.1	
LCS 410-585439/86	Lab Control Sample	Total/NA	Water	EPA 350.1	
LCSD 410-585439/119	Lab Control Sample Dup	Total/NA	Water	EPA 350.1	
LCSD 410-585439/66	Lab Control Sample Dup	Total/NA	Water	EPA 350.1	

Lab Chronicle

Client: Environmental Chemical Corp.
Project/Site: TDSS / MW Sampling / 4Q-2024-02

Job ID: 410-199687-1
SDG: 410-199687

Client Sample ID: TDSS-MW01-4Q24-02

Lab Sample ID: 410-199687-1

Date Collected: 12/03/24 13:14

Matrix: Water

Date Received: 12/09/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			584490	UAMX	ELLE	12/10/24 22:15
Total Recoverable	Analysis	6020B		1	585068	LHF4	ELLE	12/11/24 19:22
Total/NA	Analysis	180.1		1	585055	UDS7	ELLE	12/11/24 22:03
Total/NA	Analysis	2540C - 2015		1	584071	M98K	ELLE	12/10/24 23:08 - 12/11/24 08:20 [1]

Client Sample ID: TDSS-MW02-4Q24-02

Lab Sample ID: 410-199687-2

Date Collected: 12/04/24 10:56

Matrix: Water

Date Received: 12/09/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	585049	L4QM	ELLE	12/12/24 07:30
Total/NA	Analysis	300.0		50	586742	L4QM	ELLE	12/16/24 20:05
Total Recoverable	Prep	3005A			584490	UAMX	ELLE	12/10/24 22:15
Total Recoverable	Analysis	6020B		1	585426	SAM2	ELLE	12/12/24 10:45
Total Recoverable	Prep	3005A			584490	UAMX	ELLE	12/10/24 22:15
Total Recoverable	Analysis	6020B		1	585068	LHF4	ELLE	12/11/24 19:06
Total/NA	Analysis	180.1		1	585055	UDS7	ELLE	12/11/24 22:03
Total/NA	Analysis	2320B-2011		1	584818	DI9Q	ELLE	12/11/24 07:51
Total/NA	Analysis	2540C - 2015		1	584071	M98K	ELLE	12/10/24 23:08 - 12/11/24 08:20 [1]
Total/NA	Analysis	9040C		1	584819	DI9Q	ELLE	12/11/24 07:51
Total/NA	Analysis	EPA 350.1		1	585439	JCG7	ELLE	12/12/24 13:39
Total/NA	Analysis	SM5310C		1	585305	P684	ELLE	12/11/24 21:18

[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 / 4Q-2024-02

Job ID: 410-199687-1
SDG: 410-199687

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	11-30-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. 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

Hawaii	State	N/A	01-31-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. 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 / 4Q-2024-02

Job ID: 410-199687-1
SDG: 410-199687

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 / 4Q-2024-02

Job ID: 410-199687-1
SDG: 410-199687

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-199687-1	TDSS-MW01-4Q24-02	Water	12/03/24 13:14	12/09/24 10:00
410-199687-2	TDSS-MW02-4Q24-02	Water	12/04/24 10:56	12/09/24 10:00

COC NO. 04Dec2024-01

Page 1 of 1

Laboratory Name: Eurofins - Lancaster Laboratories Inc

Address : 2425 New Hollands Pike / Lancaster, PA / 17601

Contact : Elizabeth Martin

Phone / Email: PH) 717-656-2300 FX) 717-205-3949 Email) Elizabeth.Martin@ET.EurofinsUS.com

Project Location:

ECC

75 Kupuohi St, Suite 103

Lahaina, Hawaii, 96761

TAT: 5-Day

Project Contact: Kane McNeill, 650-228-6950

Project Name: TDSS / MW Sampling / 4Q-2024-02

Project Number: 4347.017

Site: TDSS Olowalu - MW's

Event: GW Sampling 4Q-2024-02

Sampler Print: Kane W. McNeill

Sampler Sign:

Sample Number	Low Flow	Date	Time	Matrix	Site Type	Media Type	# of Bottles	Metals	Turbidity	Total Bicarbonate Alkalinity Carbonate	pH	Anions - Chloride, Sulfate	Ammonia	Total Organic Carbon (TOC)	Total Dissolved Solids		Comments
								6020B	180.1	2320B	9040C	300.0	350.1	SM5310C	2540C		
								250-ml / X1	250-ml / X1	250-ml / x1		50-ml / x1	250-ml / x1	40-ml / X3	500-ml / x1		
								HNO3	-	-		-	H2SO4	H3PO4	-	-	
TDSS-MW01-4Q24-02	x	03-Dec-2024	13:14	Water	MW	w	3	x	x	EX	EX	EX	EX	EX	x		1) 2540C partial fill / @ 200ml. 2) EX - Analyze extra analyses if unused volume in completed analyses allows.
TDSS-MW02-4Q24-02	x	04-Dec-2024	10:56	Water	MW	w	10	x	x	x	x	x	x	x	x		extra volume included / 1x 250-ml unpreserved

Relinquished By: Kane W. McNeill

Date/Time 05-Dec-2024

Received By:

Date/Time

Special Instructions

Metals: Mg, Na, Ca, K, Fe, As, Pb, Sb, Co, Cu

Samples Shipped on ice

Relinquished By: Kane W. McNeill

Date/Time 6 Dec 2024

Received From Laboratory By:

Date/Time 12/9/24 1000

FEDEX Shipping Number: 7705-3368-7010 / Ship Date Friday 06-Dec-2024.

R: 0.6
C: 0.7

410-199687 Chain of Custody

HZQ

Login Sample Receipt Checklist

Client: Environmental Chemical Corp.

Job Number: 410-199687-1
SDG Number: 410-199687

Login Number: 199687
List Number: 1
Creator: Arroyo, Haley

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is 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 acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kane McNeill
Environmental Chemical Corp.
1240 Bayshore Hwy
Burlingame, California 94010

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JOB DESCRIPTION

TDSS / MW Sampling / 4Q-2024-02
410-200051

JOB NUMBER

410-200051-1

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

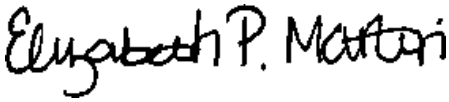
See page two for job notes and contact information.

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



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

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.

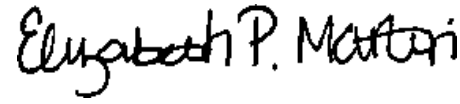

Table of Contents

Definitions/Glossary

Client: Environmental Chemical Corp.
Project/Site: TDSS / MW Sampling / 4Q-2024-02

Job ID: 410-200051-1
SDG: 410-200051

Qualifiers

HPLC/IC

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

Metals

Qualifier	Qualifier Description
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
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)
TNTC	Too Numerous To Count

Job ID: 410-200051-1 Eurofins Lancaster Laboratories Environment

Job Narrative
410-200051-1

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 and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided 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 12/11/2024 10:30 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 1.4°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 / 4Q-2024-02

Job ID: 410-200051-1
SDG: 410-200051

Client Sample ID: TDSS-MW01-4Q24-02B — Lab Sample ID: 410-200051-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	16		1.5	1.0	0.50	mg/L	1		300.0	Total/NA
Chloride	110	D	38	30	15	mg/L	25		300.0	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	64		8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Bicarbonate Alkalinity as CaCO3	64		8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
pH	7.0	HF	0.01	0.01	0.01	S.U.	1		9040C	Total/NA
Total Organic Carbon	1.5	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 1	1.4	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 2	1.5	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 3	1.5	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA

Client Sample ID: TDSS-ER-4Q2024-02 — Lab Sample ID: 410-200051-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Calcium	250		120	100	50	ug/L	1		6020B	Total Recoverable
Copper	0.59	J	1.0	0.90	0.36	ug/L	1		6020B	Total Recoverable
Magnesium	57		50	32	16	ug/L	1		6020B	Total Recoverable
Sodium	530		200	180	90	ug/L	1		6020B	Total Recoverable
Total Alkalinity as CaCO3 to pH 4.5	3.0	J	8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Bicarbonate Alkalinity as CaCO3	3.0	J	8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
pH	6.1	HF	0.01	0.01	0.01	S.U.	1		9040C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: TDSS-MW01-4Q24-02B

Lab Sample ID: 410-200051-1

Date Collected: 12/08/24 09:40
Matrix: Water
Date Received: 12/11/24 10:30

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**16**		1.5	1.0	0.50	mg/L		12/12/24 23:15	1
Chloride	**110**	**D**	38	30	15	mg/L		12/16/24 20:44	25

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**64**		8.0	6.0	2.6	mg/L		12/18/24 15:32	1
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		12/18/24 15:32	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**64**		8.0	6.0	2.6	mg/L		12/18/24 15:32	1
pH (SW846 9040C)	**7.0**	**HF**	0.01	0.01	0.01	S.U.		12/18/24 15:32	1
Ammonia as N (EPA 350.1)	0.090	U	0.10	0.090	0.050	mg/L		12/12/24 14:06	1
Total Organic Carbon (SM5310C)	**1.5**	**J**	2.0	1.0	0.50	mg/L		12/15/24 15:52	1
TOC Result 1 (SM5310C)	**1.4**	**J**	2.0	1.0	0.50	mg/L		12/15/24 15:52	1
TOC Result 2 (SM5310C)	**1.5**	**J**	2.0	1.0	0.50	mg/L		12/15/24 15:52	1
TOC Result 3 (SM5310C)	**1.5**	**J**	2.0	1.0	0.50	mg/L		12/15/24 15:52	1

Client Sample ID: TDSS-ER-4Q2024-02

Lab Sample ID: 410-200051-2

Date Collected: 12/08/24 15:00
Matrix: Water
Date Received: 12/11/24 10:30

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.5	1.0	0.50	mg/L		12/12/24 23:37	1
Chloride	1.2	U	1.5	1.2	0.60	mg/L		12/12/24 23:37	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		12/16/24 11:11	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		12/16/24 11:11	1
Calcium	**250**		120	100	50	ug/L		12/16/24 11:11	1
Cobalt	0.40	U	0.50	0.40	0.16	ug/L		12/16/24 11:11	1
Copper	**0.59**	**J**	1.0	0.90	0.36	ug/L		12/16/24 11:11	1
Iron	40	U	50	40	20	ug/L		12/16/24 11:11	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		12/16/24 11:11	1
Magnesium	**57**		50	32	16	ug/L		12/16/24 11:11	1
Potassium	180	U	200	180	65	ug/L		12/16/24 11:11	1
Sodium	**530**		200	180	90	ug/L		12/16/24 11:11	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Turbidity (EPA 180.1)	0.70	U H H3	1.0	0.70	1.0	NTU		12/11/24 22:03	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**3.0**	**J**	8.0	6.0	2.6	mg/L		12/18/24 15:39	1
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		12/18/24 15:39	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**3.0**	**J**	8.0	6.0	2.6	mg/L		12/18/24 15:39	1
Total Dissolved Solids (SM 2540C - 2015)	25	U	30	25	12	mg/L		12/12/24 09:20	1
pH (SW846 9040C)	**6.1**	**HF**	0.01	0.01	0.01	S.U.		12/18/24 15:39	1
Ammonia as N (EPA 350.1)	0.090	U	0.10	0.090	0.050	mg/L		12/12/24 14:12	1

Client: Environmental Chemical Corp.
Project/Site: TDSS / MW Sampling / 4Q-2024-02

Job ID: 410-200051-1
SDG: 410-200051

Client Sample ID: TDSS-ER-4Q2024-02
Date Collected: 12/08/24 15:00
Date Received: 12/11/24 10:30

Lab Sample ID: 410-200051-2
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon (SM5310C)	1.0	U	2.0	1.0	0.50	mg/L		12/15/24 16:18	1
TOC Result 1 (SM5310C)	1.0	U	2.0	1.0	0.50	mg/L		12/15/24 16:18	1
TOC Result 2 (SM5310C)	1.0	U	2.0	1.0	0.50	mg/L		12/15/24 16:18	1
TOC Result 3 (SM5310C)	1.0	U	2.0	1.0	0.50	mg/L		12/15/24 16:18	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 410-585564/5
Matrix: Water
Analysis Batch: 585564

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	1.5	1.0	0.50	mg/L		12/12/24 19:09	1
Chloride	1.2	U	1.5	1.2	0.60	mg/L		12/12/24 19:09	1

Lab Sample ID: LCS 410-585564/3
Matrix: Water
Analysis Batch: 585564

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	7.28		mg/L		97	87 - 112
Chloride	3.00	2.94		mg/L		98	87 - 111

Lab Sample ID: LCSD 410-585564/4
Matrix: Water
Analysis Batch: 585564

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	7.25		mg/L		97	87 - 112	0	10
Chloride	3.00	2.94		mg/L		98	87 - 111	0	10

Lab Sample ID: MB 410-586750/5
Matrix: Water
Analysis Batch: 586750

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	1.5	1.0	0.50	mg/L		12/16/24 17:53	1
Chloride	1.2	U	1.5	1.2	0.60	mg/L		12/16/24 17:53	1

Lab Sample ID: LCS 410-586750/3
Matrix: Water
Analysis Batch: 586750

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	7.16		mg/L		95	87 - 112
Chloride	3.00	3.05		mg/L		102	87 - 111

Lab Sample ID: LCSD 410-586750/4
Matrix: Water
Analysis Batch: 586750

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	7.22		mg/L		96	87 - 112	1	10
Chloride	3.00	3.07		mg/L		102	87 - 111	1	10

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-585763/1-A
Matrix: Water
Analysis Batch: 586566

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 585763

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		12/16/24 10:57	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		12/16/24 10:57	1
Calcium	100	U	120	100	50	ug/L		12/16/24 10:57	1
Cobalt	0.40	U	0.50	0.40	0.16	ug/L		12/16/24 10:57	1
Copper	0.90	U	1.0	0.90	0.36	ug/L		12/16/24 10:57	1
Iron	40	U	50	40	20	ug/L		12/16/24 10:57	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		12/16/24 10:57	1
Magnesium	32	U	50	32	16	ug/L		12/16/24 10:57	1
Potassium	180	U	200	180	65	ug/L		12/16/24 10:57	1
Sodium	180	U	200	180	90	ug/L		12/16/24 10:57	1

Lab Sample ID: LCS 410-585763/2-A
Matrix: Water
Analysis Batch: 586566

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 585763

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	97.5		ug/L		98	85 - 117
Arsenic	500	477		ug/L		95	84 - 116
Calcium	5000	5000		ug/L		100	87 - 118
Cobalt	500	493		ug/L		99	86 - 115
Copper	500	479		ug/L		96	85 - 118
Iron	5000	4980		ug/L		100	87 - 118
Lead	50.0	48.1		ug/L		96	88 - 115
Magnesium	5000	5000		ug/L		100	83 - 118
Potassium	5000	5050		ug/L		101	87 - 115
Sodium	5000	5060		ug/L		101	85 - 117

Method: 180.1 - Turbidity, Nephelometric

Lab Sample ID: MB 410-585055/3
Matrix: Water
Analysis Batch: 585055

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		12/11/24 22:03	1

Lab Sample ID: LCS 410-585055/4
Matrix: Water
Analysis Batch: 585055

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	1.2		NTU		123	88 - 139

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 410-587902/145
Matrix: Water
Analysis Batch: 587902

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		12/18/24 14:42	1

Lab Sample ID: LCS 410-587902/146
Matrix: Water
Analysis Batch: 587902

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	184		mg/L		98	80 - 110

Lab Sample ID: LCSD 410-587902/147
Matrix: Water
Analysis Batch: 587902

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	187		mg/L		99	80 - 110	1	10

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

Lab Sample ID: MB 410-585098/1
Matrix: Water
Analysis Batch: 585098

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		12/12/24 09:20	1

Lab Sample ID: LCS 410-585098/2
Matrix: Water
Analysis Batch: 585098

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	188		mg/L		94	90 - 110

Method: 9040C - pH

Lab Sample ID: LCS 410-587903/148
Matrix: Water
Analysis Batch: 587903

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	7.1		S.U.		101	95 - 105

Lab Sample ID: LCSD 410-587903/149
Matrix: Water
Analysis Batch: 587903

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	7.1		S.U.		101	95 - 105	0	3

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 410-585439/120
Matrix: Water
Analysis Batch: 585439

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		12/12/24 14:48	1

Lab Sample ID: MB 410-585439/67
Matrix: Water
Analysis Batch: 585439

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		12/12/24 12:57	1

Lab Sample ID: LCS 410-585439/85
Matrix: Water
Analysis Batch: 585439

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	2.14		mg/L		107	90 - 110		

Lab Sample ID: LCS 410-585439/86
Matrix: Water
Analysis Batch: 585439

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	2.17		mg/L		108	90 - 110		

Lab Sample ID: LCSD 410-585439/119
Matrix: Water
Analysis Batch: 585439

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	1.93		mg/L		96	90 - 110	7	15

Lab Sample ID: LCSD 410-585439/66
Matrix: Water
Analysis Batch: 585439

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	1.88		mg/L		94	90 - 110	14	15

Lab Sample ID: 410-200051-1 MS
Matrix: Water
Analysis Batch: 585439

Client Sample ID: TDSS-MW01-4Q24-02B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia as N	0.090	U	2.51	2.45		mg/L		98	90 - 110		

Lab Sample ID: 410-200051-1 DU
Matrix: Water
Analysis Batch: 585439

Client Sample ID: TDSS-MW01-4Q24-02B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ammonia as N	0.090	U		0.090	U	mg/L				NC	20

Method: SM5310C - TOC

Lab Sample ID: MB 410-586548/7
Matrix: Water
Analysis Batch: 586548

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		12/15/24 13:39	1
TOC Result 1	1.0	U	2.0	1.0	0.50	mg/L		12/15/24 13:39	1
TOC Result 2	1.0	U	2.0	1.0	0.50	mg/L		12/15/24 13:39	1
TOC Result 3	1.0	U	2.0	1.0	0.50	mg/L		12/15/24 13:39	1

Lab Sample ID: LCS 410-586548/6
Matrix: Water
Analysis Batch: 586548

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	49.8		mg/L		100	90 - 110
TOC Result 1	50.0	49.8		mg/L		99	90 - 110
TOC Result 2	50.0	49.7		mg/L		99	90 - 110
TOC Result 3	50.0	50.0		mg/L		100	90 - 110

Lab Sample ID: MRL 410-586548/3
Matrix: Water
Analysis Batch: 586548

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	0.931	J	mg/L		93	50 - 150
TOC Result 1	1.00	0.936	J	mg/L		94	
TOC Result 2	1.00	0.925	J	mg/L		92	
TOC Result 3	1.00	0.932	J	mg/L		93	

HPLC/IC

Analysis Batch: 585564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-200051-1	TDSS-MW01-4Q24-02B	Total/NA	Water	300.0	
410-200051-2	TDSS-ER-4Q2024-02	Total/NA	Water	300.0	
MB 410-585564/5	Method Blank	Total/NA	Water	300.0	
LCS 410-585564/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 410-585564/4	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 586750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-200051-1	TDSS-MW01-4Q24-02B	Total/NA	Water	300.0	
MB 410-586750/5	Method Blank	Total/NA	Water	300.0	
LCS 410-586750/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 410-586750/4	Lab Control Sample Dup	Total/NA	Water	300.0	

Metals

Prep Batch: 585763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-200051-2	TDSS-ER-4Q2024-02	Total Recoverable	Water	3005A	
MB 410-585763/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-585763/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 586566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-200051-2	TDSS-ER-4Q2024-02	Total Recoverable	Water	6020B	585763
MB 410-585763/1-A	Method Blank	Total Recoverable	Water	6020B	585763
LCS 410-585763/2-A	Lab Control Sample	Total Recoverable	Water	6020B	585763

General Chemistry

Analysis Batch: 585055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-200051-2	TDSS-ER-4Q2024-02	Total/NA	Water	180.1	
MB 410-585055/3	Method Blank	Total/NA	Water	180.1	
LCS 410-585055/4	Lab Control Sample	Total/NA	Water	180.1	

Analysis Batch: 585098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-200051-2	TDSS-ER-4Q2024-02	Total/NA	Water	2540C - 2015	
MB 410-585098/1	Method Blank	Total/NA	Water	2540C - 2015	
LCS 410-585098/2	Lab Control Sample	Total/NA	Water	2540C - 2015	

Analysis Batch: 585439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-200051-1	TDSS-MW01-4Q24-02B	Total/NA	Water	EPA 350.1	
410-200051-2	TDSS-ER-4Q2024-02	Total/NA	Water	EPA 350.1	
MB 410-585439/120	Method Blank	Total/NA	Water	EPA 350.1	
MB 410-585439/67	Method Blank	Total/NA	Water	EPA 350.1	
LCS 410-585439/85	Lab Control Sample	Total/NA	Water	EPA 350.1	
LCS 410-585439/86	Lab Control Sample	Total/NA	Water	EPA 350.1	
LCSD 410-585439/119	Lab Control Sample Dup	Total/NA	Water	EPA 350.1	
LCSD 410-585439/66	Lab Control Sample Dup	Total/NA	Water	EPA 350.1	
410-200051-1 MS	TDSS-MW01-4Q24-02B	Total/NA	Water	EPA 350.1	

General Chemistry (Continued)

Analysis Batch: 585439 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-200051-1 DU	TDSS-MW01-4Q24-02B	Total/NA	Water	EPA 350.1	

Analysis Batch: 586548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-200051-1	TDSS-MW01-4Q24-02B	Total/NA	Water	SM5310C	
410-200051-2	TDSS-ER-4Q2024-02	Total/NA	Water	SM5310C	
MB 410-586548/7	Method Blank	Total/NA	Water	SM5310C	
LCS 410-586548/6	Lab Control Sample	Total/NA	Water	SM5310C	
MRL 410-586548/3	Lab Control Sample	Total/NA	Water	SM5310C	

Analysis Batch: 587902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-200051-1	TDSS-MW01-4Q24-02B	Total/NA	Water	2320B-2011	
410-200051-2	TDSS-ER-4Q2024-02	Total/NA	Water	2320B-2011	
MB 410-587902/145	Method Blank	Total/NA	Water	2320B-2011	
LCS 410-587902/146	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 410-587902/147	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 587903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-200051-1	TDSS-MW01-4Q24-02B	Total/NA	Water	9040C	
410-200051-2	TDSS-ER-4Q2024-02	Total/NA	Water	9040C	
LCS 410-587903/148	Lab Control Sample	Total/NA	Water	9040C	
LCSD 410-587903/149	Lab Control Sample Dup	Total/NA	Water	9040C	

Lab Chronicle

Client: Environmental Chemical Corp.
Project/Site: TDSS / MW Sampling / 4Q-2024-02

Job ID: 410-200051-1
SDG: 410-200051

Client Sample ID: TDSS-MW01-4Q24-02B

Lab Sample ID: 410-200051-1

Date Collected: 12/08/24 09:40
Matrix: Water
Date Received: 12/11/24 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	585564	L4QM	ELLE	12/12/24 23:15
Total/NA	Analysis	300.0		25	586750	L4QM	ELLE	12/16/24 20:44
Total/NA	Analysis	2320B-2011		1	587902	DI9Q	ELLE	12/18/24 15:32
Total/NA	Analysis	9040C		1	587903	DI9Q	ELLE	12/18/24 15:32
Total/NA	Analysis	EPA 350.1		1	585439	JCG7	ELLE	12/12/24 14:06
Total/NA	Analysis	SM5310C		1	586548	P684	ELLE	12/15/24 15:52

Client Sample ID: TDSS-ER-4Q2024-02

Lab Sample ID: 410-200051-2

Date Collected: 12/08/24 15:00
Matrix: Water
Date Received: 12/11/24 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	585564	L4QM	ELLE	12/12/24 23:37
Total Recoverable	Prep	3005A			585763	UAMX	ELLE	12/13/24 22:10
Total Recoverable	Analysis	6020B		1	586566	F7JF	ELLE	12/16/24 11:11
Total/NA	Analysis	180.1		1	585055	UDS7	ELLE	12/11/24 22:03
Total/NA	Analysis	2320B-2011		1	587902	DI9Q	ELLE	12/18/24 15:39
Total/NA	Analysis	2540C - 2015		1	585098	M98K	ELLE	12/12/24 09:20 - 12/16/24 12:00 [1]
Total/NA	Analysis	9040C		1	587903	DI9Q	ELLE	12/18/24 15:39
Total/NA	Analysis	EPA 350.1		1	585439	JCG7	ELLE	12/12/24 14:12
Total/NA	Analysis	SM5310C		1	586548	P684	ELLE	12/15/24 16:18

[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 / 4Q-2024-02

Job ID: 410-200051-1
SDG: 410-200051

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	11-30-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. 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

Hawaii		State	N/A	01-31-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. 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 / 4Q-2024-02

Job ID: 410-200051-1
SDG: 410-200051

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 / 4Q-2024-02

Job ID: 410-200051-1
SDG: 410-200051

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-200051-1	TDSS-MW01-4Q24-02B	Water	12/08/24 09:40	12/11/24 10:30
410-200051-2	TDSS-ER-4Q2024-02	Water	12/08/24 15:00	12/11/24 10:30

COC NO. 08Dec2024-01
Page 1 of 1

Project Location:
ECC
75 Kupuohi St. Suite 103
Lahaina, Hawaii, 96761

Laboratory Name: Eurofins - Lancaster Laboratories Inc
Address : 2425 New Hollands Pike / Lancaster, PA / 17601
Contact : Elizabeth Martin
Phone / Email: FD) 717-656-2300 D) 717-205-3949 Email) Elizabeth.Martin@ET.EurofinsUS.com

TAT: 5-Day

Project Contact: Kane McNeill. 650-228-6950
Project Name: TDSS / MW Sampling / 4Q-2024-02
Project Number: 4347.017
Site: TDSS Olowalu - MW's
Event: GW Sampling 4Q-2024-02

Sampler Print: Kane W. McNeill
Sampler Sign: KM

410-200051 Chain of Custody

Sample Number	Low Flow	Date	Time	Matrix	Site Type	Media Type	# of Bottles	Metals	Turbidity	Total Bicarbonate, Alkalinity Carbonate	pH	Anions - Chloride, Sulfate	Ammonia	Total Organic Carbon (TOC)	Total Dissolved Solids		Comments
								6020B	180.1	2320B	9040C	300.0	350.1	SM5310C	2540C		
								250-ml / X1	250-ml / X1	250-ml / x1		50-ml / x1	250-ml / x1	40-ml / X3	500-ml / x1		
								HNO3	-	-		-	H2SO4	H3PO4	-	-	
TDSS-MW01-4Q24-02B	x	08-Dec-2024	09 40	Water	MW	W	8	Ex		x	x	x	x	x			EX Extra 175-ml of presreved water provided - if required.
TDSS-ER-4Q2024-02		08-Dec-2024	15 00	Water	ER		7	x	x	x	x	x	x	x	x		Equipment rinsate on pump using lab provided DI water

Relinquished By: Kane McNeill KM
Date/Time: 08-Dec-2024 / 16 00

Received By:
Date/Time

Special Instructions
Metals: Mg, Na, Ca, K, Fe, As, Pb, Sb, Co, Cu
Samples Shipped on ice

Relinquished By: KM 07:00 KM
Date/Time 09-Dec-2024

Received From Laboratory By: 12/11/24 1030
Date/Time

FEDEX Shipping Number: / Ship Date Monday / 09-Dec-2024.

Elle

R: 1.4
C: 1.4

Login Sample Receipt Checklist

Client: Environmental Chemical Corp.

Job Number: 410-200051-1
SDG Number: 410-200051

Login Number: 200051
List Number: 1
Creator: Arroyo, Haley

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is 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 acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kane McNeill
Environmental Chemical Corp.
1240 Bayshore Hwy
Burlingame, California 94010

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JOB DESCRIPTION

TDSS MW Sampling 4Q-2024 / Baseline
410-191987

JOB NUMBER

410-191987-1

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

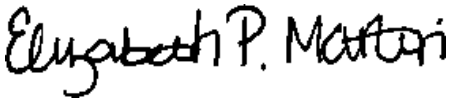
See page two for job notes and contact information.

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



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

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.

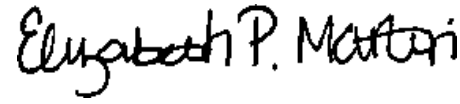

Table of Contents

Definitions/Glossary

Client: Environmental Chemical Corp. Job ID: 410-191987-1
Project/Site: TDSS MW Sampling 4Q-2024 / Baseline SDG: 410-191987

Qualifiers

HPLC/IC

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

Metals

Qualifier	Qualifier Description
B	Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank.
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
D	The reported value is from a dilution.
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
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

Job ID: 410-191987-1 Eurofins Lancaster Laboratories Environment

Job Narrative
410-191987-1

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 and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided 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 10/11/2024 9:50 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 0.6°C.

Receipt Exceptions
The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): TDSS-FB-4Q24 (410-191987-3). The container labels list TDSS-FB-4Q24, while the COC lists TDSS-ER-3Q24. Entered per container labels, as they seem to have the correct information on them, based on other sample IDs.Client was contacted to confirm

The Chain-of-Custody (COC) was incomplete as received. The COC is sample type (grab or composite). This does not meet regulatory requirements.

The following samples were collected in an improper container: TDSS-MW01-4Q24 (410-191987-1), TDSS-MW02-4Q24 (410-191987-2) and TDSS-FB-4Q24 (410-191987-3). TOC in 40 mL Hydrochloric Acid vials - used the 500 mL plastic Sulfuric Acid preserved bottle instead.

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 4Q-2024 / Baseline

Job ID: 410-191987-1
SDG: 410-191987

Client Sample ID: TDSS-MW01-4Q24 — Lab Sample ID: 410-191987-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	20	D	7.5	5.0	2.5	mg/L	5		300.0	Total/NA
Chloride	110	D	75	60	30	mg/L	50		300.0	Total/NA
Antimony	0.21	J	1.0	0.50	0.20	ug/L	1		6020B	Total Recoverable
Calcium	14000		120	100	50	ug/L	1		6020B	Total Recoverable
Cobalt	1.9		0.50	0.40	0.16	ug/L	1		6020B	Total Recoverable
Copper	3.0		1.0	0.90	0.36	ug/L	1		6020B	Total Recoverable
Iron	630		50	40	20	ug/L	1		6020B	Total Recoverable
Lead	0.30	J	0.50	0.24	0.12	ug/L	1		6020B	Total Recoverable
Magnesium	12000		50	32	16	ug/L	1		6020B	Total Recoverable
Potassium	5200		200	180	65	ug/L	1		6020B	Total Recoverable
Sodium	76000	B	200	180	90	ug/L	1		6020B	Total Recoverable
Turbidity	8.1	H H3	1.0	0.70	1.0	NTU	1		180.1	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	69		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	340		30	25	12	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	0.069	J J1	0.10	0.090	0.050	mg/L	1		EPA 350.1	Total/NA
Total Organic Carbon	9.7		2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 1	9.3		2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 2	9.1		2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 3	11		2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA

Client Sample ID: TDSS-MW02-4Q24 — Lab Sample ID: 410-191987-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	25	D	7.5	5.0	2.5	mg/L	5		300.0	Total/NA
Chloride	200	D	75	60	30	mg/L	50		300.0	Total/NA
Arsenic	1.1	J	2.0	1.7	0.68	ug/L	1		6020B	Total Recoverable
Calcium	22000		120	100	50	ug/L	1		6020B	Total Recoverable
Cobalt	0.41	J	0.50	0.40	0.16	ug/L	1		6020B	Total Recoverable
Copper	1.0		1.0	0.90	0.36	ug/L	1		6020B	Total Recoverable
Iron	2500		50	40	20	ug/L	1		6020B	Total Recoverable
Lead	0.76		0.50	0.24	0.12	ug/L	1		6020B	Total Recoverable
Magnesium	17000		50	32	16	ug/L	1		6020B	Total Recoverable
Potassium	7700		200	180	65	ug/L	1		6020B	Total Recoverable
Sodium	130000	D B	2000	1800	900	ug/L	10		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: TDSS-MW02-4Q24 (Continued)

Lab Sample ID: 410-191987-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Turbidity	80	H H3 D	10	7.2	10	NTU	10		180.1	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	69		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	500		60	50	24	mg/L	1		2540C - 2015	Total/NA
pH	7.9	HF	0.01	0.01	0.01	S.U.	1		9040C	Total/NA
Ammonia as N	0.091	J	0.10	0.090	0.050	mg/L	1		EPA 350.1	Total/NA
Total Organic Carbon	0.95	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 1	1.2	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 2	0.92	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA
TOC Result 3	0.77	J	2.0	1.0	0.50	mg/L	1		SM5310C	Total/NA

Client Sample ID: TDSS-FB-4Q24

Lab Sample ID: 410-191987-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	0.65	J	1.5	1.2	0.60	mg/L	1		300.0	Total/NA
Calcium	220		120	100	50	ug/L	1		6020B	Total Recoverable
Magnesium	51		50	32	16	ug/L	1		6020B	Total Recoverable
Sodium	180	J	200	180	90	ug/L	1		6020B	Total Recoverable
pH	5.2	HF	0.01	0.01	0.01	S.U.	1		9040C	Total/NA
Ammonia as N	0.25		0.10	0.090	0.050	mg/L	1		EPA 350.1	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: TDSS-MW01-4Q24

Lab Sample ID: 410-191987-1

Date Collected: 10/08/24 13:30
Matrix: Water
Date Received: 10/11/24 09:50

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	20	D	7.5	5.0	2.5	mg/L		10/14/24 22:30	5
Chloride	110	D	75	60	30	mg/L		10/14/24 22:41	50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	0.21	J	1.0	0.50	0.20	ug/L		10/16/24 17:42	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		10/16/24 17:42	1
Calcium	14000		120	100	50	ug/L		10/16/24 17:42	1
Cobalt	1.9		0.50	0.40	0.16	ug/L		10/16/24 17:42	1
Copper	3.0		1.0	0.90	0.36	ug/L		10/16/24 17:42	1
Iron	630		50	40	20	ug/L		10/16/24 17:42	1
Lead	0.30	J	0.50	0.24	0.12	ug/L		10/16/24 17:42	1
Magnesium	12000		50	32	16	ug/L		10/16/24 17:42	1
Potassium	5200		200	180	65	ug/L		10/16/24 17:42	1
Sodium	76000	B	200	180	90	ug/L		10/16/24 17:42	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Turbidity (EPA 180.1)	8.1	H H3	1.0	0.70	1.0	NTU		10/12/24 05:52	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	69		8.0	6.0	2.6	mg/L		10/16/24 01:59	1
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		10/16/24 01:59	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	69		8.0	6.0	2.6	mg/L		10/16/24 01:59	1
Total Dissolved Solids (SM 2540C - 2015)	340		30	25	12	mg/L		10/11/24 20:39	1
pH (SW846 9040C)	7.5	HF	0.01	0.01	0.01	S.U.		10/16/24 01:59	1
Ammonia as N (EPA 350.1)	0.069	J J1	0.10	0.090	0.050	mg/L		10/21/24 16:24	1
Total Organic Carbon (SM5310C)	9.7		2.0	1.0	0.50	mg/L		10/18/24 13:23	1
TOC Result 1 (SM5310C)	9.3		2.0	1.0	0.50	mg/L		10/18/24 13:23	1
TOC Result 2 (SM5310C)	9.1		2.0	1.0	0.50	mg/L		10/18/24 13:23	1
TOC Result 3 (SM5310C)	11		2.0	1.0	0.50	mg/L		10/18/24 13:23	1

Client Sample ID: TDSS-MW02-4Q24

Lab Sample ID: 410-191987-2

Date Collected: 10/08/24 14:30
Matrix: Water
Date Received: 10/11/24 09:50

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	25	D	7.5	5.0	2.5	mg/L		10/14/24 23:14	5
Chloride	200	D	75	60	30	mg/L		10/14/24 23:25	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		10/16/24 17:40	1
Arsenic	1.1	J	2.0	1.7	0.68	ug/L		10/16/24 17:40	1
Calcium	22000		120	100	50	ug/L		10/16/24 17:40	1
Cobalt	0.41	J	0.50	0.40	0.16	ug/L		10/16/24 17:40	1
Copper	1.0		1.0	0.90	0.36	ug/L		10/16/24 17:40	1
Iron	2500		50	40	20	ug/L		10/16/24 17:40	1
Lead	0.76		0.50	0.24	0.12	ug/L		10/16/24 17:40	1

Client Sample ID: TDSS-MW02-4Q24

Lab Sample ID: 410-191987-2

Date Collected: 10/08/24 14:30
Matrix: Water
Date Received: 10/11/24 09:50

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		10/16/24 17:40	1
Potassium	7700		200	180	65	ug/L		10/16/24 17:40	1
Sodium	130000	D B	2000	1800	900	ug/L		10/16/24 18:02	10

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Turbidity (EPA 180.1)	80	H H3 D	10	7.2	10	NTU		10/12/24 05:52	10
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	69		8.0	6.0	2.6	mg/L		10/16/24 02:05	1
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		10/16/24 02:05	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	69		8.0	6.0	2.6	mg/L		10/16/24 02:05	1
Total Dissolved Solids (SM 2540C - 2015)	500		60	50	24	mg/L		10/11/24 20:39	1
pH (SW846 9040C)	7.9	HF	0.01	0.01	0.01	S.U.		10/16/24 02:05	1
Ammonia as N (EPA 350.1)	0.091	J	0.10	0.090	0.050	mg/L		10/21/24 16:30	1
Total Organic Carbon (SM5310C)	0.95	J	2.0	1.0	0.50	mg/L		10/18/24 13:43	1
TOC Result 1 (SM5310C)	1.2	J	2.0	1.0	0.50	mg/L		10/18/24 13:43	1
TOC Result 2 (SM5310C)	0.92	J	2.0	1.0	0.50	mg/L		10/18/24 13:43	1
TOC Result 3 (SM5310C)	0.77	J	2.0	1.0	0.50	mg/L		10/18/24 13:43	1

Client Sample ID: TDSS-FB-4Q24

Lab Sample ID: 410-191987-3

Date Collected: 10/08/24 15:00
Matrix: Water
Date Received: 10/11/24 09:50

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.5	1.0	0.50	mg/L		10/15/24 00:18	1
Chloride	0.65	J	1.5	1.2	0.60	mg/L		10/15/24 00:18	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		10/16/24 17:44	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		10/16/24 17:44	1
Calcium	220		120	100	50	ug/L		10/16/24 17:44	1
Cobalt	0.40	U	0.50	0.40	0.16	ug/L		10/16/24 17:44	1
Copper	0.90	U	1.0	0.90	0.36	ug/L		10/16/24 17:44	1
Iron	40	U	50	40	20	ug/L		10/16/24 17:44	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		10/16/24 17:44	1
Magnesium	51		50	32	16	ug/L		10/16/24 17:44	1
Potassium	180	U	200	180	65	ug/L		10/16/24 17:44	1
Sodium	180	J	200	180	90	ug/L		10/22/24 12:30	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Turbidity (EPA 180.1)	0.70	U H H3	1.0	0.70	1.0	NTU		10/12/24 05:52	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		10/16/24 02:27	1
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		10/16/24 02:27	1

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 4Q-2024 / Baseline

Job ID: 410-191987-1
SDG: 410-191987

Client Sample ID: TDSS-FB-4Q24
Date Collected: 10/08/24 15:00
Date Received: 10/11/24 09:50

Lab Sample ID: 410-191987-3
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		10/16/24 02:27	1
Total Dissolved Solids (SM 2540C - 2015)	25	U	30	25	12	mg/L		10/11/24 20:39	1
pH (SW846 9040C)	**5.2**	**HF**	0.01	0.01	0.01	S.U.		10/16/24 02:27	1
Ammonia as N (EPA 350.1)	**0.25**		0.10	0.090	0.050	mg/L		10/21/24 16:32	1
Total Organic Carbon (SM5310C)	1.0	U	2.0	1.0	0.50	mg/L		10/18/24 14:03	1
TOC Result 1 (SM5310C)	1.0	U	2.0	1.0	0.50	mg/L		10/18/24 14:03	1
TOC Result 2 (SM5310C)	1.0	U	2.0	1.0	0.50	mg/L		10/18/24 14:03	1
TOC Result 3 (SM5310C)	1.0	U	2.0	1.0	0.50	mg/L		10/18/24 14:03	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 410-563049/5
Matrix: Water
Analysis Batch: 563049

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	1.5	1.0	0.50	mg/L		10/14/24 17:39	1
Chloride	1.2	U	1.5	1.2	0.60	mg/L		10/14/24 17:39	1

Lab Sample ID: LCS 410-563049/3
Matrix: Water
Analysis Batch: 563049

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	7.29		mg/L		97	87 - 112
Chloride	3.00	3.01		mg/L		100	87 - 111

Lab Sample ID: LCSD 410-563049/4
Matrix: Water
Analysis Batch: 563049

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	7.28		mg/L		97	87 - 112	0	10
Chloride	3.00	3.00		mg/L		100	87 - 111	0	10

Lab Sample ID: MB 410-563072/5
Matrix: Water
Analysis Batch: 563072

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	1.5	1.0	0.50	mg/L		10/14/24 18:15	1
Chloride	1.2	U M	1.5	1.2	0.60	mg/L		10/14/24 18:15	1

Lab Sample ID: LCS 410-563072/3
Matrix: Water
Analysis Batch: 563072

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	7.02		mg/L		94	87 - 112
Chloride	3.00	2.85		mg/L		95	87 - 111

Lab Sample ID: LCSD 410-563072/4
Matrix: Water
Analysis Batch: 563072

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	7.01		mg/L		94	87 - 112	0	10
Chloride	3.00	2.85		mg/L		95	87 - 111	0	10

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 4Q-2024 / Baseline

Job ID: 410-191987-1
SDG: 410-191987

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-562781/1-A
Matrix: Water
Analysis Batch: 564113

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 562781

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		10/16/24 16:41	1
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		10/16/24 16:41	1
Calcium	100	U	120	100	50	ug/L		10/16/24 16:41	1
Cobalt	0.40	U	0.50	0.40	0.16	ug/L		10/16/24 16:41	1
Copper	0.90	U	1.0	0.90	0.36	ug/L		10/16/24 16:41	1
Iron	40	U	50	40	20	ug/L		10/16/24 16:41	1
Lead	0.24	U	0.50	0.24	0.12	ug/L		10/16/24 16:41	1
Magnesium	32	U	50	32	16	ug/L		10/16/24 16:41	1
Potassium	180	U	200	180	65	ug/L		10/16/24 16:41	1
Sodium	180	U	200	180	90	ug/L		10/16/24 16:41	1

Lab Sample ID: LCS 410-562781/2-A
Matrix: Water
Analysis Batch: 564113

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 562781

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	99.2		ug/L		99	85 - 117
Arsenic	500	499		ug/L		100	84 - 116
Calcium	5000	4960		ug/L		99	87 - 118
Cobalt	500	494		ug/L		99	86 - 115
Copper	500	494		ug/L		99	85 - 118
Iron	5000	4980		ug/L		100	87 - 118
Lead	50.0	52.5		ug/L		105	88 - 115
Magnesium	5000	4940		ug/L		99	83 - 118
Potassium	5000	5030		ug/L		101	87 - 115
Sodium	5000	4920		ug/L		98	85 - 117

Method: 180.1 - Turbidity, Nephelometric

Lab Sample ID: MB 410-562441/3
Matrix: Water
Analysis Batch: 562441

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		10/12/24 05:52	1

Lab Sample ID: LCS 410-562441/4
Matrix: Water
Analysis Batch: 562441

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		114	88 - 139

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 410-563954/32
Matrix: Water
Analysis Batch: 563954

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		10/15/24 21:39	1

Lab Sample ID: MB 410-563954/60
Matrix: Water
Analysis Batch: 563954

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		10/16/24 00:29	1

Lab Sample ID: LCS 410-563954/63
Matrix: Water
Analysis Batch: 563954

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	188		mg/L		99	80 - 110

Lab Sample ID: LCSD 410-563954/34
Matrix: Water
Analysis Batch: 563954

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	189		mg/L		100	80 - 110	0	10

Lab Sample ID: LCSD 410-563954/64
Matrix: Water
Analysis Batch: 563954

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	189		mg/L		100	80 - 110	1	10

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

Lab Sample ID: MB 410-562399/1
Matrix: Water
Analysis Batch: 562399

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		10/11/24 20:39	1

Lab Sample ID: LCS 410-562399/2
Matrix: Water
Analysis Batch: 562399

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	196		mg/L		98	90 - 110

Method: 9040C - pH

Lab Sample ID: LCS 410-563955/61
Matrix: Water
Analysis Batch: 563955

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	7.1		S.U.		102	95 - 105		

Lab Sample ID: LCSD 410-563955/62
Matrix: Water
Analysis Batch: 563955

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	7.1		S.U.		101	95 - 105	1	3

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 410-565975/17
Matrix: Water
Analysis Batch: 565975

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		10/21/24 16:21	1

Lab Sample ID: LCS 410-565975/15
Matrix: Water
Analysis Batch: 565975

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	1.83		mg/L		92	90 - 110		

Lab Sample ID: LCSD 410-565975/16
Matrix: Water
Analysis Batch: 565975

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	1.86		mg/L		93	90 - 110	2	15

Lab Sample ID: 410-191987-1 MS
Matrix: Water
Analysis Batch: 565975

Client Sample ID: TDSS-MW01-4Q24
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia as N	0.069	J1	2.50	2.64		mg/L		103	90 - 110		

Lab Sample ID: 410-191987-1 DU
Matrix: Water
Analysis Batch: 565975

Client Sample ID: TDSS-MW01-4Q24
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ammonia as N	0.069	J1		0.0718	J	mg/L				4	20

Method: SM5310C - TOC

Lab Sample ID: MB 410-565098/7
Matrix: Water
Analysis Batch: 565098

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		10/18/24 12:02	1
TOC Result 1	1.0	U	2.0	1.0	0.50	mg/L		10/18/24 12:02	1
TOC Result 2	1.0	U	2.0	1.0	0.50	mg/L		10/18/24 12:02	1
TOC Result 3	1.0	U	2.0	1.0	0.50	mg/L		10/18/24 12:02	1

Lab Sample ID: LCS 410-565098/6
Matrix: Water
Analysis Batch: 565098

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	51.6		mg/L		103	90 - 110
TOC Result 1	50.0	50.7		mg/L		101	90 - 110
TOC Result 2	50.0	51.4		mg/L		103	90 - 110
TOC Result 3	50.0	52.6		mg/L		105	90 - 110

Lab Sample ID: MRL 410-565098/3
Matrix: Water
Analysis Batch: 565098

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	1.10	J	mg/L		110	50 - 150
TOC Result 1	1.00	1.05	J	mg/L		105	
TOC Result 2	1.00	1.11	J	mg/L		111	
TOC Result 3	1.00	1.13	J	mg/L		112	

HPLC/IC

Analysis Batch: 563049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-191987-3	TDSS-FB-4Q24	Total/NA	Water	300.0	
MB 410-563049/5	Method Blank	Total/NA	Water	300.0	
LCS 410-563049/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 410-563049/4	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 563072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-191987-1	TDSS-MW01-4Q24	Total/NA	Water	300.0	
410-191987-1	TDSS-MW01-4Q24	Total/NA	Water	300.0	
410-191987-2	TDSS-MW02-4Q24	Total/NA	Water	300.0	
410-191987-2	TDSS-MW02-4Q24	Total/NA	Water	300.0	
MB 410-563072/5	Method Blank	Total/NA	Water	300.0	
LCS 410-563072/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 410-563072/4	Lab Control Sample Dup	Total/NA	Water	300.0	

Metals

Prep Batch: 562781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-191987-1	TDSS-MW01-4Q24	Total Recoverable	Water	3005A	
410-191987-2	TDSS-MW02-4Q24	Total Recoverable	Water	3005A	
410-191987-3	TDSS-FB-4Q24	Total Recoverable	Water	3005A	
MB 410-562781/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-562781/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 564113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-191987-1	TDSS-MW01-4Q24	Total Recoverable	Water	6020B	562781
410-191987-2	TDSS-MW02-4Q24	Total Recoverable	Water	6020B	562781
410-191987-2	TDSS-MW02-4Q24	Total Recoverable	Water	6020B	562781
410-191987-3	TDSS-FB-4Q24	Total Recoverable	Water	6020B	562781
MB 410-562781/1-A	Method Blank	Total Recoverable	Water	6020B	562781
LCS 410-562781/2-A	Lab Control Sample	Total Recoverable	Water	6020B	562781

Analysis Batch: 566426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-191987-3	TDSS-FB-4Q24	Total Recoverable	Water	6020B	562781

General Chemistry

Analysis Batch: 562399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-191987-1	TDSS-MW01-4Q24	Total/NA	Water	2540C - 2015	
410-191987-2	TDSS-MW02-4Q24	Total/NA	Water	2540C - 2015	
410-191987-3	TDSS-FB-4Q24	Total/NA	Water	2540C - 2015	
MB 410-562399/1	Method Blank	Total/NA	Water	2540C - 2015	
LCS 410-562399/2	Lab Control Sample	Total/NA	Water	2540C - 2015	

Analysis Batch: 562441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-191987-1	TDSS-MW01-4Q24	Total/NA	Water	180.1	
410-191987-2	TDSS-MW02-4Q24	Total/NA	Water	180.1	

General Chemistry (Continued)

Analysis Batch: 562441 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-191987-3	TDSS-FB-4Q24	Total/NA	Water	180.1	
MB 410-562441/3	Method Blank	Total/NA	Water	180.1	
LCS 410-562441/4	Lab Control Sample	Total/NA	Water	180.1	

Analysis Batch: 563954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-191987-1	TDSS-MW01-4Q24	Total/NA	Water	2320B-2011	
410-191987-2	TDSS-MW02-4Q24	Total/NA	Water	2320B-2011	
410-191987-3	TDSS-FB-4Q24	Total/NA	Water	2320B-2011	
MB 410-563954/32	Method Blank	Total/NA	Water	2320B-2011	
MB 410-563954/60	Method Blank	Total/NA	Water	2320B-2011	
LCS 410-563954/63	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 410-563954/34	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
LCSD 410-563954/64	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 563955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-191987-1	TDSS-MW01-4Q24	Total/NA	Water	9040C	
410-191987-2	TDSS-MW02-4Q24	Total/NA	Water	9040C	
410-191987-3	TDSS-FB-4Q24	Total/NA	Water	9040C	
LCS 410-563955/61	Lab Control Sample	Total/NA	Water	9040C	
LCSD 410-563955/62	Lab Control Sample Dup	Total/NA	Water	9040C	

Analysis Batch: 565098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-191987-1	TDSS-MW01-4Q24	Total/NA	Water	SM5310C	
410-191987-2	TDSS-MW02-4Q24	Total/NA	Water	SM5310C	
410-191987-3	TDSS-FB-4Q24	Total/NA	Water	SM5310C	
MB 410-565098/7	Method Blank	Total/NA	Water	SM5310C	
LCS 410-565098/6	Lab Control Sample	Total/NA	Water	SM5310C	
MRL 410-565098/3	Lab Control Sample	Total/NA	Water	SM5310C	

Analysis Batch: 565975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-191987-1	TDSS-MW01-4Q24	Total/NA	Water	EPA 350.1	
410-191987-2	TDSS-MW02-4Q24	Total/NA	Water	EPA 350.1	
410-191987-3	TDSS-FB-4Q24	Total/NA	Water	EPA 350.1	
MB 410-565975/17	Method Blank	Total/NA	Water	EPA 350.1	
LCS 410-565975/15	Lab Control Sample	Total/NA	Water	EPA 350.1	
LCSD 410-565975/16	Lab Control Sample Dup	Total/NA	Water	EPA 350.1	
410-191987-1 MS	TDSS-MW01-4Q24	Total/NA	Water	EPA 350.1	
410-191987-1 DU	TDSS-MW01-4Q24	Total/NA	Water	EPA 350.1	

Lab Chronicle

Client: Environmental Chemical Corp.
Project/Site: TDSS MW Sampling 4Q-2024 / Baseline

Job ID: 410-191987-1
SDG: 410-191987

Client Sample ID: TDSS-MW01-4Q24

Lab Sample ID: 410-191987-1

Date Collected: 10/08/24 13:30
Matrix: Water
Date Received: 10/11/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		5	563072	W7FX	ELLE	10/14/24 22:30
Total/NA	Analysis	300.0		50	563072	W7FX	ELLE	10/14/24 22:41
Total Recoverable	Prep	3005A			562781	UAMX	ELLE	10/14/24 21:00
Total Recoverable	Analysis	6020B		1	564113	T8CQ	ELLE	10/16/24 17:42
Total/NA	Analysis	180.1		1	562441	UDS7	ELLE	10/12/24 05:52
Total/NA	Analysis	2320B-2011		1	563954	DI9Q	ELLE	10/16/24 01:59
Total/NA	Analysis	2540C - 2015		1	562399	UOCA	ELLE	10/11/24 20:39 - 10/14/24 09:50 [1]
Total/NA	Analysis	9040C		1	563955	DI9Q	ELLE	10/16/24 01:59
Total/NA	Analysis	EPA 350.1		1	565975	JCG7	ELLE	10/21/24 16:24
Total/NA	Analysis	SM5310C		1	565098	P684	ELLE	10/18/24 13:23

Client Sample ID: TDSS-MW02-4Q24

Lab Sample ID: 410-191987-2

Date Collected: 10/08/24 14:30
Matrix: Water
Date Received: 10/11/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		5	563072	W7FX	ELLE	10/14/24 23:14
Total/NA	Analysis	300.0		50	563072	W7FX	ELLE	10/14/24 23:25
Total Recoverable	Prep	3005A			562781	UAMX	ELLE	10/14/24 21:00
Total Recoverable	Analysis	6020B		1	564113	T8CQ	ELLE	10/16/24 17:40
Total Recoverable	Prep	3005A			562781	UAMX	ELLE	10/14/24 21:00
Total Recoverable	Analysis	6020B		10	564113	T8CQ	ELLE	10/16/24 18:02
Total/NA	Analysis	180.1		10	562441	UDS7	ELLE	10/12/24 05:52
Total/NA	Analysis	2320B-2011		1	563954	DI9Q	ELLE	10/16/24 02:05
Total/NA	Analysis	2540C - 2015		1	562399	UOCA	ELLE	10/11/24 20:39 - 10/14/24 09:50 [1]
Total/NA	Analysis	9040C		1	563955	DI9Q	ELLE	10/16/24 02:05
Total/NA	Analysis	EPA 350.1		1	565975	JCG7	ELLE	10/21/24 16:30
Total/NA	Analysis	SM5310C		1	565098	P684	ELLE	10/18/24 13:43

Client Sample ID: TDSS-FB-4Q24

Lab Sample ID: 410-191987-3

Date Collected: 10/08/24 15:00
Matrix: Water
Date Received: 10/11/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	563049	W7FX	ELLE	10/15/24 00:18
Total Recoverable	Prep	3005A			562781	UAMX	ELLE	10/14/24 21:00
Total Recoverable	Analysis	6020B		1	566426	F7JF	ELLE	10/22/24 12:30
Total Recoverable	Prep	3005A			562781	UAMX	ELLE	10/14/24 21:00
Total Recoverable	Analysis	6020B		1	564113	T8CQ	ELLE	10/16/24 17:44
Total/NA	Analysis	180.1		1	562441	UDS7	ELLE	10/12/24 05:52
Total/NA	Analysis	2320B-2011		1	563954	DI9Q	ELLE	10/16/24 02:27
Total/NA	Analysis	2540C - 2015		1	562399	UOCA	ELLE	10/11/24 20:39 - 10/14/24 09:50 [1]
Total/NA	Analysis	9040C		1	563955	DI9Q	ELLE	10/16/24 02:27

Lab Chronicle

Client: Environmental Chemical Corp.
Job ID: 410-191987-1
Project/Site: TDSS MW Sampling 4Q-2024 / Baseline
SDG: 410-191987

Client Sample ID: TDSS-FB-4Q24
Lab Sample ID: 410-191987-3

Date Collected: 10/08/24 15:00
Matrix: Water
Date Received: 10/11/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 350.1		1	565975	JCG7	ELLE	10/21/24 16:32
Total/NA	Analysis	SM5310C		1	565098	P684	ELLE	10/18/24 14:03

[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.
Job ID: 410-191987-1
Project/Site: TDSS MW Sampling 4Q-2024 / Baseline
SDG: 410-191987

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 the governing authority. 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

Hawaii	State	N/A	01-31-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. 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 4Q-2024 / Baseline

Job ID: 410-191987-1
SDG: 410-191987

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 4Q-2024 / Baseline

Job ID: 410-191987-1
SDG: 410-191987

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-191987-1	TDSS-MW01-4Q24	Water	10/08/24 13:30	10/11/24 09:50
410-191987-2	TDSS-MW02-4Q24	Water	10/08/24 14:30	10/11/24 09:50
410-191987-3	TDSS-FB-4Q24	Water	10/08/24 15:00	10/11/24 09:50

COC NO. 4Q-2024

Page 1 of 1

Project Location:

ECC
75 Kupuohi St, Suite 103
Lahaina, Hawaii, 96761

Laboratory Name: Eurofins - Lancaster Laboratories, Inc
Address : 2425 New Holland Pike / Lancaster, PA / 17601
Contact : Katie Grant /
Phone: 717-656-2300

TAT: 5-DAY

Project Contact: Kane McNeill, 650-228-6950

Project Name: TDSS MW Sampling 4Q-2024 / Baseline | Site: TDSS Olowalu

Project Number: 4344-401 | Event: Groundwater Sampling 4Q2024

410-191987 Chain of Custody

Sampler Print: Brian Mallari

Sampler Sign:

Sample Number	Low Flow	Date	Time	Matrix	Site Type	Media Type	# of Bottles	6020B Metals - Mg, Na, Ca, K, Fe, As, Pb, Sb, Co, Cu (250mL x1)	180.1 – Turbidity (250mL x1)	2320B – Total, Bicarbonate, and Carbonate Alkalinity (250mL x2)	300.0 Anions – Chloride / Sulfate (50mL/125 mL x2)	350.1 – Ammonia (500mL x1)	SM5310C – TOC (40mL x3)	2540C – TDS	9040C – pH				Comments
								HNO 3	-	-	-	H2SO 4	HCl	-	-				
TDSS-MW01-4Q24		10-08-2024	1330	Water	MW	W	10	X	X	X	X	X	X	X	X				
TDSS-MW02-4Q24		10-08-2024	1430	Water	MW	W	10	X	X	X	X	X	X	X	X				
TDSS-ER-3Q24		10-08-2024	1500	Water	Fld Blank	W	10	X	X	X	X	X	X	X	X				

Relinquished By: Brian Mallari
Date/Time 10/9/2024 08:15

Received By:
Date/Time

Special Instructions
Samples on ice

Relinquished By:
Date/Time

Received From Laboratory By: ELUET
Date/Time 10/11/24 09:50

R: 0.8
C: 0.6

Login Sample Receipt Checklist

Client: Environmental Chemical Corp.

Job Number: 410-191987-1
SDG Number: 410-191987

Login Number: 191987
List Number: 1
Creator: Arroyo, Haley

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is 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 acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
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.	False	Improper containers received.
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	