August 2024
Monthly Compliance Report

Solid Waste Permit No. 588
Bristol Integrated Solid Waste Management Facility
2655 Valley Drive
Bristol, VA 24201
(276) 645-7233

SCS ENGINEERS

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15521 Midlothian Turnpike Suite 305
Midlothian, VA 23113
804-378-7440

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INTRODUCTION

On behalf of the City of Bristol, Virginia (City), SCS Engineers has prepared this report to the Virginia Department of Environmental Quality (VDEQ) in accordance with item 8.iii in Appendix A of the Consent Decree between the City and VDEQ. This report provides updates regarding the progress towards completion of the items outlined in Appendix A of the Consent Decree between the City and VDEQ. The following sections outline progress during the month of August 2024 related to Solid Waste Permit (SWP) No. 588.

1.0 GAS COLLECTION

The following sections describe the steps the City, in collaboration with its consultants and contractors, has taken to improve the operation, monitoring, and performance of the facility's landfill gas collection and control system (GCCS).

1.1 SURFACE AND LEACHATE COLLECTION EMISSIONS

1.1.1 Surface Emissions

1.1.1.1 Quarterly SEM

SCS performed the Second Quarter surface emissions monitoring event on June 12, 2024. The results of the Quarterly SEM were summarized in the June 2024 Compliance Report for the SWP No. 588 Landfill. A report outlining the results and exceedance locations was included in the Semi-Annual Report that was submitted to VDEQ on August 30, 2024.

The Third Quarter 2024 SEM Event is scheduled to be completed by September 30, 2024.

1.1.1.2 Weekly SEM

In addition to the standard regulatory quarterly surface emissions monitoring, SCS performed additional surface emissions monitoring on August 1, 2024; August 7, 2024; August 15, 2024; August 21, 2024: and August 29, 2024. These weekly surface emissions monitoring (SEM) events were performed in accordance with item 1.i in Appendix A of the Consent Decree between the City and VDEQ.

The monitoring in August generally conformed to the requirements of 40 CFR 63.1960(c) and (d), and 40 CFR 60.36f(c) and (d), and 40 CFR 60, Appendix A, Method 21. The landfill gas (LFG) collection system is required to operate such that the methane concentration is less than 500 ppm above background at the landfill surface.

The surface emission monitoring route included the entire waste footprint of the Permit No. 588 landfill. Sampling was conducted with a Thermo Scientific TVA-2020 Flame Ionization Detector (FID) at 30-meter intervals and where visual observations indicated the potential for elevated concentrations of LFG, such as distressed vegetation and surface cover cracks. In addition, in accordance with 40 CFR 63.1958(d)(ii)(2) and 40 CFR 60.34f(d), monitoring was conducted at all surface cover penetrations within the waste footprint.

The Facility submitted letters to VDEQ outlining the results of the August monitoring events on August 7, 2024; August 14, 2024; August 21, 2024; August 28, 2024; and September 4, 2024.

Table 1. Summary of August Surface Emissions Monitoring

Description	August 1, 2024	August 7, 2024	August 15, 2024	August 21, 2024	August 29, 2024
Number of Points Sampled	166	165	166	167	167
Number of Points in Serpentine Route	100	100	100	100	100
Number of Points at Surface Cover Penetrations	66	65	66	67	67
Number of Exceedances	9	9	6	7	6
Number of Serpentine Exceedances	0	0	0	1	1
Number of Pipe Penetration Exceedances	9	9	6	6	5

During the August monitoring events, one new exceedance (identified as Tag 61) was detected on the serpentine route. Additionally, new exceedances were detected at nine surface cover pipe penetrations (EW-33B, EW-52, EW-63, EW-64, EW-65, EW-77, EW-91, EW-100, and TP-9). These new exceedances were all identified in the north-central portion of the landfill, where vacuum at these wellheads, or in the case of TP-9 and Tag #61, the surrounding wellheads, has been reduced. Corrective actions to address the ongoing exceedances, likely involving well adjustments to increase vacuum, are planned for the month of September 2024.

An Alternate Remedy Request outlining proposed corrective actions for exceedances at EW-55, EW-67, EW-82, EW-90, and EW-95 was submitted to VDEQ on July 11, 2024 in accordance with 40 CFR 63.1960(c)(4)(v) and 40 CFR 60.36f(c)(4)(v). Corrective actions at these five wells, which involved installation, or reapplication, of a bentonite seal along the well riser pipe were completed during the week of August 12, 2024. Follow-up monitoring at these locations have indicated that these corrective actions have been successful at reducing methane concentrations below the regulatory threshold.

Furthermore, the Facility is taking proactive steps to limit fugitive surface emissions including placement of additional soil, continued and improved dewatering activities, and well tuning to increase gas extraction.

1.1.2 Leachate Collection Emissions

SCS Field Services (SCS-FS) visited the Bristol Landfill on August 26 and 27, 2024, and performed monitoring of the leachate, witness zone, northern cleanouts, and gradient control clean-outs at the southern end of the landfill. The results of that monitoring are included in Table 2. Table 2 also lists the cleanout pipe description based on site records and a review of correspondence.

Please note that LC07 is not connected to the LFG collection system. During connection of the other leachate cleanouts to the LFGCCS in 2020, measurements of gas composition in LC07 indicated low levels of landfill gas in this cleanout.

Table 2. Leachate Cleanout Pipe Monitoring Results

Description	ID#	Record Date	CH4 (% by Vol)	CO2 (% by Vol)	O2 (% by Vol)	Balance Gas (% by Vol)	Initial Temp (°F)	Adj Temp (°F)	Initial Static Pressure (in H2O)	Adj Static Pressure (in H2O)	System Pressure (in H2O)
Southern Cleanouts Gradient West	LC01	08/27/24 16:53	55.00	44.4	0.1	0.5	71.1	70.4	-11.11	-11.11	-15.79
Southern Cleanouts Gradient East	LC02	8/27/24 16:58	48.6	47.9	0.0	3.5	70.6	70.6	-11.44	-11.46	-15.64
Southern Cleanouts Leachate Center	LC03	8/27/24 17:01	22.8	16.6	12.3	48.3	94.1	94.5	-15.15	-15.14	-15.46
Southern Cleanouts Witness East	LC04	8/27/24 17:04	5.3	4.4	19.1	71.1	93.3	94.4	-15.48	-15.31	-15.53
Southern Cleanouts Leachate West	LC05	8/27/24 17:10	49.8	47.2	0.1	2.9	67.2	67.2	-11.95	-12.12	-15.75
Southern Cleanouts Gradient Center West	LC06	8/27/24 17:14	20.8	7.8	14.6	56.8	94.7	95.5	-4.56	-4.56	-15.85
Southern Cleanouts Leachate East	LC08	8/27/24 17:07	46.3	49.9	0.2	3.7	70.8	70.7	-11.44	-11.44	-15.88
Southern Cleanouts Gradient Center East	LC09	8/27/24 17:17	11.4	6.0	17.0	65.6	101.6	102.4	-8.75	-8.75	-15.55
Southern Cleanouts Leachate West	LC10	8/27/24 17:20	0.1	0.3	21.2	78.3	95.6	95.7	-8.41	-8.41	-15.67
Northern Cleanouts Leachate East	NC01	8/27/24 16:28	0.7	0.3	21.2	77.8	96.6	97.2	-17.52	-17.52	0.32
Northern Cleanouts Leachate Center	NC02	8/27/24 16:30	0.6	0.2	21.2	78.1	95.0	95.3	-17.53	-17.50	0.32
Northern Cleanouts Leachate West	NC03	8/27/24 16:32	0.4	0.1	21.2	78.3	96.9	97.1	-17.54	-17.54	0.32
Northern Cleanouts Witness East	NC04	8/27/24 16:33	0.2	0.1	21.0	78.8	97.2	97.1	-11.78	-11.78	0.32
Northern Cleanouts Witness Center	NC05	8/27/24 16:35	0.1	0.4	20.5	79.0	94.3	94.7	-11.78	-11.78	0.32
Northern Cleanouts Witness West	NC06	8/27/24 16:36	0.2	0.0	21.1	78.8	95.7	95.0	-11.78	-11.78	0.32
Northern Cleanouts Gradient East	NC07	8/27/24 16:38	27.3	14.0	4.0	54.7	98.6	98.3	-10.82	-10.77	0.32
Northern Cleanouts Gradient Center East	NC08	8/27/24 16:41	21.6	11.4	7.9	59.1	95.2	95.4	-10.95	-10.90	0.32
Northern Cleanouts Gradient Center West	NC09	8/27/24 16:44	22.6	11.8	7.1	58.5	98.2	98.1	-10.80	-10.77	0.32
Northern Cleanouts Gradient West	NC10	8/27/24 16:46	1.1	0.2	20.8	78.0	96.2	95.5	-10.77	-10.78	0.32

1.2 EXISTING GAS EXTRACTION SYSTEM PERFORMANCE

SCS and SCS-FS have been coordinating with the City to improve the performance of the existing gas system. Specific actions taken to maintain and improve the system are detailed in the following sections of this report.

Additional actions taken by SCS-FS include the following:

- Assistance with removal of existing rental flare
- Adjustments to LFGCCS
- Maintenance of air lines and pressurized air infrastructure

- Maintenance of wellhead and other gas collection infrastructure
- Removal of liquids from landfill gas headers

1.3 REMOTE MONITORING SYSTEM

In the Fall of 2022, SCS Remote Monitoring & Control (SCS-RMC) installed 25 industrial internet of things (IIoT) temperature sensors in the landfill gas wellheads. The purpose of the sensors is to record and transmit well-head gas temperatures via a cellular connection to a database managed by SCS-RMC.

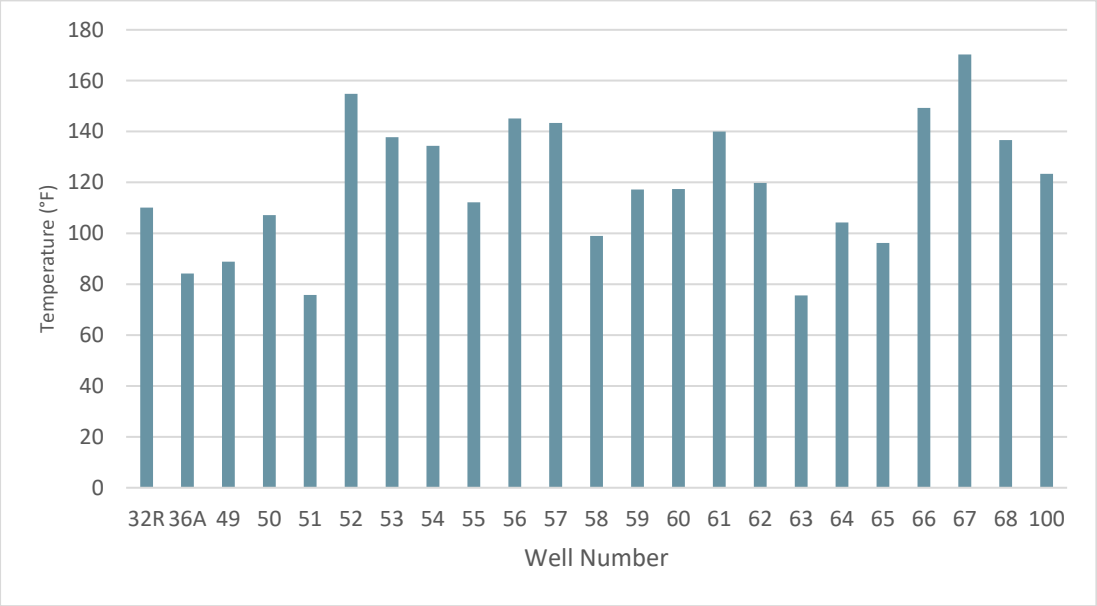
The City is providing average temperatures recorded by the sensors to VDEQ on a daily basis via email. Average daily temperatures recorded by the remote monitoring system during the month of August are included in Appendix C. In addition, SCS previously prepared semi-monthly status updates to satisfy the conditions of compliance provision no. 2 of the Environmental Protection Agency (EPA) Region III letter, Approval of Higher Operating Temperature Values for Landfill Gas Wells and Submission of Gas Treatment Alternatives at the Bristol Virginia Integrated Solid Waste Management Facility, dated August 23, 2021. On August 2, 2023, VDEQ requested that such updates be included in the monthly compliance reports going forward. Accordingly, this section is a summary of temperature monitoring activities during the monthly monitoring period of August 2024.

1.3.1 Automated Wellhead Temperature Measurements

SCS reviewed the automated hourly temperature measurements from August 2024, and identified the following trends:

- **Temperatures over 145°F:** Temperatures over the NESHAP AAAA compliance threshold of 145°F were recorded at EW-47, 52, 53, 54, 56, 57, 60, 66, 67, and 100. Average temperatures at EW-52, 56, 66, and 67 were above the compliance threshold throughout the monitoring period. The highest average temperature, 170.3°F, was measured at EW-67 (see Figure 1). The average LFG temperatures recorded by automated wellhead sensors for the month of July were similar to the values measured in June.
- **Temperature probes removed at decommissioned wells:** Temperature probes at EW-34 and EW-40 were removed in December due to the decommissioning of the wells. Additionally, the temperature probe at EW-35 was removed in May, due to the decommissioning of the well. One probe was added to EW-61 in August 2024, and SCS-FS gathered more information for a quote presented to the City for installation of additional temperature sensors.

Figure 1. Average Automated Wellhead Temperatures

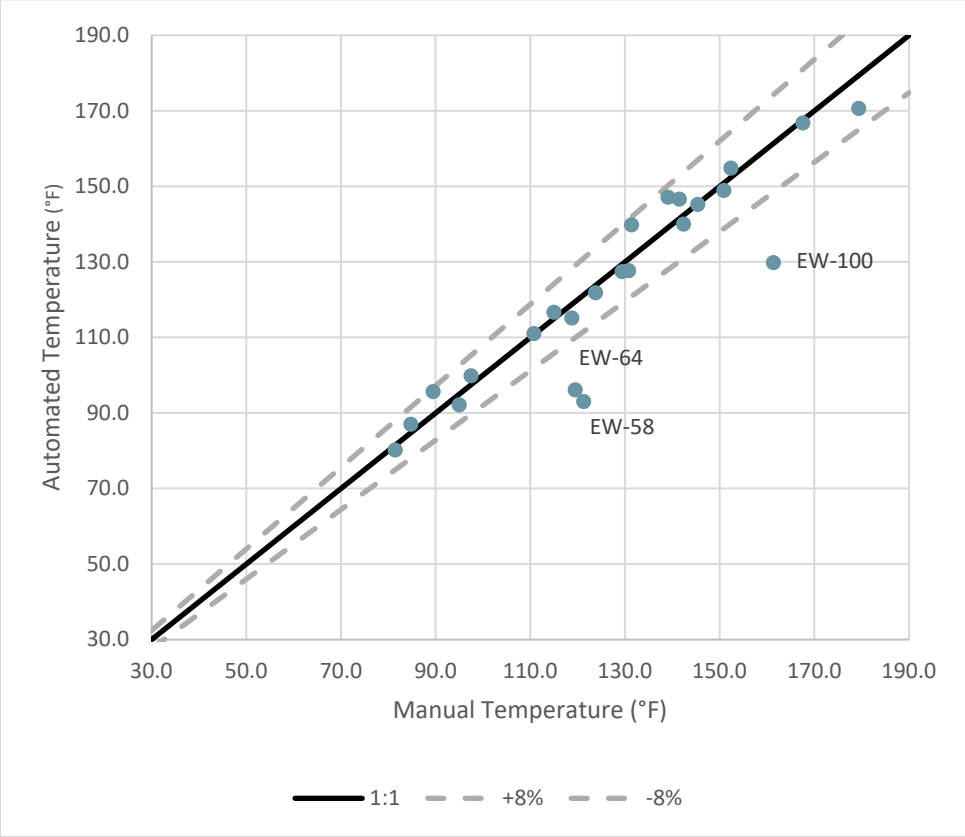


1.3.2 Comparison with Manual Temperature Measurements

Per the approval issued by VDEQ on August 2, 2023, the Facility ceased dedicated daily manual temperature measurements in the Permit No. 588 Landfill. In lieu of these measurements, the City has agreed to compare instantaneous hourly automated temperature measurements with temperatures measured at each wellhead with a handheld sensor during monthly compliance monitoring. These comparisons are shown in Figure 2, with the ±8% deviation goals as prescribed in the VDEQ approval.

Temperature comparisons outside the ±8% deviation goal lines were found again at EW-58, 64 and 100. The disparity between automated and manual temperature measurements at EW-58, 64, and 100 continued to be significant without evidence of low LFG flow rates, which have sometimes caused the automated temperature probes to record lower temperatures than manual measurements.

Figure 2. Automated vs. Manual Temperature Measurements



1.3.3 Monthly Regulatory Wellhead Temperature Measurements

Routine monthly temperature monitoring for purposes of complying with 40 CFR 60.36f(a)(5) was conducted August 26, 2024. During this monitoring period, temperature exceedances were resolved at EW-49, EW-52, EW-54, EW-82, EW-89, and EW-94. Table 3 provides the status of all exceedances recorded during this monitoring period.

Table 3. August Temperature Exceedance Summary

Well ID	Initial Exceedance Date	Last date/temperature measured	Duration of Exceedance	Status as of 8/31/2024
EW-49	5/1/24	8/7/24 97.1°F	98 days	Resolved within 120-day timeline
EW-52	8/12/24	8/15/24 152.3°F	3 days	Resolved within 15-day timeline
EW-52	8/27/24	8/29/24 155.5°F	2 days	Resolved within 15-day timeline
EW-54	8/27/24	8/29/24 179.4°F	2 days	Resolved within 15-day timeline
EW-56	7/29/24	8/22/24 147.1°F	25 days	Ongoing, within 60-day timeline

Well ID	Initial Exceedance Date	Last date/temperature measured	Duration of Exceedance	Status as of 8/31/2024
EW-66	5/1/24	8/29/24 154.6°F	118 days	Ongoing, HOV Requested on 6/10/24
EW-82	8/13/24	8/27/24 143.2°F	11 days	Resolved within 15-day timeline
EW-89	6/17/24	8/22/24 184.8°F	67 days	Resolved within 120-day timeline
EW-94	7/16/24	8/12/24 96.1°F	28 days	Resolved within 60-day timeline
EW-94	8/27/24	8/29/24 166.6°F	2 days	Ongoing, within 15-day timeline

1.3.4 LFG Sampling

SCS collected weekly LFG samples from wells with temperature exceedances lasting more than seven days using 1.5-L Summa canisters. The samples were sent to Enthalpy Analytical for lab analysis of carbon monoxide (CO) and hydrogen (H_2) content. As of September 1, 2024, the City is in possession of lab results for sampling on July 25, August 1, August 7, and August 15, 2024 to fulfill the requirement in 40 CFR 63.1961(a)(5). Lab results are summarized in Table 4.

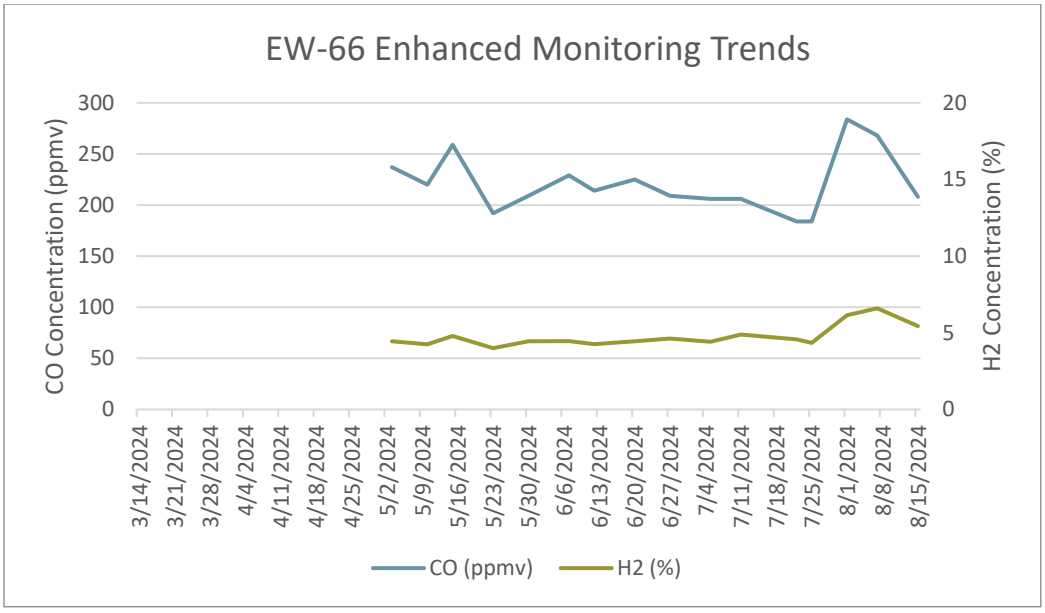
Table 4. LFG Wellhead Sampling Summary

Sample Date		7/25/24	8/1/24	8/7/24	8/15/24
EW-49	CO (ppmv)	170	174		
	H2 (Vol. %)	3.49	3.44		
EW-56	CO (ppmv)		ND	91.7	ND
	H2 (Vol. %)		3.01	3.06	2.87
EW-66	CO (ppmv)	184	284	268	208
	H2 (Vol. %)	4.34	6.15	6.60	5.44
EW-82	CO (ppmv)				623
	H2 (Vol. %)				21.5
EW-89	CO (ppmv)	1560	1530	1380	
	H2 (Vol. %)	27.7	30.1	28.1	
EW-94	CO (ppmv)	217			
	H2 (Vol. %)	4.62			

The presence of hydrogen in the samples collected during this monitoring period indicates that combustion reactions are unlikely.

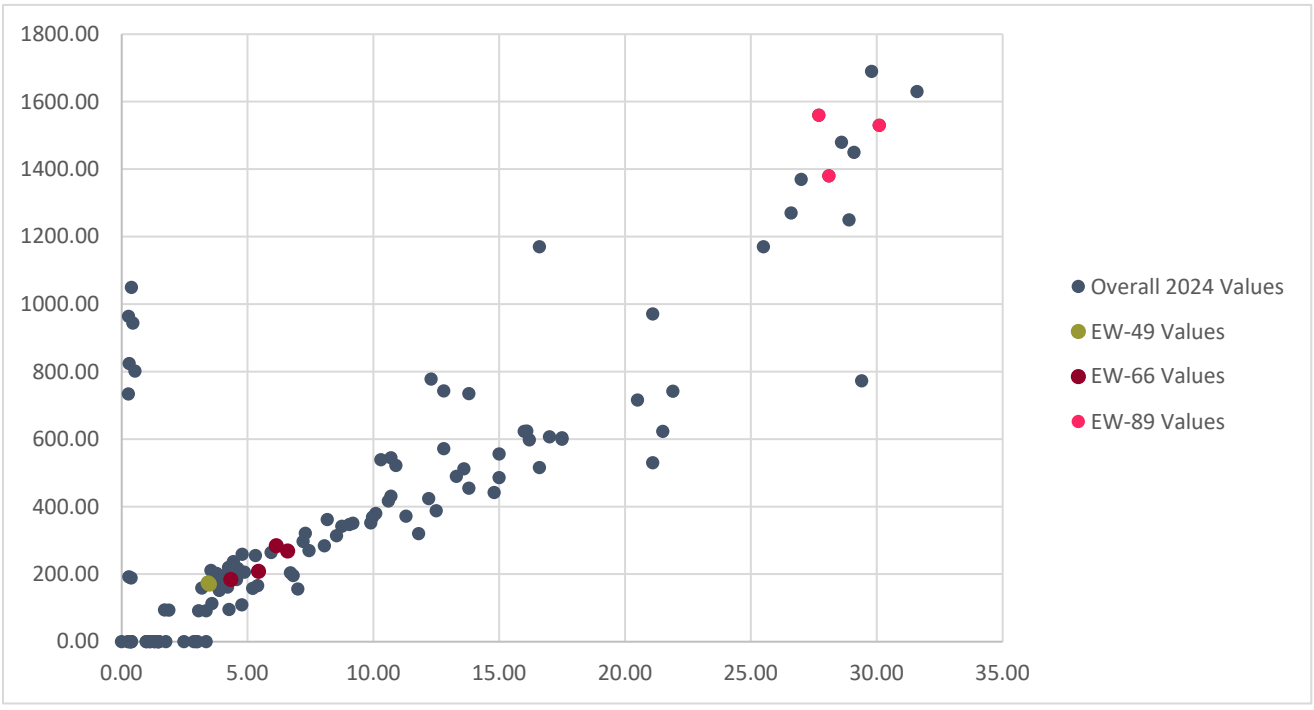
Carbon monoxide and hydrogen concentrations measured at wells for the last five weeks or more are shown in Figure 3. Both carbon monoxide and hydrogen concentrations had been relatively steady at EW-66, but increased in early August (see Figure 3). SCS reviewed the concentrations of methane, carbon dioxide, oxygen, and balance gas, as well as temperature and gas flow readings from this time and did not discover any correlating changes.

Figure 3. CO and H_2 Concentration at Selected Wells



As shown in Figure 3B, the majority of the carbon monoxide and hydrogen results this period appear to be consistent with sampling results at other wells collected in 2024. The elevated CO and H_2 found at EW-89 continued to follow a different trend, with a steeper slope at the more elevated CO and H_2 concentrations.

Figure 3B. CO and H_2 Concentration Scatter Plot



1.4 LARGE-DIAMETER DUAL-PHASE EXTRACTION WELLS

SCS completed design work on an expansion of the existing GCCS during the month of December 2022. The expansion included at least 5 large diameter dual-phase extraction wells. The wells and supporting infrastructure were completed by October 12, 2023.

1.5 VDEQ CONCURRENCE ON WELLS

As described in previous monthly compliance reports, the City engaged with VDEQ in discussions about the proposed approach for landfill GCCS improvements and expansions. Upon completion of the landfill gas collection system, SCS will submit updated as-built drawings to VDEQ that depict the completed system.

2.0 SIDEWALL ODOR MITIGATION

The City has designed and constructed a system to control fugitive emissions emanating from the quarry sidewalls. Specific aspects of the proposed design features are described in the following sections.

2.1 PERIMETER GAS COLLECTION SYSTEM

SCS's design of the GCCS expansion described in Section 1.4 included perimeter LFG wells. These wells are closer to the sidewall to intercept landfill gas that potentially could migrate to the quarry wall. These wells supplement the sidewall odor mitigation system described in Section 2.2. As described in the April 2023 Monthly Compliance Report for the SWP No. 588 Landfill, construction of the perimeter gas collection system was completed.

2.2 SIDEWALL ODOR MITIGATION SYSTEM

On behalf of the City and in an effort to capture emissions from the quarry sidewall, SCS designed a sidewall odor mitigation system (SOMS) during the month of October 2022. The design of this system was prepared and submitted to VDEQ on November 1, 2022.

2.3 PILOT SYSTEM CONSTRUCTION

SCS-CONS completed substantial construction of Phase 1 of the SOMS during the month of February 2023, SCS-FS began monitoring Phase 1 connected Horizontal Collector (HC) wellheads during the month of March 2023, and SCS-FS continued weekly wellhead monitoring into the month of May 2023. Phase 1 is considered the pilot system portion of the SOMS. SCS submitted a design engineer certification to VDEQ on February 10, 2023 that documented the substantial completion of Phase 1 of the SOMS. Details of Phase 1 construction progress and monitoring can be found in the monthly compliance reports for the SWP No. 588 landfill.

2.4 FULL SYSTEM CONSTRUCTION

SCS-CONS substantially completed construction of Phase 2 of the SOMS during the month of June 2023 as Phase 2 was connected to vacuum as of June 14, 2023. Cover soil placement continued

into the month of October 2023, and ceased when the construction crew left site on October 12, 2023 upon project final completion.

During the month of August 2024, SCS-FS collected monitoring data at each wellhead under vacuum. A summary of those measurements is shown in Table 5.

Table 5. System Averages of Sidewall Wellhead Gas Quality

Record Date	Average CH_4 [%]	Average CO_2 [%]	Average O_2 [%]	Average Bal Gas [%]
8/5/2024	8.9	12.8	14.3	64.0
8/19/2024	5.9	9.2	16.4	68.6

The sidewall system average gas composition indicates lower methane content than typical landfill gas collection systems. The gas quality measurements indicate that the SOMS is functioning as designed because landfill gas is being withdrawn and oxygen intrusion is acceptable. The wide-ranged gas composition may indicate that some areas of the landfill may be experiencing higher landfill gas concentrations than areas where methane content is seemingly insignificant. SCS-FS will adjust SOMS wellheads based on gas quality to increase flow from sections of the system with high methane content and reduce flow from sections of the system with low methane content.

3.0 WASTE TEMPERATURE MONITORING

On behalf of the City, SCS designed a temperature monitoring system to collect temperature data throughout the waste mass. The steps taken by the City to implement this system are described in the following sections.

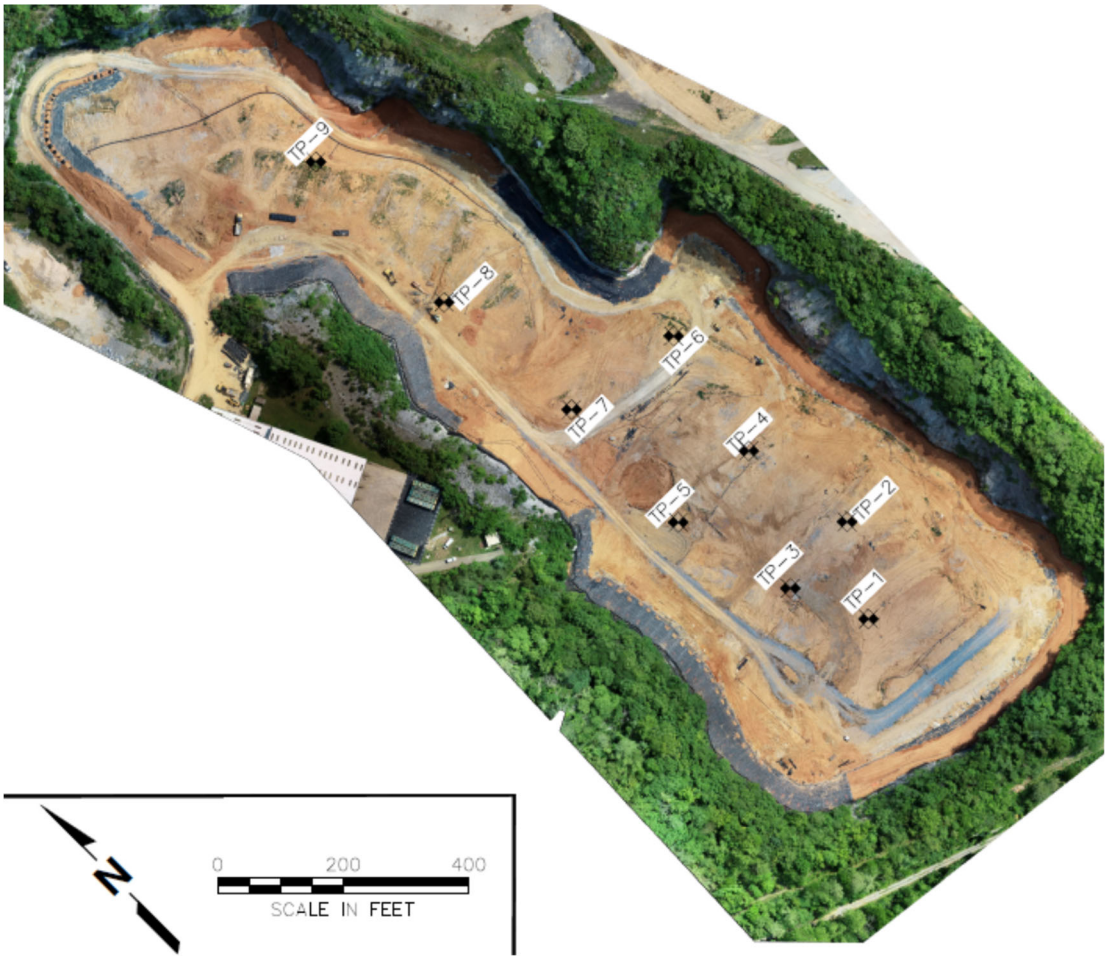
3.1 TEMPERATURE MONITORING SYSTEM DESIGN

The temperature monitoring system consists of nine boreholes drilled into the waste mass. A steel casing was placed in each borehole and the hole was backfilled around the casing with aggregate. A series of temperature sensors was placed inside the steel casing. At the top of each borehole, an IIoT transmitter collects the data from the sensors and transmits it to a cloud-based RMC system. The City submitted design of the temperature monitoring system to VDEQ on November 30, 2022.

3.2 TEMPERATURE MONITORING SYSTEM INSTALLATION

Installation of the in-situ Landfill Temperature Monitoring System began in October of 2022 and installation of replacement sensors was completed in February of 2023. Details of construction progress can be found in the monthly compliance reports for the SWP No. 588 Landfill. The locations of the temperature probes are shown in Figure 4.

Figure 4. Temperature Monitoring Probe Locations



SCS began collecting temperature data daily on February 15, 2023. The temperature sensors continued to transmit temperature data during the month of August 2024. Average daily temperatures recorded by the sensors for the Month of August are included in Appendix D. Each week the average temperatures from a select day of that week are downloaded and compared to temperatures recorded during the previous week. Average daily temperatures recorded on select days during the month of August are shown in Appendix B. The average temperatures recorded for select months between August 2023 through August 2024 are shown in Figures 5 through 13 on the following pages.

Figure 5 shows daily average temperatures recorded by Temperature Probe 1 (TP-1) during the months of August 2023, November 2023, February 2024, May 2024, and August 2024. Based on the data, temperatures have stayed generally consistent based on measurements collected in the last year.

TP-1 was originally drilled to a depth of 180 feet, but the contractor was unable to install the casing beyond a depth of 160 feet. TP-1 did not record temperatures between July 23, 2023 and July 30, 2023 due to a dead battery. The battery was replaced and TP-1 began recording temperatures again on July 31, 2023.

Figure 5. TP-1 Average Temperatures for the Months of August 2023, November 2023, February 2024, May 2024, and August 2024

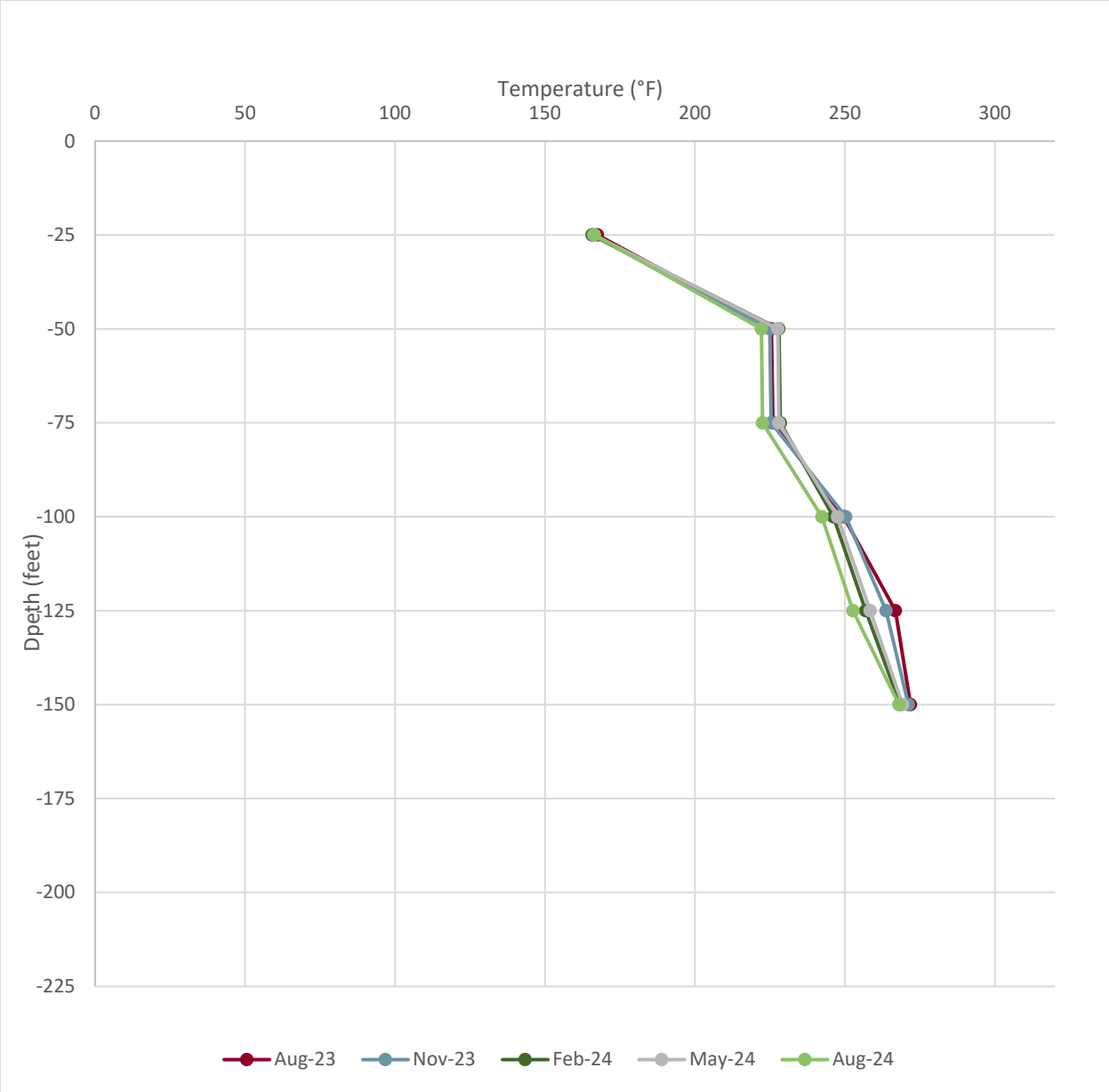


Figure 6 shows daily average temperatures in Temperature Probe 2 (TP-2) during the months of August 2023, November 2023, February 2024, May 2024, and August 2024. Based on the data, temperatures have been consistent during the last year.

TP-2 was originally drilled to a depth of 160 feet. TP-2 did not record temperatures between August 15, 2023 and September 17, 2023 due to a dead battery. A replacement battery was installed in September of 2023 and TP-2 recording temperatures again on September 18, 2023.

Figure 6. TP-2 Average Temperatures for the Months of August 2023, November 2023, February 2024, May 2024, and August 2024

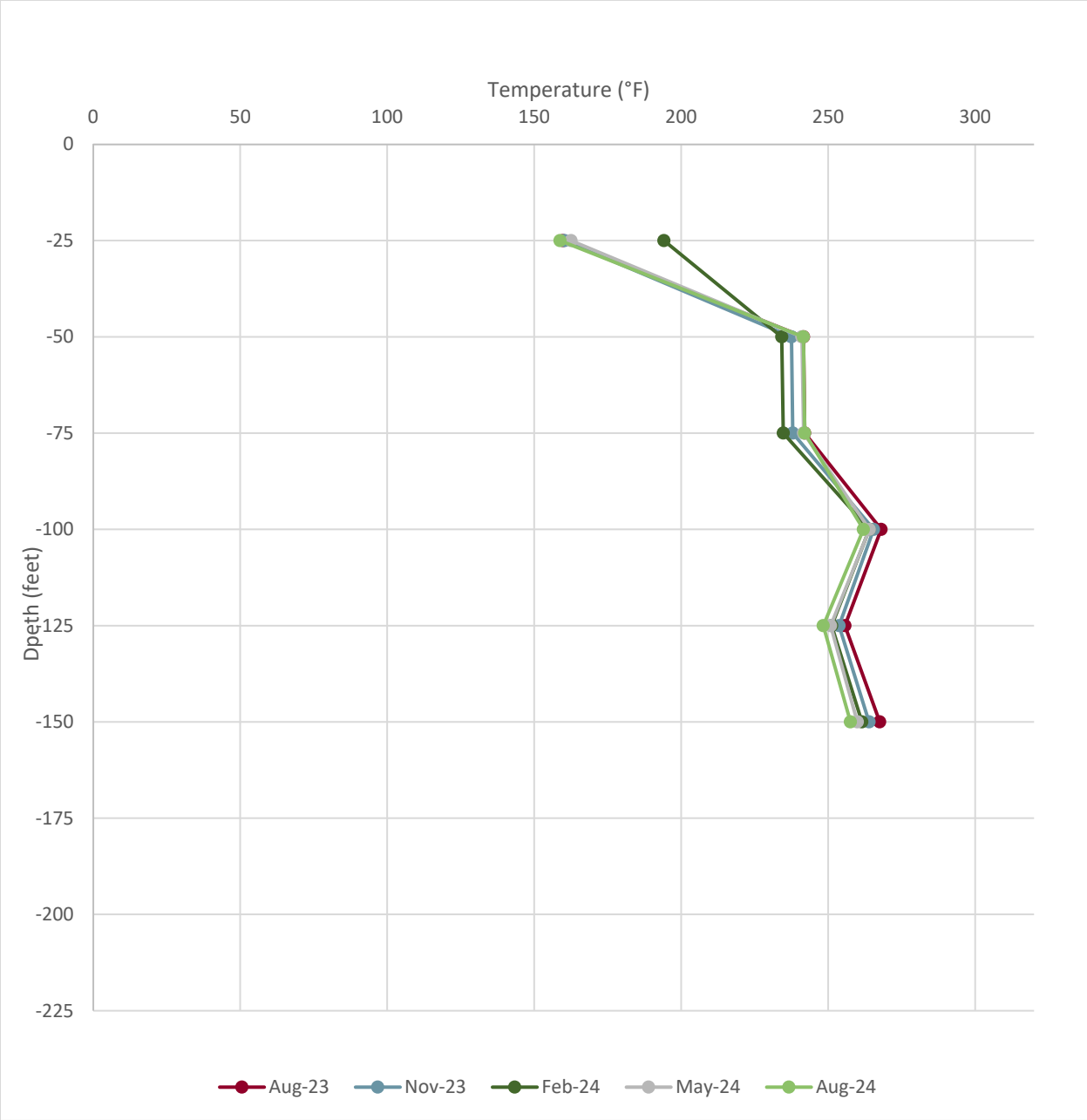


Figure 7 shows daily average temperatures in Temperature Probe 3 (TP-3) during the months of August 2023, November 2023, February 2024, May 2024, and August 2024. Based on the data, temperatures have been generally consistent below the 100-foot depth during the last year. Temperatures above the 100-foot depth fluctuated between August 2023 to November 2023 to where they have been consistent below the 50-foot depth. There was a decrease at the 25-foot depth between the months of February 2024 and May 2024.

Figure 7. TP-3 Average Temperatures for the Months of August 2023, November 2023, February 2024, May 2024, and August 2024

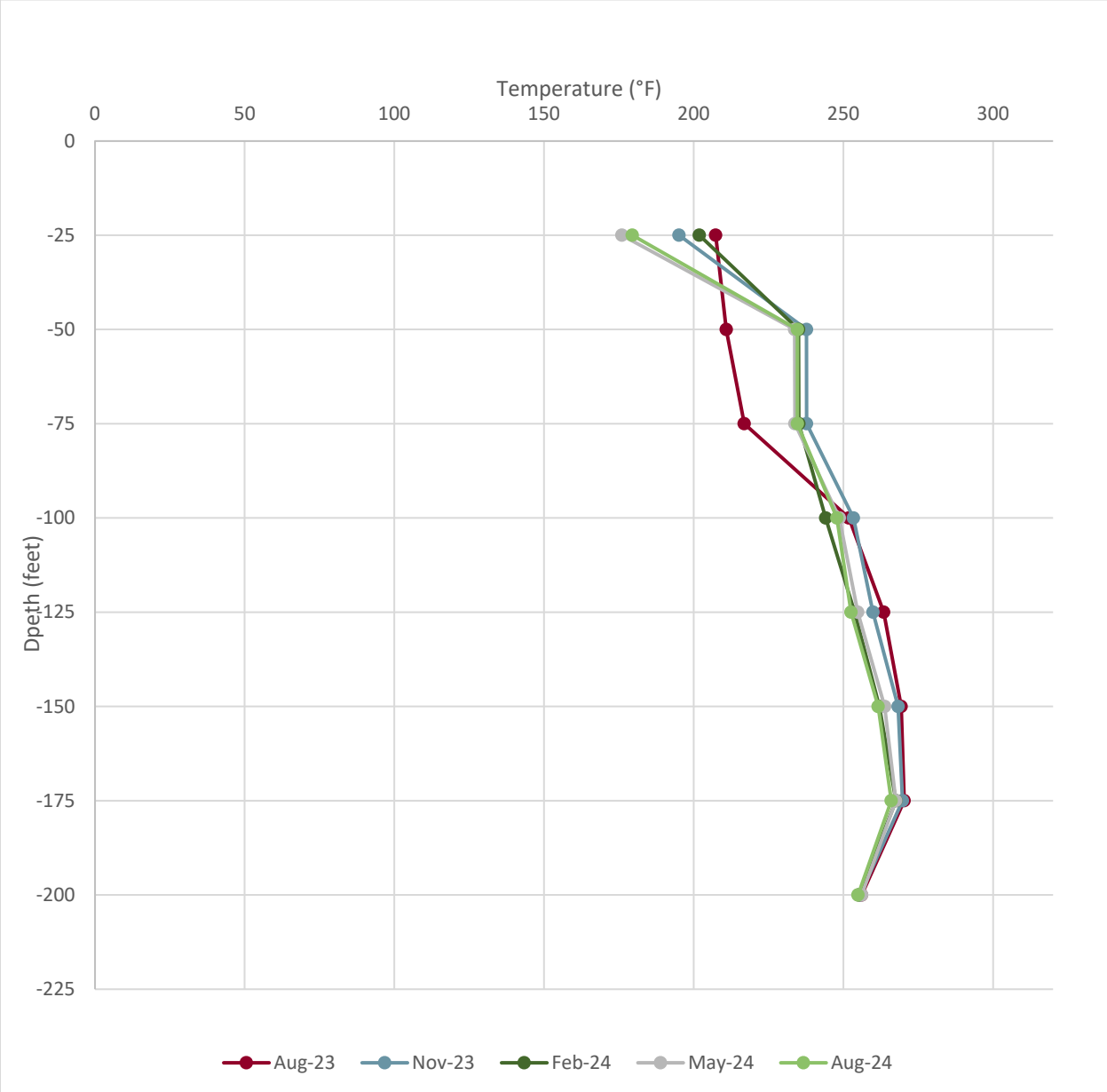


Figure 8 shows daily average temperatures in Temperature Probe 4 (TP-4) during the months of August 2023, November 2023, February 2024, May 2024, and August 2024. The temperatures during this time have been somewhat inconsistent, rising at some depths and lowering at others.

Figure 8. TP-4 Average Temperatures for the Months of August 2023, November 2023, February 2024, May 2024, and August 2024

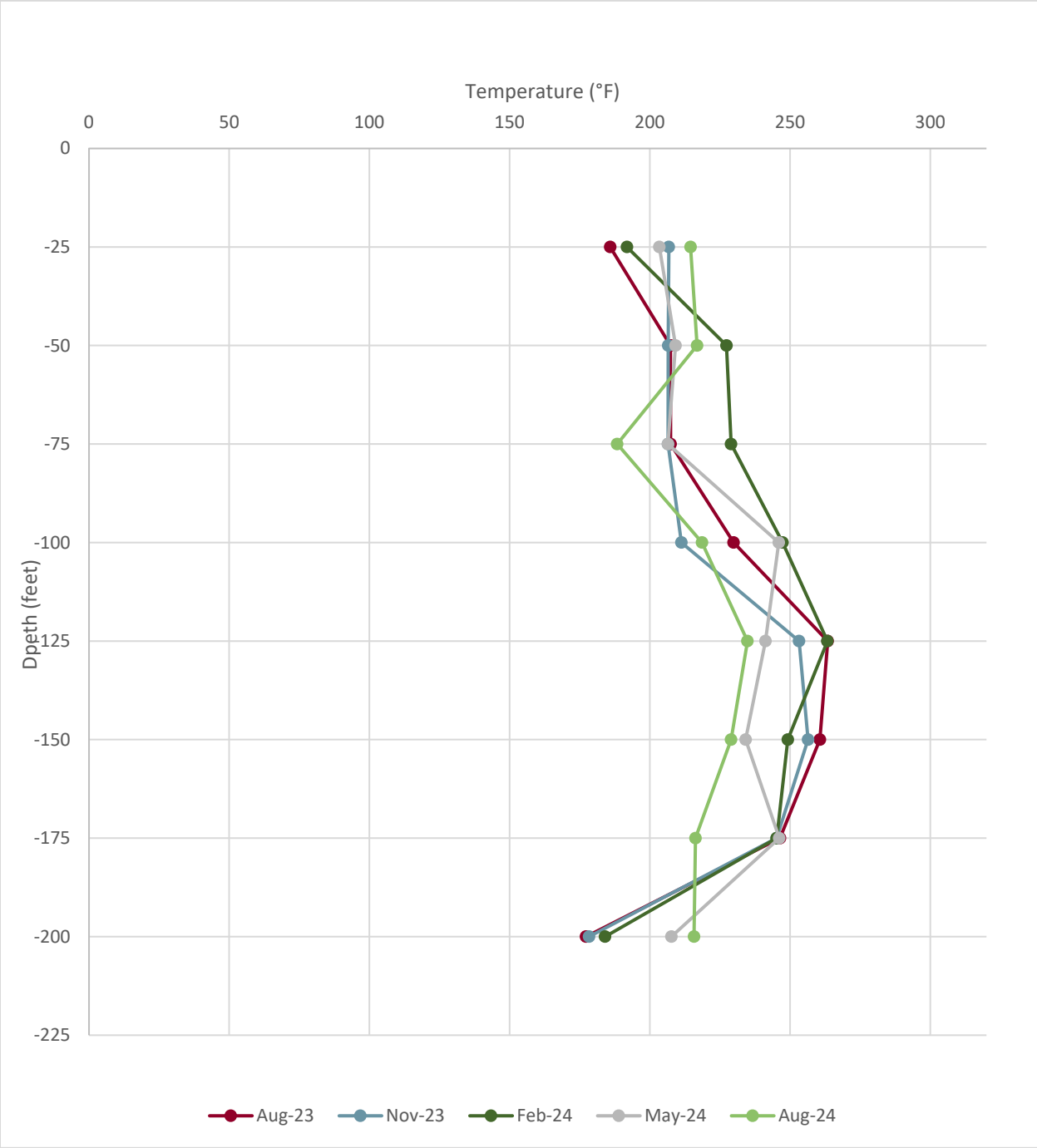


Figure 9 shows daily average temperatures in Temperature Probe 5 (TP-5) during the months of August 2023, November 2023, February 2024, May 2024, and August 2024. Based on the data, temperatures have been consistent with fluctuations at the 25-foot depth. Between November 2023 and May 2024, temperatures dropped at the 125-foot, 150-foot, and 175-foot levels.

TP-5 was damaged in late October 2023 and the sensors at the 125-foot, 150-foot, 175-foot, and 200-foot depths stopped functioning. SCS completed troubleshooting during the month of November 2023 and the sensors returned to operation later that month. TP-5 appears to have stopped recording temperatures again during the latter half of February 2024 due to a dead battery. The battery for the temperature probe was replaced in early April 2024.

Figure 9. TP-5 Average Temperatures for the Months August 2023, November 2023, February 2024, May 2024, and August 2024

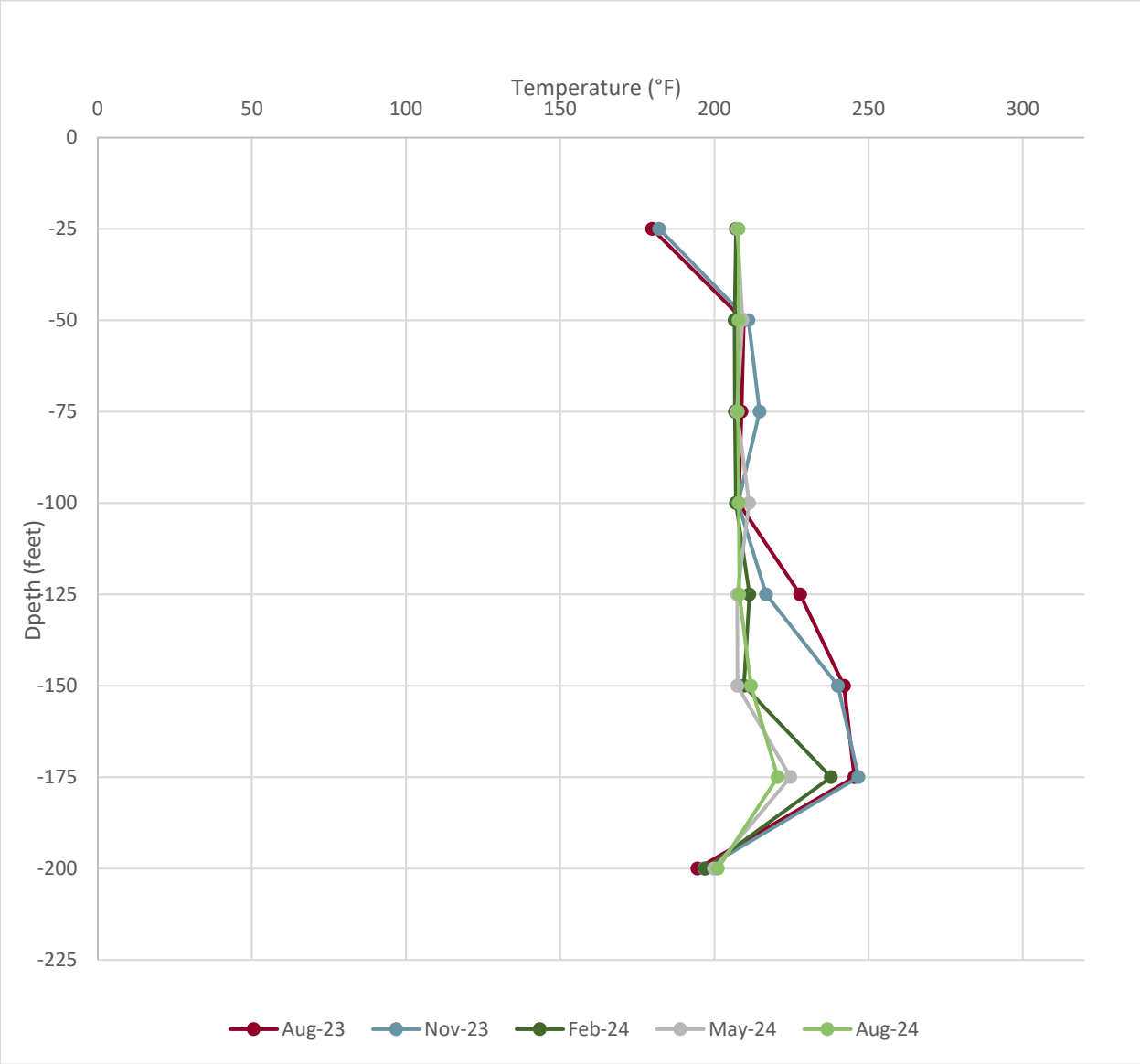


Figure 10 shows daily average temperatures in Temperature Probe 6 (TP-6) during the months of August 2023, November 2023, February 2024, May 2024, and August 2024. Based on the data, temperatures have been generally decreasing since August 2023 up to 100 feet in depth, with some temperature fluctuations occurring at the 25-foot depth. Temperatures rose between May 2024 and August 2024 at 75-foot and 100-foot levels. In April and July 2024, temperatures at the 125-foot depth increased. Further investigation has showed periodic spikes in temperature in mid-June. In August 2024, the City set up high-temperature alarms for the borehole probes, and inserted a wellhead temperature probe at nearby EW-61 to monitor the area more closely. Temperatures rose from 280-200°F to 320-340°F at the start of the month, then dropped on 8/4/24 to around 220°F by 8/6/24 and stayed stable. The City is coordinating with SCS-RMC to have a technician come on-site to evaluate the temperature sensors due to the inconsistent temperature measurements. Depending on the outcome of this additional investigation, the temperature sensors within this borehole may be replaced.

TP-6 was originally drilled to a depth of 208 feet and casing was installed to the full depth. During the installation of the installation of replacement sensors, a blockage within the casing prevented placement of sensors below the 125-foot depth.

Figure 10. TP-6 Average Temperatures for the Months of August 2023, November 2023, February 2024, May 2024, and August 2024

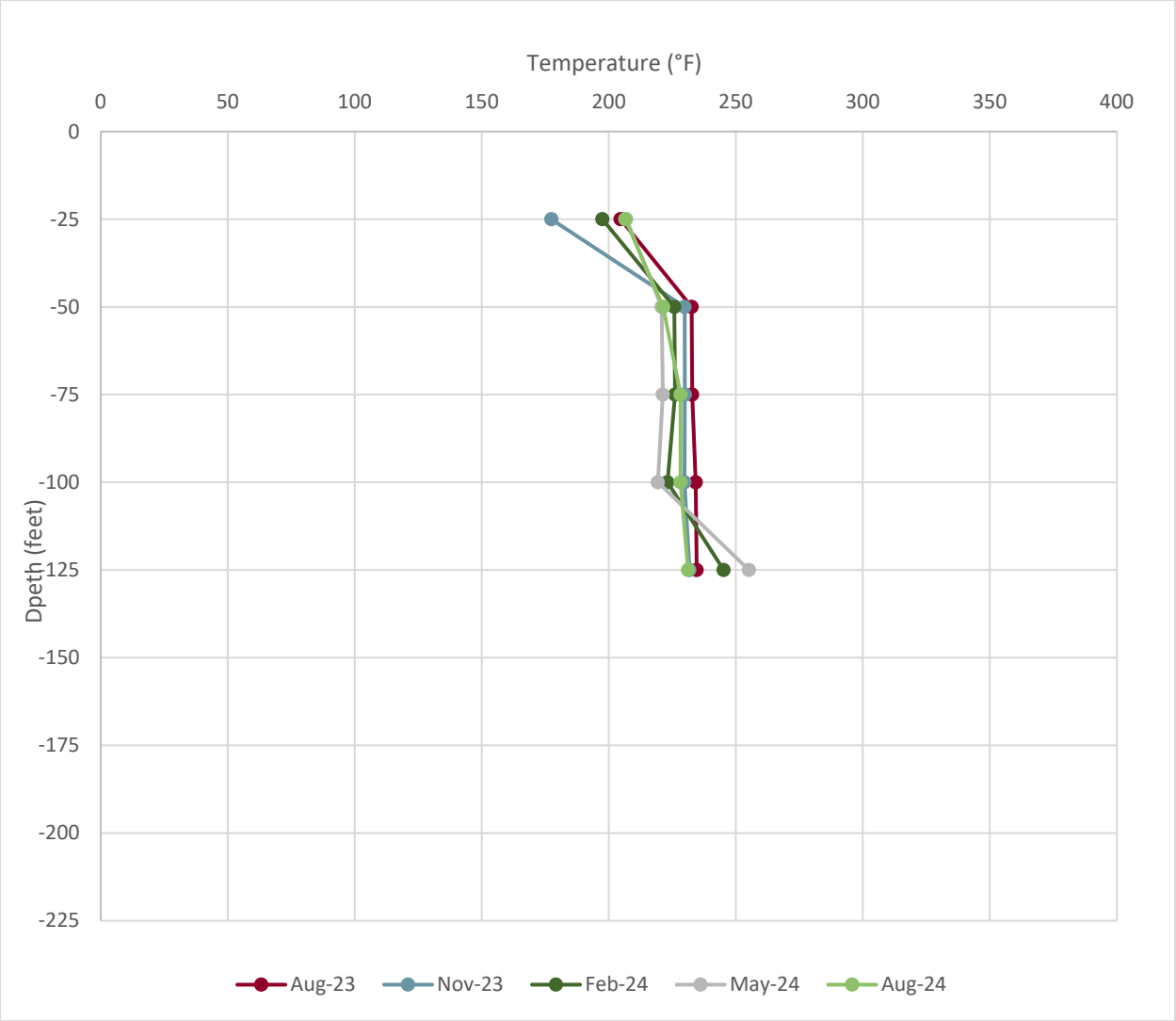


Figure 11 shows daily average temperatures in Temperature Probe 7 (TP-7) during the months of August 2023, November 2023, February 2024, May 2024, and August 2024. Based on the data, temperatures have fluctuated greatly over the last year, with temperatures at depth dropping. Observations of adjacent wells indicate that there may be below grade settlement of waste occurring in this area.

TP-7 did not record temperatures between August 15, 2023 and September 17, 2023 due to a dead battery. A replacement battery was installed in September of 2023 and TP-7 recording temperatures again on September 18, 2023.

Figure 11. TP-7 Average Temperatures for the Months of August 2023, November 2023, February 2024, May 2024, and August 2024

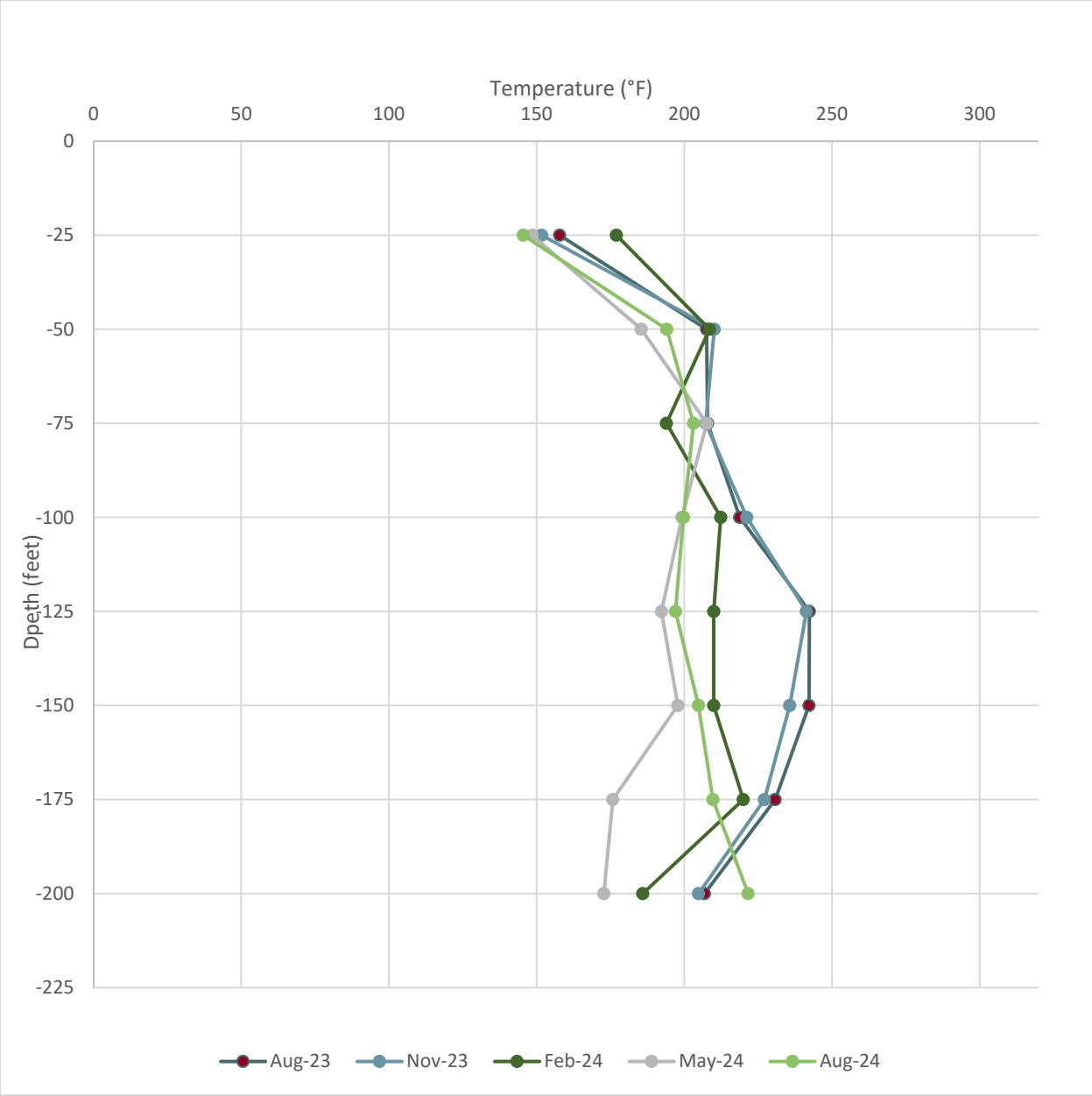


Figure 12 shows daily average temperatures in Temperature Probe 8 (TP-8) during the months of August 2023, November 2023, February 2024, May 2024, and August 2024. Based on the data, temperatures have been consistent over the past year.

TP-8 did not record temperatures from November 8, 2023 to November 27, 2023 due to a faulty battery which was replaced on November 28, 2023. Recordings on August 30, 2024 became inconsistent and the cause is currently being investigated.

Figure 12. TP-8 Average Temperatures for the Months of August 2023, November 2023, February 2024, May 2024, and August 2024

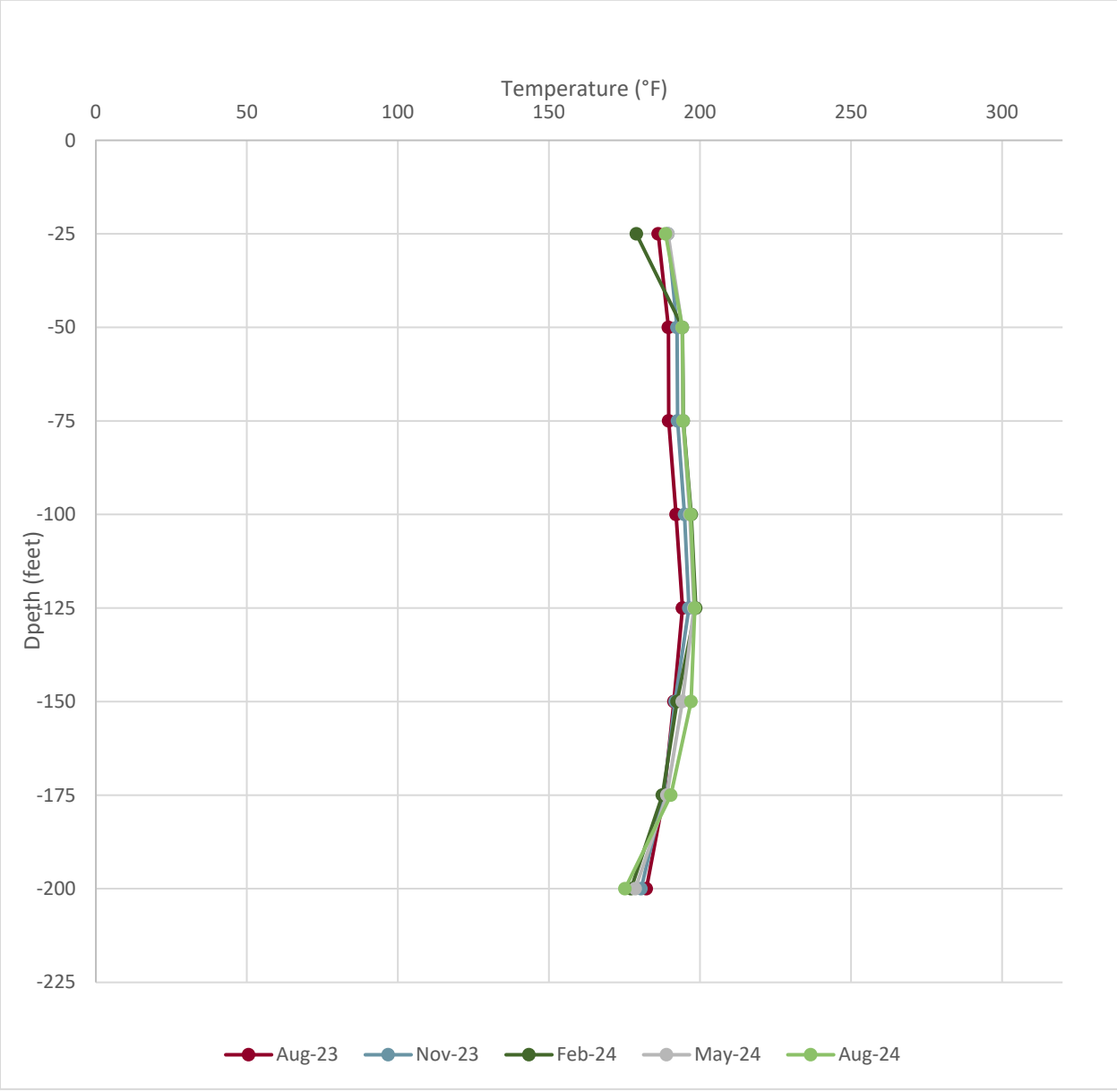
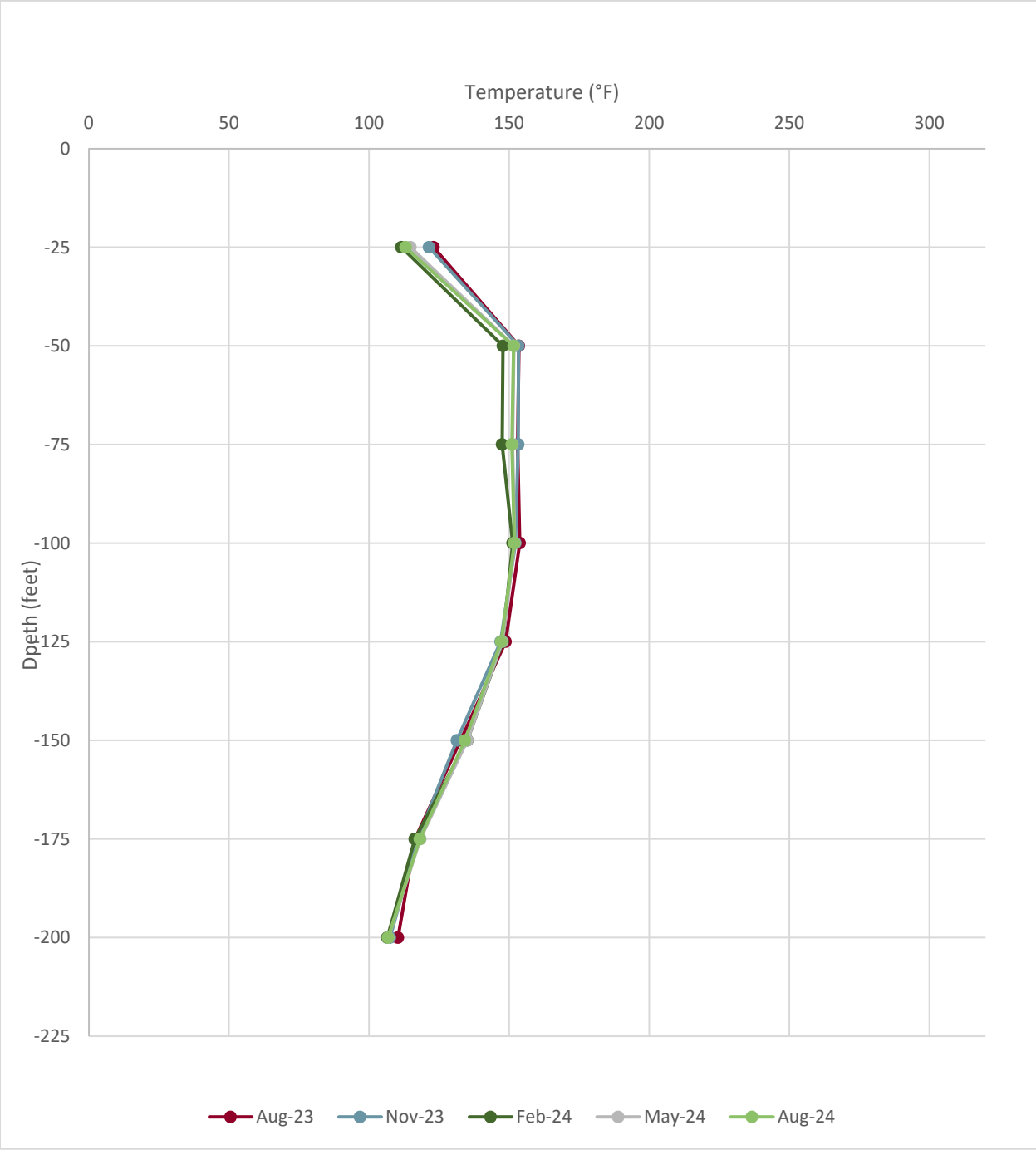


Figure 13 shows daily average temperatures in Temperature Probe 9 (TP-9) during the months of August 2023, November 2023, February 2024, May 2024, and August 2024. Based on the data, temperatures have been consistent during the last year.

Figure 13. TP-9 Average Temperatures for the Months of August 2023, November 2023, February 2024, May 2024, and August 2024



This data indicates that temperatures within the landfill are generally stable and are typical of those observed at elevated temperature landfills (ETLFs). During the months of May 2023 through September 2023, substantial construction occurred at the landfill including deep dual extraction wells that may have impacted temperatures within the waste mass adjacent to the probes. While quantifying the effect of the construction of addition wells is difficult, changes in wellhead temperature have been observed in existing wells adjacent to newly installed wells. The temperatures recorded are substantially lower than those associated with landfill fires or other combustion processes, which can exceed 1000°F. This further indicates that the elevated temperatures are due to sources other than combustion.

4.0 LEACHATE EXTRACTION AND MONITORING

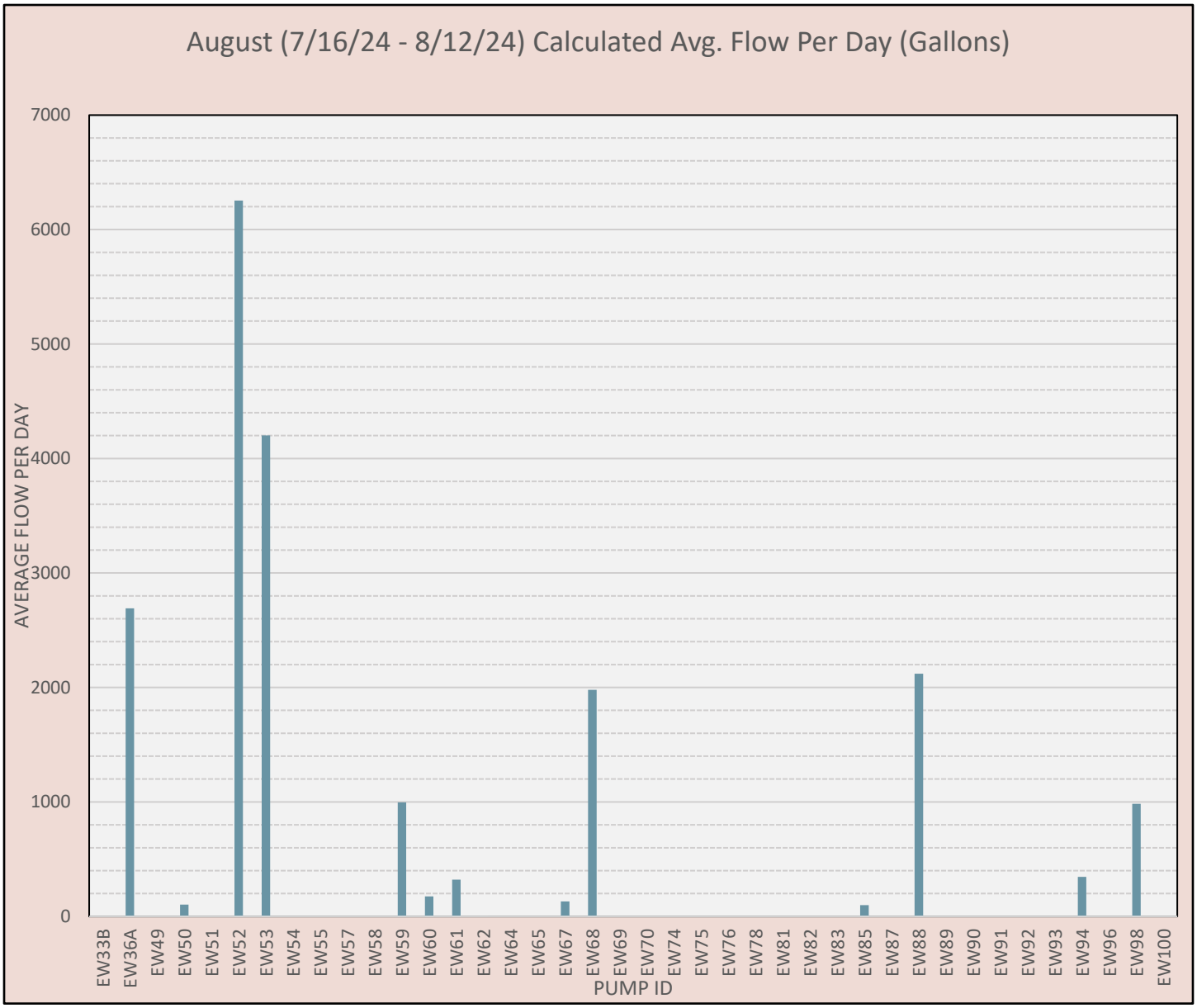
The City is taking steps to improve the extraction of leachate from the waste mass and collect analytical data on leachate characteristics. The following sections detail steps taken to achieve these goals.

4.1 EXISTING SYSTEM OPTIMIZATION

During the monthly liquid depth measurement event, SCS also collected stroke counter data from the pumps installed in the GCCS extraction wells. These stroke counts were collected from 40 wells from July 16 – August 12, 2024.

Based on this data, SCS can estimate the number of gallons of liquid pumped from each well. SCS assumed that each stroke from a float-style pneumatic pump correlates to approximately 0.3 gallons of liquid removed from the well. Additionally, Blackhawk piston-style pumps remove approximately 0.11 gallons per stroke recorded. Estimates of the quantities of liquids removed from each well during August are shown in Figure 14.

Figure 14. Estimated August Dewatering Liquid Removal by Well



SCS-FS continues to implement a routine maintenance schedule for landfill gas liquids removal pumps. The pumps at wells EW-52 and EW-53 removed the most liquid in August, according to the stroke count data. This suggests that the replacement pumps placed in these wells in the week of August 5 were effective.

In some cases, low volumes of landfill liquids removed correlate to low measured liquid levels within the gas wells. This was true of well EW-69 and EW-100 in August 2024. When this condition is identified, pumps may be relocated to wells with consistently higher liquid levels.

The City and SCS understand that operations of dewatering pumps are critical to address issues related to heat, odors, and the efficient operation of the GCCS. The landfill conditions present a

challenging environment for pump operations. Pumps require servicing after relatively short intervals. The SWP No. 588 Landfill's float-style pumps are bump-checked daily, and Blackhawk piston drive rods are cleaned routinely each week.

Several pumps have been replaced and repaired due to experiencing significant wear and tear from ETLF conditions. Listed below are the documented repairs and replacements that occurred for landfill gas liquids removal pumps during the month of August:

- **Week of July 22**: Replaced air fitting at EW-88
- **Week of August 5:** Pump replaced in EW-52 and EW-53; tri-tubing replaced in EW-52; bentonite seals installed at EW-55, EW-67, EW-90, and EW-95
- **Week of August 12:** Pump swapped in EW-53, EW-54, EW-65, EW-67, EW-78, EW-87, EW-94, tri-tubing replaced as needed; bentonite seal installed at EW-82
- **Week of August 19:** Pump swapped in EW-61; fixed tri-tubing in EW-61

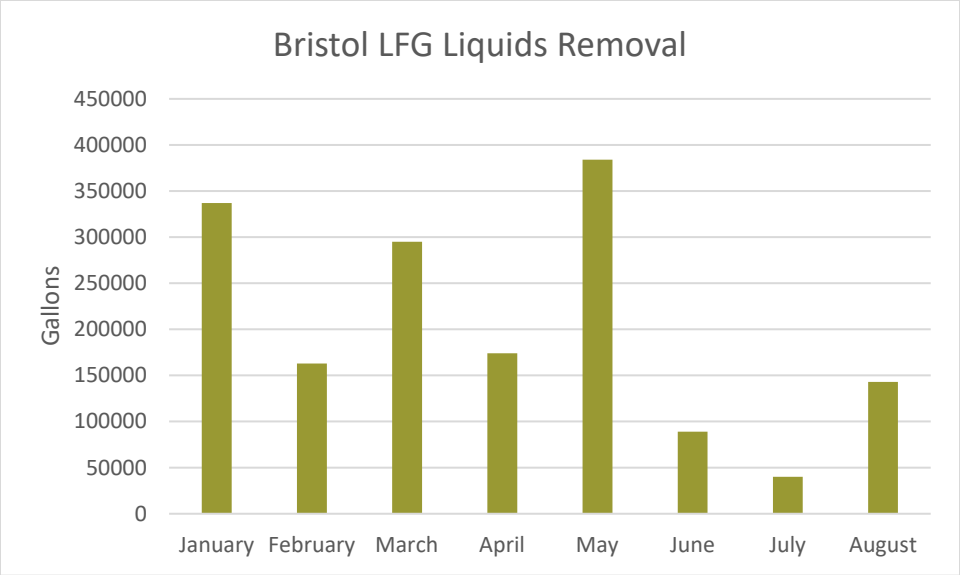
Daily pump checks and maintenance of spare pumps will continue in the coming month along with pump replacements as needed. The City, along with SCS-FS, has determined that the best pumps for the landfill's current conditions are QED. The City placed an order for an additional eight pumps. The additional pumps will help with the rotation of field pumps needing maintenance and replacement.

4.1.1 Total LFG Liquids Removal

To improve the accuracy of the total landfill gas liquids flow rate, two flow meters were installed on the landfill gas liquid forcemains in December 2023. One flow meter was installed on the SWP No. 588 primary landfill gas liquid forcemain. The other was installed on the SWP No. 588 alternate landfill gas liquids forcemain, which also serves as the conduit for condensate from the temporary perennial flare and the SWP No. 588 stormwater pump. The SWP No. 588 alternate landfill gas liquids forcemain will also serve as the SWP No. 498 landfill gas liquids forcemain in the future. In August, the total liquids flow recorded by the SWP No. 588 primary landfill gas liquids flowmeter was 143,000 gallons.

The progress in landfill gas liquids removal over the past seven months is depicted in Figure 15. Given the improved accuracy of a flowmeter compared to flow estimates based on collected stroke counter data, SCS and the City will only use calculated flow rates to track individual pump performance going forward, not the total liquids removal from the system.

Figure 15. Estimated Volume of Liquids Removed from Landfill Gas Wells



4.2 SAMPLING AND ANALYSIS PLAN

On November 1, 2022, SCS submitted to VDEQ the Dual Phase Landfill Gas Extraction Well Leachate Monitoring Plan for the Bristol Integrated Solid Waste Management Facility Solid Waste Permit No. 588 Landfill and the plan was subsequently revised on December 1, 2022. Refer to the November 2022 and December 2022 Compliance Reports for the SWP No. 588 Landfill for additional information.

4.2.1 Sample Collection

On August 27 and 28, 2024, SCS collected leachate samples from three Dual Phase LFG extraction wells (EW-54, EW-85, and EW-94). At the time of sample collection only oxidation-reduction potential and turbidity were measured and recorded as the meter was displaying an error for dissolved oxygen, pH, specific conductance, and temperature which is likely caused by the temperature being outside of the range of the meter. The associated field logs are included in **Appendix F**. SCS' field staff were not able to collect samples from select wells as summarized in **Table 6**.

Table 6. Summary Wells Unable to be Sampled for Leachate

Wells With Pumps	Wells Without Pumps
• Pump was not running at the time of monitoring for the following wells: EW-36A, EW-52, EW-53, EW-57, EW-59, EW-60, EW-61, EW-62, EW-67, EW-68, EW-69, EW-78, EW-82, EW-87, EW-88, EW-89, EW-90, EW-96, EW-98, and EW-100. • Pump was not running at the time of monitoring for the following wells and the liquid level could not be gauged as well was under vacuum thus unsafe to open for water level: EW-33B, EW-49, EW-50, EW-64, EW-65, EW-75, EW-81, and EW-83. • Pump was not running for EW-51 and EW-76 and the liquid depths were not measured at the time of monitoring due to a potential blockage. • Pump was not running for EW-55 and the liquid depth was not measured at the time of monitoring was the well is too tall and not safely accessible. • Pump was not running for EW-70 and the liquid depth was not measured at the time of monitoring as there was standing water around the well and not safely accessible.	• There was no pump at the time of the monitoring for the following wells: EW-58, EW-66, EW-71, EW-72, EW-73, EW-74, EW-86, EW-91, EW-92, EW-93, EW-95, EW-97, and EW-99. • There was no pump at the time of the monitoring for the following wells and the liquid level could not be gauged as well was under vacuum thus unsafe to open for water level: EW-63, EW-77, EW-79, EW-80, and EW-84. • There is no pump and the well appeared dry at the time of monitoring for EW-56.

The samples were delivered to Enthalpy Analytical (Enthalpy) in Richmond, Virginia and Pace Analytical Services, LLC (Pace) in Baton Rouge, Louisiana for analysis. The Enthalpy's and Pace's Virginia Division of Consolidated Laboratory Services (VELAP) certification is provided on the certificates of analysis (COAs) included in **Appendix F**. The samples were analyzed for the parameters utilizing the analytical methods described in the Dual Phase Landfill Gas Extraction Well Leachate Monitoring Plan.

At the time of preparation of this report, laboratory analytical results were not available for the August 2024 monitoring event. The August 2024 analytical results will be provided in the September 2024 Monthly Compliance Report.

At the time of preparation of the July 2024 Monthly Compliance Report, the laboratory analytical results were not available for the July 2024 monitoring event. Therefore, the July 2024 analytical results are provided in the following subsections.

4.2.1 Quality Assurance and Quality Control

Field quality control (QC) involved the collection and analysis of trip blanks to verify that the sample collection and handling processes did not impair the quality of the samples. Trip blanks were prepared for VOC analysis via Solid Waste (SW)-846 Method 8260D. In conjunction with the preparation of the groundwater sample collection bottle set, laboratory personnel filled each trip blank sample bottle with distilled/deionized water and transported them with the empty bottle kits to SCS. Field personnel handled the trip blanks like a sample; they remained un-opened, were transported in the sample cooler, and were returned to the laboratory for analyses. A trip blank is used to indicate potential contamination due to the potential migration of VOCs from the air at the site or in the sample shipping containers, through the septum or around the lid of the sampling vials and into the sample.

Laboratory quality assurance/quality control (QA/QC) involves the routine collection and analysis of method reagent blanks, matrix spike (MS) and matrix spike duplicate (MSD) samples, and laboratory control samples (LCS). A summary of each of these is presented below:

- Method Blank – The method blank is deionized water subjected to the same reagents and manipulations to which site samples are subjected. Positive results in the method blanks may indicate either contamination of the chemical reagents or the glassware and implements used to store or prepare the sample and resulting solutions.

- MS/MSD – A MS is an aliquot of a field sample with a known concentration of target parameter added to it. An MSD is an intra-laboratory split sample spiked with a known concentration of target parameter. Spiking for each occurs prior to sample analysis. MS/MSD samples are collected for every batch of twenty or fewer samples. Matrix spike recoveries are used to indicate what effect the sample matrix may have on the reported concentration and/or the performance of the sample preparation and analysis.

- LCS – These samples consist of distilled/deionized water injected with the parameters of interest for single parameter methods and selected parameters for multi-parameter methods according to the appropriate analytical method. LCS samples are prepared and analyzed for each batch containing twenty or fewer samples. LCS recoveries are used to monitor analytical accuracy.

Surrogate recoveries are also measured as a part of laboratory QA/QC. Surrogates are organic compounds that are like the parameters of interest in chemical composition, extraction, and chromatography, but are not normally found in environmental samples. These compounds are inserted into blank, standards, samples, and spiked samples prior to analysis for organic parameters only. Percent recoveries are calculated for each surrogate. Spike recoveries at or below acceptance criteria indicate whether analytical results can be considered biased high or biased low.

No trip or method blank detects were identified for the July 2024 monitoring event. The laboratory analysis reports for the July 2024 monitoring event trip blanks are included in Appendix F. The July 2024 monitoring event laboratory QA/QC reports, including the method blank results, are included in the COAs in Appendix F.

4.2.2 Data Validation

To identify analytical data that may not represent valid results, data from the monitoring events were validated by the Laboratory and SCS in accordance with United States Environmental Protection

Agency (EPA) guidance[1]. Data flagged with a "J" qualifier indicates the quantitation of the parameter is less than the laboratory's limit of quantitation but greater than the laboratory's limit of detection (LOD); thus, the concentration is considered estimated. Samples with parameter detections less than five times that of the trip blank, field blank, and/or method blank detection but greater than the laboratory's LOD are flagged with a "B" qualifier. Samples with common laboratory contaminant parameter detections less than 10 times that of the trip blank, field blank, and/or method/laboratory blank detection but greater than the laboratory's LOD are flagged with a "B" qualifier. Data with a "B" qualifier are considered not validated as the detection may be anomalous due to cross-contamination during sampling, transportation of samples, or laboratory analysis.

No leachate results were flagged with a "B" qualifier for the July 2024 monitoring event as no detections were identified in the trip or method blanks. The July 2024 detections flagged with a "J" qualifier are shown on **Table 6**.

4.2.3 Laboratory Analytical Results

The analytical results for the July 2024 leachate samples collected from extraction EW-59 and EW-60 are summarized in **Table 7**. The associated COAs are included in **Appendix F**. Parameter results from July 2024 and previous monitoring events (November 2022 – June 2024) are presented on a table in **Appendix F**. Time-series plots of each VOC for the wells that have historically been sampled are also included in **Appendix F**.

Table 7. Monthly LFG-EW Leachate Monitoring Event Summary

Well ID	EW-59	EW-60	LOD	LOQ
Parameter	**June 2024 Concentration**			
Ammonia as N (mg/L)	**1860**	---	73.1	100
	---	**1950**	146	200
Biological Oxygen Demand (mg/L)	**25800**	**4750**	0.2	2
Chemical Oxygen Demand (mg/L)	**42400**	---	5000	5000
	---	**98500**	10000	10000
Nitrate as N (mg/L)	---	ND	0.5	2.5
	6.66	---	5	25
Nitrite as N (mg/L)	---	ND	0.5	2.5
	ND	---	5	25
Total Kjeldahl Nitrogen (mg/L)	**2840**	**2680**	100	250
Total Recoverable Phenolics (mg/L)	---	**28.8**	0.75	1.25
	37.8	---	3	5

[1] United States Environmental Protection Agency. Guidance for Data Usability in Risk Assessment (Part A-14). April 1992.
United States Environmental Protection Agency. Office of Superfund Remediation and Technology Innovation. National Functional Guidelines for Inorganic Superfund Methods Data Review. November 2020.
United States Environmental Protection Agency. Office of Superfund Remediation and Technology Innovation. National Functional Guidelines for Organic Superfund Methods Data Review. November 2020.

Table 7. Monthly LFG-EW Leachate Monitoring Event Summary

Well ID	EW-59	EW-60	LOD	LOQ
Parameter	**June 2024 Concentration**			
SEMI-VOLATILE ORGANIC COMPOUND (ug/L)				
Anthracene	ND	---	40	80
	---	ND	80	160
TOTAL METALS (mg/L)				
Arsenic	**300**	**0.095**	0.0025	0.005
Barium	**1.28**	**2.75**	0.005	0.025
Cadmium	ND	ND	0.0005	0.005
Chromium	**0.252**	**0.246**	0.002	0.005
Copper	**0.398**	ND	0.0015	0.005
Lead	ND	ND	0.005	0.005
Mercury	ND	**0.00104**	0.001	0.001
Nickel	**0.1917**	**0.03634**	0.005	0.005
Selenium	ND	ND	0.00425	0.005
Silver	ND	ND	0.0003	0.0005
Zinc	**0.104**	**0.0451**	0.0125	0.025
VOLATILE FATTY ACIDS (mg/L)				
Acetic Acid	**6280**	**6180**	---	1250
Butyric Acid	**2400**	**2360**	---	250
Lactic Acid	**1220**	**1210**	---	250
Propionic Acid	**2500**	**2470**	---	250
Pyruvic Acid	ND	ND	---	250
VOLATILE ORGANIC COMPOUNDS (ug/L)				
2-Butanone (MEK)	**15600**	---	150	500
	---	**25400**	1500	5000
Acetone	**32200**	**52600**	3500	5000
Benzene	**1410**	**1820**	20	50
Ethylbenzene	**76**	**118**	20	50
Tetrahydrofuran	**1900**	**4020**	500	500
Toluene	**97**	**125**	25	50
Xylenes, Total	**125 J**	**157**	50	150

--- = not applicable
J = Constituent was detected at a concentration above the laboratory's LOD but below the laboratory's LOQ. Concentration is estimated and not validated.
LOD = laboratory's Limit of Detection
LOQ = laboratory's Limit of Quantitation
mg/L = milligrams per liter
ND = Not Detected
ug/L = micrograms per liter

5.0 SETTLEMENT MONITORING AND MANAGEMENT

The City is taking steps to track and manage settlement occurring in the landfill. A summary of actions taken to quantify and manage settlement is included in the sections below.

5.1 SETTLEMENT MONITORING AND MANAGEMENT PLAN

On behalf of the City, SCS submitted a settlement monitoring and management plan to VDEQ on November 15, 2022. Refer to the 2022 November Monthly Compliance Report for the SWP No. 588 Landfill for additional information.

5.2 MONTHLY SURVEYS

5.2.1 Topographic Data Collection

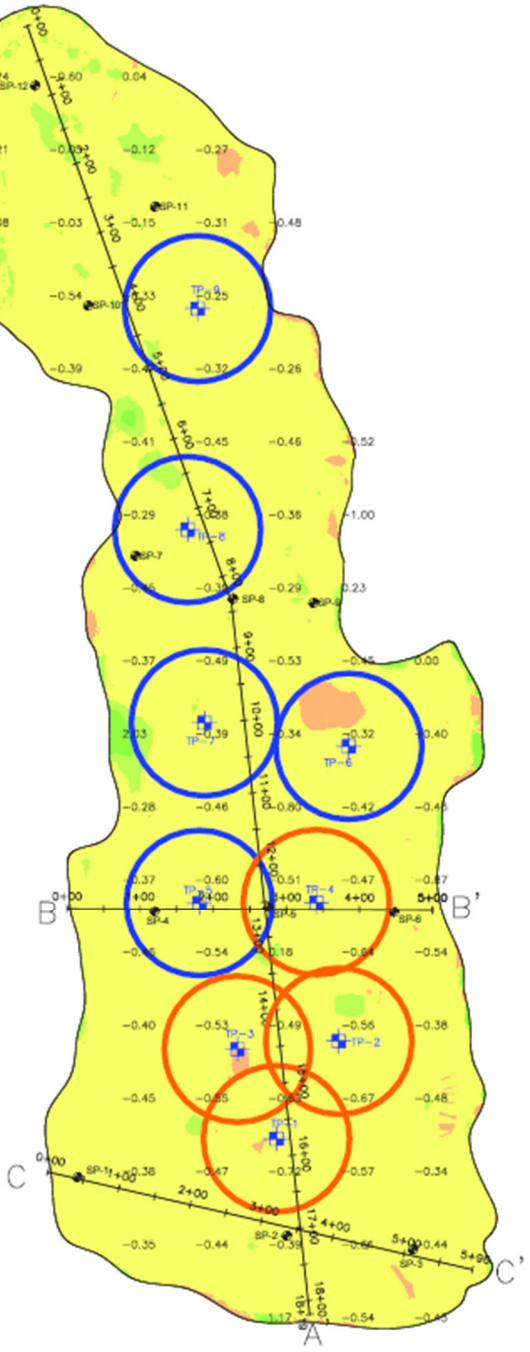
The City, through SCS, collected topographic data of the Solid Waste Permit No. 588 Landfill using photogrammetric methods via an unmanned aerial vehicle (UAV or drone). On August 14, 2024 the flight was completed and the topographic data collected. The topographic data collected is shown on Sheet 4 in Appendix E.

The topography within the landfill footprint was compared to topographic data collected by SCS using photogrammetric methods on July 16, 2024. A drawing depicting the July 16, 2024 topography is included as Sheet 3 in Appendix E.

Based on a comparison of the topographic data collected on those two dates, the data shows a fill of 400 cubic yards throughout the entire site. During that same time period, calculations indicate a "cut" value of approximately 12,400 cubic yards. Cut volumes are typically attributed to settlement. This resulted in a net volume decrease of approximately 12,000 cubic yards.

A visual depiction of settlement and filling at the landfill during this time is depicted in Figure 16. Areas in yellow, orange, and red indicate where elevations decreased and areas in green indicate areas where elevations have increased. Darker colors indicate greater changes in elevation. This drawing is also included as Sheet 5 in Appendix E.

Figure 16. 1-Month Elevation Change Map



The locations of in-waste temperature monitoring probes are also shown on Figure 16, Figure 17, and Figure 18. The circles around the probes in each of these figures are indicative of the average borehole temperature. The circles shown are offset from the probes for clarity only and do not necessarily indicate temperatures measured at locations away from the probe. Probes with a blue circle around them typically have an average temperature less than 200°F across the full depth of

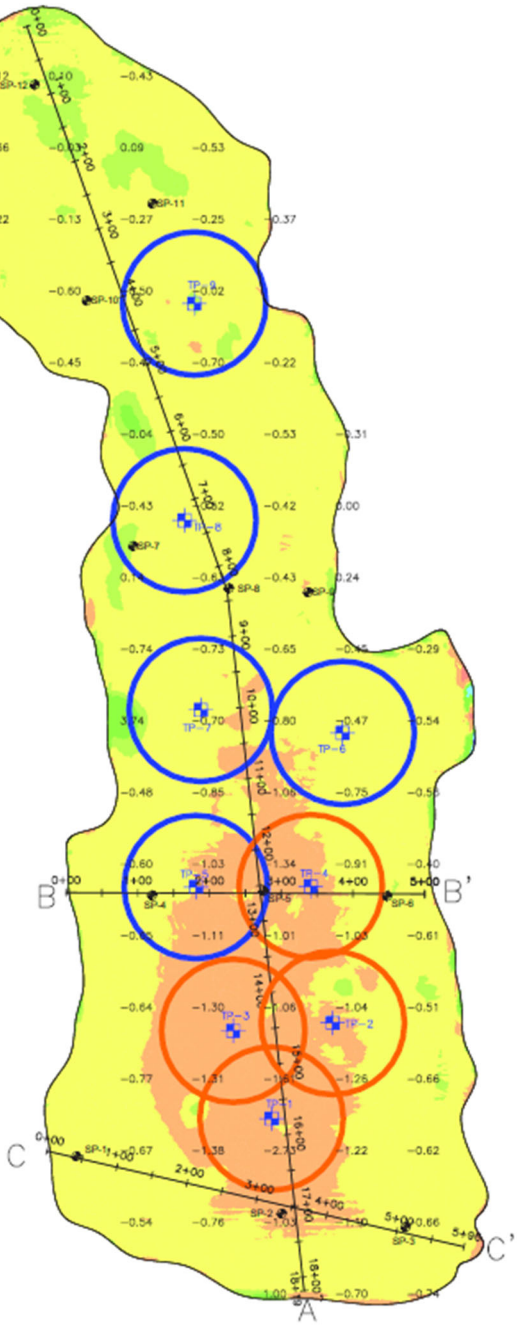
the probe. Probes with an orange circle around them typically have an average temperature greater than 200°F and less than 250°F across the full depth of the probe. There were no probes measuring average temperatures greater than 250°F and less than 300°F during the month of August 2024.

SCS calculated the waste footprint for purposes of analysis to be 752,610 square feet. Based on that area and the net volume change, the average elevation decrease for the month of August was 0.42.

SCS also compared the topographic data collected in August to the topographic data collected on May 21, 2024. Based on a comparison of the topographic data collected on those two dates, settlement occurred that reduced the volume of waste in the landfill by approximately 17,900 cubic yards. During that same time period calculations indicate approximately 700 cubic yards of fill were placed on the landfill, for a net decrease in waste volume of 7,200 cubic yards.

A visual depiction of settlement and filling at the landfill during this time is depicted in Figure 17. Areas in orange/yellow indicate where elevations decreased and areas in green indicate areas where elevations have increased. Darker colors indicate greater changes in elevation. This drawing is also included as Sheet 6 in Appendix E.

Figure 17. 3-Month Elevation Change Map



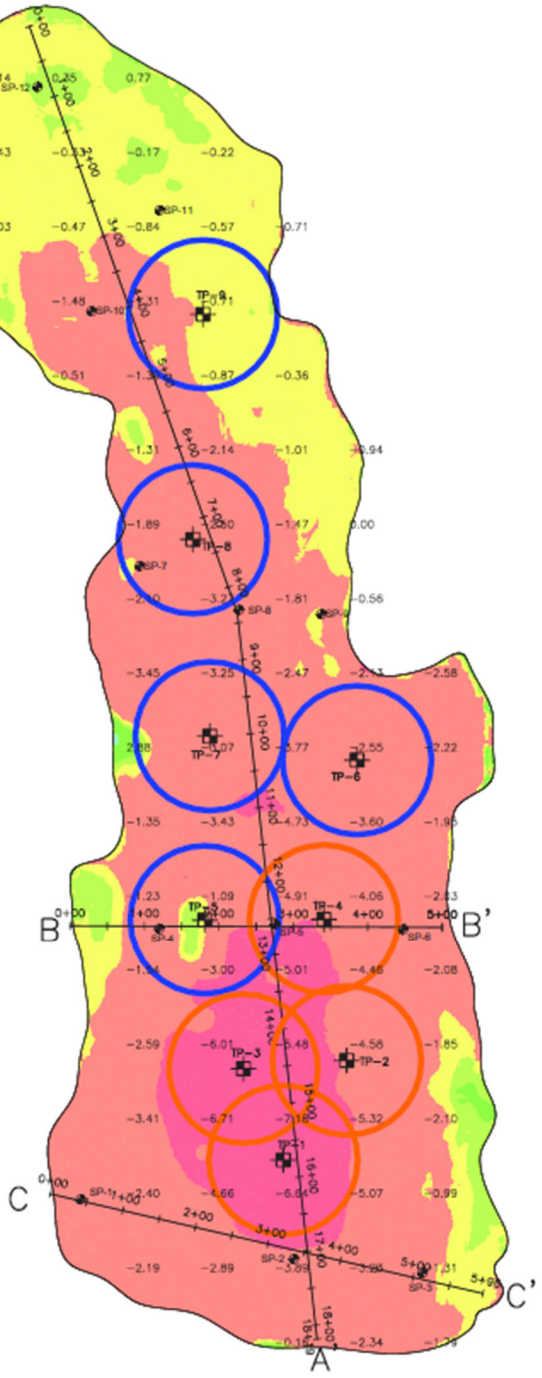
Based on the area of the landfill and the net volume change, the average elevation decrease was approximately 0.60 feet.

SCS also compared the topographic data collected in August to the drone topographic data collected on August 2, 2023 by SCS. Based on a comparison of the topographic data collected on those two

dates, settlement occurred that reduced the volume of waste in the landfill by approximately 69,000 cubic yards. During that same time period approximately 500 cubic yards of construction-related fill were placed on the landfill. This fill was primarily soil placed as part of the sidewall odor mitigation system construction. This resulted in a net volume decrease of approximately 68,500 cubic yards.

A visual depiction of settlement and filling at the landfill during this time is depicted in Figure 18. Areas in red indicate where elevations decreased and areas in green indicate areas where elevations have increased. Darker colors indicate greater changes in elevation. This drawing is also included as Sheet 7 in Appendix E.

Figure 18. 1-Year Elevation Change Map



The largest settlement occurred primarily in the southern end of the landfill where the waste settled by approximately 7 feet or more in some areas. These significant settlement values are typical of elevated temperature landfill conditions. The landfill perimeter exhibited an increase in elevation,

likely due to soil placement associated with construction of the Sidewall Odor Mitigation System. There were variations in elevation associated with soil stockpiling operations.

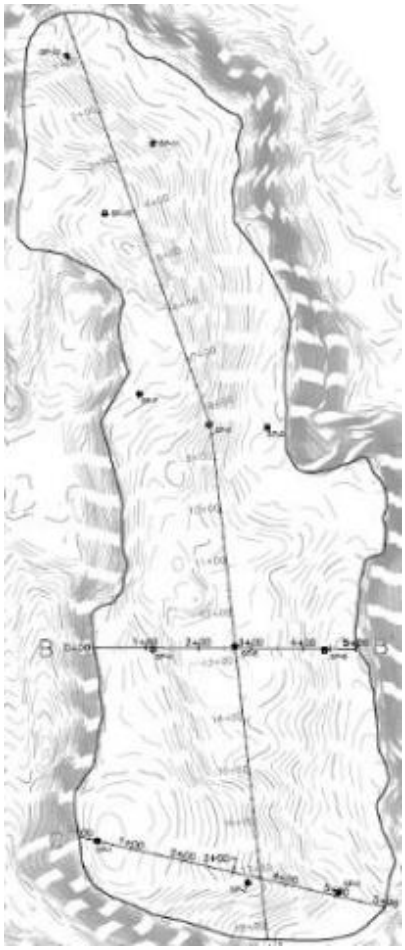
Based on the landfill area and the net volume change, the average elevation decrease was approximately 2.4 feet.

SCS will collect topographic data covering the landfill surface again in September using photogrammetric methods via UAV. This data will be compared to the data collected in September 2023, June 2024, and August 2024.

5.2.2 Settlement Plate Surveys

On November 7, 2022 SCS field services installed 12 settlement plates on the Solid Waste Permit No. 588 landfill. The construction and installation of the settlement plates generally conforms to the design outline in the Settlement Monitoring and Management Plan. The tops of the PVC pipes were painted orange to improve visibility. The settlement plate locations are depicted in Figure 19 and on Sheet 1 in Appendix E.

Figure 19. Settlement Plate Locations



The locations of the settlement plates were surveyed by the City's surveyor on November 14, 2022. The settlement plates were surveyed again on December 13, 2022; January 3, 2023; February 6, 2023; March 8, 2023; April 3, 2023; May 11, 2023; June 5, 2023; July 10, 2023; August 17, 2023; September 11, 2023; October 11, 2023; November 6, 2023; December 12, 2023; January 11, 2024; February 6, 2024; March 13, 2024; April 9, 2024; May 8, 2024; June 4, 2024; July 10, 2024; and July 31, 2024. The surveyed coordinates[2] and elevation changes of the settlement plates are shown in Table 7.

Table 8. Elevation and Strain Data at Settlement Plate Locations

Settlement Plate	Northing	Easting	Elevation on July 31, 2024	Elevation Change Since July 10, 2024	Strain[3] Since July 10, 2024	Elevation Change Since Installation	Strain/Year
SP-1	3,397,887.4	10412080.3	1,829.8	-0.1	-0.1%	-4.6	-1.6%
SP-2A	3,397,822.4	10,412,370.5	1,795.4	-0.3	-0.2%	-0.3	-3.7%
SP-3A	3,397,819.7	10,412,498.3	1,780.0	-0.2	-0.2%	-0.2	-3.2%
SP-4A	3,398,247.1	10,412,206.1	1,804.9	-0.2	-0.1%	-0.2	-2.0%
SP-5	3,398,255.8	10,412,339.3	1,790.8	-0.3	-0.1%	-9.9	-2.1%
SP-6	3,398,248.8	10,412,510.1	1,773.9	-0.2	-0.1%	-3.8	-2.2%
SP-7A	3,398,732.1	10,412,157.6	1,823.2	-0.2	-0.2%	-0.2	-2.6%
SP-8	3,398,678.3	10,412,290.9	1,801.0	-0.1	-0.1%	-6.3	-1.0%
SP-9A	3,398,644.3	10,412,416.2	1,788.7	-0.1	-0.1%	-0.1	-1.3%
SP-10	3,399,080.2	10,412,093.1	1,837.6	-0.1	0.0%	-2.6	-0.6%
SP-11	3,399,216.3	10,412,183.8	1,815.0	0.0	0.0%	-1.4	0.1%
SP-12	3,399,381.7	10,412,019.6	1,809.9	0.0	0.0%	-0.7	-0.2%

Prior to April 2024, the City's in-house surveyor read the settlement plate elevations. Starting April 2024, the settlement plate elevations were measured by FEI Civil Engineers and Land Surveyors.

Settlement Plates 2, 4, and 5 demonstrated larger settlements than at other locations. Settlement Plates 4 and 7 are damaged during construction operations. Settlement Plates 2 and 5 are located in the southern end of the landfill. This area is the location of the gas wells and temperature probes exhibiting higher temperatures. These higher settlement values are typical of elevated temperature landfill conditions.

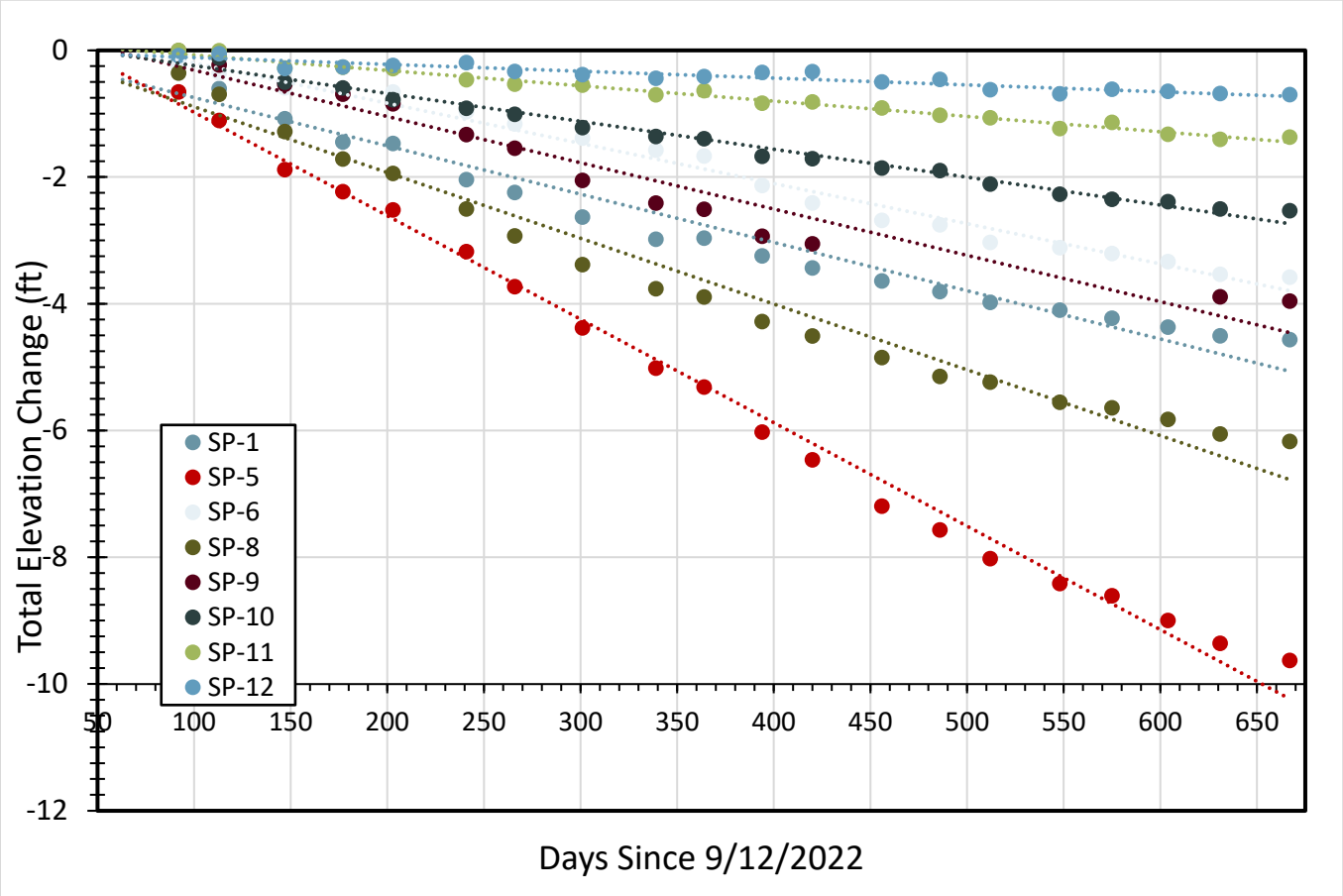
The change in elevation at the rest of the settlement plates (other than SP-11) was lower and more representative of typical settlement at municipal landfills with waste of similar depth. Settlement plate SP-11 exhibited an increase in elevation, however the elevation measured in May was equal to the elevation measured in July. The elevation has likely not changed between May and July. Settlement Plate 3 was damaged and unable to be measured since September 2023. Settlement

[2] Settlement plate locations and coordinates are based on a local coordinate system.
[3] Strain is defined as the change in elevation divided by the estimated waste depth.

Plate 9 was located in standing water and was unable to be read between December 2023 and March 2024.

Figure 20 shows the changes in elevation of select settlement plates over time. Best-fit lines for these changes in elevation are also shown on the graph. Currently settlement rates are represented well by linear trend lines. For the purposes of recording data in this figure, times are measured in days since the landfill was required to stop accepting waste.

Figure 20. Elevation Change of Select Settlement Plates Over Time



The settlement plates will be surveyed again during the month of August 2024. The elevations surveyed will be compared to the elevations surveyed the previous months.

5.2.2.1 Newly installed settlement plates

Five new settlement plates (SP-2A, SP-3A, SP-4A, SP-7A, and SP-9A) installed during June 2024 are intended to replace non-operational settlement plates. SP-9A was installed due to the existing SP-9's location in a low area which is prone to flooding after rain. The first elevation survey of the new settlement plates was completed on 7/10/24. They replaced the non-operational plates in the 7/31/24 readings.

6.0 INTERMEDIATE COVER AND EVOH COVER SYSTEM

The City is taking steps to provide intermediate and temporary cover of the wastes in the landfill. The sections below outline the steps taken by the City.

6.1 INTERMEDIATE COVER INSTALLATION

The City completed hauling and placement of a 12-inch-thick intermediate cover across the entire landfill prior to October 10, 2022. The cover was placed in accordance with 9VAC20-81-140(B)(1)(d). SCS coordinated with the City to dig a series of test holes to verify cover thickness in select locations. Details of these verifications were discussed in the October 2022 Monthly Compliance Report for the SWP No. 588 Landfill.

6.2 EVOH COVER SYSTEM DESIGN

On December 4, 2023, SCS submitted a revised stormwater management plan to submit to VDEQ, including revised drawings and calculations. The revised SWMP includes the three quarry basins, additional stormwater pumps, new stormwater force mains, and the preliminary layout of the new electrical infrastructure along the quarry rim.

On December 18, 2023 SCS and VDEQ met to discuss concerns about the impact of settlement on the proposed EVOH Cover System. The City discussed the appropriate schedule for EVOH deployment with VDEQ given the significant settlement the site is experiencing. An amendment to the Consent Decree was subsequently issued which requires the EVOH deployment no later than December 1, 2026. The amended Consent Decree also requires regular settlement assessments, and the EVOH deployment may occur earlier if settlement rates appear acceptable. The first of these assessments was submitted to VDEQ on April 11, 2024. The most recent assessment was completed on July 15, 2024.

6.3 EVOH COVER SYSTEM PROCUREMENT

Drawings used for the purposes of bidding, procurement and construction of the EVOH cover system will generally conform to the layout and details in the drawings described in section 6.2. SCS also prepared and submitted to VDEQ a specification for the EVOH geomembrane on January 30, 2023 based upon industry standards and discussions with material manufacturers. This specification and drawing set represent the first steps in the procurement process. SCS and the City have coordinated with potential suppliers to specify a product that is not currently anticipated to have long lead times. SCS has received a pro-forma data sheet from one manufacturer which is preparing a customized EVOH product for the No. 588 landfill.

6.4 EVOH COVER SYSTEM INSTALLATION

SCS will prepare regular settlement assessments for VDEQ per the amended Consent Decree. EVOH deployment will commence, with VDEQ's concurrence, if the latest assessment shows acceptable settlement rates. The amended consent decree requires installation of the EVOH cover system by December 1, 2026.

7.0 STORMWATER MANAGEMENT

The City is taking steps to implement a stormwater management plan at the landfill. The sections below outline the steps taken by the City.

7.1 STORMWATER MANAGEMENT PLAN DEVELOPMENT

The initial stormwater management plan (SWMP) was submitted to VDEQ on April 28, 2023.

The revised SWMP was submitted to VDEQ on December 4, 2023. The plan proposes a stormwater pumping system to convey stormwater collected atop the EVOH cover system to an existing discharge point permitted under VPDES permit VAR050053. The proposed system includes the construction of three stormwater collection basins in the quarry and the installation of pairs of skid-mounted stormwater pumps. The stormwater will be conveyed by force main pipes to the existing stormwater basins located west of the quarry.

The plan proposes modifications to the existing stormwater basins west of the quarry to achieve discharge quantity targets. Modifications include increasing the basin depths and installing new outlet riser structures.

7.2 STORMWATER MANAGEMENT BASIN DESIGN AND CONSTRUCTION

The landfill surface will be regraded to form the SWM basins proposed in the stormwater management plan. The earthwork will be completed as the first stage of the interim EVOH cover system installation project. A revised landfill gas management plan is being prepared to facilitate the regrading of the landfill, which will affect existing landfill gas infrastructure. The landfill gas system will be modified to accommodate the earthwork.

Attention is being given to settlement concerns in the vicinity of the stormwater basin or basins. Calculations provided to VDEQ on June 23, 2023 demonstrate the weight of the ponded water should not cause excessive settlement relative to ongoing settlement observed within the quarry. Including additional stormwater basins within the quarry will distribute the weight of ponded water over a wider area relative to the single stormwater basin design.

7.3 STORMWATER MANAGEMENT PLAN IMPLEMENTATION

The stormwater management plan design drawings are being incorporated into the overall construction drawings for the interim EVOH cover system. The interim EVOH cover system installation and stormwater management features will be bid and constructed as one project to facilitate simultaneous progress and completion.

As an interim measure, the City is currently operating a temporary stormwater pump to remove stormwater from the landfill surface.

7.4 LONG-TERM STORMWATER CONTROL AND REMOVAL

The stormwater management plan is designed with resiliency and redundancy to promote long-term operation. Refer to previously submitted compliance reports for details of long-term stormwater control and removal.

7.5 STORMWATER MONITORING

Stormwater monitoring will commence upon initial discharge of stormwater from the quarry stormwater pumping system. As stated in the stormwater management plan drawings, the stormwater shall be monitored in accordance with the facility's VPDES general permit for discharge of stormwater associated with industrial activity. Additional requirements include collecting additional stormwater samples at the discharge pipes for the quarry stormwater pumping system. The stormwater from the quarry basins will be sampled on a monthly basis prior to discharge to the upper stormwater ponds. The Operations Manual will be revised to include these additional requirements.

If the stormwater becomes contaminated or sampling indicates contamination above discharge limits, the stormwater will be diverted to the sanitary sewer system. The diversion to the sanitary sewer system will continue until the source of contamination is identified and resolved. The stormwater discharge pipe alignment will pass adjacent to the existing sanitary sewer manhole. A tee with isolation valves will be used to direct the stormwater to the upper basins or the sanitary sewer manhole.

Stormwater currently pumped from the surface of the landfill is discharged to the sanitary sewer and is sampled with other wastewater discharges in accordance with the facility's industrial wastewater discharge permit.

8.0 MISCELLANEOUS

8.1 CEASE WASTE ACCEPTANCE

The City ceased acceptance of offsite waste at the Solid Waste Permit No. 588 landfill prior to September 12, 2022.

8.2 LONG-TERM PLAN

SCS submitted the Monitoring, Maintenance, and Repair Plan to VDEQ for the SWP No. 588 landfill on December 30, 2022. Refer to the December 2022 Monthly Compliance Report for the SWP No. 588 Landfill for additional information. The City has taken steps to implement the plan that were detailed in the March 2023 Monthly Compliance Report for the SWP No. 588 Landfill.

8.3 MONTHLY COMPLIANCE REPORTS

As described in the introduction this report is intended to provide comprehensive updates regarding progress towards completion of each item described in Appendix A of the Consent Decree between the City and VDEQ.

8.4 COMMUNITY OUTREACH PROGRAM

- Ongoing basis: Five (5) posts on each the BristalVALandfill.org site and the existing City of Bristol Landfill Notifications and Information page covering important updates including:
    - Progress updates related to remediation efforts and normal maintenance activities at the Quarry Landfill

- Updates included activities at the quarry landfill such as the unannounced visit by the Environmental Protection Agency (EPA) that resulted in no elevated emissions being observed, separately, the determination that some temperature probes are inaccurately reporting temperatures and the work to replace those, as well as other routine actions such as cleaning and rebuilding pumps, collecting readings, and system adjustments for maximum efficiency.

- **Weekly updates on landing page on Bristolvalandfill.org titled "Air Sampling and Air Monitoring" that includes a summary of the air sampling and monitoring being conducted by Bristol, VA around the quarry landfill.**

    - Website now includes weekly air monitoring reports starting with May 15th, 2023 and running through May 19th of 2024. More reports will be posted as the transition to a new air monitoring system is being implemented.

- **E-mail communication sent to the list of members of the public signed up through the Bristol, VA website, the BristolVALandfill.org website, or at subsequent Open Houses to receive information via e-mail**

    - E-mails sent included weekly remediation progress update and links to website updates and latest news articles.

Appendix A

Surface Emissions Monitoring Summary Letters

August 7, 2024
File No. 02218208.04

Mr. Jonathan Chapman
Enforcement Specialist
Virginia Department of Environmental Quality
SW Regional Office
355-A Deadmore Street
Abingdon, VA 24210

Subject: Weekly Surface Emissions Monitoring Event – August 1, 2024
Bristol Integrated Solid Waste Facility – Bristol, Virginia

Dear Mr. Chapman:

On behalf of the City of Bristol (City), SCS Engineers (SCS), is pleased to submit the results of the Weekly Surface Emissions Monitoring event performed at the Bristol Integrated Solid Waste Facility located in Bristol, Virginia on August 1, 2024. This Weekly Surface Emissions Monitoring (SEM) Event was performed in accordance with Appendix A.1.i of the Consent Decree between the Commonwealth of Virginia and the City of Bristol.

The monitoring generally conforms to the requirements of 40 CFR 63.1960(c) and (d), and 40 CFR 60.36f(c) and (d), and 40 CFR 60, Appendix A, Method 21. The landfill gas (LFG) collection system is required to operate such that the methane concentration is less than 500 ppm above background at the landfill surface.

The monitoring route includes the entire waste footprint of the Permit No. 588 Landfill. Sampling was conducted with a Thermo Scientific TVA-2020 Flame Ionization Detector (FID) at 30-meter intervals and where visual observations indicated the potential for elevated concentrations of LFG, such as distressed vegetation and surface cover cracks. In addition, in accordance with 40 CFR 63.1958(d)(ii)(2) and 40 CFR 60.34f(d), monitoring was conducted at all surface cover penetrations within the waste footprint, including at the temperature probes and the newly installed and connected gas extraction wells. The approximate monitoring route and sampling locations are presented in the attached Drawing.

At the time of monitoring, all areas of the Permit No. 588 Landfill footprint are subject to regulatory monitoring based on the regulatory time schedule stipulated in 40 CFR 63.1960(b) and 40 CFR 60.36f(b). The Permit No. 588 Landfill has a surface area of approximately 17.3 acres. Therefore, the minimum number of sampling points to cover the appropriate portion of the landfill footprint, utilizing a 30-meter grid interval, is approximately 82 (4.75 points per acre). A summary of the results of the surface emissions monitoring is provided in Table 1.

Table 1. Summary of Surface Emissions Monitoring

Description	Quantity
Number of Points Sampled	166
Number of Points in Serpentine Route	100
Number of Points at Surface Cover Penetrations	66
Number of Exceedances	9
Number of Serpentine Exceedances	0
Number of Pipe Penetration Exceedances	9

REMONITORING OF ONGOING EXCEEDANCES

In accordance with 40 CFR 63.1960(c)(4)(ii) and 40 CFR 60.36f(c)(4)(ii), corrective actions and a remonitoring event are to be performed within 10 days of the initial exceedance. In accordance with 40 CFR 63.1960(c)(4)(iii) and 40 CFR 60.36f(c)(4)(iii) additional corrective actions and a second 10-day retest are to be performed if the initial 10-day retest indicates methane values greater than the regulatory threshold. The Facility performs corrective actions, as necessary, including wellhead vacuum adjustments, the installation of well-bore seals, and addition of soil cover prior to weekly monitoring events at locations that previously exhibited elevated methane concentrations.

In accordance with 40 CFR 63.1960(c)(4)(v) and 40 CFR 60.36f(c)(4)(v) a new well or collection device must be installed or an alternate remedy must be submitted within 120 days at locations that continue to exhibit methane concentrations above the regulatory threshold for two consecutive re-tests.

An Alternate Remedy Request outlining proposed corrective actions for exceedances at EW-55, EW-67, EW-82, EW-90, and EW-95 was submitted to VDEQ on July 11, 2024 in accordance with 40 CFR 63.1960(c)(4)(v) and 40 CFR 60.36f(c)(4)(v). The corrective actions at these five wells will involve installation, or reapplication, of a bentonite seal along the well riser pipe. Completion of these corrective actions is anticipated to be completed in the upcoming weeks.

The increase of exceedance points documented during this weekly event was likely due to reduced vacuum at several of the vertical extraction wells where exceedances were documented. This issue is being addressed and it is anticipated that restoration of normal levels of vacuum at these locations will result in reduced surface emissions.

A summary of ongoing exceedance points is provided in Table 2.

Table 2. Ongoing Weekly SEM Exceedances

Point ID	Initial Exceedance Date	8/1/24 Event	8/1/24 Event Result	Comments
EW-90	4/2/24	N/A	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-67	4/11/24	N/A	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-82	5/3/24	N/A	NM[1]	Subject to 40 CFR 63.1960(c)(4)(v)
EW-95	5/3/24	N/A	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-55	6/4/24	N/A	Passed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-75	7/22/24	10-Day Retest	Passed	Requires 30-Day Retest
EW-79	7/22/24	10-Day Retest	Failed	Requires 2nd 10-Day Retest
EW-80	7/22/24	10-Day Retest	Passed	Requires 30-Day Retest

1: EW-82 was unable to be monitored due to ponding water

If you have questions or require additional information, please contact either of the undersigned.

Sincerely,

Wylie R Hicklin
Associate Professional
SCS Engineers

Lucas S. Nachman
Senior Project Professional
SCS Engineers

LSN/WRH

cc: Randall Eads, City of Bristol
Jonathan Hayes, City of Bristol
Laura Socia, City of Bristol
Susan “Tracey” Blalock, VDEQ

Encl. Surface Emissions Monitoring Results
Bristol SEM Route Drawing

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 1, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
1	4.9 PPM	OK			Start Serpentine Route
2	376.0 PPM	OK			
3	8.6 PPM	OK			
4	3.2 PPM	OK			
5	1.7 PPM	OK			
6	2.0 PPM	OK			
7	1.2 PPM	OK			
8	0.8 PPM	OK			
9	1.3 PPM	OK			
10	1.2 PPM	OK			
11	0.7 PPM	OK			
12	0.7 PPM	OK			
13	0.9 PPM	OK			
14	0.9 PPM	OK			
15	18.2 PPM	OK			
16	24.3 PPM	OK			
17	0.9 PPM	OK			
18	0.5 PPM	OK			
19	0.7 PPM	OK			
20	0.6 PPM	OK			
21	0.6 PPM	OK			
22	0.5 PPM	OK			
23	0.5 PPM	OK			
24	1.5 PPM	OK			
25	0.7 PPM	OK			
26	0.3 PPM	OK			
27	0.3 PPM	OK			
28	0.2 PPM	OK			
29	0.2 PPM	OK			
30	0.4 PPM	OK			
31	3.4 PPM	OK			
32	2.2 PPM	OK			
33	6.8 PPM	OK			
34	6.9 PPM	OK			
35	7.6 PPM	OK			
36	87.7 PPM	OK			
37	0.6 PPM	OK			
38	12.3 PPM	OK			
39	1.0 PPM	OK			
40	0.8 PPM	OK			
41	2.0 PPM	OK			
42	3.2 PPM	OK			
43	1.5 PPM	OK			
44	0.5 PPM	OK			
45	4.2 PPM	OK			
46	174.0 PPM	OK			
47	221.0 PPM	OK			

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 1, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
48	7.8 PPM	OK			
49	6.8 PPM	OK			
50	5.7 PPM	OK			
51	4.3 PPM	OK			
52	4.7 PPM	OK			
53	1.8 PPM	OK			
54	1.2 PPM	OK			
55	0.1 PPM	OK			
56	9.4 PPM	OK			
57	0.1 PPM	OK			
58	1.5 PPM	OK			
59	1.5 PPM	OK			
60	1.2 PPM	OK			
61	1.5 PPM	OK			
62	2.3 PPM	OK			
63	0.6 PPM	OK			
64	0.2 PPM	OK			
65	0.3 PPM	OK			
66	0.6 PPM	OK			
67	0.3 PPM	OK			
68	0.3 PPM	OK			
69	0.3 PPM	OK			
70	0.0 PPM	OK			
71	0.0 PPM	OK			
72	0.0 PPM	OK			
73	0.2 PPM	OK			
74	6.3 PPM	OK			
75	6.1 PPM	OK			
76	4.5 PPM	OK			
77	20.7 PPM	OK			
78	0.3 PPM	OK			
79	20.2 PPM	OK			
80	4.1 PPM	OK			
81	21.2 PPM	OK			
82	6.8 PPM	OK			
83	2.1 PPM	OK			
84	1.1 PPM	OK			
85	1.7 PPM	OK			
86	4.5 PPM	OK			
87	0.2 PPM	OK			
88	0.4 PPM	OK			
89	0.5 PPM	OK			
90	55.2 PPM	OK			
91	6.3 PPM	OK			
92	7.3 PPM	OK			
93	13.6 PPM	OK			
94	0.7 PPM	OK			

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 1, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
95	0.3 PPM	OK			
96	12.8 PPM	OK			
97	0.1 PPM	OK			
98	3.9 PPM	OK			
99	5.4 PPM	OK			
100	2.4 PPM	OK			End Serpentine Route
101	2.4 PPM	OK			EW-69
102	1.7 PPM	OK			EW-71
103	6.6 PPM	OK			EW-32R
104	1.2 PPM	OK			EW-72
105	5.8 PPM	OK			EW-62
106	6.5 PPM	OK			EW-74
107	75.6 PPM	OK			EW-33B
108	692.0 PPM	HIGH_ALRM	36.60090	-82.14807	EW-63
109	103600.0 PPM	HIGH_ALRM	36.60072	-82.14819	EW-77
110	2389.0 PPM	HIGH_ALRM	36.60063	-82.14796	EW-64
111	22200.0 PPM	HIGH_ALRM	36.60094	-82.14824	EW-79
112	89.5 PPM	OK			TP-8
113	45.8 PPM	OK			EW-80
114	23.7 PPM	OK			EW-81
115	17.1 PPM	OK			EW-65
116	17.0 PPM	OK			EW-83
117	16.6 PPM	OK			EW-84
118	10.8 PPM	OK			EW-49
119	42.8 PPM	OK			TP-7
120	16.6 PPM	OK			EW-50
121	70.8 PPM	OK			EW-86
122	16.3 PPM	OK			EW-38
123	123.0 PPM	OK			EW-87
124	35.8 PPM	OK			EW-48
125	284.0 PPM	OK			EW-60
126	6.6 PPM	OK			EW-89
127	6.2 PPM	OK			TP-4
128	858.0 PPM	HIGH_ALRM	36.59903	-82.14766	EW-52
129	3.2 PPM	OK			EW-92
130	28.2 PPM	OK			EW-68
131	7.3 PPM	OK			TP-5
132	1487.0 PPM	HIGH_ALRM	36.59893	-82.14826	EW-90
133	308.0 PPM	OK			EW-51
134	235.0 PPM	OK			EW-91
135	753.0 PPM	HIGH_ALRM	36.59873	-82.14775	EW-67
136	3.4 PPM	OK			EW-47
137	4.8 PPM	OK			EW-54
138	0.7 PPM	OK			EW-55
139	1.0 PPM	OK			TP-2
140	1.2 PPM	OK			EW-66

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 1, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
141	6.8 PPM	OK			EW-96
142	1.3 PPM	OK			TP-3
143	1.4 PPM	OK			EW-53
144	1420.0 PPM	HIGH_ALRM	36.59907	-82.14777	EW-95
145	1.6 PPM	OK			EW-97
146	1.6 PPM	OK			EW-99
147	87.9 PPM	OK			EW-56
148	1357.0 PPM	HIGH_ALRM	36.59776	-82.14790	EW-100
149	3.2 PPM	OK			TP-1
150	2.4 PPM	OK			EW-57
151	2.9 PPM	OK			EW-59
152	0.7 PPM	OK			EW-58
153	0.4 PPM	OK			EW-98
154	1.2 PPM	OK			EW-94
155	0.2 PPM	OK			EW-93
156	0.7 PPM	OK			EW-88
157	1.2 PPM	OK			EW-85
158	3.8 PPM	OK			EW-61
159	9.8 PPM	OK			TP-6
160	5.8 PPM	OK			EW-36A
161	11.6 PPM	OK			EW-78
162	8.9 PPM	OK			EW-42
163	52.8 PPM	OK			EW-76
164	218.0 PPM	OK			TP-9
165	0.0 PPM	OK			EW-73
166	84.0 PPM	OK			EW-75

Number of locations sampled:	166
Number of exceedance locations:	9

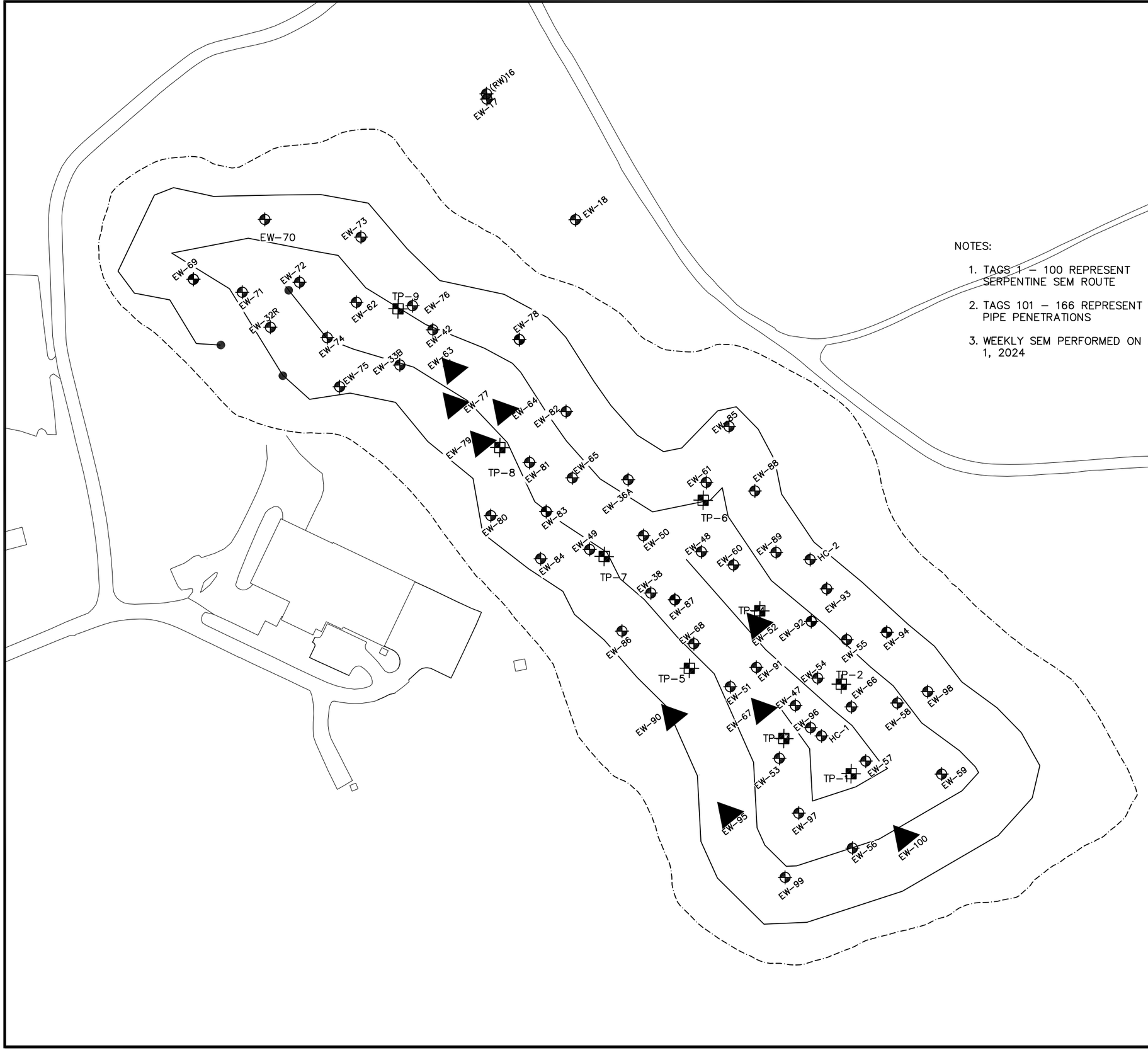
NOTES:
Points 1 through 100 represent serpentine SEM route.
Points 101 through 166 represent SEM at Pipe Penetrations
Weather Conditions: Mostly Cloudy, 72°F Wind: None

Sampling Calibration: Methane - 500 ppm, Zero Air - 0.0 ppm

8/1/2024	9:24	ZERO	504.0	PPM
8/1/2024	9:25	SPAN	2.2	PPM

Background Reading:

8/1/2024	9:36	Upwind	5.1	PPM
8/1/2024	9:38	Downwind	13.8	PPM



NOTES:

1. TAGS 1 – 100 REPRESENT SERPENTINE SEM ROUTE
2. TAGS 101 – 166 REPRESENT SEM AT PIPE PENETRATIONS
3. WEEKLY SEM PERFORMED ON AUGUST 1, 2024

0 80 160 240
SCALE IN FEET

N

LEGEND

- SEM ROUTE
- GAS WELL
- TEMPERATURE PROBE
- 79 EXCEEDANCE LOCATION
- 75 MONITORING ROUTE ENDPOINT

NO.	REVISION	DATE

SHEET TITLE
WEEKLY SEM ROUTE

PROJECT TITLE
SURFACE EMISSIONS MONITORING
SOLID WASTE PERMIT #588

CLIENT
CITY OF BRISTOL INTEGRATED SOLID WASTE MANAGEMENT FACILITY
2655 VALLEY DRIVE
BRISTOL, VA 24201

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
15521 MIDLOTHIAN TNPK - MIDLOTHIAN, VA 23113
PH. (804) 378-7440 FAX. (804) 378-7433

PROJ. NO.	DWN. BY:	CHK. BY:	QA/QC RVW BY:	APP. BY:
02218208.04	LSN	DBK		
DSN. BY: LSN				

FILE: 02218208.04
DATE: 8/1/24
SCALE: AS SHOWN
DRAWING NO.
1 of 1

August 14, 2024
File No. 02218208.04

Mr. Jonathan Chapman
Enforcement Specialist
Virginia Department of Environmental Quality
SW Regional Office
355-A Deadmore Street
Abingdon, VA 24210

Subject: Weekly Surface Emissions Monitoring Event – August 7, 2024
Bristol Integrated Solid Waste Facility – Bristol, Virginia

Dear Mr. Chapman:

On behalf of the City of Bristol (City), SCS Engineers (SCS), is pleased to submit the results of the Weekly Surface Emissions Monitoring event performed at the Bristol Integrated Solid Waste Facility located in Bristol, Virginia on August 7, 2024. This Weekly Surface Emissions Monitoring (SEM) Event was performed in accordance with Appendix A.1.i of the Consent Decree between the Commonwealth of Virginia and the City of Bristol.

The monitoring generally conforms to the requirements of 40 CFR 63.1960(c) and (d), and 40 CFR 60.36f(c) and (d), and 40 CFR 60, Appendix A, Method 21. The landfill gas (LFG) collection system is required to operate such that the methane concentration is less than 500 ppm above background at the landfill surface.

The monitoring route includes the entire waste footprint of the Permit No. 588 Landfill. Sampling was conducted with a Thermo Scientific TVA-2020 Flame Ionization Detector (FID) at 30-meter intervals and where visual observations indicated the potential for elevated concentrations of LFG, such as distressed vegetation and surface cover cracks. In addition, in accordance with 40 CFR 63.1958(d)(ii)(2) and 40 CFR 60.34f(d), monitoring was conducted at all surface cover penetrations within the waste footprint, including at the temperature probes and the newly installed and connected gas extraction wells. The approximate monitoring route and sampling locations are presented in the attached Drawing.

At the time of monitoring, all areas of the Permit No. 588 Landfill footprint are subject to regulatory monitoring based on the regulatory time schedule stipulated in 40 CFR 63.1960(b) and 40 CFR 60.36f(b). The Permit No. 588 Landfill has a surface area of approximately 17.3 acres. Therefore, the minimum number of sampling points to cover the appropriate portion of the landfill footprint, utilizing a 30-meter grid interval, is approximately 82 (4.75 points per acre). A summary of the results of the surface emissions monitoring is provided in Table 1.

Table 1. Summary of Surface Emissions Monitoring

Description	Quantity
Number of Points Sampled	165
Number of Points in Serpentine Route	100
Number of Points at Surface Cover Penetrations	65
Number of Exceedances	9
Number of Serpentine Exceedances	0
Number of Pipe Penetration Exceedances	9

REMONITORING OF ONGOING EXCEEDANCES

In accordance with 40 CFR 63.1960(c)(4)(ii) and 40 CFR 60.36f(c)(4)(ii), corrective actions and a remonitoring event are to be performed within 10 days of the initial exceedance. In accordance with 40 CFR 63.1960(c)(4)(iii) and 40 CFR 60.36f(c)(4)(iii) additional corrective actions and a second 10-day retest are to be performed if the initial 10-day retest indicates methane values greater than the regulatory threshold. The Facility performs corrective actions, as necessary, including wellhead vacuum adjustments, the installation of well-bore seals, and addition of soil cover prior to weekly monitoring events at locations that previously exhibited elevated methane concentrations.

In accordance with 40 CFR 63.1960(c)(4)(v) and 40 CFR 60.36f(c)(4)(v) a new well or collection device must be installed or an alternate remedy must be submitted within 120 days at locations that continue to exhibit methane concentrations above the regulatory threshold for two consecutive re-tests.

An Alternate Remedy Request outlining proposed corrective actions for exceedances at EW-55, EW-67, EW-82, EW-90, and EW-95 was submitted to VDEQ on July 11, 2024 in accordance with 40 CFR 63.1960(c)(4)(v) and 40 CFR 60.36f(c)(4)(v). The corrective actions at these five wells will involve installation, or reapplication, of a bentonite seal along the well riser pipe. These corrective actions were ongoing at the time of this monitoring event and are anticipated to be completed in the next couple of weeks.

The Facility continued to observe an increase of exceedance points during this weekly event, likely due to reduced vacuum at several of the vertical extraction wells where exceedances were documented. This issue is being addressed and it is anticipated that restoration of normal levels of vacuum at these locations will result in reduced surface emissions.

A summary of ongoing exceedance points is provided in Table 2.

Table 2. Ongoing Weekly SEM Exceedances

Point ID	Initial Exceedance Date	8/7/24 Event	8/7/24 Event Result	Comments
EW-90	4/2/24	N/A	Passed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-67	4/11/24	N/A	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-82	5/3/24	N/A	NM[1]	Subject to 40 CFR 63.1960(c)(4)(v)
EW-95	5/3/24	N/A	NM[2]	Subject to 40 CFR 63.1960(c)(4)(v)
EW-55	6/4/24	N/A	Passed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-79	7/22/24	2nd 10-Day Retest	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-75	7/22/24	N/A	Failed	Requires 2nd 10-Day Retest
EW-80	7/22/24	N/A	Failed	Requires 2nd 10-Day Retest
EW-52	8/1/24	10-Day Retest	Passed	Requires 1-month Retest
EW-63	8/1/24	10-Day Retest	Failed	Requires 2nd 10-Day Retest
EW-64	8/1/24	10-Day Retest	Failed	Requires 2nd 10-Day Retest
EW-77	8/1/24	10-Day Retest	Failed	Requires 2nd 10-Day Retest
EW-100	8/1/24	10-Day Retest	Passed	Requires 30-Day Retest

1: EW-82 was unable to be monitored due to ponding water

2: EW-95 was unable to be monitored due to ongoing construction

If you have questions or require additional information, please contact either of the undersigned.

Sincerely,

Wylie R Hicklin
Associate Professional
SCS Engineers

Lucas S. Nachman
Senior Project Professional
SCS Engineers

LSN/WRH

cc: Randall Eads, City of Bristol
Jonathan Hayes, City of Bristol
Laura Socia, City of Bristol
Susan “Tracey” Blalock, VDEQ

Encl. Surface Emissions Monitoring Results
Bristol SEM Route Drawing

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 7, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
1	1.4 PPM	OK			Start Serpentine Route
2	4.0 PPM	OK			
3	1.3 PPM	OK			
4	1.2 PPM	OK			
5	1.1 PPM	OK			
6	1.2 PPM	OK			
7	1.2 PPM	OK			
8	3.2 PPM	OK			
9	1.3 PPM	OK			
10	1.1 PPM	OK			
11	1.3 PPM	OK			
12	3.9 PPM	OK			
13	2.8 PPM	OK			
14	3.6 PPM	OK			
15	12.7 PPM	OK			
16	2.3 PPM	OK			
17	2.1 PPM	OK			
18	2.0 PPM	OK			
19	2.0 PPM	OK			
20	5.0 PPM	OK			
21	2.2 PPM	OK			
22	3.5 PPM	OK			
23	8.2 PPM	OK			
24	4.8 PPM	OK			
25	2.1 PPM	OK			
26	4.3 PPM	OK			
27	1.0 PPM	OK			
28	1.9 PPM	OK			
29	10.2 PPM	OK			
30	128.0 PPM	OK			
31	5.3 PPM	OK			
32	7.2 PPM	OK			
33	271.0 PPM	OK			
34	20.7 PPM	OK			
35	205.0 PPM	OK			
36	95.5 PPM	OK			
37	1.9 PPM	OK			
38	60.7 PPM	OK			
39	31.3 PPM	OK			
40	2.1 PPM	OK			
41	196.0 PPM	OK			
42	8.1 PPM	OK			
43	1.2 PPM	OK			
44	18.5 PPM	OK			
45	181.0 PPM	OK			
46	35.3 PPM	OK			
47	46.1 PPM	OK			

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 7, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
48	90.5 PPM	OK			
49	4.0 PPM	OK			
50	2.6 PPM	OK			
51	0.5 PPM	OK			
52	1.1 PPM	OK			
53	0.8 PPM	OK			
54	1.0 PPM	OK			
55	1.3 PPM	OK			
56	0.4 PPM	OK			
57	5.0 PPM	OK			
58	9.7 PPM	OK			
59	77.5 PPM	OK			
60	3.9 PPM	OK			
61	2.1 PPM	OK			
62	3.6 PPM	OK			
63	4.6 PPM	OK			
64	25.3 PPM	OK			
65	6.9 PPM	OK			
66	8.7 PPM	OK			
67	16.2 PPM	OK			
68	3.3 PPM	OK			
69	2.6 PPM	OK			
70	1.4 PPM	OK			
71	2.2 PPM	OK			
72	27.0 PPM	OK			
73	20.1 PPM	OK			
74	297.0 PPM	OK			
75	12.1 PPM	OK			
76	2.6 PPM	OK			
77	0.3 PPM	OK			
78	12.0 PPM	OK			
79	0.8 PPM	OK			
80	42.9 PPM	OK			
81	10.2 PPM	OK			
82	3.4 PPM	OK			
83	1.1 PPM	OK			
84	1.4 PPM	OK			
85	3.7 PPM	OK			
86	3.2 PPM	OK			
87	2.5 PPM	OK			
88	2.4 PPM	OK			
89	12.2 PPM	OK			
90	74.9 PPM	OK			
91	3.1 PPM	OK			
92	0.8 PPM	OK			
93	34.8 PPM	OK			
94	6.2 PPM	OK			

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 7, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
95	61.4 PPM	OK			
96	47.4 PPM	OK			
97	0.4 PPM	OK			
98	1.0 PPM	OK			
99	0.2 PPM	OK			
100	0.1 PPM	OK			End Serpentine Route
101	79.4 PPM	OK			EW-52
102	152.0 PPM	OK			TP-4
103	159.0 PPM	OK			EW-60
104	58.4 PPM	OK			EW-48
105	8.8 PPM	OK			TP-6
106	4.8 PPM	OK			EW-61
107	0.6 PPM	OK			EW-50
108	780.0 PPM	HIGH_ALRM	36.59873	-82.14775	EW-67
109	3.3 PPM	OK			EW-47
110	31.7 PPM	OK			EW-54
111	73.4 PPM	OK			EW-55
112	28.4 PPM	OK			EW-92
113	78.8 PPM	OK			EW-91
114	15.7 PPM	OK			EW-96
115	0.8 PPM	OK			TP-2
116	0.8 PPM	OK			EW-66
117	1.8 PPM	OK			EW-58
118	4.7 PPM	OK			EW-57
119	1.1 PPM	OK			TP-1
120	16.8 PPM	OK			EW-59
121	6.7 PPM	OK			EW-100
122	25.5 PPM	OK			EW-56
123	3.1 PPM	OK			EW-97
124	5.0 PPM	OK			EW-53
125	7.5 PPM	OK			TP-3
126	84.4 PPM	OK			EW-51
127	2.0 PPM	OK			TP-5
128	0.8 PPM	OK			EW-68
129	0.6 PPM	OK			EW-87
130	17.1 PPM	OK			EW-38
131	30.1 PPM	OK			TP-7
132	5.6 PPM	OK			EW-49
133	6.0 PPM	OK			EW-83
134	4.8 PPM	OK			EW-65
135	19.9 PPM	OK			EW-81
136	123.0 PPM	OK			TP-8
137	1223.0 PPM	HIGH_ALRM	36.60063	-82.14796	EW-64
138	1437.0 PPM	HIGH_ALRM	36.60090	-82.14807	EW-63
139	17.8 PPM	OK			EW-42
140	47.0 PPM	OK			EW-76

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 7, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
141	651.0 PPM	HIGH_ALRM	36.60126	-82.14801	TP-9
142	4.1 PPM	OK			EW-62
143	8.0 PPM	OK			EW-74
144	2.3 PPM	OK			EW-32R
145	1.5 PPM	OK			EW-69
146	1.6 PPM	OK			EW-71
147	3.0 PPM	OK			EW-72
148	5.5 PPM	OK			EW-73
149	9.6 PPM	OK			EW-78
150	6.0 PPM	OK			EW-36A
151	1.1 PPM	OK			EW-85
152	0.9 PPM	OK			EW-88
153	2.5 PPM	OK			EW-89
154	3.6 PPM	OK			EW-93
155	1.0 PPM	OK			EW-94
156	0.0 PPM	OK			EW-98
157	3.1 PPM	OK			EW-99
158	50.7 PPM	OK			EW-90
159	101.0 PPM	OK			EW-86
160	12.6 PPM	OK			EW-84
161	1673.0 PPM	HIGH_ALRM	36.60017	-82.14845	EW-80
162	2784.0 PPM	HIGH_ALRM	36.60017	-82.14847	EW-79
163	8481.0 PPM	HIGH_ALRM	36.60053	-82.14828	EW-77
164	686.0 PPM	HIGH_ALRM	36.60088	-82.14829	EW-33B
165	1207.0 PPM	HIGH_ALRM	36.60118	-82.14856	EW-75

Number of locations sampled:	165
Number of exceedance locations:	9

NOTES:
Points 1 through 100 represent serpentine SEM route.
Points 101 through 165 represent SEM at Pipe Penetrations
Weather Conditions: Sunny, 88°F Wind: 7 MPH E

Sampling Calibration: Methane - 500 ppm, Zero Air - 0.0 ppm

8/7/2024	11:03	ZERO	0.2	PPM
8/7/2024	11:06	SPAN	501.0	PPM

Background Reading:

8/7/2024	11:09	Upwind	2.0	PPM
8/7/2024	11:17	Downwind	6.0	PPM

NOTES:

1. TAGS 1 – 100 REPRESENT SERPENTINE SEM ROUTE
2. TAGS 101 – 165 REPRESENT SEM AT PIPE PENETRATIONS
3. WEEKLY SEM PERFORMED ON AUGUST 7, 2024

0 80 160 240
SCALE IN FEET

N

LEGEND

- SEM ROUTE
- GAS WELL
- TEMPERATURE PROBE
- 79 EXCEEDANCE LOCATION
- 75 MONITORING ROUTE ENDPOINT

NO.	REVISION	DATE
1		
2		
3		
4		
5		
6		

SHEET TITLE
WEEKLY SEM ROUTE

PROJECT TITLE
SURFACE EMISSIONS MONITORING
SOLID WASTE PERMIT #588

CLIENT
CITY OF BRISTOL INTEGRATED SOLID WASTE MANAGEMENT FACILITY
2655 VALLEY DRIVE
BRISTOL, VA 24201

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
15521 MIDLOTHIAN TNPK - MIDLOTHIAN, VA 23113
PH. (804) 378-7440 FAX. (804) 378-7433

PROJ. NO.	DWN. BY:	Q/A RVW BY:
02218208.04	LSN	
DSN. BY:	CHK. BY:	APP. BY:
LSN	DBK	

FILE: 02218208.04
DATE: 8/7/24
SCALE: AS SHOWN
DRAWING NO.
1 of 1

August 21, 2024
File No. 02218208.04

Mr. Jonathan Chapman
Enforcement Specialist
Virginia Department of Environmental Quality
SW Regional Office
355-A Deadmore Street
Abingdon, VA 24210

Subject: Weekly Surface Emissions Monitoring Event – August 15, 2024
Bristol Integrated Solid Waste Facility – Bristol, Virginia

Dear Mr. Chapman:

On behalf of the City of Bristol (City), SCS Engineers (SCS), is pleased to submit the results of the Weekly Surface Emissions Monitoring event performed at the Bristol Integrated Solid Waste Facility located in Bristol, Virginia on August 15, 2024. This Weekly Surface Emissions Monitoring (SEM) Event was performed in accordance with Appendix A.1.i of the Consent Decree between the Commonwealth of Virginia and the City of Bristol.

The monitoring generally conforms to the requirements of 40 CFR 63.1960(c) and (d), and 40 CFR 60.36f(c) and (d), and 40 CFR 60, Appendix A, Method 21. The landfill gas (LFG) collection system is required to operate such that the methane concentration is less than 500 ppm above background at the landfill surface.

The monitoring route includes the entire waste footprint of the Permit No. 588 Landfill. Sampling was conducted with a Thermo Scientific TVA-2020 Flame Ionization Detector (FID) at 30-meter intervals and where visual observations indicated the potential for elevated concentrations of LFG, such as distressed vegetation and surface cover cracks. In addition, in accordance with 40 CFR 63.1958(d)(ii)(2) and 40 CFR 60.34f(d), monitoring was conducted at all surface cover penetrations within the waste footprint, including at the temperature probes and the newly installed and connected gas extraction wells. The approximate monitoring route and sampling locations are presented in the attached Drawing.

At the time of monitoring, all areas of the Permit No. 588 Landfill footprint are subject to regulatory monitoring based on the regulatory time schedule stipulated in 40 CFR 63.1960(b) and 40 CFR 60.36f(b). The Permit No. 588 Landfill has a surface area of approximately 17.3 acres. Therefore, the minimum number of sampling points to cover the appropriate portion of the landfill footprint, utilizing a 30-meter grid interval, is approximately 82 (4.75 points per acre). A summary of the results of the surface emissions monitoring is provided in Table 1.

Table 1. Summary of Surface Emissions Monitoring

Description	Quantity
Number of Points Sampled	166
Number of Points in Serpentine Route	100
Number of Points at Surface Cover Penetrations	66
Number of Exceedances	6
Number of Serpentine Exceedances	0
Number of Pipe Penetration Exceedances	6

REMONITORING OF ONGOING EXCEEDANCES

In accordance with 40 CFR 63.1960(c)(4)(ii) and 40 CFR 60.36f(c)(4)(ii), corrective actions and a remonitoring event are to be performed within 10 days of the initial exceedance. In accordance with 40 CFR 63.1960(c)(4)(iii) and 40 CFR 60.36f(c)(4)(iii) additional corrective actions and a second 10-day retest are to be performed if the initial 10-day retest indicates methane values greater than the regulatory threshold. The Facility performs corrective actions, as necessary, including wellhead vacuum adjustments, the installation of well-bore seals, and addition of soil cover prior to weekly monitoring events at locations that previously exhibited elevated methane concentrations.

In accordance with 40 CFR 63.1960(c)(4)(v) and 40 CFR 60.36f(c)(4)(v) a new well or collection device must be installed or an alternate remedy must be submitted within 120 days at locations that continue to exhibit methane concentrations above the regulatory threshold for two consecutive re-tests.

An Alternate Remedy Request outlining proposed corrective actions for exceedances at EW-55, EW-67, EW-82, EW-90, and EW-95 was submitted to VDEQ on July 11, 2024 in accordance with 40 CFR 63.1960(c)(4)(v) and 40 CFR 60.36f(c)(4)(v). Corrective actions at these five wells, which involved, installation, or reapplication, of a bentonite seal along the well riser pipe, were completed during the week of 8/12/24. Therefore, since the Alternate Remedy has been completed at these five locations, the exceedances have been resolved.

The Facility continued to observe an increase of exceedance points during this weekly event, likely due to reduced vacuum at several of the vertical extraction wells where exceedances were documented. This issue is being addressed and it is anticipated that restoration of normal levels of vacuum at these locations will result in reduced surface emissions.

A summary of ongoing exceedance points is provided in Table 2.

Table 2. Ongoing Weekly SEM Exceedances

Point ID	Initial Exceedance Date	8/15/24 Event	8/15/24 Event Result	Comments
EW-90	4/2/24	N/A	Passed	Alternate Remedy Completed - Exceedance Resolved
EW-67	4/11/24	N/A	Passed	Alternate Remedy Completed - Exceedance Resolved
EW-82	5/3/24	N/A	NM[1]	Alternate Remedy Completed - Exceedance Resolved
EW-95	5/3/24	N/A	Passed	Alternate Remedy Completed - Exceedance Resolved
EW-55	6/4/24	N/A	Passed	Alternate Remedy Completed - Exceedance Resolved
EW-79	7/22/24	N/A	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-63	8/1/24	2nd 10-Day Retest	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-64	8/1/24	2nd 10-Day Retest	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-77	8/1/24	2nd 10-Day Retest	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-75	7/22/24	2nd 10-Day Retest	Passed	Requires 1-Month Retest
EW-80	7/22/24	2nd 10-Day Retest	Passed	Requires 1-Month Retest
EW-52	8/1/24	N/A	Passed	Requires 1-Month Retest
EW-100	8/1/24	N/A	Passed	Requires 1-Month Retest
EW-33B	8/7/24	10-Day Retest	Failed	Requires 2nd 10-Day Retest
TP-9	8/7/24	10-Day Retest	Passed	Requires 1-Month Retest

1: EW-82 was unable to be monitored due to ponding water

If you have questions or require additional information, please contact either of the undersigned.

Sincerely,

Wylie R Hicklin
Associate Professional
SCS Engineers

Lucas S. Nachman
Senior Project Professional
SCS Engineers

LSN/WRH

cc: Randall Eads, City of Bristol
Jonathan Hayes, City of Bristol
Laura Socia, City of Bristol
Susan “Tracey” Blalock, VDEQ

Encl. Surface Emissions Monitoring Results
Bristol SEM Route Drawing

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 15, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
1	3.2 PPM	OK			Start Serpentine Route
2	3.7 PPM	OK			
3	10.2 PPM	OK			
4	5.7 PPM	OK			
5	5.0 PPM	OK			
6	3.0 PPM	OK			
7	3.0 PPM	OK			
8	48.3 PPM	OK			
9	2.7 PPM	OK			
10	1.5 PPM	OK			
11	1.6 PPM	OK			
12	3.2 PPM	OK			
13	2.6 PPM	OK			
14	3.9 PPM	OK			
15	13.0 PPM	OK			
16	1.4 PPM	OK			
17	1.7 PPM	OK			
18	1.5 PPM	OK			
19	1.2 PPM	OK			
20	1.4 PPM	OK			
21	6.9 PPM	OK			
22	1.5 PPM	OK			
23	4.2 PPM	OK			
24	1.6 PPM	OK			
25	1.3 PPM	OK			
26	1.1 PPM	OK			
27	1.1 PPM	OK			
28	1.1 PPM	OK			
29	6.0 PPM	OK			
30	1.8 PPM	OK			
31	23.7 PPM	OK			
32	108.0 PPM	OK			
33	33.7 PPM	OK			
34	144.0 PPM	OK			
35	20.5 PPM	OK			
36	10.2 PPM	OK			
37	7.8 PPM	OK			
38	79.5 PPM	OK			
39	11.4 PPM	OK			
40	2.3 PPM	OK			
41	2.4 PPM	OK			
42	5.5 PPM	OK			
43	8.3 PPM	OK			
44	2.8 PPM	OK			
45	20.3 PPM	OK			
46	28.1 PPM	OK			
47	51.7 PPM	OK			

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 15, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
48	4.3 PPM	OK			
49	1.8 PPM	OK			
50	3.1 PPM	OK			
51	2.4 PPM	OK			
52	1.9 PPM	OK			
53	1.0 PPM	OK			
54	0.9 PPM	OK			
55	3.1 PPM	OK			
56	2.6 PPM	OK			
57	22.7 PPM	OK			
58	17.6 PPM	OK			
59	4.8 PPM	OK			
60	379.0 PPM	OK			
61	6.1 PPM	OK			
62	2.8 PPM	OK			
63	1.3 PPM	OK			
64	1.1 PPM	OK			
65	0.9 PPM	OK			
66	1.0 PPM	OK			
67	1.7 PPM	OK			
68	1.6 PPM	OK			
69	7.3 PPM	OK			
70	0.5 PPM	OK			
71	4.8 PPM	OK			
72	2.8 PPM	OK			
73	7.9 PPM	OK			
74	0.5 PPM	OK			
75	1.3 PPM	OK			
76	0.5 PPM	OK			
77	39.9 PPM	OK			
78	1.9 PPM	OK			
79	2.1 PPM	OK			
80	1.6 PPM	OK			
81	0.5 PPM	OK			
82	0.4 PPM	OK			
83	8.3 PPM	OK			
84	1.2 PPM	OK			
85	1.0 PPM	OK			
86	19.9 PPM	OK			
87	13.5 PPM	OK			
88	18.3 PPM	OK			
89	97.4 PPM	OK			
90	206.0 PPM	OK			
91	1.5 PPM	OK			
92	5.2 PPM	OK			
93	110.0 PPM	OK			
94	35.8 PPM	OK			

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 15, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
95	6.5 PPM	OK			
96	0.4 PPM	OK			
97	0.1 PPM	OK			
98	0.1 PPM	OK			
99	1.2 PPM	OK			
100	15.9 PPM	OK			End Serpentine Route
101	96.7 PPM	OK			EW-52
102	12.8 PPM	OK			TP-4
103	46.4 PPM	OK			EW-60
104	41.4 PPM	OK			EW-48
105	1.6 PPM	OK			TP-6
106	1.2 PPM	OK			EW-61
107	3.6 PPM	OK			EW-50
108	152.0 PPM	OK			EW-67
109	0.5 PPM	OK			EW-47
110	31.8 PPM	OK			EW-54
111	423.0 PPM	OK			EW-55
112	0.9 PPM	OK			EW-92
113	2048.0 PPM	HIGH_ALRM	36.59890	-82.14756	EW-91
114	2.1 PPM	OK			EW-96
115	0.4 PPM	OK			TP-2
116	0.8 PPM	OK			EW-66
117	0.3 PPM	OK			EW-58
118	9.4 PPM	OK			EW-57
119	0.5 PPM	OK			TP-1
120	1.1 PPM	OK			EW-59
121	5.7 PPM	OK			EW-100
122	60.5 PPM	OK			EW-56
123	1.4 PPM	OK			EW-97
124	1.4 PPM	OK			EW-53
125	2.3 PPM	OK			TP-3
126	56.3 PPM	OK			EW-51
127	4.9 PPM	OK			TP-5
128	18.9 PPM	OK			EW-68
129	7.1 PPM	OK			EW-87
130	133.0 PPM	OK			EW-38
131	3.7 PPM	OK			TP-7
132	1.9 PPM	OK			EW-49
133	161.0 PPM	OK			EW-83
134	57.8 PPM	OK			EW-65
135	21.5 PPM	OK			EW-81
136	111.0 PPM	OK			TP-8
137	1160.0 PPM	HIGH_ALRM	36.60063	-82.14796	EW-64
138	1257.0 PPM	HIGH_ALRM	36.60090	-82.14807	EW-63
139	41.8 PPM	OK			EW-42
140	20.2 PPM	OK			EW-76

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 15, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
141	0.1 PPM	OK			TP-9
142	6.6 PPM	OK			EW-62
143	29.8 PPM	OK			EW-74
144	1.0 PPM	OK			EW-32R
145	1.4 PPM	OK			EW-69
146	0.6 PPM	OK			EW-71
147	40.6 PPM	OK			EW-72
148	10.9 PPM	OK			EW-73
149	0.8 PPM	OK			EW-78
150	0.1 PPM	OK			EW-36A
151	0.0 PPM	OK			EW-85
152	2.5 PPM	OK			EW-88
153	0.0 PPM	OK			EW-89
154	1.3 PPM	OK			EW-93
155	0.0 PPM	OK			EW-94
156	2.0 PPM	OK			EW-98
157	37.0 PPM	OK			EW-99
158	9.3 PPM	OK			EW-95
159	8.8 PPM	OK			EW-90
160	47.1 PPM	OK			EW-86
161	26.1 PPM	OK			EW-84
162	339.0 PPM	OK			EW-80
163	1656.0 PPM	HIGH_ALRM	36.60017	-82.14847	EW-79
164	9297.0 PPM	HIGH_ALRM	36.60053	-82.14828	EW-77
165	4230.0 PPM	HIGH_ALRM	36.60088	-82.14829	EW-33B
166	431.0 PPM	OK			EW-75

Number of locations sampled:	166
Number of exceedance locations:	6

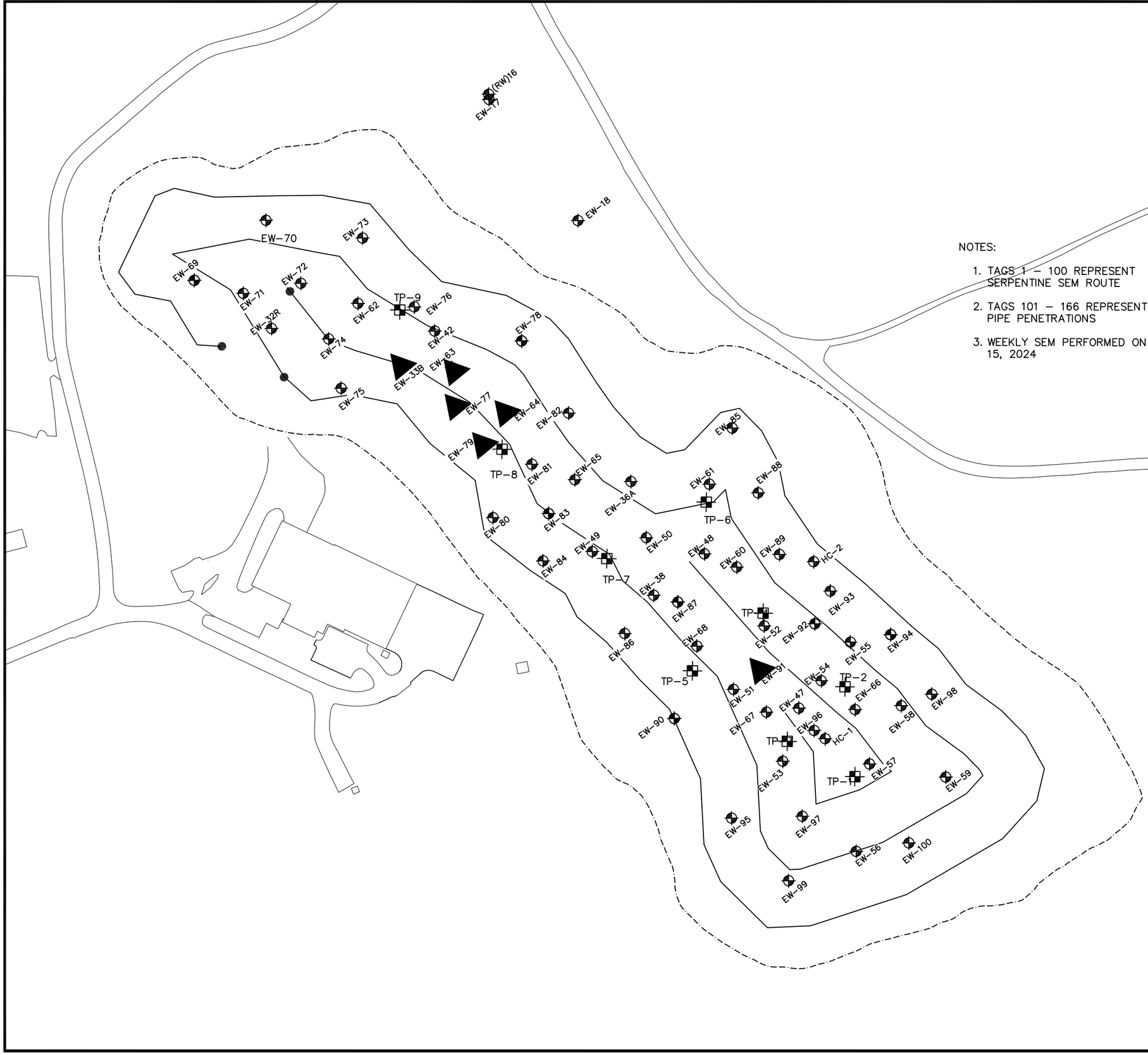
NOTES:
Points 1 through 100 represent serpentine SEM route.
Points 101 through 166 represent SEM at Pipe Penetrations
Weather Conditions: Sunny, 85°F Wind: 2 MPH SE

Sampling Calibration: Methane - 500 ppm, Zero Air - 0.0 ppm

8/15/2024	10:48	ZERO	0.2	PPM
8/15/2024	10:50	SPAN	500.0	PPM

Background Reading:

8/15/2024	10:52	Upwind	2.4	PPM
8/15/2024	10:56	Downwind	4.6	PPM



NOTES:

1. TAGS 1 – 100 REPRESENT SERPENTINE SEM ROUTE
2. TAGS 101 – 166 REPRESENT SEM AT PIPE PENETRATIONS
3. WEEKLY SEM PERFORMED ON AUGUST 15, 2024

0 80 160 240
SCALE IN FEET

N

LEGEND

- SEM ROUTE
- GAS WELL
- TEMPERATURE PROBE
- 79 EXCEEDANCE LOCATION
- 75 MONITORING ROUTE ENDPOINT

NO.	REVISION	DATE

SHEET TITLE
WEEKLY SEM ROUTE

PROJECT TITLE
SURFACE EMISSIONS MONITORING
SOLID WASTE PERMIT #588

CLIENT
CITY OF BRISTOL INTEGRATED SOLID WASTE MANAGEMENT FACILITY
2655 VALLEY DRIVE
BRISTOL, VA 24201

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
15521 MIDLOTHIAN TNPK - MIDLOTHIAN, VA 23113
PH. (804) 378-7440 FAX. (804) 378-7433

PROJ. NO.	DWN. BY:	CHK. BY:	QA/QC BY:	APP. BY:
02218208.04	LSN	DBK		
DSN. BY: LSN				

FILE: 02218208.04
DATE: 8/15/24
SCALE: AS SHOWN
DRAWING NO. 1 of 1

August 28, 2024
File No. 02218208.04

Mr. Jonathan Chapman
Enforcement Specialist
Virginia Department of Environmental Quality
SW Regional Office
355-A Deadmore Street
Abingdon, VA 24210

Subject: Weekly Surface Emissions Monitoring Event – August 21, 2024
Bristol Integrated Solid Waste Facility – Bristol, Virginia

Dear Mr. Chapman:

On behalf of the City of Bristol (City), SCS Engineers (SCS), is pleased to submit the results of the Weekly Surface Emissions Monitoring event performed at the Bristol Integrated Solid Waste Facility located in Bristol, Virginia on August 21, 2024. This Weekly Surface Emissions Monitoring (SEM) Event was performed in accordance with Appendix A.1.i of the Consent Decree between the Commonwealth of Virginia and the City of Bristol.

The monitoring generally conforms to the requirements of 40 CFR 63.1960(c) and (d), and 40 CFR 60.36f(c) and (d), and 40 CFR 60, Appendix A, Method 21. The landfill gas (LFG) collection system is required to operate such that the methane concentration is less than 500 ppm above background at the landfill surface.

The monitoring route includes the entire waste footprint of the Permit No. 588 Landfill. Sampling was conducted with a Thermo Scientific TVA-2020 Flame Ionization Detector (FID) at 30-meter intervals and where visual observations indicated the potential for elevated concentrations of LFG, such as distressed vegetation and surface cover cracks. In addition, in accordance with 40 CFR 63.1958(d)(ii)(2) and 40 CFR 60.34f(d), monitoring was conducted at all surface cover penetrations within the waste footprint, including at the temperature probes and the newly installed and connected gas extraction wells. The approximate monitoring route and sampling locations are presented in the attached Drawing.

At the time of monitoring, all areas of the Permit No. 588 Landfill footprint are subject to regulatory monitoring based on the regulatory time schedule stipulated in 40 CFR 63.1960(b) and 40 CFR 60.36f(b). The Permit No. 588 Landfill has a surface area of approximately 17.3 acres. Therefore, the minimum number of sampling points to cover the appropriate portion of the landfill footprint, utilizing a 30-meter grid interval, is approximately 82 (4.75 points per acre). A summary of the results of the surface emissions monitoring is provided in Table 1.

Table 1. Summary of Surface Emissions Monitoring

Description	Quantity
Number of Points Sampled	167
Number of Points in Serpentine Route	100
Number of Points at Surface Cover Penetrations	67
Number of Exceedances	7
Number of Serpentine Exceedances	1
Number of Pipe Penetration Exceedances	6

REMONITORING OF ONGOING EXCEEDANCES

In accordance with 40 CFR 63.1960(c)(4)(ii) and 40 CFR 60.36f(c)(4)(ii), corrective actions and a remonitoring event are to be performed within 10 days of the initial exceedance. In accordance with 40 CFR 63.1960(c)(4)(iii) and 40 CFR 60.36f(c)(4)(iii) additional corrective actions and a second 10-day retest are to be performed if the initial 10-day retest indicates methane values greater than the regulatory threshold. The Facility performs corrective actions, as necessary, including wellhead vacuum adjustments, the installation of well-bore seals, and addition of soil cover prior to weekly monitoring events at locations that previously exhibited elevated methane concentrations.

In accordance with 40 CFR 63.1960(c)(4)(v) and 40 CFR 60.36f(c)(4)(v) a new well or collection device must be installed or an alternate remedy must be submitted within 120 days at locations that continue to exhibit methane concentrations above the regulatory threshold for two consecutive re-tests.

The Facility continued to observe an increase of exceedance points during this weekly event, likely due to reduced vacuum at several of the vertical extraction wells. This will be addressed by increasing vacuum at these locations.

A summary of ongoing exceedance points is provided in Table 2.

Table 2. Ongoing Weekly SEM Exceedances

Point ID	Initial Exceedance Date	8/21/24 Event	8/21/24 Event Result	Comments
EW-79	7/22/24	N/A	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-63	8/1/24	N/A	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-64	8/1/24	N/A	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-77	8/1/24	N/A	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-33B	8/7/24	2nd 10-Day Retest	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-75	7/22/24	1-Month Retest	Passed	Exceedance Resolved
EW-80	7/22/24	1-Month Retest	Passed	Exceedance Resolved
EW-52	8/1/24	N/A	Passed	Requires 1-Month Retest
EW-100	8/1/24	N/A	Passed	Requires 1-Month Retest
TP-9	8/7/24	N/A	Passed	Requires 1-Month Retest
EW-91	8/15/24	10-Day Retest	Passed	Requires 1-Month Retest

If you have questions or require additional information, please contact either of the undersigned.

Sincerely,

Wylie R Hicklin
Associate Professional
SCS Engineers

Lucas S. Nachman
Senior Project Professional
SCS Engineers

LSN/WRH

cc: Randall Eads, City of Bristol
Jonathan Hayes, City of Bristol
Laura Socia, City of Bristol
Susan “Tracey” Blalock, VDEQ

Encl. Surface Emissions Monitoring Results
Bristol SEM Route Drawing

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 21, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
1	3.1 PPM	OK			Start Serpentine Route
2	21.6 PPM	OK			
3	7.6 PPM	OK			
4	1.9 PPM	OK			
5	1.8 PPM	OK			
6	1.8 PPM	OK			
7	1.7 PPM	OK			
8	1.7 PPM	OK			
9	1.8 PPM	OK			
10	1.7 PPM	OK			
11	1.8 PPM	OK			
12	1.7 PPM	OK			
13	4.3 PPM	OK			
14	2.5 PPM	OK			
15	12.1 PPM	OK			
16	5.0 PPM	OK			
17	11.6 PPM	OK			
18	7.4 PPM	OK			
19	2.6 PPM	OK			
20	2.1 PPM	OK			
21	1.9 PPM	OK			
22	14.5 PPM	OK			
23	4.6 PPM	OK			
24	4.6 PPM	OK			
25	4.6 PPM	OK			
26	3.3 PPM	OK			
27	2.7 PPM	OK			
28	3.0 PPM	OK			
29	2.8 PPM	OK			
30	2.4 PPM	OK			
31	9.3 PPM	OK			
32	3.0 PPM	OK			
33	2.4 PPM	OK			
34	67.6 PPM	OK			
35	19.0 PPM	OK			
36	331.0 PPM	OK			
37	20.9 PPM	OK			
38	6.0 PPM	OK			
39	6.8 PPM	OK			
40	14.8 PPM	OK			
41	9.0 PPM	OK			
42	4.3 PPM	OK			
43	5.5 PPM	OK			
44	17.3 PPM	OK			
45	126.0 PPM	OK			
46	29.7 PPM	OK			
47	154.0 PPM	OK			

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 21, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
48	1.5 PPM	OK			
49	1.3 PPM	OK			
50	1.2 PPM	OK			
51	1.2 PPM	OK			
52	1.1 PPM	OK			
53	2.1 PPM	OK			
54	1.3 PPM	OK			
55	3.0 PPM	OK			
56	7.2 PPM	OK			
57	12.3 PPM	OK			
58	6.3 PPM	OK			
59	62.8 PPM	OK			
60	51.6 PPM	OK			
61	896.0 PPM	HIGH_ALRM	36.60029	-82.14785	
62	47.3 PPM	OK			
63	14.9 PPM	OK			
64	5.3 PPM	OK			
65	6.3 PPM	OK			
66	14.4 PPM	OK			
67	14.8 PPM	OK			
68	8.3 PPM	OK			
69	3.4 PPM	OK			
70	2.2 PPM	OK			
71	5.1 PPM	OK			
72	127.0 PPM	OK			
73	61.8 PPM	OK			
74	1.8 PPM	OK			
75	1.8 PPM	OK			
76	17.2 PPM	OK			
77	46.5 PPM	OK			
78	20.2 PPM	OK			
79	4.1 PPM	OK			
80	4.6 PPM	OK			
81	3.9 PPM	OK			
82	2.4 PPM	OK			
83	4.7 PPM	OK			
84	9.5 PPM	OK			
85	3.4 PPM	OK			
86	5.9 PPM	OK			
87	23.0 PPM	OK			
88	14.4 PPM	OK			
89	25.7 PPM	OK			
90	68.3 PPM	OK			
91	9.4 PPM	OK			
92	3.3 PPM	OK			
93	23.1 PPM	OK			
94	8.2 PPM	OK			

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 21, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
95	39.3 PPM	OK			
96	10.9 PPM	OK			
97	1.7 PPM	OK			
98	3.5 PPM	OK			
99	1.2 PPM	OK			
100	1.7 PPM	OK			End Serpentine Route
101	135.0 PPM	OK			EW-52
102	46.1 PPM	OK			TP-4
103	76.2 PPM	OK			EW-60
104	36.1 PPM	OK			EW-48
105	26.7 PPM	OK			TP-6
106	2.2 PPM	OK			EW-61
107	1.8 PPM	OK			EW-50
108	1.0 PPM	OK			EW-67
109	1.0 PPM	OK			EW-47
110	1.2 PPM	OK			EW-54
111	112.0 PPM	OK			EW-55
112	1.4 PPM	OK			EW-92
113	50.1 PPM	OK			EW-91
114	40.1 PPM	OK			EW-96
115	1.3 PPM	OK			TP-2
116	1.6 PPM	OK			EW-66
117	0.9 PPM	OK			EW-58
118	0.9 PPM	OK			EW-57
119	1.1 PPM	OK			TP-1
120	5.6 PPM	OK			EW-59
121	24.2 PPM	OK			EW-100
122	234.0 PPM	OK			EW-56
123	2.6 PPM	OK			EW-97
124	3.3 PPM	OK			EW-53
125	3.1 PPM	OK			TP-3
126	455.0 PPM	OK			EW-51
127	1.4 PPM	OK			TP-5
128	159.0 PPM	OK			EW-68
129	88.1 PPM	OK			EW-87
130	0.8 PPM	OK			EW-38
131	21.9 PPM	OK			TP-7
132	1.5 PPM	OK			EW-49
133	1.0 PPM	OK			EW-83
134	2840.0 PPM	HIGH_ALRM	36.60017	-82.14787	EW-65
135	60.1 PPM	OK			EW-81
136	30.8 PPM	OK			TP-8
137	1147.0 PPM	HIGH_ALRM	36.60056	-82.14796	EW-64
138	696.0 PPM	HIGH_ALRM	36.60090	-82.14807	EW-63
139	3.7 PPM	OK			EW-42
140	45.1 PPM	OK			EW-76

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 21, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
141	259.0 PPM	OK			TP-9
142	1.0 PPM	OK			EW-62
143	6.2 PPM	OK			EW-74
144	4.5 PPM	OK			EW-32R
145	1.2 PPM	OK			EW-69
146	1.0 PPM	OK			EW-71
147	3.9 PPM	OK			EW-72
148	11.8 PPM	OK			EW-73
149	3.1 PPM	OK			EW-78
150	14.9 PPM	OK			EW-82
151	2.9 PPM	OK			EW-36A
152	0.5 PPM	OK			EW-85
153	1.3 PPM	OK			EW-88
154	5.0 PPM	OK			EW-89
155	0.3 PPM	OK			EW-93
156	0.7 PPM	OK			EW-94
157	0.4 PPM	OK			EW-98
158	1.1 PPM	OK			EW-99
159	78.8 PPM	OK			EW-95
160	14.5 PPM	OK			EW-90
161	152.0 PPM	OK			EW-86
162	188.0 PPM	OK			EW-84
163	79.5 PPM	OK			EW-80
164	1128.0 PPM	HIGH_ALRM	36.60051	-82.14819	EW-79
165	12700.0 PPM	HIGH_ALRM	36.60072	-82.14819	EW-77
166	1789.0 PPM	HIGH_ALRM	36.60105	-82.14831	EW-33B
167	194.0 PPM	OK			EW-75

Number of locations sampled:	167
Number of exceedance locations:	7

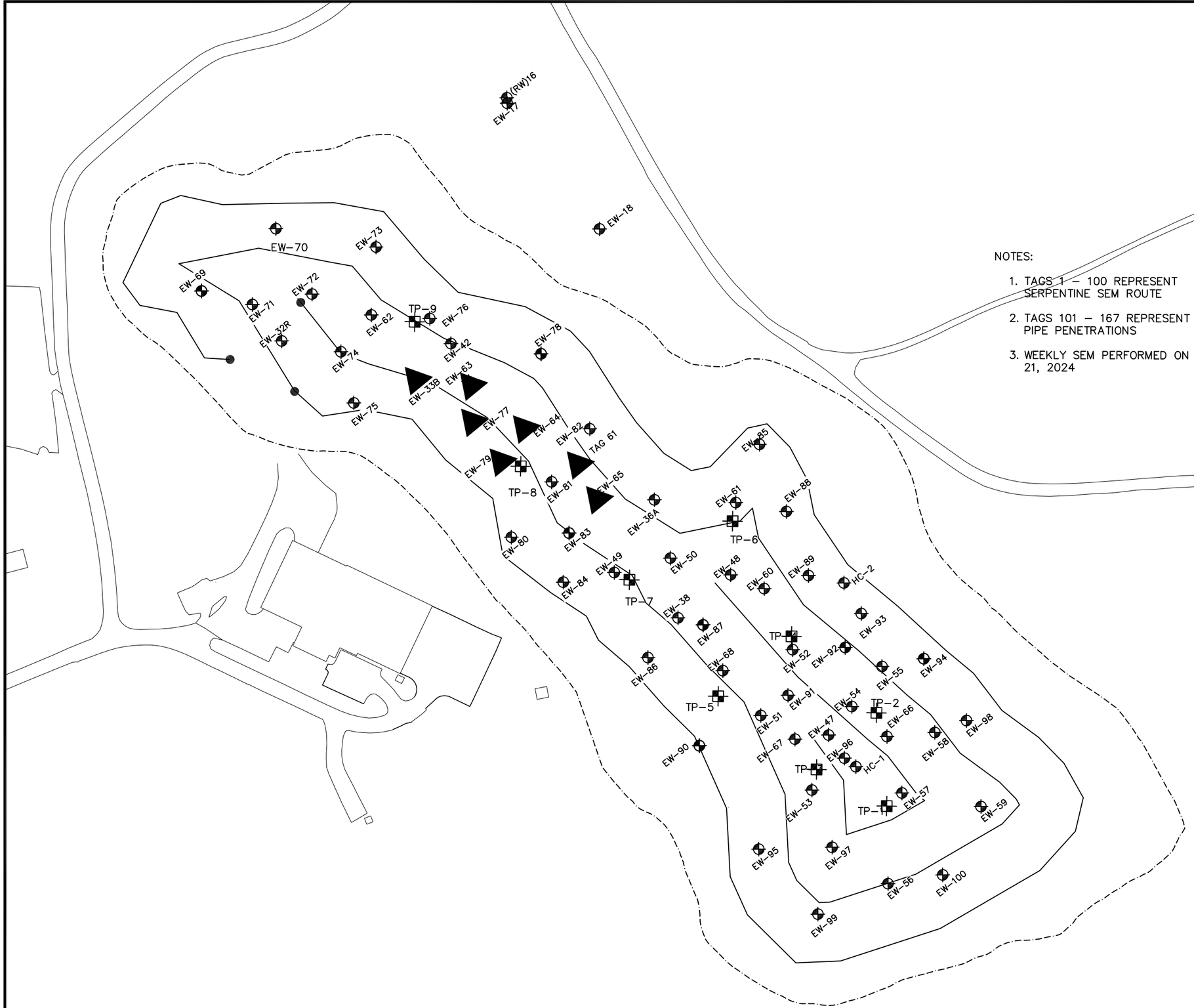
NOTES:
Points 1 through 100 represent serpentine SEM route.
Points 101 through 167 represent SEM at Pipe Penetrations
Weather Conditions: Sunny, 65°F Wind: 5 MPH NE

Sampling Calibration: Methane - 500 ppm, Zero Air - 0.0 ppm

8/21/2024	10:48	ZERO	0.2	PPM
8/21/2024	10:51	SPAN	501.0	PPM

Background Reading:

8/21/2024	10:52	Upwind	2.3	PPM
8/21/2024	10:56	Downwind	2.1	PPM



NOTES:

1. TAGS 1 – 100 REPRESENT SERPENTINE SEM ROUTE
2. TAGS 101 – 167 REPRESENT SEM AT PIPE PENETRATIONS
3. WEEKLY SEM PERFORMED ON AUGUST 21, 2024

0 80 160 240
SCALE IN FEET

N

LEGEND

- SEM ROUTE
- GAS WELL
- TEMPERATURE PROBE
- 79 EXCEEDANCE LOCATION
- 75 MONITORING ROUTE ENDPOINT

NO.	REVISION	DATE

SHEET TITLE
WEEKLY SEM ROUTE

PROJECT TITLE
SURFACE EMISSIONS MONITORING
SOLID WASTE PERMIT #588

CLIENT
CITY OF BRISTOL INTEGRATED SOLID WASTE MANAGEMENT FACILITY
2655 VALLEY DRIVE
BRISTOL, VA 24201

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
15521 MIDLOTHIAN TNPK - MIDLOTHIAN, VA 23113
PH. (804) 378-7440 FAX. (804) 378-7433

PROJ. NO.	DWN. BY:	CHK. BY:	QA/QC BY:	APP. BY:
02218208.04	LSN	DBK		
DSN. BY: LSN				

FILE: 02218208.04
DATE: 8/21/24
SCALE: AS SHOWN
DRAWING NO. 1 of 1

September 4, 2024
File No. 02218208.04

Mr. Jonathan Chapman
Enforcement Specialist
Virginia Department of Environmental Quality
SW Regional Office
355-A Deadmore Street
Abingdon, VA 24210

Subject: Weekly Surface Emissions Monitoring Event – August 29, 2024
Bristol Integrated Solid Waste Facility – Bristol, Virginia

Dear Mr. Chapman:

On behalf of the City of Bristol (City), SCS Engineers (SCS), is pleased to submit the results of the Weekly Surface Emissions Monitoring event performed at the Bristol Integrated Solid Waste Facility located in Bristol, Virginia on August 29, 2024. This Weekly Surface Emissions Monitoring (SEM) Event was performed in accordance with Appendix A.1.i of the Consent Decree between the Commonwealth of Virginia and the City of Bristol.

The monitoring generally conforms to the requirements of 40 CFR 63.1960(c) and (d), and 40 CFR 60.36f(c) and (d), and 40 CFR 60, Appendix A, Method 21. The landfill gas (LFG) collection system is required to operate such that the methane concentration is less than 500 ppm above background at the landfill surface.

The monitoring route includes the entire waste footprint of the Permit No. 588 Landfill. Sampling was conducted with a Thermo Scientific TVA-2020 Flame Ionization Detector (FID) at 30-meter intervals and where visual observations indicated the potential for elevated concentrations of LFG, such as distressed vegetation and surface cover cracks. In addition, in accordance with 40 CFR 63.1958(d)(ii)(2) and 40 CFR 60.34f(d), monitoring was conducted at all surface cover penetrations within the waste footprint, including at the temperature probes and the newly installed and connected gas extraction wells. The approximate monitoring route and sampling locations are presented in the attached Drawing.

At the time of monitoring, all areas of the Permit No. 588 Landfill footprint are subject to regulatory monitoring based on the regulatory time schedule stipulated in 40 CFR 63.1960(b) and 40 CFR 60.36f(b). The Permit No. 588 Landfill has a surface area of approximately 17.3 acres. Therefore, the minimum number of sampling points to cover the appropriate portion of the landfill footprint, utilizing a 30-meter grid interval, is approximately 82 (4.75 points per acre). A summary of the results of the surface emissions monitoring is provided in Table 1.

Table 1. Summary of Surface Emissions Monitoring

Description	Quantity
Number of Points Sampled	167
Number of Points in Serpentine Route	100
Number of Points at Surface Cover Penetrations	67
Number of Exceedances	6
Number of Serpentine Exceedances	1
Number of Pipe Penetration Exceedances	5

REMONITORING OF ONGOING EXCEEDANCES

In accordance with 40 CFR 63.1960(c)(4)(ii) and 40 CFR 60.36f(c)(4)(ii), corrective actions and a remonitoring event are to be performed within 10 days of the initial exceedance. In accordance with 40 CFR 63.1960(c)(4)(iii) and 40 CFR 60.36f(c)(4)(iii) additional corrective actions and a second 10-day retest are to be performed if the initial 10-day retest indicates methane values greater than the regulatory threshold. The Facility performs corrective actions, as necessary, including wellhead vacuum adjustments, the installation of well-bore seals, and addition of soil cover prior to weekly monitoring events at locations that previously exhibited elevated methane concentrations.

In accordance with 40 CFR 63.1960(c)(4)(v) and 40 CFR 60.36f(c)(4)(v) a new well or collection device must be installed or an alternate remedy must be submitted within 120 days at locations that continue to exhibit methane concentrations above the regulatory threshold for two consecutive re-tests.

The Facility continued to observe an increase of exceedance points during this weekly event, likely due to reduced vacuum at several of the vertical extraction wells. This will be addressed by increasing vacuum at these locations.

A summary of ongoing exceedance points is provided in Table 2.

Table 2. Ongoing Weekly SEM Exceedances

Point ID	Initial Exceedance Date	8/29/24 Event	8/29/24 Event Result	Comments
EW-79	7/22/24	N/A	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-63	8/1/24	N/A	Passed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-64	8/1/24	N/A	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-77	8/1/24	N/A	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-33B	8/7/24	N/A	Failed	Subject to 40 CFR 63.1960(c)(4)(v)
EW-52	8/1/24	1-Month Retest	Passed	Exceedance Resolved
EW-100	8/1/24	1-Month Retest	Passed	Exceedance Resolved
TP-9	8/7/24	N/A	Passed	Requires 1-Month Retest
EW-91	8/15/24	N/A	Passed	Requires 1-Month Retest
Tag 61	8/21/24	10-Day Retest	Failed	Requires 2nd 10-Day Retest
EW-65	8/21/24	10-Day Retest	Failed	Requires 2nd 10-Day Retest

If you have questions or require additional information, please contact either of the undersigned.

Sincerely,

William J. Fabrie

Lucas S. Nachman

William J. Fabrie
Staff Professional
SCS Engineers

Lucas S. Nachman
Senior Project Professional
SCS Engineers

LSN/WJF

cc: Randall Eads, City of Bristol
Jonathan Hayes, City of Bristol
Laura Socia, City of Bristol
Susan “Tracey” Blalock, VDEQ

Encl. Surface Emissions Monitoring Results
Bristol SEM Route Drawing

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 29, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
1	9.3 PPM	OK			Start Serpentine Route
2	2.8 PPM	OK			
3	11.7 PPM	OK			
4	3.4 PPM	OK			
5	3.3 PPM	OK			
6	3.0 PPM	OK			
7	3.0 PPM	OK			
8	2.0 PPM	OK			
9	2.1 PPM	OK			
10	11.8 PPM	OK			
11	5.5 PPM	OK			
12	22.0 PPM	OK			
13	4.8 PPM	OK			
14	3.1 PPM	OK			
15	16.5 PPM	OK			
16	2.3 PPM	OK			
17	1.6 PPM	OK			
18	1.6 PPM	OK			
19	1.6 PPM	OK			
20	1.4 PPM	OK			
21	1.5 PPM	OK			
22	12.0 PPM	OK			
23	5.6 PPM	OK			
24	2.5 PPM	OK			
25	2.1 PPM	OK			
26	3.5 PPM	OK			
27	5.8 PPM	OK			
28	3.4 PPM	OK			
29	1.9 PPM	OK			
30	2.7 PPM	OK			
31	1.8 PPM	OK			
32	2.8 PPM	OK			
33	7.3 PPM	OK			
34	37.9 PPM	OK			
35	51.8 PPM	OK			
36	95.6 PPM	OK			
37	18.9 PPM	OK			
38	56.3 PPM	OK			
39	1.6 PPM	OK			
40	1.2 PPM	OK			
41	3.2 PPM	OK			
42	12.4 PPM	OK			
43	5.7 PPM	OK			
44	80.4 PPM	OK			
45	30.6 PPM	OK			
46	8.3 PPM	OK			
47	4.2 PPM	OK			

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 29, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
48	8.4 PPM	OK			
49	6.8 PPM	OK			
50	2.8 PPM	OK			
51	3.1 PPM	OK			
52	4.2 PPM	OK			
53	2.2 PPM	OK			
54	2.5 PPM	OK			
55	6.1 PPM	OK			
56	83.1 PPM	OK			
57	4.4 PPM	OK			
58	9.3 PPM	OK			
59	15.1 PPM	OK			
60	35.0 PPM	OK			
61	837.0 PPM	HIGH_ALRM	36.60029	-82.14785	
62	141.0 PPM	OK			
63	16.8 PPM	OK			
64	1.4 PPM	OK			
65	3.5 PPM	OK			
66	1.0 PPM	OK			
67	0.5 PPM	OK			
68	0.6 PPM	OK			
69	0.4 PPM	OK			
70	0.3 PPM	OK			
71	0.3 PPM	OK			
72	15.6 PPM	OK			
73	44.7 PPM	OK			
74	3.2 PPM	OK			
75	0.9 PPM	OK			
76	0.4 PPM	OK			
77	186.0 PPM	OK			
78	105.0 PPM	OK			
79	8.9 PPM	OK			
80	2.3 PPM	OK			
81	0.4 PPM	OK			
82	5.8 PPM	OK			
83	0.4 PPM	OK			
84	2.0 PPM	OK			
85	0.6 PPM	OK			
86	9.8 PPM	OK			
87	50.3 PPM	OK			
88	35.5 PPM	OK			
89	171.0 PPM	OK			
90	114.0 PPM	OK			
91	2.8 PPM	OK			
92	280.0 PPM	OK			
93	6.4 PPM	OK			
94	88.5 PPM	OK			

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 29, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
95	2.1 PPM	OK			
96	0.6 PPM	OK			
97	0.2 PPM	OK			
98	0.2 PPM	OK			
99	0.9 PPM	OK			
100	10.0 PPM	OK			End Serpentine Route
101	221.0 PPM	OK			EW-52
102	2.4 PPM	OK			TP-4
103	74.8 PPM	OK			EW-60
104	5.1 PPM	OK			EW-48
105	0.3 PPM	OK			TP-6
106	0.0 PPM	OK			EW-61
107	0.5 PPM	OK			EW-50
108	475.0 PPM	OK			EW-67
109	0.4 PPM	OK			EW-47
110	0.7 PPM	OK			EW-54
111	6.6 PPM	OK			EW-55
112	0.0 PPM	OK			EW-92
113	149.0 PPM	OK			EW-91
114	0.8 PPM	OK			EW-96
115	0.0 PPM	OK			TP-2
116	4.8 PPM	OK			EW-66
117	0.1 PPM	OK			EW-58
118	9.0 PPM	OK			EW-57
119	3.8 PPM	OK			TP-1
120	0.5 PPM	OK			EW-59
121	3.1 PPM	OK			EW-100
122	31.3 PPM	OK			EW-56
123	0.4 PPM	OK			EW-97
124	0.2 PPM	OK			EW-53
125	3.5 PPM	OK			TP-3
126	116.0 PPM	OK			EW-51
127	0.9 PPM	OK			TP-5
128	7.7 PPM	OK			EW-68
129	0.9 PPM	OK			EW-87
130	0.3 PPM	OK			EW-38
131	92.4 PPM	OK			TP-7
132	0.2 PPM	OK			EW-49
133	1.8 PPM	OK			EW-83
134	1113.0 PPM	HIGH_ALRM	36.60017	-82.14787	EW-65
135	207.0 PPM	OK			EW-81
136	7.5 PPM	OK			TP-8
137	3964.0 PPM	HIGH_ALRM	36.60056	-82.14796	EW-64
138	87.3 PPM	OK			EW-63
139	11.9 PPM	OK			EW-42
140	9.6 PPM	OK			EW-76

EXHIBIT 1. SURFACE EMISSIONS MONITORING RESULTS
WEEKLY MONITORING EVENT - AUGUST 29, 2024
BRISTOL INTEGRATED SOLID WASTE FACILITY - BRISTOL, VIRGINIA

ID #	Methane Concentration	Compliance	GPS Coordinates Lat.	Long.	Comments
141	8.8 PPM	OK			TP-9
142	2.0 PPM	OK			EW-62
143	10.5 PPM	OK			EW-74
144	1.7 PPM	OK			EW-32R
145	0.8 PPM	OK			EW-69
146	0.1 PPM	OK			EW-71
147	0.1 PPM	OK			EW-72
148	6.3 PPM	OK			EW-73
149	0.0 PPM	OK			EW-78
150	37.0 PPM	OK			EW-82
151	1.5 PPM	OK			EW-36A
152	0.2 PPM	OK			EW-85
153	0.1 PPM	OK			EW-88
154	6.2 PPM	OK			EW-89
155	6.3 PPM	OK			EW-93
156	0.1 PPM	OK			EW-94
157	0.2 PPM	OK			EW-98
158	4.0 PPM	OK			EW-99
159	13.5 PPM	OK			EW-95
160	0.3 PPM	OK			EW-90
161	38.2 PPM	OK			EW-86
162	245.0 PPM	OK			EW-84
163	36.8 PPM	OK			EW-80
164	2209.0 PPM	HIGH_ALRM	36.60051	-82.14819	EW-79
165	23400.0 PPM	HIGH_ALRM	36.60072	-82.14819	EW-77
166	994.0 PPM	HIGH_ALRM	36.60105	-82.14831	EW-33B
167	349.0 PPM	OK			EW-75

Number of locations sampled:	167
Number of exceedance locations:	6

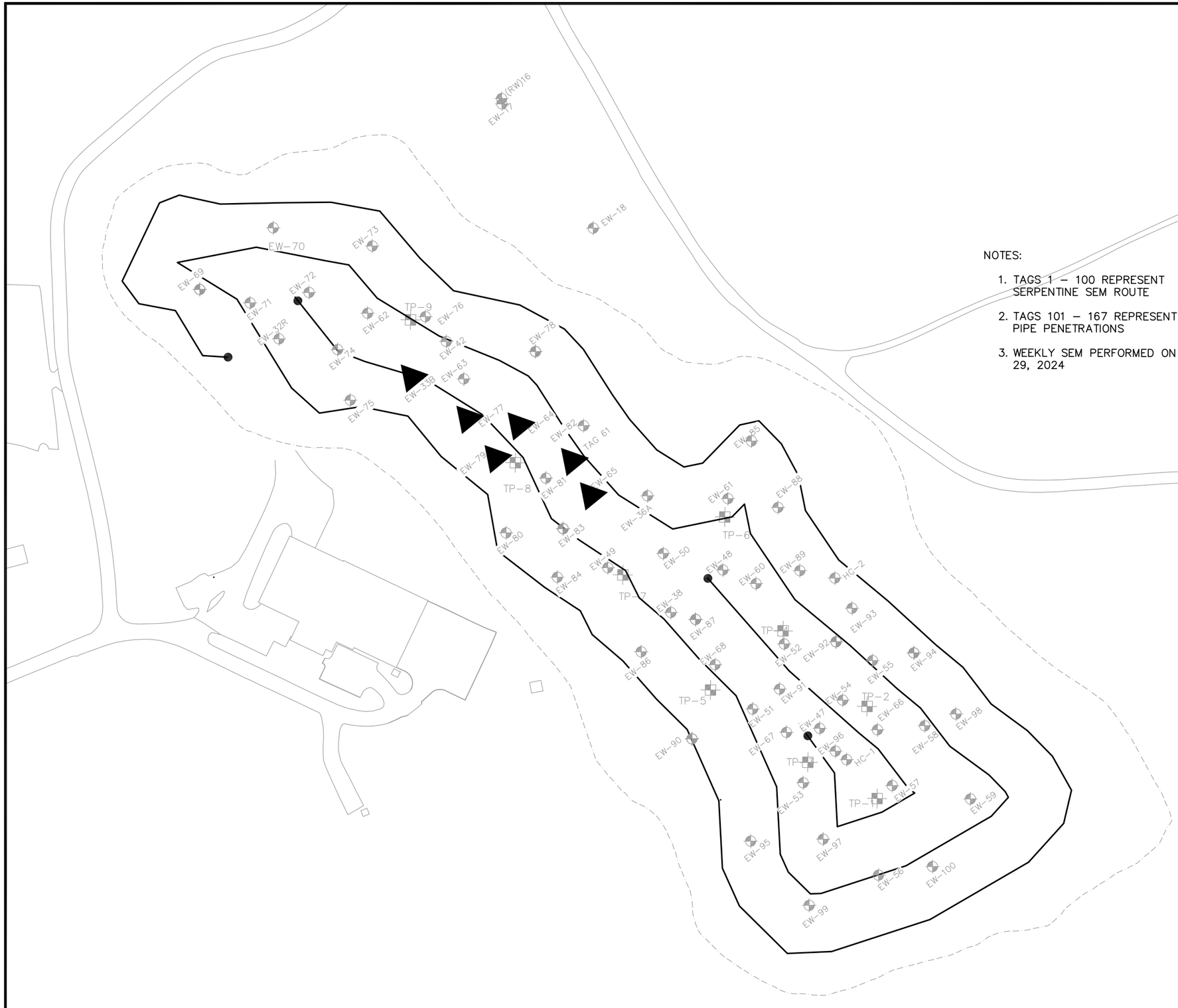
NOTES:
Points 1 through 100 represent serpentine SEM route.
Points 101 through 167 represent SEM at Pipe Penetrations
Weather Conditions: Sunny, 91°F Wind: 1 MPH W

Sampling Calibration: Methane - 500 ppm, Zero Air - 0.0 ppm

8/29/2024	9:38	ZERO	0.3	PPM
8/29/2024	9:41	SPAN	499.0	PPM

Background Reading:

8/29/2024	9:44	Upwind	2.3	PPM
8/29/2024	9:49	Downwind	2.7	PPM



NOTES:

1. TAGS 1 – 100 REPRESENT SERPENTINE SEM ROUTE
2. TAGS 101 – 167 REPRESENT SEM AT PIPE PENETRATIONS
3. WEEKLY SEM PERFORMED ON AUGUST 29, 2024

0 80 160 240
SCALE IN FEET

N

LEGEND

- SEM ROUTE
- GAS WELL
- TEMPERATURE PROBE
- 79 EXCEEDANCE LOCATION
- 75 MONITORING ROUTE ENDPOINT

NO.	REVISION	DATE

SHEET TITLE
WEEKLY SEM ROUTE

PROJECT TITLE
SURFACE EMISSIONS MONITORING
SOLID WASTE PERMIT #588

CLIENT
CITY OF BRISTOL INTEGRATED SOLID WASTE MANAGEMENT FACILITY
2655 VALLEY DRIVE
BRISTOL, VA 24201

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
15521 MIDLOTHIAN TNPK - MIDLOTHIAN, VA 23113
PH. (804) 378-7440 FAX. (804) 378-7433

PROJ. NO. 02218208.04
DSN. BY: LSN
DWN. BY: LSN
CHK. BY: DBK
QA/QC BY:
APP. BY:

FILE: 02218208.04
DATE: 8/29/24
SCALE: AS SHOWN
DRAWING NO. 1 of 1

Appendix B

In-Waste Temperatures on Select Days in August

Appendix B Figures

Figure B - 1 Average Temperatures Recorded by TP-1 on August 7, 2024 ..... B-3
Figure B - 2 Average Temperatures Recorded by TP-1 on August 14, 2024 ..... B-3
Figure B - 3 Average Temperatures Recorded by TP-1 on August 21, 2024 ..... B-4
Figure B - 4 Average Temperatures Recorded by TP-1 on August 28, 2024 ..... B-4
Figure B - 5 Average Temperatures Recorded by TP-2 on August 7, 2024 ..... B-5
Figure B - 6 Average Temperatures Recorded by TP-2 on August 14, 2024 ..... B-5
Figure B - 7 Average Temperatures Recorded by TP-2 on August 21, 2024 ..... B-6
Figure B - 8 Average Temperatures Recorded by TP-2 on August 28, 2024 ..... B-6
Figure B - 9 Average Temperatures Recorded by TP-3 on August 7, 2024 ..... B-7
Figure B - 10 Average Temperatures Recorded by TP-3 on August 14, 2024 ..... B-7
Figure B - 11 Average Temperatures Recorded by TP-3 on August 21, 2024 ..... B-8
Figure B - 12 Average Temperatures Recorded by TP-3 on August 28, 2024 ..... B-8
Figure B - 13 Average Temperatures Recorded by TP-4 on August 7, 2024 ..... B-9
Figure B - 14 Average Temperatures Recorded by TP-4 on August 14, 2024 ..... B-9
Figure B - 15 Average Temperatures Recorded by TP-4 on August 21, 2024 ..... B-10
Figure B - 16 Average Temperatures Recorded by TP-4 on August 28, 2024 ..... B-10
Figure B - 17 Average Temperatures Recorded by TP-5 on August 7, 2024 ..... B-11
Figure B - 18 Average Temperatures Recorded by TP-5 on August 14, 2024 ..... B-11
Figure B - 19 Average Temperatures Recorded by TP-5 on August 21, 2024 ..... B-12
Figure B - 20 Average Temperatures Recorded by TP-5 on August 28, 2024 ..... B-12
Figure B - 21 Average Temperatures Recorded by TP-6 on August 7, 2024 ..... B-13
Figure B - 22 Average Temperatures Recorded by TP-6 on August 14, 2024 ..... B-13
*F*igure B - 23 Average Temperatures Recorded by TP-6 on August 21, 2024 ..... B-14
Figure B - 24 Average Temperatures Recorded by TP-6 on August 28, 2024 ..... B-14
Figure B - 25 Average Temperatures Recorded by TP-7 on August 7, 2024 ..... B-15
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Figure B - 33 Average Temperatures Recorded by TP-9 on August 7, 2024 ..... B-19
Figure B - 34 Average Temperatures Recorded by TP-9 on August 14, 2024 ..... B-19
Figure B - 35 Average Temperatures Recorded by TP-9 on August 21, 2024 ..... B-20
Figure B - 36 Average Temperatures Recorded by TP-9 on August 28, 2024 ..... B-20

Figure B - 1 Average Temperatures Recorded by TP-1 on August 7, 2024

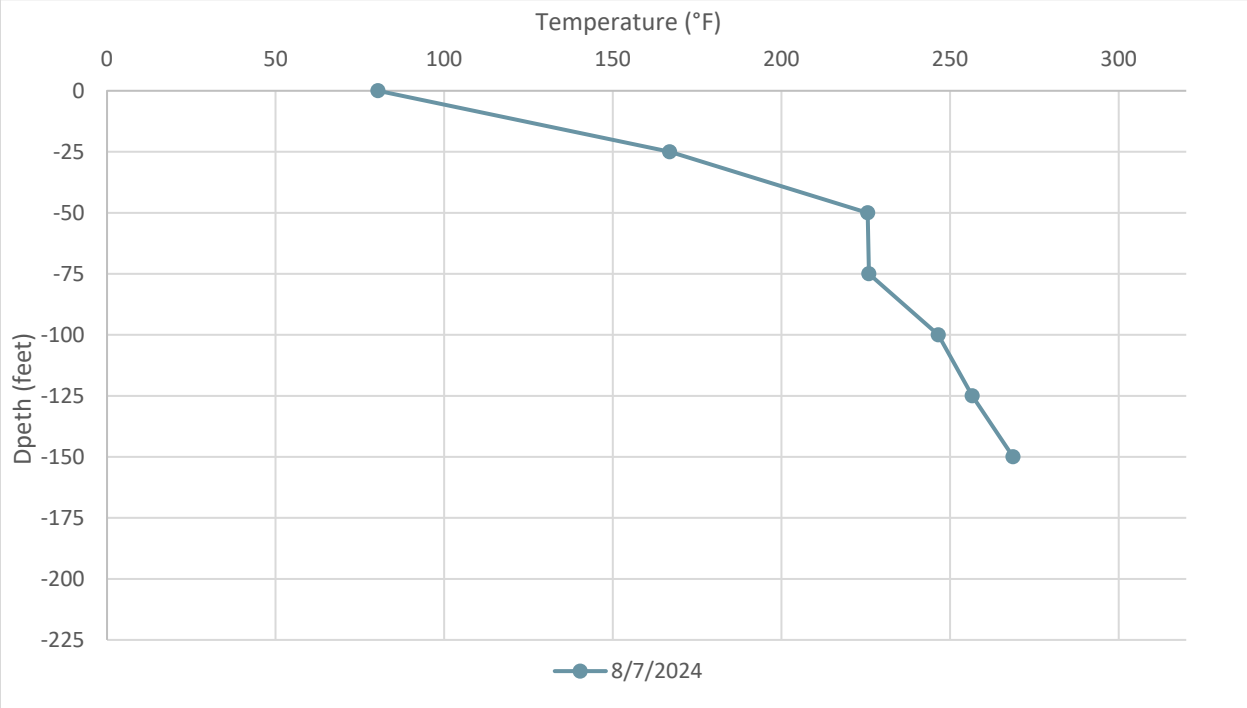


Figure B - 2 Average Temperatures Recorded by TP-1 on August 14, 2024

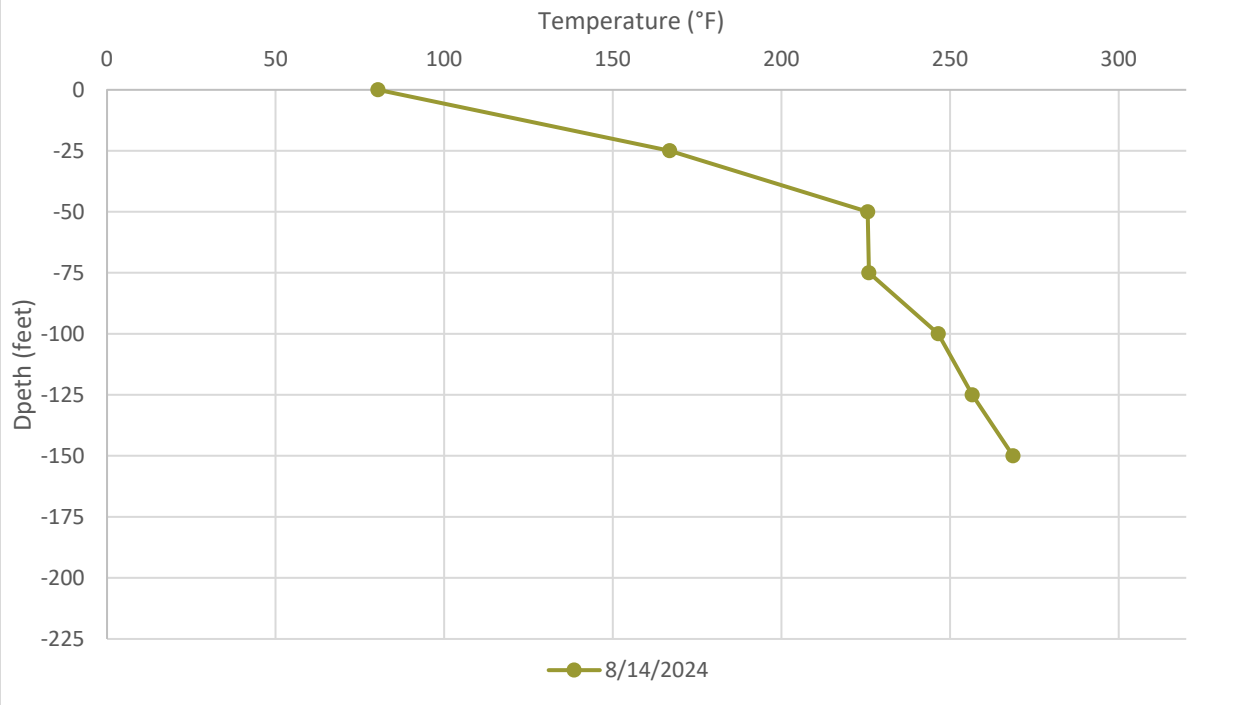


Figure B - 3 Average Temperatures Recorded by TP-1 on August 21, 2024

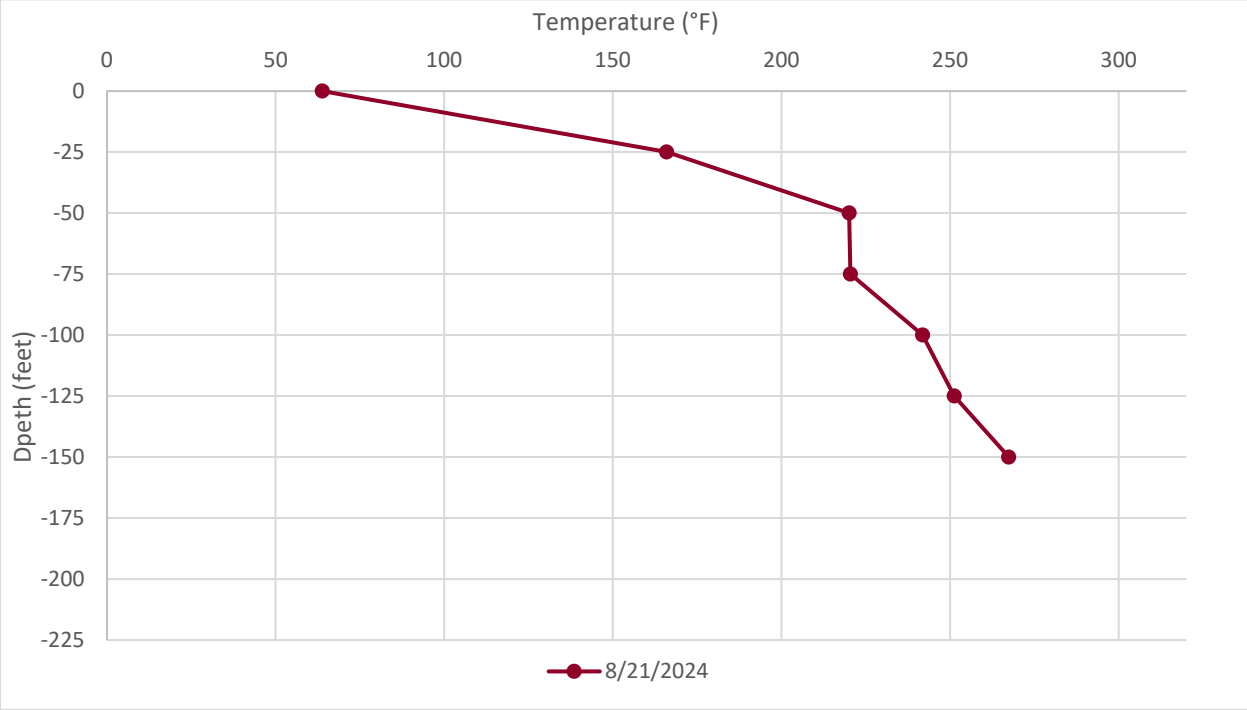


Figure B - 4 Average Temperatures Recorded by TP-1 on August 28, 2024

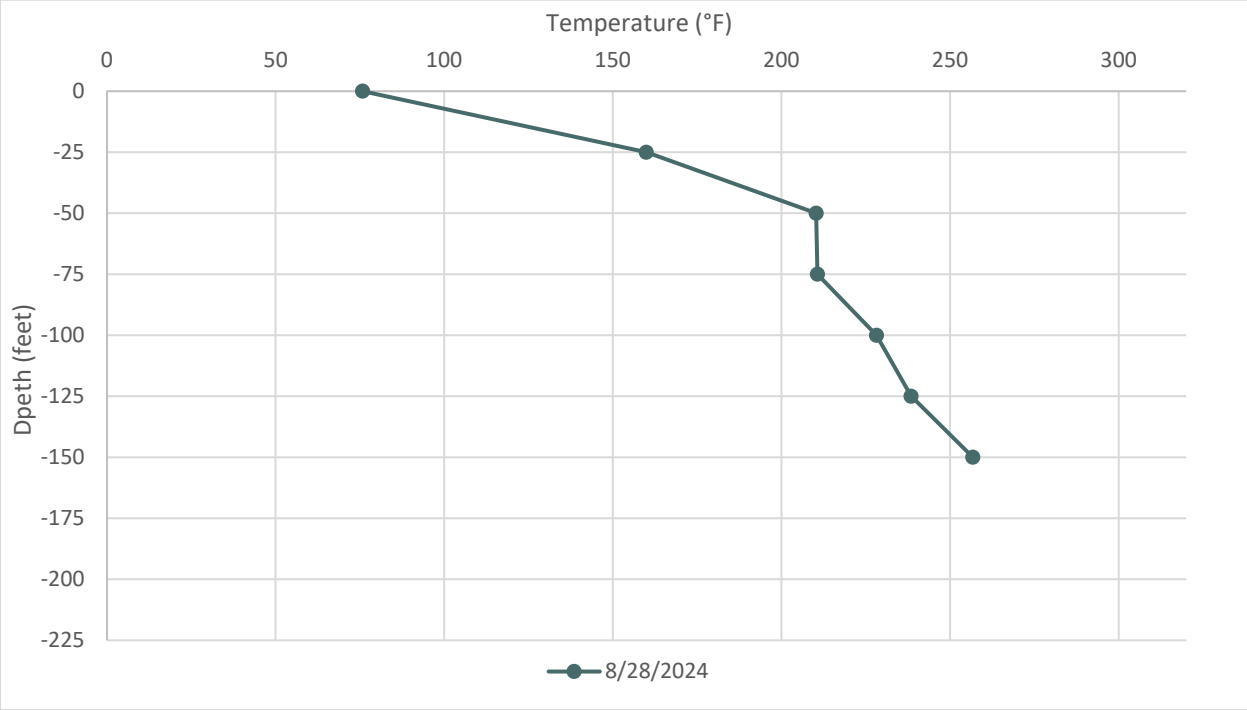


Figure B - 5 Average Temperatures Recorded by TP-2 on August 7, 2024

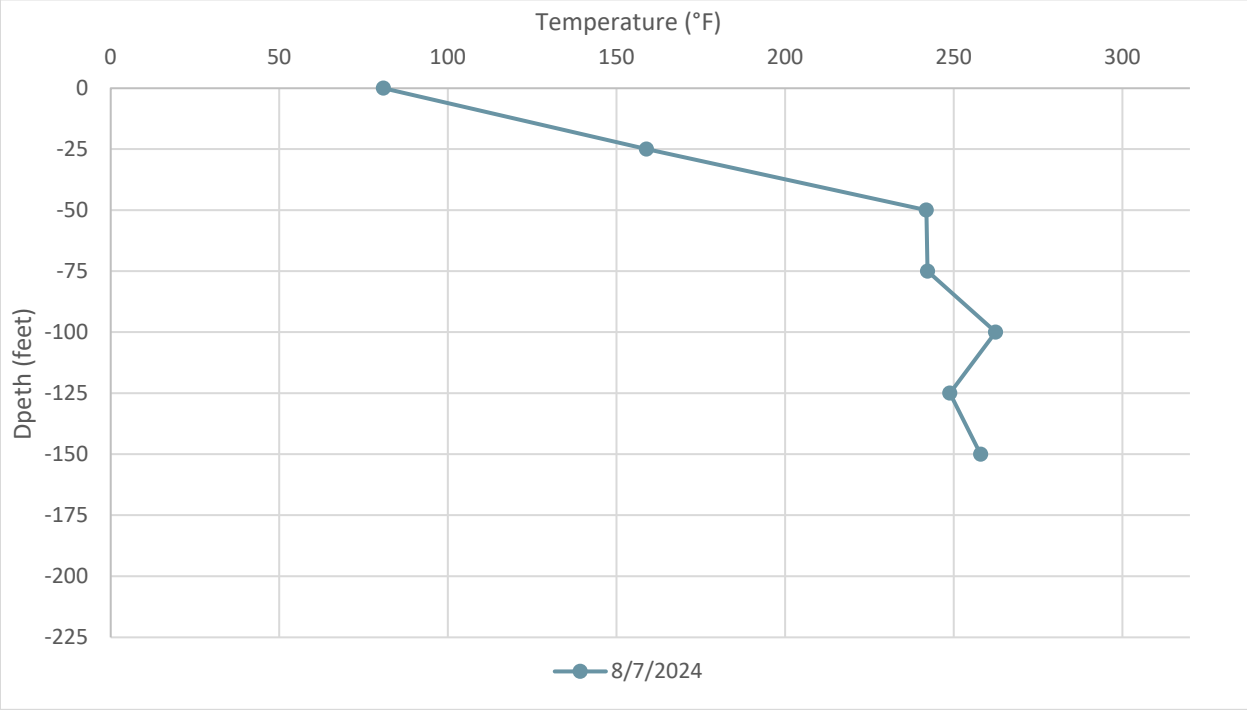


Figure B - 6 Average Temperatures Recorded by TP-2 on August 14, 2024

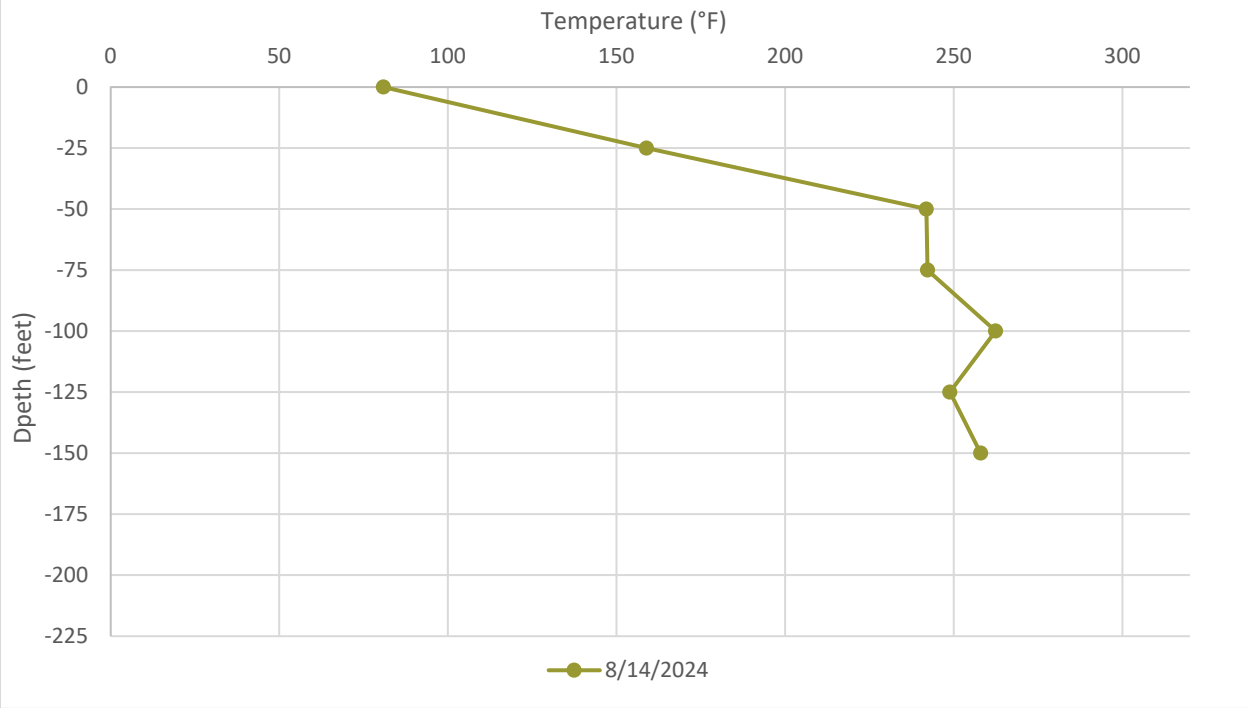


Figure B - 7 Average Temperatures Recorded by TP-2 on August 21, 2024

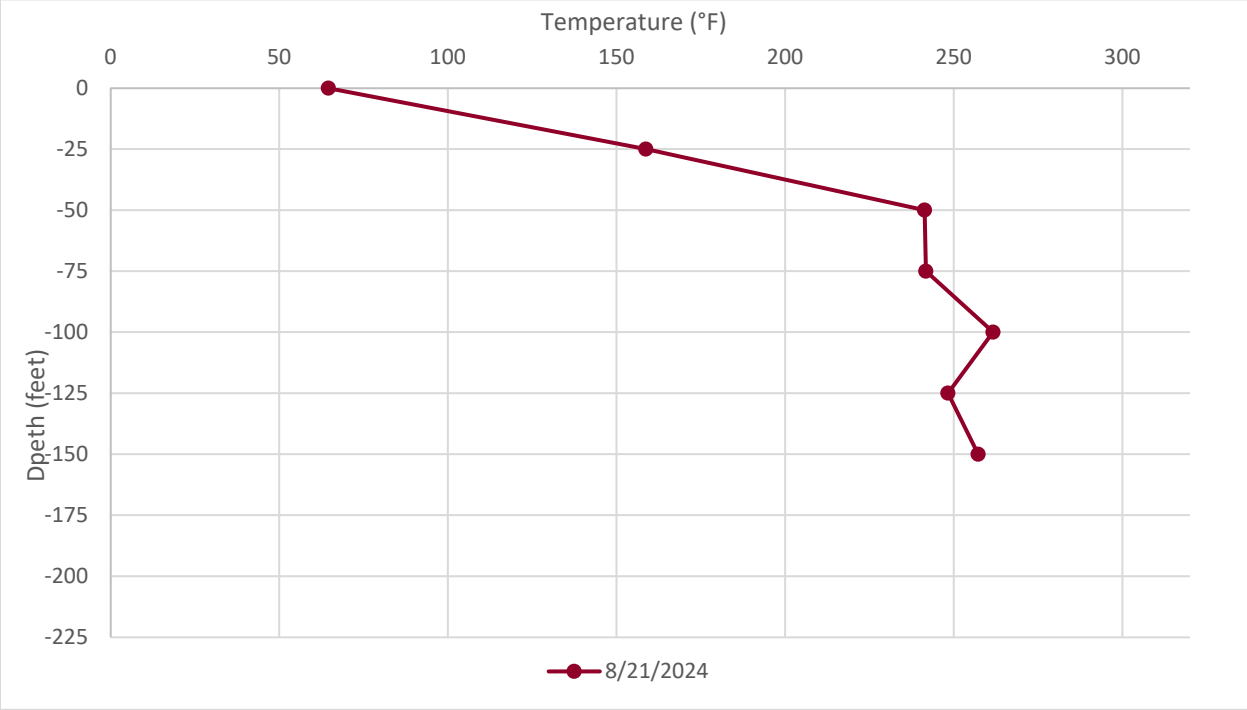


Figure B - 8 Average Temperatures Recorded by TP-2 on August 28, 2024

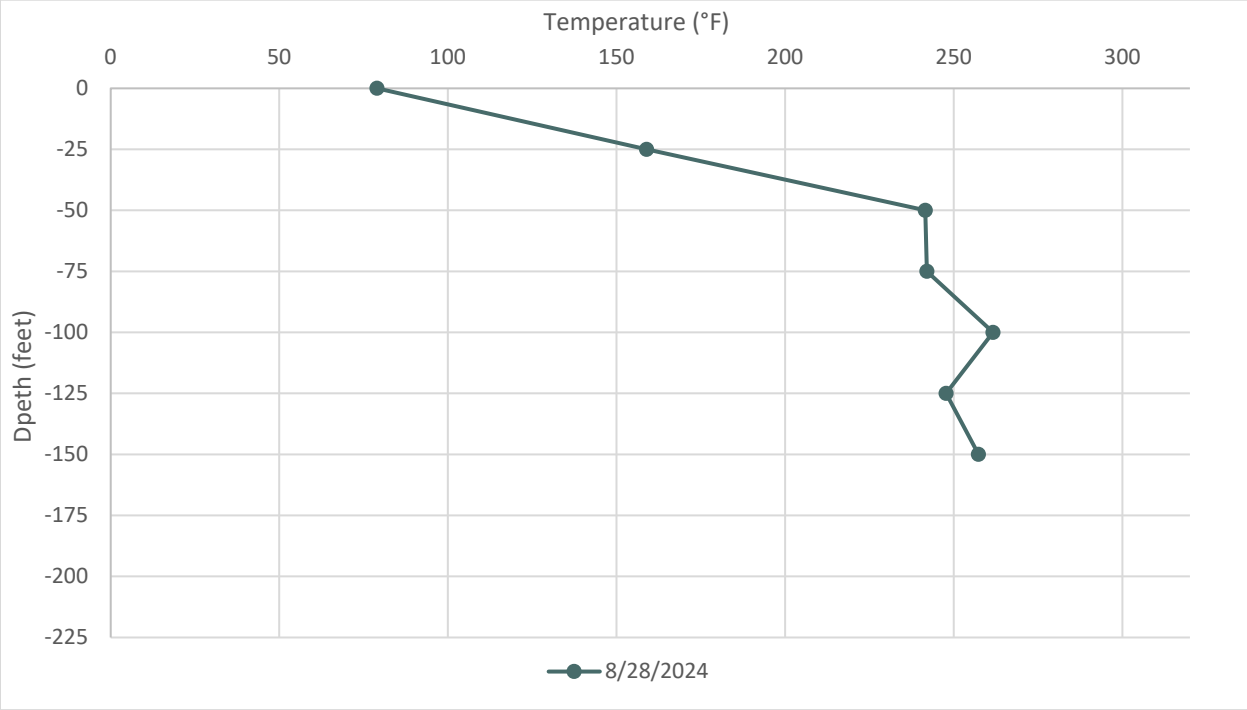


Figure B - 9 Average Temperatures Recorded by TP-3 on August 7, 2024

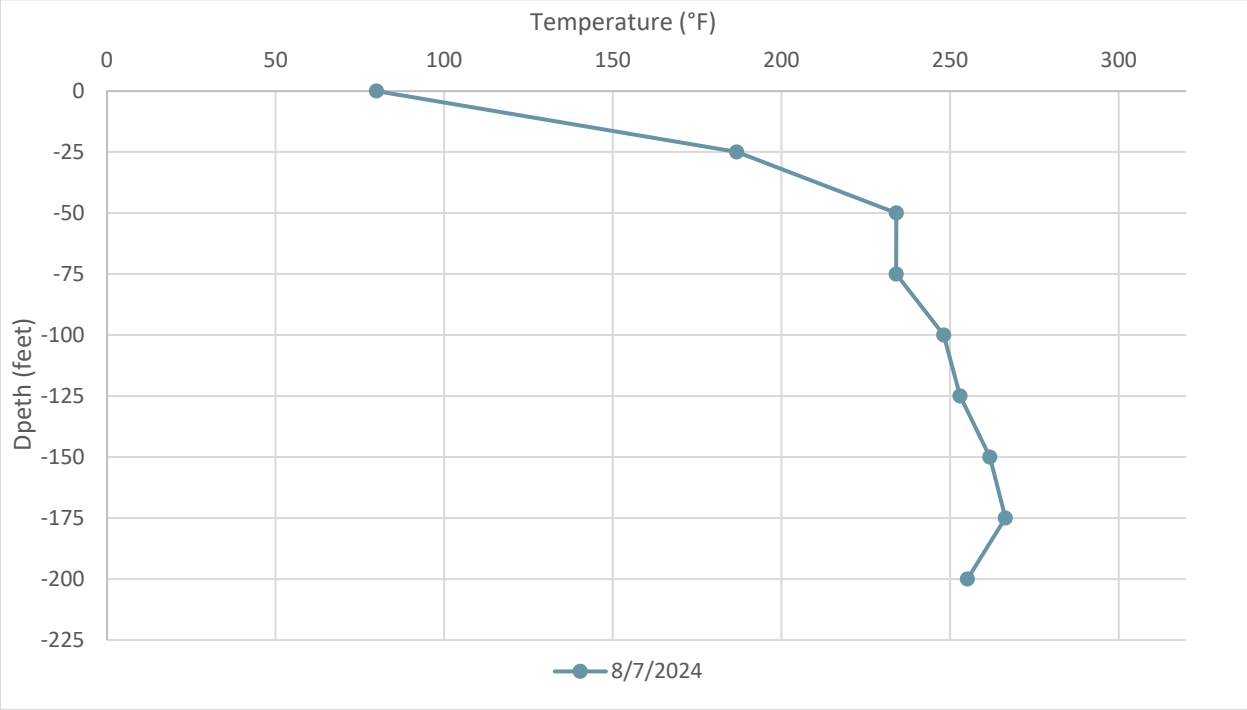


Figure B - 10 Average Temperatures Recorded by TP-3 on August 14, 2024

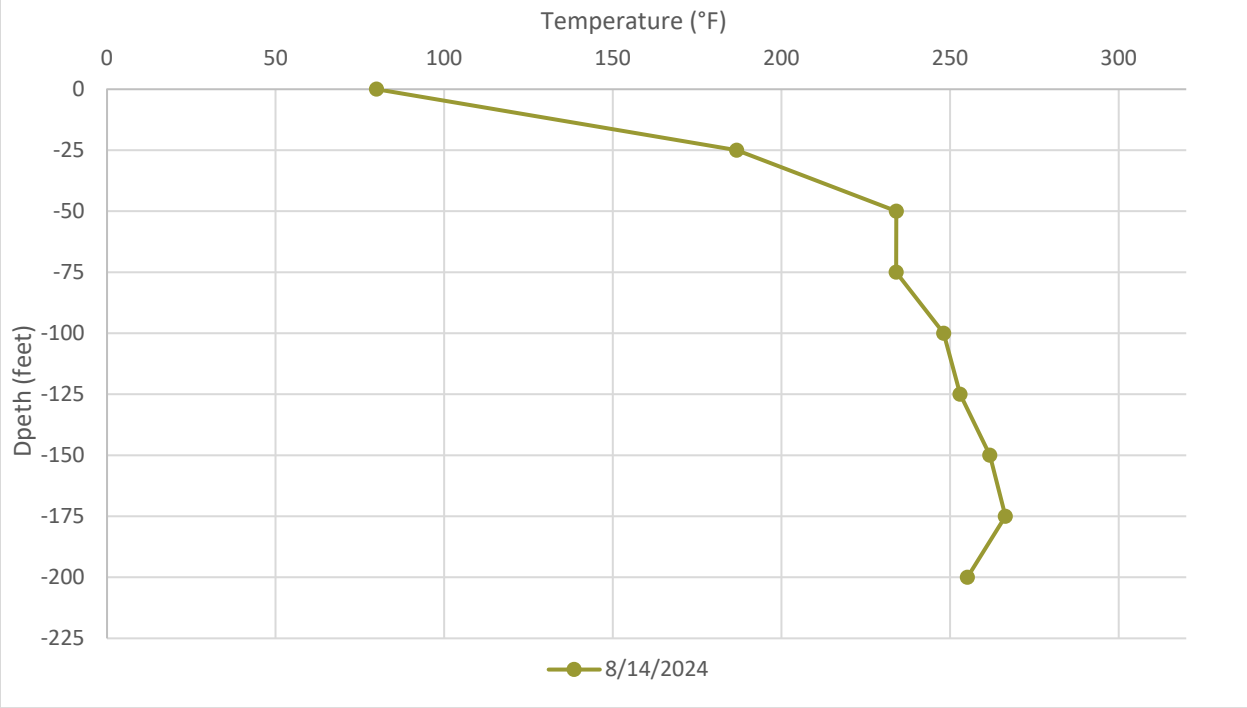


Figure B - 11 Average Temperatures Recorded by TP-3 on August 21, 2024

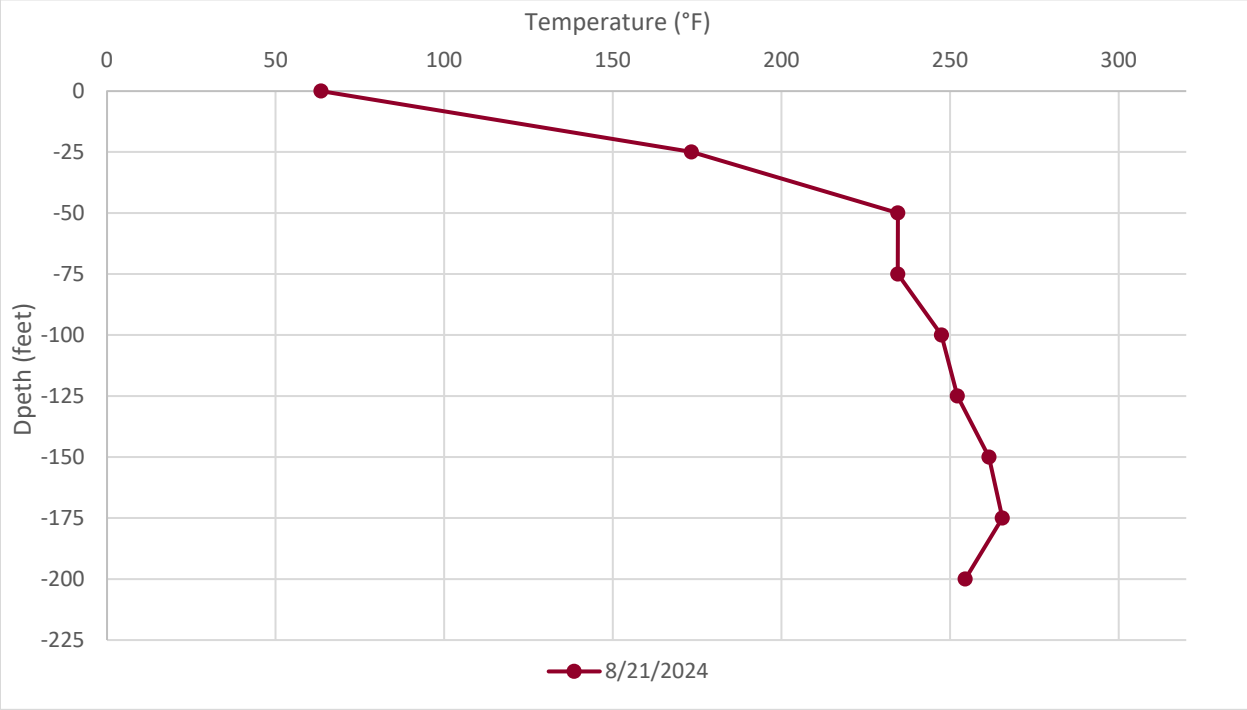


Figure B - 12 Average Temperatures Recorded by TP-3 on August 28, 2024

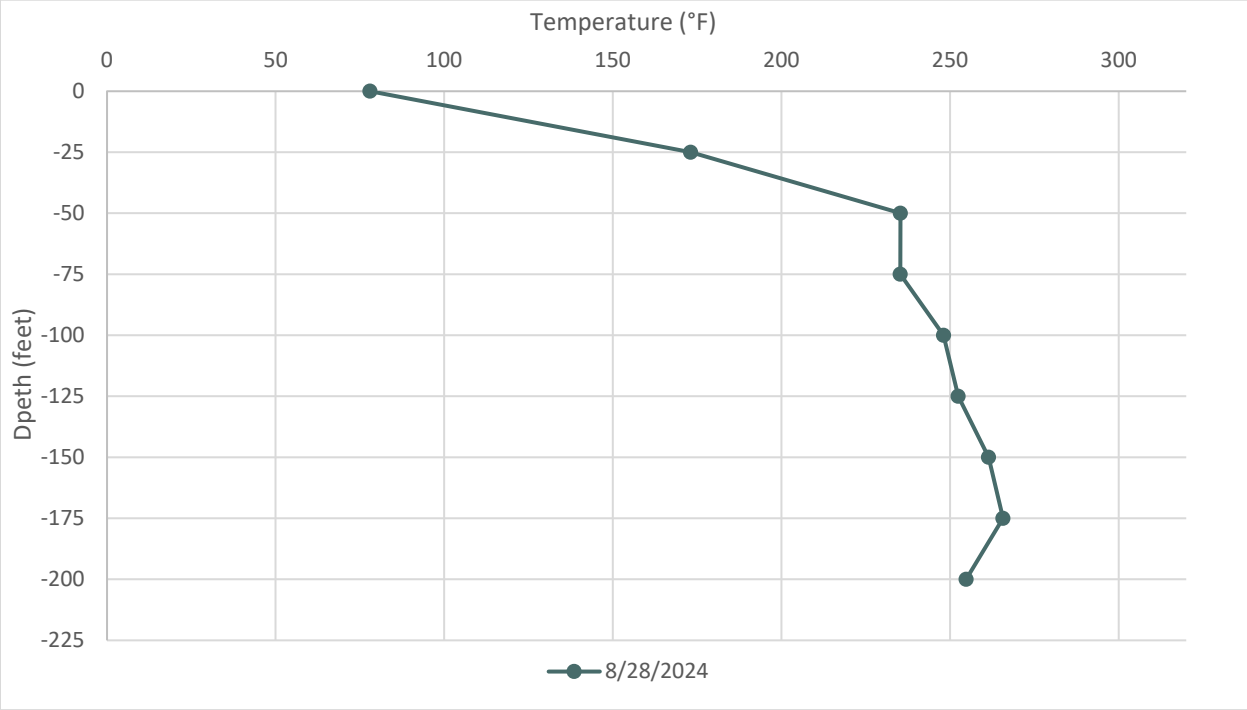


Figure B - 13 Average Temperatures Recorded by TP-4 on August 7, 2024

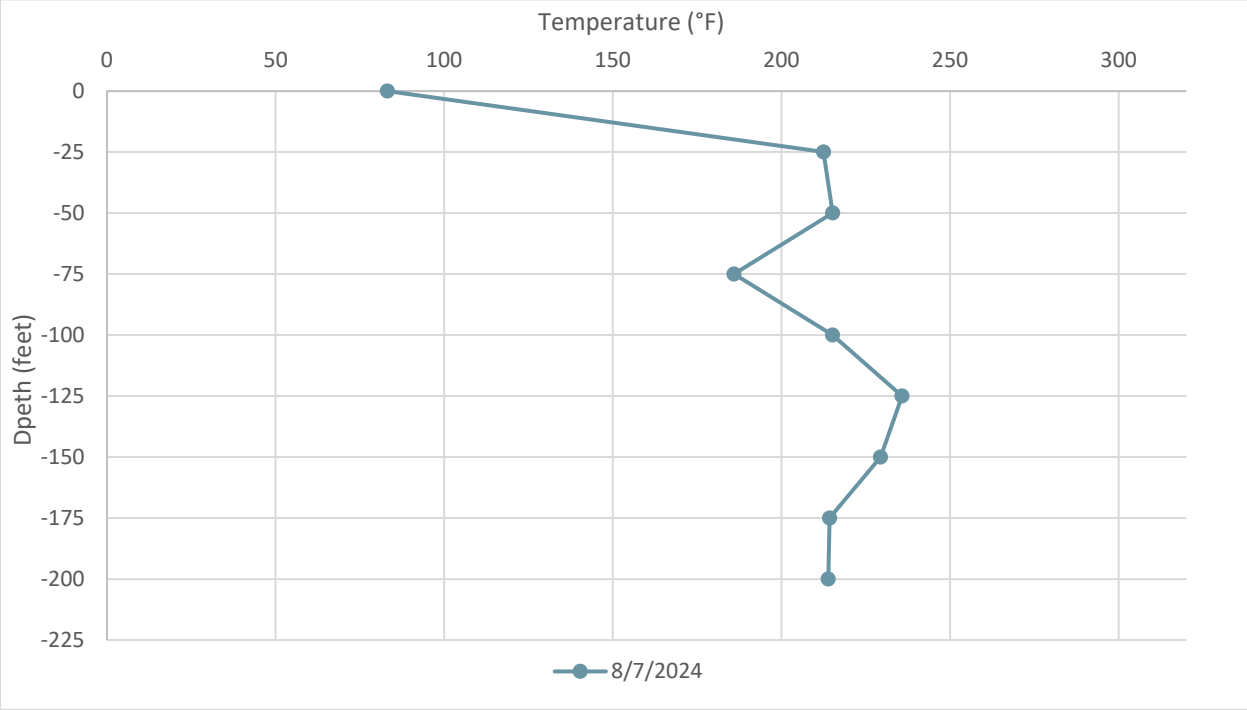


Figure B - 14 Average Temperatures Recorded by TP-4 on August 14, 2024

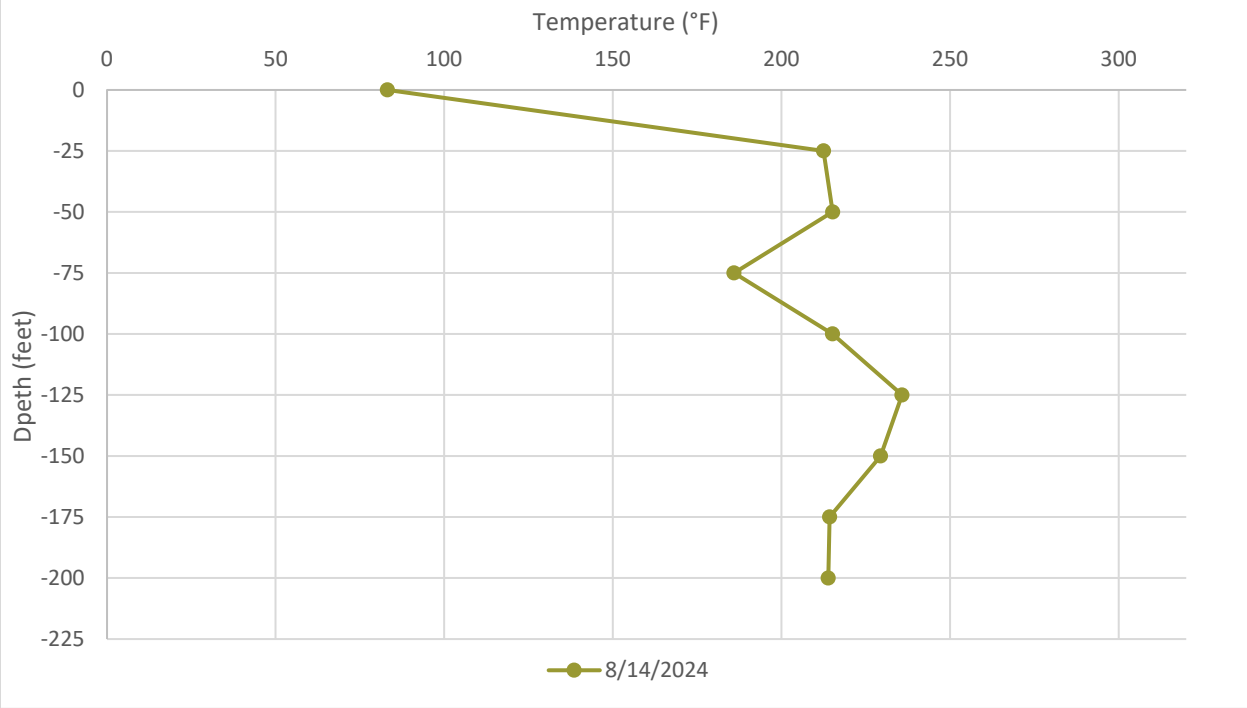


Figure B - 15 Average Temperatures Recorded by TP-4 on August 21, 2024

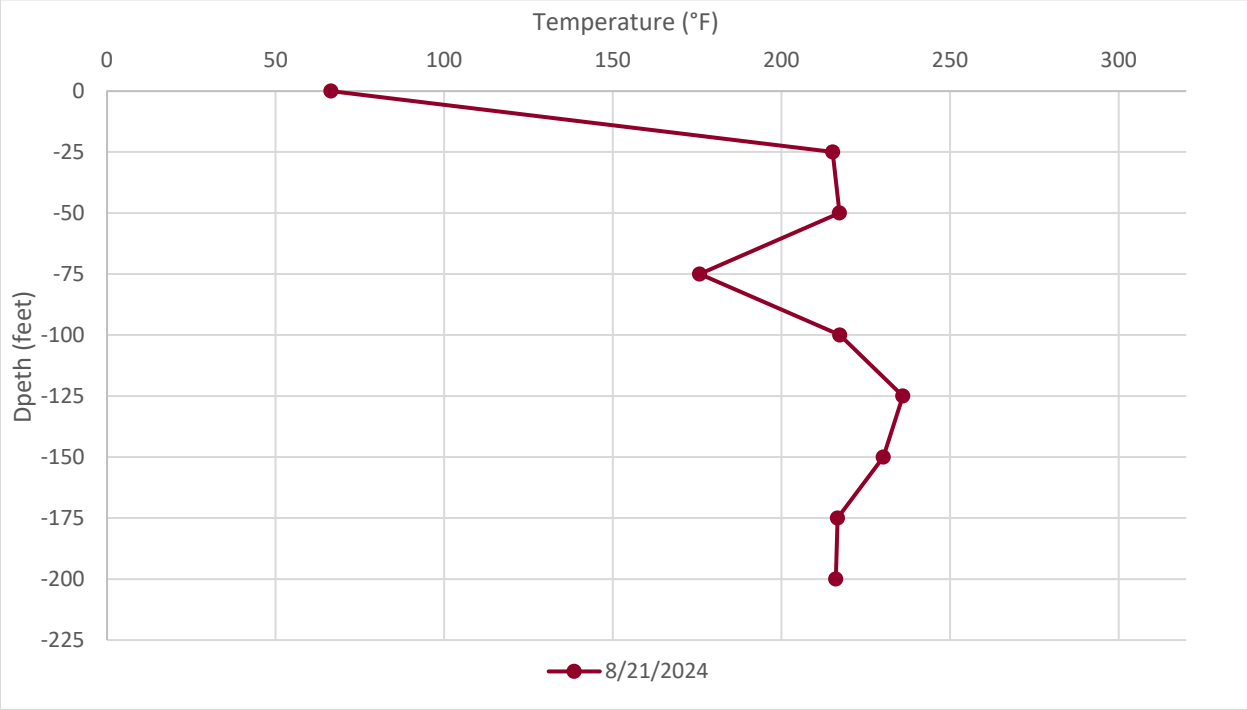


Figure B - 16 Average Temperatures Recorded by TP-4 on August 28, 2024

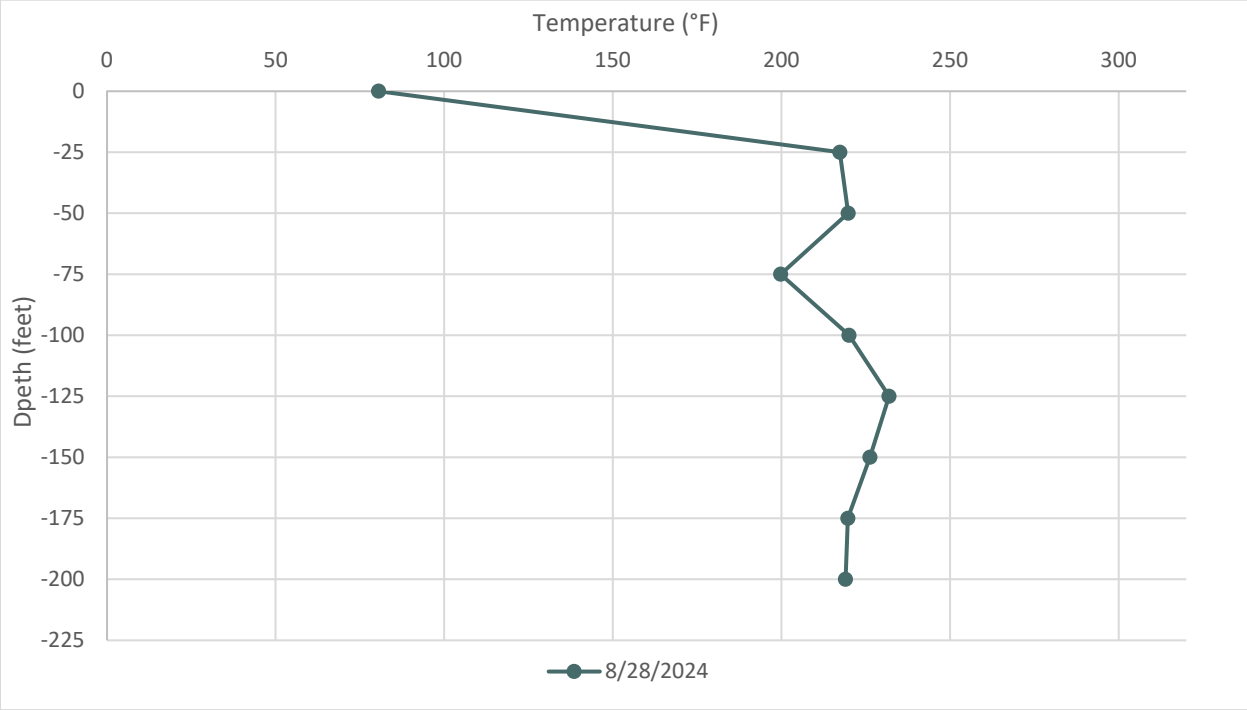


Figure B - 17 Average Temperatures Recorded by TP-5 on August 7, 2024

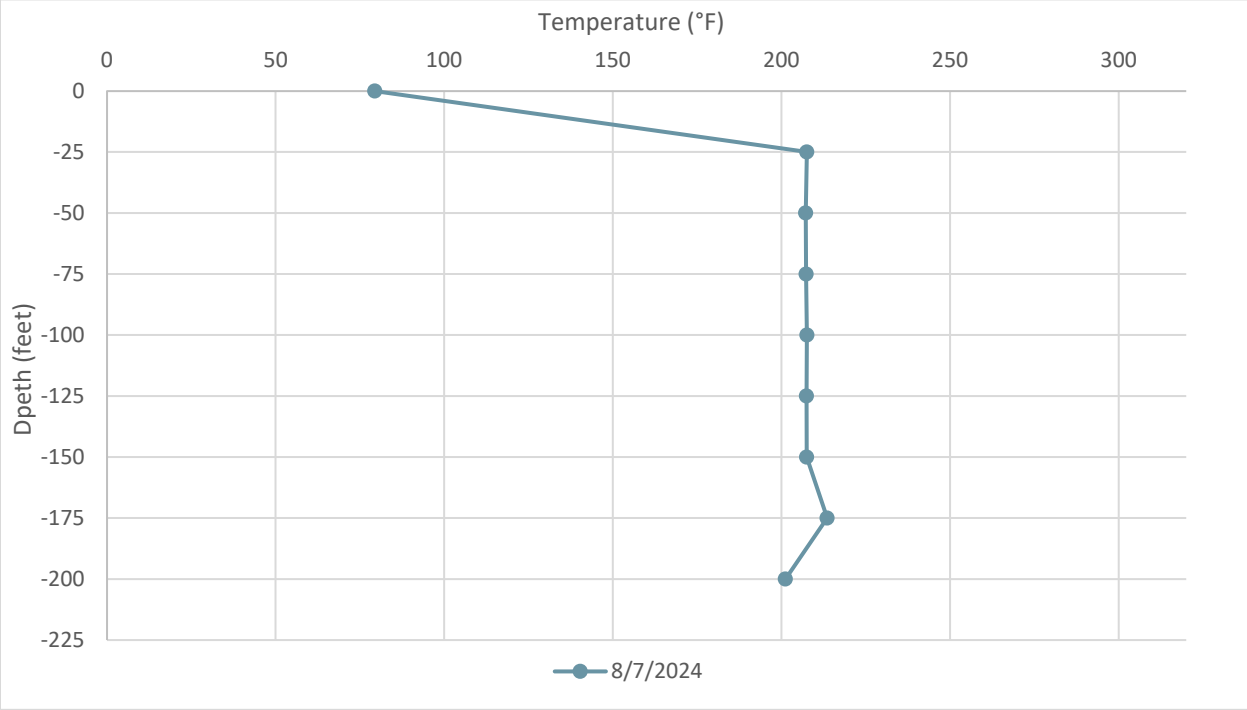


Figure B - 18 Average Temperatures Recorded by TP-5 on August 14, 2024

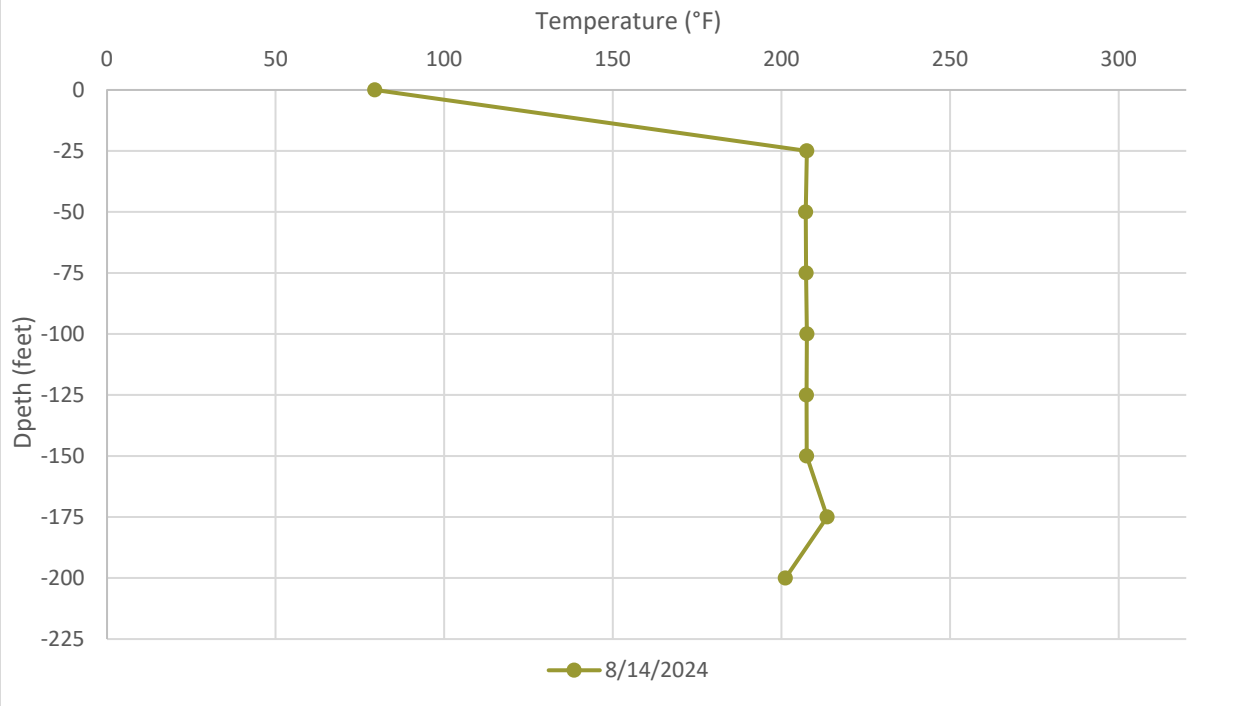


Figure B - 19 Average Temperatures Recorded by TP-5 on August 21, 2024

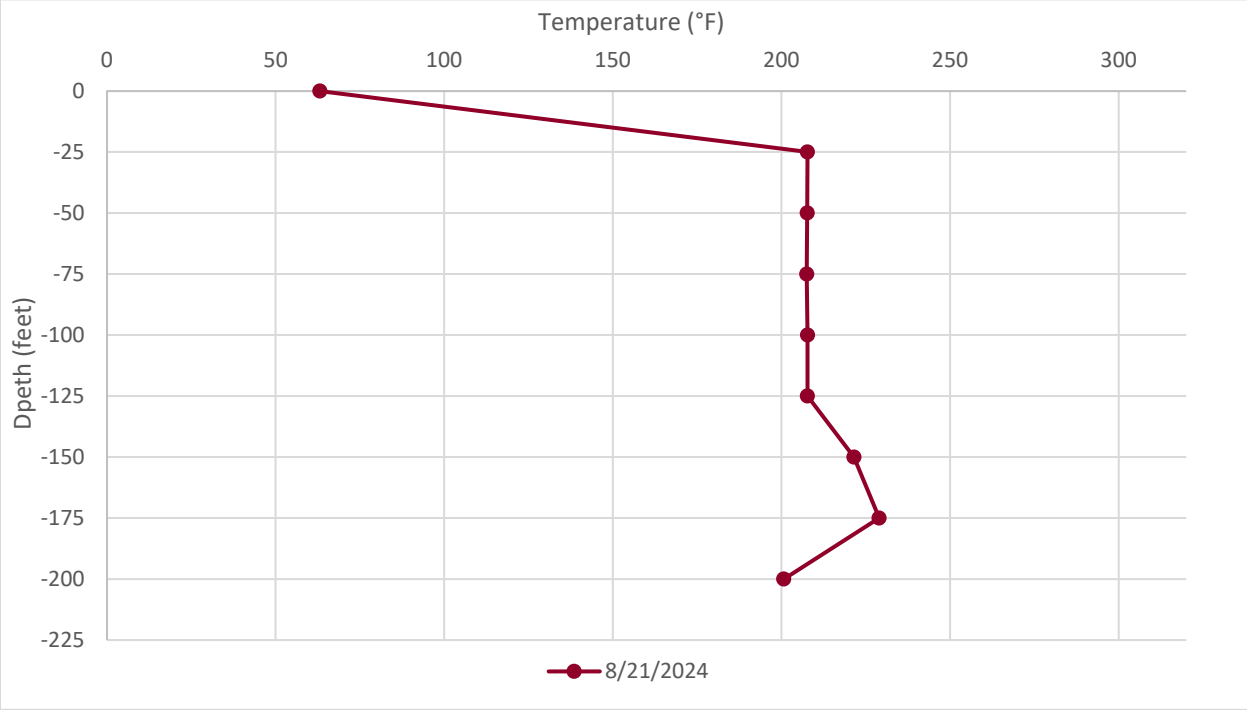


Figure B - 20 Average Temperatures Recorded by TP-5 on August 28, 2024

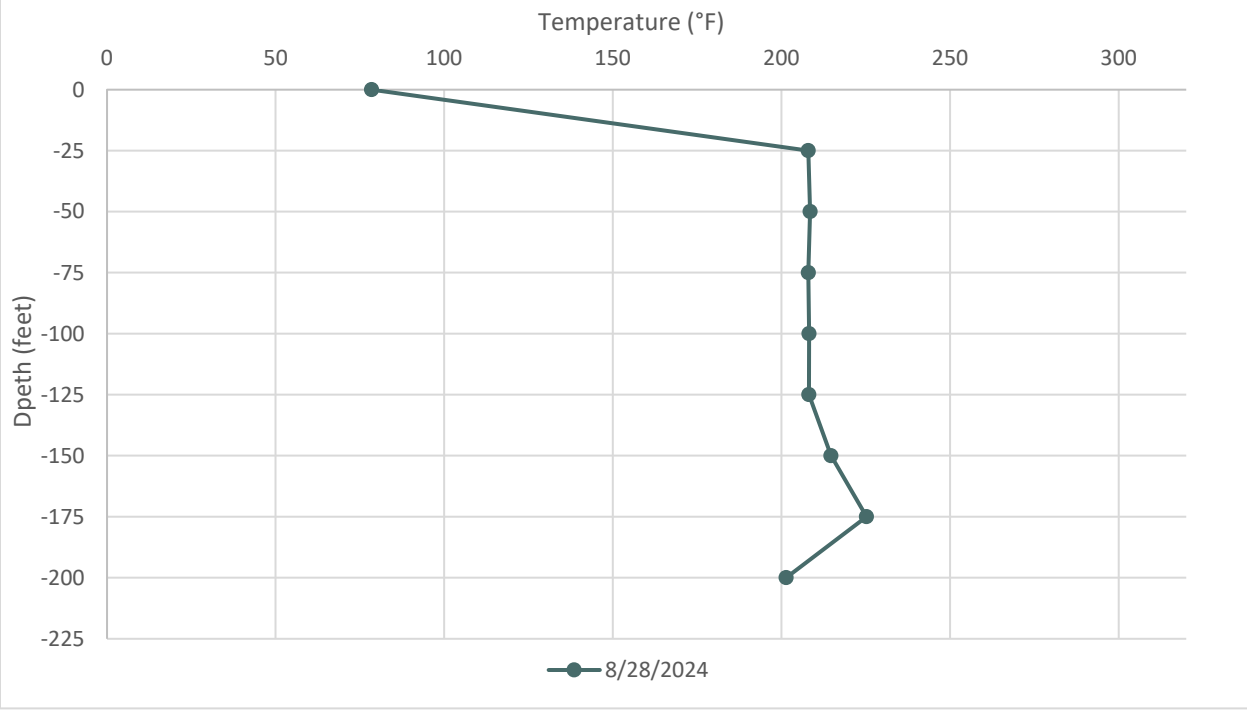


Figure B - 21 Average Temperatures Recorded by TP-6 on August 7, 2024

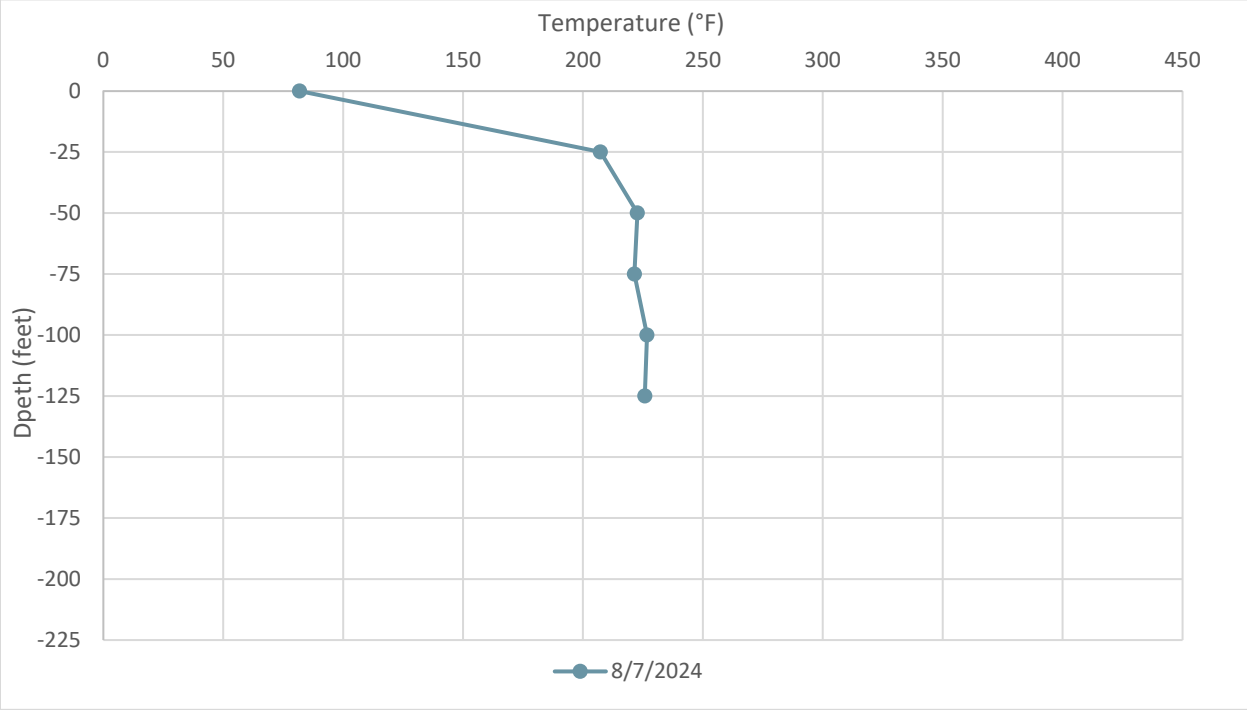


Figure B - 22 Average Temperatures Recorded by TP-6 on August 14, 2024

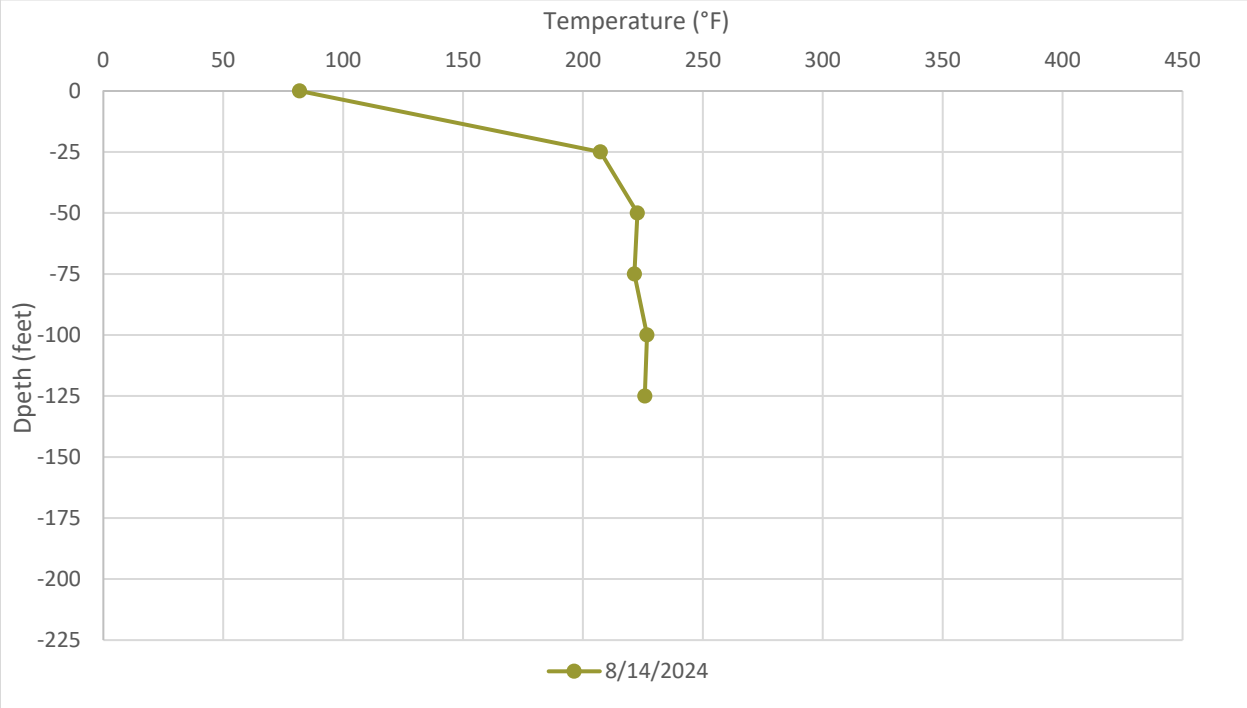


Figure B - 23 Average Temperatures Recorded by TP-6 on August 21, 2024

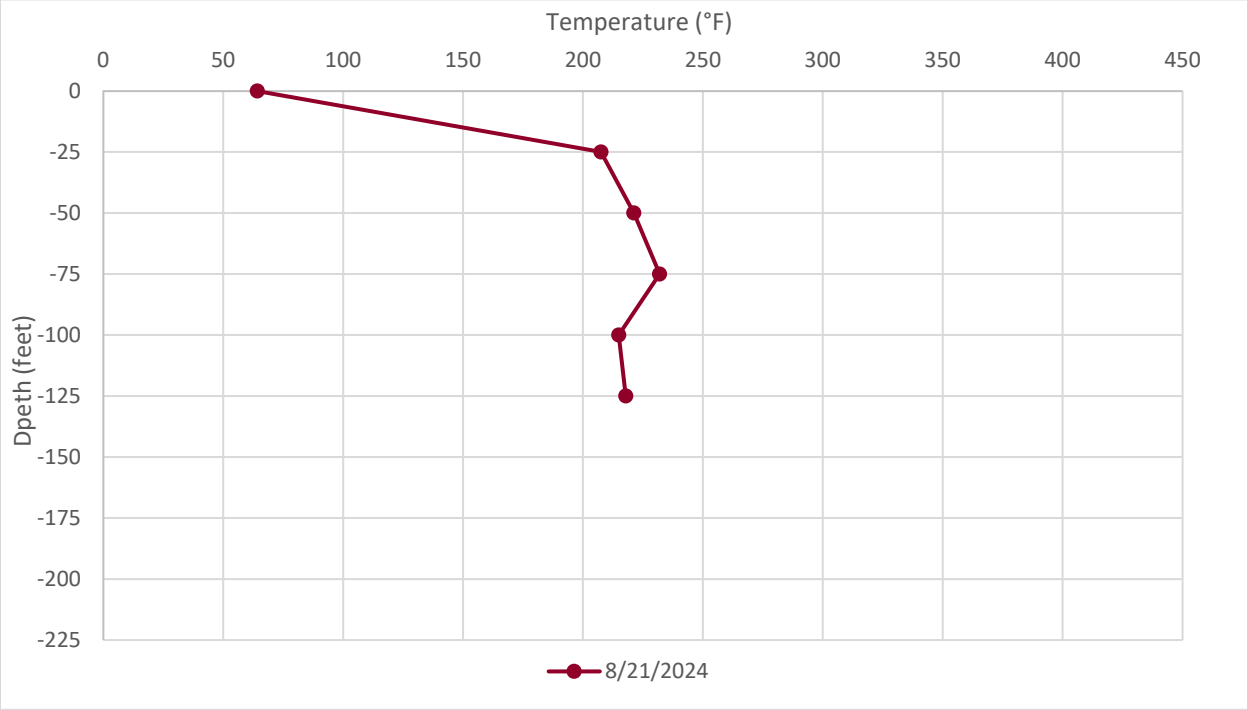


Figure B - 24 Average Temperatures Recorded by TP-6 on August 28, 2024

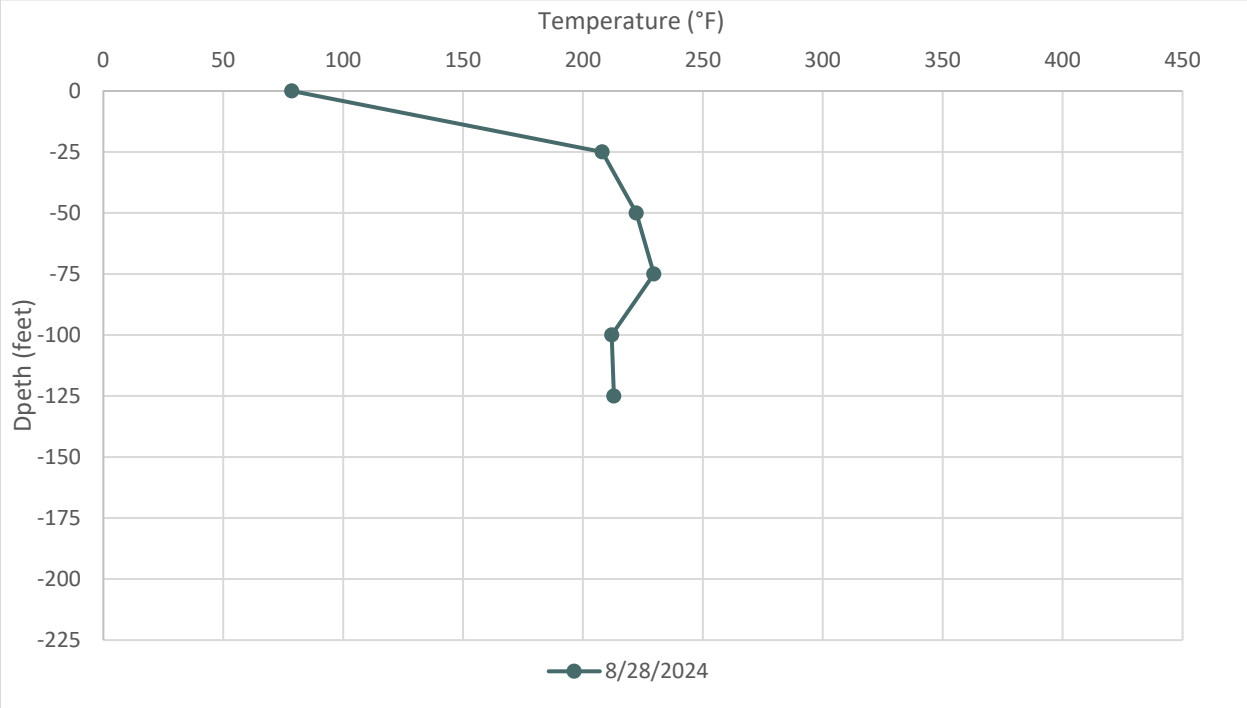


Figure B - 25 Average Temperatures Recorded by TP-7 on August 7, 2024

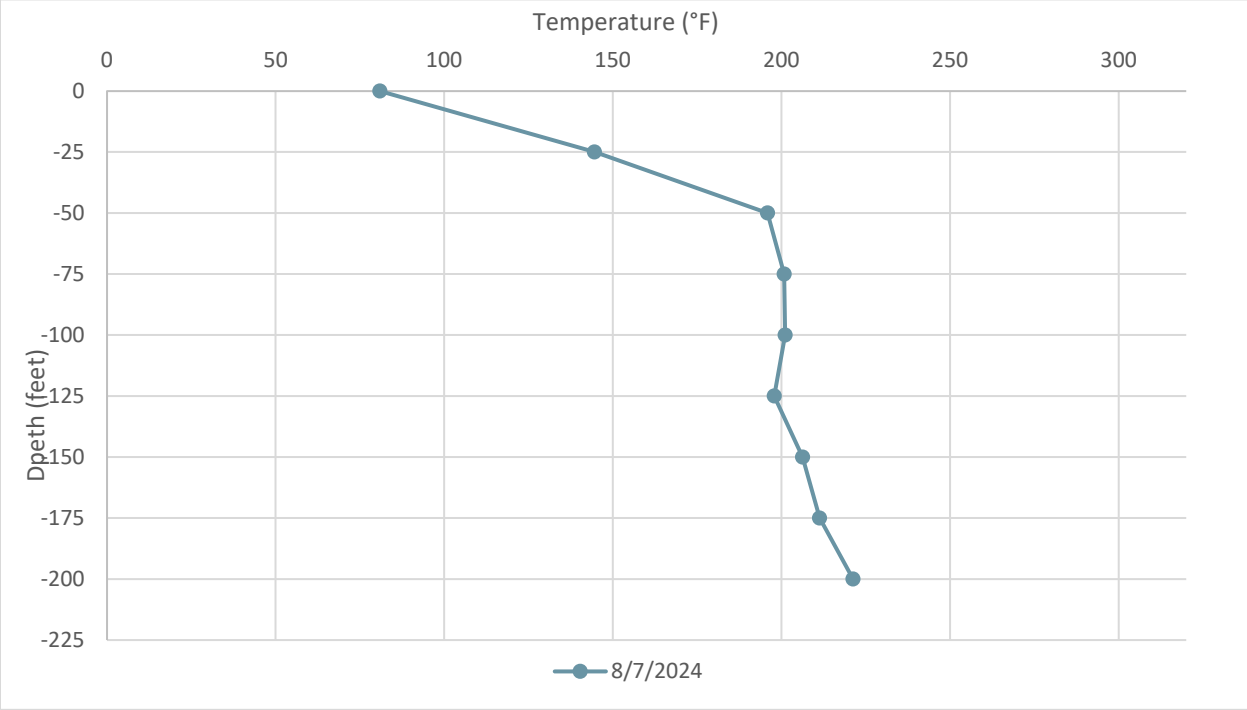


Figure B - 26 Average Temperatures Recorded by TP-7 on August 14, 2024

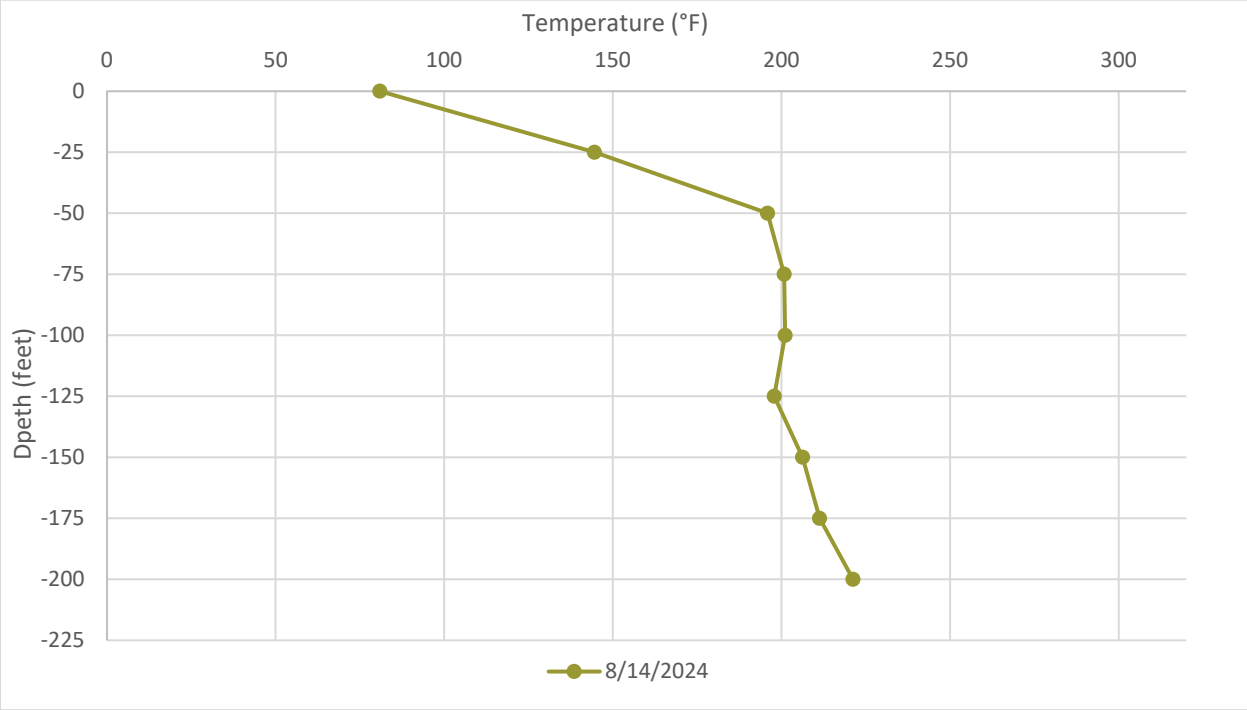


Figure B - 27 Average Temperatures Recorded by TP-7 on August 21, 2024

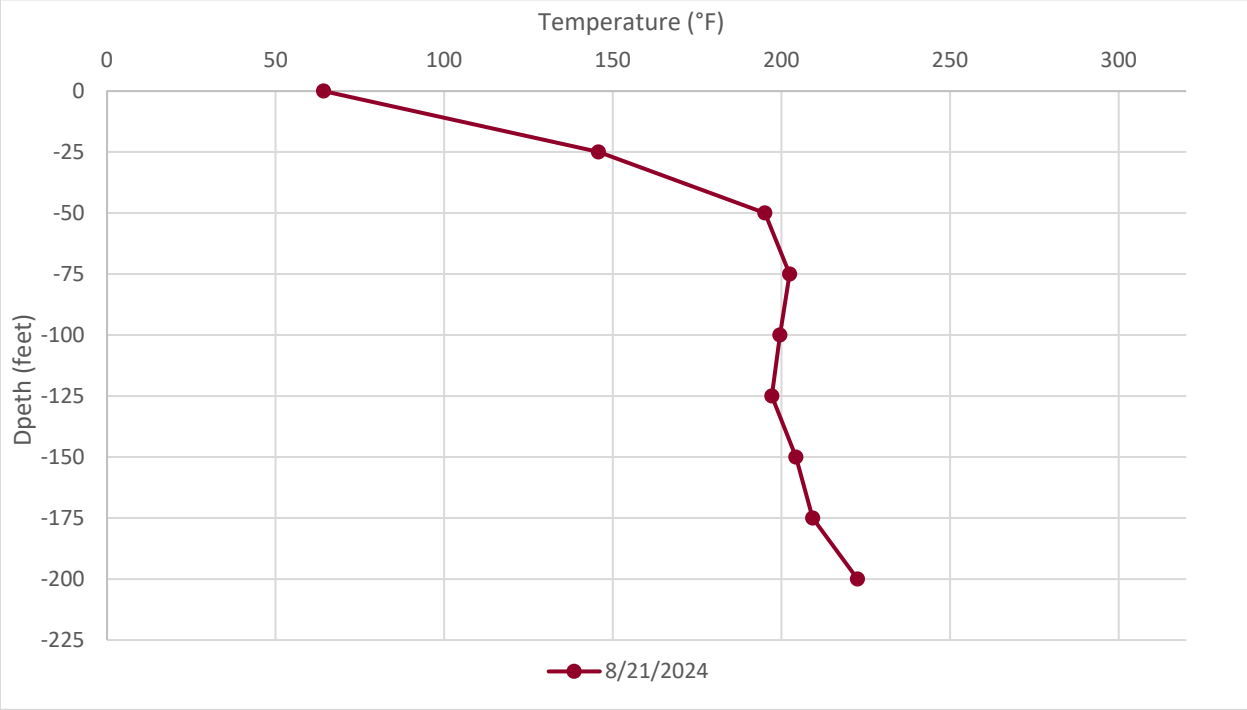


Figure B - 28 Average Temperatures Recorded by TP-7 on August 28, 2024

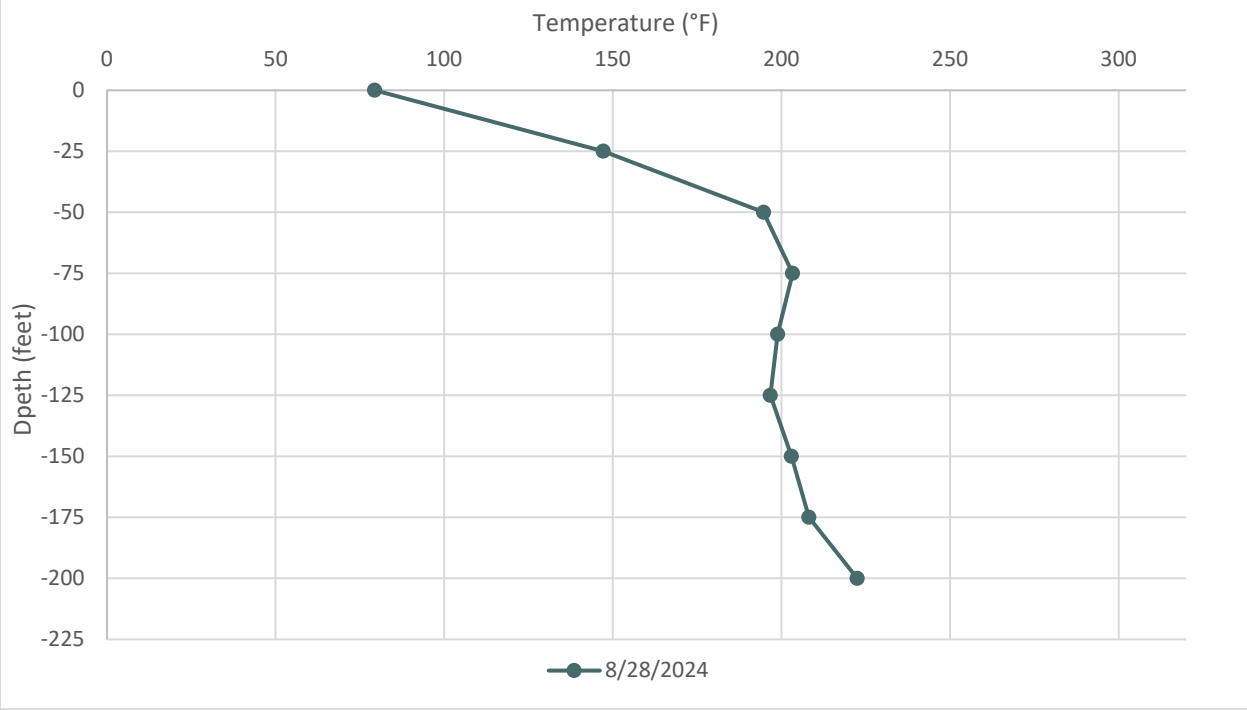


Figure B - 29 Average Temperatures Recorded by TP-8 on August 7, 2024

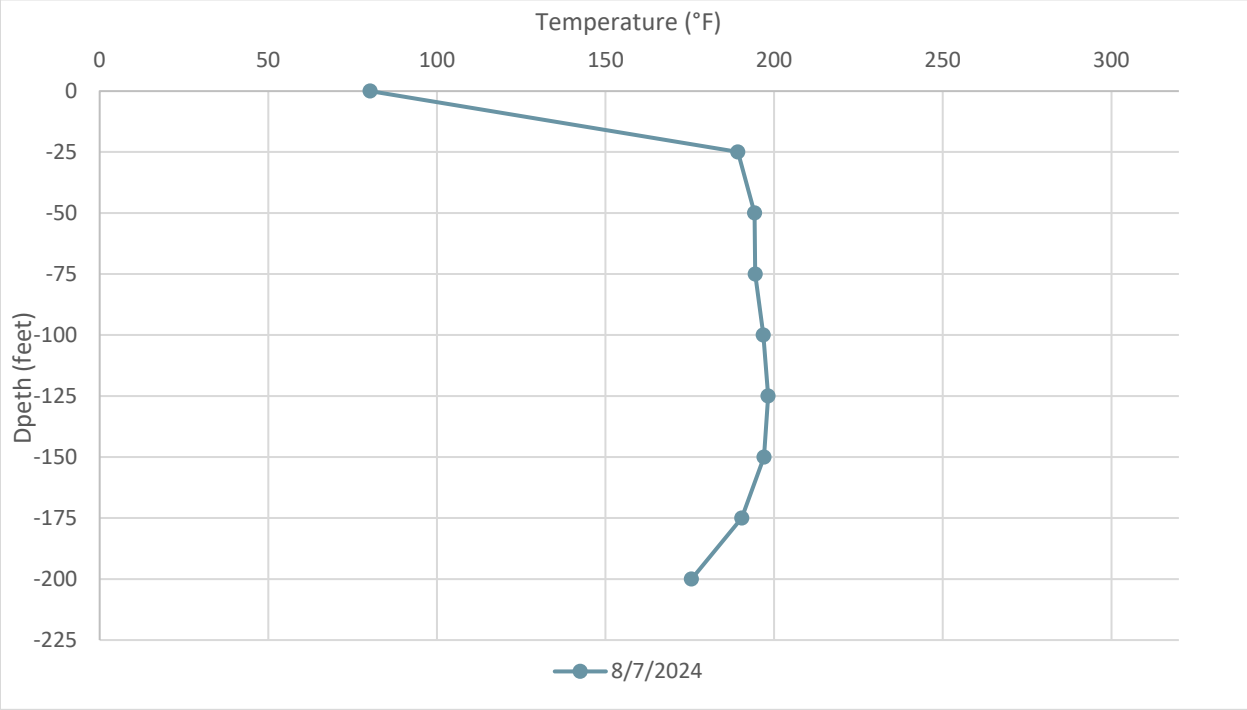


Figure B - 30 Average Temperatures Recorded by TP-8 on August 14, 2024

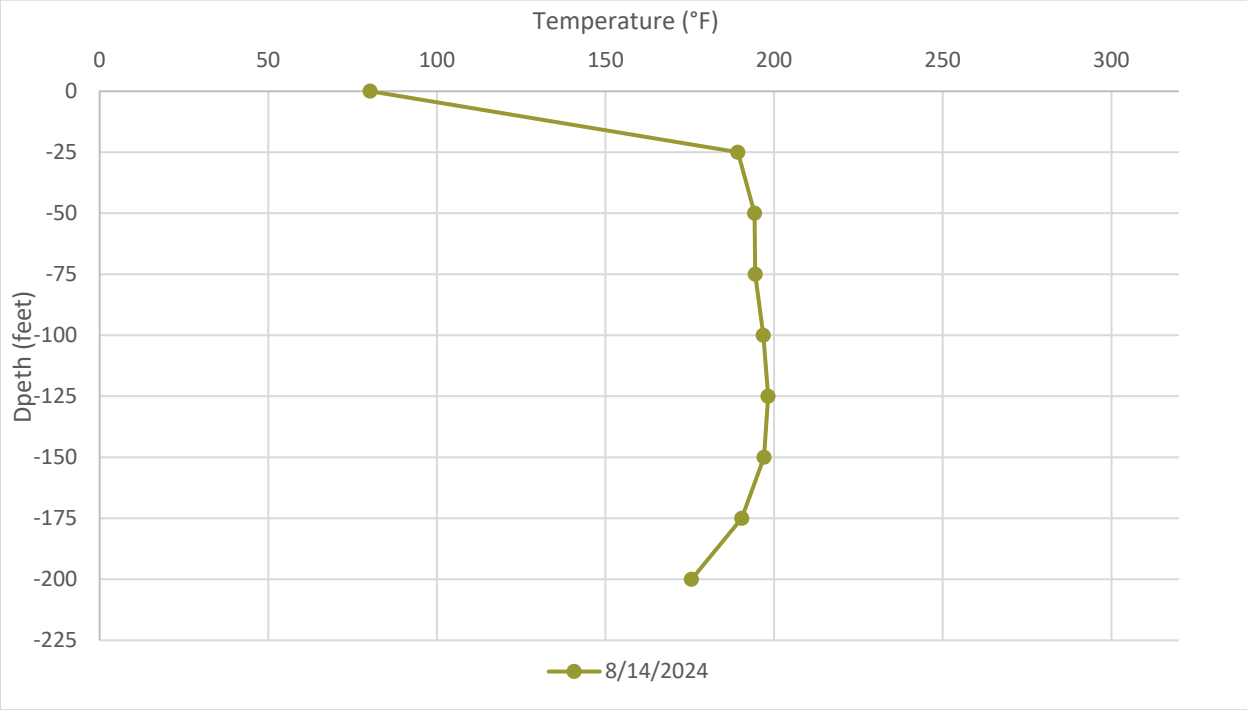


Figure B - 31 Average Temperatures Recorded by TP-8 on August 21, 2024

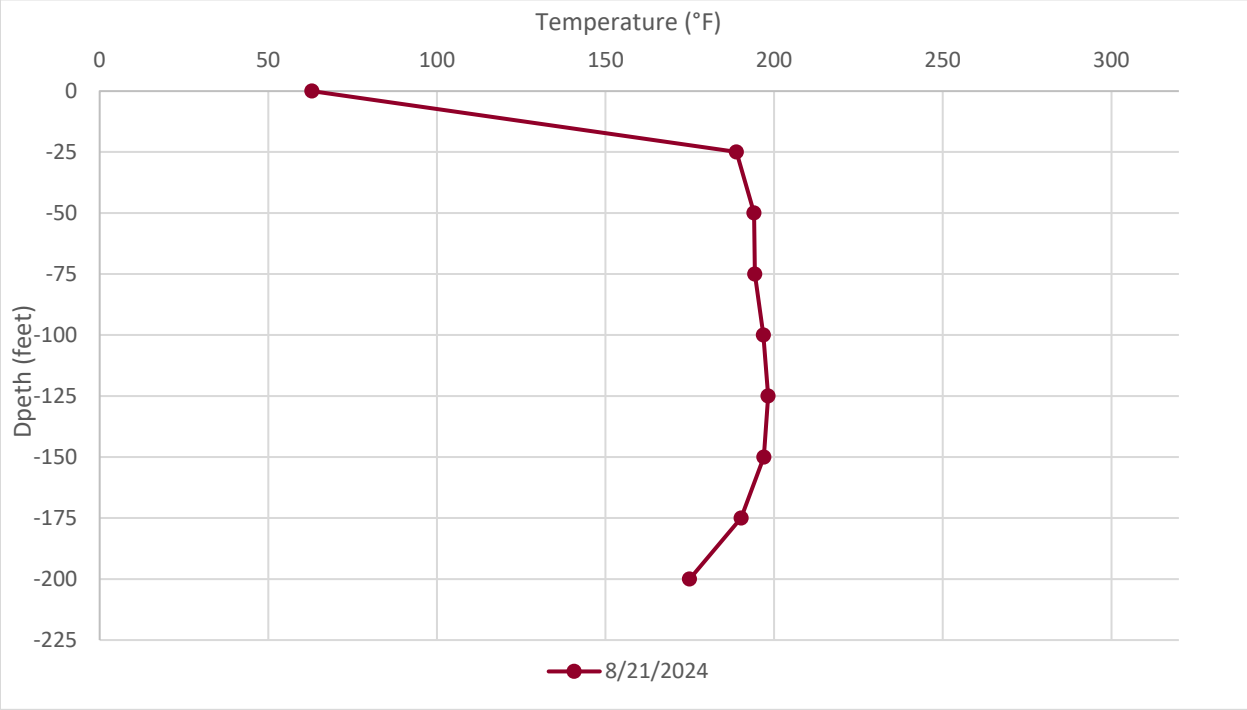


Figure B - 32 Average Temperatures Recorded by TP-8 on August 28, 2024

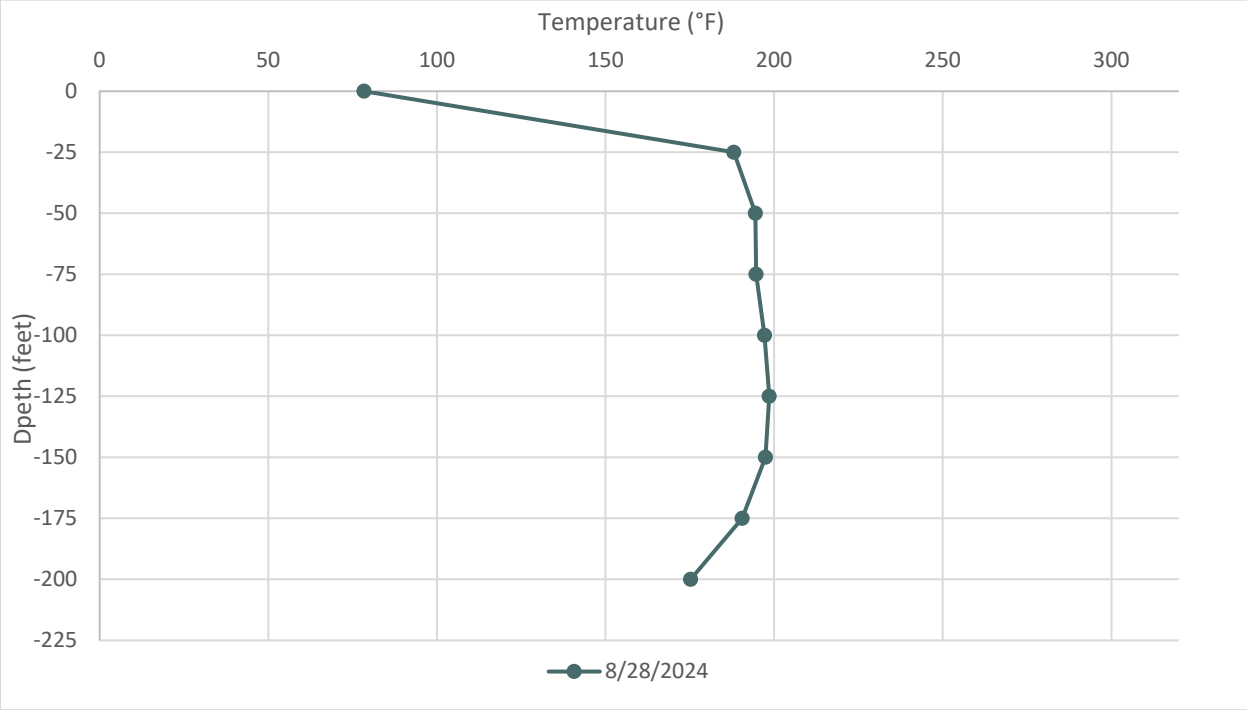


Figure B - 33 Average Temperatures Recorded by TP-9 on August 7, 2024

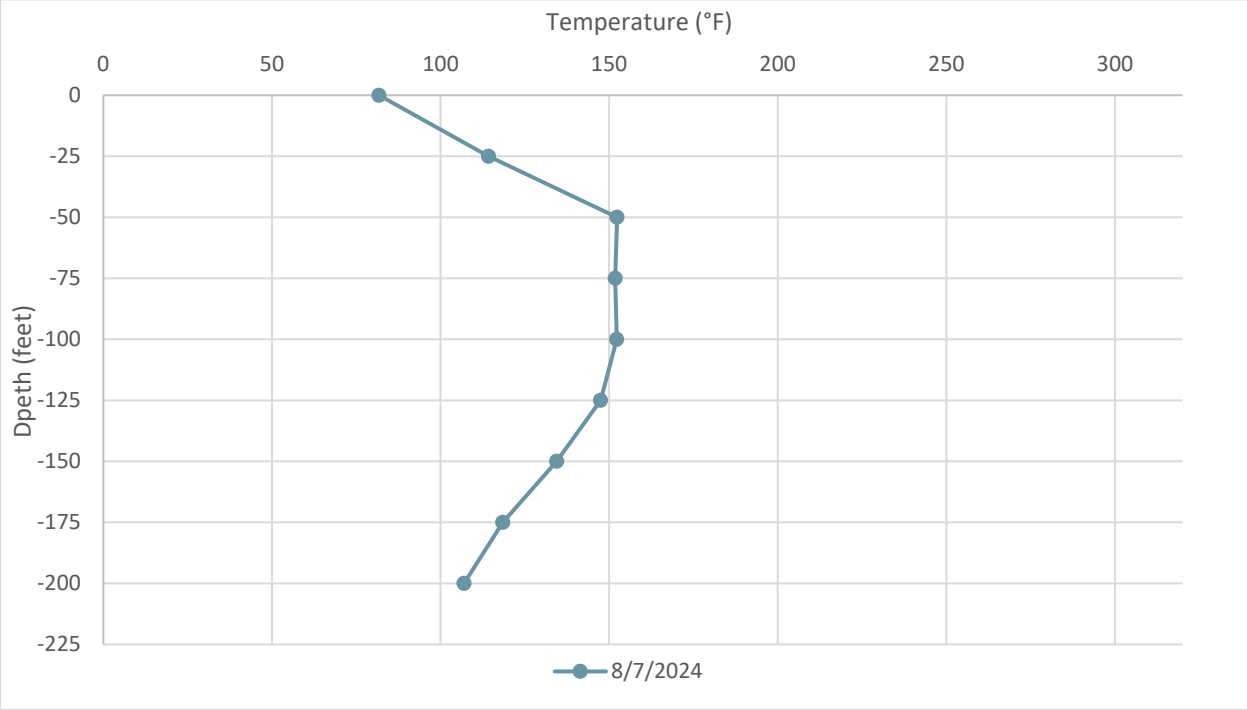


Figure B - 34 Average Temperatures Recorded by TP-9 on August 14, 2024

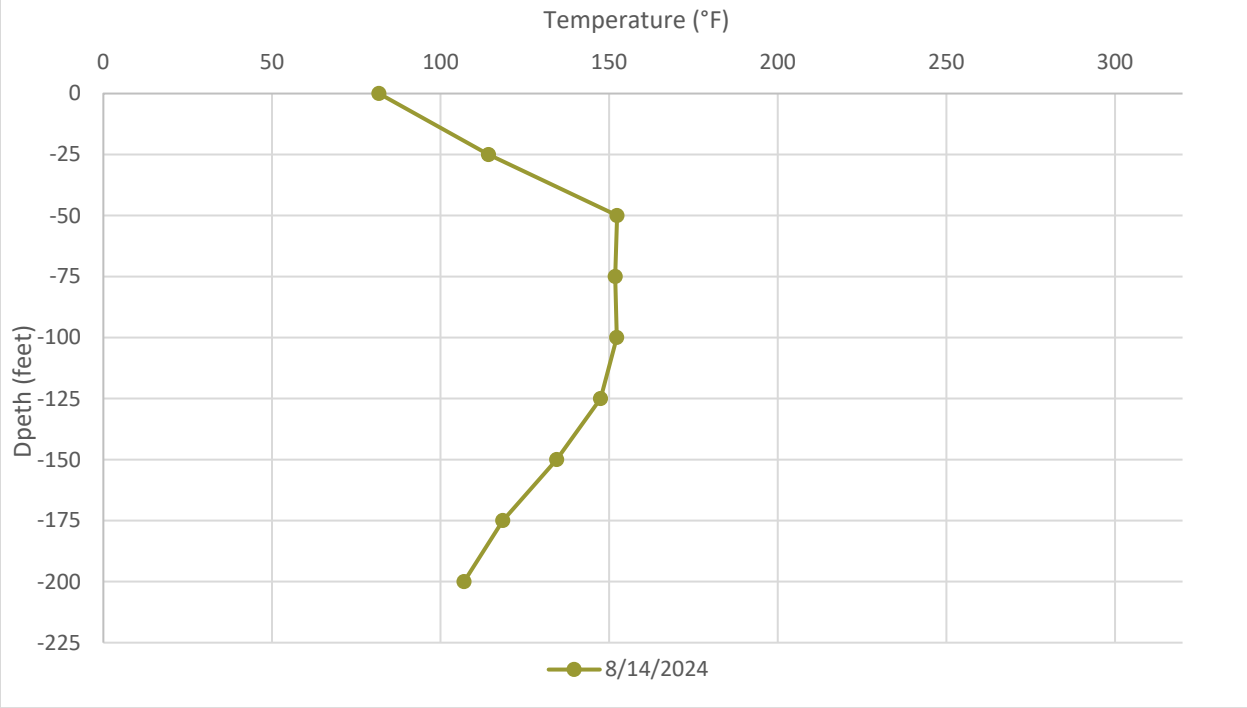


Figure B - 35 Average Temperatures Recorded by TP-9 on August 21, 2024

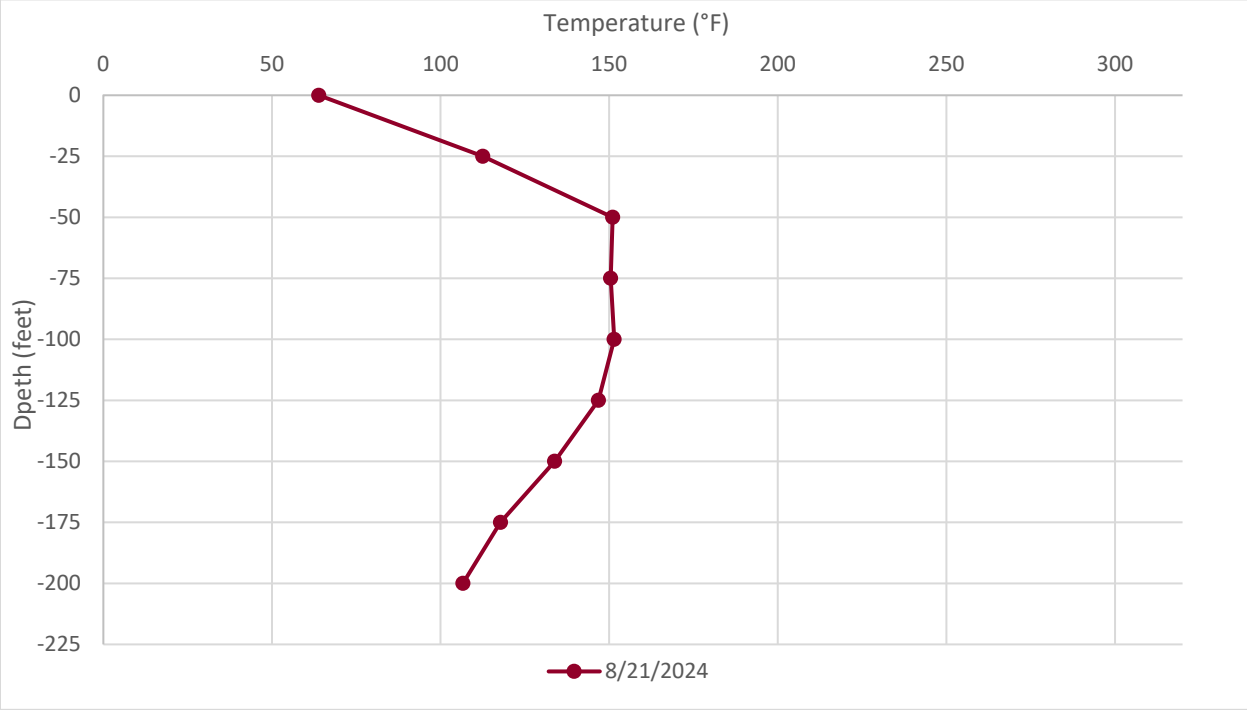
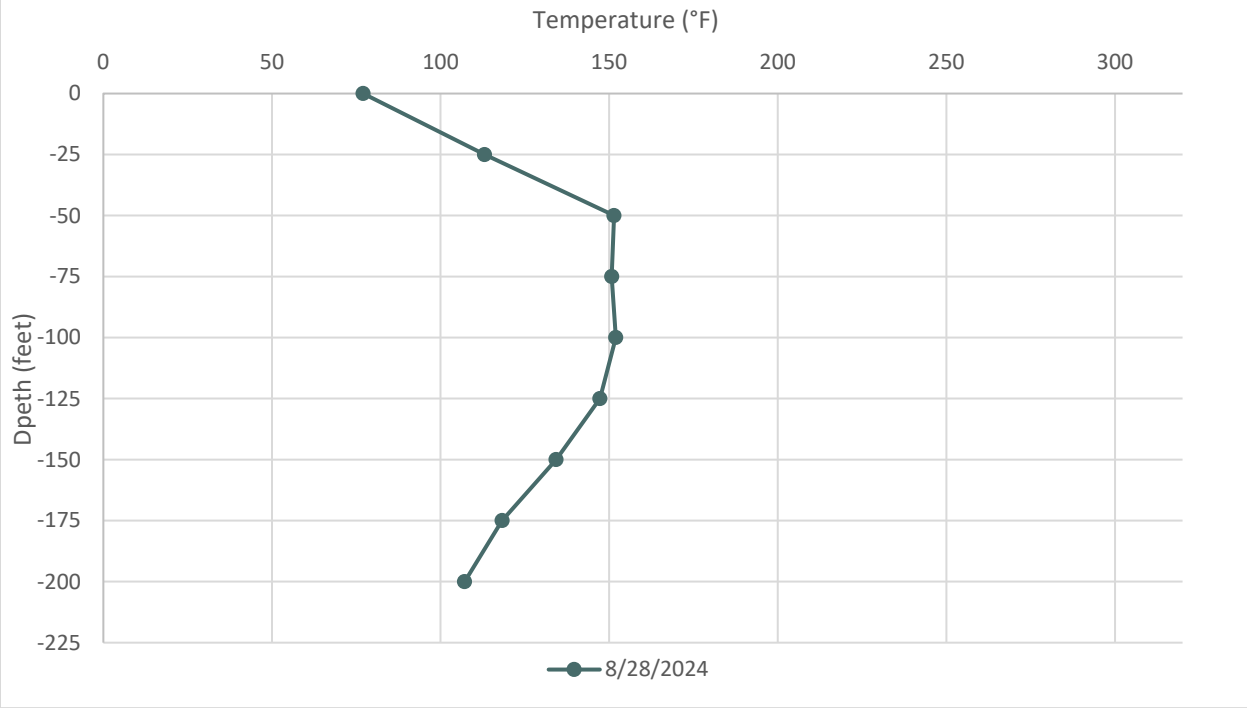


Figure B - 36 Average Temperatures Recorded by TP-9 on August 28, 2024



Appendix C

Daily Wellhead Temperature Averages

Solid Waste Permit 588 Daily Wellhead Temperature Averages

The data provided in this report represent initial readings provided by field instrumentation without Validation, analysis, quality assurance review, or context based on operating conditions. This report is subject to revision following quality assurance review and an analysis of operating conditions. SCS will continue to provide a supplemental report with additional information and further analysis on a monthly basis at a minimum.

SCS ENGINEERS

07222143.00 | September 3, 2024

274 Granite Run Drive
Lancaster, PA 17601
717-550-6330

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 32R

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	110.3	107.1	115.6
Aug 2	111.3	107.0	116.9
Aug 3	109.2	105.4	113.3
Aug 4	100.1	74.3	105.8
Aug 5	96.5	64.8	115.5
Aug 6	111.5	106.5	116.7
Aug 7	112.0	107.6	117.1
Aug 8	108.9	107.1	110.1
Aug 9	108.9	105.7	112.4
Aug 10	109.2	105.7	114.1
Aug 11	108.9	104.0	114.2
Aug 12	110.0	105.0	115.4
Aug 13	111.6	108.1	116.5
Aug 14	112.7	108.1	117.7
Aug 15	112.8	107.1	118.0
Aug 16	112.1	106.8	117.9
Aug 17	112.3	107.9	118.4
Aug 18	111.1	108.2	116.4
Aug 19	110.6	107.5	115.5
Aug 20	108.2	104.7	112.3
Aug 21	107.7	101.9	115.5
Aug 22	108.9	104.0	114.9
Aug 23	110.2	103.8	116.7
Aug 24	111.1	105.3	117.3
Aug 25	111.6	106.1	117.7
Aug 26	112.3	107.5	118.2
Aug 27	112.7	107.8	117.9
Aug 28	112.8	107.1	118.8
Aug 29	113.1	107.7	118.7
Aug 30	112.5	108.6	120.4
Summary	**110.0**	**96.5**	**113.1**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 36A

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	85.5	78.1	95.5
Aug 2	83.9	74.6	96.4
Aug 3	79.9	75.2	90.0
Aug 4	84.7	75.0	102.7
Aug 5	87.6	73.3	104.5
Aug 6	87.2	75.2	102.7
Aug 7	89.2	75.9	107.6
Aug 8	80.7	76.1	86.5
Aug 9	83.9	75.5	95.0
Aug 10	84.7	73.7	100.1
Aug 11	82.8	69.8	97.9
Aug 12	82.9	69.6	99.0
Aug 13	83.9	75.2	97.4
Aug 14	86.3	74.0	103.7
Aug 15	85.4	72.9	101.8
Aug 16	82.4	73.7	95.2
Aug 17	82.4	75.2	98.1
Aug 18	79.4	73.1	92.7
Aug 19	80.0	74.8	90.9
Aug 20	76.6	68.2	86.6
Aug 21	77.4	63.4	97.8
Aug 22	80.0	67.6	99.3
Aug 23	83.7	69.2	105.2
Aug 24	84.5	69.9	107.9
Aug 25	86.2	71.7	107.7
Aug 26	87.8	73.2	108.9
Aug 27	87.6	73.4	106.9
Aug 28	89.0	75.2	108.1
Aug 29	90.0	76.7	113.8
Aug 30	88.7	78.6	109.1
Summary	**84.1**	**76.6**	**90.0**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 49

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	149.0	148.5	149.6
Aug 2	148.9	145.6	149.9
Aug 3	138.7	124.3	149.0
Aug 4	116.8	95.0	128.8
Aug 5	129.7	82.3	160.3
Aug 6	150.5	150.0	150.9
Aug 7	117.5	76.4	150.3
Aug 8	74.4	69.2	80.4
Aug 9	77.6	68.5	91.1
Aug 10	77.1	64.5	90.3
Aug 11	74.7	60.3	92.9
Aug 12	74.8	59.4	92.1
Aug 13	76.0	66.1	92.0
Aug 14	78.0	63.4	96.3
Aug 15	77.1	63.2	92.8
Aug 16	75.5	67.6	90.1
Aug 17	74.6	67.2	88.5
Aug 18	70.7	63.7	83.6
Aug 19	71.7	64.9	84.4
Aug 20	66.2	56.2	78.2
Aug 21	65.9	49.8	85.3
Aug 22	69.3	54.9	87.1
Aug 23	73.1	56.6	92.7
Aug 24	74.6	57.4	93.0
Aug 25	76.5	60.2	94.9
Aug 26	77.8	60.9	97.3
Aug 27	78.2	62.8	96.8
Aug 28	80.4	63.3	99.9
Aug 29	82.5	66.1	102.9
Aug 30	80.6	67.9	101.8
Summary	**89.3**	**65.9**	**150.5**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 50

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	108.5	107.2	111.0
Aug 2	108.5	107.1	110.9
Aug 3	96.8	77.7	107.8
Aug 4	82.0	72.3	97.5
Aug 5	97.0	66.2	117.7
Aug 6	110.7	108.5	115.5
Aug 7	110.2	108.0	114.6
Aug 8	109.2	108.4	112.1
Aug 9	109.1	108.3	110.3
Aug 10	108.8	107.5	110.2
Aug 11	108.2	106.7	109.8
Aug 12	108.8	106.4	113.2
Aug 13	109.2	107.8	110.9
Aug 14	109.3	107.4	111.8
Aug 15	109.3	107.3	111.9
Aug 16	109.0	107.0	111.4
Aug 17	108.4	107.0	110.0
Aug 18	107.8	107.4	109.0
Aug 19	108.3	107.2	111.5
Aug 20	107.9	106.6	110.4
Aug 21	107.8	105.8	111.3
Aug 22	107.7	106.2	109.2
Aug 23	108.4	106.3	111.5
Aug 24	108.1	106.6	110.0
Aug 25	108.1	106.7	109.7
Aug 26	108.8	106.8	112.3
Aug 27	109.3	107.0	113.0
Aug 28	109.2	107.5	113.4
Aug 29	109.4	107.7	112.2
Aug 30	109.5	108.0	112.7
Summary	**107.1**	**82.0**	**110.7**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 51

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	75.7	67.9	91.4
Aug 2	76.2	69.2	90.7
Aug 3	73.4	68.3	88.5
Aug 4	76.7	67.4	94.3
Aug 5	79.7	65.6	97.7
Aug 6	80.5	68.2	95.4
Aug 7	81.6	68.6	97.7
Aug 8	74.4	69.8	79.7
Aug 9	77.6	69.1	90.6
Aug 10	76.9	64.9	93.0
Aug 11	74.4	61.1	93.0
Aug 12	74.7	60.1	92.8
Aug 13	76.2	66.0	91.9
Aug 14	77.9	64.0	96.8
Aug 15	77.2	63.9	95.7
Aug 16	75.4	67.6	90.2
Aug 17	74.6	67.5	88.8
Aug 18	71.1	64.5	85.7
Aug 19	71.6	65.6	83.2
Aug 20	66.1	57.2	77.9
Aug 21	65.7	50.7	87.0
Aug 22	68.9	55.9	88.4
Aug 23	72.8	57.9	95.6
Aug 24	74.7	58.2	97.0
Aug 25	76.9	60.9	99.5
Aug 26	78.2	61.7	102.4
Aug 27	78.6	63.6	100.1
Aug 28	80.7	64.0	104.5
Aug 29	82.3	66.1	103.5
Aug 30	80.9	68.5	105.2
Summary	**75.7**	**65.7**	**82.3**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 52

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	147.2	145.8	147.9
Aug 2	146.8	145.2	147.8
Aug 3	146.3	142.4	148.8
Aug 4	149.7	146.7	153.2
Aug 5	159.1	148.1	176.4
Aug 6	160.1	154.8	173.9
Aug 7	152.7	150.5	155.0
Aug 8	154.9	148.9	171.5
Aug 9	157.8	151.9	173.0
Aug 10	151.8	150.0	153.8
Aug 11	149.1	148.2	150.0
Aug 12	155.7	147.3	172.1
Aug 13	157.2	150.9	171.9
Aug 14	157.2	151.2	172.7
Aug 15	157.6	150.9	174.0
Aug 16	158.2	152.2	173.4
Aug 17	152.4	150.3	154.0
Aug 18	149.7	149.0	150.7
Aug 19	155.7	148.5	171.6
Aug 20	156.3	150.2	172.1
Aug 21	156.9	150.2	173.8
Aug 22	151.6	149.5	153.3
Aug 23	155.9	148.4	173.0
Aug 24	151.3	149.2	152.7
Aug 25	149.0	148.2	149.8
Aug 26	158.1	147.3	170.3
Aug 27	0.0	170.3	170.3
Aug 28	0.0	170.3	170.3
Aug 29	0.0	170.3	170.3
Aug 30	0.0	170.3	170.3
Summary	**133.3**	**0.0**	**160.1**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 53

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	122.7	117.7	132.3
Aug 2	124.1	118.4	133.5
Aug 3	118.5	112.2	124.8
Aug 4	117.6	110.7	131.0
Aug 5	133.7	108.0	156.5
Aug 6	167.7	159.5	173.6
Aug 7	167.8	145.2	178.6
Aug 8	139.9	133.5	156.3
Aug 9	135.4	131.6	139.8
Aug 10	131.7	126.6	139.7
Aug 11	129.1	123.3	140.0
Aug 12	136.0	121.9	153.9
Aug 13	152.7	148.4	157.0
Aug 14	155.1	151.9	159.9
Aug 15	154.9	150.8	160.3
Aug 16	155.6	147.9	159.3
Aug 17	140.9	71.4	155.6
Aug 18	134.7	129.8	139.9
Aug 19	132.3	127.8	137.5
Aug 20	127.2	120.8	135.5
Aug 21	132.0	116.4	148.7
Aug 22	129.2	122.0	140.7
Aug 23	133.3	122.6	151.0
Aug 24	132.2	122.8	142.9
Aug 25	133.6	124.6	145.9
Aug 26	135.8	126.5	152.0
Aug 27	136.5	127.9	150.8
Aug 28	138.9	128.9	151.5
Aug 29	145.2	138.3	154.3
Aug 30	146.8	133.4	157.0
Summary	**138.0**	**117.6**	**167.8**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 54

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	87.5	75.1	105.3
Aug 2	93.5	82.8	109.9
Aug 3	82.8	74.8	92.5
Aug 4	82.4	73.3	100.4
Aug 5	91.2	70.3	114.5
Aug 6	95.8	83.9	110.5
Aug 7	98.4	86.9	115.1
Aug 8	92.4	88.5	97.0
Aug 9	96.0	88.7	107.3
Aug 10	93.0	79.9	109.3
Aug 11	94.1	78.5	113.4
Aug 12	97.0	81.7	115.5
Aug 13	121.5	93.3	174.1
Aug 14	161.5	142.9	180.6
Aug 15	168.2	150.1	184.7
Aug 16	177.9	164.7	184.7
Aug 17	160.5	147.7	166.2
Aug 18	142.0	128.9	150.3
Aug 19	157.1	127.9	181.1
Aug 20	162.9	150.2	175.7
Aug 21	164.7	153.5	176.6
Aug 22	157.1	147.4	161.7
Aug 23	158.2	143.6	174.0
Aug 24	158.0	149.7	164.8
Aug 25	149.9	142.3	154.7
Aug 26	155.8	140.5	175.8
Aug 27	174.1	159.5	189.4
Aug 28	177.5	161.9	188.8
Aug 29	172.6	166.4	183.6
Aug 30	176.8	163.7	189.5
Summary	**133.3**	**82.4**	**177.9**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 55

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	130.9	126.7	137.6
Aug 2	127.3	101.6	139.0
Aug 3	117.9	106.9	128.2
Aug 4	119.0	108.4	134.0
Aug 5	125.4	109.7	140.8
Aug 6	128.7	123.7	136.3
Aug 7	128.6	121.0	137.2
Aug 8	105.5	87.7	127.4
Aug 9	99.1	90.7	111.2
Aug 10	101.6	90.2	114.9
Aug 11	101.1	85.9	119.8
Aug 12	102.4	85.8	121.7
Aug 13	105.6	95.9	119.7
Aug 14	105.5	93.5	124.1
Aug 15	105.3	90.4	123.6
Aug 16	101.4	78.6	115.2
Aug 17	105.6	92.9	122.4
Aug 18	102.4	91.9	113.1
Aug 19	102.8	89.6	113.1
Aug 20	96.1	84.2	107.7
Aug 21	97.8	82.9	119.6
Aug 22	103.8	89.8	127.1
Aug 23	112.5	96.9	131.5
Aug 24	114.7	99.0	132.7
Aug 25	117.6	105.1	135.5
Aug 26	121.9	110.1	137.4
Aug 27	118.1	65.2	134.3
Aug 28	118.8	65.5	134.1
Aug 29	123.4	111.9	138.6
Aug 30	121.3	96.1	137.8
Summary	**112.1**	**96.1**	**130.9**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 56

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	144.2	142.3	146.6
Aug 2	144.9	141.5	148.4
Aug 3	132.1	121.3	146.1
Aug 4	125.0	120.1	135.8
Aug 5	136.9	117.3	149.9
Aug 6	145.2	142.8	148.5
Aug 7	146.1	143.5	149.7
Aug 8	144.7	143.3	146.1
Aug 9	145.8	144.5	147.1
Aug 10	145.9	143.6	148.4
Aug 11	145.6	143.6	148.3
Aug 12	146.3	143.1	149.5
Aug 13	146.4	144.5	148.7
Aug 14	146.8	143.9	149.8
Aug 15	146.9	144.4	150.1
Aug 16	146.8	141.0	149.4
Aug 17	146.9	144.8	151.0
Aug 18	147.0	144.1	148.5
Aug 19	146.7	143.5	148.5
Aug 20	145.4	143.6	146.8
Aug 21	145.7	142.5	149.2
Aug 22	146.2	143.5	149.5
Aug 23	147.1	145.2	150.1
Aug 24	147.4	145.0	150.8
Aug 25	147.8	145.5	151.2
Aug 26	147.9	145.7	151.4
Aug 27	148.0	146.1	151.3
Aug 28	148.6	146.4	152.1
Aug 29	148.8	146.5	152.0
Aug 30	148.2	145.8	151.2
Summary	**145.1**	**125.0**	**148.8**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 57

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	147.1	144.8	149.8
Aug 2	148.7	143.2	155.3
Aug 3	116.8	90.2	149.3
Aug 4	99.5	87.9	119.4
Aug 5	126.9	86.3	154.8
Aug 6	149.4	147.0	152.7
Aug 7	151.1	147.5	155.0
Aug 8	147.8	145.3	150.5
Aug 9	148.9	146.6	151.1
Aug 10	148.5	145.1	153.3
Aug 11	147.6	143.5	153.2
Aug 12	147.6	142.9	153.4
Aug 13	147.2	144.0	153.0
Aug 14	146.9	142.3	152.8
Aug 15	146.9	141.7	153.2
Aug 16	145.6	137.9	153.9
Aug 17	145.8	141.1	152.8
Aug 18	144.4	139.5	147.6
Aug 19	143.8	140.5	147.8
Aug 20	139.6	134.5	144.6
Aug 21	139.7	133.5	149.9
Aug 22	141.6	134.4	151.8
Aug 23	143.6	136.4	153.0
Aug 24	145.0	137.7	153.7
Aug 25	145.8	137.6	154.9
Aug 26	146.4	139.4	155.8
Aug 27	146.9	140.2	156.6
Aug 28	149.4	143.0	157.2
Aug 29	149.8	144.2	156.0
Aug 30	148.9	134.4	157.9
Summary	**143.2**	**99.5**	**151.1**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 58

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	99.5	96.7	104.4
Aug 2	99.9	95.4	105.1
Aug 3	94.1	89.1	98.2
Aug 4	94.4	89.0	102.8
Aug 5	99.3	89.0	109.5
Aug 6	102.2	97.5	107.8
Aug 7	102.7	97.9	108.2
Aug 8	99.4	97.7	101.7
Aug 9	100.4	96.9	105.1
Aug 10	99.7	95.5	104.1
Aug 11	98.8	93.6	105.3
Aug 12	98.5	92.3	105.0
Aug 13	100.0	96.1	106.2
Aug 14	100.3	94.4	107.9
Aug 15	99.9	94.4	105.8
Aug 16	99.0	93.9	103.7
Aug 17	99.5	96.8	104.8
Aug 18	97.4	94.9	101.7
Aug 19	97.6	95.3	102.2
Aug 20	95.0	91.0	99.1
Aug 21	95.0	89.0	102.6
Aug 22	96.4	91.5	103.7
Aug 23	98.1	91.8	106.1
Aug 24	98.6	91.7	105.9
Aug 25	99.7	92.9	107.6
Aug 26	100.2	93.5	108.0
Aug 27	100.1	93.9	107.1
Aug 28	100.9	94.7	108.8
Aug 29	101.8	95.4	109.7
Aug 30	100.7	95.3	109.3
Summary	**99.0**	**94.1**	**102.7**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 59

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	122.0	108.3	135.1
Aug 2	134.4	119.2	139.9
Aug 3	113.5	109.7	118.1
Aug 4	112.5	109.6	117.1
Aug 5	123.1	109.9	135.2
Aug 6	125.7	114.0	139.0
Aug 7	118.7	110.9	132.6
Aug 8	121.4	116.0	129.7
Aug 9	125.7	116.6	133.8
Aug 10	115.7	114.0	116.9
Aug 11	114.3	113.1	116.0
Aug 12	114.3	112.6	116.6
Aug 13	114.0	113.0	115.2
Aug 14	114.2	112.7	115.9
Aug 15	110.9	38.9	115.6
Aug 16	114.2	112.8	116.3
Aug 17	114.0	113.2	115.5
Aug 18	113.7	113.2	114.9
Aug 19	114.3	113.1	122.7
Aug 20	113.7	112.4	117.2
Aug 21	113.4	111.8	115.3
Aug 22	113.0	111.5	115.1
Aug 23	112.7	110.1	116.2
Aug 24	112.7	110.3	115.3
Aug 25	113.6	111.7	115.8
Aug 26	117.3	111.8	126.0
Aug 27	122.6	118.8	126.3
Aug 28	126.9	119.8	132.6
Aug 29	125.0	117.3	130.3
Aug 30	117.3	113.7	127.7
Summary	**117.5**	**110.9**	**134.4**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 60

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	116.3	113.0	132.9
Aug 2	115.7	112.6	125.5
Aug 3	109.7	105.3	113.5
Aug 4	110.0	105.0	118.1
Aug 5	116.9	104.7	136.9
Aug 6	117.2	113.1	128.6
Aug 7	117.5	112.2	137.9
Aug 8	116.0	112.7	135.6
Aug 9	116.9	113.0	130.7
Aug 10	114.7	112.4	117.1
Aug 11	113.5	110.8	117.0
Aug 12	115.8	110.4	132.0
Aug 13	118.1	112.3	138.8
Aug 14	118.9	112.5	140.6
Aug 15	118.6	112.6	138.9
Aug 16	118.8	112.8	141.0
Aug 17	115.2	112.5	118.8
Aug 18	114.1	112.8	116.5
Aug 19	118.0	112.8	141.3
Aug 20	117.9	111.8	143.2
Aug 21	117.8	110.4	142.7
Aug 22	115.2	112.7	119.4
Aug 23	119.7	112.1	145.9
Aug 24	116.8	113.5	120.3
Aug 25	116.9	113.7	120.8
Aug 26	121.4	114.3	148.3
Aug 27	124.9	115.7	146.8
Aug 28	121.4	117.1	134.0
Aug 29	120.0	116.5	123.3
Aug 30	126.6	116.9	155.5
Summary	**117.3**	**109.7**	**126.6**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 61

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	0.0	0.0	0.0
Aug 2	0.0	0.0	0.0
Aug 3	0.0	0.0	0.0
Aug 4	0.0	0.0	0.0
Aug 5	0.0	0.0	0.0
Aug 6	0.0	0.0	0.0
Aug 7	0.0	0.0	0.0
Aug 8	139.4	139.0	139.8
Aug 9	139.9	138.5	149.4
Aug 10	139.6	138.6	141.2
Aug 11	139.4	138.2	140.9
Aug 12	139.4	138.3	141.1
Aug 13	140.3	139.2	141.7
Aug 14	140.8	139.6	142.5
Aug 15	140.5	139.3	141.9
Aug 16	140.1	138.7	141.3
Aug 17	140.3	139.5	142.2
Aug 18	140.0	139.6	141.1
Aug 19	139.7	139.0	140.8
Aug 20	138.8	137.8	139.5
Aug 21	138.9	137.8	140.8
Aug 22	139.2	138.0	141.2
Aug 23	139.3	124.4	142.4
Aug 24	140.2	138.6	142.2
Aug 25	140.3	138.7	142.3
Aug 26	140.6	139.2	142.8
Aug 27	140.6	139.3	142.3
Aug 28	140.7	139.4	142.4
Aug 29	140.7	139.4	142.5
Aug 30	140.2	138.8	142.2
Summary	**107.3**	**0.0**	**140.8**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 62

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	121.2	119.8	122.8
Aug 2	121.2	118.4	123.7
Aug 3	120.5	119.1	122.2
Aug 4	116.8	89.2	121.5
Aug 5	102.0	58.1	124.3
Aug 6	121.8	120.2	123.7
Aug 7	121.8	119.6	124.5
Aug 8	120.1	119.5	120.8
Aug 9	120.8	119.7	122.6
Aug 10	120.6	118.8	122.6
Aug 11	120.0	117.6	122.6
Aug 12	120.0	118.2	122.4
Aug 13	120.0	118.2	122.3
Aug 14	120.5	117.9	122.9
Aug 15	120.7	118.6	123.6
Aug 16	120.1	117.0	122.8
Aug 17	120.4	119.1	123.1
Aug 18	119.7	118.6	121.8
Aug 19	119.7	118.7	121.8
Aug 20	118.6	116.7	120.4
Aug 21	118.9	116.1	122.7
Aug 22	119.7	116.6	123.4
Aug 23	120.5	117.7	124.3
Aug 24	120.7	118.0	124.1
Aug 25	121.1	118.4	124.9
Aug 26	121.3	118.3	124.7
Aug 27	121.1	117.9	124.9
Aug 28	118.8	56.4	125.3
Aug 29	122.0	118.7	125.9
Aug 30	121.6	117.0	126.9
Summary	**119.7**	**102.0**	**122.0**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 63

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	75.8	67.3	89.7
Aug 2	76.8	68.3	93.3
Aug 3	73.4	68.3	85.8
Aug 4	77.5	67.5	94.1
Aug 5	80.8	65.7	98.5
Aug 6	80.7	67.4	97.2
Aug 7	82.8	68.1	100.3
Aug 8	74.0	69.2	80.2
Aug 9	78.1	68.9	91.9
Aug 10	77.0	64.4	90.7
Aug 11	74.5	60.1	93.3
Aug 12	73.9	59.0	92.5
Aug 13	75.8	65.3	93.4
Aug 14	77.0	63.0	96.7
Aug 15	76.3	62.1	94.4
Aug 16	74.6	67.5	88.8
Aug 17	74.8	66.6	87.9
Aug 18	70.9	63.7	85.2
Aug 19	71.7	64.9	86.9
Aug 20	66.2	56.1	80.1
Aug 21	65.3	48.9	83.3
Aug 22	69.0	53.6	89.3
Aug 23	72.5	56.5	93.1
Aug 24	74.0	57.2	92.7
Aug 25	76.6	60.2	95.3
Aug 26	77.4	60.8	97.9
Aug 27	77.9	62.7	97.2
Aug 28	79.8	63.3	98.5
Aug 29	81.5	65.6	103.1
Aug 30	79.8	67.4	101.6
Summary	**75.5**	**65.3**	**82.8**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 64

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	105.7	101.8	112.1
Aug 2	105.7	95.3	114.6
Aug 3	104.3	97.5	111.7
Aug 4	98.0	76.9	106.1
Aug 5	97.2	66.1	117.1
Aug 6	109.9	102.3	117.7
Aug 7	110.9	101.9	120.0
Aug 8	104.5	101.5	108.8
Aug 9	107.2	100.9	114.0
Aug 10	107.1	99.5	116.5
Aug 11	105.2	95.5	115.5
Aug 12	104.5	95.4	113.4
Aug 13	104.9	98.5	113.6
Aug 14	105.9	97.2	116.2
Aug 15	105.6	98.3	114.3
Aug 16	103.4	92.2	109.3
Aug 17	103.1	98.0	111.0
Aug 18	100.5	95.8	106.1
Aug 19	101.7	97.1	109.2
Aug 20	96.9	90.4	105.2
Aug 21	97.6	88.1	108.4
Aug 22	100.6	92.6	112.0
Aug 23	102.9	93.1	115.4
Aug 24	103.8	91.0	114.5
Aug 25	105.1	95.2	115.9
Aug 26	106.0	94.0	116.4
Aug 27	106.1	96.5	115.5
Aug 28	107.7	97.3	117.6
Aug 29	108.4	96.2	119.3
Aug 30	106.9	98.1	119.3
Summary	**104.2**	**96.9**	**110.9**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 65

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	129.9	127.7	132.1
Aug 2	129.8	121.5	136.0
Aug 3	109.0	90.2	130.0
Aug 4	101.1	91.8	115.0
Aug 5	122.1	92.9	141.2
Aug 6	140.5	138.7	143.0
Aug 7	136.5	133.4	138.5
Aug 8	135.3	132.7	137.4
Aug 9	140.0	137.7	142.4
Aug 10	141.6	139.9	143.7
Aug 11	140.5	138.8	142.3
Aug 12	116.2	67.4	141.6
Aug 13	76.3	65.8	97.3
Aug 14	78.2	63.3	97.4
Aug 15	77.7	63.4	98.8
Aug 16	75.4	67.8	91.2
Aug 17	75.5	67.4	90.9
Aug 18	71.2	64.2	88.6
Aug 19	72.4	64.2	87.0
Aug 20	67.1	56.9	82.8
Aug 21	66.9	50.1	88.1
Aug 22	70.4	54.9	94.1
Aug 23	74.4	57.1	98.8
Aug 24	75.5	57.8	98.0
Aug 25	77.4	60.5	99.4
Aug 26	79.3	61.4	102.7
Aug 27	79.5	63.1	100.7
Aug 28	81.7	64.1	104.3
Aug 29	82.9	65.9	108.1
Aug 30	81.3	68.0	106.9
Summary	**96.8**	**66.9**	**141.6**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 66

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	147.7	145.2	148.9
Aug 2	147.6	137.1	150.2
Aug 3	128.9	107.8	148.3
Aug 4	125.5	117.5	136.4
Aug 5	142.8	123.7	158.1
Aug 6	151.1	149.6	154.4
Aug 7	151.5	149.3	153.4
Aug 8	150.1	147.5	152.0
Aug 9	151.1	149.1	152.8
Aug 10	151.4	149.4	153.4
Aug 11	151.0	149.0	153.1
Aug 12	151.7	148.6	154.1
Aug 13	152.0	150.4	154.2
Aug 14	151.8	149.7	154.0
Aug 15	151.8	149.8	154.0
Aug 16	150.8	136.3	154.9
Aug 17	151.6	149.4	154.4
Aug 18	151.0	139.7	152.6
Aug 19	151.0	141.5	153.2
Aug 20	150.1	146.7	151.4
Aug 21	150.4	148.3	153.0
Aug 22	151.1	148.7	154.8
Aug 23	151.7	149.7	154.2
Aug 24	152.0	149.9	154.2
Aug 25	152.1	149.9	154.8
Aug 26	152.2	149.3	154.9
Aug 27	152.1	150.0	155.1
Aug 28	152.6	150.1	154.9
Aug 29	152.7	150.6	155.1
Aug 30	151.3	130.8	155.1
Summary	**149.3**	**125.5**	**152.7**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 67

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	193.2	190.2	194.7
Aug 2	179.2	160.7	193.9
Aug 3	169.3	154.3	173.0
Aug 4	166.2	163.4	168.3
Aug 5	181.5	160.9	194.4
Aug 6	191.9	182.1	195.6
Aug 7	148.2	75.0	181.7
Aug 8	125.7	69.4	172.3
Aug 9	169.7	167.3	171.6
Aug 10	167.3	166.1	168.6
Aug 11	165.3	163.5	166.9
Aug 12	173.1	163.3	188.8
Aug 13	193.8	189.5	195.4
Aug 14	192.8	184.7	196.2
Aug 15	181.5	177.7	184.3
Aug 16	178.0	174.5	182.6
Aug 17	174.2	171.7	176.3
Aug 18	170.3	167.0	172.7
Aug 19	169.2	167.4	170.4
Aug 20	167.1	165.1	169.0
Aug 21	166.9	164.4	169.8
Aug 22	166.3	162.9	169.5
Aug 23	166.7	163.8	169.7
Aug 24	166.1	162.8	169.0
Aug 25	166.3	163.9	169.4
Aug 26	167.1	164.4	170.8
Aug 27	166.9	165.2	168.9
Aug 28	172.3	147.7	188.9
Aug 29	168.6	165.2	173.7
Aug 30	161.7	133.1	169.1
Summary	**170.9**	**125.7**	**193.8**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 68

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	137.6	127.7	145.7
Aug 2	144.0	139.0	147.9
Aug 3	135.7	131.5	140.7
Aug 4	133.7	131.6	136.7
Aug 5	135.8	129.1	142.0
Aug 6	134.8	133.8	136.1
Aug 7	132.9	129.9	133.9
Aug 8	130.7	128.7	132.9
Aug 9	131.5	128.2	134.3
Aug 10	131.9	131.1	132.7
Aug 11	131.2	130.3	132.1
Aug 12	130.8	127.7	132.6
Aug 13	133.9	100.6	151.4
Aug 14	139.8	134.8	152.0
Aug 15	139.8	134.2	151.7
Aug 16	140.2	135.5	151.3
Aug 17	135.6	133.7	137.3
Aug 18	133.4	132.7	134.0
Aug 19	137.9	132.1	149.6
Aug 20	139.3	134.3	151.2
Aug 21	140.2	134.7	154.1
Aug 22	136.2	134.5	138.0
Aug 23	139.5	133.7	152.9
Aug 24	136.3	134.8	137.6
Aug 25	134.4	133.4	135.1
Aug 26	138.2	132.8	152.2
Aug 27	140.7	135.4	154.1
Aug 28	138.3	77.7	154.0
Aug 29	138.1	136.2	141.2
Aug 30	144.5	135.3	156.2
Summary	**136.6**	**130.7**	**144.5**

Solid Waste Permit 588 Daily Wellhead Temperature Averages for Well 100

Bristol, Virginia

Date	Average (°F)	Minimum (°F)	Maximum (°F)
Aug 1	123.6	120.6	127.3
Aug 2	144.0	139.0	147.9
Aug 3	119.5	110.9	123.7
Aug 4	133.7	131.6	136.7
Aug 5	124.0	113.7	130.8
Aug 6	134.8	133.8	136.1
Aug 7	125.0	121.4	129.4
Aug 8	130.7	128.7	132.9
Aug 9	124.4	122.0	127.3
Aug 10	131.9	131.1	132.7
Aug 11	122.0	117.0	125.9
Aug 12	130.8	127.7	132.6
Aug 13	123.2	119.2	128.0
Aug 14	139.8	134.8	152.0
Aug 15	123.5	117.6	128.8
Aug 16	140.2	135.5	151.3
Aug 17	123.2	119.9	128.2
Aug 18	133.4	132.7	134.0
Aug 19	121.0	116.1	123.6
Aug 20	139.3	134.3	151.2
Aug 21	117.7	111.7	124.0
Aug 22	136.2	134.5	138.0
Aug 23	121.7	116.1	128.5
Aug 24	136.3	134.8	137.6
Aug 25	123.9	118.0	129.5
Aug 26	138.2	132.8	152.2
Aug 27	126.4	118.1	134.1
Aug 28	138.3	77.7	154.0
Aug 29	130.1	126.3	133.3
Aug 30	144.5	135.3	156.2
Summary	**123.3**	**117.7**	**130.1**

Appendix D

Solid Waste Permit 588 Daily Borehole Temperature Averages

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Solid Waste Permit 588 Daily Borehole Temperature Averages for Borehole 1

	Depth from Surface					
Date	25 ft	50 ft	75 ft	100 ft	125 ft	150 ft
1-Aug	166.5	225.9	226.3	247.2	257.7	268.8
2-Aug	166.7	225.8	226.2	247.1	257.7	268.8
3-Aug	166.0	225.2	225.6	246.7	257.5	268.6
4-Aug	166.6	224.6	225.0	246.3	257.4	268.7
5-Aug	167.2	224.7	225.1	246.4	257.2	268.8
6-Aug	166.8	225.3	225.6	246.5	256.8	268.7
7-Aug	166.9	225.6	226.0	246.5	256.6	268.7
8-Aug	166.4	225.4	225.7	246.2	256.0	268.3
9-Aug	166.5	226.3	226.7	246.6	256.0	268.5
10-Aug	166.5	227.1	227.3	246.6	255.8	268.5
11-Aug	166.4	224.9	225.2	245.4	254.7	268.3
12-Aug	166.5	223.7	224.1	245.0	253.8	268.3
13-Aug	166.4	222.9	223.3	244.3	253.2	268.1
14-Aug	166.5	222.2	222.5	243.0	253.0	268.3
15-Aug	166.5	221.5	221.9	242.5	252.2	268.1
16-Aug	166.4	221.3	221.6	242.2	251.7	267.9
17-Aug	166.5	220.9	221.3	242.0	252.2	267.8
18-Aug	166.3	220.8	221.2	242.4	252.1	267.6
19-Aug	166.3	220.7	221.1	241.9	251.6	267.7
20-Aug	166.1	220.1	220.4	240.3	250.6	267.5
21-Aug	166.0	220.1	220.5	241.9	251.3	267.4
22-Aug	166.1	220.3	220.7	242.3	251.4	267.4
23-Aug	166.3	219.8	220.2	239.3	250.6	267.6
24-Aug	166.3	219.3	219.6	237.4	249.4	267.5
25-Aug	166.5	219.0	219.3	236.3	248.4	267.5
26-Aug	166.4	218.9	219.3	236.2	247.9	267.5
27-Aug	166.5	218.8	219.2	236.5	247.8	267.4
28-Aug	166.6	219.1	219.5	237.7	248.4	267.5
29-Aug	166.6	219.0	219.4	237.5	248.6	267.4
30-Aug	166.6	218.8	219.1	236.5	248.4	267.4
31-Aug	166.4	218.5	218.8	235.7	247.8	267.2
Average	**166.5**	**222.1**	**222.5**	**242.3**	**252.7**	**268.0**

Solid Waste Permit 588 Daily Borehole Temperature Averages for Borehole 2

	Depth from Surface					
Date	25 ft	50 ft	75 ft	100 ft	125 ft	150 ft
1-Aug	159.0	242.0	242.4	262.4	249.1	258.0
2-Aug	159.2	242.0	242.3	262.4	248.8	258.0
3-Aug	158.9	241.8	242.2	262.4	249.0	258.1
4-Aug	158.8	241.8	242.3	262.3	248.7	258.0
5-Aug	159.0	241.9	242.3	262.4	248.9	258.0
6-Aug	158.9	241.9	242.3	262.3	248.9	257.8
7-Aug	158.9	241.9	242.2	262.4	248.9	258.0
8-Aug	158.5	241.5	241.9	262.1	248.5	257.6
9-Aug	159.0	241.6	242.0	262.3	248.8	257.9
10-Aug	158.8	241.6	242.0	262.3	249.1	257.8
11-Aug	158.7	241.6	242.1	262.2	248.7	257.8
12-Aug	158.6	241.6	242.1	262.1	248.6	257.7
13-Aug	158.9	241.6	242.0	262.1	248.6	257.5
14-Aug	158.6	241.6	242.1	262.2	248.5	257.7
15-Aug	158.5	241.4	241.8	262.0	248.6	257.6
16-Aug	158.7	241.5	241.9	262.0	248.3	257.5
17-Aug	158.8	241.6	242.0	262.0	248.3	257.6
18-Aug	158.8	241.5	241.9	261.9	248.1	257.4
19-Aug	158.6	241.5	241.9	261.8	248.1	257.4
20-Aug	158.6	241.3	241.7	261.7	248.0	257.2
21-Aug	158.7	241.4	241.8	261.7	248.3	257.3
22-Aug	158.7	241.3	241.7	261.8	247.8	257.2
23-Aug	158.6	241.4	241.8	261.9	248.0	257.3
24-Aug	158.8	241.5	242.0	261.7	247.9	257.3
25-Aug	158.9	241.6	242.0	261.7	248.0	257.4
26-Aug	158.9	241.6	242.0	261.7	247.9	257.4
27-Aug	158.9	241.7	242.1	261.6	247.7	257.3
28-Aug	158.9	241.6	242.1	261.7	247.8	257.4
29-Aug	159.0	241.5	241.8	261.7	247.8	257.3
30-Aug	158.8	241.5	241.9	261.6	247.7	257.2
31-Aug	158.7	241.3	241.8	261.4	247.5	257.1
Average	**158.8**	**241.6**	**242.0**	**262.0**	**248.3**	**257.6**

Solid Waste Permit 588 Daily Borehole Temperature Averages for Borehole 3

	Depth from Surface							
Date	25 ft	50 ft	75 ft	100 ft	125 ft	150 ft	175 ft	200 ft
1-Aug	178.4	234.7	234.7	248.3	253.0	261.9	266.3	255.0
2-Aug	180.6	234.2	234.1	248.3	253.0	261.8	266.4	255.0
3-Aug	181.0	234.3	234.2	248.2	252.9	261.7	266.3	255.0
4-Aug	180.1	234.5	234.5	248.3	252.9	261.6	266.3	255.0
5-Aug	180.1	234.9	235.0	248.5	253.1	261.9	266.5	255.2
6-Aug	182.0	234.3	234.4	248.3	253.0	261.8	266.4	255.2
7-Aug	186.6	234.1	234.0	248.1	253.0	261.8	266.4	255.2
8-Aug	189.2	233.9	233.9	247.7	252.5	261.5	266.1	254.8
9-Aug	189.9	234.4	234.4	247.7	252.6	261.6	266.2	255.0
10-Aug	190.5	234.6	234.6	247.7	252.8	261.7	266.3	255.0
11-Aug	188.5	234.7	234.7	247.7	252.6	261.5	266.2	255.0
12-Aug	184.0	234.9	234.9	247.7	252.6	261.6	266.2	255.0
13-Aug	186.5	234.8	234.8	247.3	252.5	261.5	266.2	254.9
14-Aug	187.4	234.1	234.2	247.4	252.6	261.6	266.2	255.1
15-Aug	184.3	234.0	234.1	247.3	252.5	261.6	266.1	255.1
16-Aug	181.2	234.1	234.0	247.3	252.3	261.4	265.9	254.8
17-Aug	176.2	234.1	234.1	247.4	252.3	261.4	265.7	254.6
18-Aug	177.1	234.3	234.3	247.4	252.2	261.3	265.6	254.5
19-Aug	176.3	234.5	234.5	247.4	252.2	261.5	265.6	254.6
20-Aug	173.7	234.5	234.5	247.4	252.2	261.5	265.6	254.6
21-Aug	173.3	234.5	234.5	247.5	252.2	261.6	265.5	254.5
22-Aug	174.5	234.7	234.8	247.6	252.3	261.5	265.7	254.6
23-Aug	174.7	235.1	235.1	247.6	252.4	261.8	265.8	254.8
24-Aug	174.6	235.1	235.2	247.6	252.3	261.7	265.7	254.7
25-Aug	174.3	235.1	235.2	247.6	252.4	261.6	265.7	254.8
26-Aug	173.7	235.3	235.3	247.9	252.4	261.7	265.8	254.8
27-Aug	173.4	235.3	235.2	247.8	252.3	261.5	265.7	254.8
28-Aug	173.1	235.3	235.3	248.1	252.4	261.4	265.7	254.8
29-Aug	172.8	235.2	235.2	248.5	252.4	261.5	265.8	254.9
30-Aug	172.8	235.1	235.1	248.6	252.5	261.6	265.8	254.8
31-Aug	172.6	235.1	235.0	248.1	252.4	261.5	265.6	254.7
Average	**179.5**	**234.6**	**234.6**	**247.8**	**252.5**	**261.6**	**266.0**	**254.9**

Solid Waste Permit 588 Daily Borehole Temperature Averages for Borehole 4

	Depth from Surface							
Date	25 ft	50 ft	75 ft	100 ft	125 ft	150 ft	175 ft	200 ft
1-Aug	210.5	214.0	177.0	229.9	232.1	226.4	213.1	212.9
2-Aug	211.2	214.3	190.4	229.1	231.6	225.8	213.8	213.4
3-Aug	210.6	213.6	176.8	223.5	233.1	226.9	212.8	212.4
4-Aug	211.0	213.8	192.5	224.5	232.8	226.7	213.0	212.7
5-Aug	211.6	214.2	183.8	214.3	233.2	227.0	213.7	213.3
6-Aug	212.2	215.0	194.3	214.9	234.1	227.9	214.3	213.9
7-Aug	212.5	215.2	185.8	215.2	235.8	229.5	214.3	213.9
8-Aug	212.1	214.4	183.7	214.3	235.5	229.0	213.7	213.1
9-Aug	213.0	215.0	181.4	215.1	236.3	229.9	214.3	213.7
10-Aug	213.4	215.1	186.8	215.3	236.7	230.7	214.4	213.9
11-Aug	213.5	215.4	182.4	215.6	236.6	230.6	214.8	214.3
12-Aug	214.0	215.9	192.6	216.1	236.5	230.6	215.3	214.8
13-Aug	214.5	216.6	204.7	216.7	236.8	231.2	215.8	215.3
14-Aug	214.9	217.0	209.8	217.0	236.8	230.9	216.3	215.8
15-Aug	214.7	216.7	206.7	216.6	235.5	229.4	216.1	215.6
16-Aug	215.3	217.3	201.6	217.3	236.8	231.1	216.6	216.1
17-Aug	215.3	217.3	157.6	217.4	236.4	230.2	216.6	216.1
18-Aug	215.1	217.1	157.7	217.2	236.9	231.2	216.4	215.9
19-Aug	215.4	217.4	161.3	217.5	236.3	230.4	216.8	216.3
20-Aug	214.2	216.2	165.2	216.6	236.1	230.5	215.9	215.3
21-Aug	215.2	217.1	176.8	217.3	235.9	230.1	216.6	216.1
22-Aug	215.9	218.0	174.9	218.1	235.8	230.0	217.3	216.8
23-Aug	216.2	218.2	184.1	218.5	236.5	230.7	217.7	217.2
24-Aug	216.5	218.6	192.8	218.8	235.7	229.9	218.0	217.4
25-Aug	217.0	219.1	206.1	219.4	234.6	229.0	218.8	218.1
26-Aug	217.6	219.8	208.4	220.2	233.2	227.8	219.6	218.9
27-Aug	217.3	219.9	204.8	220.2	232.6	227.5	219.6	219.0
28-Aug	217.4	219.8	199.0	220.1	232.0	226.4	219.8	219.1
29-Aug	217.7	220.0	213.3	220.1	232.2	227.0	220.0	219.3
30-Aug	217.9	220.3	207.2	220.4	231.8	226.6	220.1	219.4
31-Aug	217.1	219.4	178.4	219.5	232.0	227.0	219.3	218.7
Average	**214.5**	**216.8**	**188.3**	**218.6**	**234.8**	**229.0**	**216.3**	**215.8**

Solid Waste Permit 588 Daily Borehole Temperature Averages for Borehole 5

	Depth from Surface							
Date	25 ft	50 ft	75 ft	100 ft	125 ft	150 ft	175 ft	200 ft
1-Aug	207.9	207.9	207.7	207.9	207.8	207.8	208.0	201.0
2-Aug	207.7	207.9	207.6	207.7	207.6	207.7	210.4	201.0
3-Aug	207.6	207.7	207.5	207.7	207.6	207.7	207.9	201.1
4-Aug	207.9	208.0	207.7	207.9	207.8	207.9	211.2	201.2
5-Aug	207.9	208.0	207.7	207.9	207.8	207.8	212.6	201.0
6-Aug	207.7	207.6	207.6	207.7	207.6	207.6	213.0	201.0
7-Aug	207.5	207.2	207.3	207.6	207.5	207.5	213.5	201.2
8-Aug	207.3	206.9	207.1	207.3	207.1	207.2	212.3	200.8
9-Aug	207.5	207.2	207.4	207.6	207.6	208.8	217.8	200.9
10-Aug	207.9	207.6	207.7	208.2	207.9	212.9	226.3	201.1
11-Aug	207.8	207.5	207.6	207.9	210.6	212.7	227.4	200.9
12-Aug	207.8	207.5	207.6	207.9	211.4	208.1	220.0	201.0
13-Aug	207.9	207.6	207.8	207.9	209.1	208.0	214.2	201.3
14-Aug	208.0	207.7	207.8	208.0	207.8	208.0	212.6	201.3
15-Aug	207.9	207.6	207.8	208.0	207.9	208.6	223.8	201.3
16-Aug	207.9	207.6	207.7	207.9	207.9	208.2	227.0	201.0
17-Aug	207.7	207.4	207.5	207.7	207.7	207.9	226.7	200.9
18-Aug	207.5	207.2	207.3	207.6	207.6	213.3	227.4	201.0
19-Aug	207.6	207.3	207.4	207.6	207.6	219.1	228.5	201.0
20-Aug	207.7	207.5	207.4	207.6	207.5	219.8	228.6	200.7
21-Aug	207.7	207.7	207.5	207.7	207.7	221.5	229.0	200.7
22-Aug	207.9	208.0	207.7	208.0	207.9	222.2	229.4	200.9
23-Aug	208.1	208.4	207.9	208.1	208.1	220.3	229.7	201.1
24-Aug	208.2	208.6	208.0	208.2	208.1	213.9	229.9	201.2
25-Aug	208.2	208.6	208.0	208.2	208.2	208.5	226.7	201.3
26-Aug	208.3	208.7	208.0	208.3	208.4	220.8	228.9	201.3
27-Aug	208.2	208.7	208.0	208.2	208.6	224.7	229.9	201.4
28-Aug	208.0	208.5	208.0	208.2	208.2	215.0	225.9	201.4
29-Aug	208.1	208.6	208.1	208.2	208.1	208.2	211.5	201.3
30-Aug	208.1	208.6	208.1	208.1	208.1	208.1	212.8	201.3
31-Aug	208.0	208.4	207.9	208.0	207.9	207.9	212.7	201.5
Average	**207.9**	**207.9**	**207.7**	**207.9**	**208.1**	**211.9**	**220.5**	**201.1**

Solid Waste Permit 588 Daily Borehole Temperature Averages for Borehole 6

	Depth from Surface				
Date	25 ft	50 ft	75 ft	100 ft	125 ft
1-Aug	207.5	222.9	214.3	287.5	300.6
2-Aug	207.4	222.9	215.8	281.8	291.3
3-Aug	207.1	212.3	208.7	304.2	318.5
4-Aug	207.4	214.3	211.4	293.1	300.0
5-Aug	207.5	223.2	217.3	269.8	275.1
6-Aug	207.3	223.3	220.4	245.2	247.5
7-Aug	207.3	222.8	221.5	226.6	225.8
8-Aug	206.9	222.6	228.1	218.1	217.0
9-Aug	207.3	222.4	230.9	215.3	216.1
10-Aug	207.6	221.6	232.3	215.6	217.2
11-Aug	207.6	222.1	232.3	215.7	217.3
12-Aug	207.5	221.7	232.3	215.5	217.4
13-Aug	207.5	221.7	233.2	216.3	218.1
14-Aug	207.9	222.2	233.7	216.7	218.6
15-Aug	207.7	222.2	236.2	218.7	220.7
16-Aug	207.6	222.4	237.8	220.0	222.7
17-Aug	207.4	221.3	236.1	218.6	222.5
18-Aug	207.1	221.3	235.4	218.1	219.4
19-Aug	207.1	221.8	232.5	214.8	216.0
20-Aug	207.3	221.6	231.4	213.9	214.9
21-Aug	207.6	221.2	232.0	214.9	217.9
22-Aug	207.7	220.1	233.7	216.7	218.3
23-Aug	207.9	220.8	231.5	214.5	215.3
24-Aug	208.0	221.5	231.0	213.9	214.8
25-Aug	208.1	221.6	231.0	213.5	214.5
26-Aug	208.1	221.4	230.5	212.9	213.8
27-Aug	208.0	221.5	229.9	212.1	213.0
28-Aug	208.0	222.2	229.5	212.0	212.9
29-Aug	205.4	224.2	227.9	213.2	214.1
30-Aug	187.4	222.3	227.5	213.8	215.8
31-Aug	197.7	220.9	230.4	212.7	220.0
Average	**206.5**	**221.4**	**228.3**	**228.2**	**231.2**

Solid Waste Permit 588 Daily Borehole Temperature Averages for Borehole 7

	Depth from Surface							
Date	25 ft	50 ft	75 ft	100 ft	125 ft	150 ft	175 ft	200 ft
1-Aug	146.4	186.6	205.8	197.9	193.1	204.0	209.1	217.4
2-Aug	144.8	187.7	205.8	198.4	194.4	205.1	209.5	219.0
3-Aug	144.1	186.9	205.7	198.0	193.8	204.4	209.2	219.0
4-Aug	144.1	186.6	205.8	198.2	193.8	204.0	209.4	219.3
5-Aug	143.9	188.0	205.9	198.5	194.9	204.8	209.8	220.4
6-Aug	143.9	191.6	204.9	199.2	196.1	204.9	209.8	220.6
7-Aug	144.6	195.9	200.8	201.1	197.9	206.3	211.4	221.3
8-Aug	143.9	195.6	201.7	200.4	197.4	205.5	210.7	220.4
9-Aug	144.3	196.1	201.6	200.7	198.0	205.9	211.0	221.0
10-Aug	144.3	196.6	201.6	201.1	198.8	206.0	211.3	221.0
11-Aug	144.4	196.6	201.7	201.1	198.5	205.9	211.0	221.0
12-Aug	144.5	196.2	202.5	200.6	198.2	205.8	210.5	221.2
13-Aug	144.7	196.1	202.0	200.6	198.2	206.3	210.4	221.5
14-Aug	145.0	196.1	202.1	200.8	198.5	206.2	210.8	222.3
15-Aug	145.0	196.1	202.0	200.8	198.4	206.4	210.6	221.9
16-Aug	145.0	196.4	201.9	200.9	198.5	206.5	210.7	222.3
17-Aug	145.2	196.4	201.4	201.0	198.6	206.4	210.8	222.7
18-Aug	145.5	195.4	201.2	200.0	197.6	204.9	209.7	222.1
19-Aug	145.8	195.4	201.5	199.9	197.6	204.8	209.7	222.2
20-Aug	145.8	195.7	202.0	200.2	197.9	205.1	209.9	223.0
21-Aug	145.8	195.1	202.4	199.6	197.2	204.3	209.3	222.6
22-Aug	145.9	195.1	202.6	199.6	197.2	204.1	209.3	222.9
23-Aug	146.2	195.2	203.1	199.6	197.3	204.1	209.2	223.0
24-Aug	146.4	194.9	203.4	199.2	196.9	203.6	208.8	222.6
25-Aug	146.5	195.0	203.6	199.4	197.0	203.6	208.9	223.0
26-Aug	146.9	195.1	203.7	199.4	197.2	203.6	209.0	223.1
27-Aug	147.0	194.9	203.4	199.1	196.9	203.1	208.5	222.6
28-Aug	147.2	194.7	203.3	198.9	196.7	203.0	208.2	222.5
29-Aug	147.3	194.9	203.6	198.9	196.9	203.0	208.0	222.2
30-Aug	147.4	194.5	205.7	198.6	196.6	202.9	207.8	223.3
31-Aug	147.4	195.3	203.7	199.1	197.2	203.8	207.9	222.0
Average	**145.5**	**194.1**	**203.1**	**199.7**	**197.0**	**204.8**	**209.7**	**221.6**

Solid Waste Permit 588 Daily Borehole Temperature Averages for Borehole 8

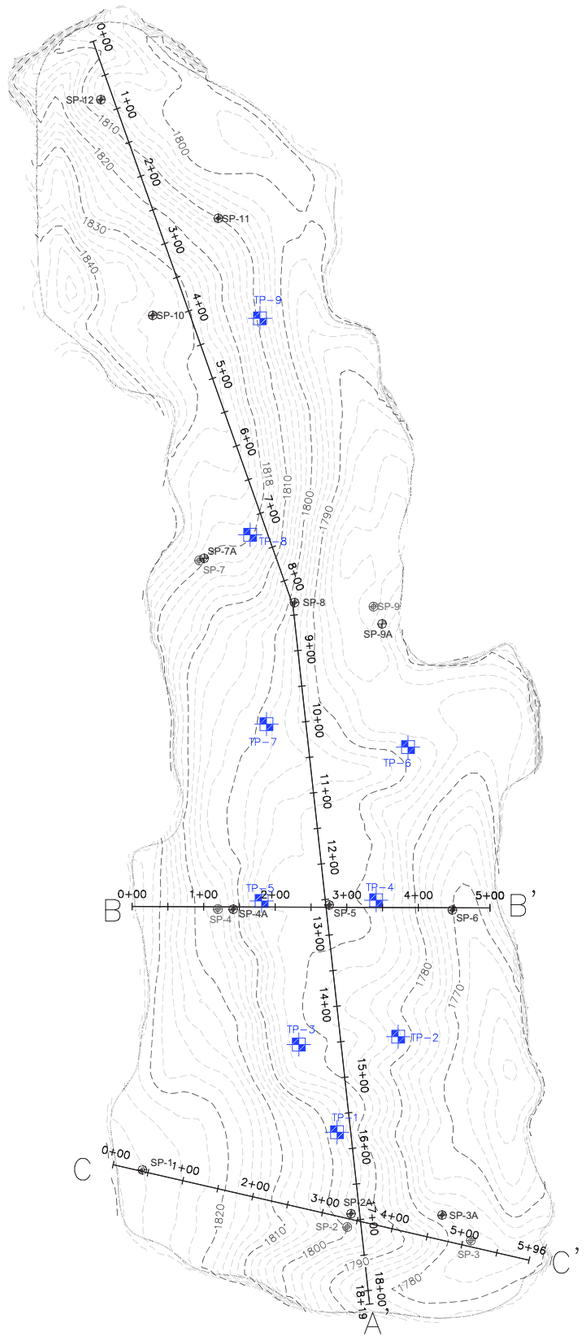
	Depth from Surface							
Date	25 ft	50 ft	75 ft	100 ft	125 ft	150 ft	175 ft	200 ft
1-Aug	189.8	194.3	194.4	196.9	198.3	196.1	190.2	175.3
2-Aug	189.4	194.2	194.4	196.9	198.2	196.4	190.2	175.4
3-Aug	189.5	194.1	194.3	196.7	198.1	196.6	190.1	175.2
4-Aug	189.8	194.2	194.4	196.8	198.3	196.8	190.2	175.3
5-Aug	189.1	194.3	194.5	196.9	198.4	197.0	190.3	175.4
6-Aug	189.4	194.2	194.4	196.9	198.4	197.0	190.4	175.5
7-Aug	189.2	194.2	194.4	196.8	198.2	197.0	190.4	175.5
8-Aug	189.0	194.0	194.2	196.6	198.0	196.8	190.3	175.4
9-Aug	188.6	194.1	194.3	196.6	198.1	196.8	190.3	175.1
10-Aug	188.9	194.2	194.4	196.8	198.3	196.9	190.3	175.1
11-Aug	188.7	194.2	194.4	196.9	198.2	196.8	190.3	175.2
12-Aug	188.1	194.2	194.4	196.9	198.3	196.9	190.4	175.3
13-Aug	188.4	194.3	194.4	197.0	198.4	197.0	190.5	175.4
14-Aug	188.0	194.2	194.5	197.0	198.4	197.0	190.4	175.2
15-Aug	188.3	194.3	194.5	197.0	198.4	197.1	190.4	175.1
16-Aug	188.1	194.3	194.5	197.0	198.4	197.0	190.4	175.2
17-Aug	188.0	194.2	194.4	196.9	198.2	197.0	190.3	175.1
18-Aug	188.5	194.1	194.2	196.7	198.1	196.9	190.3	175.0
19-Aug	188.8	194.1	194.2	196.8	198.1	197.0	190.3	175.0
20-Aug	188.7	194.0	194.2	196.8	198.1	197.0	190.3	175.0
21-Aug	188.8	194.1	194.3	196.8	198.2	197.0	190.2	174.9
22-Aug	188.9	194.2	194.4	197.0	198.4	197.1	190.3	174.9
23-Aug	188.7	194.3	194.5	197.1	198.5	197.2	190.4	175.0
24-Aug	187.3	194.4	194.5	197.1	198.6	197.3	190.5	175.3
25-Aug	187.9	194.4	194.6	197.2	198.6	197.4	190.5	175.3
26-Aug	188.0	194.4	194.6	197.1	198.5	197.4	190.5	175.3
27-Aug	188.6	194.4	194.6	197.1	198.6	197.4	190.5	175.4
28-Aug	188.1	194.5	194.7	197.2	198.6	197.5	190.5	175.2
29-Aug	187.8	194.4	194.6	197.2	198.6	197.5	190.6	175.1
30-Aug	188.1	194.4	194.7	197.3	198.7	197.6	190.6	175.1
31-Aug	188.0	191.5	194.4	197.1	196.4	198.1	190.2	174.0
Average	**188.6**	**194.2**	**194.4**	**196.9**	**198.3**	**197.0**	**190.4**	**175.2**

Solid Waste Permit 588 Daily Borehole Temperature Averages for Borehole 9

	Depth from Surface							
Date	25 ft	50 ft	75 ft	100 ft	125 ft	150 ft	175 ft	200 ft
1-Aug	114.2	152.1	151.8	151.9	147.2	134.5	118.2	106.5
2-Aug	111.8	151.7	150.9	152.0	147.3	134.5	118.3	106.5
3-Aug	110.2	150.9	150.0	151.9	147.3	134.2	118.0	106.3
4-Aug	112.2	151.5	151.0	152.1	147.5	134.5	118.4	106.6
5-Aug	113.8	152.1	151.6	152.2	147.5	134.5	118.4	106.6
6-Aug	114.1	152.2	151.6	152.0	147.2	134.5	118.2	106.6
7-Aug	114.3	152.4	151.8	152.3	147.5	134.5	118.5	107.0
8-Aug	113.7	151.8	151.3	151.7	147.2	133.9	117.9	106.5
9-Aug	113.7	152.1	151.5	152.0	147.3	134.3	118.3	106.9
10-Aug	113.9	152.1	151.6	151.9	147.1	134.2	118.2	106.8
11-Aug	113.9	152.0	151.5	151.9	147.1	134.1	118.0	106.8
12-Aug	113.5	151.9	151.3	151.9	147.1	134.2	118.1	106.8
13-Aug	113.5	151.9	151.3	151.8	147.1	134.2	118.0	106.7
14-Aug	113.4	152.0	151.3	152.0	147.2	134.4	118.2	106.9
15-Aug	112.9	151.7	151.0	151.9	147.1	134.3	118.1	106.9
16-Aug	112.7	151.5	150.8	151.9	147.1	134.2	118.0	106.8
17-Aug	112.6	151.5	150.7	151.9	147.3	134.5	118.2	107.0
18-Aug	112.3	151.2	150.4	151.7	147.0	134.2	117.9	106.7
19-Aug	112.4	151.1	150.3	151.7	147.1	134.0	118.0	106.8
20-Aug	112.3	150.9	150.3	151.5	146.9	133.8	117.8	106.6
21-Aug	112.6	151.1	150.5	151.5	146.8	133.9	117.8	106.7
22-Aug	112.7	151.1	150.4	151.6	146.9	134.0	117.9	106.7
23-Aug	112.9	151.3	150.7	151.7	147.1	134.2	118.1	106.9
24-Aug	112.9	151.4	150.7	151.7	147.1	134.1	118.1	106.9
25-Aug	112.9	151.4	150.7	151.8	147.1	134.1	118.0	106.9
26-Aug	113.2	151.5	150.8	151.9	147.3	134.2	118.2	107.1
27-Aug	113.0	151.5	150.7	151.8	147.1	134.1	118.1	107.0
28-Aug	113.1	151.5	150.8	152.0	147.3	134.3	118.3	107.2
29-Aug	113.3	151.6	150.9	152.1	147.4	134.3	118.4	107.2
30-Aug	113.2	151.6	150.9	152.0	147.3	134.3	118.3	107.2
31-Aug	113.0	151.4	150.7	151.8	147.1	134.0	118.2	107.0
Average	**113.0**	**151.6**	**151.0**	**151.9**	**147.2**	**134.2**	**118.1**	**106.8**

Appendix E

Monthly Topography Analysis



LEGEND

- MAJOR CONTOURS (EVERY 10')
- MINOR CONTOURS (EVERY 2')
- APPROXIMATE SIDEWALL LOCATION
- SP-9 SETTLEMENT PLATE
- TP-3 TEMPERATURE MONITORING PROBE

NOTES:

1. GRADES SHOWN AS CONTOUR LINES ONLY WITHIN THE PERMIT 588 BOUNDARY REPRESENT THE TOPOGRAPHY CAPTURED ON AUGUST 2, 2023 BY SCS ENGINEERS.
2. ANY DETERMINATION OF TOPOGRAPHY OR CONTOURS, OR ANY DEPICTION OF PHYSICAL IMPROVEMENTS, PROPERTY LINES, OR BOUNDARIES IS FOR GENERAL INFORMATION ONLY AND SHALL NOT BE USED FOR DESIGN, MODIFICATION, OR CONSTRUCTION OF IMPROVEMENTS TO REAL PROPERTY OR FLOOD PLAIN DETERMINATION.
3. THE HORIZONTAL DATUM IS STATE PLANE VIRGINIA SOUTH ZONE NAD–83 (2011).
4. THE VERTICAL DATUM IS BASED UPON NAVD–88.

100 50 0 100 200

SCALE: 1"=100'

NO.	REVISION	DATE

SHEET TITLE: AUGUST 2023 LANDFILL TOPOGRAPHY

PROJECT TITLE: MONTHLY TOPOGRAPHY ANALYSIS SOLID WASTE PERMIT #588

CLIENT: CITY OF BRISTOL INTEGRATED SOLID WASTE MANAGEMENT FACILITY
2655 VALLEY DRIVE
BRISTOL, VIRGINIA 24201

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
15821 MIDLOTHIAN TNPK - MIDLOTHIAN, VA 23113
PH. (804) 378-7440 FAX. (804) 378-7433

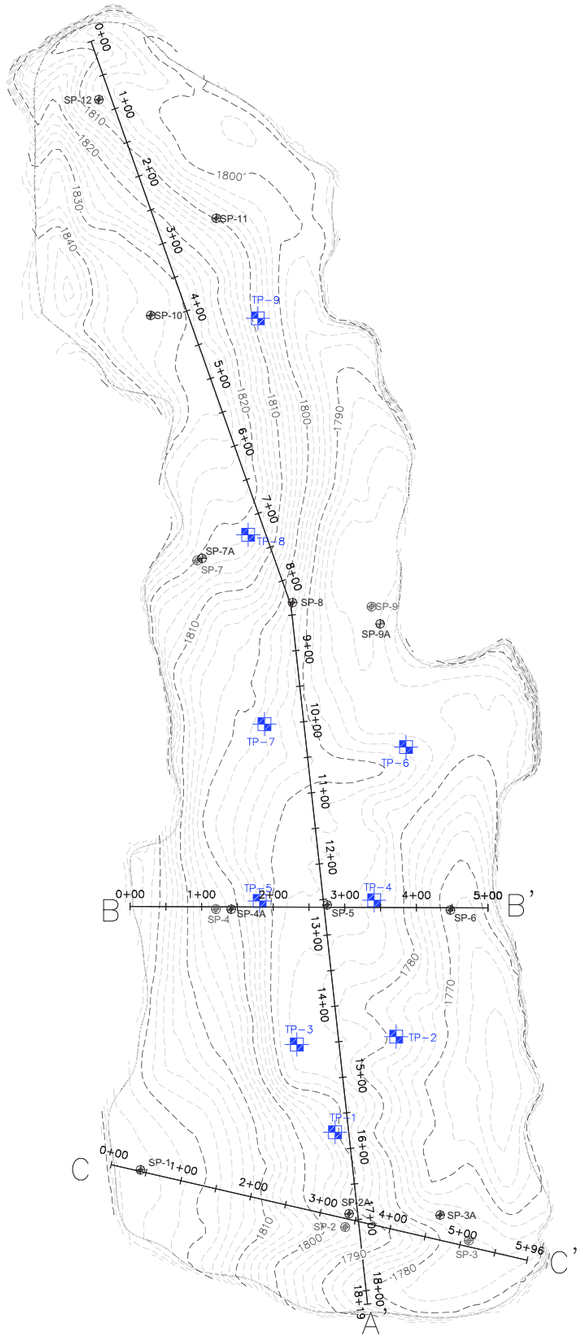
PROJ. NO. 02218208.05
DSN. BY:
DWN. BY: LLH
CHK. BY: CJW
QA/QC RVW BY: CJW
APP. BY: CJW

CADD FILE: SURF COMP

DATE: 9/1/2024

SCALE:

DRAWING NO. 1 of 8



LEGEND

- MAJOR CONTOURS (EVERY 10')
- MINOR CONTOURS (EVERY 2')
- APPROXIMATE SIDEWALL LOCATION
- SP-9 SETTLEMENT PLATE
- TP-3 TEMPERATURE MONITORING PROBE
- -0.39 SPOT ELEVATION ON 100' GRID

NOTES:

1. GRADES SHOWN AS CONTOUR LINES ONLY WITHIN THE PERMIT 588 BOUNDARY REPRESENT THE TOPOGRAPHY CAPTURED ON MAY 21, 2024 BY SCS ENGINEERS.
2. ANY DETERMINATION OF TOPOGRAPHY OR CONTOURS, OR ANY DEPICTION OF PHYSICAL IMPROVEMENTS, PROPERTY LINES, OR BOUNDARIES IS FOR GENERAL INFORMATION ONLY AND SHALL NOT BE USED FOR DESIGN, MODIFICATION, OR CONSTRUCTION OF IMPROVEMENTS TO REAL PROPERTY OR FLOOD PLAIN DETERMINATION.
3. THE HORIZONTAL DATUM IS STATE PLANE VIRGINIA SOUTH ZONE NAD-83 (2011).
4. THE VERTICAL DATUM IS BASED UPON NAVD-88.

100 50 0 100 200

SCALE: 1"=100'

NO.	REVISION	DATE

SHEET TITLE: MAY 2024 LANDFILL TOPOGRAPHY

PROJECT TITLE: MONTHLY TOPOGRAPHY ANALYSIS SOLID WASTE PERMIT #588

CLIENT: CITY OF BRISTOL INTEGRATED SOLID WASTE MANAGEMENT FACILITY
2655 VALLEY DRIVE
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PH. (804) 378-7440 FAX. (804) 378-7433

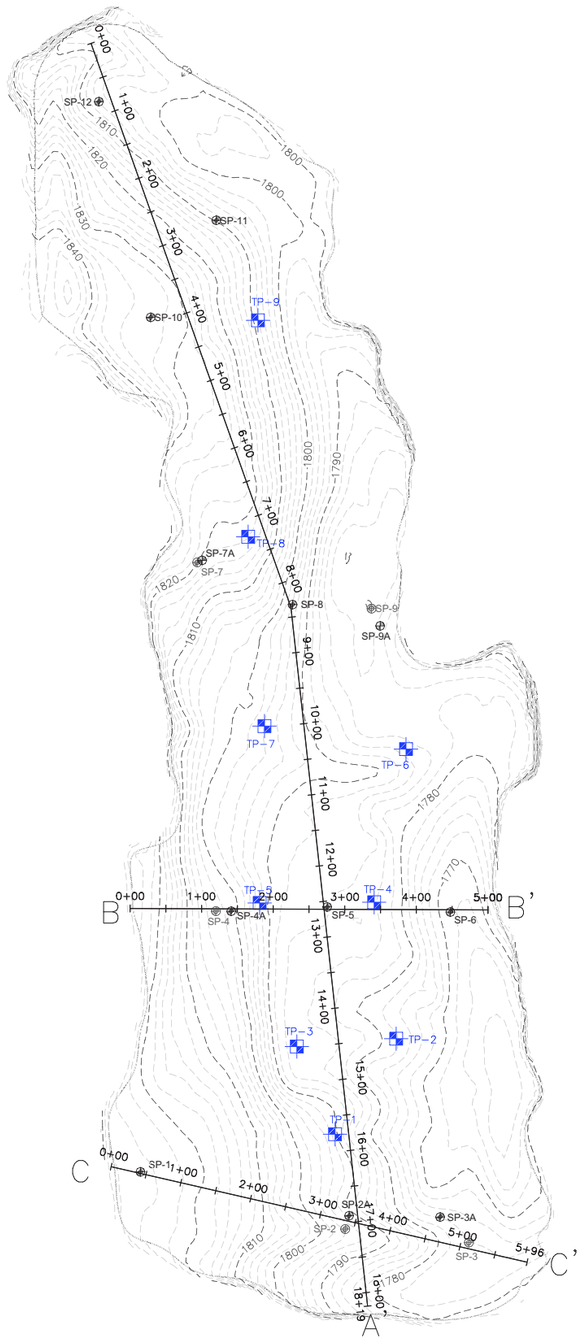
PROJ. NO. 02218208.05
DSN. BY: SRB
DWN. BY: LLH
CHK. BY: CJW
QA/QC RVW BY: CJW
APP. BY: CJW

CADD FILE: SURF COMP

DATE: 9/1/2024

SCALE:

DRAWING NO. 2 of 8



LEGEND

- MAJOR CONTOURS (EVERY 10')
- MINOR CONTOURS (EVERY 2')
- APPROXIMATE SIDEWALL LOCATION
- SP-9 SETTLEMENT PLATE
- TP-3 TEMPERATURE MONITORING PROBE

NOTES:

1. GRADES SHOWN AS CONTOUR LINES ONLY WITHIN THE PERMIT 588 BOUNDARY REPRESENT THE TOPOGRAPHY CAPTURED ON JULY 16, 2024 BY SCS ENGINEERS.
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3. THE HORIZONTAL DATUM IS STATE PLANE VIRGINIA SOUTH ZONE NAD-83 (2011).
4. THE VERTICAL DATUM IS BASED UPON NAVD-88.

100 50 0 100 200
SCALE: 1"=100'

NO.	REVISION	DATE

SHEET TITLE: JULY 2024 LANDFILL TOPOGRAPHY

PROJECT TITLE: MONTHLY TOPOGRAPHY ANALYSIS SOLID WASTE PERMIT #588

CLIENT: CITY OF BRISTOL INTEGRATED SOLID WASTE MANAGEMENT FACILITY
2655 VALLEY DRIVE
BRISTOL, VIRGINIA 24201

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
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15821 MIDLOTHIAN TNPK - MIDLOTHIAN, VA 23113
PH. (804) 378-7440 FAX (804) 378-7433

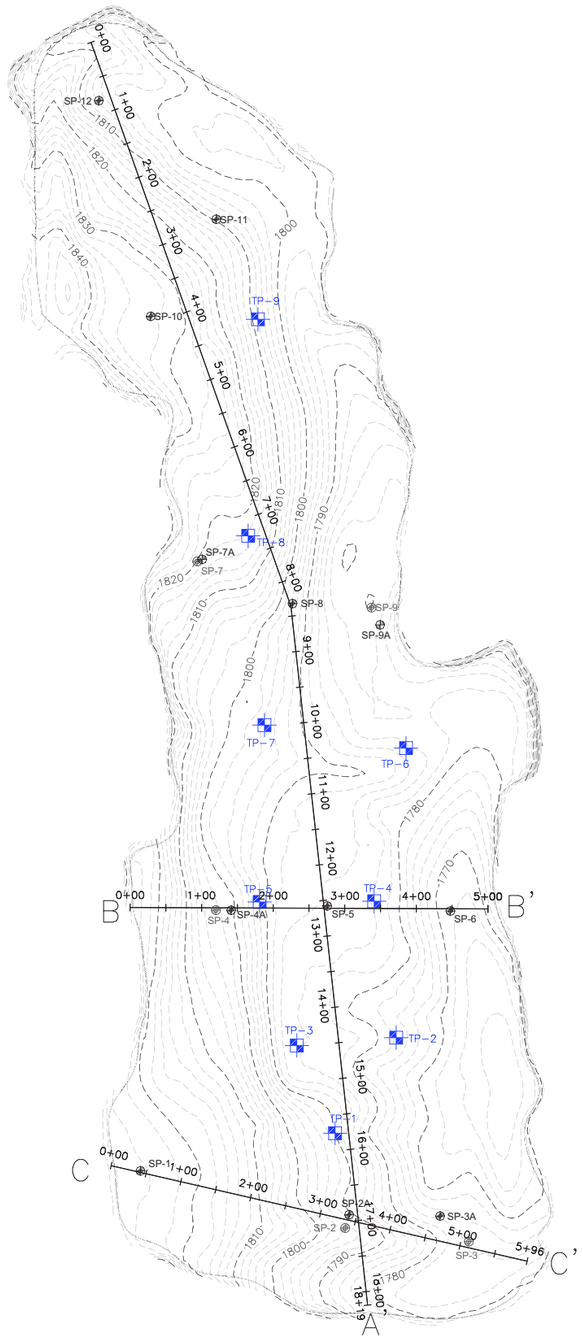
PROJ. NO. 02218208.05 | DSN. BY: | DWN. BY: LLH | CHK. BY: CJW | Q/A RVW BY: CJW | APP. BY: CJW

CADD FILE: SURF COMP

DATE: 9/1/2024

SCALE:

DRAWING NO. 3 of 8



LEGEND

- MAJOR CONTOURS (EVERY 10')
- MINOR CONTOURS (EVERY 2')
- APPROXIMATE SIDEWALL LOCATION
- SP-9 SETTLEMENT PLATE
- TP-3 TEMPERATURE MONITORING PROBE

NOTES:

1. GRADES SHOWN AS CONTOUR LINES ONLY WITHIN THE PERMIT 588 BOUNDARY REPRESENT THE TOPOGRAPHY CAPTURED ON AUGUST 14, 2024 BY SCS ENGINEERS.
2. ANY DETERMINATION OF TOPOGRAPHY OR CONTOURS, OR ANY DEPICTION OF PHYSICAL IMPROVEMENTS, PROPERTY LINES, OR BOUNDARIES IS FOR GENERAL INFORMATION ONLY AND SHALL NOT BE USED FOR DESIGN, MODIFICATION, OR CONSTRUCTION OF IMPROVEMENTS TO REAL PROPERTY OR FLOOD PLAIN DETERMINATION.
3. THE HORIZONTAL DATUM IS STATE PLANE VIRGINIA SOUTH ZONE NAD-83 (2011).
4. THE VERTICAL DATUM IS BASED UPON NAVD-88.

100 50 0 100 200
SCALE: 1"=100'

NO.	REVISION	DATE

SHEET TITLE: AUGUST 2024 LANDFILL TOPOGRAPHY

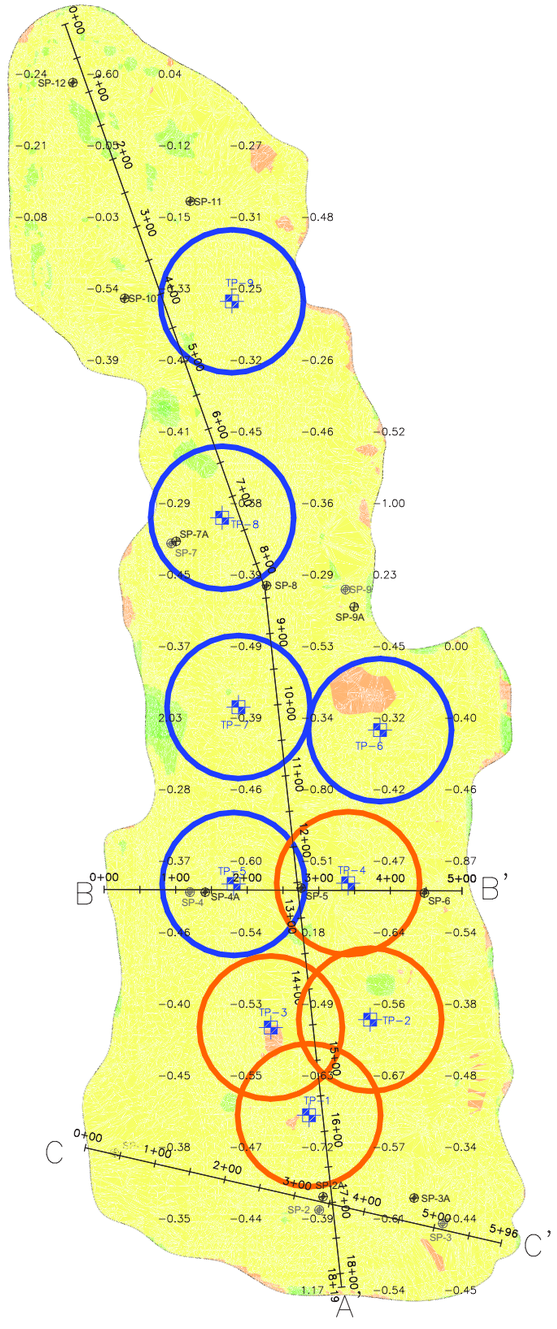
PROJECT TITLE: MONTHLY TOPOGRAPHY ANALYSIS SOLID WASTE PERMIT #588

CLIENT: CITY OF BRISTOL INTEGRATED SOLID WASTE MANAGEMENT FACILITY
2655 VALLEY DRIVE
BRISTOL, VIRGINIA 24201

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
1521 MIDLOTHIAN TNPK - MIDLOTHIAN, VA 23113
PH: (804) 378-7440 FAX: (804) 378-7453

PROJ. NO. 02218208.05
DWN. BY: LLH
CHK. BY: CJW
Q/A RVW BY:
APP. BY: CJW
DSN. BY:

CADD FILE: SURF COMP
DATE: 9/1/2024
SCALE:
DRAWING NO. 4 of 8



LEGEND

- MAJOR CONTOURS (EVERY 10')
- MINOR CONTOURS (EVERY 2')
- APPROXIMATE WASTE BOUNDARY
- SP-9 SETTLEMENT PLATE
- -0.39 SPOT ELEVATION ON 100' GRID
- TP-8 TEMPERATURE MONITORING PROBE WITH AVERAGE TEMPERATURES AT DEPTH LESS THAN 200 °F
- TP-1 TEMPERATURE MONITORING PROBE WITH AVERAGE TEMPERATURES AT DEPTH BETWEEN 200 °F AND 250 °F
- TP-2 TEMPERATURE MONITORING PROBE WITH AVERAGE TEMPERATURES AT DEPTH BETWEEN 250 °F AND 300 °F

Volume

Base Surface TOPO – JULY 16, 2024
Comparison Surface TOPO – AUGUST 14, 2024

Cut Volume	12,439	Cu. Yd.
Fill Volume	417	Cu. Yd.
Net Cut	12,022	Cu. Yd.

Elevations Table

Number	Minimum Elevation	Maximum Elevation	Color
1	-8.000	-5.000	
2	-5.000	-1.000	
3	-1.000	0.000	
4	0.000	1.000	
5	1.000	5.000	
6	5.000	10.000	
7	10.000	20.000	

NOTES:

1. THE ELEVATION CHANGES ARE CALCULATED BETWEEN THE AERIAL TOPOGRAPHY DATA CAPTURED ON JULY 16, 2024 AND AUGUST 14, 2024 BY SCS ENGINEERS. POSITIVE VALUES (+) INDICATE AREAS OF FILL AND NEGATIVE VALUES (–) INDICATE AREAS OF CUT (SETTLEMENT). VALUES ARE ROUNDED TO THE NEAREST FOOT
2. ANY DETERMINATION OF TOPOGRAPHY OR CONTOURS, OR ANY DEPICTION OF PHYSICAL IMPROVEMENTS, PROPERTY LINES, OR BOUNDARIES IS FOR GENERAL INFORMATION ONLY AND SHALL NOT BE USED FOR DESIGN, MODIFICATION, OR CONSTRUCTION OF IMPROVEMENTS TO REAL PROPERTY OR FOR FLOOD PLAIN DETERMINATION.
3. THE HORIZONTAL DATUM IS STATE PLANE VIRGINIA SOUTH ZONE NAD–83 (2011)
4. THE VERTICAL DATUM IS BASED UPON NAVD–88.

100 50 0 100 200
SCALE: 1"=100'

NO.	REVISION	DATE

SHEET TITLE: AUGUST VOLUME CHANGE JULY 2024 TO AUGUST 2024

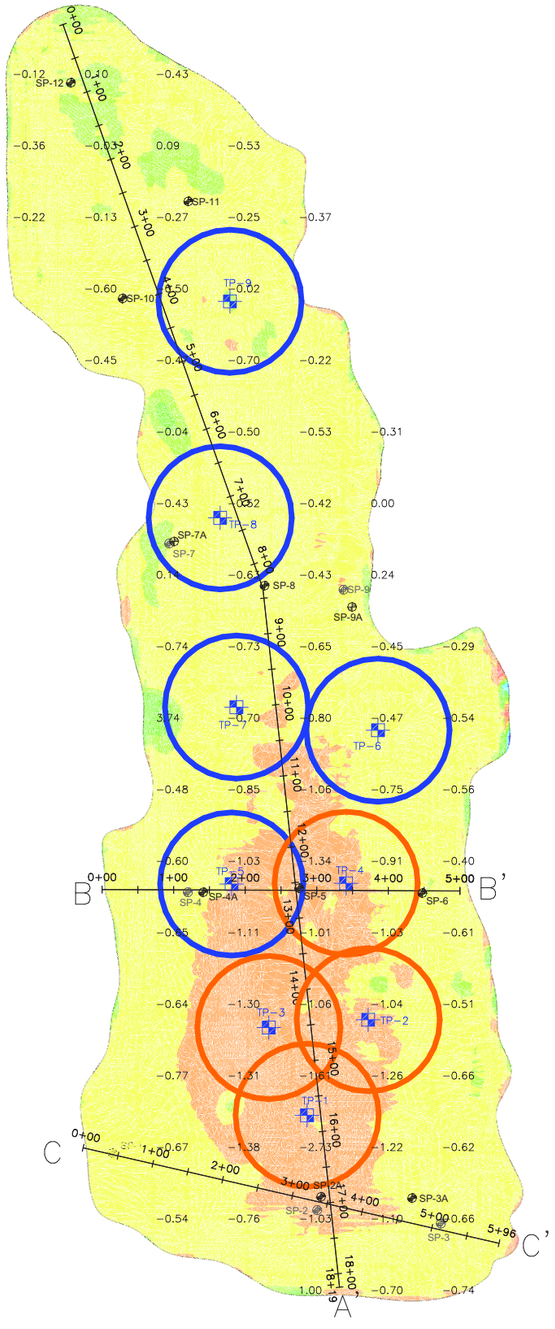
PROJECT TITLE: MONTHLY TOPOGRAPHY ANALYSIS SOLID WASTE PERMIT #588

CLIENT: CITY OF BRISTOL INTEGRATED SOLID WASTE MANAGEMENT FACILITY
2655 VALLEY DRIVE
BRISTOL, VIRGINIA 24201

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
15521 MIDLOTHIAN TNPK - MIDLOTHIAN, VA 23113
PH. (804) 378-7440 FAX. (804) 378-7433

PROJ. NO. 02218208.05
DSN. BY:
DWN. BY: LLH
CHK. BY: CJW
D/A RVW. BY: CJW
APP. BY: CJW

CADD FILE: SURF COMP
DATE: 9/1/2024
SCALE:
DRAWING NO. 5 of 8



LEGEND

- MAJOR CONTOURS (EVERY 10')
- MINOR CONTOURS (EVERY 2')
- APPROXIMATE WASTE BOUNDARY
- SP-9 SETTLEMENT PLATE
- −0.39 SPOT ELEVATION ON 100' GRID
- TP−8 TEMPERATURE MONITORING PROBE WITH AVERAGE TEMPERATURES AT DEPTH LESS THAN 200 °F
- TP−1 TEMPERATURE MONITORING PROBE WITH AVERAGE TEMPERATURES AT DEPTH BETWEEN 200 °F AND 250 °F
- TP−2 TEMPERATURE MONITORING PROBE WITH AVERAGE TEMPERATURES AT DEPTH BETWEEN 250 °F AND 300 °F

Volume
Base Surface TOPO – MAY 21, 2024
Comparison Surface TOPO – AUGUST 14, 2024

Cut Volume	17,873	Cu. Yd.
Fill Volume	725	Cu. Yd.
Net Cut	17,148	Cu. Yd.

Elevations Table

Number	Minimum Elevation	Maximum Elevation	Color
1	−10.000	−5.000	
2	−5.000	−1.000	
3	−1.000	0.000	
4	0.000	1.000	
5	1.000	5.000	
6	5.000	10.000	

NOTES:

1. THE ELEVATION CHANGES ARE CALCULATED BETWEEN THE AERIAL TOPOGRAPHY DATA CAPTURED ON MAY 21, 2024 AND AUGUST 14, 2024 BY SCS ENGINEERS. POSITIVE VALUES (+) INDICATE AREAS OF FILL AND NEGATIVE VALUES (−) INDICATE AREAS OF CUT (SETTLEMENT). VALUES ARE ROUNDED TO THE NEAREST FOOT.
2. ANY DETERMINATION OF TOPOGRAPHY OR CONTOURS, OR ANY DEPICTION OF PHYSICAL IMPROVEMENTS, PROPERTY LINES, OR BOUNDARIES IS FOR GENERAL INFORMATION ONLY AND SHALL NOT BE USED FOR DESIGN, MODIFICATION, OR CONSTRUCTION OF IMPROVEMENTS TO REAL PROPERTY OR FOR FLOOD PLAIN DETERMINATION.
3. THE HORIZONTAL DATUM IS STATE PLANE VIRGINIA SOUTH ZONE NAD−83 (2011).
4. THE VERTICAL DATUM IS BASED UPON NAVD−88.

100 50 0 100 200
SCALE: 1"=100'

NO.	REVISION	DATE

SHEET TITLE: AUGUST VOLUME CHANGE MAY 2024 TO AUGUST 2024

PROJECT TITLE: MONTHLY TOPOGRAPHY ANALYSIS SOLID WASTE PERMIT #588

CLIENT
CITY OF BRISTOL INTEGRATED SOLID WASTE MANAGEMENT FACILITY
2655 VALLEY DRIVE
BRISTOL, VIRGINIA 24201

SCS ENGINEERS
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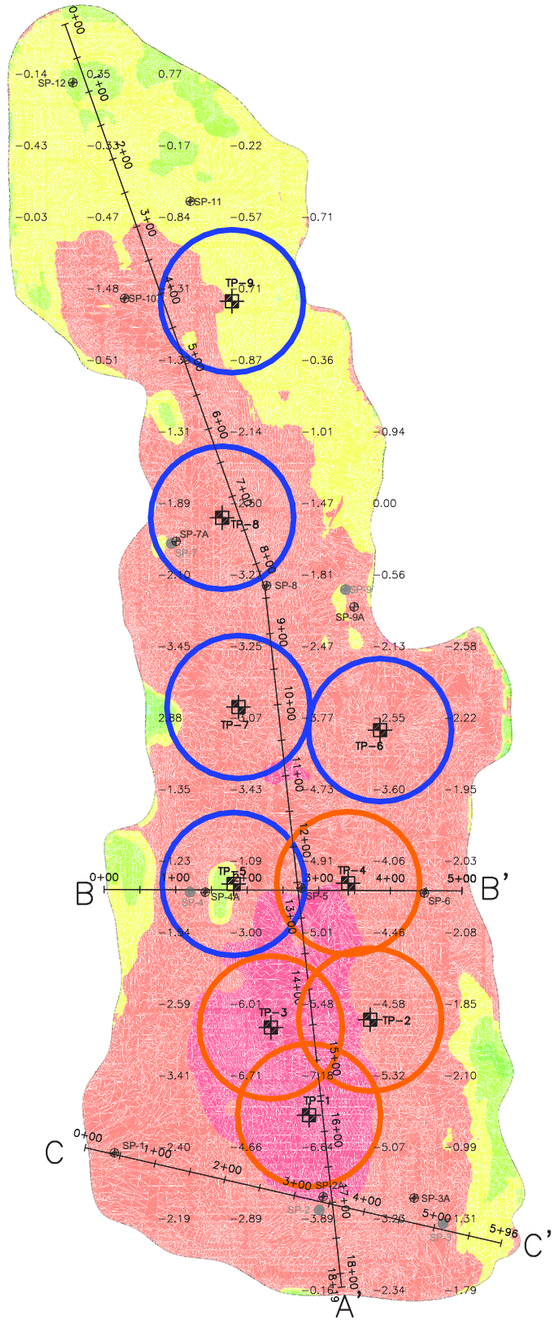
15521 MIDLOTHIAN TNPK. - MIDLOTHIAN, VA 23113
PH. (804) 378-7440 FAX. (804) 378-7453

PROJ. NO. 02218208.05
DSN. BY:
DWN. BY: LLH
CHK. BY: CJW
QA RVW BY: CJW
APP. BY: CJW

CADD FILE: SURF COMP
DATE: 9/1/2024
SCALE:
DRAWING NO. 6 of 8



LEGEND

- MAJOR CONTOURS (EVERY 10')
- MINOR CONTOURS (EVERY 2')
- APPROXIMATE WASTE BOUNDARY
- SP-9 SETTLEMENT PLATE
- -0.39 SPOT ELEVATION ON 100' GRID
- TP-8 TEMPERATURE MONITORING PROBE WITH AVERAGE TEMPERATURES AT DEPTH LESS THAN 200 °F
- TP-1 TEMPERATURE MONITORING PROBE WITH AVERAGE TEMPERATURES AT DEPTH BETWEEN 200 °F AND 250 °F
- TP-2 TEMPERATURE MONITORING PROBE WITH AVERAGE TEMPERATURES AT DEPTH BETWEEN 250 °F AND 300 °F

Volume

Base Surface TOPO – AUGUST 2, 2023
Comparison Surface TOPO – AUGUST 14, 2024

Cut Volume	69,042	Cu. Yd.
Fill Volume	546	Cu. Yd.
Net Cut	68,496	Cu. Yd.

Elevations Table

Number	Minimum Elevation	Maximum Elevation	Color
1	-16.000	-10.000	
2	-10.000	-5.000	
3	-5.000	-1.000	
4	-1.000	0.000	
5	0.000	1.000	
6	1.000	5.000	
7	5.000	10.000	

NOTES:

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3. THE HORIZONTAL DATUM IS STATE PLANE VIRGINIA SOUTH ZONE NAD–83 (2011)
4. THE VERTICAL DATUM(S) IS BASED UPON NAVD–88.

100 50 0 100 200
SCALE: 1"=100'

NO. | REVISION | DATE

SHEET TITLE: AUGUST VOLUME CHANGE AUGUST 2023 TO AUGUST 2024

PROJECT TITLE: MONTHLY TOPOGRAPHY ANALYSIS SOLID WASTE PERMIT #588

CLIENT
CITY OF BRISTOL INTEGRATED SOLID WASTE MANAGEMENT FACILITY
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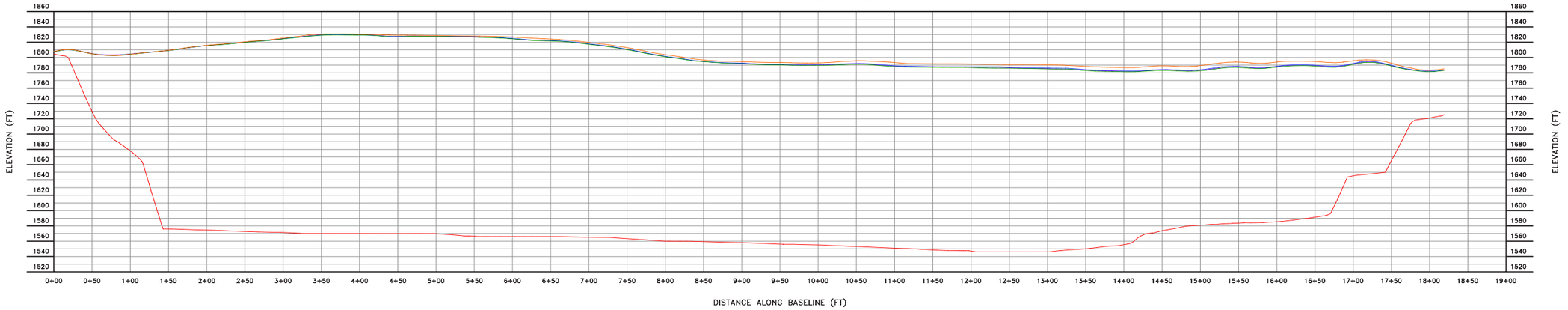
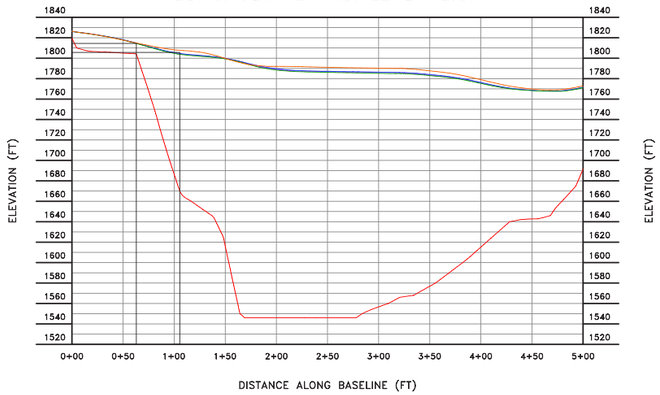
PROJ. NO. 02218208.05 | DWN. BY: LLH | D/A RVW. BY: CJW | DSN. BY: | CHK. BY: CJW | APP. BY: CJW

CADD FILE: SURF COMP
DATE: 9/1/2024
SCALE:
DRAWING NO. 7 of 8

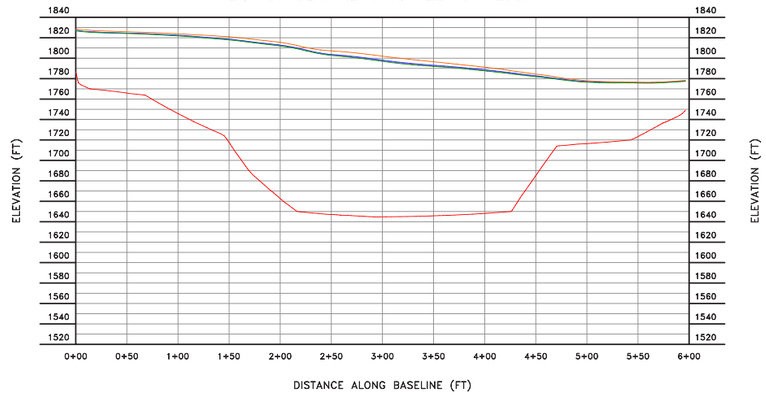
LONGITUDINAL PROFILE A ALIGN



LONGITUDINAL PROFILE B ALIGN



LONGITUDINAL PROFILE C ALIGN



LEGEND

- BOTTOM LINER ELEVATION
- AUGUST 2023 TOPO
- MAY 2024 TOPO
- JULY 2024 TOPO
- AUGUST 2024 TOPO

NO.	REVISION	DATE

SHEET TITLE: **PROFILES**

PROJECT TITLE: **MONTHLY TOPOGRAPHY ANALYSIS SOLID WASTE PERMIT #588**

CLIENT
CITY OF BRISTOL INTEGRATED SOLID WASTE MANAGEMENT FACILITY
2655 VALLEY DRIVE
BRISTOL, VIRGINIA 24201

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
15821 MIDLOTHIAN TNPK - MIDLOTHIAN, VA 23113
PH. (804) 378-7440 FAX. (804) 378-7453

PROJ. NO. 02218208.05
DWN. BY: LLH
CHK. BY: CJW
Q/A RVW BY: CJW
APP. BY: CJW

CADD FILE: SURF COMP
DATE: 9/1/2024
SCALE:
DRAWING NO. **8** of 8

Appendix F

Field Logs

Lab Report

Historical LFG-EW Leachate Monitoring Results Summary

Time-Series Plots

City of Bristol SWP 588 Landfill
Dual Phase LFG-EW Sample Collection Log

Location ID	Sample Date	Sample Time	Temperature (oC)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
EW-33B									
EW-36A									
EW-49									
EW-50									
EW-51									
EW-52									
EW-53									
EW-54	8/28/2024	9:34	---	---	---	---	-127.3	51.01	Brown
EW-55									
EW-57									
EW-58									
EW-59									
EW-60									
EW-61									
EW-62									
EW-64									
EW-67									
EW-68									
EW-70									
EW-72									

City of Bristol SWP 588 Landfill
Dual Phase LFG-EW Sample Collection Log

Location ID	Sample Date	Sample Time	Temperature (oC)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
EW-73									
EW-74									
EW-75									
EW-76									
EW-78									
EW-81									
EW-82									
EW-83									
EW-85	8/27/2024	11:56	---	---	---	---	-150.3	26.62	Brown
EW-87									
EW-88									
EW-89									
EW-90									
EW-91									
EW-92									
EW-94	8/27/2024	13:04	---	---	---	---	-157.2	1.31	Brown
EW-96									
EW-98									
EW-100									
--- = YSI displaying +++++ for result									
Sampler:		M. Myers, W. Fabrie				Samples Shipped By: Courier			
Log Checked By:		L. Howard				Laboratory: Enthalpy Analytical			

City of Bristol SWP 588 Landfill
Dual Phase LFG-EW Liquid Level Measurement Log

Date	8/27/2024-8/28/2024											
Personnel	W. Fabrie, M. Myers						Checked By:		L. Howard			
Location ID	Date	Measured Well Casing Depth (ft)	Pump Depth (ft)	Prior Cycle Count (6/11)	Cycle Count	Prior Depth to Liquid (ft)	Depth to Liquid (ft)	Casing Stickup (ft)	Liquid Column Thickness (ft)	Pump PSI	Sample Collected	Comments
PUMP INSTALLED												
EW-33B*	---	185.00	140	94	---	125.94	---	---	---	--		
EW-36A	8/27/2024	180.00	135	26966	64574	48.95	50.29	5.17	129.71	---		
EW-49*	---	96.15	90	79555	---	80.33	---	---	---	--		
EW-50	8/27/2024	77.70	83	141671	1442037	35.28	55.58	4.75	22.12	---		
EW-51	8/28/2024	92.80	95	180628	180635	33.23	---	3.83	---	--		Blockage @ 32.93 (pump?)
EW-52	8/28/2024	98.70	93	646006	830633	46.82	47.31	3.58	51.39	---		
EW-53	8/27/2024	100.70	---	3108459	3275227	51.08	52.24	4.50	48.46	--		
EW-54	8/28/2024	82.70	75	977367	1015321	36.78	39.5	4.50	43.20	---	Y	Sample collected @ 9:34
EW-55	8/28/2024	90.40	90	713767	---	42.02	---	---	---	--		Too tall
EW-57	8/27/2024	107.40	71	97665	97665	45.38	45.39	5.42	62.01	---		Cycle counter disconnected
EW-59	8/27/2024	73.40	64	3255268	3377582	37.90	59.81	4.75	13.59	--		
EW-60	8/28/2024	81.80	70	644434	678741	45.6	43.33	4.25	38.47	---		
EW-61	8/27/2024	87.80	66	79936	266507	56.62	61.11	3.17	26.69	--		
EW-62	8/28/2024	110.60	80	214566	214599	85.35	84.62	4.58	25.98	---		
EW-64*	---	109.00	113	177633	---	84.64	---	---	---	--		
EW-65*	---	88.40	50	4818	---	46.94	---	---	---	---		
EW-67	8/28/2024	107.75	62.5	373921	65053	45.15	40.29	2.50	67.46	--		
EW-68	8/28/2024	73.57	68	2479873	2510407	50.6	45.38	1.75	28.19	---		
EW-69	8/28/2024	98.00	---	17	18	94.08	93.44	4.58	4.56	--		
EW-70	8/28/2024	71.00	58	14	---	5.55	DNM	---	---	---		Standing water
EW-74	8/28/2024	184.15	140	35	---	161.34	162.36	6.42	21.79	--		No pump
EW-78	8/28/2024	57.00	47	121019	128230	57.68	43.38	3.83	13.62	---		
EW-81*	---	151.56	125	329326	---	102.97	---	---	---	--		
EW-82	8/28/2024	163.26	145	24501	124501	112.08	121.95	4.42	41.31	---		
EW-83*	---	167.04	145	2194	---	101.54	---	---	---	--		
EW-85	8/27/2024	91.00	78.5	43794	204216	73.65	80.05	4.58	10.95	---	Y	Sample collected @ 11:56
EW-87	8/28/2024	149.57	125	214634	276118	53.00	57.80	5.08	91.77	--		
EW-88	8/27/2024	100.00	58	38924	171472	45.55	49.26	3.83	50.74	---		Cycle counter disconnected
EW-89	8/27/2024	84.57	70	---	---	39.15	41.92	3.83	42.65	--		
EW-90	8/27/2024	114.00	101	---	---	77.53	79.67	3.33	34.33	---		
EW-91	8/28/2024	137.70	115	---	---	35.40	45.35	5.33	92.35	--		No pump
EW-92	8/28/2024	112.99	95	---	---	46.32	49.57	6.25	63.42	---		No pump
EW-96	8/27/2024	164.35	145	---	---	50.45	49.57	6.25	114.78	--		
EW-98	8/27/2024	51.00	43	915576	1155091	25.38	55.53	4.25	-4.53	---		
EW-100	8/27/2024	108.50	96.5	705163	733311	108.59	109.27	4.17	-0.77	--		

City of Bristol SWP 588 Landfill
Dual Phase LFG-EW Liquid Level Measurement Log

Date	8/27/2024-8/28/2024											
Personnel	W. Fabrie, M. Myers						Checked By:		L. Howard			
Location ID	Date	Measured Well Casing Depth (ft)	Pump Depth (ft)	Prior Cycle Count (6/11)	Cycle Count	Prior Depth to Liquid (ft)	Depth to Liquid (ft)	Casing Stickup (ft)	Liquid Column Thickness (ft)	Pump PSI	Sample Collected	Comments
NO PUMP												
EW-56	8/27/2024	42.71	58	---	---	Dry	Dry	5.42	---	--		Dry @ ~43.40
EW-58	8/27/2024	84.50	82	---	---	28.09	28.31	3.83	56.19	---		
EW-63*	---	62.10	64	---	---	66.63	---	---	---	--		
EW-66	8/27/2024	---	---	---	---	33.68	36.81	5.58	---	---		
EW-71	8/28/2024	185.80	---	---	---	165.75	165.90	4.83	19.9	--		
EW-72	8/28/2024	141.21	---	---	---	133.45	131.64	4.50	9.57	---		
EW-73	8/28/2024	116.00	---	---	---	107.31	106.59	3.83	9.41	--		
EW-77*	---	185.22	---	---	---	134.11	---	---	---	---		
EW-79*	---	185.64	---	---	---	152.95	---	---	---	--		
EW-80*	---	149.00	---	---	---	137.84	---	---	---	---		
EW-84*	---	130.56	---	---	---	78.01	---	---	---	--		
EW-86	8/27/2024	153.00	---	---	---	74.88	74.90	2.92	78.10	---		
EW-93	8/27/2024	111.00	---	---	---	28.78	32.22	4.25	78.78	--		
EW-95	8/27/2024	68.00	---	---	---	56.96	59.10	3.50	8.90	---		
EW-97	8/27/2024	144.50	---	---	---	88.70	94.12	6.50	50.38	--		
EW-99	8/27/2024	65.00	---	---	---	60.88	60.40	3.75	4.60	---		
MEASURE CASING STICKUP AND CYCLE COUNTER ONLY												
EW-76	8/28/2024	127.00	108	34	41	DNM	---	3.33	---	--		
EW-75*	---	130.82	140	16	---	DNM	---	---	---	---		
EW-94	8/27/2024	50.00	45	301711	434431	35.1	---	4.17	---	--	Y	Sample collected @ 13:04

DNM = Do not measure

* = Unable to get depth to liquid due to damage to forcemain causing wells to be not under vacuum and therefore unsafe to open.

TNI Accredited
VELAP ID 460021

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 24G1354

Client Name:	SCS Engineers-Winchester 296 Victory Road Winchester, VA 22602	Date Received:	July 25, 2024 8:00
		Date Issued:	August 8, 2024 17:09
		Project Number:	02218208.15 Task 2
Submitted To:	Jennifer Robb	Purchase Order:	
Client Site I.D.:	24-02 LFG-EW Monthly Monitoring		

Enclosed are the results of analyses for samples received by the laboratory on 07/25/2024 08:00. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

Sarah R. Endsley
Laboratory Manager

End Notes:
The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

Enthalpy Analytical
1941 Reymet Road
Richmond, VA 23237
(804)-358-8295 - Telephone
(804)-358-8297 - Fax

Analysis Detects Report

Client Name: SCS Engineers-Winchester
Client Site ID: 24-02 LFG-EW Monthly Monitoring
Submitted To: Jennifer Robb

Date Issued: 8/8/2024 5:09:45PM

Laboratory Sample ID: **24G1354-01** **Client Sample ID:** **EW-59**

Parameter	Samp ID	Reference Method	Sample Results	Qual	DL	LOQ	Dil. Factor	Units
Arsenic	01	SW6020B	300		2.5	5.0	5	ug/L
Barium	01	SW6020B	1280		5.00	25.0	5	ug/L
Chromium	01	SW6020B	252		2.00	5.00	5	ug/L
Copper	01	SW6020B	39.8		1.50	5.00	5	ug/L
Nickel	01	SW6020B	191.7		5.000	5.000	5	ug/L
Zinc	01	SW6020B	104		12.5	25.0	5	ug/L
2-Butanone (MEK)	01	SW8260D	15600		150	500	50	ug/L
Acetone	01RE1	SW8260D	32200		3500	5000	500	ug/L
Benzene	01	SW8260D	1410		20.0	50.0	50	ug/L
Ethylbenzene	01	SW8260D	76.0		20.0	50.0	50	ug/L
Tetrahydrofuran	01	SW8260D	1900		500	500	50	ug/L
Toluene	01	SW8260D	97.0		25.0	50.0	50	ug/L
Xylenes, Total	01	SW8260D	125	J	50.0	150	50	ug/L
Ammonia as N	01	EPA350.1 R2.0	1860		73.1	100	1000	mg/L
BOD	01	SM5210B-2016	25800	H	0.2	2.0	1	mg/L
COD	01	SM5220D-2011	42400		5000	5000	500	mg/L
Cyanide	01	SW9012B	0.28	CI	0.10	0.10	10	mg/L
Nitrate as N	01	Calc.	6.66		5.00	25.0	500	mg/L
Nitrate+Nitrite as N	01	SM4500-NO3F-2016	6.66		0.50	0.50	5	mg/L
TKN as N	01	EPA351.2 R2.0	2840		100	250	500	mg/L
Total Recoverable Phenolics	01	SW9065	37.8		3.00	5.00	100	mg/L

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Analysis Detects Report

Date Issued: 8/8/2024 5:09:45PM

Client Name: SCS Engineers-Winchester
Client Site ID: 24-02 LFG-EW Monthly Monitoring
Submitted To: Jennifer Robb

Laboratory Sample ID: **24G1354-02** **Client Sample ID:** **EW-60**

Parameter	Samp ID	Reference Method	Sample Results	Qual	DL	LOQ	Dil. Factor	Units
Arsenic	02	SW6020B	95		2.5	5.0	5	ug/L
Barium	02	SW6020B	2750		5.00	25.0	5	ug/L
Chromium	02	SW6020B	246		2.00	5.00	5	ug/L
Mercury	02	SW6020B	1.04		1.00	1.00	5	ug/L
Nickel	02	SW6020B	36.34		5.000	5.000	5	ug/L
Zinc	02	SW6020B	45.1		12.5	25.0	5	ug/L
2-Butanone (MEK)	02RE1	SW8260D	25400		1500	5000	500	ug/L
Acetone	02RE1	SW8260D	52600		3500	5000	500	ug/L
Benzene	02	SW8260D	1820		20.0	50.0	50	ug/L
Ethylbenzene	02	SW8260D	118		20.0	50.0	50	ug/L
Tetrahydrofuran	02	SW8260D	4020		500	500	50	ug/L
Toluene	02	SW8260D	125		25.0	50.0	50	ug/L
Xylenes, Total	02	SW8260D	157		50.0	150	50	ug/L
Ammonia as N	02RE1	EPA350.1 R2.0	1950		146	200	2000	mg/L
BOD	02	SM5210B-2016	4750		0.2	2.0	1	mg/L
COD	02	SM5220D-2011	98500		10000	10000	1000	mg/L
Cyanide	02	SW9012B	0.25	CI	0.05	0.05	5	mg/L
TKN as N	02	EPA351.2 R2.0	2680		100	250	500	mg/L
Total Recoverable Phenolics	02	SW9065	28.8		0.750	1.25	1	mg/L

Note that this report is not the "Certificate of Analysis". This report only lists the target analytes that displayed concentrations that exceeded the detection limit specified for that analyte. For a complete listing of all analytes requested and the results of the analysis see the " Certificate of Analysis".

Enthalpy Analytical
1941 Reymet Road
Richmond, Virginia 23237
(804)-358-8295 - Telephone
(804)-358-8297 - Fax

Certificate of Analysis

Client Name: SCS Engineers-Winchester
Client Site I.D.: 24-02 LFG-EW Monthly Monitoring
Submitted To: Jennifer Robb

Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EW-59	24G1354-01	Ground Water	07/23/2024 12:38	07/25/2024 08:00
EW-60	24G1354-02	Ground Water	07/24/2024 10:40	07/25/2024 08:00
Trip Blank	24G1354-03	Non-Potable Water	07/02/2024 09:10	07/25/2024 08:00

Analysis for VFA was subcontracted to Pace Analytical. The subcontracted results are attached at the end of this Certificate of Analysis.

Enthalpy Analytical
1941 Reymet Road
Richmond, Virginia 23237
(804)-358-8295 - Telephone
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Certificate of Analysis

Client Name: SCS Engineers-Winchester
Client Site I.D.: 24-02 LFG-EW Monthly Monitoring
Submitted To: Jennifer Robb

Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

Client Sample ID: **EW-59** **Laboratory Sample ID:** **24G1354-01**

Parameter	Samp ID	CAS	Reference Method	Sample Prep Date/Time	Analyzed Date/Time	Sample Results	Qual	DL	LOQ	DF	Units	Analyst
Metals (Total) by EPA 6000/7000 Series Methods												
Silver	01	7440-22-4	SW6020B	07/26/2024 17:00	07/29/2024 12:20	BLOD		0.300	5.00	5	ug/L	AB
Arsenic	01	7440-38-2	SW6020B	07/26/2024 17:00	07/29/2024 12:20	300		2.5	5.0	5	ug/L	AB
Barium	01	7440-39-3	SW6020B	07/26/2024 17:00	07/29/2024 12:20	1280		5.00	25.0	5	ug/L	AB
Cadmium	01	7440-43-9	SW6020B	07/26/2024 17:00	07/29/2024 12:20	BLOD		0.500	5.00	5	ug/L	AB
Chromium	01	7440-47-3	SW6020B	07/26/2024 17:00	07/29/2024 12:20	252		2.00	5.00	5	ug/L	AB
Copper	01	7440-50-8	SW6020B	07/26/2024 17:00	07/29/2024 12:20	39.8		1.50	5.00	5	ug/L	AB
Mercury	01	7439-97-6	SW6020B	07/26/2024 17:00	07/29/2024 12:20	BLOD		1.00	1.00	5	ug/L	AB
Nickel	01	7440-02-0	SW6020B	07/26/2024 17:00	07/29/2024 12:20	191.7		5.000	5.000	5	ug/L	AB
Lead	01	7439-92-1	SW6020B	07/26/2024 17:00	07/29/2024 12:20	BLOD		5.0	5.0	5	ug/L	AB
Selenium	01	7782-49-2	SW6020B	07/26/2024 17:00	07/29/2024 12:20	BLOD		4.25	5.00	5	ug/L	AB
Zinc	01	7440-66-6	SW6020B	07/26/2024 17:00	07/29/2024 12:20	104		12.5	25.0	5	ug/L	AB
Volatile Organic Compounds by GCMS												
2-Butanone (MEK)	01	78-93-3	SW8260D	07/26/2024 17:33	07/26/2024 17:33	15600		150	500	50	ug/L	RJB
Acetone	01RE1	67-64-1	SW8260D	07/26/2024 17:56	07/26/2024 17:56	32200		3500	5000	500	ug/L	RJB
Benzene	01	71-43-2	SW8260D	07/26/2024 17:33	07/26/2024 17:33	1410		20.0	50.0	50	ug/L	RJB
Ethylbenzene	01	100-41-4	SW8260D	07/26/2024 17:33	07/26/2024 17:33	76.0		20.0	50.0	50	ug/L	RJB
Toluene	01	108-88-3	SW8260D	07/26/2024 17:33	07/26/2024 17:33	97.0		25.0	50.0	50	ug/L	RJB
Xylenes, Total	01	1330-20-7	SW8260D	07/26/2024 17:33	07/26/2024 17:33	125	J	50.0	150	50	ug/L	RJB
Tetrahydrofuran	01	109-99-9	SW8260D	07/26/2024 17:33	07/26/2024 17:33	1900		500	500	50	ug/L	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	*01*	*113 %*	*70-120*	*07/26/2024 17:33*	*07/26/2024 17:33*							
Surr: 4-Bromofluorobenzene (Surr)	*01*	*99.3 %*	*75-120*	*07/26/2024 17:33*	*07/26/2024 17:33*							
Surr: Dibromofluoromethane (Surr)	*01*	*105 %*	*70-130*	*07/26/2024 17:33*	*07/26/2024 17:33*							
Surr: Toluene-d8 (Surr)	*01*	*103 %*	*70-130*	*07/26/2024 17:33*	*07/26/2024 17:33*							
Surr: 1,2-Dichloroethane-d4 (Surr)	*01RE1*	*118 %*	*70-120*	*07/26/2024 17:56*	*07/26/2024 17:56*							

Enthalpy Analytical
1941 Reymet Road
Richmond, Virginia 23237
(804)-358-8295 - Telephone
(804)-358-8297 - Fax

Certificate of Analysis

Client Name: SCS Engineers-Winchester
Client Site I.D.: 24-02 LFG-EW Monthly Monitoring
Submitted To: Jennifer Robb

Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

Client Sample ID: **EW-59** **Laboratory Sample ID:** **24G1354-01**

Parameter	Samp ID	CAS	Reference Method	Sample Prep Date/Time	Analyzed Date/Time	Sample Results	Qual	DL	LOQ	DF	Units	Analys
Volatile Organic Compounds by GCMS												
Surr: 4-Bromofluorobenzene (Surr)	*01RE1*	*98.5 %*	*75-120*	*07/26/2024 17:56*	*07/26/2024 17:56*							
Surr: Dibromofluoromethane (Surr)	*01RE1*	*105 %*	*70-130*	*07/26/2024 17:56*	*07/26/2024 17:56*							
Surr: Toluene-d8 (Surr)	*01RE1*	*104 %*	*70-130*	*07/26/2024 17:56*	*07/26/2024 17:56*							
Semivolatile Organic Compounds by GCMS												
Anthracene	01	120-12-7	SW8270E	07/29/2024 08:30	07/29/2024 15:05	BLOD		40.0	80.0	4	ug/L	BMS
Surr: 2,4,6-Tribromophenol (Surr)	*01*	*36.3 %*	*5-136*	*07/29/2024 08:30*	*07/29/2024 15:05*							
Surr: 2-Fluorobiphenyl (Surr)	*01*	*73.7 %*	*9-117*	*07/29/2024 08:30*	*07/29/2024 15:05*							
Surr: 2-Fluorophenol (Surr)	*01*	*%*	*5-60*	*07/29/2024 08:30*	*07/29/2024 15:05*							*DS*
Surr: Nitrobenzene-d5 (Surr)	*01*	*0.400 %*	*5-151*	*07/29/2024 08:30*	*07/29/2024 15:05*							*DS*
Surr: Phenol-d5 (Surr)	*01*	*%*	*5-60*	*07/29/2024 08:30*	*07/29/2024 15:05*							*DS*
Surr: p-Terphenyl-d14 (Surr)	*01*	*106 %*	*5-141*	*07/29/2024 08:30*	*07/29/2024 15:05*							

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Client Name: SCS Engineers-Winchester
Client Site I.D.: 24-02 LFG-EW Monthly Monitoring
Submitted To: Jennifer Robb

Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

Client Sample ID: **EW-59** **Laboratory Sample ID:** **24G1354-01**

Parameter	Samp ID	CAS	Reference Method	Sample Prep Date/Time	Analyzed Date/Time	Sample Results	Qual	DL	LOQ	DF	Units	Analyst
Wet Chemistry Analysis												
Ammonia as N	01	7664-41-7	EPA350.1 R2.0	08/06/2024 12:16	08/06/2024 12:16	1860		73.1	100	1000	mg/L	SPH
BOD	01	E1640606	SM5210B-2016	07/25/2024 13:55	07/25/2024 13:55	25800	H	0.2	2.0	1	mg/L	CET
Cyanide	01	57-12-5	SW9012B	08/02/2024 11:00	08/02/2024 12:17	0.28	CI	0.10	0.10	10	mg/L	AAL
COD	01	NA	SM5220D-2011	07/31/2024 15:46	07/31/2024 15:46	42400		5000	5000	500	mg/L	TEG
Nitrate as N	01	14797-55-8	Calc.	08/03/2024 13:00	08/03/2024 13:00	6.66		5.00	25.0	500	mg/L	EEM
Nitrate+Nitrite as N	01	E701177	SM4500-NO3F-2016	08/03/2024 13:00	08/03/2024 13:00	6.66		0.50	0.50	5	mg/L	TEG
Nitrite as N	01	14797-65-0	SM4500-NO2B-2011	07/25/2024 09:30	07/25/2024 09:30	BLOD		5.00	25.0	500	mg/L	EEM
Total Recoverable Phenolics	01	NA	SW9065	08/07/2024 17:30	08/07/2024 17:30	37.8		3.00	5.00	100	mg/L	SPH
TKN as N	01	E17148461	EPA351.2 R2.0	08/05/2024 12:32	08/05/2024 12:32	2840		100	250	500	mg/L	TEG

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Submitted To: Jennifer Robb

Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

Client Sample ID: **EW-60** **Laboratory Sample ID:** **24G1354-02**

Parameter	Samp ID	CAS	Reference Method	Sample Prep Date/Time	Analyzed Date/Time	Sample Results	Qual	DL	LOQ	DF	Units	Analyst
Metals (Total) by EPA 6000/7000 Series Methods												
Silver	02	7440-22-4	SW6020B	07/26/2024 17:00	07/29/2024 12:23	BLOD		0.300	5.00	5	ug/L	AB
Arsenic	02	7440-38-2	SW6020B	07/26/2024 17:00	07/29/2024 12:23	95		2.5	5.0	5	ug/L	AB
Barium	02	7440-39-3	SW6020B	07/26/2024 17:00	07/29/2024 12:23	2750		5.00	25.0	5	ug/L	AB
Cadmium	02	7440-43-9	SW6020B	07/26/2024 17:00	07/29/2024 12:23	BLOD		0.500	5.00	5	ug/L	AB
Chromium	02	7440-47-3	SW6020B	07/26/2024 17:00	07/29/2024 12:23	246		2.00	5.00	5	ug/L	AB
Copper	02	7440-50-8	SW6020B	07/26/2024 17:00	07/29/2024 12:23	BLOD		1.50	5.00	5	ug/L	AB
Mercury	02	7439-97-6	SW6020B	07/26/2024 17:00	07/29/2024 12:23	1.04		1.00	1.00	5	ug/L	AB
Nickel	02	7440-02-0	SW6020B	07/26/2024 17:00	07/29/2024 12:23	36.34		5.000	5.000	5	ug/L	AB
Lead	02	7439-92-1	SW6020B	07/26/2024 17:00	07/29/2024 12:23	BLOD		5.0	5.0	5	ug/L	AB
Selenium	02	7782-49-2	SW6020B	07/26/2024 17:00	07/29/2024 12:23	BLOD		4.25	5.00	5	ug/L	AB
Zinc	02	7440-66-6	SW6020B	07/26/2024 17:00	07/29/2024 12:23	45.1		12.5	25.0	5	ug/L	AB
Volatile Organic Compounds by GCMS												
2-Butanone (MEK)	02RE1	78-93-3	SW8260D	07/26/2024 18:44	07/26/2024 18:44	25400		1500	5000	500	ug/L	RJB
Acetone	02RE1	67-64-1	SW8260D	07/26/2024 18:44	07/26/2024 18:44	52600		3500	5000	500	ug/L	RJB
Benzene	02	71-43-2	SW8260D	07/26/2024 18:20	07/26/2024 18:20	1820		20.0	50.0	50	ug/L	RJB
Ethylbenzene	02	100-41-4	SW8260D	07/26/2024 18:20	07/26/2024 18:20	118		20.0	50.0	50	ug/L	RJB
Toluene	02	108-88-3	SW8260D	07/26/2024 18:20	07/26/2024 18:20	125		25.0	50.0	50	ug/L	RJB
Xylenes, Total	02	1330-20-7	SW8260D	07/26/2024 18:20	07/26/2024 18:20	157		50.0	150	50	ug/L	RJB
Tetrahydrofuran	02	109-99-9	SW8260D	07/26/2024 18:20	07/26/2024 18:20	4020		500	500	50	ug/L	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	*02*	*118 %*	*70-120*	*07/26/2024 18:20*	*07/26/2024 18:20*							
Surr: 4-Bromofluorobenzene (Surr)	*02*	*97.9 %*	*75-120*	*07/26/2024 18:20*	*07/26/2024 18:20*							
Surr: Dibromofluoromethane (Surr)	*02*	*104 %*	*70-130*	*07/26/2024 18:20*	*07/26/2024 18:20*							
Surr: Toluene-d8 (Surr)	*02*	*103 %*	*70-130*	*07/26/2024 18:20*	*07/26/2024 18:20*							
Surr: 1,2-Dichloroethane-d4 (Surr)	*02RE1*	*116 %*	*70-120*	*07/26/2024 18:44*	*07/26/2024 18:44*							

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Client Site I.D.: 24-02 LFG-EW Monthly Monitoring
Submitted To: Jennifer Robb

Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

Client Sample ID: **EW-60** **Laboratory Sample ID:** **24G1354-02**

Parameter	Samp ID	CAS	Reference Method	Sample Prep Date/Time	Analyzed Date/Time	Sample Results	Qual	DL	LOQ	DF	Units	Analyst
Volatile Organic Compounds by GCMS												
Surr: 4-Bromofluorobenzene (Surr)	*02RE1*	*99.1 %*	*75-120*	*07/26/2024 18:44*	*07/26/2024 18:44*							
Surr: Dibromofluoromethane (Surr)	*02RE1*	*105 %*	*70-130*	*07/26/2024 18:44*	*07/26/2024 18:44*							
Surr: Toluene-d8 (Surr)	*02RE1*	*102 %*	*70-130*	*07/26/2024 18:44*	*07/26/2024 18:44*							
Semivolatile Organic Compounds by GCMS												
Anthracene	02	120-12-7	SW8270E	07/29/2024 08:30	07/29/2024 15:34	BLOD		80.0	160	4	ug/L	BMS
Surr: 2,4,6-Tribromophenol (Surr)	*02*	*%*	*5-136*	*07/29/2024 08:30*	*07/29/2024 15:34*							*DS*
Surr: 2-Fluorobiphenyl (Surr)	*02*	*%*	*9-117*	*07/29/2024 08:30*	*07/29/2024 15:34*							*DS*
Surr: 2-Fluorophenol (Surr)	*02*	*0.320 %*	*5-60*	*07/29/2024 08:30*	*07/29/2024 15:34*							*DS*
Surr: Nitrobenzene-d5 (Surr)	*02*	*%*	*5-151*	*07/29/2024 08:30*	*07/29/2024 15:34*							*DS*
Surr: Phenol-d5 (Surr)	*02*	*0.320 %*	*5-60*	*07/29/2024 08:30*	*07/29/2024 15:34*							*DS*
Surr: p-Terphenyl-d14 (Surr)	*02*	*146 %*	*5-141*	*07/29/2024 08:30*	*07/29/2024 15:34*							*DS*
Wet Chemistry Analysis												
Ammonia as N	02RE1	7664-41-7	EPA350.1 R2.0	08/06/2024 12:16	08/06/2024 12:16	1950		146	200	2000	mg/L	SPH
BOD	02	E1640606	SM5210B-2016	07/25/2024 16:38	07/25/2024 16:38	4750		0.2	2.0	1	mg/L	CET
Cyanide	02	57-12-5	SW9012B	08/06/2024 12:29	08/06/2024 12:29	0.25	CI	0.05	0.05	5	mg/L	TEG
COD	02	NA	SM5220D-2011	07/31/2024 15:46	07/31/2024 15:46	98500		10000	10000	1000	mg/L	TEG
Nitrate as N	02	14797-55-8	Calc.	08/08/2024 10:00	08/08/2024 11:50	BLOD		0.500	2.50	50	mg/L	EEM
Nitrate+Nitrite as N	02	E701177	SM4500-NO3F-2016	08/08/2024 10:00	08/08/2024 11:50	BLOD		0.50	0.50	5	mg/L	MKS
Nitrite as N	02	14797-65-0	SM4500-NO2B-2011	07/25/2024 09:30	07/25/2024 09:30	BLOD		0.50	2.50	50	mg/L	EEM
Total Recoverable Phenolics	02	NA	SW9065	08/07/2024 17:30	08/07/2024 17:30	28.8		0.750	1.25	1	mg/L	SPH
TKN as N	02	E17148461	EPA351.2 R2.0	08/05/2024 12:33	08/05/2024 12:33	2680		100	250	500	mg/L	TEG

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Submitted To: Jennifer Robb

Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

Client Sample ID: **Trip Blank** **Laboratory Sample ID:** **24G1354-03**

Parameter	Samp ID	CAS	Reference Method	Sample Prep Date/Time	Analyzed Date/Time	Sample Results	Qual	DL	LOQ	DF	Units	Analyst
Volatile Organic Compounds by GCMS												
2-Butanone (MEK)	03	78-93-3	SW8260D	07/26/2024 13:11	07/26/2024 13:11	BLOD		3.00	10.0	1	ug/L	RJB
Acetone	03	67-64-1	SW8260D	07/26/2024 13:11	07/26/2024 13:11	BLOD		7.00	10.0	1	ug/L	RJB
Benzene	03	71-43-2	SW8260D	07/26/2024 13:11	07/26/2024 13:11	BLOD		0.40	1.00	1	ug/L	RJB
Ethylbenzene	03	100-41-4	SW8260D	07/26/2024 13:11	07/26/2024 13:11	BLOD		0.40	1.00	1	ug/L	RJB
Toluene	03	108-88-3	SW8260D	07/26/2024 13:11	07/26/2024 13:11	BLOD		0.50	1.00	1	ug/L	RJB
Xylenes, Total	03	1330-20-7	SW8260D	07/26/2024 13:11	07/26/2024 13:11	BLOD		1.00	3.00	1	ug/L	RJB
Tetrahydrofuran	03	109-99-9	SW8260D	07/26/2024 13:11	07/26/2024 13:11	BLOD		10.0	10.0	1	ug/L	RJB
Surr: 1,2-Dichloroethane-d4 (Surr)	*03*	*115 %*	*70-120*	*07/26/2024 13:11*	*07/26/2024 13:11*							
Surr: 4-Bromofluorobenzene (Surr)	*03*	*96.6 %*	*75-120*	*07/26/2024 13:11*	*07/26/2024 13:11*							
Surr: Dibromofluoromethane (Surr)	*03*	*102 %*	*70-130*	*07/26/2024 13:11*	*07/26/2024 13:11*							
Surr: Toluene-d8 (Surr)	*03*	*105 %*	*70-130*	*07/26/2024 13:11*	*07/26/2024 13:11*							

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Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1053 - EPA200.8 R5.4										
Blank (BHG1053-BLK1)				Prepared: 07/26/2024 Analyzed: 07/29/2024						
Mercury	ND	0.200	ug/L							
Arsenic	ND	1.0	ug/L							
Barium	ND	5.00	ug/L							
Cadmium	ND	1.00	ug/L							
Chromium	ND	1.00	ug/L							
Copper	ND	1.00	ug/L							
Lead	ND	1.0	ug/L							
Nickel	ND	1.000	ug/L							
Selenium	ND	1.00	ug/L							
Silver	ND	1.00	ug/L							
Zinc	ND	5.00	ug/L							
LCS (BHG1053-BS1)				Prepared: 07/26/2024 Analyzed: 07/29/2024						
Mercury	0.992	0.200	ug/L	1.00		99.2	80-120			
Arsenic	52	1.0	ug/L	50.0		104	80-120			
Barium	51.6	5.00	ug/L	50.0		103	80-120			
Cadmium	49.8	1.00	ug/L	50.0		99.7	80-120			
Chromium	50.5	1.00	ug/L	50.0		101	80-120			
Copper	51.6	1.00	ug/L	50.0		103	80-120			
Lead	52	1.0	ug/L	50.0		103	80-120			
Nickel	50.05	1.000	ug/L	50.0		100	80-120			
Selenium	50.1	1.00	ug/L	50.0		100	80-120			
Silver	10.3	1.00	ug/L	10.0		103	80-120			
Zinc	51.3	5.00	ug/L	50.0		103	80-120			
Matrix Spike (BHG1053-MS1)	**Source: 24G1509-01**			Prepared: 07/26/2024 Analyzed: 07/29/2024						

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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1053 - EPA200.8 R5.4										
Matrix Spike (BHG1053-MS1)	**Source: 24G1509-01**			Prepared: 07/26/2024 Analyzed: 07/29/2024						
Mercury	1.01	0.200	ug/L	1.00	BLOD	101	70-130			
Arsenic	50	1.0	ug/L	50.0	BLOD	100	75-125			
Barium	120	5.00	ug/L	50.0	67.8	105	75-125			
Cadmium	50.6	1.00	ug/L	50.0	BLOD	101	75-125			
Chromium	50.0	1.00	ug/L	50.0	BLOD	100	75-125			
Copper	142	1.00	ug/L	50.0	93.1	98.6	75-125			
Lead	55	1.0	ug/L	50.0	5.3	100	75-125			
Nickel	52.63	1.000	ug/L	50.0	3.223	98.8	75-125			
Selenium	49.0	1.00	ug/L	50.0	BLOD	98.0	75-125			
Silver	10.4	1.00	ug/L	10.0	BLOD	104	75-125			
Zinc	592	5.00	ug/L	50.0	546	91.7	75-125			*E*
Matrix Spike (BHG1053-MS2)	**Source: 24G1510-01**			Prepared: 07/26/2024 Analyzed: 07/29/2024						
Mercury	1.01	0.200	ug/L	1.00	BLOD	101	70-130			
Arsenic	54	1.0	ug/L	50.0	BLOD	109	75-125			
Barium	52.0	5.00	ug/L	50.0	BLOD	104	75-125			
Cadmium	52.4	1.00	ug/L	50.0	BLOD	105	75-125			
Chromium	52.6	1.00	ug/L	50.0	BLOD	105	75-125			
Copper	53.2	1.00	ug/L	50.0	BLOD	106	75-125			
Lead	52	1.0	ug/L	50.0	BLOD	104	75-125			
Nickel	52.42	1.000	ug/L	50.0	BLOD	105	75-125			
Selenium	52.6	1.00	ug/L	50.0	BLOD	105	75-125			
Silver	10.8	1.00	ug/L	10.0	BLOD	108	75-125			
Zinc	53.4	5.00	ug/L	50.0	BLOD	107	75-125			
Matrix Spike Dup (BHG1053-MSD1)	**Source: 24G1509-01**			Prepared: 07/26/2024 Analyzed: 07/29/2024						

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Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1053 - EPA200.8 R5.4										
Matrix Spike Dup (BHG1053-MSD1)	**Source: 24G1509-01**			Prepared: 07/26/2024 Analyzed: 07/29/2024						
Mercury	0.994	0.200	ug/L	1.00	BLOD	99.4	70-130	1.97	20	
Arsenic	52	1.0	ug/L	50.0	BLOD	103	75-125	2.61	20	
Barium	120	5.00	ug/L	50.0	67.8	105	75-125	0.0820	20	
Cadmium	50.2	1.00	ug/L	50.0	BLOD	100	75-125	0.844	20	
Chromium	50.7	1.00	ug/L	50.0	BLOD	101	75-125	1.35	20	
Copper	144	1.00	ug/L	50.0	93.1	102	75-125	1.27	20	
Lead	55	1.0	ug/L	50.0	5.3	99.9	75-125	0.159	20	
Nickel	53.64	1.000	ug/L	50.0	3.223	101	75-125	1.91	20	
Selenium	50.6	1.00	ug/L	50.0	BLOD	101	75-125	3.14	20	
Silver	10.4	1.00	ug/L	10.0	BLOD	104	75-125	0.0417	20	
Zinc	597	5.00	ug/L	50.0	546	101	75-125	0.810	20	*E*
Matrix Spike Dup (BHG1053-MSD2)	**Source: 24G1510-01**			Prepared: 07/26/2024 Analyzed: 07/29/2024						
Mercury	0.994	0.200	ug/L	1.00	BLOD	99.4	70-130	1.25	20	
Arsenic	50	1.0	ug/L	50.0	BLOD	101	75-125	7.53	20	
Barium	50.9	5.00	ug/L	50.0	BLOD	102	75-125	2.11	20	
Cadmium	50.0	1.00	ug/L	50.0	BLOD	100	75-125	4.64	20	
Chromium	50.5	1.00	ug/L	50.0	BLOD	101	75-125	3.94	20	
Copper	50.1	1.00	ug/L	50.0	BLOD	100	75-125	5.88	20	
Lead	49	1.0	ug/L	50.0	BLOD	98.4	75-125	5.72	20	
Nickel	49.68	1.000	ug/L	50.0	BLOD	99.4	75-125	5.37	20	
Selenium	49.5	1.00	ug/L	50.0	BLOD	99.0	75-125	6.01	20	
Silver	10.2	1.00	ug/L	10.0	BLOD	102	75-125	5.16	20	
Zinc	50.8	5.00	ug/L	50.0	BLOD	102	75-125	4.98	20	

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Work Order: 24G1354

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1080 - SW5030B-MS										
Blank (BHG1080-BLK1)				Prepared & Analyzed: 07/26/2024						
2-Butanone (MEK)	ND	10.0	ug/L							
Acetone	ND	10.0	ug/L							
Benzene	ND	1.00	ug/L							
Ethylbenzene	ND	1.00	ug/L							
Toluene	ND	1.00	ug/L							
Xylenes, Total	ND	3.00	ug/L							
Surr: 1,2-Dichloroethane-d4 (Surr)	*54.2*		ug/L	*50.0*		*108*	*70-120*			
Surr: 4-Bromofluorobenzene (Surr)	*49.1*		ug/L	*50.0*		*98.2*	*75-120*			
Surr: Dibromofluoromethane (Surr)	*51.8*		ug/L	*50.0*		*104*	*70-130*			
Surr: Toluene-d8 (Surr)	*51.5*		ug/L	*50.0*		*103*	*70-130*			
LCS (BHG1080-BS1)				Prepared & Analyzed: 07/26/2024						
1,1,1,2-Tetrachloroethane	43.0	0.4	ug/L	50.0		85.9	80-130			
1,1,1-Trichloroethane	43.4	1	ug/L	50.0		86.8	65-130			
1,1,2,2-Tetrachloroethane	46.0	0.4	ug/L	50.0		92.1	65-130			
1,1,2-Trichloroethane	45.5	1	ug/L	50.0		91.0	75-125			
1,1-Dichloroethane	45.0	1	ug/L	50.0		89.9	70-135			
1,1-Dichloroethylene	42.5	1	ug/L	50.0		85.0	70-130			
1,1-Dichloropropene	52.7	1	ug/L	50.0		105	75-135			
1,2,3-Trichlorobenzene	50.8	1	ug/L	50.0		102	55-140			
1,2,3-Trichloropropane	44.7	1	ug/L	50.0		89.4	75-125			
1,2,4-Trichlorobenzene	48.3	1	ug/L	50.0		96.6	65-135			
1,2,4-Trimethylbenzene	54.9	1	ug/L	50.0		110	75-130			
1,2-Dibromo-3-chloropropane (DBCP)	36.1	1	ug/L	50.0		72.2	50-130			
1,2-Dibromoethane (EDB)	44.6	1	ug/L	50.0		89.1	80-120			

Enthalpy Analytical
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Richmond, Virginia 23237
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Certificate of Analysis

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Client Site I.D.: 24-02 LFG-EW Monthly Monitoring
Submitted To: Jennifer Robb

Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1080 - SW5030B-MS										
LCS (BHG1080-BS1)				Prepared & Analyzed: 07/26/2024						
1,2-Dichlorobenzene	49.7	0.5	ug/L	50.0		99.3	70-120			
1,2-Dichloroethane	39.4	1	ug/L	50.0		78.9	70-130			
1,2-Dichloropropane	51.0	0.5	ug/L	50.0		102	75-125			
1,3,5-Trimethylbenzene	53.1	1	ug/L	50.0		106	75-125			
1,3-Dichlorobenzene	49.5	1	ug/L	50.0		99.1	75-125			
1,3-Dichloropropane	46.7	1	ug/L	50.0		93.5	75-125			
1,4-Dichlorobenzene	49.1	1	ug/L	50.0		98.2	75-125			
2,2-Dichloropropane	45.1	1	ug/L	50.0		90.2	70-135			
2-Butanone (MEK)	40.9	10	ug/L	50.0		81.7	30-150			
2-Chlorotoluene	48.9	1	ug/L	50.0		97.8	75-125			
2-Hexanone (MBK)	41.9	5	ug/L	50.0		83.7	55-130			
4-Chlorotoluene	49.2	1	ug/L	50.0		98.3	75-130			
4-Isopropyltoluene	56.6	1	ug/L	50.0		113	75-130			
4-Methyl-2-pentanone (MIBK)	42.7	5	ug/L	50.0		85.4	60-135			
Acetone	36.2	10	ug/L	50.0		72.3	40-140			
Benzene	53.7	1	ug/L	50.0		107	80-120			
Bromobenzene	44.6	1	ug/L	50.0		89.2	75-125			
Bromochloromethane	48.5	1	ug/L	50.0		97.0	65-130			
Bromodichloromethane	40.9	0.5	ug/L	50.0		81.8	75-120			
Bromoform	39.6	1	ug/L	50.0		79.3	70-130			
Bromomethane	38.7	1	ug/L	50.0		77.4	30-145			
Carbon disulfide	55.1	10	ug/L	50.0		110	35-160			
Carbon tetrachloride	40.5	1	ug/L	50.0		81.1	65-140			
Chlorobenzene	49.0	1	ug/L	50.0		98.1	80-120			
Chloroethane	39.4	1	ug/L	50.0		78.8	60-135			

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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1080 - SW5030B-MS										
LCS (BHG1080-BS1)				Prepared & Analyzed: 07/26/2024						
Chloroform	46.9	0.5	ug/L	50.0		93.9	65-135			
Chloromethane	49.3	1	ug/L	50.0		98.6	40-125			
cis-1,2-Dichloroethylene	51.8	1	ug/L	50.0		104	70-125			
cis-1,3-Dichloropropene	43.9	1	ug/L	50.0		87.9	70-130			
Dibromochloromethane	38.9	0.5	ug/L	50.0		77.8	60-135			
Dibromomethane	43.9	1	ug/L	50.0		87.8	75-125			
Dichlorodifluoromethane	54.9	1	ug/L	50.0		110	30-155			
Ethylbenzene	51.2	1	ug/L	50.0		102	75-125			
Hexachlorobutadiene	47.0	0.8	ug/L	50.0		94.0	50-140			
Isopropylbenzene	44.4	1	ug/L	50.0		88.8	75-125			
m+p-Xylenes	95.6	2	ug/L	100		95.6	75-130			
Methylene chloride	44.5	4	ug/L	50.0		89.1	55-140			
Methyl-t-butyl ether (MTBE)	38.6	1	ug/L	50.0		77.2	65-125			
Naphthalene	49.2	1	ug/L	50.0		98.4	55-140			
n-Butylbenzene	54.5	1	ug/L	50.0		109	70-135			
n-Propylbenzene	50.0	1	ug/L	50.0		99.9	70-130			
o-Xylene	47.0	1	ug/L	50.0		93.9	80-120			
sec-Butylbenzene	54.2	1	ug/L	50.0		108	70-125			
Styrene	47.4	1	ug/L	50.0		94.7	65-135			
tert-Butylbenzene	51.8	1	ug/L	50.0		104	70-130			
Tetrachloroethylene (PCE)	44.5	1	ug/L	50.0		88.9	45-150			
Toluene	49.2	1	ug/L	50.0		98.4	75-120			
trans-1,2-Dichloroethylene	44.3	1	ug/L	50.0		88.6	60-140			
trans-1,3-Dichloropropene	43.3	1	ug/L	50.0		86.6	55-140			
Trichloroethylene	47.1	1	ug/L	50.0		94.2	70-125			

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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1080 - SW5030B-MS										
LCS (BHG1080-BS1)				Prepared & Analyzed: 07/26/2024						
Trichlorofluoromethane	36.2	1	ug/L	50.0		72.4	60-145			
Vinyl chloride	30.5	0.5	ug/L	50.0		61.1	50-145			
Surr: 1,2-Dichloroethane-d4 (Surr)	*54.9*		ug/L	*50.0*		*110*	*70-120*			
Surr: 4-Bromofluorobenzene (Surr)	*48.6*		ug/L	*50.0*		*97.2*	*75-120*			
Surr: Dibromofluoromethane (Surr)	*51.9*		ug/L	*50.0*		*104*	*70-130*			
Surr: Toluene-d8 (Surr)	*50.2*		ug/L	*50.0*		*100*	*70-130*			
Matrix Spike (BHG1080-MS1)	**Source: 24G1308-05**			Prepared & Analyzed: 07/26/2024						
1,1,1,2-Tetrachloroethane	42.4	0.4	ug/L	50.0	BLOD	84.8	80-130			
1,1,1-Trichloroethane	43.7	1	ug/L	50.0	BLOD	87.5	65-130			
1,1,2,2-Tetrachloroethane	47.6	0.4	ug/L	50.0	BLOD	95.2	65-130			
1,1,2-Trichloroethane	46.3	1	ug/L	50.0	BLOD	92.6	75-125			
1,1-Dichloroethane	51.0	1	ug/L	50.0	BLOD	102	70-135			
1,1-Dichloroethylene	43.3	1	ug/L	50.0	BLOD	86.5	50-145			
1,1-Dichloropropene	53.0	1	ug/L	50.0	BLOD	106	75-135			
1,2,3-Trichlorobenzene	49.4	1	ug/L	50.0	BLOD	98.7	55-140			
1,2,3-Trichloropropane	46.4	1	ug/L	50.0	BLOD	92.8	75-125			
1,2,4-Trichlorobenzene	47.8	1	ug/L	50.0	BLOD	95.7	65-135			
1,2,4-Trimethylbenzene	54.6	1	ug/L	50.0	BLOD	109	75-130			
1,2-Dibromo-3-chloropropane (DBCP)	38.4	1	ug/L	50.0	BLOD	76.7	50-130			
1,2-Dibromoethane (EDB)	45.8	1	ug/L	50.0	BLOD	91.5	80-120			
1,2-Dichlorobenzene	49.3	0.5	ug/L	50.0	BLOD	98.6	70-120			
1,2-Dichloroethane	38.8	1	ug/L	50.0	BLOD	77.6	70-130			
1,2-Dichloropropane	51.8	0.5	ug/L	50.0	BLOD	104	75-125			
1,3,5-Trimethylbenzene	53.2	1	ug/L	50.0	BLOD	106	75-124			

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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1080 - SW5030B-MS										
Matrix Spike (BHG1080-MS1)		**Source: 24G1308-05**		Prepared & Analyzed: 07/26/2024						
1,3-Dichlorobenzene	49.6	1	ug/L	50.0	BLOD	99.1	75-125			
1,3-Dichloropropane	47.3	1	ug/L	50.0	BLOD	94.6	75-125			
1,4-Dichlorobenzene	48.7	1	ug/L	50.0	BLOD	97.3	75-125			
2,2-Dichloropropane	44.8	1	ug/L	50.0	BLOD	89.6	70-135			
2-Butanone (MEK)	48.2	10	ug/L	50.0	BLOD	96.3	30-150			
2-Chlorotoluene	49.7	1	ug/L	50.0	BLOD	99.3	75-125			
2-Hexanone (MBK)	45.2	5	ug/L	50.0	BLOD	90.5	55-130			
4-Chlorotoluene	49.4	1	ug/L	50.0	BLOD	98.9	75-130			
4-Isopropyltoluene	56.2	1	ug/L	50.0	BLOD	112	75-130			
4-Methyl-2-pentanone (MIBK)	45.4	5	ug/L	50.0	BLOD	90.8	60-135			
Acetone	55.1	10	ug/L	50.0	14.7	80.7	40-140			
Benzene	53.6	1	ug/L	50.0	BLOD	107	80-120			
Bromobenzene	44.5	1	ug/L	50.0	BLOD	89.0	75-125			
Bromochloromethane	48.1	1	ug/L	50.0	BLOD	96.2	65-130			
Bromodichloromethane	41.5	0.5	ug/L	50.0	BLOD	83.0	75-136			
Bromoform	40.3	1	ug/L	50.0	BLOD	80.5	70-130			
Bromomethane	38.9	1	ug/L	50.0	BLOD	77.8	30-145			
Carbon disulfide	72.0	10	ug/L	50.0	BLOD	143	35-160			
Carbon tetrachloride	39.6	1	ug/L	50.0	BLOD	79.2	65-140			
Chlorobenzene	48.8	1	ug/L	50.0	BLOD	97.5	80-120			
Chloroethane	37.9	1	ug/L	50.0	BLOD	75.8	60-135			
Chloroform	46.9	0.5	ug/L	50.0	BLOD	93.6	65-135			
Chloromethane	49.1	1	ug/L	50.0	BLOD	98.2	40-125			
cis-1,2-Dichloroethylene	51.6	1	ug/L	50.0	BLOD	103	70-125			
cis-1,3-Dichloropropene	43.3	1	ug/L	50.0	BLOD	86.7	47-136			

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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1080 - SW5030B-MS										
Matrix Spike (BHG1080-MS1)	**Source: 24G1308-05**			Prepared & Analyzed: 07/26/2024						
Dibromochloromethane	39.8	0.5	ug/L	50.0	BLOD	79.6	60-135			
Dibromomethane	43.9	1	ug/L	50.0	BLOD	87.8	75-125			
Dichlorodifluoromethane	38.6	1	ug/L	50.0	BLOD	77.1	30-155			
Ethylbenzene	51.4	1	ug/L	50.0	BLOD	103	75-125			
Hexachlorobutadiene	45.4	0.8	ug/L	50.0	BLOD	90.7	50-140			
Isopropylbenzene	44.7	1	ug/L	50.0	BLOD	89.5	75-125			
m+p-Xylenes	96.0	2	ug/L	100	BLOD	96.0	75-130			
Methylene chloride	44.9	4	ug/L	50.0	BLOD	88.2	55-140			
Methyl-t-butyl ether (MTBE)	38.7	1	ug/L	50.0	BLOD	77.3	65-125			
Naphthalene	49.6	1	ug/L	50.0	BLOD	99.3	55-140			
n-Butylbenzene	54.8	1	ug/L	50.0	BLOD	110	70-135			
n-Propylbenzene	49.8	1	ug/L	50.0	BLOD	99.5	70-130			
o-Xylene	47.2	1	ug/L	50.0	BLOD	94.4	80-120			
sec-Butylbenzene	54.3	1	ug/L	50.0	BLOD	109	70-125			
Styrene	47.8	1	ug/L	50.0	BLOD	95.5	65-135			
tert-Butylbenzene	51.7	1	ug/L	50.0	BLOD	103	70-130			
Tetrachloroethylene (PCE)	43.4	1	ug/L	50.0	BLOD	86.9	51-231			
Toluene	50.0	1	ug/L	50.0	BLOD	100	75-120			
trans-1,2-Dichloroethylene	43.1	1	ug/L	50.0	BLOD	86.3	60-140			
trans-1,3-Dichloropropene	44.1	1	ug/L	50.0	BLOD	88.2	55-140			
Trichloroethylene	47.1	1	ug/L	50.0	BLOD	94.2	70-125			
Trichlorofluoromethane	35.7	1	ug/L	50.0	BLOD	71.3	60-145			
Vinyl chloride	30.7	0.5	ug/L	50.0	BLOD	61.3	50-145			
Surr: 1,2-Dichloroethane-d4 (Surr)	*55.9*		ug/L	*50.0*		*112*	*70-120*			

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Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1080 - SW5030B-MS										
Matrix Spike (BHG1080-MS1)	**Source: 24G1308-05**			Prepared & Analyzed: 07/26/2024						
Surr: 4-Bromofluorobenzene (Surr)	*49.2*		ug/L	*50.0*		*98.4*	*75-120*			
Surr: Dibromofluoromethane (Surr)	*51.3*		ug/L	*50.0*		*103*	*70-130*			
Surr: Toluene-d8 (Surr)	*50.8*		ug/L	*50.0*		*102*	*70-130*			
Matrix Spike Dup (BHG1080-MSD1)	**Source: 24G1308-05**			Prepared & Analyzed: 07/26/2024						
1,1,1,2-Tetrachloroethane	44.4	0.4	ug/L	50.0	BLOD	88.9	80-130	4.65	30	
1,1,1-Trichloroethane	44.8	1	ug/L	50.0	BLOD	89.5	65-130	2.28	30	
1,1,2,2-Tetrachloroethane	48.8	0.4	ug/L	50.0	BLOD	97.7	65-130	2.61	30	
1,1,2-Trichloroethane	48.7	1	ug/L	50.0	BLOD	97.5	75-125	5.11	30	
1,1-Dichloroethane	53.7	1	ug/L	50.0	BLOD	107	70-135	5.14	30	
1,1-Dichloroethylene	42.0	1	ug/L	50.0	BLOD	84.0	50-145	2.98	30	
1,1-Dichloropropene	55.6	1	ug/L	50.0	BLOD	111	75-135	4.77	30	
1,2,3-Trichlorobenzene	52.4	1	ug/L	50.0	BLOD	105	55-140	5.99	30	
1,2,3-Trichloropropane	47.2	1	ug/L	50.0	BLOD	94.5	75-125	1.82	30	
1,2,4-Trichlorobenzene	50.0	1	ug/L	50.0	BLOD	100	65-135	4.44	30	
1,2,4-Trimethylbenzene	57.7	1	ug/L	50.0	BLOD	115	75-130	5.52	30	
1,2-Dibromo-3-chloropropane (DBCP)	39.1	1	ug/L	50.0	BLOD	78.2	50-130	1.94	30	
1,2-Dibromoethane (EDB)	47.5	1	ug/L	50.0	BLOD	95.0	80-120	3.73	30	
1,2-Dichlorobenzene	51.1	0.5	ug/L	50.0	BLOD	102	70-120	3.59	30	
1,2-Dichloroethane	40.7	1	ug/L	50.0	BLOD	81.3	70-130	4.73	30	
1,2-Dichloropropane	54.1	0.5	ug/L	50.0	BLOD	108	75-125	4.30	30	
1,3,5-Trimethylbenzene	55.1	1	ug/L	50.0	BLOD	110	75-124	3.43	30	
1,3-Dichlorobenzene	51.4	1	ug/L	50.0	BLOD	103	75-125	3.72	30	
1,3-Dichloropropane	49.7	1	ug/L	50.0	BLOD	99.3	75-125	4.87	30	
1,4-Dichlorobenzene	50.2	1	ug/L	50.0	BLOD	100	75-125	3.00	30	

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Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1080 - SW5030B-MS										
Matrix Spike Dup (BHG1080-MSD1)	**Source: 24G1308-05**			Prepared & Analyzed: 07/26/2024						
2,2-Dichloropropane	46.7	1	ug/L	50.0	BLOD	93.3	70-135	4.09	30	
2-Butanone (MEK)	44.4	10	ug/L	50.0	BLOD	88.7	30-150	8.17	30	
2-Chlorotoluene	50.6	1	ug/L	50.0	BLOD	101	75-125	1.89	30	
2-Hexanone (MBK)	45.0	5	ug/L	50.0	BLOD	90.0	55-130	0.487	30	
4-Chlorotoluene	51.3	1	ug/L	50.0	BLOD	103	75-130	3.71	30	
4-Isopropyltoluene	58.4	1	ug/L	50.0	BLOD	117	75-130	3.80	30	
4-Methyl-2-pentanone (MIBK)	46.9	5	ug/L	50.0	BLOD	93.9	60-135	3.38	30	
Acetone	56.0	10	ug/L	50.0	14.7	82.5	40-140	1.62	30	
Benzene	56.0	1	ug/L	50.0	BLOD	112	80-120	4.36	30	
Bromobenzene	46.1	1	ug/L	50.0	BLOD	92.2	75-125	3.51	30	
Bromochloromethane	49.4	1	ug/L	50.0	BLOD	98.9	65-130	2.75	30	
Bromodichloromethane	42.6	0.5	ug/L	50.0	BLOD	85.3	75-136	2.69	30	
Bromoform	41.6	1	ug/L	50.0	BLOD	83.1	70-130	3.13	30	
Bromomethane	41.5	1	ug/L	50.0	BLOD	83.0	30-145	6.49	30	
Carbon disulfide	58.2	10	ug/L	50.0	BLOD	116	35-160	21.2	30	
Carbon tetrachloride	41.8	1	ug/L	50.0	BLOD	83.7	65-140	5.47	30	
Chlorobenzene	50.7	1	ug/L	50.0	BLOD	101	80-120	3.90	30	
Chloroethane	38.5	1	ug/L	50.0	BLOD	77.1	60-135	1.70	30	
Chloroform	48.9	0.5	ug/L	50.0	BLOD	97.7	65-135	4.19	30	
Chloromethane	50.6	1	ug/L	50.0	BLOD	101	40-125	2.91	30	
cis-1,2-Dichloroethylene	54.0	1	ug/L	50.0	BLOD	108	70-125	4.49	30	
cis-1,3-Dichloropropene	45.5	1	ug/L	50.0	BLOD	91.1	47-136	4.95	30	
Dibromochloromethane	41.6	0.5	ug/L	50.0	BLOD	83.3	60-135	4.57	30	
Dibromomethane	45.0	1	ug/L	50.0	BLOD	89.9	75-125	2.34	30	
Dichlorodifluoromethane	57.3	1	ug/L	50.0	BLOD	115	30-155	39.2	30	*P*

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Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1080 - SW5030B-MS										
Matrix Spike Dup (BHG1080-MSD1)	**Source: 24G1308-05**			Prepared & Analyzed: 07/26/2024						
Ethylbenzene	53.3	1	ug/L	50.0	BLOD	107	75-125	3.51	30	
Hexachlorobutadiene	48.1	0.8	ug/L	50.0	BLOD	96.2	50-140	5.84	30	
Isopropylbenzene	46.2	1	ug/L	50.0	BLOD	92.5	75-125	3.30	30	
m+p-Xylenes	99.4	2	ug/L	100	BLOD	99.4	75-130	3.51	30	
Methylene chloride	46.2	4	ug/L	50.0	BLOD	90.8	55-140	2.83	30	
Methyl-t-butyl ether (MTBE)	42.3	1	ug/L	50.0	BLOD	84.6	65-125	9.04	30	
Naphthalene	52.4	1	ug/L	50.0	BLOD	105	55-140	5.39	30	
n-Butylbenzene	55.9	1	ug/L	50.0	BLOD	112	70-135	2.04	30	
n-Propylbenzene	51.9	1	ug/L	50.0	BLOD	104	70-130	4.17	30	
o-Xylene	48.6	1	ug/L	50.0	BLOD	97.2	80-120	2.92	30	
sec-Butylbenzene	56.5	1	ug/L	50.0	BLOD	113	70-125	4.04	30	
Styrene	49.5	1	ug/L	50.0	BLOD	99.0	65-135	3.60	30	
tert-Butylbenzene	53.9	1	ug/L	50.0	BLOD	108	70-130	4.26	30	
Tetrachloroethylene (PCE)	45.7	1	ug/L	50.0	BLOD	91.4	51-231	5.09	30	
Toluene	51.8	1	ug/L	50.0	BLOD	104	75-120	3.42	30	
trans-1,2-Dichloroethylene	44.0	1	ug/L	50.0	BLOD	88.1	60-140	2.04	30	
trans-1,3-Dichloropropene	46.2	1	ug/L	50.0	BLOD	92.4	55-140	4.70	30	
Trichloroethylene	49.0	1	ug/L	50.0	BLOD	98.0	70-125	3.87	30	
Trichlorofluoromethane	37.3	1	ug/L	50.0	BLOD	74.5	60-145	4.39	30	
Vinyl chloride	31.0	0.5	ug/L	50.0	BLOD	61.9	50-145	0.973	30	
Surr: 1,2-Dichloroethane-d4 (Surr)	*53.8*		ug/L	*50.0*		*108*	*70-120*			
Surr: 4-Bromofluorobenzene (Surr)	*49.4*		ug/L	*50.0*		*98.8*	*75-120*			
Surr: Dibromofluoromethane (Surr)	*51.3*		ug/L	*50.0*		*103*	*70-130*			
Surr: Toluene-d8 (Surr)	*51.1*		ug/L	*50.0*		*102*	*70-130*			

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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1111 - SW3510C/EPA600-MS										
Blank (BHG1111-BLK1)				Prepared & Analyzed: 07/29/2024						
Anthracene	ND	10.0	ug/L							
Surr: 2,4,6-Tribromophenol (Surr)	*72.7*		ug/L	*100*		*72.7*	*5-136*			
Surr: 2-Fluorobiphenyl (Surr)	*30.3*		ug/L	*50.0*		*60.5*	*9-117*			
Surr: 2-Fluorophenol (Surr)	*41.1*		ug/L	*100*		*41.1*	*5-60*			
Surr: Nitrobenzene-d5 (Surr)	*34.7*		ug/L	*50.0*		*69.4*	*5-151*			
Surr: Phenol-d5 (Surr)	*29.5*		ug/L	*100*		*29.5*	*5-60*			
Surr: p-Terphenyl-d14 (Surr)	*36.8*		ug/L	*50.0*		*73.6*	*5-141*			
LCS (BHG1111-BS1)				Prepared & Analyzed: 07/29/2024						
1,2,4-Trichlorobenzene	34.5	10.0	ug/L	50.0		69.0	57-130			
1,2-Dichlorobenzene	30.2	10.0	ug/L	50.0		60.4	22-115			
1,3-Dichlorobenzene	30.0	10.0	ug/L	50.0		59.9	22-112			
1,4-Dichlorobenzene	32.3	10.0	ug/L	50.0		64.6	13-112			
2,4,6-Trichlorophenol	33.6	10.0	ug/L	50.0		67.2	52-129			
2,4-Dichlorophenol	36.2	10.0	ug/L	50.0		72.4	53-122			
2,4-Dimethylphenol	38.9	5.00	ug/L	50.0		77.8	42-120			
2,4-Dinitrophenol	18.9	50.0	ug/L	50.0		37.8	48-127			*J, L*
2,4-Dinitrotoluene	38.4	10.0	ug/L	50.0		76.8	10-173			
2,6-Dinitrotoluene	36.4	10.0	ug/L	50.0		72.8	68-137			
2-Chloronaphthalene	33.6	10.0	ug/L	50.0		67.3	65-120			
2-Chlorophenol	31.2	10.0	ug/L	50.0		62.4	36-120			
2-Nitrophenol	36.3	10.0	ug/L	50.0		72.6	45-167			
3,3'-Dichlorobenzidine	23.6	10.0	ug/L	50.0		47.2	10-213			
4,6-Dinitro-2-methylphenol	31.6	50.0	ug/L	50.0		63.2	53-130			
4-Bromophenyl phenyl ether	34.8	10.0	ug/L	50.0		69.5	65-120			

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Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1111 - SW3510C/EPA600-MS										
LCS (BHG1111-BS1)				Prepared & Analyzed: 07/29/2024						
4-Chlorophenyl phenyl ether	33.9	10.0	ug/L	50.0		67.9	38-145			
4-Nitrophenol	10.7	50.0	ug/L	50.0		21.4	13-129			
Acenaphthene	34.5	10.0	ug/L	50.0		68.9	60-132			
Acenaphthylene	36.4	10.0	ug/L	50.0		72.9	54-126			
Acetophenone	29.0	20.0	ug/L	50.0		58.1	0-200			
Anthracene	34.8	10.0	ug/L	50.0		69.5	43-120			
Benzo (a) anthracene	39.3	10.0	ug/L	50.0		78.6	42-133			
Benzo (a) pyrene	41.1	10.0	ug/L	50.0		82.2	32-148			
Benzo (b) fluoranthene	43.0	10.0	ug/L	50.0		85.9	42-140			
Benzo (g,h,i) perylene	46.1	10.0	ug/L	50.0		92.3	10-195			
Benzo (k) fluoranthene	35.8	10.0	ug/L	50.0		71.6	25-146			
bis (2-Chloroethoxy) methane	32.5	10.0	ug/L	50.0		64.9	49-165			
bis (2-Chloroethyl) ether	29.6	10.0	ug/L	50.0		59.2	43-126			
2,2'-Oxybis (1-chloropropane)	30.6	10.0	ug/L	50.0		61.2	63-139			*L*
bis (2-Ethylhexyl) phthalate	45.1	10.0	ug/L	50.0		90.3	29-137			
Butyl benzyl phthalate	42.6	10.0	ug/L	50.0		85.1	10-140			
Chrysene	37.2	10.0	ug/L	50.0		74.5	44-140			
Dibenz (a,h) anthracene	42.9	10.0	ug/L	50.0		85.7	10-200			
Diethyl phthalate	37.3	10.0	ug/L	50.0		74.6	10-120			
Dimethyl phthalate	35.3	10.0	ug/L	50.0		70.6	10-120			
Di-n-butyl phthalate	32.3	10.0	ug/L	50.0		64.5	10-120			
Di-n-octyl phthalate	44.1	10.0	ug/L	50.0		88.2	19-132			
Fluoranthene	31.9	10.0	ug/L	50.0		63.9	43-121			
Fluorene	37.0	10.0	ug/L	50.0		74.0	70-120			
Hexachlorobenzene	34.1	1.00	ug/L	50.0		68.3	10-142			

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Semivolatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1111 - SW3510C/EPA600-MS										
LCS (BHG1111-BS1)				Prepared & Analyzed: 07/29/2024						
Hexachlorobutadiene	37.1	10.0	ug/L	50.0		74.3	38-120			
Hexachlorocyclopentadiene	28.2	10.0	ug/L	50.0		56.5	10-76			
Hexachloroethane	30.0	10.0	ug/L	50.0		60.1	55-120			
Indeno (1,2,3-cd) pyrene	42.1	10.0	ug/L	50.0		84.2	10-151			
Isophorone	18.4	10.0	ug/L	50.0		36.8	47-180			*L*
Naphthalene	32.3	5.00	ug/L	50.0		64.7	36-120			
Nitrobenzene	26.4	10.0	ug/L	50.0		52.8	54-158			*L*
n-Nitrosodimethylamine	17.4	10.0	ug/L	50.0		34.8	10-85			
n-Nitrosodi-n-propylamine	31.4	10.0	ug/L	50.0		62.8	14-198			
n-Nitrosodiphenylamine	29.6	10.0	ug/L	50.0		59.2	12-97			
p-Chloro-m-cresol	34.5	10.0	ug/L	50.0		69.0	10-142			
Pentachlorophenol	25.3	20.0	ug/L	50.0		50.6	38-152			
Phenanthrene	46.2	10.0	ug/L	50.0		92.4	65-120			
Phenol	13.7	10.0	ug/L	50.5		27.2	17-120			
Pyrene	37.3	10.0	ug/L	50.0		74.5	70-120			
Pyridine	21.1	10.0	ug/L	50.0		42.1	10-103			
Surr: 2,4,6-Tribromophenol (Surr)	*77.5*		ug/L	*100*		*77.5*	*5-136*			
Surr: 2-Fluorobiphenyl (Surr)	*35.7*		ug/L	*50.0*		*71.3*	*9-117*			
Surr: 2-Fluorophenol (Surr)	*40.2*		ug/L	*100*		*40.2*	*5-60*			
Surr: Nitrobenzene-d5 (Surr)	*34.8*		ug/L	*50.0*		*69.6*	*5-151*			
Surr: Phenol-d5 (Surr)	*29.0*		ug/L	*100*		*29.0*	*5-60*			
Surr: p-Terphenyl-d14 (Surr)	*41.3*		ug/L	*50.0*		*82.6*	*5-141*			

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Wet Chemistry Analysis - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG0999 - No Prep Wet Chem										
Blank (BHG0999-BLK1)				Prepared & Analyzed: 07/25/2024						
BOD	ND	2.0	mg/L							
LCS (BHG0999-BS1)				Prepared & Analyzed: 07/25/2024						
BOD	202	2	mg/L	198		102	84.6-115.4			
Duplicate (BHG0999-DUP1)	**Source: 24G1286-03**			Prepared & Analyzed: 07/25/2024						
BOD	2.2	2.0	mg/L		2.5			10.1	20	
Batch BHG1000 - No Prep Wet Chem										
Blank (BHG1000-BLK1)				Prepared & Analyzed: 07/25/2024						
Nitrite as N	ND	0.05	mg/L							
LCS (BHG1000-BS1)				Prepared & Analyzed: 07/25/2024						
Nitrite as N	0.10	0.05	mg/L	0.100		98.0	80-120			
Matrix Spike (BHG1000-MS1)	**Source: 24G1355-03**			Prepared & Analyzed: 07/25/2024						
Nitrite as N	0.11	0.05	mg/L	0.100	0.01	94.0	80-120			
Matrix Spike Dup (BHG1000-MSD1)	**Source: 24G1355-03**			Prepared & Analyzed: 07/25/2024						
Nitrite as N	0.11	0.05	mg/L	0.100	0.01	94.0	80-120	0.00	20	
Batch BHG1261 - No Prep Wet Chem										
Blank (BHG1261-BLK1)				Prepared & Analyzed: 07/31/2024						
COD	ND	10.0	mg/L							

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Wet Chemistry Analysis - Quality Control

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Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHG1261 - No Prep Wet Chem										
LCS (BHG1261-BS1)				Prepared & Analyzed: 07/31/2024						
COD	50.1	10.0	mg/L	50.0		100	88-119			
Matrix Spike (BHG1261-MS1)	**Source: 24G1286-01**			Prepared & Analyzed: 07/31/2024						
COD	60.3	10.0	mg/L	50.0	BLOD	121	72.4-130			
Matrix Spike Dup (BHG1261-MSD1)	**Source: 24G1286-01**			Prepared & Analyzed: 07/31/2024						
COD	59.9	10.0	mg/L	50.0	BLOD	120	72.4-130	0.549	20	
Batch BHH0100 - No Prep Wet Chem										
Blank (BHH0100-BLK1)				Prepared & Analyzed: 08/02/2024						
Cyanide	ND	0.01	mg/L							
LCS (BHH0100-BS1)				Prepared & Analyzed: 08/02/2024						
Cyanide	0.22	0.01	mg/L	0.250		89.0	80-120			
Matrix Spike (BHH0100-MS1)	**Source: 24G1292-03**			Prepared & Analyzed: 08/02/2024						
Cyanide	0.24	0.01	mg/L	0.250	BLOD	94.1	80-120			*CI*
Matrix Spike (BHH0100-MS2)	**Source: 24G1292-06**			Prepared & Analyzed: 08/02/2024						
Cyanide	0.26	0.01	mg/L	0.250	BLOD	103	80-120			*CI*
Matrix Spike Dup (BHH0100-MSD1)	**Source: 24G1292-03**			Prepared & Analyzed: 08/02/2024						
Cyanide	0.25	0.01	mg/L	0.250	BLOD	101	80-120	6.85	20	*CI*
Matrix Spike Dup (BHH0100-MSD2)	**Source: 24G1292-06**			Prepared & Analyzed: 08/02/2024						
Cyanide	0.26	0.01	mg/L	0.250	BLOD	105	80-120	2.01	20	*CI*

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Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHH0114 - No Prep Wet Chem										
Blank (BHH0114-BLK1)				Prepared & Analyzed: 08/05/2024						
TKN as N	ND	0.50	mg/L							
LCS (BHH0114-BS1)				Prepared & Analyzed: 08/05/2024						
TKN as N	5.23	0.5	mg/L	5.00		105	90-110			
Matrix Spike (BHH0114-MS1)	**Source: 24G1720-01**			Prepared & Analyzed: 08/05/2024						
TKN as N	6.54	0.50	mg/L	5.00	1.49	101	90-110			
Matrix Spike (BHH0114-MS2)	**Source: 24G1720-02**			Prepared & Analyzed: 08/05/2024						
TKN as N	6.36	0.50	mg/L	5.00	1.34	100	90-110			
Matrix Spike Dup (BHH0114-MSD1)	**Source: 24G1720-01**			Prepared & Analyzed: 08/05/2024						
TKN as N	6.45	0.50	mg/L	5.00	1.49	99.1	90-110	1.51	20	
Matrix Spike Dup (BHH0114-MSD2)	**Source: 24G1720-02**			Prepared & Analyzed: 08/05/2024						
TKN as N	6.58	0.50	mg/L	5.00	1.34	105	90-110	3.32	20	
Batch BHH0124 - No Prep Wet Chem										
Blank (BHH0124-BLK1)				Prepared & Analyzed: 08/03/2024						
Nitrate+Nitrite as N	ND	0.10	mg/L							
LCS (BHH0124-BS1)				Prepared & Analyzed: 08/03/2024						
Nitrate+Nitrite as N	1.04	0.1	mg/L	1.00		104	90-110			
Matrix Spike (BHH0124-MS1)	**Source: 24G1319-02**			Prepared & Analyzed: 08/03/2024						
Nitrate+Nitrite as N	3.98	0.20	mg/L	2.00	2.07	95.4	90-120			

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Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHH0124 - No Prep Wet Chem										
Matrix Spike Dup (BHH0124-MSD1)	**Source: 24G1319-02**			Prepared & Analyzed: 08/03/2024						
Nitrate+Nitrite as N	3.97	0.20	mg/L	2.00	2.07	95.0	90-120	0.201	20	
Batch BHH0209 - No Prep Wet Chem										
Blank (BHH0209-BLK1)				Prepared & Analyzed: 08/06/2024						
Ammonia as N	ND	0.10	mg/L							
LCS (BHH0209-BS1)				Prepared & Analyzed: 08/06/2024						
Ammonia as N	1.04	0.1	mg/L	1.00		104	90-110			
Matrix Spike (BHH0209-MS1)	**Source: 24H0013-10**			Prepared & Analyzed: 08/06/2024						
Ammonia as N	1.00	0.10	mg/L	1.00	BLOD	100	89.3-131			
Matrix Spike (BHH0209-MS2)	**Source: 24G1406-01**			Prepared & Analyzed: 08/06/2024						
Ammonia as N	1.03	0.10	mg/L	1.00	0.08	94.5	89.3-131			
Matrix Spike Dup (BHH0209-MSD1)	**Source: 24H0013-10**			Prepared & Analyzed: 08/06/2024						
Ammonia as N	0.99	0.10	mg/L	1.00	BLOD	98.9	89.3-131	1.60	20	
Matrix Spike Dup (BHH0209-MSD2)	**Source: 24G1406-01**			Prepared & Analyzed: 08/06/2024						
Ammonia as N	1.00	0.10	mg/L	1.00	0.08	91.5	89.3-131	2.96	20	
Batch BHH0223 - No Prep Wet Chem										
Blank (BHH0223-BLK1)				Prepared & Analyzed: 08/06/2024						
Cyanide	ND	0.01	mg/L							

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Submitted To: Jennifer Robb

Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

Wet Chemistry Analysis - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHH0223 - No Prep Wet Chem										
LCS (BHH0223-BS1)				Prepared & Analyzed: 08/06/2024						
Cyanide	0.21	0.01	mg/L	0.250		85.2	80-120			
Matrix Spike (BHH0223-MS1)	**Source: 24G1691-01**			Prepared & Analyzed: 08/06/2024						
Cyanide	0.25	0.01	mg/L	0.250	BLOD	98.1	80-120			*CI*
Matrix Spike Dup (BHH0223-MSD1)	**Source: 24G1691-01**			Prepared & Analyzed: 08/06/2024						
Cyanide	0.23	0.01	mg/L	0.250	BLOD	91.6	80-120	6.87	20	*CI*
Batch BHH0306 - No Prep Wet Chem										
Blank (BHH0306-BLK1)				Prepared & Analyzed: 08/08/2024						
Nitrate+Nitrite as N	ND	0.10	mg/L							
LCS (BHH0306-BS1)				Prepared & Analyzed: 08/08/2024						
Nitrate+Nitrite as N	1.00	0.1	mg/L	1.00		100	90-110			
Matrix Spike (BHH0306-MS1)	**Source: 24G1406-06**			Prepared & Analyzed: 08/08/2024						
Nitrate+Nitrite as N	1.09	0.10	mg/L	1.00	BLOD	109	90-120			
Matrix Spike Dup (BHH0306-MSD1)	**Source: 24G1406-06**			Prepared & Analyzed: 08/08/2024						
Nitrate+Nitrite as N	1.08	0.10	mg/L	1.00	BLOD	108	90-120	0.737	20	
Batch BHH0317 - No Prep Wet Chem										
Blank (BHH0317-BLK1)				Prepared & Analyzed: 08/07/2024						
Total Recoverable Phenolics	ND	0.050	mg/L							

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Wet Chemistry Analysis - Quality Control

Enthalpy Analytical

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BHH0317 - No Prep Wet Chem										
LCS (BHH0317-BS1)				Prepared & Analyzed: 08/07/2024						
Total Recoverable Phenolics	0.45	0.050	mg/L	0.510		87.8	80-120			
Matrix Spike (BHH0317-MS1)		**Source: 24H0069-06**		Prepared & Analyzed: 08/07/2024						
Total Recoverable Phenolics	0.38	0.050	mg/L	0.500	BLOD	76.0	70-130			
Matrix Spike Dup (BHH0317-MSD1)		**Source: 24H0069-06**		Prepared & Analyzed: 08/07/2024						
Total Recoverable Phenolics	0.39	0.050	mg/L	0.500	BLOD	78.8	70-130	3.62	20	
Batch BHH0319 - No Prep Wet Chem										
Blank (BHH0319-BLK1)				Prepared & Analyzed: 08/08/2024						
Ammonia as N	ND	0.10	mg/L							
LCS (BHH0319-BS1)				Prepared & Analyzed: 08/08/2024						
Ammonia as N	1.01	0.1	mg/L	1.00		101	90-110			
Matrix Spike (BHH0319-MS1)		**Source: 24H0102-01**		Prepared & Analyzed: 08/08/2024						
Ammonia as N	1.12	0.10	mg/L	1.00	0.09	104	89.3-131			
Matrix Spike (BHH0319-MS2)		**Source: 24H0104-01**		Prepared & Analyzed: 08/08/2024						
Ammonia as N	1.07	0.10	mg/L	1.00	BLOD	107	89.3-131			
Matrix Spike Dup (BHH0319-MSD1)		**Source: 24H0102-01**		Prepared & Analyzed: 08/08/2024						
Ammonia as N	1.13	0.10	mg/L	1.00	0.09	104	89.3-131	0.710	20	
Matrix Spike Dup (BHH0319-MSD2)		**Source: 24H0104-01**		Prepared & Analyzed: 08/08/2024						
Ammonia as N	1.03	0.10	mg/L	1.00	BLOD	103	89.3-131	3.61	20	

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Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Subcontracted Analysis			**Preparation Method:**		
24G1354-01		Subcontract			
24G1354-02		Subcontract			

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods			**Preparation Method:**	**EPA200.8 R5.4**	
24G1354-01	50.0 mL / 50.0 mL	SW6020B	BHG1053	SHG1028	AG40318
24G1354-02	50.0 mL / 50.0 mL	SW6020B	BHG1053	SHG1028	AG40318

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis			**Preparation Method:**	**No Prep Wet Chem**	
24G1354-01	300 mL / 300 mL	SM5210B-2016	BHG0999	SHG1067	
24G1354-02	300 mL / 300 mL	SM5210B-2016	BHG0999	SHG1067	
24G1354-01	25.0 mL / 25.0 mL	SM4500-NO2B-2011	BHG1000	SHG0974	AD40276
24G1354-02	25.0 mL / 25.0 mL	SM4500-NO2B-2011	BHG1000	SHG0974	AD40276
24G1354-01	2.00 mL / 2.00 mL	SM5220D-2011	BHG1261	SHG1145	AG40341
24G1354-02	2.00 mL / 2.00 mL	SM5220D-2011	BHG1261	SHG1145	AG40341
24G1354-01	6.00 mL / 6.00 mL	SW9012B	BHH0100	SHH0101	AH40179
24G1354-01	25.0 mL / 25.0 mL	EPA351.2 R2.0	BHH0114	SHH0143	AH40190
24G1354-02	25.0 mL / 25.0 mL	EPA351.2 R2.0	BHH0114	SHH0143	AH40190
24G1354-01	5.00 mL / 5.00 mL	SM4500-NO3F-2016	BHH0124	SHH0125	AH40182
24G1354-01	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0209	SHH0215	AH40199
24G1354-02	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0209	SHH0215	AH40199
24G1354-02	6.00 mL / 6.00 mL	SW9012B	BHH0223	SHH0257	AH40203

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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis			**Preparation Method:**	**No Prep Wet Chem**	
24G1354-02	5.00 mL / 5.00 mL	SM4500-NO3F-2016	BHH0306	SHH0309	AH40214
24G1354-01	5.00 mL / 10.0 mL	SW9065	BHH0317	SHH0314	AH40219
24G1354-02	0.200 mL / 10.0 mL	SW9065	BHH0317	SHH0314	AH40219
24G1354-02RE1	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0319	SHH0316	AH40217

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS			**Preparation Method:**	**SW3510C/EPA600-MS**	
24G1354-01	500 mL / 1.00 mL	SW8270E	BHG1111	SHH0020	AC40286
24G1354-02	500 mL / 2.00 mL	SW8270E	BHG1111	SHH0020	AC40286

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS			**Preparation Method:**	**SW5030B-MS**	
24G1354-01	5.00 mL / 5.00 mL	SW8260D	BHG1080	SHG1004	AE40260
24G1354-01RE1	5.00 mL / 5.00 mL	SW8260D	BHG1080	SHG1004	AE40260
24G1354-02	5.00 mL / 5.00 mL	SW8260D	BHG1080	SHG1004	AE40260
24G1354-02RE1	5.00 mL / 5.00 mL	SW8260D	BHG1080	SHG1004	AE40260
24G1354-03	5.00 mL / 5.00 mL	SW8260D	BHG1080	SHG1004	AE40260

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QC Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods			**Preparation Method:**	**EPA200.8 R5.4**	
BHG1053-BLK1	50.0 mL / 50.0 mL	SW6020B	BHG1053	SHG1028	AG40318
BHG1053-BS1	50.0 mL / 50.0 mL	SW6020B	BHG1053	SHG1028	AG40318
BHG1053-MS1	50.0 mL / 50.0 mL	SW6020B	BHG1053	SHG1028	AG40318
BHG1053-MS2	50.0 mL / 50.0 mL	SW6020B	BHG1053	SHG1028	AG40318
BHG1053-MSD1	50.0 mL / 50.0 mL	SW6020B	BHG1053	SHG1028	AG40318
BHG1053-MSD2	50.0 mL / 50.0 mL	SW6020B	BHG1053	SHG1028	AG40318

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis			**Preparation Method:**	**No Prep Wet Chem**	
BHG0999-BLK1	300 mL / 300 mL	SM5210B-2016	BHG0999	SHG1067	
BHG0999-BS1	300 mL / 300 mL	SM5210B-2016	BHG0999	SHG1067	
BHG0999-DUP1	300 mL / 300 mL	SM5210B-2016	BHG0999	SHG1067	
BHG1000-BLK1	25.0 mL / 25.0 mL	SM4500-NO2B-2011	BHG1000	SHG0974	AD40276
BHG1000-BS1	25.0 mL / 25.0 mL	SM4500-NO2B-2011	BHG1000	SHG0974	AD40276
BHG1000-MRL1	25.0 mL / 25.0 mL	SM4500-NO2B-2011	BHG1000	SHG0974	AD40276
BHG1000-MS1	25.0 mL / 25.0 mL	SM4500-NO2B-2011	BHG1000	SHG0974	AD40276
BHG1000-MSD1	25.0 mL / 25.0 mL	SM4500-NO2B-2011	BHG1000	SHG0974	AD40276
BHG1261-BLK1	2.00 mL / 2.00 mL	SM5220D-2011	BHG1261	SHG1145	AG40341
BHG1261-BS1	2.00 mL / 2.00 mL	SM5220D-2011	BHG1261	SHG1145	AG40341
BHG1261-MRL1	2.00 mL / 2.00 mL	SM5220D-2011	BHG1261	SHG1145	AG40341
BHG1261-MS1	2.00 mL / 2.00 mL	SM5220D-2011	BHG1261	SHG1145	AG40341
BHG1261-MSD1	2.00 mL / 2.00 mL	SM5220D-2011	BHG1261	SHG1145	AG40341
BHH0100-BLK1	6.00 mL / 6.00 mL	SW9012B	BHH0100	SHH0101	AH40179
BHH0100-BS1	6.00 mL / 6.00 mL	SW9012B	BHH0100	SHH0101	AH40179
BHH0100-MRL1	6.00 mL / 6.00 mL	SW9012B	BHH0100	SHH0101	AH40179

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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis			**Preparation Method:**	**No Prep Wet Chem**	
BHH0100-MS1	6.00 mL / 6.00 mL	SW9012B	BHH0100	SHH0101	AH40179
BHH0100-MS2	6.00 mL / 6.00 mL	SW9012B	BHH0100	SHH0101	AH40179
BHH0100-MSD1	6.00 mL / 6.00 mL	SW9012B	BHH0100	SHH0101	AH40179
BHH0100-MSD2	6.00 mL / 6.00 mL	SW9012B	BHH0100	SHH0101	AH40179
BHH0114-BLK1	25.0 mL / 25.0 mL	EPA351.2 R2.0	BHH0114	SHH0143	AH40190
BHH0114-BS1	25.0 mL / 25.0 mL	EPA351.2 R2.0	BHH0114	SHH0143	AH40190
BHH0114-MRL1	25.0 mL / 25.0 mL	EPA351.2 R2.0	BHH0114	SHH0143	AH40190
BHH0114-MS1	25.0 mL / 25.0 mL	EPA351.2 R2.0	BHH0114	SHH0143	AH40190
BHH0114-MS2	25.0 mL / 25.0 mL	EPA351.2 R2.0	BHH0114	SHH0143	AH40190
BHH0114-MSD1	25.0 mL / 25.0 mL	EPA351.2 R2.0	BHH0114	SHH0143	AH40190
BHH0114-MSD2	25.0 mL / 25.0 mL	EPA351.2 R2.0	BHH0114	SHH0143	AH40190
BHH0124-BLK1	5.00 mL / 5.00 mL	SM4500-NO3F-2016	BHH0124	SHH0125	AH40182
BHH0124-BS1	5.00 mL / 5.00 mL	SM4500-NO3F-2016	BHH0124	SHH0125	AH40182
BHH0124-MRL1	5.00 mL / 5.00 mL	SM4500-NO3F-2016	BHH0124	SHH0125	AH40182
BHH0124-MS1	5.00 mL / 10.0 mL	SM4500-NO3F-2016	BHH0124	SHH0125	AH40182
BHH0124-MSD1	5.00 mL / 10.0 mL	SM4500-NO3F-2016	BHH0124	SHH0125	AH40182
BHH0209-BLK1	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0209	SHH0215	AH40199
BHH0209-BS1	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0209	SHH0215	AH40199
BHH0209-MS1	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0209	SHH0215	AH40199
BHH0209-MS2	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0209	SHH0215	AH40199
BHH0209-MSD1	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0209	SHH0215	AH40199
BHH0209-MSD2	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0209	SHH0215	AH40199
BHH0223-BLK1	6.00 mL / 6.00 mL	SW9012B	BHH0223	SHH0257	AH40203
BHH0223-BS1	6.00 mL / 6.00 mL	SW9012B	BHH0223	SHH0257	AH40203
BHH0223-MRL1	6.00 mL / 6.00 mL	SW9012B	BHH0223	SHH0257	AH40203
BHH0223-MRL2	6.00 mL / 6.00 mL	SW9012B	BHH0223	SHH0257	AH40203
BHH0223-MS1	6.00 mL / 6.00 mL	SW9012B	BHH0223	SHH0257	AH40203
BHH0223-MSD1	6.00 mL / 6.00 mL	SW9012B	BHH0223	SHH0257	AH40203

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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis			**Preparation Method:**	**No Prep Wet Chem**	
BHH0306-BLK1	5.00 mL / 5.00 mL	SM4500-NO3F-2016	BHH0306	SHH0309	AH40214
BHH0306-BS1	5.00 mL / 5.00 mL	SM4500-NO3F-2016	BHH0306	SHH0309	AH40214
BHH0306-MRL1	5.00 mL / 5.00 mL	SM4500-NO3F-2016	BHH0306	SHH0309	AH40214
BHH0306-MRL2	5.00 mL / 5.00 mL	SM4500-NO3F-2016	BHH0306	SHH0309	AH40214
BHH0306-MS1	25.0 mL / 25.0 mL	SM4500-NO3F-2016	BHH0306	SHH0309	AH40214
BHH0306-MSD1	25.0 mL / 25.0 mL	SM4500-NO3F-2016	BHH0306	SHH0309	AH40214
BHH0317-BLK1	5.00 mL / 10.0 mL	SW9065	BHH0317	SHH0314	AH40219
BHH0317-BS1	5.00 mL / 10.0 mL	SW9065	BHH0317	SHH0314	AH40219
BHH0317-MRL1	5.00 mL / 10.0 mL	SW9065	BHH0317	SHH0314	AH40219
BHH0317-MS1	5.00 mL / 10.0 mL	SW9065	BHH0317	SHH0314	AH40219
BHH0317-MSD1	5.00 mL / 10.0 mL	SW9065	BHH0317	SHH0314	AH40219
BHH0319-BLK1	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0319	SHH0316	AH40217
BHH0319-BS1	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0319	SHH0316	AH40217
BHH0319-MRL1	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0319	SHH0316	AH40217
BHH0319-MS1	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0319	SHH0316	AH40217
BHH0319-MS2	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0319	SHH0316	AH40217
BHH0319-MSD1	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0319	SHH0316	AH40217
BHH0319-MSD2	6.00 mL / 6.00 mL	EPA350.1 R2.0	BHH0319	SHH0316	AH40217

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS			**Preparation Method:**	**SW3510C/EPA600-MS**	
BHG1111-BLK1	1000 mL / 1.00 mL	SW8270E	BHG1111	SHG1085	AG40237
BHG1111-BS1	1000 mL / 1.00 mL	SW8270E	BHG1111	SHG1085	AG40237

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS			**Preparation Method:**	**SW5030B-MS**	
BHG1080-BLK1	5.00 mL / 5.00 mL	SW8260D	BHG1080	SHG1004	AE40260

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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS			**Preparation Method:**	**SW5030B-MS**	
BHG1080-BS1	5.00 mL / 5.00 mL	SW8260D	BHG1080	SHG1004	AE40260
BHG1080-MS1	5.00 mL / 5.00 mL	SW8260D	BHG1080	SHG1004	AE40260
BHG1080-MSD1	5.00 mL / 5.00 mL	SW8260D	BHG1080	SHG1004	AE40260

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Certified Analyses included in this Report

Analyte	Certifications
EPA350.1 R2.0 in Non-Potable Water	
Ammonia as N	VELAP,NCDEQ,PADEP,WVDEP
EPA351.2 R2.0 in Non-Potable Water	
TKN as N	VELAP,NCDEQ,WVDEP
SM4500-NO2B-2011 in Non-Potable Water	
Nitrite as N	VELAP,WVDEP,NCDEQ
SM4500-NO3F-2016 in Non-Potable Water	
Nitrate+Nitrite as N	VELAP,WVDEP,NCDEQ
SM5210B-2016 in Non-Potable Water	
BOD	VELAP,NCDEQ,WVDEP
SM5220D-2011 in Non-Potable Water	
COD	VELAP,NCDEQ,PADEP,WVDEP
SW6020B in Non-Potable Water	
Mercury	VELAP
Arsenic	VELAP,WVDEP,NCDEQ
Barium	VELAP,WVDEP,NCDEQ
Cadmium	VELAP,WVDEP,NCDEQ
Chromium	VELAP,WVDEP,NCDEQ
Copper	VELAP,WVDEP,NCDEQ
Lead	VELAP,WVDEP
Nickel	VELAP,WVDEP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Zinc	VELAP,WVDEP
SW8260D in Non-Potable Water	

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Certified Analyses included in this Report

Analyte	Certifications
2-Butanone (MEK)	VELAP,NCDEQ,PADEP,WVDEP
Acetone	VELAP,NCDEQ,PADEP,WVDEP
Benzene	VELAP,NCDEQ,PADEP,WVDEP
Ethylbenzene	VELAP,NCDEQ,PADEP,WVDEP
Toluene	VELAP,NCDEQ,PADEP,WVDEP
Xylenes, Total	VELAP,NCDEQ,PADEP,WVDEP
Tetrahydrofuran	VELAP,PADEP
SW8270E in Non-Potable Water	
Anthracene	NCDEQ,WVDEP,VELAP,PADEP
SW9012B in Non-Potable Water	
Cyanide	VELAP,WVDEP,NCDEQ
SW9065 in Non-Potable Water	
Total Recoverable Phenolics	VELAP,WVDEP

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Code	Description	Laboratory ID	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2024
NCDEQ	North Carolina DEQ	495	12/31/2024
NCDOH	North Carolina Department of Health	51714	07/31/2025
NYDOH	New York DOH Drinking Water	12069	04/01/2025
PADEP	NELAP-Pennsylvania Certificate #009	68-03503	10/31/2024
SCDHEC	South Carolina Dept of Health and Environmental Control Certificate 93016001	93016	09/14/2024
TXCEQ	Texas Comm on Environmental Quality #T104704576-23-1	T104704576	05/31/2025
VELAP	NELAP-Virginia Certificate #12969	460021	06/14/2025
WVDEP	West Virginia DEP	350	11/30/2024

Enthalpy Analytical
1941 Reymet Road
Richmond, Virginia 23237
(804)-358-8295 - Telephone
(804)-358-8297 - Fax

Certificate of Analysis

Client Name: SCS Engineers-Winchester
Client Site I.D.: 24-02 LFG-EW Monthly Monitoring
Submitted To: Jennifer Robb

Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

Qualifiers and Definitions

Cl	Residual Chlorine or other oxidizing agent was detected in the container used to analyze this sample.
DS	Surrogate concentration reflects a dilution factor.
E	Estimated concentration, outside calibration range
H	Analysis was performed outside of the method prescribed holding time.
J	The reported result is an estimated value.
L	LCS recovery is outside of established acceptance limits
P	Duplicate analysis does not meet the acceptance criteria for precision

RPD	Relative Percent Difference
Qual	Qualifers
-RE	Denotes sample was re-analyzed
LOD	Limit of Detection, same as Method Detection Limit (MDL) as defined by 40 CFR 136 Appendix B
BLOD	Below Limit of Detection, same as Below Method Detection Limit (MDL) as defined by 40 CFR 136 Appendix B
LOQ	Limit of Quantitation
DF	Dilution Factor
DL	Detection Limit, same as MDL as defined by 40 CFR 136 Appendix B
TIC	Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library. A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
PCBs, Total	Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

ENTHALPY ANALYTICAL

1941 REYMET ROAD
RICHMOND, VIRGINIA 23237
(804) 358-8295 PHONE
(804)358-8297 FAX

CHAIN OF CUSTODY

COMPANY NAME: SCS Engineers	INVOICE TO: SAME	PROJECT NAME/Quote #: City of Bristol Landfill #588
CONTACT: Jennifer Robb	INVOICE CONTACT:	SITE NAME: 24-02 LFG-EW Monthly Monitoring
ADDRESS: 296 Victory Road	INVOICE ADDRESS:	PROJECT NUMBER: 02218208.15 Task 2
Winchester, VA 22602	INVOICE PHONE #:	P.O. #:
PHONE #: 703-471-6150 EMAIL: jrobb@scsengineers.com		Pretreatment Program:

Is sample for compliance reporting? YES NO | Regulatory State: V A | Is sample from a chlorinated supply? YES NO | PWS I.D. #:

SAMPLER NAME (PRINT): Will Fabric/Laurel Tucker | SAMPLER SIGNATURE: [signature] | Turn Around Time: 10 Day(s)

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other_____

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	Ammonia - EPA 350.1	BOD - SM22 5210B-2021	COD - SM22 5220D-2011	Cyanide - SW9012	Nitrate SM22 450-NO3F-2011 (report seperatly from Nitrite)	Nitrite SM22 450-NO3F-2011	SVOC (Anthracene) 8270	Total Metals (As, Ba, Cd, Cr, Cu, Pb, Ni, Se, Ag, Zn) 6020	TKN - EPA 351.2 R2.0	Mercury - 6020	Total Recoverable Phenolics - 9065	V. Fatty Acids (See List) 8015	VOCs (See List) 8260
1) EW-59	X					7/23/24	1238		GW	13													
2) EW-60	X					7/24/24	1040		GW	13													
3)									GW														
4)									GW														
5)									GW														
6)									GW														
7)									GW														
8)									GW														
9)									GW														
10) Trip Blank	X					7/2/24	910		DI	2													

ANALYSIS / (PRESERVATIVE)

Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol

COMMENTS

Note VOC 8260 no HCl

PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)

#271
Observed Temp °C: 0.1
Correction Factor °C: 0.0
Corrected Temp °C: 0.1

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
[signature]	7/24/24 13:00	LCN	
LCN		[signature]	7.25.24 0800

QC Data Package
Level III ☐
Level IV ☐

LAB USE ONLY Therm ID: _____
Custody Seals used and intact? (Y) N)
Received on ice? (Y) N)

SCS-W 24G1354
24-02 LFG-EW
Recd: 07/25/2024 Due: 08/08/2024

v130325002

ENTHALPY ANALYTICAL

Sample Preservation Log

Order ID 24G1354 Date Performed: 7-25-24 Analyst Performing Check: CSB

Sample ID	Container ID	Metals pH as Received < 2	Metals Other	Metals Final pH	Cyanide pH as Received > 12	Cyanide Other	Cyanide Final pH	Sulfide pH as Received > 9	Sulfide Other	Sulfide Final pH	Ammonia pH as Received < 2	Ammonia Other	Ammonia Final pH	TKN pH as Received < 2	TKN Other	TKN Final pH	Phos, Tot pH as Received < 2	Phos, Tot Other	Phos, Tot Final pH	NO3+NO2 pH as Received < 2	NO3+NO2 Other	NO3+NO2 Final pH	DRO pH as Received < 2	DRO Other	DRO Final pH	Pesticide (8081/608/508) PCB DW only Received Res. Cl +	Pesticide Received Res. Cl -	Pesticide final + or -	SVOC (525/8270/625) Received Res. Cl +	SVOC Received Res. Cl -	SVOC final + or -	CrVI * ** Received pH	CrVI Final pH	Pest/PCB (508) / SVOC(525) pH as Received < 2	Pest/PCB Other	Pest/PCB Final pH	COD pH as Received < 2	COD Other	COD Final pH	Phenolics pH as Received < 2	Phenolics Other	Phenolics Final pH
1	A		6	<2																																						
1	B											5	<2		5	<2					5	<2																					
1	D					9	>12																																				
1	H																																									5	<2
1	I																													—													
2	A		6	<2																																						
2	B											5	<2		5	<2					5	<2																				5	<2
2	D					9	>12																																				
2	H																																									5	<2
2	I																													—													

NaOH ID: 4A03375 HNO3 ID: 4G02458 CrVI preserved date/time: Analyst Initials:

** pH must be adjusted between 9.3 - 9.7*

H_2SO_4 ID: 4F02156 $Na_2S_2O_3$ ID: Ammonia Buffer Sol'n ID:

HCL ID: Na_2SO_3 ID: 5N NaOH ID:

Metals were received with pH = 6 HNO3 was added at 1155 on 25 July 2024, by CSB in the Log-In room to bring pH= <2.

**W.Va only certifies DISS CrVI and not T CrVI as an approved analyte under 40CFR136 for waste water.

Enthalpy Analytical
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Richmond, Virginia 23237
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(804)-358-8297 - Fax

Certificate of Analysis

Client Name: SCS Engineers-Winchester
Client Site I.D.: 24-02 LFG-EW Monthly Monitoring
Submitted To: Jennifer Robb

Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

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Certificate of Analysis

Client Name: SCS Engineers-Winchester
Client Site I.D.: 24-02 LFG-EW Monthly Monitoring
Submitted To: Jennifer Robb

Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

Laboratory Order ID: 24G1354

Sample Conditions Checklist

Samples Received at:	**0.10°C**
How were samples received?	Logistics Courier
Were Custody Seals used? If so, were they received intact?	Yes
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits or received on ice, and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	Yes
Are all volatile organic and TOX containers free of headspace?	No
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	Yes
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis. In addition, field parameters are always received outside holding time and will be marked accordingly.	No

Client informed via email that: a) two NaOH containers were received with a pH of 9 and adjusted to bring them to the required pH of >12, b) four H2SO4 containers were received with a pH of 5 and adjusted to bring them to the required pH of <2, and c) several VOAs from both samples were received with headspace. Client asked if they

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Certificate of Analysis

Client Name: SCS Engineers-Winchester
Client Site I.D.: 24-02 LFG-EW Monthly Monitoring
Submitted To: Jennifer Robb

Date Issued: 8/8/2024 5:09:45PM
Work Order: 24G1354

would like lab to proceed with analysis. AKB2 7/25/24 1526
Analysis to proceed per Jennifer Robb via email. CSB 7/26/24 1020

Per phone discussion with Logan Howard on 7/25/24 at 1615 the lab is OK to analyze and report the BOD result on sample EW-59 out of hold. DFE 7/25/24 1620.

Pace Analytical Services, LLC
7979 Innovation Park Drive
Baton Rouge, LA 70820
(225) 769-4900

August 07, 2024

Virginia Thrasher
Enthalpy
1941 Reymet Road
Richmond, VA 23237

RE: Project: 24G1354/Enthalpy
Pace Project No.: 20325361

Dear Virginia Thrasher:

Enclosed are the analytical results for sample(s) received by the laboratory on July 30, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Baton Rouge

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Devin McDougal
devin.mcdougal@pacelabs.com
(225) 769-4900
Project Manager

Enclosures

cc: Andrew Bruner, Enthalpy
Daniel Elliott, Enthalpy
Meghan Meyer, Enthalpy

Pace Analytical Services, LLC
7979 Innovation Park Drive
Baton Rouge, LA 70820
(225) 769-4900

CERTIFICATIONS

Project: 24G1354/Enthalpy
Pace Project No.: 20325361

Pace Analytical Services Baton Rouge
7979 Innovation Park Drive Ste A, Baton Rouge, LA 70820-7402
Louisiana Dept of Enviromental Quality (NELAC/LELAP): 01979
Florida Dept of Health (NELAC/FELAP): E87854
DoD ELAP (A2LA) #: 6429.01
Alabama DEM #: 41900
Alaska DEC-DW #: LA00024
Alaska DEC CS-LAP #: 21-001
Arkansas DEQ #: 88-0655
California ELAP #: 3063
Georgia DPD #: C050
Hawaii DOH State Laboratories Division
Illinois EPA #: 200048
Kansas DoHE #: E-10354
Kentucky DEP UST Branch #: 123054
Louisiana DOH #: LA036
Minnesota DOH #: 2233799
Mississippi State Dept of Health
Montana Department of Environmental Quality
Nebraska DHHS #: NE-OS-35.21
Nevada DCNR DEP #: LA00024
New York DOH #: 12149
North Carolina DEQ - WW & GW #: 618
North Dakota DEQ #: R195
Ohio EPA #: 87782
Oklahoma Dept of Environmental Quality #: 9403
Oregon ELAP #: 4168
Pennsylvania Dept of Environmental Protection #: 68-05973
South Carolina DHEC #: 73006001
Texas CEQ #: T104704178-23-15
Utah DOH #: LA00024
Virginia DCLS #: 6460215
Washington Dept of Ecology #: C929
Wisconsin DNR #: 399139510

Pace Analytical Services, LLC
7979 Innovation Park Drive
Baton Rouge, LA 70820
(225) 769-4900

SAMPLE SUMMARY

Project: 24G1354/Enthalpy
Pace Project No.: 20325361

Lab ID	Sample ID	Matrix	Date Collected	Date Received
20325361001	**24G1354-01: EW-59**	Water	07/23/24 12:38	07/30/24 10:00
20325361002	**24G1354-02: EW-60**	Water	07/24/24 10:40	07/30/24 10:00

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7979 Innovation Park Drive
Baton Rouge, LA 70820
(225) 769-4900

SAMPLE ANALYTE COUNT

Project: 24G1354/Enthalpy
Pace Project No.: 20325361

Lab ID	Sample ID	Method	Analysts	Analytes Reported
20325361001	**24G1354-01: EW-59**	Pace ENV-SOP-BTRO-0042	VAM	10
20325361002	**24G1354-02: EW-60**	Pace ENV-SOP-BTRO-0042	VAM	10

PASI-BR = Pace Analytical Services - Baton Rouge

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7979 Innovation Park Drive
Baton Rouge, LA 70820
(225) 769-4900

PROJECT NARRATIVE

Project: 24G1354/Enthalpy
Pace Project No.: 20325361

Method: **Pace ENV-SOP-BTRO-0042**
Description: BR AM23G Low Level VFA
Client: BR-Enthalpy
Date: August 07, 2024

General Information:
2 samples were analyzed for Pace ENV-SOP-BTRO-0042 by Pace Analytical Services Baton Rouge. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 337420

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 20325165001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1620075)
  - Butyric Acid
  - Formic acid
  - Lactic Acid
  - Pentanoic Acid
  - Propionic Acid
  - Pyruvic Acid
  - i-Pentanoic Acid
- MSD (Lab ID: 1620076)
  - Butyric Acid
  - Formic acid
  - Lactic Acid

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7979 Innovation Park Drive
Baton Rouge, LA 70820
(225) 769-4900

PROJECT NARRATIVE

Project: 24G1354/Enthalpy
Pace Project No.: 20325361

Method: **Pace ENV-SOP-BTRO-0042**
Description: BR AM23G Low Level VFA
Client: BR-Enthalpy
Date: August 07, 2024

QC Batch: 337420

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 20325165001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Pentanoic Acid
- Propionic Acid
- Pyruvic Acid
- i-Pentanoic Acid

Additional Comments:

Analyte Comments:

QC Batch: 337420

D4: Sample was diluted due to the presence of high levels of target analytes.

- 24G1354-01: EW-59 (Lab ID: 20325361001)
  - Lactic Acid
- 24G1354-02: EW-60 (Lab ID: 20325361002)
  - Lactic Acid

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- 24G1354-01: EW-59 (Lab ID: 20325361001)
  - Hexanoic Acid
  - i-Hexanoic Acid
  - i-Pentanoic Acid
  - Pentanoic Acid
- 24G1354-02: EW-60 (Lab ID: 20325361002)
  - Hexanoic Acid
  - i-Hexanoic Acid
  - i-Pentanoic Acid
  - Pentanoic Acid
- BLANK (Lab ID: 1619673)
  - Hexanoic Acid
  - i-Hexanoic Acid
  - i-Pentanoic Acid
  - Pentanoic Acid
- LCS (Lab ID: 1619674)
  - Hexanoic Acid
  - i-Hexanoic Acid
  - i-Pentanoic Acid
  - Pentanoic Acid
- MS (Lab ID: 1620075)
  - Hexanoic Acid
  - i-Hexanoic Acid
  - i-Pentanoic Acid
  - Pentanoic Acid

Pace Analytical Services, LLC
7979 Innovation Park Drive
Baton Rouge, LA 70820
(225) 769-4900

PROJECT NARRATIVE

Project: 24G1354/Enthalpy
Pace Project No.: 20325361

Method: **Pace ENV-SOP-BTRO-0042**
Description: BR AM23G Low Level VFA
Client: BR-Enthalpy
Date: August 07, 2024

Analyte Comments:

QC Batch: 337420

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- MSD (Lab ID: 1620076)
  - Hexanoic Acid
  - i-Hexanoic Acid
  - i-Pentanoic Acid
  - Pentanoic Acid

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7979 Innovation Park Drive
Baton Rouge, LA 70820
(225) 769-4900

ANALYTICAL RESULTS

Project: 24G1354/Enthalpy
Pace Project No.: 20325361

Sample: 24G1354-01: EW-59 **Lab ID: 20325361001** Collected: 07/23/24 12:38 Received: 07/30/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
BR AM23G Low Level VFA	Analytical Method: Pace ENV-SOP-BTRO-0042 Pace Analytical Services - Baton Rouge							
Pentanoic Acid	**275**	mg/L	250	500		08/03/24 00:21	109-52-4	N2
Acetic Acid	**6280**	mg/L	1250	2500		08/05/24 23:39	64-19-7	
Butyric Acid	**2400**	mg/L	250	500		08/03/24 00:21	107-92-6	
Formic acid	**1830**	mg/L	250	500		08/03/24 00:21	64-18-6	
Hexanoic Acid	ND	mg/L	250	500		08/03/24 00:21	142-62-1	N2
i-Hexanoic Acid	ND	mg/L	250	500		08/03/24 00:21	646-07-1	N2
Lactic Acid	**1220**	mg/L	250	500		08/03/24 00:21	50-21-5	D4
i-Pentanoic Acid	**308**	mg/L	250	500		08/03/24 00:21	503-74-2	N2
Propionic Acid	**2500**	mg/L	250	500		08/03/24 00:21	79-09-4	
Pyruvic Acid	ND	mg/L	250	500		08/03/24 00:21	127-17-3	

Sample: 24G1354-02: EW-60 **Lab ID: 20325361002** Collected: 07/24/24 10:40 Received: 07/30/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
BR AM23G Low Level VFA	Analytical Method: Pace ENV-SOP-BTRO-0042 Pace Analytical Services - Baton Rouge							
Pentanoic Acid	**293**	mg/L	250	500		08/03/24 00:46	109-52-4	N2
Acetic Acid	**6180**	mg/L	1250	2500		08/06/24 00:04	64-19-7	
Butyric Acid	**2360**	mg/L	250	500		08/03/24 00:46	107-92-6	
Formic acid	**1810**	mg/L	250	500		08/03/24 00:46	64-18-6	
Hexanoic Acid	ND	mg/L	250	500		08/03/24 00:46	142-62-1	N2
i-Hexanoic Acid	ND	mg/L	250	500		08/03/24 00:46	646-07-1	N2
Lactic Acid	**1210**	mg/L	250	500		08/03/24 00:46	50-21-5	D4
i-Pentanoic Acid	**296**	mg/L	250	500		08/03/24 00:46	503-74-2	N2
Propionic Acid	**2470**	mg/L	250	500		08/03/24 00:46	79-09-4	
Pyruvic Acid	ND	mg/L	250	500		08/03/24 00:46	127-17-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7979 Innovation Park Drive
Baton Rouge, LA 70820
(225) 769-4900

QUALITY CONTROL DATA

Project: 24G1354/Enthalpy
Pace Project No.: 20325361

QC Batch: 337420
QC Batch Method: Pace ENV-SOP-BTRO-0042
Analysis Method: Pace ENV-SOP-BTRO-0042
Analysis Description: BR AM23G Low Level VFA
Laboratory: Pace Analytical Services - Baton Rouge
Associated Lab Samples: 20325361001, 20325361002

METHOD BLANK: 1619673 Matrix: Water
Associated Lab Samples: 20325361001, 20325361002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Butyric Acid	mg/L	ND	0.50	08/02/24 16:51	
Formic acid	mg/L	ND	0.50	08/02/24 16:51	
Hexanoic Acid	mg/L	ND	0.50	08/02/24 16:51	N2
i-Hexanoic Acid	mg/L	ND	0.50	08/02/24 16:51	N2
i-Pentanoic Acid	mg/L	ND	0.50	08/02/24 16:51	N2
Lactic Acid	mg/L	ND	0.50	08/02/24 16:51	
Pentanoic Acid	mg/L	ND	0.50	08/02/24 16:51	N2
Propionic Acid	mg/L	ND	0.50	08/02/24 16:51	
Pyruvic Acid	mg/L	ND	0.50	08/02/24 16:51	

LABORATORY CONTROL SAMPLE: 1619674

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Butyric Acid	mg/L	2	1.7	86	70-130	
Formic acid	mg/L	2	1.9	93	70-130	
Hexanoic Acid	mg/L	2	1.6	80	39-114	N2
i-Hexanoic Acid	mg/L	2	1.8	89	39-114	N2
i-Pentanoic Acid	mg/L	2	1.9	93	59-121	N2
Lactic Acid	mg/L	2	1.9	96	70-130	
Pentanoic Acid	mg/L	2	1.7	84	59-121	N2
Propionic Acid	mg/L	2	1.7	84	70-130	
Pyruvic Acid	mg/L	2	1.8	88	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1620075 1620076

Parameter	Units	20325165001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Butyric Acid	mg/L	34.2	20	20	41.8	43.3	38	45	70-130	3	30	M1
Formic acid	mg/L	ND	20	20	9.0	8.9	40	40	70-130	0	30	M1
Hexanoic Acid	mg/L	ND	20	20	8.4	9.2	42	46	39-114	9	30	N2
i-Hexanoic Acid	mg/L	ND	20	20	8.3	7.8	42	39	39-114	7	30	N2
i-Pentanoic Acid	mg/L	ND	20	20	7.8	9.4	36	44	59-121	19	30	M1,N2
Lactic Acid	mg/L	ND	20	20	6.1	6.2	24	24	70-130	1	30	M1,ML
Pentanoic Acid	mg/L	ND	20	20	10.1	10.2	36	36	59-121	1	30	M1,N2
Propionic Acid	mg/L	36.7	20	20	42.4	43.4	28	33	70-130	2	30	M1
Pyruvic Acid	mg/L	ND	20	20	8.8	9.4	37	40	70-130	7	30	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7979 Innovation Park Drive
Baton Rouge, LA 70820
(225) 769-4900

QUALITY CONTROL DATA

Project: 24G1354/Enthalpy
Pace Project No.: 20325361

QC Batch: 337633
QC Batch Method: Pace ENV-SOP-BTRO-0042
Analysis Method: Pace ENV-SOP-BTRO-0042
Analysis Description: BR AM23G Low Level VFA
Laboratory: Pace Analytical Services - Baton Rouge
Associated Lab Samples: 20325361001, 20325361002

METHOD BLANK: 1620515 Matrix: Water
Associated Lab Samples: 20325361001, 20325361002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acetic Acid	mg/L	ND	0.50	08/05/24 16:29	

LABORATORY CONTROL SAMPLE: 1620516

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acetic Acid	mg/L	2	1.8	90	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1620658 1620659

Parameter	Units	50379256004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Acetic Acid	mg/L	5.0 U	20	20	17.8	18.0	87	88	70-130	1	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7979 Innovation Park Drive
Baton Rouge, LA 70820
(225) 769-4900

QUALIFIERS

Project: 24G1354/Enthalpy
Pace Project No.: 20325361

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The Nelac Institute

ANALYTE QUALIFIERS

D4	Sample was diluted due to the presence of high levels of target analytes.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
ML	Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 24G1354/Enthalpy
Pace Project No.: 20325361

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
20325361001	**24G1354-01: EW-59**	Pace ENV-SOP-BTRO-0042	337420		
20325361001	**24G1354-01: EW-59**	Pace ENV-SOP-BTRO-0042	337633		
20325361002	**24G1354-02: EW-60**	Pace ENV-SOP-BTRO-0042	337420		
20325361002	**24G1354-02: EW-60**	Pace ENV-SOP-BTRO-0042	337633		

ENTHALPY ANALYTICAL

Pace - Gulf Coast
7979 Innovation Park Dr
Baton Rouge, LA 70820

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WO# : 20325361

20325361

CHAIN OF CUSTODY

COMPANY NAME: Enthalpy	INVOICE TO: Enthalpy	PROJECT NAME/Quote #: 24G1354
CONTACT: Dan Elliot	INVOICE CONTACT:	SITE NAME: 24G1354
ADDRESS: 1941 Reymet Rd Richmond VA 23237	INVOICE ADDRESS: 1941 Reymet Rd Richmond VA 23237	PROJECT NUMBER: 24G1354
PHONE #: (804) 358-8295	INVOICE PHONE #: (804) 358-8295	P.O. #: PO-069420
FAX #:	EMAIL:	Pretreatment Program:
Is sample for compliance reporting? YES NO	Is sample from a chlorinated supply? YES NO	PWS I.D. #:
SAMPLER NAME (PRINT):	SAMPLER SIGNATURE:	**Turn Around Time: 10**

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other_____

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE) Volatile Fatty Acid								COMMENTS
1) 24G1354-01: EW-59	x					7/23/24	1238		GW	13	X								1
2) 24G1354-02: EW-60	x					7/24/24	1040		GW	13	X								2
3)																			
4)																			
5)																			
6)																			
7)																			
8)																			
9)																			
10)																			

Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol

PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
[signature]	7/29/24 1529	Fed Ex Express	7/29/24 1529
Fed Ex	7/30/24 1000	[signature]	7/30/24 1000
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME

QC Data Package
Level I ☐
Level II ☐
Level III ☐
Level IV ☐

LAB USE ONLY **COOLER TEMP** _____°C

Historical LFG-EW Leachate Monitoring Results Summary

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Ammonia as N (mg/L)	November-2022	---	---	---	---	---	---	---	---	**1560**	---	**1400**	---	---	**1380**	---	---	---	---	---	---	---	---	50	50
	December-2022	**1700**	---	**2280**	---	---	---	**2110**	---	**1410**	**1310**	---	---	---	---	**1150**	**1780**	---	---	---	---	---	---	100	100
	January-2023	**1520**	---	---	---	---	---	---	**936**	---	---	---	---	---	**1330**	---	---	---	---	---	---	---	---	50	50
		---	---	---	---	---	---	---	---	**2440**	---	---	---	---	---	---	---	---	---	---	---	---	---	100	100
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1490**	---	---	---	---	---	---	100	100
	March-2023	---	---	---	---	---	---	---	**667**	**1480**	---	---	---	---	---	---	---	---	---	---	---	---	---	73.1	100
	April-2023	---	---	---	---	---	---	---	**1410**	---	**1220**	---	---	---	---	---	---	---	---	---	---	---	---	73.1	100
	May-2023	**1390**	---	---	---	---	---	---	**1860**	**2380**	---	---	---	---	---	---	---	---	---	---	---	---	---	146	200
	June-2023	---	---	---	---	---	---	---	---	**2740**	---	**2370**	---	**2170**	---	---	---	---	---	---	---	---	---	146	200
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1180**	---	---	---	---	---	73.1	100
		1570	---	---	---	---	---	**2260**	---	---	---	---	---	---	---	---	---	---	---	---	---	**2350**	**310**	146	200
	August-2023	---	---	---	---	**1600**	---	**1890**	---	---	---	---	---	---	---	---	---	---	---	---	---	**2140**	**222**	146	200
	September-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1720**	---	---	---	---	---	73.1	100
		---	---	**1250**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	146	200
	October-2023	---	---	---	---	---	**1980**	---	---	---	---	---	---	---	---	---	---	**1730**	---	**2890**	---	---	---	146	200
	November-2023	**1260**	---	**2490**	**1830**	---	**2070**	---	---	---	---	---	---	---	---	---	---	**1800**	---	**2590**	---	---	---	146	200
		---	---	---	---	---	---	---	---	---	---	---	**1170**	---	---	---	---	---	---	---	---	---	**2080**	183	250
		---	---	---	---	---	---	---	---	**2440**	---	---	---	---	---	---	---	---	---	---	---	---	---	366	500
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1540**	---	---	---	---	---	73.1	100
		---	---	**2900**	---	---	---	---	---	---	---	---	---	---	---	---	**2200**	---	---	---	---	---	---	146	200
	January-2024	---	**2160**	---	---	---	---	---	---	**2400**	---	---	---	---	---	---	---	---	---	---	---	---	**1610**	146	200
	February-2024	---	**1900**	---	**2600**	---	---	---	---	---	---	---	---	---	---	---	---	---	**1780**	---	**2380**	---	---	146	200
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2280**	---	**968**	146	200
	April-2024	---	---	**2290**	---	---	---	---	---	---	---	---	**928**	---	---	---	**2140**	**1800**	---	---	---	---	---	146	200
	May-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**898**	73.1	100
		---	---	---	---	---	---	---	---	**2550**	---	---	---	---	---	---	---	**1620**	**1950**	**2660**	---	---	---	146	200
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1990**	**2170**	---	---	---	**1850**	146	200
	July-2024	---	---	---	---	---	---	---	---	**1860**	---	---	---	---	---	---	---	---	---	---	---	---	---	73.1	100
		---	---	---	---	---	---	---	---	---	**1950**	---	---	---	---	---	---	---	---	---	---	---	---	146	200
Biological Oxygen Demand (mg/L)	November-2022	---	---	---	---	---	---	---	---	**15700**	---	**5860**	---	---	**5140**	---	---	---	---	---	---	---	---	0.2	2
	December-2022	**6440**	---	**12500**	---	---	---	**11400**	---	**9240**	**3330**	---	---	---	---	**8360**	**6770**	---	---	---	---	---	---	0.2	2
	January-2023	**9920**	---	---	---	---	---	---	**999**	**28100**	---	---	---	---	**7060**	---	---	---	---	---	---	---	---	0.2	2
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**7230**	---	---	---	---	---	---	0.2	2
	March-2023	---	---	---	---	---	---	---	**1570**	**9190**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.2	2
	April-2023	---	---	---	---	---	---	---	**8430**	---	**2860**	---	---	---	---	---	---	---	---	---	---	---	---	0.2	2
	May-2023	**7350**	---	---	---	---	---	---	**11900**	**35300**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.2	2
	June-2023	---	---	---	---	---	---	---	---	**20000**	---	**27400**	---	**23100**	---	---	---	---	---	---	---	---	---	0.2	2
	July-2023	**6820**	---	---	---	---	---	**32900**	---	---	---	---	---	---	---	---	---	**330**	---	---	---	**31800**	**937**	0.2	2
	August-2023	---	---	---	---	**>33045**	---	**>33225**	---	---	---	---	---	---	---	---	---	---	---	---	---	**>32805**	**506**	0.2	2
	September-2023	---	---	**40185.5**	---	---	---	---	---	---	---	---	---	---	---	---	---	**659**	---	---	---	---	---	0.2	2
	October-2023	---	---	---	---	---	**34600**	---	---	---	---	---	---	---	---	---	---	**690**	---	**37000**	---	---	---	0.2	2
	November-2023	**1910**	---	**30400**	**27500**	---	**32015**	---	---	**29600**	---	---	**3640**	---	---	---	---	**480**	---	**32135**	---	---	**21500**	0.2	2
	December-2023	---	---	**>44105**	---	---	---	---	---	---	---	---	---	---	---	---	**13700**	**681**	---	---	---	---	---	0.2	2
	January-2024	---	**26000**	---	---	---	---	---	---	**17100**	---	---	---	---	---	---	---	---	---	---	---	---	**14000**	0.2	2
	February-2024	---	**23200**	---	**26200**	---	---	---	---	---	---	---	---	---	---	---	---	---	**21400**	---	**34300**	---	---	0.2	2
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**40600**	---	**7680**	0.2	2
	April-2024	---	---	**41142**	---	---	---	---	---	---	---	---	**1210**	---	---	---	**19600**	**386**	---	---	---	---	---	0.2	2
	May-2024	---	---	---	---	---	---	---	---	**25600**	---	---	---	---	---	---	---	**448**	**22200**	**33400**	---	---	**7750**	0.2	2
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**421**	**24400**	---	---	---	**16200**	0.2	2
	July-2024	---	---	---	---	---	---	---	---	**25800**	**4750**	---	---	---	---	---	---	---	---	---	---	---	---	0.2	2

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Chemical Oxygen Demand (mg/L)	November-2022	---	---	---	---	---	---	---	---	---	---	**9790**	---	---	**10800**	---	---	---	---	---	---	---	---	1000	1000
		---	---	---	---	---	---	---	---	**23500**	---	---	---	---	---	---	---	---	---	---	---	---	---	2000	2000
	December-2022	**7440**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1000	1000
		---	---	---	---	---	---	---	---	**13200**	**8000**	---	---	---	---	**20300**	**14100**	---	---	---	---	---	---	2000	2000
		---	---	---	---	---	---	**22400**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5000	5000
		---	---	**86800**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10000	10000
	January-2023	---	---	---	---	---	---	---	**3630**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	500	500
		14900	---	---	---	---	---	---	---	---	---	---	---	---	**8430**	---	---	---	---	---	---	---	---	2000	2000
		---	---	---	---	---	---	---	---	**47600**	---	---	---	---	---	---	---	---	---	---	---	---	---	5000	5000
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**9210**	---	---	---	---	---	---	1000	1000
	March-2023	---	---	---	---	---	---	---	**1690**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	500	500
		---	---	---	---	---	---	---	---	**10600**	---	---	---	---	---	---	---	---	---	---	---	---	---	2000	2000
	April-2023	---	---	---	---	---	---	---	---	---	**7370**	---	---	---	---	---	---	---	---	---	---	---	---	1000	1000
		---	---	---	---	---	---	---	**16800**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2000	2000
	May-2023	**7590**	---	---	---	---	---	---	**18700**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2000	2000
		---	---	---	---	---	---	---	---	**44700**	---	---	---	---	---	---	---	---	---	---	---	---	---	4000	4000
	June-2023	---	---	---	---	---	---	---	---	---	---	**44800**	---	---	---	---	---	---	---	---	---	---	---	5000	5000
		---	---	---	---	---	---	---	---	**41300**	---	---	---	**55000**	---	---	---	---	---	---	---	---	---	10000	10000
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2180**	500	500
		6480	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2460**	---	---	---	---	---	1000	1000
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**41000**	---	5000	5000
		---	---	---	---	---	---	**50100**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10000	10000
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1750**	500	500
		---	---	---	---	**59000**	---	**58600**	---	---	---	---	---	---	---	---	---	---	---	---	---	**60600**	---	5000	5000
	September-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**6260**	---	---	---	---	---	1000	1000
		---	---	**87400**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10000	10000
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**5320**	---	---	---	---	---	500	500
		---	---	---	---	---	**51000**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5000	5000
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**63600**	---	---	---	10000	10000
	November-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**4710**	---	---	---	---	---	1000	1000
		6200	---	---	---	---	---	---	---	---	---	---	**5620**	---	---	---	---	---	---	---	---	---	---	2000	2000
		---	---	---	**48100**	---	**57900**	---	---	**43700**	---	---	---	---	---	---	---	---	---	---	---	---	**37600**	5000	5000
		---	---	**77100**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**63900**	---	---	---	10000	10000
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**4870**	---	---	---	---	---	1000	1000
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**19900**	---	---	---	---	---	---	5000	5000
		---	---	**94200**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10000	10000
	January-2024	---	**48600**	---	---	---	---	---	---	**59800**	---	---	---	---	---	---	---	---	---	---	---	---	**38200**	5000	5000
	February-2024	---	**42700**	---	**51200**	---	---	---	---	---	---	---	---	---	---	---	---	---	**48900**	---	---	---	---	5000	5000
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**68400**	---	---	10000	10000
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**14400**	2000	2000
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**75500**	---	---	10000	10000
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**3110**	---	---	---	---	**4200**	---	---	---	---	---	1000	1000
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**32400**	---	---	---	---	---	---	5000	5000
		---	---	**79700**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10000	10000
	May-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**4930**	---	---	---	---	---	1000	1000
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**17700**	5000	5000
		---	---	---	---	---	---	---	---	**48500**	---	---	---	---	---	---	---	---	**43100**	**70700**	---	---	---	10000	10000
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**4520**	---	---	---	---	---	1000	1000
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**51400**	---	---	---	**31300**	5000	5000
	July-2024	---	---	---	---	---	---	---	---	**42400**	---	---	---	---	---	---	---	---	---	---	---	---	---	5000	5000
		---	---	---	---	---	---	---	---	---	**98500**	---	---	---	---	---	---	---	---	---	---	---	---	10000	10000
Nitrate+Nitrite as N (mg/L)	November-2022	---	---	---	---	---	---	---	---	**2.91**	---	**0.16**	---	---	**0.33**	---	---	---	---	---	---	---	---	0.1	0.1

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Nitrate as N (mg/L)	December-2022	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	0.2	0.2
		---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	0.2	0.6
		ND	---	ND	---	---	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	1.1	5.1
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	1.5	5.5
	January-2023	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.35	1.35
		---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	1.1	1.1
		3.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.1	2.1
		---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	2.2	2.2
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	0.35	1.35
	March-2023	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	1.04	5.1
	April-2023	---	---	---	---	---	---	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	0.6	2.6
	May-2023	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.1	5.1
		---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	1.2	5.2
	June-2023	---	---	---	---	---	---	---	---	ND	---	---	---	ND	---	---	---	---	---	---	---	---	---	1.1	5.1
		---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	1.2	5.2
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.355**	---	---	---	---	---	0.15	0.35
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.55	0.75
		ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	3
		---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	1.5	5.5
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.15	0.35
		---	---	---	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	1.5	3.5
	September-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.3	1.1
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.7	1.5
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.35	1.35
		---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	3
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	1.5	3.5
	November-2023	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.15	0.35
		---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	0.35	1.35
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.75	1.75
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.1	5.1
		---	---	---	ND	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	ND	---	---	ND	1.5	5.5
	December-2023	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	1.1	5.1
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	1.5	5.5
	January-2024	---	**2.01**	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	1.5	5.5
	February-2024	---	**9.1**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	ND	---	---	1.5	5.5
		---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.5	7.5
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	ND	0.75	1.75
	April-2024	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	ND	---	---	---	---	---	0.35	0.35
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.5	5.5
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	2.5	10.5
	May-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.15	0.35
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.35	1.35
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	0.6	2.6
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.9**	---	---	---	1	3
		---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	1.1	5.1
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.692**	---	---	---	---	---	0.6	2.6
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	ND	1.5	3.5
	July-2024	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	0.5	2.5
		---	---	---	---	---	---	---	---	**6.66**	---	---	---	---	---	---	---	---	---	---	---	---	---	5	25

Historical LFG-EW Leachate Monitoring Results Summary

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Nitrite as N (mg/L)	December-2022	---	---	---	---	---	---	---	---	---	**0.12 J**	---	---	---	---	---	---	---	---	---	---	---	---	0.1	0.5
		ND	---	ND	---	---	---	ND	---	ND	---	---	---	---	---	ND	ND	---	---	---	---	---	---	1	5
	January-2023	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.25	1.25
		---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	1	1
		ND	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	2	2
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.48 J**	---	---	---	---	---	---	0.25	1.25
	March-2023	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	1	5
	April-2023	---	---	---	---	---	---	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	0.5	2.5
	May-2023	ND	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	1	5
	June-2023	---	---	---	---	---	---	---	---	**2 J**	---	ND	---	ND	---	---	---	---	---	---	---	---	---	1	5
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	ND	0.05	0.25
		ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.5	2.5
		---	---	---	---	---	---	**1.2 J**	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	1	5
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.05	0.25
		---	---	---	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	0.5	2.5
	September-2023	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.2	1
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.25	1.25
		---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	0.5	2.5
	November-2023	**0.06 J**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.05	0.25
		---	---	---	---	---	ND	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	0.25	1.25
		---	---	ND	ND	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	ND	---	---	ND	1	5
	December-2023	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	1	5
	January-2024	---	**1.7 J**	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	1	5
	February-2024	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	ND	---	---	1	5
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	**0.25 J**	0.25	1.25
	April-2024	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	ND	---	---	---	---	---	0.25	0.25
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	5
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	2	10
	May-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.05	0.25
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.25	1.25
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	ND	---	---	---	0.5	2.5
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	ND	---	---	---	ND	0.5	2.5
	July-2024	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	0.5	2.5
		---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	5	25

Historical LFG-EW Leachate Monitoring Results Summary

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Total Kjeldahl Nitrogen (mg/L)	November-2022	---	---	---	---	---	---	---	---	---	---	**1290**	---	---	**1470**	---	---	---	---	---	---	---	---	20	50
		---	---	---	---	---	---	---	---	**2110**	---	---	---	---	---	---	---	---	---	---	---	---	---	50	125
	December-2022	**1510**	---	**3570**	---	---	---	**1790**	---	**1830**	**1490**	---	---	---	---	**1340**	**1940**	---	---	---	---	---	---	200	500
	January-2023	**1840**	---	---	---	---	---	---	**881**	---	---	---	---	---	**1410**	---	---	---	---	---	---	---	---	20	50
		---	---	---	---	---	---	---	---	**2970**	---	---	---	---	---	---	---	---	---	---	---	---	---	40	100
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1870**	---	---	---	---	---	---	16.8	50
	March-2023	---	---	---	---	---	---	---	**879**	**1920**	---	---	---	---	---	---	---	---	---	---	---	---	---	33.6	100
	April-2023	---	---	---	---	---	---	---	**1820**	---	**1510**	---	---	---	---	---	---	---	---	---	---	---	---	16.8	50
	May-2023	**1590**	---	---	---	---	---	---	**1950**	**2910**	---	---	---	---	---	---	---	---	---	---	---	---	---	40	100
	June-2023	---	---	---	---	---	---	---	---	**3080**	---	---	---	**2750**	---	---	---	---	---	---	---	---	---	100	250
		---	---	---	---	---	---	---	---	---	---	**2650**	---	---	---	---	---	---	---	---	---	---	---	200	500
	July-2023	**1670**	---	---	---	---	---	**2960**	---	---	---	---	---	---	---	---	---	**1670**	---	---	---	**2720**	**285**	40	100
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**279**	10	25
		---	---	---	---	**2240**	---	**2820**	---	---	---	---	---	---	---	---	---	---	---	---	---	**2850**	---	100	250
	September-2023	---	---	**3340**	---	---	---	---	---	---	---	---	---	---	---	---	---	**2680**	---	---	---	---	---	100	250
	October-2023	---	---	---	---	---	**1050**	---	---	---	---	---	---	---	---	---	---	---	---	**1320**	---	---	---	40	100
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**4630**	---	---	---	---	---	100	250
	November-2023	---	---	---	---	---	**2240**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2120**	80	200
		1440	---	**3290**	**2630**	---	---	---	---	**2530**	---	---	**1120**	---	---	---	---	**2270**	---	**3170**	---	---	---	100	250
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1880**	---	---	---	---	---	---	80	200
		---	---	**3130**	---	---	---	---	---	---	---	---	---	---	---	---	---	**1890**	---	---	---	---	---	100	250
	January-2024	---	**2450**	---	---	---	---	---	---	**3020**	---	---	---	---	---	---	---	---	---	---	---	---	**1810**	100	250
	February-2024	---	**2540**	---	**2890**	---	---	---	---	---	---	---	---	---	---	---	---	---	**2470**	---	**2970**	---	---	100	250
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1030**	50	125
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2980**	---	---	100	250
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**1030**	---	---	---	---	**1730**	---	---	---	---	---	40	100
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2320**	---	---	---	---	---	---	50	125
		---	---	**3260**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	100	250
	May-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1140**	40	100
		---	---	---	---	---	---	---	---	**3120**	---	---	---	---	---	---	---	**1780**	**2470**	**3280**	---	---	---	100	250
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1870**	---	---	---	---	**4750**	100	250
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2680**	---	---	---	---	200	500
	July-2024	---	---	---	---	---	---	---	---	**2840**	**2680**	---	---	---	---	---	---	---	---	---	---	---	---	100	250

Historical LFG-EW Leachate Monitoring Results Summary

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Total Recoverable Phenolics (mg/L)	November-2022	---	---	---	---	---	---	---	---	---	---	**5.68**	---	---	**3**	---	---	---	---	---	---	---	---	0.3	0.5
		---	---	---	---	---	---	---	---	**28.8**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.75	1.25
	December-2022	---	---	---	---	---	---	---	---	---	**8.94**	---	---	---	---	---	---	---	---	---	---	---	---	0.3	0.5
		24.9	---	**54.6**	---	---	---	**28.3**	---	**32**	---	---	---	---	---	**20.2**	**36**	---	---	---	---	---	---	1.5	2.5
	January-2023	**27.2**	---	---	---	---	---	---	**1.3**	---	---	---	---	---	**20.2**	---	---	---	---	---	---	---	---	0.75	1.25
		---	---	---	---	---	---	---	---	**56.5**	---	---	---	---	---	---	---	---	---	---	---	---	---	1.5	2.5
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**22.4**	---	---	---	---	---	---	1.5	2.5
	March-2023	---	---	---	---	---	---	---	**0.4**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.03	0.05
		---	---	---	---	---	---	---	---	**13.9**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.3	0.5
	April-2023	---	---	---	---	---	---	---	**18.7**	---	**5.1**	---	---	---	---	---	---	---	---	---	---	---	---	0.3	0.5
	May-2023	**18.6**	---	---	---	---	---	---	**20**	**50**	---	---	---	---	---	---	---	---	---	---	---	---	---	1.5	2.5
	June-2023	---	---	---	---	---	---	---	---	**39.1**	---	**45.6**	---	**80.6**	---	---	---	---	---	---	---	---	---	1.5	2.5
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.7**	---	---	---	---	---	0.15	0.25
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2.92**	0.3	0.5
		11.6	---	---	---	---	---	**47.9**	---	---	---	---	---	---	---	---	---	---	---	---	---	**37.3**	---	1.5	2.5
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.46**	0.15	0.25
		---	---	---	---	**28.6**	---	**31.4**	---	---	---	---	---	---	---	---	---	---	---	---	---	**40.4**	---	1.5	2.5
	September-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**4.58**	---	---	---	---	---	0.3	0.5
		---	---	**38.2**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3	5
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**4.13**	---	---	---	---	---	0.15	0.25
		---	---	---	---	---	**37**	---	---	---	---	---	---	---	---	---	---	---	---	**38.7**	---	---	---	0.6	1
	November-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**3.65**	---	---	---	---	---	0.15	0.25
		7.88	---	---	**36.4**	---	---	---	---	---	---	---	**4.76**	---	---	---	---	---	---	---	---	---	---	0.6	1
		---	---	**38.8**	---	---	**47.4**	---	---	---	---	---	---	---	---	---	---	---	---	**47.1**	---	---	---	0.75	1.25
		---	---	---	---	---	---	---	---	**46.9**	---	---	---	---	---	---	---	---	---	---	---	---	**29.1**	1.5	2.5
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**3.72**	---	---	---	---	---	0.06	0.1
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**23**	---	---	---	---	---	---	0.75	1.25
		---	---	**34.2**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.5	2.5
	January-2024	---	**38**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**22.7**	1.5	2.5
		---	---	---	---	---	---	---	---	**39.2**	---	---	---	---	---	---	---	---	---	---	---	---	---	3	5
	February-2024	---	**37.3**	---	**42.9**	---	---	---	---	---	---	---	---	---	---	---	---	---	**50.2**	---	**43.1**	---	---	1.5	2.5
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**46.6**	---	**12.8**	3	5
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**1.68**	---	---	---	---	**1.16**	---	---	---	---	---	0.3	0.5
		---	---	**38.4**	---	---	---	---	---	---	---	---	---	---	---	---	**28.6**	---	---	---	---	---	---	1.5	2.5
	May-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.06**	---	---	---	---	---	0.3	0.5
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**13.6**	1.5	2.5
		---	---	---	---	---	---	---	---	**36.6**	---	---	---	---	---	---	---	---	**33.6**	**51**	---	---	---	3	5
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.82**	---	---	---	---	---	0.3	0.5
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**23.2**	1.5	2.5
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**44.8**	---	---	---	---	3	5
	July-2024	---	---	---	---	---	---	---	---	---	**28.8**	---	---	---	---	---	---	---	---	---	---	---	---	0.75	1.25
		---	---	---	---	---	---	---	---	**37.8**	---	---	---	---	---	---	---	---	---	---	---	---	---	3	5

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
SEMI-VOLATILE ORGANIC COMPOUND (ug/L)																									
Anthracene	November-2022	---	---	---	---	---	---	---	---	---	---	ND	---	---	ND	---	---	---	---	---	---	---	---	46.7	93.5
		---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	93.5	187
	December-2022	---	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	ND	---	---	---	---	---	---	9.35	9.35
		---	---	---	---	---	---	ND	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	11.7	11.7
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	23.4	23.4
		ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	485	971
	January-2023	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	243	485
		---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	253	505
		ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	490	980
		---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	500	1000
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	187	374
	March-2023	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	51	102
		---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	117	234
	April-2023	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.4	74.8
		---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	38.8	77.7
	May-2023	ND	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	93.5	187
		---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	467	935
	June-2023	---	---	---	---	---	---	---	---	ND	---	---	---	ND	---	---	---	---	---	---	---	---	---	485	971
		---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	490	980
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	46.7	93.5
		ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	100	200
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	250	500
		---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	1000	2000
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	19.6	39.2
		---	---	---	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	1000	2000
	September-2023	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	40	80
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	40	80
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	50	100
		---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	500	1000
	November-2023	ND	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	20	40
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	50	100
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	100	200
		---	---	---	ND	---	ND	---	---	ND	---	---	---	---	---	---	---	---	---	ND	---	---	---	400	800
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1000	2000
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	50	100
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	100	200
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	200	400
	January-2024	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	100	200
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	250	500
		---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	1000	2000
	February-2024	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	200	400
		---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	250	500
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	ND	---	---	400000	800000
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	20	40
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	80	160
	April-2024	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	5	10
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	20	40
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	100	200
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	400	800
	May-2024	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	ND	ND	---	---	---	ND	10	10
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	80	160
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	20	40
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	ND	100	200
	July-2024	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	40	80
		---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	80	160

Historical LFG-EW Leachate Monitoring Results Summary

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
TOTAL METALS (mg/L)																									
Arsenic	November-2022	---	---	---	---	---	---	---	---	**0.863**	---	**0.464**	---	---	**1.3**	---	---	---	---	---	---	---	---	0.02	0.04
	December-2022	**1.02**	---	**0.406**	---	---	---	**0.174**	---	**1.69**	**0.49**	---	---	---	---	**0.159**	**0.574**	---	---	---	---	---	---	0.02	0.04
	January-2023	**0.285**	---	---	---	---	---	---	**0.596**	**0.225**	---	---	---	---	**0.846**	---	---	---	---	---	---	---	---	0.01	0.02
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.29**	---	---	---	---	---	---	0.005	0.01
	March-2023	---	---	---	---	---	---	---	**1.07**	**1**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.01	0.02
	April-2023	---	---	---	---	---	---	---	---	---	**0.11**	---	---	---	---	---	---	---	---	---	---	---	---	0.0005	0.001
		---	---	---	---	---	---	---	**0.36**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.005	0.01
	May-2023	**0.26**	---	---	---	---	---	---	**0.3**	**0.27**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0025	0.005
	June-2023	---	---	---	---	---	---	---	---	**0.26**	---	**0.5**	---	**0.14**	---	---	---	---	---	---	---	---	---	0.0025	0.005
	July-2023	**0.23**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.24**	---	---	---	**0.19**	**0.06**	0.0005	0.001
		---	---	---	---	---	---	**0.7**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0025	0.005
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.15**	0.0025	0.005
		---	---	---	---	**0.32**	---	**0.43**	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.29**	---	0.005	0.01
	September-2023	---	---	**0.42**	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.25**	---	---	---	---	---	0.005	0.01
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.24**	---	**0.31**	---	---	---	0.0005	0.001
		---	---	---	---	---	**0.36**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.001	0.002
	November-2023	**0.23**	---	**0.33**	**0.53**	---	**0.43**	---	---	**0.35**	---	---	**0.78**	---	---	---	---	**0.34**	---	**0.27**	---	---	**0.2**	0.003	0.003
	December-2023	---	---	**0.4**	---	---	---	---	---	---	---	---	---	---	---	---	**0.26**	---	---	---	---	---	---	0.0025	0.005
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.24**	---	---	---	---	---	0.001	0.002
	January-2024	---	**0.47**	---	---	---	---	---	---	**0.23**	---	---	---	---	---	---	---	---	---	---	---	---	**0.18**	0.0025	0.005
	February-2024	---	**0.68**	---	**0.42**	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.33**	---	**0.23**	---	---	0.002	0.002
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.12**	0.001	0.002
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.23**	---	---	0.0025	0.005
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**0.49**	---	---	---	---	**0.18**	---	---	---	---	---	0.0005	0.001
		---	---	**0.31**	---	---	---	---	---	---	---	---	---	---	---	---	**0.33**	---	---	---	---	---	---	0.004	0.004
	May-2024	---	---	---	---	---	---	---	---	**0.33**	---	---	---	---	---	---	---	**0.2**	**0.73**	**0.22**	---	---	**0.22**	0.005	0.01
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.19**	**0.49**	---	---	---	**0.14**	0.005	0.01
	July-2024	---	---	---	---	---	---	---	---	**300**	**0.095**	---	---	---	---	---	---	---	---	---	---	---	---	0.0025	0.005
Barium	November-2022	---	---	---	---	---	---	---	---	**0.871**	---	**0.485**	---	---	**0.36**	---	---	---	---	---	---	---	---	0.01	0.02
	December-2022	**0.566**	---	**0.803**	---	---	---	**0.978**	---	**0.438**	**0.214**	---	---	---	---	**0.856**	**0.793**	---	---	---	---	---	---	0.01	0.02
	January-2023	**0.643**	---	---	---	---	---	---	**0.683**	**1.92**	---	---	---	---	**0.554**	---	---	---	---	---	---	---	---	0.005	0.01
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.04**	---	---	---	---	---	---	0.01	0.05
	March-2023	---	---	---	---	---	---	---	**0.406**	**0.683**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.005	0.01
	April-2023	---	---	---	---	---	---	---	**1.21**	---	**0.326**	---	---	---	---	---	---	---	---	---	---	---	---	0.01	0.05
	May-2023	**0.636**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.005	0.025
		---	---	---	---	---	---	---	**1.2**	**1.83**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.01	0.05
	June-2023	---	---	---	---	---	---	---	---	**1.69**	---	---	---	**1.65**	---	---	---	---	---	---	---	---	---	0.005	0.025
		---	---	---	---	---	---	---	---	---	---	**3.01**	---	---	---	---	---	---	---	---	---	---	---	0.01	0.05
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.217**	0.001	0.005
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.558**	---	---	---	---	---	0.002	0.01
		0.542	---	---	---	---	---	**2.28**	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.02**	---	0.005	0.025
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.218**	0.005	0.025
		---	---	---	---	**1.61**	---	**1.58**	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.48**	---	0.01	0.05
	September-2023	---	---	**0.72**	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.649**	---	---	---	---	---	0.01	0.05
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.664**	---	---	---	---	---	0.002	0.01
		---	---	---	---	---	**2.56**	---	---	---	---	---	---	---	---	---	---	---	---	**1.93**	---	---	---	0.005	0.025
	November-2023	**0.572**	---	**0.81**	**2.28**	---	**2.51**	---	---	**1.96**	---	---	**0.418**	---	---	---	---	**0.67**	---	**2.06**	---	---	**2.84**	0.01	0.05
	December-2023	---	---	**0.68**	---	---	---	---	---	---	---	---	---	---	---	---	**1.36**	---	---	---	---	---	---	0.005	0.025
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.672**	---	---	---	---	---	0.002	0.01
	January-2024	---	---	---	---	---	---	---	---	**1.92**	---	---	---	---	---	---	---	---	---	---	---	---	**1.91**	0.005	0.025
		---	**3.27**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.01	0.05
	February-2024	---	**3.03**	---	**4.41**	---	---	---	---	---	---	---	---	---	---	---	---	---	**2.65**	---	**0.925**	---	---	0.005	0.025
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.03**	0.002	0.01
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.54**	---	---	0.005	0.025
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**0.4**	---	---	---	---	**0.634**	---	---	---	---	---	0.001	0.005
		---	---	**1.02**	---	---	---	---	---	---	---	---	---	---	---	---	**2.15**	---	---	---	---	---	---	0.01	0.05
	May-2024	---	---	---	---	---	---	---	---	**1.79**	---	---	---	---	---	---	---	**0.619**	**2.8**	**2.06**	---	---	**0.872**	0.01	0.05
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.6**	**3.44**	---	---	---	**1.51**	0.01	0.05
	July-2024	---	---	---	---	---	---	---	---	**1.28**	**2.75**	---	---	---	---	---	---	---	---	---	---	---	---	0.005	0.025

Historical LFG-EW Leachate Monitoring Results Summary

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	**Monitoring Event**	**Concentration**																							
Cadmium	November-2022	---	---	---	---	---	---	---	---	ND	---	ND	---	---	ND	---	---	---	---	---	---	---	---	0.004	0.008
	December-2022	ND	---	**0.0104**	---	---	---	ND	---	ND	ND	---	---	---	---	ND	ND	---	---	---	---	---	---	0.004	0.008
	January-2023	ND	---	---	---	---	---	---	ND	ND	---	---	---	---	ND	---	---	---	---	---	---	---	---	0.002	0.004
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.000297 J**	---	---	---	---	---	---	0.0001	0.001
	March-2023	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	0.002	0.004
	April-2023	---	---	---	---	---	---	---	**0.000158 J**	---	**0.000333 J**	---	---	---	---	---	---	---	---	---	---	---	---	0.0001	0.001
	May-2023	ND	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0005	0.005
	June-2023	---	---	---	---	---	---	---	---	ND	---	ND	---	ND	---	---	---	---	---	---	---	---	---	0.0005	0.005
	July-2023	**0.000219 J**	---	---	---	---	---	**0.000156 J**	---	---	---	---	---	---	---	---	---	**0.000186 J**	---	---	---	ND	ND	0.0001	0.001
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.0005	0.005
		---	---	---	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	0.001	0.01
	September-2023	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.001	0.01
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.000171 J**	---	ND	---	---	---	0.0001	0.001
		---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0002	0.002
	November-2023	ND	---	ND	ND	---	ND	---	---	ND	---	---	ND	---	---	---	---	ND	---	ND	---	---	ND	0.001	0.003
	December-2023	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	**0.000604 J**	---	---	---	---	---	---	0.0005	0.0015
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.0002	0.002
	January-2024	---	ND	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.0005	0.005
	February-2024	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0175**	---	ND	---	---	0.0005	0.005
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.0002	0.002
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	0.0005	0.005
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**0.000204 J**	---	---	---	---	**0.000195 J**	---	---	---	---	---	0.0001	0.001
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	0.001	0.004
	May-2024	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	ND	**0.0483**	ND	---	---	ND	0.001	0.01
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	**0.0175**	---	---	---	ND	0.001	0.01
	July-2024	---	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	0.0005	0.005
Chromium	November-2022	---	---	---	---	---	---	---	---	**0.208**	---	**0.112**	---	---	**0.354**	---	---	---	---	---	---	---	---	0.016	0.02
	December-2022	**0.503**	---	**1.08**	---	---	---	**1.76**	---	**0.274**	**0.319**	---	---	---	---	**0.499**	**0.822**	---	---	---	---	---	---	0.016	0.02
	January-2023	**0.31**	---	---	---	---	---	---	**0.488**	**0.178**	---	---	---	---	**0.155**	---	---	---	---	---	---	---	---	0.008	0.01
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.277**	---	---	---	---	---	---	0.004	0.01
	March-2023	---	---	---	---	---	---	---	**0.213**	**0.188**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.008	0.01
	April-2023	---	---	---	---	---	---	---	---	---	**0.142**	---	---	---	---	---	---	---	---	---	---	---	---	0.0004	0.001
		---	---	---	---	---	---	---	**0.306**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.004	0.01
	May-2023	**0.422**	---	---	---	---	---	---	**0.281**	**0.237**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.002	0.005
	June-2023	---	---	---	---	---	---	---	---	**0.251**	---	**0.191**	---	**0.272**	---	---	---	---	---	---	---	---	---	0.002	0.005
	July-2023	**0.308**	---	---	---	---	---	**0.535**	---	---	---	---	---	---	---	---	---	**0.231**	---	---	---	**0.215**	**0.0265**	0.0004	0.001
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0276**	0.002	0.005
		---	---	---	---	**0.606**	---	**0.449**	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.259**	---	0.004	0.01
	September-2023	---	---	**1.17**	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.234**	---	---	---	---	0.004	0.01
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.144**	---	**0.194**	---	---	---	0.0004	0.001
		---	---	---	---	---	**0.273**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0008	0.002
	November-2023	**0.391**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0	0.003
		---	---	---	**0.51**	---	---	---	---	---	---	---	---	---	---	---	---	**0.251**	---	**0.403**	---	---	---	0.003	0.003
		---	---	**1.04**	---	---	**0.402**	---	---	**0.246**	---	---	**0.343**	---	---	---	---	---	---	---	---	---	**0.222**	0.004	0.01
	December-2023	---	---	**1.34**	---	---	---	---	---	---	---	---	---	---	---	---	**0.259**	---	---	---	---	---	0.002	0.005
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.219**	---	---	---	---	---	0.0008	0.002
	January-2024	---	**0.17**	---	---	---	---	---	---	**0.193**	---	---	---	---	---	---	---	---	---	---	---	---	**0.128**	0.002	0.005
	February-2024	---	**0.23**	---	**0.272**	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.203**	---	**0.336**	---	---	0.002	0.005
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0759**	0.0008	0.002
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.414**	---	---	0.002	0.005
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**0.36**	---	---	---	---	**0.245**	---	---	---	---	---	0.0004	0.001
		---	---	**0.836**	---	---	---	---	---	---	---	---	---	---	---	---	**0.228**	---	---	---	---	---	---	0.004	0.01
	May-2024	---	---	---	---	---	---	---	---	**0.268**	---	---	---	---	---	---	---	**0.226**	**0.183**	**0.352**	---	---	**0.11**	0.004	0.01
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.226**	**0.188**	---	---	---	**0.16**	0.004	0.01
	July-2024	---	---	---	---	---	---	---	---	**0.252**	**0.246**	---	---	---	---	---	---	---	---	---	---	---	---	0.002	0.005

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Copper	November-2022	---	---	---	---	---	---	---	---	ND	---	ND	---	---	ND	---	---	---	---	---	---	---	---	0.016	0.02
	December-2022	ND	---	ND	---	---	---	ND	---	ND	ND	---	---	---	---	ND	ND	---	---	---	---	---	---	0.016	0.02
	January-2023	ND	---	---	---	---	---	---	**0.0127**	**0.0256**	---	---	---	---	ND	---	---	---	---	---	---	---	---	0.008	0.01
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.00365**	---	---	---	---	---	---	0.0003	0.001
	March-2023	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	0.008	0.01
	April-2023	---	---	---	---	---	---	---	**0.00664**	---	**0.00767**	---	---	---	---	---	---	---	---	---	---	---	---	0.0003	0.001
	May-2023	ND	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0015	0.005
	June-2023	---	---	---	---	---	---	---	---	**0.00154 J**	---	**0.00362 J**	---	**0.00269 J**	---	---	---	---	---	---	---	---	---	0.0015	0.005
	July-2023	**0.00124**	---	---	---	---	---	**0.00163**	---	---	---	---	---	---	---	---	---	**0.00811**	---	---	---	ND	**0.0027**	0.0003	0.001
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.0015	0.005
		---	---	---	---	**0.00343 J**	---	**0.0176**	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	0.003	0.01
	September-2023	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.00407 J**	---	---	---	---	---	0.003	0.01
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.00361**	---	**0.000609 J**	---	---	---	0.0003	0.001
		---	---	---	---	---	**0.00806**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0006	0.002
	November-2023	**0.00607**	---	**0.00352**	**0.0212**	---	**0.00756**	---	---	ND	---	---	**0.00341**	---	---	---	---	**0.00387**	---	ND	---	---	ND	0.003	0.003
	December-2023	---	---	**0.00184**	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	0.0015	0.0015
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0034**	---	---	---	---	---	0.0006	0.002
	January-2024	---	ND	---	---	---	---	---	---	**0.019**	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.0015	0.005
	February-2024	---	ND	---	**0.00201**	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	ND	---	---	0.0015	0.002
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.00115 J**	0.0006	0.002
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.00184 J**	---	---	0.0015	0.005
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**0.00443**	---	---	---	---	**0.004**	---	---	---	---	---	0.0003	0.001
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	0.003	0.004
	May-2024	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	**0.00486 J**	**0.00688 J**	ND	---	---	ND	0.003	0.01
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.00409 J**	ND	---	---	---	ND	0.003	0.01
	July-2024	---	---	---	---	---	---	---	---	**0.398**	ND	---	---	---	---	---	---	---	---	---	---	---	---	0.0015	0.005
Lead	November-2022	---	---	---	---	---	---	---	---	ND	---	ND	---	---	**0.017 J**	---	---	---	---	---	---	---	---	0.012	0.02
	December-2022	ND	---	**0.0381**	---	---	---	ND	---	ND	ND	---	---	---	---	ND	ND	---	---	---	---	---	---	0.012	0.02
	January-2023	ND	---	---	---	---	---	---	ND	ND	---	---	---	---	ND	---	---	---	---	---	---	---	---	0.006	0.01
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.006**	---	---	---	---	---	---	0.001	0.001
	March-2023	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	0.006	0.01
	April-2023	---	---	---	---	---	---	---	**0.0022**	---	**0.0067**	---	---	---	---	---	---	---	---	---	---	---	---	0.001	0.001
	May-2023	ND	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	0.005	0.005
	June-2023	---	---	---	---	---	---	---	---	ND	---	ND	---	**0.0069**	---	---	---	---	---	---	---	---	---	0.005	0.005
	July-2023	**0.0014**	---	---	---	---	---	**0.019**	---	---	---	---	---	---	---	---	---	**0.0092**	---	---	---	ND	**0.0017**	0.001	0.001
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.005	0.005
		---	---	---	---	**0.014**	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.013**	---	0.01	0.01
	September-2023	---	---	**0.12**	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.01	0.01
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0036**	---	**0.0034**	---	---	---	0.001	0.001
		---	---	---	---	---	**0.0077**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.002	0.002
	November-2023	ND	---	**0.13**	**0.0046**	---	**0.014**	---	---	ND	---	---	ND	---	---	---	---	**0.0032**	---	**0.0043**	---	---	ND	0.003	0.003
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0043**	---	---	---	---	---	0.002	0.002
		---	---	**0.16**	---	---	---	---	---	---	---	---	---	---	---	---	**0.002**	---	---	---	---	---	---	0.0015	0.0015
	January-2024	---	ND	---	---	---	---	---	---	**0.0081**	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.005	0.005
	February-2024	---	**0.0065**	---	**0.01**	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.051**	---	**0.012**	---	---	0.001	0.002
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.002	0.002
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.02**	---	---	0.005	0.005
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**0.0013**	---	---	---	---	**0.0025**	---	---	---	---	---	0.001	0.001
		---	---	**0.13**	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	0.004	0.004
	May-2024	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	ND	**0.11**	ND	---	---	ND	0.01	0.01
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	**0.024**	---	---	---	ND	0.01	0.01
	July-2024	---	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	0.005	0.005

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Mercury	November-2022	---	---	---	---	---	---	---	---	---	---	**0.00169**	---	---	**0.00053**	---	---	---	---	---	---	---	---	0.0004	0.0004
		---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0008	0.0008
	December-2022	**0.00051**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0004	0.0004
		---	---	---	---	---	---	**0.00118**	---	ND	**0.00588**	---	---	---	---	**0.0048**	ND	---	---	---	---	---	---	0.0008	0.0008
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.004	0.004
	January-2023	ND	---	---	---	---	---	---	ND	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	0.0004	0.0004
		---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	0.004	0.004
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	0.0004	0.0004
	March-2023	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0002	0.0002
		---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0004	0.0004
	April-2023	---	---	---	---	---	---	---	---	---	**0.00128**	---	---	---	---	---	---	---	---	---	---	---	---	0.0002	0.0002
		---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0004	0.0004
	May-2023	ND	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0002	0.0002
	June-2023	---	---	---	---	---	---	---	---	ND	---	ND	---	ND	---	---	---	---	---	---	---	---	---	0.004	0.004
	July-2023	**0.000306**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	ND	0.0002	0.0002
		---	---	---	---	---	---	**0.0107**	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	0.001	0.001
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.001	0.001
		---	---	---	---	**0.00312**	---	**0.00397**	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	0.002	0.002
	September-2023	---	---	**0.00503**	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.002	0.002
	October-2023	---	---	---	---	---	**0.00165**	---	---	---	---	---	---	---	---	---	---	ND	---	**0.00055**	---	---	---	0.0004	0.0004
	November-2023	ND	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	0.0000002	0.0000002
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.0000004	0.0000004
		---	---	**0.00576**	**0.00606**	---	**0.00578**	---	---	ND	---	---	---	---	---	---	---	---	---	**0.00954**	---	---	ND	0.000004	0.000004
	December-2023	---	---	**0.00484**	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	0.001	0.001
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.0004	0.0004
	January-2024	---	ND	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.001	0.001
	February-2024	---	**0.00376**	---	**0.0115**	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.00238**	---	**0.00284**	---	---	0.001	0.001
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.00124**	0.0004	0.0004
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	0.001	0.001
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**0.000201**	---	---	---	---	ND	---	---	---	---	---	0.0002	0.0002
		---	---	**0.00382**	---	---	---	---	---	---	---	---	---	---	---	---	**0.00151**	---	---	---	---	---	---	0.0008	0.0008
	May-2024	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	ND	ND	ND	---	---	ND	0.002	0.002
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	**0.0119**	---	---	---	ND	0.002	0.002
	July-2024	---	---	---	---	---	---	---	---	ND	**0.00104**	---	---	---	---	---	---	---	---	---	---	---	---	0.001	0.001
Nickel	November-2022	---	---	---	---	---	---	---	---	**0.0866**	---	**0.1344**	---	---	**0.173**	---	---	---	---	---	---	---	---	0.014	0.02
	December-2022	**0.1722**	---	**0.5025**	---	---	---	**0.2989**	---	**0.1299**	**0.287**	---	---	---	---	**0.1853**	**0.346**	---	---	---	---	---	---	0.014	0.02
	January-2023	**0.1074**	---	---	---	---	---	---	**0.1442**	**0.0407**	---	---	---	---	**0.0769**	---	---	---	---	---	---	---	---	0.007	0.01
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.1726**	---	---	---	---	---	---	0.001	0.001
	March-2023	---	---	---	---	---	---	---	**0.1254**	**0.1033**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.007	0.01
	April-2023	---	---	---	---	---	---	---	**0.1143**	---	**0.1732**	---	---	---	---	---	---	---	---	---	---	---	---	0.001	0.001
	May-2023	**0.113**	---	---	---	---	---	---	**0.09726**	**0.05657**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.005	0.005
	June-2023	---	---	---	---	---	---	---	---	**0.05978**	---	**0.05892**	---	**0.07161**	---	---	---	---	---	---	---	---	---	0.005	0.005
	July-2023	**0.09872**	---	---	---	---	---	**0.08332**	---	---	---	---	---	---	---	---	---	**0.1576**	---	---	---	**0.03074**	**0.01403**	0.001	0.001
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.02029**	0.005	0.005
		---	---	---	---	**0.1457**	---	**0.09673**	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0513**	---	0.01	0.01
	September-2023	---	---	**0.5152**	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.2387**	---	---	---	---	---	0.01	0.01
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.2019**	---	**0.09206**	---	---	---	0.001	0.001
		---	---	---	---	---	**0.104**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.002	0.002
	November-2023	**0.1178**	---	**0.4227**	**0.1242**	---	**0.07791**	---	---	**0.05944**	---	---	**0.1493**	---	---	---	---	**0.2492**	---	**0.1332**	---	---	**0.05277**	0.01	0.01
	December-2023	---	---	**0.6091**	---	---	---	---	---	---	---	---	---	---	---	---	**0.1447**	---	---	---	---	---	---	0.005	0.005
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.2127**	---	---	---	---	---	0.002	0.002
	January-2024	---	**0.06308**	---	---	---	---	---	---	**0.04911**	---	---	---	---	---	---	---	---	---	---	---	---	**0.0326**	0.005	0.005
	February-2024	---	**0.07945**	---	**0.07013**	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.09174**	---	**0.06183**	---	---	0.005	0.005
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.02232**	0.002	0.002
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.08678**	---	---	0.005	0.005
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**0.1319**	---	---	---	---	**0.196**	---	---	---	---	---	0.001	0.001
		---	---	**0.3136**	---	---	---	---	---	---	---	---	---	---	---	---	**0.1139**	---	---	---	---	---	---	0.01	0.01
	May-2024	---	---	---	---	---	---	---	---	**0.0538**	---	---	---	---	---	---	---	**0.2065**	**0.07835**	**0.09235**	---	---	**0.02884**	0.01	0.01
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.211**	**0.07664**	---	---	---	**0.03166**	0.01	0.01
	July-2024	---	---	---	---	---	---	---	---	**0.1917**	**0.03634**	---	---	---	---	---	---	---	---	---	---	---	---	0.005	0.005

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Selenium	November-2022	---	---	---	---	---	---	---	---	ND	---	ND	---	---	ND	---	---	---	---	---	---	---	---	0.08	0.1
	December-2022	ND	---	ND	---	---	---	ND	---	ND	ND	---	---	---	---	ND	ND	---	---	---	---	---	---	0.08	0.1
	January-2023	ND	---	---	---	---	---	---	ND	ND	---	---	---	---	ND	---	---	---	---	---	---	---	---	0.04	0.05
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.00199**	---	---	---	---	---	---	0.00085	0.001
	March-2023	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	0.04	0.05
	April-2023	---	---	---	---	---	---	---	**0.00189**	---	**0.00185**	---	---	---	---	---	---	---	---	---	---	---	---	0.00085	0.001
	May-2023	ND	---	---	---	---	---	---	ND	**0.00569**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.00425	0.005
	June-2023	---	---	---	---	---	---	---	---	ND	---	ND	---	ND	---	---	---	---	---	---	---	---	---	0.00425	0.005
	July-2023	**0.00101**	---	---	---	---	---	**0.00331**	---	---	---	---	---	---	---	---	---	**0.00116**	---	---	---	**0.00251**	ND	0.00085	0.001
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.00425	0.005
		---	---	---	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	0.0085	0.01
	September-2023	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.0085	0.01
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.00186**	---	**0.0044**	---	---	---	0.00085	0.001
		---	---	---	---	---	**0.00332**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0017	0.002
	November-2023	ND	---	**0.00425**	**0.00314**	---	**0.00315**	---	---	ND	---	---	ND	---	---	---	---	ND	---	**0.0032**	---	---	ND	0.003	0.003
	December-2023	---	---	**0.00785**	---	---	---	---	---	---	---	---	---	---	---	---	**0.00253**	---	---	---	---	---	---	0.0015	0.0015
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.00215**	---	---	---	---	---	0.0017	0.002
	January-2024	---	ND	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.00425	0.005
	February-2024	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.00571**	---	**0.00651**	---	---	0.00425	0.005
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.0017	0.002
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.00627**	---	---	0.00425	0.005
	April-2024	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	**0.000929 J**	---	---	---	---	---	0.00085	0.001
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	0.0085	0.01
	May-2024	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	ND	ND	ND	---	---	ND	0.0085	0.01
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	ND	---	---	---	ND	0.0085	0.01
	July-2024	---	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	0.00425	0.005
Silver	November-2022	---	---	---	---	---	---	---	---	ND	---	ND	---	---	ND	---	---	---	---	---	---	---	---	0.01	0.02
	December-2022	ND	---	**0.0187 J**	---	---	---	ND	---	ND	ND	---	---	---	---	ND	ND	---	---	---	---	---	---	0.01	0.02
	January-2023	ND	---	---	---	---	---	---	ND	ND	---	---	---	---	ND	---	---	---	---	---	---	---	---	0.005	0.01
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	0.00006	0.001
	March-2023	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	0.005	0.01
	April-2023	---	---	---	---	---	---	---	ND	---	**0.00011 J**	---	---	---	---	---	---	---	---	---	---	---	---	0.00006	0.001
	May-2023	ND	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0003	0.005
	June-2023	---	---	---	---	---	---	---	---	ND	---	ND	---	ND	---	---	---	---	---	---	---	---	---	0.0003	0.005
	July-2023	ND	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	ND	---	---	---	ND	ND	0.00006	0.001
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.0003	0.005
		---	---	---	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	0.0006	0.01
	September-2023	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.0006	0.01
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	ND	---	---	---	0.00006	0.001
		---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.00012	0.002
	November-2023	ND	---	ND	ND	---	ND	---	---	ND	---	---	ND	---	---	---	---	ND	---	ND	---	---	ND	0.0006	0.01
	December-2023	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	0.00025	0.001
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	0.00012	0.002
	January-2024	---	ND	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.0003	0.005
	February-2024	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	ND	---	---	0.0003	0.005
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	0.00012	0.002
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	0.0003	0.005
	April-2024	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	ND	---	---	---	---	---	0.00006	0.001
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	0.0004	0.001
	May-2024	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	ND	ND	ND	---	---	ND	0.0006	0.01
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	ND	---	---	---	ND	0.0006	0.01
	July-2024	---	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	0.0003	0.0005

Historical LFG-EW Leachate Monitoring Results Summary

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Zinc	November-2022	---	---	---	---	---	---	---	---	ND	---	**0.032**	---	---	**0.694**	---	---	---	---	---	---	---	---	0.02	0.02
	December-2022	**0.208**	---	**29.7**	---	---	---	**0.162**	---	**0.0686**	**0.75**	---	---	---	---	**0.364**	**0.286**	---	---	---	---	---	---	0.02	0.02
	January-2023	**0.133**	---	---	---	---	---	---	**0.15**	**0.074**	---	---	---	---	**0.0752**	---	---	---	---	---	---	---	---	0.01	0.01
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0851**	---	---	---	---	---	---	0.0025	0.005
	March-2023	---	---	---	---	---	---	---	**0.0689**	**0.0538**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.01	0.01
	April-2023	---	---	---	---	---	---	---	**0.0539**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0025	0.005
		---	---	---	---	---	---	---	---	---	**0.414**	---	---	---	---	---	---	---	---	---	---	---	---	0.025	0.05
	May-2023	**0.079**	---	---	---	---	---	---	**0.0635**	**0.0519**	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0125	0.025
	June-2023	---	---	---	---	---	---	---	---	**0.0538**	---	**0.0253**	---	**0.945**	---	---	---	---	---	---	---	---	---	0.0125	0.025
	July-2023	**0.0488**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0714**	---	---	---	**0.354**	**0.0782**	0.0025	0.005
		---	---	---	---	---	---	**2.03**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0125	0.025
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.112**	0.0125	0.025
		---	---	---	---	---	---	**1.71**	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.914**	---	0.025	0.05
		---	---	---	---	**5.92**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.05	0.1
	September-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0788**	---	---	---	---	---	0.025	0.05
		---	---	**45**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.25	0.5
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0622**	---	---	---	---	---	0.0025	0.005
		---	---	---	---	---	**0.203**	---	---	---	---	---	---	---	---	---	---	---	---	**633**	---	---	---	0.005	0.01
	November-2023	**0.0471 J**	---	---	**0.0534**	---	**0.74**	---	---	**0.053**	---	---	**0.0618**	---	---	---	---	**0.0722**	---	**0.845**	---	---	**0.0313 J**	0.025	0.05
		---	---	**30.4**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.25	0.5
	December-2023	---	---	**52.7**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.25	0.5
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.061**	---	---	---	---	---	0.005	0.01
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0462**	---	---	---	---	---	---	0.025	0.025
	January-2024	---	**0.117**	---	---	---	---	---	---	**0.0974**	---	---	---	---	---	---	---	---	---	---	---	---	**0.0261**	0.0125	0.025
	February-2024	---	**0.0879**	---	**0.0554**	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.475**	---	**0.809**	---	---	0.0125	0.025
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0342**	0.005	0.01
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2.09**	---	---	0.0125	0.025
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**0.0565**	---	---	---	---	**0.0539**	---	---	---	---	---	0.0025	0.005
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0394**	---	---	---	---	---	---	0.02	0.02
		---	---	**24.7**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.25	0.5
	May-2024	---	---	---	---	---	---	---	---	**0.165**	---	---	---	---	---	---	---	**0.0568**	**1.3**	**1.43**	---	---	**0.0812**	0.025	0.05
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0505**	**0.498**	---	---	---	ND	0.025	0.05
	July-2024	---	---	---	---	---	---	---	---	**0.104**	**0.0451**	---	---	---	---	---	---	---	---	---	---	---	---	0.0125	0.025

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
VOLATILE FATTY ACIDS (mg/L)																									
Acetic Acid	November-2022	---	---	---	---	---	---	---	---	---	---	**1600**	---	---	---	---	---	---	---	---	---	---	---	25	100
		---	---	---	---	---	---	---	---	**3500**	---	---	---	---	**150 J**	---	---	---	---	---	---	---	---	62	250
	December-2022	**1800**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	62	250
	January-2023	ND	---	---	---	---	---	---	ND	**4400**	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	500
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	500
	March-2023	---	---	---	---	---	---	---	ND	**640**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	500
	April-2023	---	---	---	---	---	---	---	**1200**	---	**520**	---	---	---	---	---	---	---	---	---	---	---	---	370	500
	May-2023	**990**	---	---	---	---	---	---	**1800**	**3000**	---	---	---	---	---	---	---	---	---	---	---	---	---	370	500
	June-2023	---	---	---	---	---	---	---	---	**5900**	---	**4100**	---	**5000**	---	---	---	---	---	---	---	---	---	750	1000
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	150	200
		ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	370	500
		---	---	---	---	---	---	**6100**	---	---	---	---	---	---	---	---	---	---	---	---	---	**750**	---	750	1000
	August-2023	---	---	---	---	**3300**	---	**5300**	---	---	---	---	---	---	---	---	---	---	---	---	---	**4200**	ND	---	500
	September-2023	---	---	**7400**	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	370	500
	October-2023	---	---	---	---	---	**3200**	---	---	---	---	---	---	---	---	---	---	**720**	---	**4100**	---	---	---	370	500
	November-2023	ND	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	ND	---	---	---	---	**4160**	250	500
		---	---	---	**4950**	---	**6650**	---	---	**5350**	---	---	---	---	---	---	---	---	---	**7300**	---	---	---	500	1000
		---	---	**9900**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1000	2000
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**660**	---	---	---	---	---	---	---	100
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	250
		---	---	**11200**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1000
	January-2024	---	**4410**	---	---	---	---	---	---	**5290**	---	---	---	---	---	---	---	---	---	---	---	---	**3080**	---	250
	February-2024	---	**3130**	---	**3530**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	250
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**3530**	---	**6770**	---	---	---	500
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2700**	---	200
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**46000**	---	---	---	1000
	April-2024	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	ND	---	---	---	---	---	---	100
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1670**	---	---	---	---	---	---	---	250
		---	---	**9170**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1250
	May-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	**4370**	---	---	---	**221**	---	250
		---	---	---	---	---	---	---	---	**4950**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	500
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**6530**	---	---	---	---	1250
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	100
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**3890**	---	---	---	**4450**	---	500
	July-2024	---	---	---	---	---	---	---	---	**6280**	**6180**	---	---	---	---	---	---	---	---	---	---	---	---	---	1250

Historical LFG-EW Leachate Monitoring Results Summary

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Butyric Acid	November-2022	---	---	---	---	---	---	---	---	---	---	**430**	---	---	---	---	---	---	---	---	---	---	---	12	100
		---	---	---	---	---	---	---	---	**830**	---	---	---	---	ND	---	---	---	---	---	---	---	---	29	250
	December-2022	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	29	250
	January-2023	ND	---	---	---	---	---	---	ND	**1800**	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	500
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	500
	March-2023	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	500
	April-2023	---	---	---	---	---	---	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	330	500
	May-2023	ND	---	---	---	---	---	---	ND	**1200**	---	---	---	---	---	---	---	---	---	---	---	---	---	330	500
	June-2023	---	---	---	---	---	---	---	---	**2500**	---	**1500**	---	**2900**	---	---	---	---	---	---	---	---	---	650	1000
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	130	200
		ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	330	500
		---	---	---	---	---	---	**2800**	---	---	---	---	---	---	---	---	---	---	---	---	---	**650**	---	650	1000
	August-2023	---	---	---	---	**1400**	---	**1700**	---	---	---	---	---	---	---	---	---	---	---	---	---	**1600**	ND	---	500
	September-2023	---	---	**3100**	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	330	500
	October-2023	---	---	---	---	---	**1200**	---	---	---	---	---	---	---	---	---	---	ND	---	**2000**	---	---	---	330	500
	November-2023	ND	---	---	**1670**	---	**1760**	---	---	**1370**	---	---	ND	---	---	---	---	ND	---	**2730**	---	---	**740**	250	500
		---	---	**3420**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	500	1000
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**336**	---	---	---	---	---	---	---	100
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	250
		---	---	**3390**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1000
	January-2024	---	**813**	---	---	---	---	---	---	**1230**	---	---	---	---	---	---	---	---	---	---	---	---	**594**	---	250
	February-2024	---	**583**	---	**1170**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	250
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1180**	---	**2980**	---	---	---	500
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**500**	---	20
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2100**	---	---	---	200
	April-2024	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	ND	---	---	---	---	---	---	100
		---	---	**3120**	---	---	---	---	---	---	---	---	---	---	---	---	**444**	---	---	---	---	---	---	---	250
	May-2024	---	---	---	---	---	---	---	---	**1190**	---	---	---	---	---	---	---	ND	**984**	**2370**	---	---	**448**	---	250
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	**1190**	---	---	---	**1030**	---	100
	July-2024	---	---	---	---	---	---	---	---	**2400**	**2360**	---	---	---	---	---	---	---	---	---	---	---	---	---	250
Lactic Acid	November-2022	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	11	100
		---	---	---	---	---	---	---	---	ND	---	---	---	---	ND	---	---	---	---	---	---	---	---	27	250
	December-2022	**90 J**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	27	250
	November-2023	ND	---	---	**968**	---	**1800**	---	---	**969**	---	---	ND	---	---	---	---	ND	---	**1170**	---	---	**324**	250	500
		---	---	**6030**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	500	1000
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	100
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	250
		---	---	**9050**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1000
	January-2024	---	**629**	---	---	---	---	---	---	**979**	---	---	---	---	---	---	---	---	---	---	---	---	**256**	---	250
	February-2024	---	**334**	---	**180**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	250
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**756**	---	**1650**	---	---	---	500
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	20
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	200
	April-2024	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	ND	---	---	---	---	---	---	100
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	250
		---	---	**5120**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1250
	May-2024	---	---	---	---	---	---	---	---	**1160**	---	---	---	---	---	---	---	ND	**1170**	**1730**	---	---	ND	---	250
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	**706**	---	---	---	**246**	---	100
	July-2024	---	---	---	---	---	---	---	---	**1220**	**1210**	---	---	---	---	---	---	---	---	---	---	---	---	---	250

Historical LFG-EW Leachate Monitoring Results Summary

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Propionic Acid	November-2022	---	---	---	---	---	---	---	---	---	---	**620**	---	---	---	---	---	---	---	---	---	---	---	11	100
		---	---	---	---	---	---	---	---	**1600**	---	---	---	---	**73 J**	---	---	---	---	---	---	---	---	27	250
	December-2022	**640**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	27	250
	January-2023	ND	---	---	---	---	---	---	ND	**2000**	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	500
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	500
	March-2023	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	500
	April-2023	---	---	---	---	---	---	---	**600**	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	340	500
	May-2023	**520**	---	---	---	---	---	---	**800**	**1400**	---	---	---	---	---	---	---	---	---	---	---	---	---	340	500
	June-2023	---	---	---	---	---	---	---	---	**2900**	---	**2000**	---	**2900**	---	---	---	---	---	---	---	---	---	680	1000
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	140	200
		ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	340	500
		---	---	---	---	---	---	**3100**	---	---	---	---	---	---	---	---	---	---	---	---	---	**680**	---	680	1000
	August-2023	---	---	---	---	**1200**	---	**2000**	---	---	---	---	---	---	---	---	---	---	---	---	---	**1900**	ND	---	500
	September-2023	---	---	**1800**	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	340	500
	October-2023	---	---	---	---	---	**1300**	---	---	---	---	---	---	---	---	---	---	ND	---	**2000**	---	---	---	340	500
	November-2023	ND	---	---	**2170**	---	**2310**	---	---	**2080**	---	---	**387**	---	---	---	---	ND	---	**3350**	---	---	**1420**	250	500
		---	---	**2580**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	500	1000
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**996**	---	---	---	---	---	---	---	100
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	250
		---	---	**2280**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1000
	January-2024	---	**1680**	---	---	---	---	---	---	**1970**	---	---	---	---	---	---	---	---	---	---	---	---	**1030**	---	250
	February-2024	---	**1210**	---	**1510**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	250
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1980**	---	**2900**	---	---	---	500
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**570**	---	20
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2100**	---	---	---	200
	April-2024	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	ND	---	---	---	---	---	---	100
		---	---	**2300**	---	---	---	---	---	---	---	---	---	---	---	---	**1150**	---	---	---	---	---	---	---	250
	May-2024	---	---	---	---	---	---	---	---	**1730**	---	---	---	---	---	---	---	ND	**1640**	**2770**	---	---	**647**	---	250
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	**1870**	---	---	---	**1400**	---	100
	July-2024	---	---	---	---	---	---	---	---	**2500**	**2470**	---	---	---	---	---	---	---	---	---	---	---	---	---	250
Pyruvic Acid	November-2022	---	---	---	---	---	---	---	---	---	---	**46 J**	---	---	---	---	---	---	---	---	---	---	---	12	100
		---	---	---	---	---	---	---	---	**98 J**	---	---	---	---	ND	---	---	---	---	---	---	---	---	30	250
	December-2022	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	30	250
	November-2023	ND	---	---	ND	---	ND	---	---	ND	---	---	ND	---	---	---	---	ND	---	ND	---	---	ND	250	500
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	500	1000
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	100
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	250
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1000
	January-2024	---	ND	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	250
	February-2024	---	ND	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	250
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	ND	---	---	---	500
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**130**	---	20
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**460**	---	---	---	200
	April-2024	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	ND	---	---	---	---	---	---	100
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	250
	May-2024	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	ND	ND	ND	---	---	ND	---	250
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	**113**	---	---	---	ND	---	100
	July-2024	---	---	---	---	---	---	---	---	ND	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	250

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
VOLATILE ORGANIC COMPOUNDS (ug/L)																									
2-Butanone (MEK)	November-2022	---	---	---	---	---	---	---	---	**3510**	---	---	---	---	**1140**	---	---	---	---	---	---	---	---	30	100
		---	---	---	---	---	---	---	---	---	---	**15600**	---	---	---	---	---	---	---	---	---	---	---	300	1000
	December-2022	**3140**	---	---	---	---	---	---	---	---	**3390**	---	---	---	---	---	---	---	---	---	---	---	---	30	100
		---	---	**26800**	---	---	---	**27700**	---	**5670**	---	---	---	---	---	**21700**	**7150**	---	---	---	---	---	---	300	1000
	January-2023	**3480**	---	---	---	---	---	---	**632**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	30	100
		---	---	---	---	---	---	---	---	**7840**	---	---	---	---	**5470**	---	---	---	---	---	---	---	---	300	1000
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**14400**	---	---	---	---	---	---	600	2000
	March-2023	---	---	---	---	---	---	---	**257**	**2770**	---	---	---	---	---	---	---	---	---	---	---	---	---	30	100
	April-2023	---	---	---	---	---	---	---	**3420**	---	**5530**	---	---	---	---	---	---	---	---	---	---	---	---	750	2500
	May-2023	**5360**	---	---	---	---	---	---	**5970**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	150	500
		---	---	---	---	---	---	---	---	**13600**	---	---	---	---	---	---	---	---	---	---	---	---	---	750	2500
	June-2023	---	---	---	---	---	---	---	---	**13800**	---	---	---	---	---	---	---	---	---	---	---	---	---	750	2500
		---	---	---	---	---	---	---	---	---	---	**20100**	---	**22600**	---	---	---	---	---	---	---	---	---	1500	5000
	July-2023	**5860**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	60	200
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**13500**	750	2500
		---	---	---	---	---	---	**38400**	---	---	---	---	---	---	---	---	---	---	---	---	---	**31600**	---	3000	10000
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**5950**	60	200
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**7350**	---	150	500
		---	---	---	---	---	---	**3000**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	750	2500
		---	---	---	---	**25600**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1500	5000
	September-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**439**	---	---	---	---	---	60	200
		---	---	**17500**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	750	2500
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**211**	---	---	---	---	---	15	50
		---	---	---	---	---	**17800**	---	---	---	---	---	---	---	---	---	---	---	---	**33400**	---	---	---	1500	5000
	November-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**78.8 J**	---	---	---	---	---	30	100
		---	---	---	---	---	**17700**	---	---	**10600**	---	---	---	---	---	---	---	---	---	---	---	---	---	150	500
		3990	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	300	1000
		---	---	**25700**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	750	2500
		---	---	---	**22300**	---	---	---	---	---	---	**17600**	---	---	---	---	---	---	---	**26700**	---	---	**31200**	1500	5000
	December-2023	---	---	**13700**	---	---	---	---	---	---	---	---	---	---	---	---	**7060**	ND	---	---	---	---	150	500
	January-2024	---	---	---	---	---	---	---	---	**10800**	---	---	---	---	---	---	---	---	---	---	---	---	---	150	500
		---	**34700**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**28900**	1500	5000
	February-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**12700**	---	---	---	---	150	500
		---	**30500**	---	**28900**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**17400**	---	---	1500	5000
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**11700**	---	---	150	500
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**25200**	1500	5000
	April-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	30	100
		---	---	---	---	---	---	---	---	---	---	---	**14600**	---	---	---	---	---	---	---	---	---	---	750	2500
		---	---	**37200**	---	---	---	---	---	---	---	---	---	---	---	---	**28700**	---	---	---	---	---	---	1500	5000
	May-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	60	200
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**7340**	---	---	---	**18600**	150	500
		---	---	---	---	---	---	---	---	**25700**	---	---	---	---	---	---	---	---	---	**32700**	---	---	---	1500	5000
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	60	200
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**13800**	---	---	---	---	150	500
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**33200**	15000	25000
	July-2024	---	---	---	---	---	---	---	---	**15600**	---	---	---	---	---	---	---	---	---	---	---	---	---	150	500
		---	---	---	---	---	---	---	---	---	**25400**	---	---	---	---	---	---	---	---	---	---	---	---	1500	5000

Historical LFG-EW Leachate Monitoring Results Summary

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Acetone	November-2022	---	---	---	---	---	---	---	---	---	---	---	---	---	**4420**	---	---	---	---	---	---	---	---	70	100
		---	---	---	---	---	---	---	---	**16100**	---	**38300**	---	---	---	---	---	---	---	---	---	---	---	700	1000
	December-2022	---	---	---	---	---	---	---	---	**15600**	**5170**	---	---	---	---	---	**9800**	---	---	---	---	---	---	700	1000
		8500	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1750	2500
		---	---	**53100**	---	---	---	**49900**	---	---	---	---	---	---	---	**45600**	---	---	---	---	---	---	---	3500	5000
	January-2023	---	---	---	---	---	---	---	**1530**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	70	100
		---	---	---	---	---	---	---	---	**22200**	---	---	---	---	**14000**	---	---	---	---	---	---	---	---	700	1000
		8130	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1750	2500
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**23900**	---	---	---	---	---	---	1400	2000
	March-2023	---	---	---	---	---	---	---	**375**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	70	100
		---	---	---	---	---	---	---	---	**6810**	---	---	---	---	---	---	---	---	---	---	---	---	---	700	1000
	April-2023	---	---	---	---	---	---	---	**8290**	---	**7560**	---	---	---	---	---	---	---	---	---	---	---	---	1750	2500
	May-2023	**10700**	---	---	---	---	---	---	**11700**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	350	500
		---	---	---	---	---	---	---	---	**29600**	---	---	---	---	---	---	---	---	---	---	---	---	---	1750	2500
	June-2023	---	---	---	---	---	---	---	---	**29600**	---	---	---	---	---	---	---	---	---	---	---	---	---	1750	2500
		---	---	---	---	---	---	---	---	---	---	**61800**	---	**50800**	---	---	---	---	---	---	---	---	---	3500	5000
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1180**	---	---	---	---	---	140	200
		9780	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	700	1000
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**11600**	1750	2500
		---	---	---	---	---	---	**77200**	---	---	---	---	---	---	---	---	---	---	---	---	---	**69700**	---	7000	10000
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**20900**	700	1000
		---	---	---	---	---	---	**18700**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1750	2500
		---	---	---	---	**72500**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**87700**	---	3500	5000
	September-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**188 J**	---	---	---	---	---	140	200
		---	---	**40100**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1750	2500
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**79**	---	---	---	---	---	35	50
		---	---	---	---	---	**66900**	---	---	---	---	---	---	---	---	---	---	---	---	**92900**	---	---	---	3500	5000
	November-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**104**	---	---	---	---	---	70	100
		5560	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	700	1000
		---	---	**64700**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1750	2500
		---	---	---	**43100**	---	**61100**	---	---	**36800**	---	---	**32800**	---	---	---	---	---	---	**53900**	---	---	**67800**	3500	5000
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	140	200
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	350	500
		---	---	**44300**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1750	2500
	January-2024	---	**96600**	---	---	---	---	---	---	**22800**	---	---	---	---	---	---	---	---	---	---	---	---	**47300**	3500	5000
	February-2024	---	**81600**	---	**70200**	---	---	---	---	---	---	---	---	---	---	---	---	---	**45600**	---	**63100**	---	---	3500	5000
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**50800**	---	**57600**	3500	5000
	April-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	70	100
		---	---	---	---	---	---	---	---	---	---	---	**24300**	---	---	---	---	---	---	---	---	---	---	1750	2500
		---	---	**95300**	---	---	---	---	---	---	---	---	---	---	---	---	**55200**	---	---	---	---	---	---	3500	5000
	May-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	140	200
		---	---	---	---	---	---	---	---	**63200**	---	---	---	---	---	---	---	---	**39000**	**91300**	---	---	**33300**	3500	5000
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	140	200
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**94400**	---	---	---	**84400**	35000	50000
	July-2024	---	---	---	---	---	---	---	---	**32200**	**52600**	---	---	---	---	---	---	---	---	---	---	---	---	3500	5000

Historical LFG-EW Leachate Monitoring Results Summary

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Benzene	November-2022	---	---	---	---	---	---	---	---	**7.4 J**	---	**2860**	---	---	**50.4**	---	---	---	---	---	---	---	---	4	10
	December-2022	**301**	---	**2960**	---	---	---	---	---	**6.3 J**	**622**	---	---	---	---	**1750**	**179**	---	---	---	---	---	---	4	10
		---	---	---	---	---	---	**6550**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	40	100
	January-2023	**240**	---	---	---	---	---	---	**28.7**	**1620**	---	---	---	---	**167**	---	---	---	---	---	---	---	---	4	10
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1370**	---	---	---	---	---	---	4	10
	March-2023	---	---	---	---	---	---	---	**1540**	**727**	---	---	---	---	---	---	---	---	---	---	---	---	---	4	10
	April-2023	---	---	---	---	---	---	---	**3740**	---	**320**	---	---	---	---	---	---	---	---	---	---	---	---	4	10
	May-2023	**814**	---	---	---	---	---	---	**4890**	**3370**	---	---	---	---	---	---	---	---	---	---	---	---	---	20	50
	June-2023	---	---	---	---	---	---	---	---	**2630**	---	---	---	---	---	---	---	---	---	---	---	---	---	8	20
		---	---	---	---	---	---	---	---	---	---	**1400**	---	**1590**	---	---	---	---	---	---	---	---	---	20	50
	July-2023	**824**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**80.8**	---	---	---	---	---	8	20
		---	---	---	---	---	---	**4050**	---	---	---	---	---	---	---	---	---	---	---	---	---	**1420**	---	20	50
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**11800**	100	250
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**379**	8	20
		---	---	---	---	**2320**	---	**168**	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	20	50
	September-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**193**	---	---	---	---	---	8	20
		---	---	**468**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	100	250
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**399**	---	---	---	---	---	2	5
		---	---	---	---	---	**576**	---	---	---	---	---	---	---	---	---	---	---	---	**3100**	---	---	---	20	50
	November-2023	**80.8**	---	---	---	---	---	---	---	---	---	---	**31.3**	---	---	---	---	---	---	---	---	---	---	2	5
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**323**	---	---	---	---	---	4	10
		---	---	---	**1070**	---	**654**	---	---	**982**	---	---	---	---	---	---	---	---	---	**1960**	---	---	**1190**	20	50
		---	---	**870**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	100	250
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**932**	---	---	---	---	---	---	8	20
		---	---	**1330**	---	---	---	---	---	---	---	---	---	---	---	---	---	**463**	---	---	---	---	---	20	50
	January-2024	---	**1410**	---	---	---	---	---	---	**662**	---	---	---	---	---	---	---	---	---	---	---	---	**2900**	20	50
	February-2024	---	**906**	---	**884**	---	---	---	---	---	---	---	---	---	---	---	---	---	**346**	---	**484**	---	---	20	50
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**226**	---	**8910**	20	50
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**52.1**	---	---	---	---	**13.8**	---	---	---	---	---	4	10
		---	---	**2040**	---	---	---	---	---	---	---	---	---	---	---	---	**3420**	---	---	---	---	---	---	20	50
	May-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**276**	---	---	---	---	---	8	20
		---	---	---	---	---	---	---	---	**3080**	---	---	---	---	---	---	---	---	**144**	**818**	---	---	**2990**	20	50
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**173**	---	---	---	---	---	8	20
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**210**	---	---	---	**2740**	20	50
	July-2024	---	---	---	---	---	---	---	---	**1410**	**1820**	---	---	---	---	---	---	---	---	---	---	---	---	20	50

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Ethylbenzene	December-2022	**67.3**	---	**172**	---	---	---	**287**	---	ND	**48.5**	---	---	---	---	**108**	**27.4**	---	---	---	---	---	---	4	10
	November-2022	---	---	---	---	---	---	---	---	ND	---	**194**	---	---	**16.2**	---	---	---	---	---	---	---	---	4	10
	January-2023	**65.1**	---	---	---	---	---	---	ND	**93.9**	---	---	---	---	**20.8**	---	---	---	---	---	---	---	---	4	10
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**151**	---	---	---	---	---	---	4	10
	March-2023	---	---	---	---	---	---	---	**131**	**71.5**	---	---	---	---	---	---	---	---	---	---	---	---	---	4	10
	April-2023	---	---	---	---	---	---	---	**186**	---	**43.4**	---	---	---	---	---	---	---	---	---	---	---	---	4	10
	May-2023	**124**	---	---	---	---	---	---	**276**	**144**	---	---	---	---	---	---	---	---	---	---	---	---	---	20	50
	June-2023	---	---	---	---	---	---	---	---	**104**	---	---	---	---	---	---	---	---	---	---	---	---	---	8	20
		---	---	---	---	---	---	---	---	---	---	**98**	---	**116**	---	---	---	---	---	---	---	---	---	20	50
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**666**	4	10
		128	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**82**	---	---	---	---	---	8	20
		---	---	---	---	---	---	**224**	---	---	---	---	---	---	---	---	---	---	---	---	---	**87.5**	---	20	50
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**16.8 J**	8	20
		---	---	---	---	**80**	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	20	50
	September-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**22.8**	---	---	---	---	---	8	20
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	100	250
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**34.8**	---	---	---	---	---	2	5
		---	---	---	---	---	**42.5 J**	---	---	---	---	---	---	---	---	---	---	---	---	**247**	---	---	---	20	50
	November-2023	**26.3**	---	---	---	---	---	---	---	---	---	---	**45.4**	---	---	---	---	---	---	---	---	---	---	2	5
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**26.9**	---	---	---	---	---	4	10
		---	---	---	**62**	---	**54**	---	---	**76.5**	---	---	---	---	---	---	---	---	---	**224**	---	---	**60.5**	20	50
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	100	250
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**46**	---	---	---	---	---	---	8	20
		---	---	**69.5**	---	---	---	---	---	---	---	---	---	---	---	---	---	**44 J**	---	---	---	---	---	20	50
	January-2024	---	**99**	---	---	---	---	---	---	**28 J**	---	---	---	---	---	---	---	---	---	---	---	---	**248**	20	50
	February-2024	---	**51**	---	**43 J**	---	---	---	---	---	---	---	---	---	---	---	---	---	**31 J**	---	---	**41 J**	---	20	50
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**25 J**	---	**710**	20	50
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**106**	---	---	---	---	ND	---	---	---	---	---	4	10
		---	---	**91.5**	---	---	---	---	---	---	---	---	---	---	---	---	**186**	---	---	---	---	---	---	20	50
	May-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**35.4**	---	---	---	---	---	8	20
		---	---	---	---	---	---	---	---	**146**	---	---	---	---	---	---	---	---	ND	**59**	---	---	**225**	20	50
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**23.6**	---	---	---	---	---	8	20
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	**142**	20	50
	July-2024	---	---	---	---	---	---	---	---	**76**	**118**	---	---	---	---	---	---	---	---	---	---	---	---	20	50

Historical LFG-EW Leachate Monitoring Results Summary

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Tetrahydrofuran	November-2022	---	---	---	---	---	---	---	---	**309**	---	---	---	---	**176**	---	---	---	---	---	---	---	---	100	100
		---	---	---	---	---	---	---	---	---	---	**8530**	---	---	---	---	---	---	---	---	---	---	---	1000	1000
	December-2022	**151**	---	---	---	---	---	---	---	**170**	**1120**	---	---	---	---	---	**663**	---	---	---	---	---	---	100	100
		---	---	**5210**	---	---	---	**19800**	---	---	---	---	---	---	---	**6130**	---	---	---	---	---	---	---	1000	1000
	January-2023	**183**	---	---	---	---	---	---	**566**	**1810**	---	---	---	---	**352**	---	---	---	---	---	---	---	---	100	100
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**3760**	---	---	---	---	---	---	2000	2000
	March-2023	---	---	---	---	---	---	---	**353**	**464**	---	---	---	---	---	---	---	---	---	---	---	---	---	100	100
	April-2023	---	---	---	---	---	---	---	**2410**	---	**4790**	---	---	---	---	---	---	---	---	---	---	---	---	100	100
	May-2023	ND	---	---	---	---	---	---	**2740**	**2380**	---	---	---	---	---	---	---	---	---	---	---	---	---	500	500
	June-2023	---	---	---	---	---	---	---	---	**2100**	---	---	---	---	---	---	---	---	---	---	---	---	---	200	200
		---	---	---	---	---	---	---	---	---	---	**7320**	---	**6670**	---	---	---	---	---	---	---	---	---	500	500
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2960**	100	100
		411	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**616**	---	---	---	---	---	200	200
		---	---	---	---	---	---	**8380**	---	---	---	---	---	---	---	---	---	---	---	---	---	**5310**	---	500	500
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2880**	200	200
		---	---	---	---	**7370**	---	**3210**	---	---	---	---	---	---	---	---	---	---	---	---	---	**1200**	---	500	500
	September-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**343**	---	---	---	---	---	200	200
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2500	2500
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**606**	---	---	---	---	---	50	50
		---	---	---	---	---	**4870**	---	---	---	---	---	---	---	---	---	---	---	---	**9140**	---	---	---	500	500
	November-2023	**199**	---	---	---	---	---	---	---	---	---	---	**325**	---	---	---	---	---	---	---	---	---	---	50	50
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**358**	---	---	---	---	---	100	100
		---	---	---	**4780**	---	**3320**	---	---	**785**	---	---	---	---	---	---	---	---	---	**5370**	---	---	**4600**	500	500
		---	---	**4620**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2500	2500
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**4240**	---	---	---	---	---	---	200	200
		---	---	**2620**	---	---	---	---	---	---	---	---	---	---	---	---	---	**502**	---	---	---	---	---	500	500
	January-2024	---	**5160**	---	---	---	---	---	---	**1040**	---	---	---	---	---	---	---	---	---	---	---	---	**10900**	500	500
	February-2024	---	**3500**	---	**4580**	---	---	---	---	---	---	---	---	---	---	---	---	---	**3520**	---	**4910**	---	---	500	500
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**3320**	---	**8710**	500	500
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**697**	---	---	---	---	ND	---	---	---	---	---	100	100
		---	---	**7290**	---	---	---	---	---	---	---	---	---	---	---	---	**7680**	---	---	---	---	---	---	500	500
	May-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**555**	---	---	---	---	---	200	200
		---	---	---	---	---	---	---	---	**2660**	---	---	---	---	---	---	---	---	**1880**	**5860**	---	---	**7640**	500	500
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**568**	---	---	---	---	---	200	200
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**3830**	---	---	---	**13000**	500	500
	July-2024	---	---	---	---	---	---	---	---	**1900**	**4020**	---	---	---	---	---	---	---	---	---	---	---	---	500	500

Historical LFG-EW Leachate Monitoring Results Summary

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	**Monitoring Event**	**Concentration**																							
Toluene	November-2022	---	---	---	---	---	---	---	---	ND	---	**214**	---	---	**32.8**	---	---	---	---	---	---	---	---	5	10
	December-2022	**122**	---	**175**	---	---	---	**195**	---	ND	**113**	---	---	---	---	**113**	**48.3**	---	---	---	---	---	---	5	10
	January-2023	**122**	---	---	---	---	---	---	**8 J**	**139**	---	---	---	---	**35.3**	---	---	---	---	---	---	---	---	5	10
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**224**	---	---	---	---	---	---	5	10
	March-2023	---	---	---	---	---	---	---	**182**	**98.1**	---	---	---	---	---	---	---	---	---	---	---	---	---	5	10
	April-2023	---	---	---	---	---	---	---	**303**	---	**94.4**	---	---	---	---	---	---	---	---	---	---	---	---	5	10
	May-2023	**258**	---	---	---	---	---	---	**371**	**239**	---	---	---	---	---	---	---	---	---	---	---	---	---	25	50
	June-2023	---	---	---	---	---	---	---	---	**165**	---	---	---	---	---	---	---	---	---	---	---	---	---	10	20
		---	---	---	---	---	---	---	---	---	---	**67**	---	**212**	---	---	---	---	---	---	---	---	---	25	50
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**965**	5	10
		248	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**107**	---	---	---	---	---	10	20
		---	---	---	---	---	---	**218**	---	---	---	---	---	---	---	---	---	---	---	---	---	**118**	---	25	50
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**36.6**	10	20
		---	---	---	---	**105**	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	25	50
	September-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**40.6**	---	---	---	---	---	10	20
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	125	250
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**59.2**	---	---	---	---	---	2.5	5
		---	---	---	---	---	**37 J**	---	---	---	---	---	---	---	---	---	---	---	---	**235**	---	---	---	25	50
	November-2023	**47.3**	---	---	---	---	---	---	---	---	---	---	**50.4**	---	---	---	---	---	---	---	---	---	---	2.5	5
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**48.7**	---	---	---	---	---	5	10
		---	---	---	**62.5**	---	**51.5**	---	---	**114**	---	---	---	---	---	---	---	---	---	**167**	---	---	**114**	25	50
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	125	250
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**73.2**	---	---	---	---	---	---	10	20
		---	---	**83.5**	---	---	---	---	---	---	---	---	---	---	---	---	---	**74.5**	---	---	---	---	---	25	50
	January-2024	---	**95.5**	---	---	---	---	---	---	**60**	---	---	---	---	---	---	---	---	---	---	---	---	**310**	25	50
	February-2024	---	**49 J**	---	**37 J**	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	**30.5 J**	---	---	25	50
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**73**	---	**916**	25	50
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**90.1**	---	---	---	---	ND	---	---	---	---	---	5	10
		---	---	**104**	---	---	---	---	---	---	---	---	---	---	---	---	**263**	---	---	---	---	---	---	25	50
	May-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**53.8**	---	---	---	---	---	10	20
		---	---	---	---	---	---	---	---	**180**	---	---	---	---	---	---	---	---	ND	**62.5**	---	---	**284**	25	50
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**34.6**	---	---	---	---	---	10	20
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	**228**	25	50
	July-2024	---	---	---	---	---	---	---	---	**97**	**125**	---	---	---	---	---	---	---	---	---	---	---	---	25	50

Historical LFG-EW Leachate Monitoring Results Summary

Well ID		EW-50	EW-51	EW-52	EW-53	EW-54	EW-55	EW-57	EW-58	EW-59	EW-60	EW-61	EW-62	EW-64	EW-65	EW-67	EW-68	EW-78	EW-85	EW-87	EW-88	EW-94	EW-98	LOD	LOQ
Parameter	Monitoring Event	Concentration																							
Xylenes, Total	November-2022	---	---	---	---	---	---	---	---	ND	---	**185**	---	---	**37.8**	---	---	---	---	---	---	---	---	10	30
	December-2022	**161**	---	**222**	---	---	---	**186**	---	ND	**112**	---	---	---	---	**197**	**59.9**	---	---	---	---	---	---	10	30
	January-2023	**138**	---	---	---	---	---	---	ND	**134**	---	---	---	---	**38.1**	---	---	---	---	---	---	---	---	10	30
	February-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**240**	---	---	---	---	---	---	10	30
	March-2023	---	---	---	---	---	---	---	**240**	**111**	---	---	---	---	---	---	---	---	---	---	---	---	---	10	30
	April-2023	---	---	---	---	---	---	---	**329**	---	**97.4**	---	---	---	---	---	---	---	---	---	---	---	---	10	30
	May-2023	**274**	---	---	---	---	---	---	**441**	**230**	---	---	---	---	---	---	---	---	---	---	---	---	---	50	150
	June-2023	---	---	---	---	---	---	---	---	**177**	---	---	---	---	---	---	---	---	---	---	---	---	---	20	60
		---	---	---	---	---	---	---	---	---	---	**92 J**	---	**136 J**	---	---	---	---	---	---	---	---	---	50	150
	July-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1130**	10	30
		257	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**74.4**	---	---	---	---	---	20	60
		---	---	---	---	---	---	**230**	---	---	---	---	---	---	---	---	---	---	---	---	---	**174**	---	50	150
	August-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**48.4 J**	20	60
		---	---	---	---	**180**	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	50	150
	September-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	20	60
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	250	750
	October-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**30.6**	---	---	---	---	---	5	15
		---	---	---	---	---	**134 J**	---	---	---	---	---	---	---	---	---	---	---	---	**328**	---	---	---	50	150
	November-2023	**56**	---	---	---	---	---	---	---	---	---	---	**48**	---	---	---	---	---	---	---	---	---	---	5	15
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**25.3 J**	---	---	---	---	---	10	30
		---	---	---	**116 J**	---	**104 J**	---	---	**132 J**	---	---	---	---	---	---	---	---	---	**306**	---	---	**138 J**	50	150
		---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	250	750
	December-2023	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**167**	---	---	---	---	---	---	20	60
		---	---	**224**	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	50	150
	January-2024	---	**142 J**	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	**534**	50	150
	February-2024	---	**63 J**	---	**59 J**	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	ND	---	---	50	150
	March-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	**1360**	50	150
	April-2024	---	---	---	---	---	---	---	---	---	---	---	**110**	---	---	---	---	ND	---	---	---	---	---	10	30
		---	---	**140 J**	---	---	---	---	---	---	---	---	---	---	---	---	**352**	---	---	---	---	---	---	50	150
	May-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**31.6 J**	---	---	---	---	---	20	60
		---	---	---	---	---	---	---	---	**223**	---	---	---	---	---	---	---	---	ND	**105 J**	---	---	**400**	50	150
	June-2024	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	20	60
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	**261**	50	150
	July-2024	---	---	---	---	---	---	---	---	**125 J**	**157**	---	---	---	---	---	---	---	---	---	---	---	---	50	150

--- = not applicable/available

J = Parameter was detected at a concentration greater than the laboratory's LOD, but less than the laboratory's LOQ. Concentration is considered estimated.

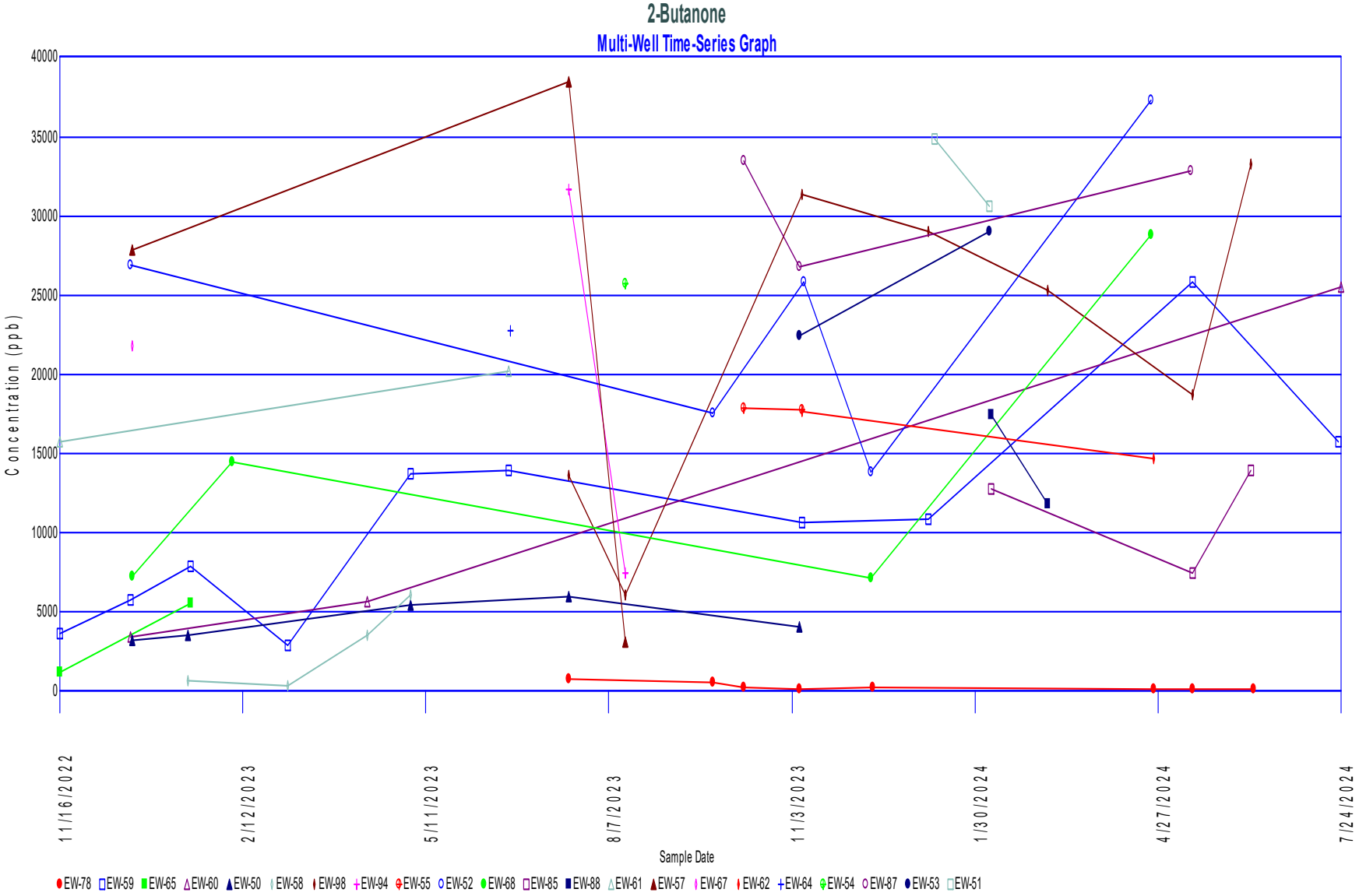
LOD = laboratory's Limit of Detection

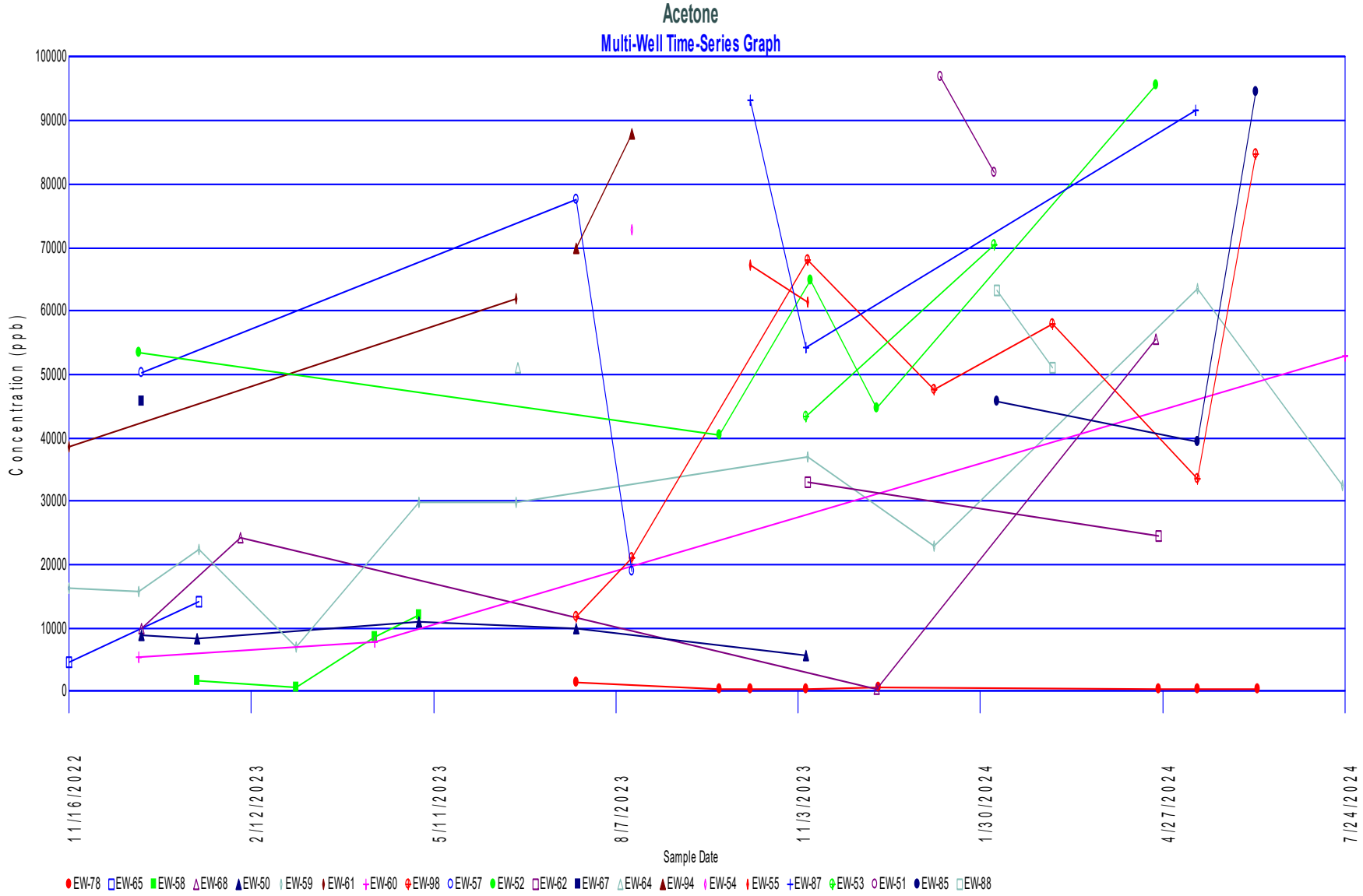
LOQ = laboratory's Limit of Quantitation

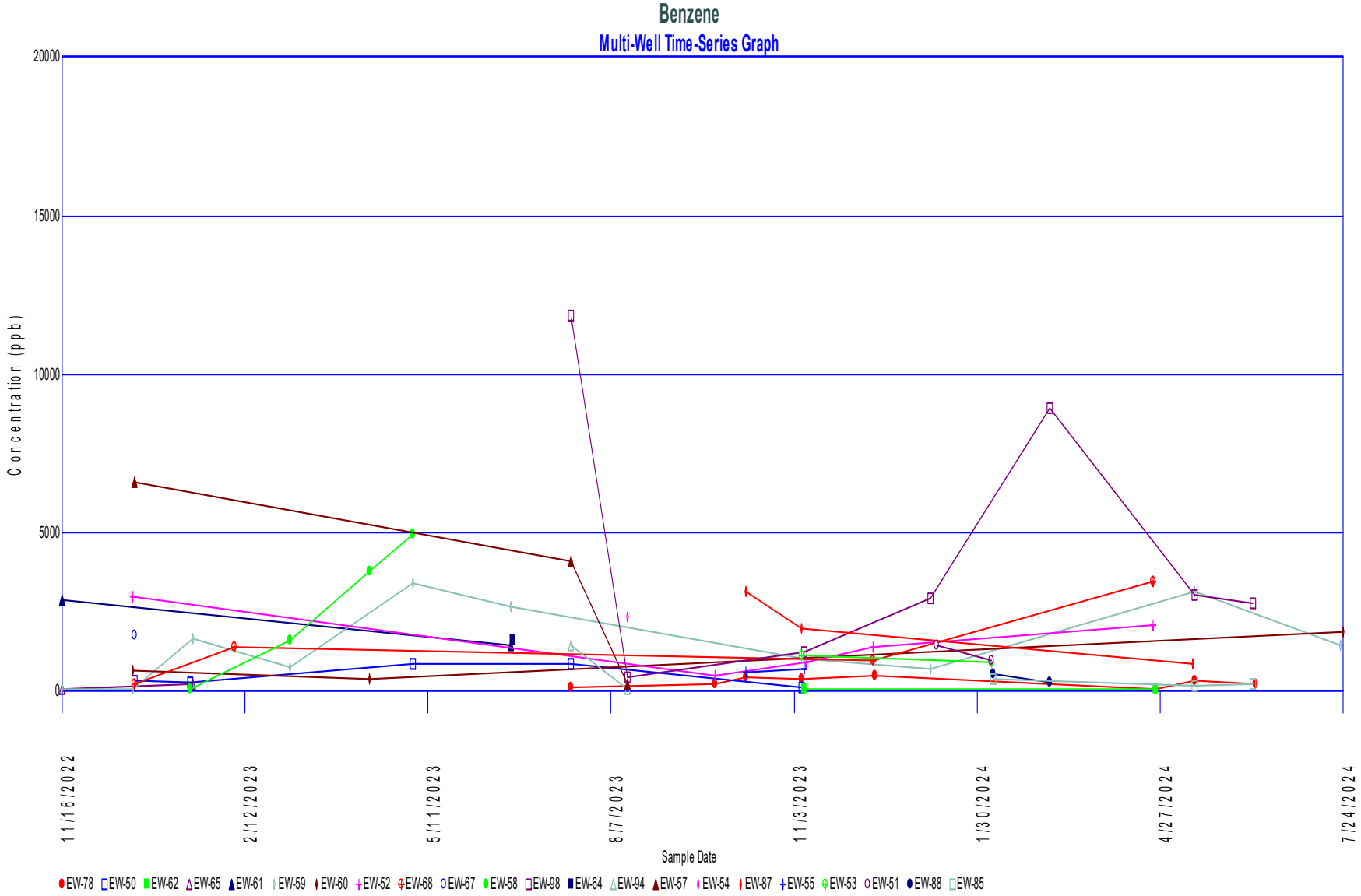
mg/L = milligrams per liter

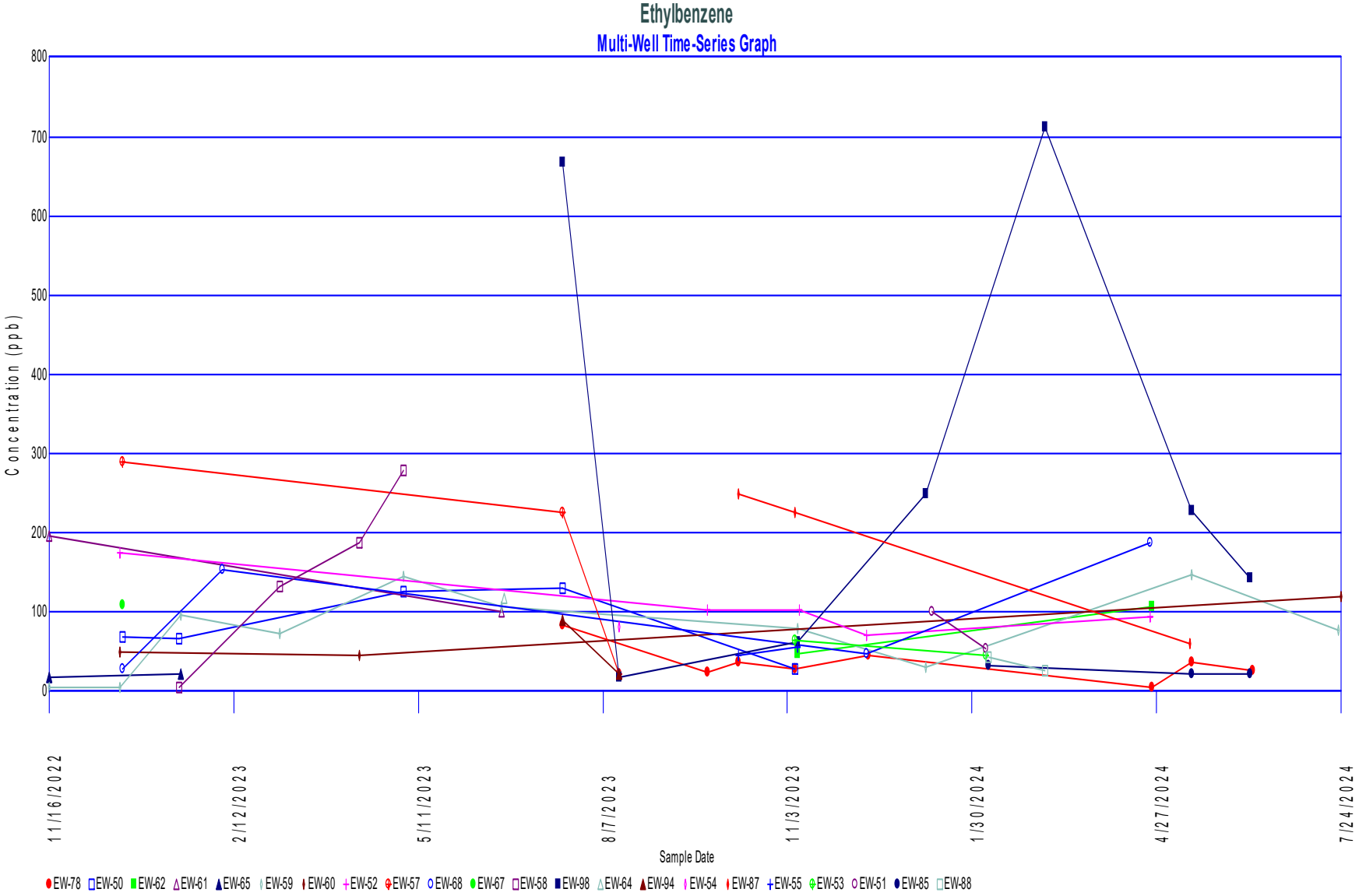
ND = Not Detected

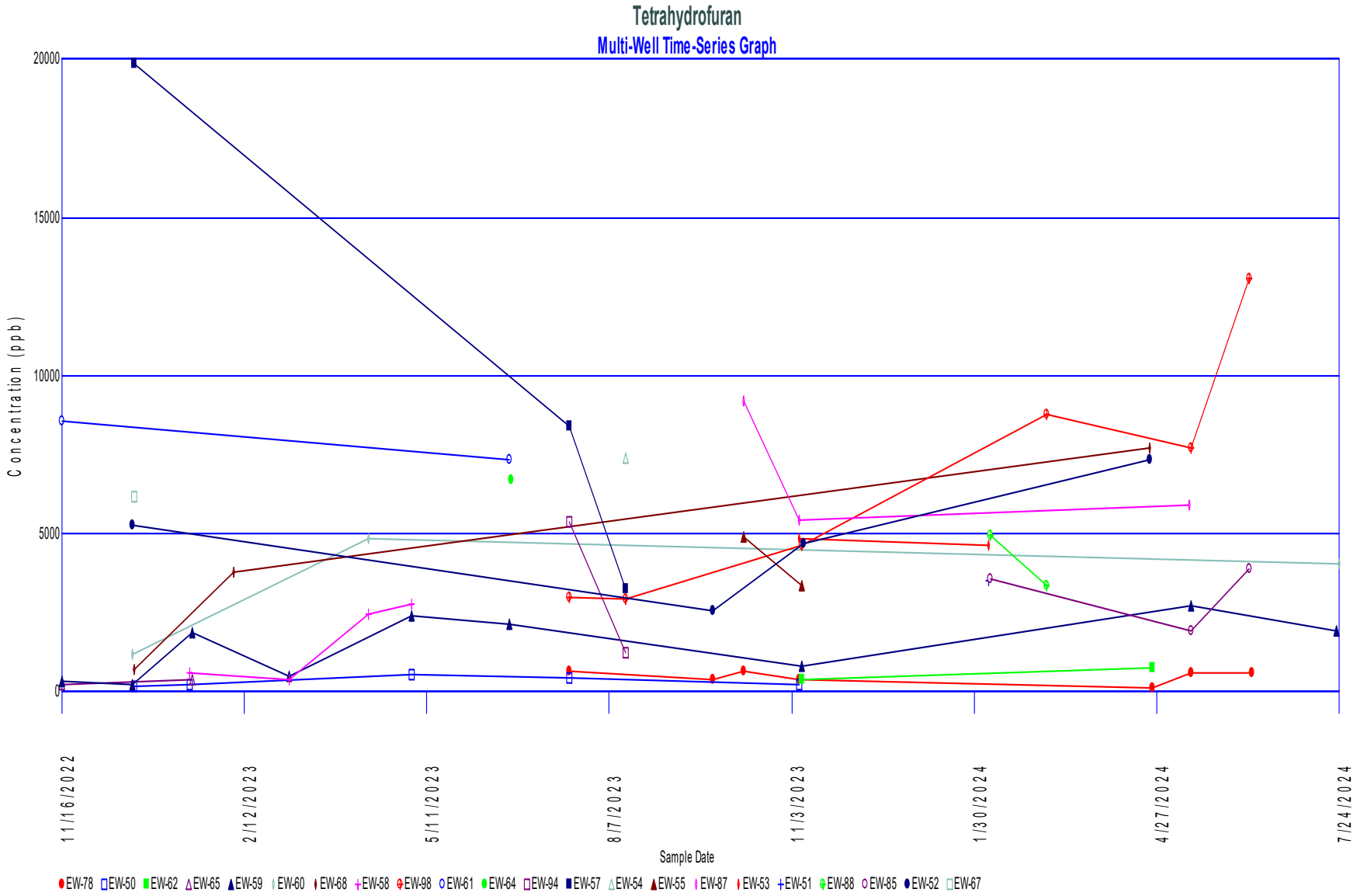
ug/L = micrograms per liter

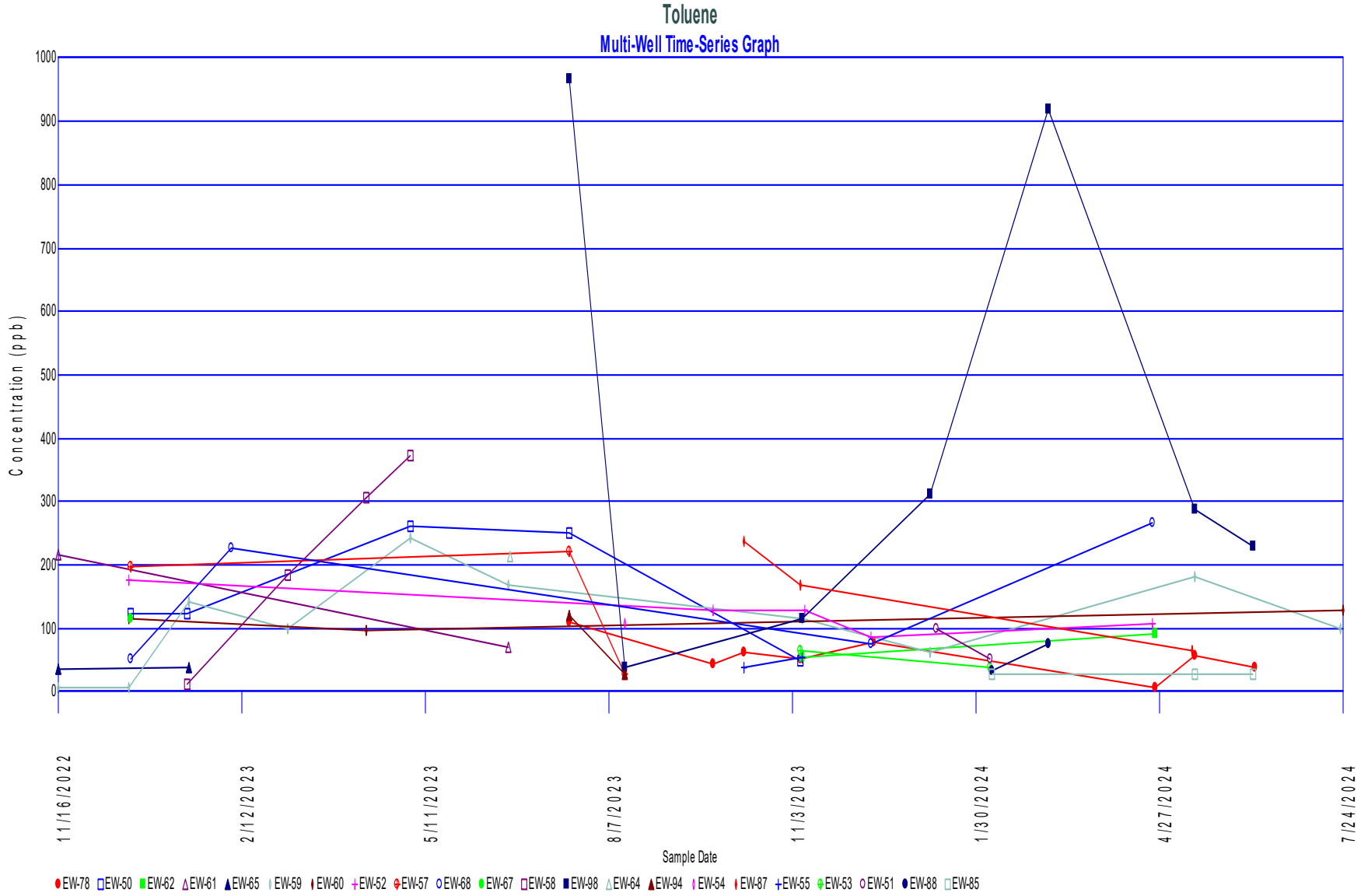

2-Butanone
Multi-Well Time-Series Graph
Concentration (ppb)
40000
35000
30000
25000
20000
15000
10000
5000
0
11/16/2022
2/12/2023
5/11/2023
8/7/2023
11/3/2023
1/30/2024
4/27/2024
7/24/2024
Sample Date
EW-78 EW-59 EW-65 EW-60 EW-50 EW-58 EW-98 EW-94 EW-55 EW-52 EW-68 EW-85 EW-88 EW-61 EW-57 EW-67 EW-62 EW-64 EW-54 EW-87 EW-53 EW-51

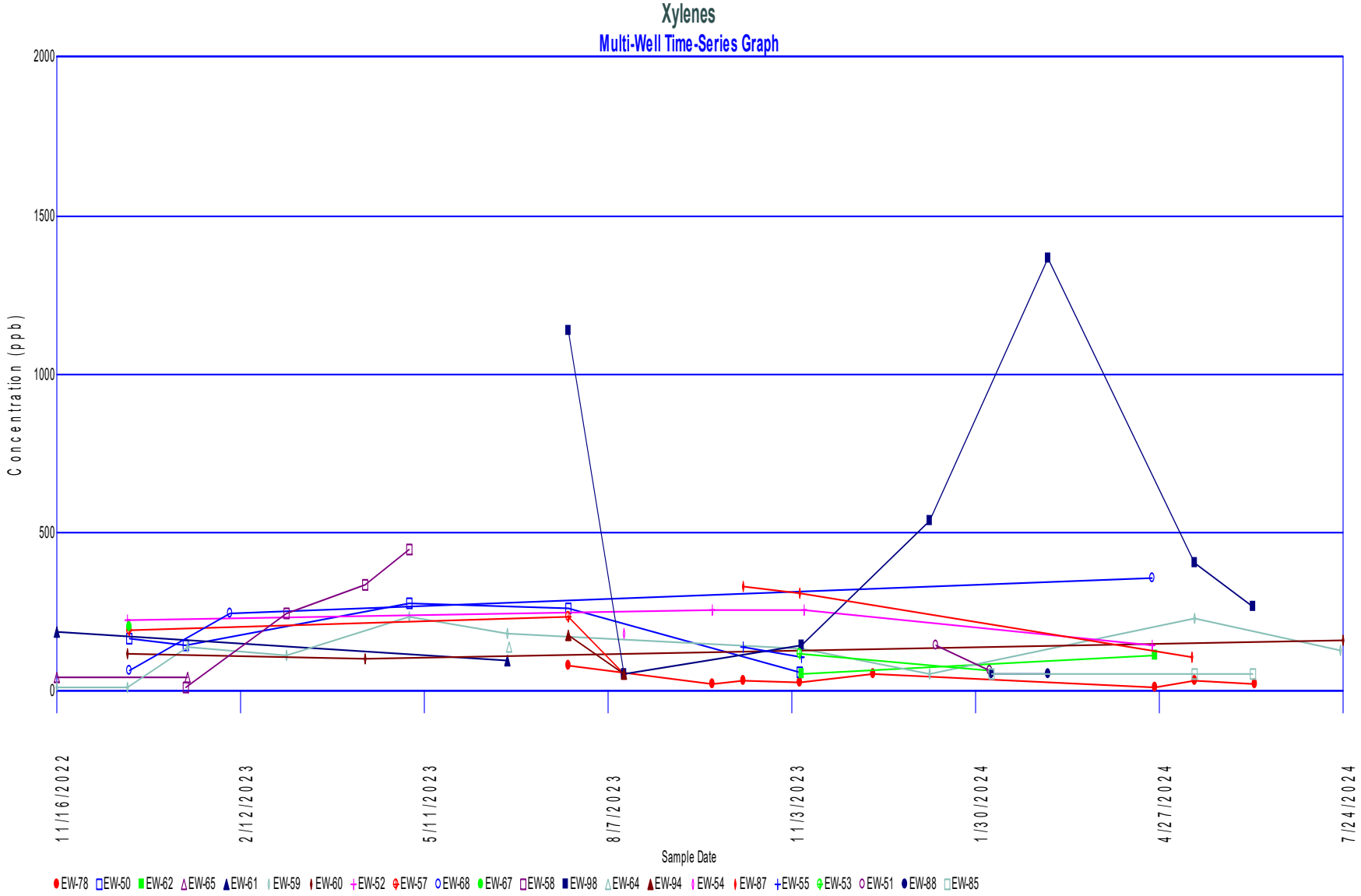

Acetone
Multi-Well Time-Series Graph
Concentration (ppb)
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
11/16/2022
2/12/2023
5/11/2023
8/7/2023
11/3/2023
1/30/2024
4/27/2024
7/24/2024
Sample Date
EW-78 EW-65 EW-58 EW-68 EW-50 EW-59 EW-61 EW-60 EW-98 EW-57 EW-52 EW-62 EW-67 EW-64 EW-94 EW-54 EW-55 EW-87 EW-53 EW-51 EW-85 EW-88


Benzene
Multi-Well Time-Series Graph
20000
15000
10000
5000
0
Concentration (ppb)
11/16/2022
2/12/2023
5/11/2023
8/7/2023
11/3/2023
1/30/2024
4/27/2024
7/24/2024
Sample Date
EW-78 EW-50 EW-62 EW-65 EW-61 EW-59 EW-60 EW-52 EW-68 EW-67 EW-58 EW-98 EW-64 EW-94 EW-57 EW-54 EW-87 EW-55 EW-53 EW-51 EW-88 EW-85


Ethylbenzene
Multi-Well Time-Series Graph
Concentration (ppb)
800
700
600
500
400
300
200
100
0
11/16/2022
2/12/2023
5/11/2023
8/7/2023
11/3/2023
1/30/2024
4/27/2024
7/24/2024
Sample Date
EW-78 EW-50 EW-62 EW-61 EW-65 EW-59 EW-60 EW-52 EW-57 EW-68 EW-67 EW-58 EW-98 EW-64 EW-94 EW-54 EW-87 EW-55 EW-53 EW-51 EW-85 EW-88


Tetrahydrofuran
Multi-Well Time-Series Graph
20000
15000
10000
5000
0
Concentration (ppb)
11/16/2022
2/12/2023
5/11/2023
8/7/2023
11/3/2023
1/30/2024
4/27/2024
7/24/2024
Sample Date
EW-78 EW-50 EW-62 EW-65 EW-59 EW-60 EW-68 EW-58 EW-98 EW-61 EW-64 EW-94 EW-57 EW-54 EW-55 EW-87 EW-53 EW-51 EW-88 EW-85 EW-52 EW-67


Toluene
Multi-Well Time-Series Graph
Concentration (ppb)
1000
900
800
700
600
500
400
300
200
100
0
11/16/2022
2/12/2023
5/11/2023
8/7/2023
11/3/2023
1/30/2024
4/27/2024
7/24/2024
Sample Date
EW-78 EW-50 EW-62 EW-61 EW-65 EW-59 EW-60 EW-52 EW-57 EW-68 EW-67 EW-58 EW-98 EW-64 EW-94 EW-54 EW-87 EW-55 EW-53 EW-51 EW-88 EW-85


Xylenes
Multi-Well Time-Series Graph
2000
1500
1000
500
0
Concentration (ppb)
11/16/2022
2/12/2023
5/11/2023
8/7/2023
11/3/2023
1/30/2024
4/27/2024
7/24/2024
Sample Date
EW-78 EW-50 EW-62 EW-65 EW-61 EW-59 EW-60 EW-52 EW-57 EW-68 EW-67 EW-58 EW-98 EW-64 EW-94 EW-54 EW-87 EW-55 EW-53 EW-51 EW-88 EW-85