



May 6, 2024

Mr. Mark Pugh, Project Manager
Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite #600
Portland, Oregon 97232

**Re: First Quarter 2024 GTS O&M Data Report
Milwaukie International Way Site (ECSI No. 2079)
Milwaukie, Oregon
2060.007.002/Task Order 065-23-007**

Dear Mr. Pugh:

This letter report presents the operations and maintenance (O&M) data and maintenance activities performed for the groundwater extraction and treatment system (GTS) at the Milwaukie International Way (MIW) site in Milwaukie, Oregon, for the first quarter of 2024. A summary of the flow rate data, analytical results, and maintenance activities performed for the quarter are included in this report. Figure 1 shows the locations of the treatment system, extraction wells, and extraction trench.

Haley & Aldrich, Inc., had the GTS offline for expansion activities from mid-January through mid-May 2022; however, there were several operational issues once the system was brought back online. The GTS went offline on December 19, 2022, and after further repairs was restarted on June 6, 2023. On July 1, 2023, GSI Water Solutions, Inc. (GSI), assumed responsibility from Haley & Aldrich for O&M of the GTS. The system has been operational since that time with the exception of an approximately one-month period in summer 2023 when two motor contactors in the control panel failed.

System Performance

GTS performance is described below and includes a summary of system flow rates, mass removal, and analytical results. The GTS sampling was performed on February 29, 2024, and included collecting water samples from the system effluent and extraction wells EXT-2R, EXT-3R, and EXT-4. Samples were not collected from the trench as the pump was not operational on the day of sampling.

System Flow Rates

Table 1 provides a summary of the total monthly and total average flow rates through the system for the past 5 years and is based on flow measurements from the flow totalizer on the effluent line from the equalization tank. Table 2 provides the average monthly individual flow rates from EXT-2R, EXT-3R, EXT-4, and the extraction trench since May 2022 when the upgraded system was initially started. Extraction rates for the previous extraction wells, EXT-1, EXT-2, EXT-3, and the extraction trench are also included in Table 2 from January 2019 through the GTS shut down in January 2022. The average monthly total effluent from the GTS from January 2019 through March 2024 is also included in Table 2. Individual flow rates are based on flow measurements from the individual flow meters installed in the four influent lines to the treatment system. The total system discharge rate is calculated using a flow totalizer installed in the treatment system effluent line.

In the first quarter of 2024, the average monthly flow rate for the GTS was 23,346 gallons per day (gpd) (Table 1), or 16.2 gallons per minute (gpm) (Table 2). In January 2024, the average flow rate was 25,414 gpd, or 17.65 gpm. In February 2024, the average flow rate was 23,071 gpd, or 16.02 gpm. In March 2024, the average flow rate was 21,552 gpd, or 14.97 gpm. The trench was offline for the entire first quarter of 2024. These extraction rates are declining compared to those recorded when the new extraction wells were first operational (May through December 2023) but are greater than those recorded before the GTS was expanded (i.e., prior to mid-January 2022). The average flow rates for the individual extraction wells for the first quarter of 2024 were as follows:

- EXT-2R: 8.37 gpm
- EXT-3R: 4.47 gpm
- EXT-4: 2.55 gpm
- Trench: 0 gpm

The target flow rate for each of the three extraction wells is 10 gpm. GTS expansion activities started in 2022 have not yet been completed by Haley & Aldrich, Inc. Once conveyance improvements are completed, extraction rates may increase. If the target flow rate of 10 gpm is not met, GSI will propose a scope of work to investigate the low extraction rates and upon concurrence from the Oregon Department of Environmental Quality (DEQ), we will implement the scope of work.

System Mass Removal

In addition to flow rates, Table 1 shows the influent groundwater concentrations and GTS mass removal rates for chlorinated volatile organic compounds (cVOCs). The mass removal is calculated using the system effluent sample concentrations and multiplying by the total effluent discharge volume recorded at the flow totalizer. In the first quarter of 2024, approximately 2.7 pounds of cVOCs were removed. Monthly mass removal rates include 0.97 pounds in January 2024, 0.85 pounds in February 2024, 0.82 pounds in March 2024. These mass removal rates are among the greatest removal volumes recorded since the new extraction wells became operational (May 2022) and are generally slightly greater than mass removal rates measured prior to GTS shut down in mid-January 2022.

Water Analytical Results

Extraction wells EXT-2R, EXT-3R, and EXT-4 were sampled on February 29, 2024, and analyzed for cVOCs using U.S. Environmental Protection Agency (EPA) Method 8260D. Pace Analytical National of Mt. Juliet, Tennessee, performed the chemical analyses. Table 3 shows the analytical results for the first quarter 2024 samples collected from the extraction wells along with results since March 2019. The analytical laboratory report and chain-of-custody documentation are provided as Attachment A. Analytical results for February 2024 are summarized below:

- In EXT-2R, the total cVOC concentration was 121 micrograms per liter ($\mu\text{g/L}$); this is within range of samples collected in 2022 and 2023 (63 to 150 $\mu\text{g/L}$). Trichloroethene (TCE) was detected at 60.2 $\mu\text{g/L}$ and is the cVOC with the highest concentration compared to the other cVOCs. *Cis*-1,2-dichloroethene (*cis*-1,2-DCE) concentration was detected at 58.6 $\mu\text{g/L}$. Tetrachloroethene (PCE), *trans*-1,2-dichloroethene (*trans*-1,2-DCE), 1,1-dichloroethene (1,1-DCE), and vinyl chloride (VC) were all below 1 $\mu\text{g/L}$. The distribution of cVOC concentrations in EXT-2R are similar to previous samples and similar to EXT-2 where TCE was the highest detected cVOC followed by *cis*-1,2-DCE and all other cVOCs generally below 1 $\mu\text{g/L}$.
- In EXT-3R, the total cVOC concentration was 92.1 $\mu\text{g/L}$. This is greater than the range of samples collected in 2022 and 2023 (0.17 to 65.3 $\mu\text{g/L}$). For this well, *cis*-1,2-DCE was detected at 64.9 $\mu\text{g/L}$ and is the cVOC with the highest concentration compared to the other cVOC constituents. The VC concentration was 24.4 $\mu\text{g/L}$, the greatest concentration recorded from this well. TCE concentration was detected at 1.74 $\mu\text{g/L}$ and other target cVOCs below the laboratory reporting limits. The distribution of cVOC concentrations in EXT-3R are similar to EXT-3 where *cis*-1,2-DCE is found at the highest concentration, followed by VC.

- In EXT-4, the total cVOC concentration was 270 µg/L, which is slightly lower than the range of samples collected in 2022 (304 to 357 µg/L) but within the range of samples collected in 2023 (261 to 289 µg/L). For this well, TCE and *cis*-1,2-DCE were detected at 143 µg/L and 123 µg/L, respectively. *Trans*-1,2-DCE was detected at 1.64 µg/L and VC at 2.34 µg/L while PCE and 1,1-DCE were detected less than their reporting limit of 10 µg/L.

A system effluent sample was collected on February 29, 2024, for the purpose of verifying compliance with the Clackamas County Service District (CCSD) discharge permit. The system effluent sample was analyzed for cVOCs by EPA Method 624 in accordance with the CCSD discharge permit requirements. Results showed detections of TCE (75.6 µg/L), *cis*-1,2-DCE (76.6 µg/L), and VC (5.77 µg/L). Other cVOCs were less than 1 µg/L or the laboratory's method reporting limits. Table 4 provides a summary of the analytical results for the GTS effluent sample.

The CCSD permit has a discharge limit for pH between 5.5 and 11.5. The pH of the system effluent sample was recorded in the field at the time of sampling as 7.57. The CCSD discharge permit specifies a total toxic organics (TTO) limit of 2.13 milligrams per liter (mg/L), which was based on the sum of the detected cVOC concentrations. The system effluent sample collected in February 2024 had a TTO concentration of 0.15 mg/L.

Operations and Maintenance

Maintenance activities are completed by A.Y.M. Maintenance, Inc. (AYM), of Happy Valley, Oregon. AYM conducts weekly site inspections to perform routine O&M. Cochran, Inc., of Tigard, Oregon, performed electrical repairs, as described below. Weekly O&M logs provided by AYM are included in Attachment B.

Routine Operation and Maintenance

Routine O&M includes weekly site visits by AYM to inspect and maintain the treatment system. Routine maintenance includes:

- Changing the sediment bag filters.
- Maintaining the sequestering agent addition system.
- Performing maintenance on the transfer pump (i.e., greasing).

Sequestering agent is added to the influent groundwater to reduce the tendency for dissolved iron in groundwater to oxidize and foul the lines and treatment system. Metering pumps are installed in each of the extraction well vaults to continuously add a small amount of the sequestering agent into the influent flow line. AYM checks and refills the sequestering agent in the vaults as needed.

Two sediment bag filters are installed after the influent transfer tank to trap most of the iron flocculate present in the groundwater before discharging to the sewer. AYM replaces these filters weekly to maintain good, consistent flow rates through the effluent line. Without frequent maintenance, the bag filters become clogged, causing pressure buildup and reduced flow, subsequently triggering a high-level alarm in the transfer tank. The bag filters have a 100-micron opening that allows for good flow through the system while remaining effective in filtering iron flocculates and reducing the number of system shutdowns.

Non-Routine Maintenance

AYM employees are connected to an automated system that calls their cell phones whenever a system alarm is set off. This automated system uses a telephone landline to communicate with cell phones. There were no system alarms during the first quarter of 2024.

On January 11, 2024, in anticipation of a winter storm, AYM installed heaters within the GTS building; however, once the winter storm began, power outages occurred throughout the City of Milwaukie. AYM

returned to the GTS on Saturday, January 13, 2024, to shut the GTS down and clear conveyance lines to prevent freezing and pipe breakage. Power was restored to the GTS on January 18, 2024.

During a site inspection on February 29, 2024, GSI staff identified a slow drip of water originating from a broken pipe between two decommissioned granular activated carbon (GAC) vessels. The water was identified to be residual water from when GAC system was operational. AYM replaced the broken pipe the same day.

GSI is working with AYM and Cochran to install a backup automated system that will call cell phones using a wireless modem that communicates via cell phone service. This wireless system also contains batteries that will allow the system to generate an alarm if power is lost to the system. The wireless system will provide redundancy to the original system and may be more reliable as the landline system ages (see below). DEQ activated the wireless system on March 19, 2024, and initial electrical connections were made by Cochran on March 21, 2024. Final wiring was completed on April 26, 2024, bringing the wireless automated system into operation.

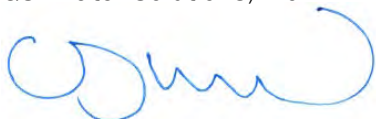
During a routine site inspection on August 16, 2023, AYM identified that the system was not operational. The system likely shut down due to a triggered alarm, although no alarms were reported. AYM noted that it appeared that the alarm system was frozen. The cause of the shutdown could not be determined. The GTS was restarted and has been operational since except for the planned shutdown during the winter storm. Although the alarm system has power, it could not be restarted or reprogrammed and will not make alarm calls reliably when tested. AYM is sourcing a replacement unit that will “plug-in” to the control panel.

In September 2023, it came to GSI’s attention that the EXT-2R and EXT-4 vaults still did not have power for sump pumps and sequestrant dosing pumps, an issue identified as early as August 2022. On October 17, 2023, AYM confirmed that there is no electrical current to any receptacles in the EXT-2R and EXT-4 vaults. Under subcontract to Haley & Aldrich, Cochran troubleshoot and fixed electrical issues on February 4, and March 21, 2024. GSI has not been provided with a list of repairs made to the GTS; however, during a site visit on February 22, 2024, AYM confirmed that electrical power to the EXT-2R and EXT-4 vaults was restored. AYM installed and connected the sequestrant and sump pumps in EXT-4 on February 22, 2024, and in EXT-2R on February 29, 2024. AYM replaced the sequestrant pump in EXT-4 on March 7, 2024, after the previous pump failed.

All work performed by GSI was completed in accordance with generally accepted professional practices related to the nature of the work accomplished in the same or similar localities, at the time the services were performed. This report is for the specific application to the referenced project and for the exclusive use of DEQ. No other warranty, express or implied, is made.

Sincerely,

GSI Water Solutions, Inc.



Christopher W. Martin, PE
Task Order Manager

GSI Water Solutions, Inc.



Richard D. Ernst, RG
Program Manager

Attachments:

- Table 1 – GTS Hydraulic Performance and Mass Removal
- Table 2 – Average Monthly Extraction Rates for Extraction Wells and Trench
- Table 3 – Analytical Results for Extraction Wells and Trench
- Table 4 – GTS Groundwater Analytical Results
- Figure 1 – Extraction Well Plan
- Attachment A – Analytical Laboratory Report and Chain of Custody
- Attachment B – Weekly O&M Logs

| Date | Influent Groundwater Concentrations ¹ | | | | Flow Summary | | Mass Removal Summary ¹ | | | | |
|--------|--|----------------------------|--------------|--------------------------|-------------------------|---------------------------------------|-----------------------------------|---------------------------|-------------|-----------------------------------|-----------------------------|
| | TCE (µg/L) | cis -1,2- DCE (µg/L) | VC (µg/L) | Total cVOCs (mg/L) | Monthly Flow (MG) | Average Flow (gpd) ² | TCE (lbs) | cis -1,2- DCE (lbs) | VC (lbs) | Total Monthly Mass (lbs) | Cumulative Mass (lbs) |
| Jan-19 | 187 | 75 | 29.6 | 0.29 | 0.352 | 10,057 | 0.55 | 0.22 | 0.087 | 0.86 | 698.77 |
| Feb-19 | 187 | 75 | 29.6 | 0.29 | 0.183 | 6,537 | 0.29 | 0.12 | 0.045 | 0.45 | 699.21 |
| Mar-19 | 187 | 75 | 30 | 0.29 | 0.343 | 11,065 | 0.53 | 0.22 | 0.08 | 0.84 | 700.05 |
| Apr-19 | 68 | 64 | 1.9 | 0.13 | 0.420 | 14,483 | 0.24 | 0.22 | 0.007 | 0.47 | 700.52 |
| May-19 | 68 | 64 | 1.9 | 0.13 | 0.512 | 14,629 | 0.29 | 0.27 | 0.008 | 0.57 | 701.09 |
| Jun-19 | 68 | 64 | 1.9 | 0.13 | 0.378 | 13,500 | 0.21 | 0.20 | 0.01 | 0.42 | 701.51 |
| Jul-19 | 124 | 82 | 2.4 | 0.21 | 0.362 | 12,929 | 0.37 | 0.25 | 0.007 | 0.63 | 702.14 |
| Aug-19 | 124 | 82 | 2.4 | 0.21 | 0.662 | 18,914 | 0.68 | 0.45 | 0.013 | 1.15 | 703.29 |
| Sep-19 | 124 | 82 | 2.4 | 0.21 | 0.535 | 19,107 | 0.55 | 0.37 | 0.01 | 0.93 | 704.22 |
| Oct-19 | 88 | 63 | 1.4 | 0.15 | 0.542 | 19,357 | 0.40 | 0.28 | 0.006 | 0.69 | 704.91 |
| Nov-19 | 88 | 63 | 1.4 | 0.15 | 0.664 | 18,971 | 0.49 | 0.35 | 0.008 | 0.84 | 705.75 |
| Dec-19 | 88 | 63 | 1.4 | 0.15 | 0.555 | 19,821 | 0.41 | 0.29 | 0.01 | 0.71 | 706.46 |
| Jan-20 | 80 | 64 | 2.0 | 0.15 | 0.745 | 21,286 | 0.50 | 0.40 | 0.013 | 0.91 | 707.37 |
| Feb-20 | 80 | 64 | 2.0 | 0.15 | 0.560 | 20,000 | 0.37 | 0.30 | 0.009 | 0.68 | 708.05 |
| Mar-20 | 80 | 64 | 2.0 | 0.15 | 0.530 | 18,929 | 0.35 | 0.28 | 0.01 | 0.64 | 708.69 |
| Apr-20 | 86 | 66 | 0.83 | 0.15 | 0.658 | 18,800 | 0.47 | 0.36 | 0.005 | 0.84 | 709.53 |
| May-20 | 86 | 66 | 0.83 | 0.15 | 0.512 | 18,286 | 0.37 | 0.28 | 0.004 | 0.65 | 710.19 |
| Jun-20 | 86 | 66 | 0.83 | 0.15 | 0.417 | 14,893 | 0.30 | 0.23 | 0.003 | 0.53 | 710.72 |
| Jul-20 | 127 | 82 | 1.1 | 0.21 | 0.619 | 17,686 | 0.66 | 0.42 | 0.006 | 1.09 | 711.80 |
| Aug-20 | 127 | 82 | 1.1 | 0.21 | 0.268 | 12,762 | 0.28 | 0.18 | 0.002 | 0.47 | 712.27 |
| Sep-20 | 127 | 82 | 1.1 | 0.21 | 0.580 | 16,571 | 0.61 | 0.40 | 0.005 | 1.0 | 713.29 |
| Oct-20 | 79 | 70 | 1.2 | 0.15 | 0.621 | 17,743 | 0.41 | 0.36 | 0.006 | 0.78 | 714.07 |
| Nov-20 | 79 | 70 | 1.2 | 0.15 | 0.455 | 16,250 | 0.30 | 0.27 | 0.005 | 0.57 | 714.64 |
| Dec-20 | 79 | 70 | 1.2 | 0.15 | 0.491 | 14,029 | 0.32 | 0.29 | 0.005 | 0.62 | 715.26 |
| Jan-21 | 85 | 74 | 4.0 | 0.16 | 0.476 | 17,000 | 0.34 | 0.29 | 0.016 | 0.65 | 715.90 |
| Feb-21 | 85 | 74 | 4.0 | 0.16 | 0.428 | 15,286 | 0.30 | 0.26 | 0.014 | 0.58 | 716.48 |
| Mar-21 | 85 | 74 | 4.0 | 0.16 | 0.482 | 16,621 | 0.34 | 0.30 | 0.02 | 0.66 | 717.14 |
| Apr-21 | 94 | 69 | 2.4 | 0.17 | 0.515 | 15,147 | 0.41 | 0.30 | 0.010 | 0.71 | 717.85 |
| May-21 | 94 | 69 | 2.4 | 0.17 | 0.374 | 13,357 | 0.29 | 0.21 | 0.008 | 0.52 | 718.37 |
| Jun-21 | 94 | 69 | 2.4 | 0.17 | 0.328 | 11,714 | 0.26 | 0.19 | 0.007 | 0.45 | 718.82 |
| Jul-21 | 113 | 86 | 2.2 | 0.20 | 0.330 | 9,706 | 0.31 | 0.24 | 0.006 | 0.55 | 719.37 |
| Aug-21 | 113 | 86 | 2.2 | 0.20 | 0.232 | 8,593 | 0.22 | 0.17 | 0.004 | 0.39 | 719.76 |
| Sep-21 | 113 | 86 | 2.2 | 0.20 | 0.242 | 8,345 | 0.23 | 0.17 | 0.004 | 0.41 | 720.17 |
| Oct-21 | 79 | 73 | 5.3 | 0.16 | 0.282 | 8,057 | 0.18 | 0.17 | 0.013 | 0.37 | 720.54 |
| Nov-21 | 79 | 73 | 5.3 | 0.16 | 0.215 | 7,963 | 0.14 | 0.13 | 0.010 | 0.28 | 720.82 |
| Dec-21 | 79 | 73 | 5.3 | 0.16 | 0.372 | 10,333 | 0.24 | 0.23 | 0.017 | 0.49 | 721.30 |

See notes on the next page.

| Date | Influent Groundwater Concentrations ¹ | | | | Flow Summary | | Mass Removal Summary ¹ | | | | |
|---|--|-----------------------------------|--------------|--------------------------|-------------------------|---------------------------------------|-----------------------------------|----------------------------------|-------------|-----------------------------------|-----------------------------|
| | TCE (µg/L) | <i>cis</i> -1,2- DCE (µg/L) | VC (µg/L) | Total cVOCs (mg/L) | Monthly Flow (MG) | Average Flow (gpd) ² | TCE (lbs) | <i>cis</i> -1,2- DCE (lbs) | VC (lbs) | Total Monthly Mass (lbs) | Cumulative Mass (lbs) |
| Jan-22 | 79 | 73 | 5.3 | 0.16 | 0.096 | 8,000 | 0.06 | 0.06 | 0.004 | 0.13 | 721.43 |
| Feb-22 | — | — | — | — | 0 | 0 | — | — | — | — | 721.43 |
| Mar-22 | — | — | — | — | 0 | 0 | — | — | — | — | 721.43 |
| Apr-22 | — | — | — | — | 0 | 0 | — | — | — | — | 721.43 |
| May-22 | 43.6 | 39.5 | ND (1.0) | 0.08 | 0.204 | 29,143 | 0.07 | 0.07 | 0.00 | 0.14 | 721.57 |
| Jun-22 | 72.4 | 65.7 | 3.7 | 0.142 | 0.925 | 26,429 | 0.56 | 0.51 | 0.028 | 1.09 | 722.66 |
| Jul-22 | 75.2 | 63.8 | 2.76 | 0.142 | 0.582 | 20,786 | 0.37 | 0.31 | 0.013 | 0.69 | 723.35 |
| Aug-22 | 59.8 | 54.3 | 4.45 | 0.119 | 0.624 | 22,286 | 0.31 | 0.28 | 0.023 | 0.62 | 723.97 |
| Sep-22 | 90.2 | 73.1 | 10.1 | 0.173 | 0.409 | 27,267 | 0.31 | 0.25 | 0.034 | 0.59 | 724.56 |
| Oct-22 | 91.0 | 71.1 | 0.70 | 0.163 | 0.281 | 25,545 | 0.21 | 0.17 | 0.002 | 0.38 | 724.94 |
| Nov-22 | 79.6 | 67.0 | 3.66 | 0.150 | 0.192 | 27,429 | 0.13 | 0.11 | 0.006 | 0.24 | 725.18 |
| Dec-22 | 79.6 | 67.0 | 3.66 | 0.150 | 0.607 | 26,391 | 0.40 | 0.34 | 0.019 | 0.76 | 725.94 |
| Jan-23 | — | — | — | — | 0 | 0 | — | — | — | — | 725.94 |
| Feb-23 | — | — | — | — | 0 | 0 | — | — | — | — | 725.94 |
| Mar-23 | — | — | — | — | 0 | 0 | — | — | — | — | 725.94 |
| Apr-23 | — | — | — | — | 0 | 0 | — | — | — | — | 725.94 |
| May-23 | — | — | — | — | 0 | 0 | — | — | — | — | 725.94 |
| Jun-23 | 20.0 | 21.9 | 0.347 | 0.04 | 0.567 | 25,773 | 0.09 | 0.10 | 0.002 | 0.20 | 726.14 |
| Jul-23 | 66.1 | 65.7 | 5.67 | 0.14 | 0.212 | 24,530 | 0.12 | 0.12 | 0.010 | 0.24 | 726.38 |
| Aug-23 | 66.1 | 65.7 | 5.67 | 0.14 | 0.517 | 27,147 | 0.29 | 0.28 | 0.024 | 0.59 | 726.98 |
| Sep-23 | 66.1 | 65.7 | 5.67 | 0.14 | 0.724 | 26,041 | 0.40 | 0.40 | 0.034 | 0.83 | 727.81 |
| Oct-23 | 54.3 | 50.7 | 2.98 | 0.11 | 0.695 | 25,714 | 0.31 | 0.29 | 0.017 | 0.63 | 728.43 |
| Nov-23 | 54.3 | 50.7 | 2.98 | 0.11 | 0.897 | 27,182 | 0.41 | 0.38 | 0.022 | 0.81 | 729.24 |
| Dec-23 | 54.3 | 50.7 | 2.98 | 0.11 | 0.715 | 26,481 | 0.32 | 0.30 | 0.018 | 0.64 | 729.88 |
| Jan-24 | 75.6 | 76.6 | 5.77 | 0.16 | 0.737 | 25,414 | 0.46 | 0.47 | 0.035 | 0.97 | 730.86 |
| Feb-24 | 75.6 | 76.6 | 5.77 | 0.16 | 0.646 | 23,071 | 0.41 | 0.41 | 0.031 | 0.85 | 731.71 |
| Mar-24 | 75.6 | 76.6 | 5.77 | 0.16 | 0.625 | 21,552 | 0.39 | 0.40 | 0.030 | 0.82 | 732.53 |
| Cumulative Flow Total (MG) | | | | | 132.76 | | TCE | <i>cis</i>-1,2- DCE | VC | | Total Mass |
| Estimated Mass Removed Since Startup (lbs) | | | | | | | 262 | 430 | 39 | | 733 |

Notes

¹ Mass removed from subsurface [lbs] = influent concentration [mg/L] * flow [MG] * 8.34 [constant].

² Monthly system flow recorded from Clackamas County Service District (CCSD) reports.

For months where no effluent sample is collected, mass removal is calculated using the effluent sample collected during the quarter multiplied by the discharge volume for the month.

Abbreviations and Acronyms

Gray italicized values are inferred from quarterly monitoring results.

— = No sample collected and/or no mass removal calculated.

µg/L = micrograms per liter

cis-1,2-DCE = *cis*-1,2-dichloroethene

cVOCs = chlorinated volatile organic compounds

gpd = gallons per day

GTS = groundwater extraction and treatment system

lbs = pounds

MG = million gallons

mg/L = milligrams per liter

ND = not detected

TCE = trichloroethene

VC = vinyl chloride

| Month | Monthly Average Extraction Rates (gpm) | | | | | | Extraction Trench | Totalizer |
|--------|--|-------|-------|--------|--------|-------|-------------------|-----------|
| | EXT-1 | EXT-2 | EXT-3 | EXT-2R | EXT-3R | EXT-4 | | |
| Jan-19 | 2.28 | 3.89 | 0.68 | — | — | — | 0.321 | 6.98 |
| Feb-19 | 2.28 | 3.55 | 0.49 | — | — | — | 0.337 | 4.38 |
| Mar-19 | 2.41 | 3.35 | 0.36 | — | — | — | 0.350 | 8.50 |
| Apr-19 | 2.86 | 6.81 | 0.17 | — | — | — | 0.310 | 10.1 |
| May-19 | 3.07 | 6.85 | 0.02 | — | — | — | 0.300 | 10.2 |
| Jun-19 | 2.88 | 6.27 | 0 | — | — | — | 0.270 | 9.38 |
| Jul-19 | 2.33 | 6.52 | 0 | — | — | — | 0.220 | 8.98 |
| Aug-19 | 2.72 | 10.2 | 0 | — | — | — | 0.360 | 13.1 |
| Sep-19 | 2.70 | 10.2 | 0 | — | — | — | 0.670 | 13.3 |
| Oct-19 | 2.62 | 10.3 | 0 | — | — | — | 0.710 | 13.4 |
| Nov-19 | 2.70 | 10.3 | 0 | — | — | — | 0.490 | 13.2 |
| Dec-19 | 2.72 | 10.3 | 0 | — | — | — | 1.240 | 13.8 |
| Jan-20 | 2.93 | 10.2 | 0 | — | — | — | 2.090 | 14.8 |
| Feb-20 | 3.05 | 10.1 | 0 | — | — | — | 0.930 | 13.9 |
| Mar-20 | 3.06 | 10.0 | 0 | — | — | — | 0.520 | 13.1 |
| Apr-20 | 3.17 | 9.96 | 0 | — | — | — | 0.190 | 13.1 |
| May-20 | 3.11 | 9.74 | 0 | — | — | — | 0.120 | 12.7 |
| Jun-20 | 2.56 | 7.84 | 0 | — | — | — | 0.000 | 10.3 |
| Jul-20 | 2.78 | 9.64 | 0 | — | — | — | 0.000 | 12.3 |
| Aug-20 | 1.67 | 7.23 | 0 | — | — | — | 0.000 | 8.86 |
| Sep-20 | 1.96 | 9.29 | 0 | — | — | — | 0.420 | 11.5 |
| Oct-20 | 2.27 | 9.76 | 0 | — | — | — | 0.670 | 12.3 |
| Nov-20 | 2.37 | 9.38 | 0 | — | — | — | 0.080 | 11.3 |
| Dec-20 | 2.28 | 7.98 | 0 | — | — | — | 0.010 | 9.74 |
| Jan-21 | 3.22 | 9.05 | 0 | — | — | — | 0.008 | 11.8 |
| Feb-21 | 3.02 | 8.09 | 0 | — | — | — | 0.007 | 10.6 |
| Mar-21 | 3.21 | 8.63 | 0 | — | — | — | 0.008 | 11.5 |
| Apr-21 | 3.04 | 7.92 | 0 | — | — | — | 0.007 | 10.5 |
| May-21 | 2.73 | 7.07 | 0 | — | — | — | 0.007 | 9.28 |
| Jun-21 | 2.51 | 6.16 | 0 | — | — | — | 0.007 | 8.13 |
| Jul-21 | 1.92 | 5.21 | 0 | — | — | — | 0.007 | 6.55 |
| Aug-21 | 1.46 | 3.60 | 0 | — | — | — | 0.006 | 5.97 |
| Sep-21 | 1.57 | 4.42 | 0 | — | — | — | 0.006 | 5.80 |
| Oct-21 | 1.97 | 4.01 | 0 | — | — | — | 0.007 | 5.60 |
| Nov-21 | 2.31 | 3.82 | 0 | — | — | — | 0.007 | 5.53 |
| Dec-21 | 2.59 | 3.53 | 0 | — | — | — | 0.006 | 5.63 |
| Jan-22 | 3.02 | 2.87 | 0 | — | — | — | 0 | 5.36 |
| Feb-22 | Extraction wells taken offline | | | — | — | — | — | — |
| Mar-22 | — | — | — | — | — | — | — | — |

See notes on the next page.

| Month | Monthly Average Extraction Rates (gpm) | | | | | | Extraction Trench | Totalizer |
|--------|--|-------|-------|--|--------|-------|-------------------|-----------|
| | EXT-1 | EXT-2 | EXT-3 | EXT-2R | EXT-3R | EXT-4 | | |
| Apr-22 | — | — | — | Extraction wells brought online May 2022 | | | — | — |
| May-22 | — | — | — | 10.45 | 6.56 | 2.70 | — | 20.24 |
| Jun-22 | — | — | — | 9.84 | 5.64 | 2.45 | — | 18.35 |
| Jul-22 | — | — | — | 8.87 | 5.26 | 2.31 | — | 14.43 |
| Aug-22 | — | — | — | 7.56 | 5.21 | 2.26 | — | 15.48 |
| Sep-22 | — | — | — | 10.03 | 7.65 | 4.16 | — | 18.94 |
| Oct-22 | — | — | — | 11.78 | 6.58 | 3.84 | — | 17.74 |
| Nov-22 | — | — | — | 10.85 | 4.68 | 2.64 | — | 19.05 |
| Dec-22 | — | — | — | 10.32 | 4.56 | 2.64 | 0.003 | 18.33 |
| Jan-23 | — | — | — | — | — | — | — | — |
| Feb-23 | — | — | — | — | — | — | — | — |
| Mar-23 | — | — | — | — | — | — | — | — |
| Apr-23 | — | — | — | — | — | — | — | — |
| May-23 | — | — | — | — | — | — | — | — |
| Jun-23 | — | — | — | 9.26 | 4.96 | 2.39 | 0.463 | 17.90 |
| Jul-23 | — | — | — | 8.69 | 4.95 | 2.43 | 0.010 | 17.03 |
| Aug-23 | — | — | — | 9.41 | 5.18 | 2.48 | 0.710 | 18.85 |
| Sep-23 | — | — | — | 9.04 | 5.19 | 2.60 | 0.550 | 18.08 |
| Oct-23 | — | — | — | 9.01 | 5.39 | 2.02 | 0.680 | 17.86 |
| Nov-23 | — | — | — | 8.95 | 5.20 | 2.87 | 1.30 | 18.88 |
| Dec-23 | — | — | — | 8.45 | 5.49 | 2.67 | 1.27 | 18.39 |
| Jan-24 | — | — | — | 9.04 | 4.96 | 2.65 | -- | 17.65 |
| Feb-24 | — | — | — | 8.11 | 4.47 | 2.65 | -- | 16.02 |
| Mar-24 | — | — | — | 7.96 | 3.99 | 2.34 | -- | 14.97 |

Total extraction rates calculated from system effluent totalizer readings.

Abbreviations and Acronyms

— = no flow data
 gpm = gallons per minute.

Extraction Wells

EXT-2 = Extraction Well 2
 EXT-3 = Extraction Well 3

 EXT-2R = Extraction Well 2R
 EXT-3R = Extraction Well 3R
 EXT-4 = Extraction Well 4

System Operational Events

EXT-3 pump was removed from service on May 24, 2019.
 installed.
 The system operated intermittently from May 17, 2022, through December 2022.
 The system was offline from December 16, 2022, through June 6, 2023, then offline again from July 7, 2023, through August 10, 2023.

| Date/ Sample ID | Concentration in µg/L | | | | | | Total cVOCs |
|--|---------------------------------|-------------------|-------------------------|---------------------------|-------------------|-------------------|-----------------|
| | PCE | TCE | <i>cis</i> -1,2- DCE | <i>trans</i> -1,2- DCE | 1,1-DCE | VC | |
| March 13, 2019 | | | | | | | |
| EXT-1 | <1.0 | 7.9 | 25 | <1.0 | <1.0 | 6.1 | 39 |
| EXT-2 | 2.1 | 196 | 119 | 0.89 | <1.0 | 0.33 | 318 |
| EXT-3 | <1.0 | 1.9 | 75 | 1.1 | <1.0 | 30 | 108 |
| Trench | <1.0 | <1.0 | 0.56 | <1.0 | <1.0 | <1.0 | 0.56 |
| June 14, 2019 | | | | | | | |
| EXT-1 | <1.0 | 14 | 38 | <1.0 | <1.0 | 8.4 | 60 |
| EXT-2 | 1.3 | 89 | 84 | 0.56 | <1.0 | <1.0 | 175 |
| EXT-3 | Not sampled due to pump offline | | | | | | |
| Trench | <1.0 | <1.0 | 4.6 | <1.0 | <1.0 | 0.50 | 5.1 |
| September 17, 2019 | | | | | | | |
| EXT-1 | <1.0 | 12 | 35 | <1.0 | <1.0 | 6.4 | 54 |
| EXT-2 | 1.3 | 118 | 76 | 0.60 | <1.0 | <1.0 | 196 |
| EXT-3 | <1.0 ^a | <1.0 ^a | 37 ^a | 0.92 ^a | <1.0 ^a | 0.48 ^a | 39 ^a |
| Trench | <1.0 | 0.60 | 50 | <1.0 | <1.0 | 10 | 61 |
| December 9, 2019 | | | | | | | |
| EXT-1 | <1.0 | 12 | 25 | <1.0 | <1.0 | 3.7 | 40 |
| EXT-2 | 0.6 | 63 | 53 | 0.41 | <1.0 | <1.0 | 117 |
| EXT-3 | Not sampled due to pump offline | | | | | | |
| Trench | <1.0 | <1.0 | 19.4 | <1.0 | <1.0 | 6.0 | 25 |
| March 9, 2020 | | | | | | | |
| EXT-1 | <1.0 | 13 | 29 | <1.0 | <1.0 | 5.8 | 48 |
| EXT-2 | 0.6 | 75 | 61 | 0.43 | <1.0 | <1.0 | 137 |
| EXT-3 | Not sampled due to pump offline | | | | | | |
| Trench | <1.0 | <1.0 | 14 | <1.0 | <1.0 | 4.2 | 18 |
| June 16, 2020 | | | | | | | |
| EXT-1 | <1.0 | 10 | 31 | <1.0 | <1.0 | 7.1 | 49 |
| EXT-2 | 0.99 | 124 | 88 | 0.64 | 0.29 | <1.0 | 214 |
| EXT-3 | Not sampled due to pump offline | | | | | | |
| Trench | Not sampled due to pump offline | | | | | | |
| September 3-4, 2020 | | | | | | | |
| EXT-1 | <1.0 | 14 | 30 | 0.21 | 0.21 | 4.2 | 49 |
| EXT-2 | 0.92 | 87 | 64 | 0.54 | 0.22 | <1.0 | 153 |
| EXT-3 | Not sampled due to pump offline | | | | | | |
| Trench | Not sampled due to pump offline | | | | | | |
| December 2, 2020 | | | | | | | |
| EXT-1 | <1.0 | 11 | 29 | <1.0 | <1.0 | 3.9 | 44 |
| EXT-2 | 0.71 | 65 | 56 | 0.33 | <1.0 | <1.0 | 122 |
| EXT-3 | Not sampled due to pump offline | | | | | | |
| Trench | 0.50 | 61 | 59 | 0.24 | 0.20 | <1.0 | 121 |
| First Quarter 2021 Second Quarter 2021 September 15-17, 2021 | | | | | | | |
| Not sampled due to system offline | | | | | | | |
| EXT-1 | <1.0 | 11 | 24 | <1.0 | <1.0 | 4.9 | 40 |
| EXT-2 | 2.12 | 177 | 106 | 0.65 | 0.31 | <1.0 | 286 |
| EXT-3 | Not sampled due to pump offline | | | | | | |
| Trench | Not sampled due to pump offline | | | | | | |
| Fourth Quarter 2021 First Quarter 2022 | | | | | | | |
| Not sampled due to system offline | | | | | | | |

See notes on the next page.

Milwaukie International Way (ECSI No. 2079)

Milwaukie, Oregon

| Date/ Sample ID | Concentration in µg/L | | | | | | | Total cVOCs |
|-----------------------------------|---------------------------------|-------|------------------|--------------------|---------|-------|------|----------------|
| | PCE | TCE | cis -1,2- DCE | trans -1,2- DCE | 1,1-DCE | VC | | |
| May 17, 2022 | | | | | | | | |
| EXT-2R | <1.0 | 38.6 | 24.1 | <1.0 | <1.0 | <1.0 | <1.0 | 62.7 |
| EXT-3R | <1.0 | <1.0 | 0.17 | <1.0 | <1.0 | <1.0 | <1.0 | 0.17 |
| EXT-4 | 1.22 | 141 | 159 | 1.42 | 0.56 | 0.97 | | 304 |
| Trench | Not sampled due to pump offline | | | | | | | |
| June 29, 2022 | | | | | | | | |
| EXT-2R | 0.86 | 81.2 | 60.4 | 0.63 | 0.33 | 0.39 | | 144 |
| EXT-3R | <1.0 | 3.48 | 28.4 | <1.0 | 0.21 | 11.9 | | 44.0 |
| EXT-4 | 2.41 | 163 | 148 | 1.33 | 0.72 | 1.10 | | 317 |
| Trench | Not sampled due to pump offline | | | | | | | |
| July 21, 2022 | | | | | | | | |
| EXT-2R | 0.90 | 81.5 | 58.5 | 0.44 | 0.46 | <1.0 | | 142 |
| EXT-3R | <1.0 | 5.91 | 38.9 | <1.0 | <1.0 | 14.5 | | 59.3 |
| EXT-4 | 2.93 | 191 | 160 | 1.41 | 0.87 | 1.25 | | 357 |
| Trench | Not sampled due to pump offline | | | | | | | |
| October 20, 2022 | | | | | | | | |
| EXT-2R | 0.83 | 87.0 | 60.6 | 0.54 | 0.26 | 0.43 | | 150 |
| EXT-3R | <1.0 | 3.60 | 37.2 | 0.21 | <1.0 | 9.71 | | 50.7 |
| EXT-4 | 2.16 | 186 | 145 | 1.56 | 0.69 | 1.48 | | 337 |
| EXT-4 | Sampling not required | | | | | | | |
| Trench | Not sampled due to pump offline | | | | | | | |
| First Quarter 2023 | | | | | | | | |
| Not sampled due to system offline | | | | | | | | |
| June 6, 2023 | | | | | | | | |
| EXT-2R | 0.701 | 42.8 | 27.7 | 0.193 | <1.0 | <1.0 | | 71.4 |
| EXT-3R | <1.0 | <1.0 | 3.98 | <1.0 | <1.0 | 1.15 | | 5.13 |
| EXT-4 | 1.60 | 125 | 159 | 1.92 | <1.0 | 1.14 | | 289 |
| Trench | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | | <1.0 |
| September 21, 2023 | | | | | | | | |
| EXT-2R | 0.876 | 74.1 | 48.8 | 0.600 | 0.217 | <1.0 | | 125 |
| EXT-3R | <1.0 | <1.0 | 26.4 | <1.0 | <1.0 | 2.74 | | 29.1 |
| EXT-4 | 1.95 | 136 | 121 | 1.67 | 0.645 | 1.16 | | 262 |
| Trench | <1.0 | 0.193 | 27.8 | <1.0 | <1.0 | 2.80 | | 30.8 |
| December 7, 2023 | | | | | | | | |
| EXT-2R | 0.516 | 65.1 | 44.3 | 0.332 | <1.0 | <1.0 | | 110 |
| EXT-3R | <1.0 | 2.19 | 50.3 | 0.639 | <1.0 | 12.2 | | 65.3 |
| EXT-4 | <10.0 | 152 | 107 | 1.64 | <10.0 | <10.0 | | 261 |
| Trench | <1.0 | <1.0 | 3.37 | <1.0 | <1.0 | 1.21 | | 4.58 |
| February 29, 2024 | | | | | | | | |
| EXT-2R | 0.969 | 60.2 | 58.6 | 0.920 | 0.267 | 0.241 | | 121 |
| EXT-3R | <1.0 | 1.74 | 64.9 | 1.10 | <1.0 | 24.4 | | 92.1 |
| EXT-4 | <10.0 | 143 | 123 | 1.64 | <10.0 | 2.34 | | 270 |
| Trench | Not sampled due to pump offline | | | | | | | |

Notes

^a Sample collected using low-flow sample techniques during annual groundwater sampling while extraction pump was offline.

Total cVOCs are the sum of detected cVOCs.

System offline from January 10, through May 17, 2022, for system expansion.

System operated intermittently between May 17 and December 16, 2022, to troubleshoot repairs.

System offline from December 16, 2022, through June 6, 2023, for repairs.

System offline from July 7, through August 10, 2023, for repairs.

Abbreviations and Acronyms

< = Indicates concentration less than method reporting limit shown.

µg/L = micrograms per liter

1,1-DCE = 1,1-dichloroethene

cis -1,2-DCE = cis -1,2-dichloroethene

cVOCs = chlorinated volatile organic compounds

PCE = tetrachloroethene

TCE = trichloroethene

trans -1,2-DCE = trans -1,2-dichloroethene

VC = vinyl chloride

| Effluent Sample Date | Concentrations in µg/L | | | | | | | pH |
|----------------------|------------------------|------|---------------------|-----------------------|---------|-------|-------------|------|
| | PCE | TCE | <i>cis</i> -1,2-DCE | <i>trans</i> -1,2-DCE | 1,1-DCE | VC | Total cVOCs | |
| March 13, 2019 | 1.3 | 122 | 90 | 0.57 | <1.0 | 2.6 | 216 | — |
| June 14, 2019 | 0.53 | 68 | 64 | <1.0 | <1.0 | 1.9 | 134 | — |
| September 17, 2019 | 1.3 | 124 | 82 | 0.49 | <1.0 | 2.4 | 210 | — |
| December 9, 2019 | 1.2 | 88 | 63 | 0.50 | <1.0 | 1.4 | 154 | — |
| March 9, 2020 | 0.53 | 80 | 64 | <1.0 | <1.0 | 2.0 | 146 | — |
| June 16, 2020 | 0.83 | 86 | 66 | 0.43 | 0.27 | 0.83 | 155 | — |
| September 3, 2020 | 1.3 | 127 | 82 | 0.56 | 0.34 | 1.1 | 213 | — |
| December 2, 2020 | 0.7 | 79 | 70 | 0.35 | <1.0 | 1.2 | 151 | — |
| March 25, 2021 | 0.61 | 85 | 75 | 0.44 | <1.0 | 3.9 | 165 | — |
| June 10, 2021 | 0.71 | 94 | 69 | 0.41 | 0.26 | 2.4 | 167 | — |
| September 16, 2021 | 1.0 | 113 | 86 | 0.49 | 0.24 | 2.2 | 203 | — |
| December 29, 2021 | 0.7 | 79 | 73 | 0.33 | 0.47 | 5.3 | 158 | — |
| May 17, 2022 | 0.49 | 43.6 | 39.5 | 0.28 | <1.0 | <1.0 | 84 | — |
| June 29, 2022 | 0.97 | 72.4 | 65.7 | 0.57 | 0.32 | 3.66 | 144 | — |
| July 21, 2022 | 0.96 | 75.2 | 63.8 | 0.39 | <1.0 | 2.76 | 143 | — |
| August 9, 2022 | 0.55 | 59.8 | 54.3 | 0.43 | <1.0 | 4.45 | 120 | — |
| September 14, 2022 | 0.92 | 90.2 | 73.1 | 0.84 | 0.48 | 10.1 | 176 | — |
| October 20, 2022 | 0.92 | 91.0 | 71.1 | 0.61 | 0.24 | 0.70 | 165 | — |
| November 22, 2022 | 0.90 | 79.6 | 67.0 | 0.55 | 0.26 | 3.66 | 152 | — |
| June 6, 2023 | <1.0 | 20.0 | 21.9 | 0.231 | <1.0 | 0.347 | 42 | 7.05 |
| September 21, 2023 | 0.711 | 66.1 | 65.7 | 0.527 | <1.0 | 5.67 | 139 | 6.66 |
| December 7, 2023 | 0.731 | 54.3 | 50.7 | 0.523 | <1.0 | 2.98 | 109 | 7.07 |
| February 29, 2024 | 0.715 | 75.6 | 76.6 | 0.884 | 0.537 | 5.77 | 160 | 7.57 |

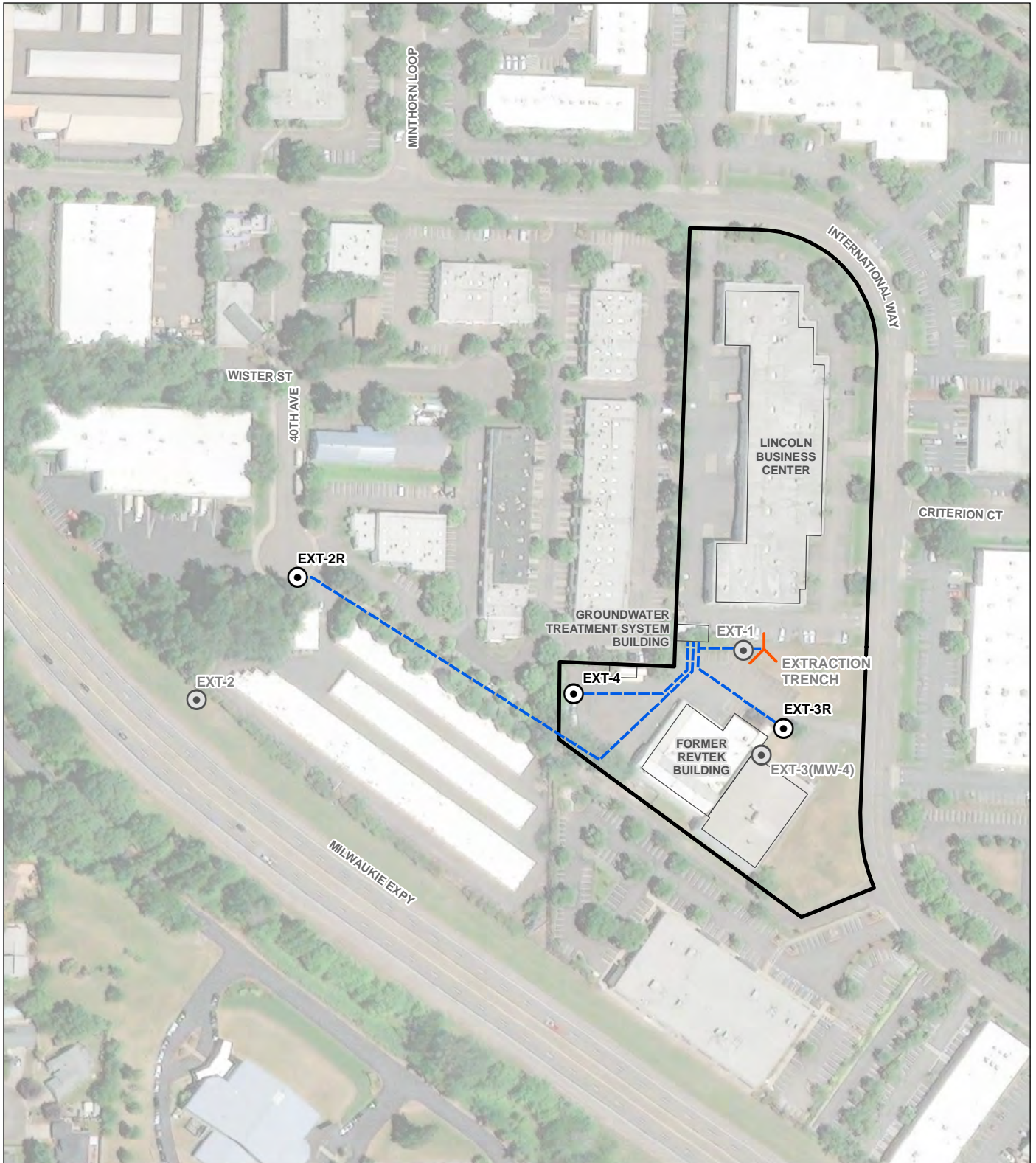
Notes

Final Effluent is the final system effluent discharge to conveyance line to sanitary sewer.
 Total cVOCs are the sum of detected cVOCs plus half the method reporting limit for each non-detect cVOC constituent.
 pH measured using hand held water meter at the time of sampling.

Abbreviations and Acronyms

| | |
|--|--|
| — = not measured or not recorded | GTS = groundwater extraction and treatment system |
| µg/L = micrograms per liter | PCE = tetrachloroethene |
| 1,1-DCE = 1,1-dichloroethene | TCE = trichloroethene |
| <i>cis</i> -1,2-DCE = <i>cis</i> -1,2-dichloroethene | <i>trans</i> -1,2-DCE = <i>trans</i> -1,2-dichloroethene |
| cVOCs = chlorinated volatile organic compounds | VC = vinyl chloride |

Figure



LEGEND

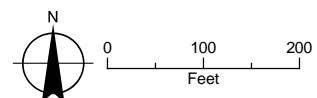
- Extraction Well
- Extraction Well (Out of Service)
- Groundwater Conveyance Line
- Extraction Trench
- Property
- Building

NOTES

EXT-1 and EXT-2 were taken offline in January 2022.
 EXT-3 has been offline since May 2019.
 The new extraction wells (EXT-2R, EXT-3R, AND EXT-4) began operation in May 2022.

FIGURE 1

Extraction Well Plan
 Milwaukie International Way
 Milwaukie, Oregon



ATTACHMENT A

Analytical Laboratory Reports and Chains of Custody

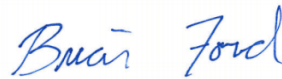
- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1711035
Samples Received: 03/01/2024
Project Number: 2060.007
Description: OREGON DEQ-MILWAUKIE INTERNATIONAL WAY

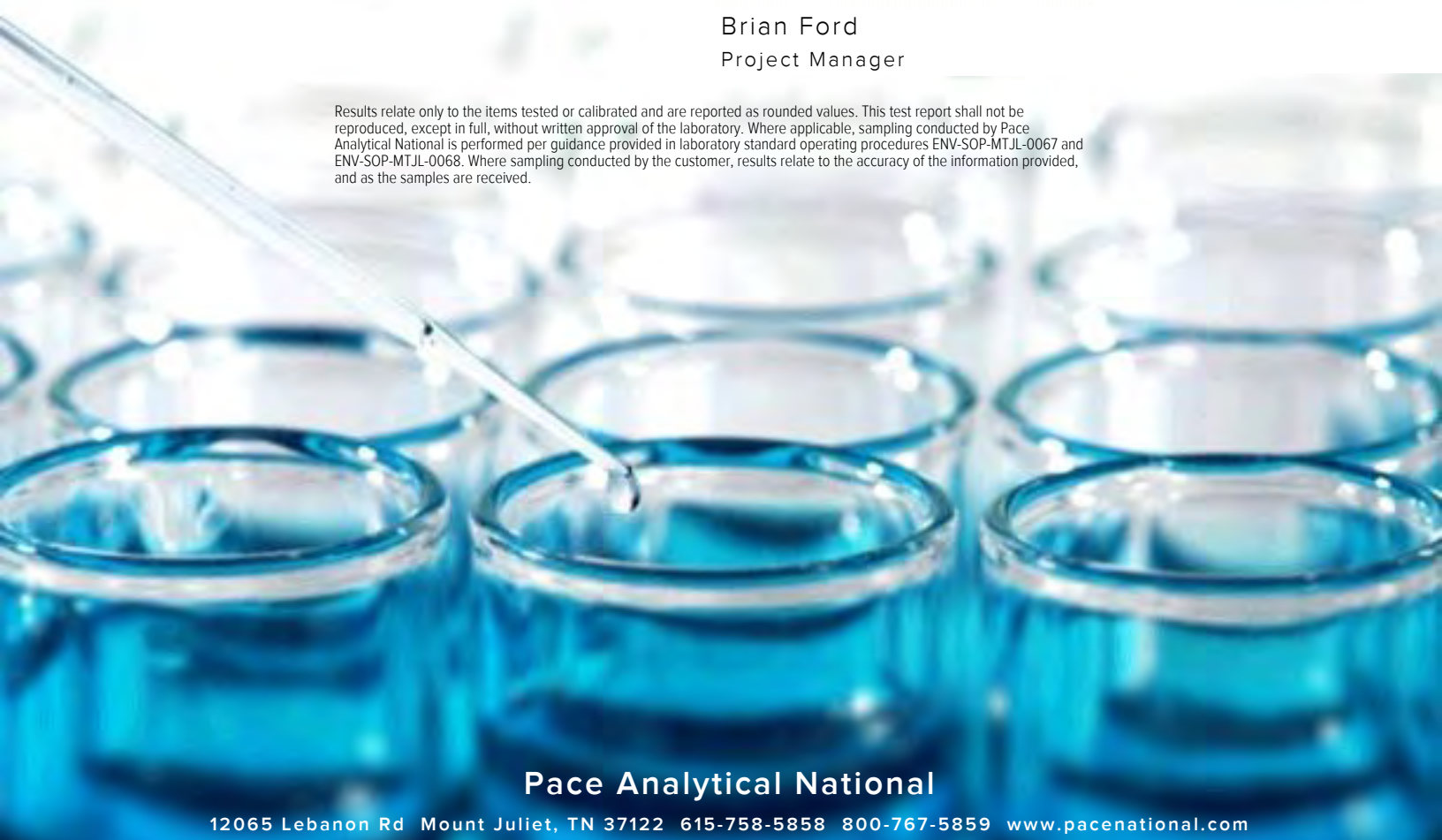
Report To: Mark Pugh
3150 NW 229th St., Suite 150
Hillsboro, OR 97124

Entire Report Reviewed By:



Brian Ford
Project Manager








Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

EXT-2R L1711035-01 GW

Collected by: Alex McCarthy
 Collected date/time: 02/29/24 09:15
 Received date/time: 03/01/24 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC/MS) by Method 8260D | WG2239493 | 1 | 03/05/24 00:45 | 03/05/24 00:45 | DWR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260D | WG2244007 | 2 | 03/11/24 14:07 | 03/11/24 14:07 | JAH | Mt. Juliet, TN |

1 Cp

2 Tc

3 Ss

EXT-3R L1711035-02 GW

Collected by: Alex McCarthy
 Collected date/time: 02/29/24 10:00
 Received date/time: 03/01/24 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC/MS) by Method 8260D | WG2239493 | 1 | 03/05/24 01:05 | 03/05/24 01:05 | AV | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260D | WG2244007 | 1 | 03/11/24 14:30 | 03/11/24 14:30 | JAH | Mt. Juliet, TN |

4 Cn

5 Sr

6 Qc

EXT-4 L1711035-03 GW

Collected by: Alex McCarthy
 Collected date/time: 02/29/24 09:30
 Received date/time: 03/01/24 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC/MS) by Method 8260D | WG2239493 | 10 | 03/05/24 05:20 | 03/05/24 05:20 | DWR | Mt. Juliet, TN |

7 Gl

8 Al

9 Sc

EFF L1711035-04 WW

Collected by: Alex McCarthy
 Collected date/time: 02/29/24 10:25
 Received date/time: 03/01/24 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC/MS) by Method 624.1 | WG2239999 | 1 | 03/05/24 18:47 | 03/05/24 18:47 | DYW | Mt. Juliet, TN |

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Volatile Organic Compounds (GC/MS) by Method 624.1/8260D

| Analyte | Result ug/l | Qualifier | MDL ug/l | RDL ug/l | Dilution | Analysis date / time | Batch |
|--------------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|-----------|
| Acetone | U | | 11.3 | 50.0 | 1 | 03/05/2024 00:45 | WG2239493 |
| Acrolein | U | C3 | 2.54 | 50.0 | 1 | 03/05/2024 00:45 | WG2239493 |
| Acrylonitrile | U | | 0.671 | 10.0 | 1 | 03/05/2024 00:45 | WG2239493 |
| Benzene | U | | 0.0941 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Bromobenzene | U | | 0.118 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Bromodichloromethane | U | | 0.136 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Bromoform | U | | 0.129 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Bromomethane | U | | 0.605 | 5.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| n-Butylbenzene | U | | 0.157 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| sec-Butylbenzene | U | | 0.125 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| tert-Butylbenzene | U | | 0.127 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Carbon disulfide | U | | 0.0962 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Carbon tetrachloride | U | | 0.128 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Chlorobenzene | U | | 0.116 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Chlorodibromomethane | U | | 0.140 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Chloroethane | U | | 0.192 | 5.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Chloroform | U | | 0.111 | 5.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Chloromethane | U | | 0.960 | 2.50 | 1 | 03/05/2024 00:45 | WG2239493 |
| 2-Chlorotoluene | U | | 0.106 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 4-Chlorotoluene | U | | 0.114 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,2-Dibromo-3-Chloropropane | U | | 0.276 | 5.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,2-Dibromoethane | U | | 0.126 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Dibromomethane | U | | 0.122 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,2-Dichlorobenzene | U | | 0.107 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,3-Dichlorobenzene | U | | 0.110 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,4-Dichlorobenzene | U | | 0.120 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Dichlorodifluoromethane | U | J4 | 0.374 | 5.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,1-Dichloroethane | U | | 0.100 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,2-Dichloroethane | U | | 0.0819 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,1-Dichloroethene | 0.267 | J | 0.188 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| cis-1,2-Dichloroethene | 58.6 | | 0.126 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| trans-1,2-Dichloroethene | 0.920 | J | 0.149 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,2-Dichloropropane | U | | 0.149 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,1-Dichloropropene | U | | 0.142 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,3-Dichloropropane | U | | 0.110 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| cis-1,3-Dichloropropene | U | | 0.111 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| trans-1,3-Dichloropropene | U | | 0.118 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 2,2-Dichloropropane | U | | 0.161 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Di-isopropyl ether | U | | 0.105 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Ethylbenzene | U | | 0.137 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Hexachloro-1,3-butadiene | U | | 0.337 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Isopropylbenzene | U | | 0.105 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| p-Isopropyltoluene | U | | 0.120 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 2-Butanone (MEK) | U | | 1.19 | 10.0 | 1 | 03/05/2024 00:45 | WG2239493 |
| Methylene Chloride | U | | 0.430 | 5.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 4-Methyl-2-pentanone (MIBK) | U | | 0.478 | 10.0 | 1 | 03/05/2024 00:45 | WG2239493 |
| Methyl tert-butyl ether | U | | 0.101 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Naphthalene | U | | 1.00 | 5.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| n-Propylbenzene | U | | 0.0993 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Styrene | U | | 0.118 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,1,1,2-Tetrachloroethane | U | | 0.147 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,1,2,2-Tetrachloroethane | U | | 0.133 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.180 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Tetrachloroethene | 0.969 | J J4 | 0.300 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Toluene | U | | 0.278 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,2,3-Trichlorobenzene | U | | 0.230 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 624.1/8260D

| Analyte | Result ug/l | Qualifier | MDL ug/l | RDL ug/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| 1,2,4-Trichlorobenzene | U | | 0.481 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,1,1-Trichloroethane | U | | 0.149 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,1,2-Trichloroethane | U | | 0.158 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Trichloroethene | 60.2 | | 0.380 | 2.00 | 2 | 03/11/2024 14:07 | WG2244007 |
| Trichlorofluoromethane | U | | 0.160 | 5.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,2,3-Trichloropropane | U | | 0.237 | 2.50 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,2,4-Trimethylbenzene | U | | 0.322 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,2,3-Trimethylbenzene | U | | 0.104 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| 1,3,5-Trimethylbenzene | U | | 0.104 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Vinyl chloride | 0.241 | <u>J</u> | 0.234 | 1.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| Xylenes, Total | U | | 0.174 | 3.00 | 1 | 03/05/2024 00:45 | WG2239493 |
| (S) Toluene-d8 | 102 | | | 80.0-120 | | 03/05/2024 00:45 | WG2239493 |
| (S) Toluene-d8 | 111 | | | 80.0-120 | | 03/11/2024 14:07 | WG2244007 |
| (S) 4-Bromofluorobenzene | 105 | | | 77.0-126 | | 03/05/2024 00:45 | WG2239493 |
| (S) 4-Bromofluorobenzene | 99.6 | | | 77.0-126 | | 03/11/2024 14:07 | WG2244007 |
| (S) 1,2-Dichloroethane-d4 | 99.8 | | | 70.0-130 | | 03/05/2024 00:45 | WG2239493 |
| (S) 1,2-Dichloroethane-d4 | 98.4 | | | 70.0-130 | | 03/11/2024 14:07 | WG2244007 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 624.1/8260D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|--------------------------------|--------|-----------|--------|------|----------|------------------|-----------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Acetone | U | | 11.3 | 50.0 | 1 | 03/05/2024 01:05 | WG2239493 |
| Acrolein | U | C3 | 2.54 | 50.0 | 1 | 03/05/2024 01:05 | WG2239493 |
| Acrylonitrile | U | | 0.671 | 10.0 | 1 | 03/05/2024 01:05 | WG2239493 |
| Benzene | U | | 0.0941 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Bromobenzene | U | | 0.118 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Bromodichloromethane | U | | 0.136 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Bromoform | U | | 0.129 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Bromomethane | U | | 0.605 | 5.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| n-Butylbenzene | U | | 0.157 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| sec-Butylbenzene | U | | 0.125 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| tert-Butylbenzene | U | | 0.127 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Carbon disulfide | U | | 0.0962 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Carbon tetrachloride | U | | 0.128 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Chlorobenzene | U | | 0.116 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Chlorodibromomethane | U | | 0.140 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Chloroethane | U | | 0.192 | 5.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Chloroform | U | | 0.111 | 5.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Chloromethane | U | | 0.960 | 2.50 | 1 | 03/05/2024 01:05 | WG2239493 |
| 2-Chlorotoluene | U | | 0.106 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 4-Chlorotoluene | U | | 0.114 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,2-Dibromo-3-Chloropropane | U | | 0.276 | 5.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,2-Dibromoethane | U | | 0.126 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Dibromomethane | U | | 0.122 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,2-Dichlorobenzene | U | | 0.107 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,3-Dichlorobenzene | U | | 0.110 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,4-Dichlorobenzene | U | | 0.120 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Dichlorodifluoromethane | U | J4 | 0.374 | 5.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,1-Dichloroethane | U | | 0.100 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,2-Dichloroethane | U | | 0.0819 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,1-Dichloroethene | U | | 0.188 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| cis-1,2-Dichloroethene | 64.9 | | 0.126 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| trans-1,2-Dichloroethene | 1.10 | | 0.149 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,2-Dichloropropane | U | | 0.149 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,1-Dichloropropene | U | | 0.142 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,3-Dichloropropane | U | | 0.110 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| cis-1,3-Dichloropropene | U | | 0.111 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| trans-1,3-Dichloropropene | U | | 0.118 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 2,2-Dichloropropane | U | | 0.161 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Di-isopropyl ether | U | | 0.105 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Ethylbenzene | U | | 0.137 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Hexachloro-1,3-butadiene | U | | 0.337 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Isopropylbenzene | U | | 0.105 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| p-Isopropyltoluene | U | | 0.120 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 2-Butanone (MEK) | U | | 1.19 | 10.0 | 1 | 03/05/2024 01:05 | WG2239493 |
| Methylene Chloride | U | | 0.430 | 5.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 4-Methyl-2-pentanone (MIBK) | U | | 0.478 | 10.0 | 1 | 03/05/2024 01:05 | WG2239493 |
| Methyl tert-butyl ether | U | | 0.101 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Naphthalene | U | | 1.00 | 5.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| n-Propylbenzene | U | | 0.0993 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Styrene | U | | 0.118 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,1,1,2-Tetrachloroethane | U | | 0.147 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,1,2,2-Tetrachloroethane | U | | 0.133 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.180 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Tetrachloroethene | U | J4 | 0.300 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Toluene | U | | 0.278 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,2,3-Trichlorobenzene | U | | 0.230 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 624.1/8260D

| Analyte | Result ug/l | Qualifier | MDL ug/l | RDL ug/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|--------------------|-------------|-------------|----------|-------------------------|---------------------------|
| 1,2,4-Trichlorobenzene | U | | 0.481 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,1,1-Trichloroethane | U | | 0.149 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,1,2-Trichloroethane | U | | 0.158 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Trichloroethene | 1.74 | | 0.190 | 1.00 | 1 | 03/11/2024 14:30 | WG2244007 |
| Trichlorofluoromethane | U | | 0.160 | 5.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,2,3-Trichloropropane | U | | 0.237 | 2.50 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,2,4-Trimethylbenzene | U | | 0.322 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,2,3-Trimethylbenzene | U | | 0.104 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| 1,3,5-Trimethylbenzene | U | | 0.104 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Vinyl chloride | 24.4 | C5 | 0.234 | 1.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| Xylenes, Total | U | | 0.174 | 3.00 | 1 | 03/05/2024 01:05 | WG2239493 |
| (S) Toluene-d8 | 104 | | | 80.0-120 | | 03/05/2024 01:05 | WG2239493 |
| (S) Toluene-d8 | 111 | | | 80.0-120 | | 03/11/2024 14:30 | WG2244007 |
| (S) 4-Bromofluorobenzene | 106 | | | 77.0-126 | | 03/05/2024 01:05 | WG2239493 |
| (S) 4-Bromofluorobenzene | 99.9 | | | 77.0-126 | | 03/11/2024 14:30 | WG2244007 |
| (S) 1,2-Dichloroethane-d4 | 93.1 | | | 70.0-130 | | 03/05/2024 01:05 | WG2239493 |
| (S) 1,2-Dichloroethane-d4 | 98.8 | | | 70.0-130 | | 03/11/2024 14:30 | WG2244007 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 624.1/8260D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|--------------------------------|--------|-----------|-------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Acetone | U | | 113 | 500 | 10 | 03/05/2024 05:20 | WG2239493 |
| Acrolein | U | <u>C3</u> | 25.4 | 500 | 10 | 03/05/2024 05:20 | WG2239493 |
| Acrylonitrile | U | | 6.71 | 100 | 10 | 03/05/2024 05:20 | WG2239493 |
| Benzene | U | | 0.941 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Bromobenzene | U | | 1.18 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Bromodichloromethane | U | | 1.36 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Bromoform | U | | 1.29 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Bromomethane | U | | 6.05 | 50.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| n-Butylbenzene | U | | 1.57 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| sec-Butylbenzene | U | | 1.25 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| tert-Butylbenzene | U | | 1.27 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Carbon disulfide | U | | 0.962 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Carbon tetrachloride | U | | 1.28 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Chlorobenzene | U | | 1.16 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Chlorodibromomethane | U | | 1.40 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Chloroethane | U | | 1.92 | 50.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Chloroform | U | | 1.11 | 50.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Chloromethane | U | | 9.60 | 25.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 2-Chlorotoluene | U | | 1.06 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 4-Chlorotoluene | U | | 1.14 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,2-Dibromo-3-Chloropropane | U | | 2.76 | 50.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,2-Dibromoethane | U | | 1.26 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Dibromomethane | U | | 1.22 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,2-Dichlorobenzene | U | | 1.07 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,3-Dichlorobenzene | U | | 1.10 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,4-Dichlorobenzene | U | | 1.20 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Dichlorodifluoromethane | U | <u>J4</u> | 3.74 | 50.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,1-Dichloroethane | U | | 1.00 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,2-Dichloroethane | U | | 0.819 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,1-Dichloroethene | U | | 1.88 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| cis-1,2-Dichloroethene | 123 | | 1.26 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| trans-1,2-Dichloroethene | 1.64 | <u>J</u> | 1.49 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,2-Dichloropropane | U | | 1.49 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,1-Dichloropropene | U | | 1.42 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,3-Dichloropropane | U | | 1.10 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| cis-1,3-Dichloropropene | U | | 1.11 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| trans-1,3-Dichloropropene | U | | 1.18 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 2,2-Dichloropropane | U | | 1.61 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Di-isopropyl ether | U | | 1.05 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Ethylbenzene | U | | 1.37 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Hexachloro-1,3-butadiene | U | | 3.37 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Isopropylbenzene | U | | 1.05 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| p-Isopropyltoluene | U | | 1.20 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 2-Butanone (MEK) | U | | 11.9 | 100 | 10 | 03/05/2024 05:20 | WG2239493 |
| Methylene Chloride | U | | 4.30 | 50.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 4-Methyl-2-pentanone (MIBK) | U | | 4.78 | 100 | 10 | 03/05/2024 05:20 | WG2239493 |
| Methyl tert-butyl ether | U | | 1.01 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Naphthalene | U | | 10.0 | 50.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| n-Propylbenzene | U | | 0.993 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Styrene | U | | 1.18 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,1,1,2-Tetrachloroethane | U | | 1.47 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,1,2,2-Tetrachloroethane | U | | 1.33 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,1,2-Trichlorotrifluoroethane | U | | 1.80 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Tetrachloroethene | U | <u>J4</u> | 3.00 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Toluene | U | | 2.78 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,2,3-Trichlorobenzene | U | | 2.30 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 624.1/8260D

| Analyte | Result ug/l | Qualifier | MDL ug/l | RDL ug/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| 1,2,4-Trichlorobenzene | U | | 4.81 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,1,1-Trichloroethane | U | | 1.49 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,1,2-Trichloroethane | U | | 1.58 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Trichloroethene | 143 | | 1.90 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Trichlorofluoromethane | U | | 1.60 | 50.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,2,3-Trichloropropane | U | | 2.37 | 25.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,2,4-Trimethylbenzene | U | | 3.22 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,2,3-Trimethylbenzene | U | | 1.04 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| 1,3,5-Trimethylbenzene | U | | 1.04 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Vinyl chloride | U | | 2.34 | 10.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| Xylenes, Total | U | | 1.74 | 30.0 | 10 | 03/05/2024 05:20 | WG2239493 |
| (S) Toluene-d8 | 98.8 | | | 80.0-120 | | 03/05/2024 05:20 | WG2239493 |
| (S) 4-Bromofluorobenzene | 102 | | | 77.0-126 | | 03/05/2024 05:20 | WG2239493 |
| (S) 1,2-Dichloroethane-d4 | 92.9 | | | 70.0-130 | | 03/05/2024 05:20 | WG2239493 |

Sample Narrative:

L1711035-03 WG2239493: Target compounds too high to run at a lower dilution.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 624.1/8260D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------------------------|--------|-----------|--------|----------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Benzene | U | | 0.0941 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Bromodichloromethane | U | | 0.136 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Bromoform | U | | 0.129 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Bromomethane | U | | 0.605 | 5.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Carbon tetrachloride | U | | 0.128 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Chlorobenzene | U | | 0.116 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Chlorodibromomethane | U | | 0.140 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Chloroethane | U | | 0.192 | 5.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Chloroform | U | | 0.111 | 5.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Chloromethane | U | | 0.960 | 2.50 | 1 | 03/05/2024 18:47 | WG2239999 |
| 1,2-Dichlorobenzene | U | | 0.107 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| 1,3-Dichlorobenzene | U | | 0.110 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| 1,4-Dichlorobenzene | U | | 0.120 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Dichlorodifluoromethane | U | | 0.374 | 5.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| 1,1-Dichloroethane | U | | 0.100 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| 1,2-Dichloroethane | U | | 0.0819 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| 1,1-Dichloroethene | 0.537 | J | 0.188 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| cis-1,2-Dichloroethene | 76.6 | | 0.126 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| trans-1,2-Dichloroethene | 0.884 | J | 0.149 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| 1,2-Dichloropropane | U | | 0.149 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| cis-1,3-Dichloropropene | U | | 0.111 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| trans-1,3-Dichloropropene | U | | 0.118 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Ethylbenzene | U | | 0.137 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Methylene Chloride | U | | 0.430 | 5.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Methyl tert-butyl ether | U | | 0.101 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Naphthalene | U | | 1.00 | 5.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| 1,1,2,2-Tetrachloroethane | U | | 0.133 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Tetrachloroethene | 0.715 | J | 0.300 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Toluene | U | | 0.278 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| 1,1,1-Trichloroethane | U | | 0.149 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| 1,1,2-Trichloroethane | U | | 0.158 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Trichloroethene | 75.6 | | 0.190 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Trichlorofluoromethane | U | | 0.160 | 5.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| Vinyl chloride | 5.77 | | 0.234 | 1.00 | 1 | 03/05/2024 18:47 | WG2239999 |
| (S) Toluene-d8 | 99.3 | | | 80.0-120 | | 03/05/2024 18:47 | WG2239999 |
| (S) 4-Bromofluorobenzene | 89.8 | | | 80.0-120 | | 03/05/2024 18:47 | WG2239999 |
| (S) 1,2-Dichloroethane-d4 | 98.8 | | | 70.0-130 | | 03/05/2024 18:47 | WG2239999 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4042379-2 03/05/24 09:58

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0941 | 1.00 |
| Bromodichloromethane | U | | 0.136 | 1.00 |
| Bromoform | U | | 0.129 | 1.00 |
| Bromomethane | U | | 0.605 | 5.00 |
| Carbon tetrachloride | U | | 0.128 | 1.00 |
| Chlorobenzene | U | | 0.116 | 1.00 |
| Chlorodibromomethane | U | | 0.140 | 1.00 |
| Chloroethane | U | | 0.192 | 5.00 |
| Chloroform | U | | 0.111 | 5.00 |
| Chloromethane | U | | 0.960 | 2.50 |
| 1,2-Dichlorobenzene | U | | 0.107 | 1.00 |
| 1,3-Dichlorobenzene | U | | 0.110 | 1.00 |
| 1,4-Dichlorobenzene | U | | 0.120 | 1.00 |
| Dichlorodifluoromethane | U | | 0.374 | 5.00 |
| 1,1-Dichloroethane | U | | 0.100 | 1.00 |
| 1,2-Dichloroethane | U | | 0.0819 | 1.00 |
| 1,1-Dichloroethene | U | | 0.188 | 1.00 |
| cis-1,2-Dichloroethene | U | | 0.126 | 1.00 |
| trans-1,2-Dichloroethene | U | | 0.149 | 1.00 |
| 1,2-Dichloropropane | U | | 0.149 | 1.00 |
| cis-1,3-Dichloropropene | U | | 0.111 | 1.00 |
| trans-1,3-Dichloropropene | U | | 0.118 | 1.00 |
| Ethylbenzene | U | | 0.137 | 1.00 |
| Methylene Chloride | U | | 0.430 | 5.00 |
| Methyl tert-butyl ether | U | | 0.101 | 1.00 |
| Naphthalene | U | | 1.00 | 5.00 |
| 1,1,2,2-Tetrachloroethane | U | | 0.133 | 1.00 |
| Tetrachloroethene | U | | 0.300 | 1.00 |
| Toluene | U | | 0.278 | 1.00 |
| 1,1,1-Trichloroethane | U | | 0.149 | 1.00 |
| 1,1,2-Trichloroethane | U | | 0.158 | 1.00 |
| Trichloroethene | U | | 0.190 | 1.00 |
| Trichlorofluoromethane | U | | 0.160 | 5.00 |
| Vinyl chloride | U | | 0.234 | 1.00 |
| (S) Toluene-d8 | 102 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 91.8 | | | 80.0-120 |
| (S) 1,2-Dichloroethane-d4 | 94.9 | | | 70.0-130 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4042379-1 03/05/24 09:17

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | <u>LCS Qualifier</u> |
|---------------------------|----------------------|--------------------|---------------|------------------|----------------------|
| Benzene | 5.00 | 4.74 | 94.8 | 65.0-135 | |
| Bromodichloromethane | 5.00 | 4.90 | 98.0 | 65.0-135 | |
| Bromoform | 5.00 | 5.08 | 102 | 70.0-130 | |
| Bromomethane | 5.00 | 1.86 | 37.2 | 15.0-185 | |
| Carbon tetrachloride | 5.00 | 5.18 | 104 | 70.0-130 | |
| Chlorobenzene | 5.00 | 5.11 | 102 | 65.0-135 | |
| Chlorodibromomethane | 5.00 | 5.17 | 103 | 70.0-135 | |
| Chloroethane | 5.00 | 3.24 | 64.8 | 40.0-160 | |
| Chloroform | 5.00 | 4.88 | 97.6 | 70.0-135 | |
| Chloromethane | 5.00 | 5.80 | 116 | 0.100-205 | |
| 1,2-Dichlorobenzene | 5.00 | 5.12 | 102 | 65.0-135 | |
| 1,3-Dichlorobenzene | 5.00 | 5.24 | 105 | 70.0-130 | |
| 1,4-Dichlorobenzene | 5.00 | 5.21 | 104 | 65.0-135 | |
| Dichlorodifluoromethane | 5.00 | 4.75 | 95.0 | 49.0-155 | |
| 1,1-Dichloroethane | 5.00 | 5.14 | 103 | 70.0-130 | |
| 1,2-Dichloroethane | 5.00 | 5.25 | 105 | 70.0-130 | |
| 1,1-Dichloroethene | 5.00 | 4.50 | 90.0 | 50.0-150 | |
| cis-1,2-Dichloroethene | 5.00 | 4.84 | 96.8 | 73.0-120 | |
| trans-1,2-Dichloroethene | 5.00 | 4.96 | 99.2 | 70.0-130 | |
| 1,2-Dichloropropane | 5.00 | 5.29 | 106 | 35.0-165 | |
| cis-1,3-Dichloropropene | 5.00 | 4.84 | 96.8 | 25.0-175 | |
| trans-1,3-Dichloropropene | 5.00 | 4.81 | 96.2 | 50.0-150 | |
| Ethylbenzene | 5.00 | 5.05 | 101 | 60.0-140 | |
| Methylene Chloride | 5.00 | 4.68 | 93.6 | 60.0-140 | |
| Methyl tert-butyl ether | 5.00 | 4.73 | 94.6 | 64.0-123 | |
| Naphthalene | 5.00 | 4.13 | 82.6 | 62.0-128 | |
| 1,1,2,2-Tetrachloroethane | 5.00 | 4.82 | 96.4 | 60.0-140 | |
| Tetrachloroethene | 5.00 | 5.31 | 106 | 70.0-130 | |
| Toluene | 5.00 | 4.83 | 96.6 | 70.0-130 | |
| 1,1,1-Trichloroethane | 5.00 | 5.19 | 104 | 70.0-130 | |
| 1,1,2-Trichloroethane | 5.00 | 5.19 | 104 | 70.0-130 | |
| Trichloroethene | 5.00 | 4.92 | 98.4 | 65.0-135 | |
| Trichlorofluoromethane | 5.00 | 4.74 | 94.8 | 50.0-150 | |
| Vinyl chloride | 5.00 | 3.64 | 72.8 | 5.00-195 | |
| (S) Toluene-d8 | | | 98.7 | 80.0-120 | |
| (S) 4-Bromofluorobenzene | | | 93.3 | 80.0-120 | |
| (S) 1,2-Dichloroethane-d4 | | | 94.5 | 70.0-130 | |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1710954-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710954-20 03/05/24 17:22 • (MS) R4042379-3 03/05/24 19:07 • (MSD) R4042379-4 03/05/24 19:29

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene | 5.00 | U | 6.52 | 5.00 | 130 | 100 | 1 | 37.0-151 | | | 26.4 | 61 |
| Bromodichloromethane | 5.00 | U | 6.44 | 5.05 | 129 | 101 | 1 | 35.0-155 | | | 24.2 | 56 |
| Bromoform | 5.00 | U | 7.18 | 5.98 | 144 | 120 | 1 | 45.0-169 | | | 18.2 | 42 |
| Bromomethane | 5.00 | U | 2.76 | 1.93 | 55.2 | 38.6 | 1 | 0.100-206 | | | 35.4 | 61 |
| Carbon tetrachloride | 5.00 | U | 7.41 | 6.10 | 148 | 122 | 1 | 70.0-140 | J5 | | 19.4 | 41 |
| Chlorobenzene | 5.00 | U | 6.53 | 5.24 | 131 | 105 | 1 | 37.0-160 | | | 21.9 | 53 |
| Chlorodibromomethane | 5.00 | U | 6.38 | 5.16 | 128 | 103 | 1 | 53.0-149 | | | 21.1 | 50 |
| Chloroethane | 5.00 | U | 4.48 | 3.71 | 89.6 | 74.2 | 1 | 14.0-230 | | | 18.8 | 78 |
| Chloroform | 5.00 | U | 6.44 | 4.88 | 129 | 97.6 | 1 | 51.0-138 | | | 27.6 | 54 |
| Chloromethane | 5.00 | U | 7.58 | 6.40 | 152 | 128 | 1 | 0.100-273 | | | 16.9 | 60 |
| 1,2-Dichlorobenzene | 5.00 | U | 6.35 | 4.97 | 127 | 99.4 | 1 | 18.0-190 | | | 24.4 | 57 |
| 1,3-Dichlorobenzene | 5.00 | U | 6.17 | 5.03 | 123 | 101 | 1 | 59.0-156 | | | 20.4 | 43 |
| 1,4-Dichlorobenzene | 5.00 | U | 6.40 | 5.00 | 128 | 100 | 1 | 18.0-190 | | | 24.6 | 57 |
| Dichlorodifluoromethane | 5.00 | U | 6.79 | 5.66 | 136 | 113 | 1 | 20.0-160 | | | 18.2 | 20 |
| 1,1-Dichloroethane | 5.00 | U | 6.70 | 5.47 | 134 | 109 | 1 | 59.0-155 | | | 20.2 | 40 |
| 1,2-Dichloroethane | 5.00 | U | 6.61 | 5.50 | 132 | 110 | 1 | 49.0-155 | | | 18.3 | 49 |
| 1,1-Dichloroethene | 5.00 | U | 6.12 | 5.03 | 122 | 101 | 1 | 0.100-234 | | | 19.6 | 32 |
| cis-1,2-Dichloroethene | 5.00 | U | 6.42 | 5.03 | 128 | 101 | 1 | 43.0-142 | | J3 | 24.3 | 20 |
| trans-1,2-Dichloroethene | 5.00 | U | 6.38 | 5.30 | 128 | 106 | 1 | 54.0-156 | | | 18.5 | 45 |
| 1,2-Dichloropropane | 5.00 | U | 7.19 | 5.30 | 144 | 106 | 1 | 0.100-210 | | | 30.3 | 55 |
| cis-1,3-Dichloropropene | 5.00 | U | 5.75 | 4.59 | 115 | 91.8 | 1 | 0.100-227 | | | 22.4 | 58 |
| trans-1,3-Dichloropropene | 5.00 | U | 6.05 | 4.84 | 121 | 96.8 | 1 | 17.0-183 | | | 22.2 | 86 |
| Ethylbenzene | 5.00 | 0.157 | 6.82 | 5.65 | 133 | 110 | 1 | 37.0-162 | | | 18.8 | 63 |
| Methylene Chloride | 5.00 | U | 5.78 | 4.76 | 116 | 95.2 | 1 | 0.100-221 | | | 19.4 | 28 |
| Methyl tert-butyl ether | 5.00 | U | 6.09 | 4.91 | 122 | 98.2 | 1 | 42.0-142 | | J3 | 21.5 | 20 |
| Naphthalene | 5.00 | U | 4.85 | 4.41 | 97.0 | 88.2 | 1 | 42.0-146 | | | 9.50 | 20 |
| 1,1,2,2-Tetrachloroethane | 5.00 | U | 5.74 | 4.58 | 115 | 91.6 | 1 | 46.0-157 | | | 22.5 | 61 |
| Tetrachloroethene | 5.00 | U | 6.96 | 5.70 | 139 | 114 | 1 | 64.0-148 | | | 19.9 | 39 |
| Toluene | 5.00 | U | 6.35 | 5.13 | 127 | 103 | 1 | 47.0-150 | | | 21.3 | 41 |
| 1,1,1-Trichloroethane | 5.00 | U | 7.04 | 5.66 | 141 | 113 | 1 | 56.0-162 | | | 21.7 | 36 |
| 1,1,2-Trichloroethane | 5.00 | U | 6.48 | 5.02 | 130 | 100 | 1 | 52.0-150 | | | 25.4 | 45 |
| Trichloroethene | 5.00 | U | 6.98 | 5.67 | 140 | 113 | 1 | 70.0-157 | | | 20.7 | 48 |
| Trichlorofluoromethane | 5.00 | U | 6.97 | 5.84 | 139 | 117 | 1 | 17.0-181 | | | 17.6 | 84 |
| Vinyl chloride | 5.00 | U | 5.17 | 3.98 | 103 | 79.6 | 1 | 0.100-251 | | | 26.0 | 66 |
| (S) Toluene-d8 | | | | | 94.4 | 94.3 | | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | | 91.6 | 94.6 | | 80.0-120 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | | 97.4 | 101 | | 70.0-130 | | | | |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4042756-3 03/04/24 22:29

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|-----------------------------|-------------------|--------------|----------------|----------------|
| Acetone | U | | 11.3 | 50.0 |
| Acrolein | U | | 2.54 | 50.0 |
| Acrylonitrile | U | | 0.671 | 10.0 |
| Benzene | U | | 0.0941 | 1.00 |
| Bromobenzene | U | | 0.118 | 1.00 |
| Bromodichloromethane | U | | 0.136 | 1.00 |
| Bromoform | U | | 0.129 | 1.00 |
| Bromomethane | U | | 0.605 | 5.00 |
| n-Butylbenzene | U | | 0.157 | 1.00 |
| sec-Butylbenzene | U | | 0.125 | 1.00 |
| tert-Butylbenzene | U | | 0.127 | 1.00 |
| Carbon disulfide | U | | 0.0962 | 1.00 |
| Carbon tetrachloride | U | | 0.128 | 1.00 |
| Chlorobenzene | U | | 0.116 | 1.00 |
| Chlorodibromomethane | U | | 0.140 | 1.00 |
| Chloroethane | U | | 0.192 | 5.00 |
| Chloroform | U | | 0.111 | 5.00 |
| Chloromethane | U | | 0.960 | 2.50 |
| 2-Chlorotoluene | U | | 0.106 | 1.00 |
| 4-Chlorotoluene | U | | 0.114 | 1.00 |
| 1,2-Dibromo-3-Chloropropane | U | | 0.276 | 5.00 |
| 1,2-Dibromoethane | U | | 0.126 | 1.00 |
| Dibromomethane | U | | 0.122 | 1.00 |
| 1,2-Dichlorobenzene | U | | 0.107 | 1.00 |
| 1,3-Dichlorobenzene | U | | 0.110 | 1.00 |
| 1,4-Dichlorobenzene | U | | 0.120 | 1.00 |
| Dichlorodifluoromethane | U | | 0.374 | 5.00 |
| 1,1-Dichloroethane | U | | 0.100 | 1.00 |
| 1,2-Dichloroethane | U | | 0.0819 | 1.00 |
| 1,1-Dichloroethene | U | | 0.188 | 1.00 |
| cis-1,2-Dichloroethene | U | | 0.126 | 1.00 |
| trans-1,2-Dichloroethene | U | | 0.149 | 1.00 |
| 1,2-Dichloropropane | U | | 0.149 | 1.00 |
| 1,1-Dichloropropene | U | | 0.142 | 1.00 |
| 1,3-Dichloropropane | U | | 0.110 | 1.00 |
| cis-1,3-Dichloropropene | U | | 0.111 | 1.00 |
| trans-1,3-Dichloropropene | U | | 0.118 | 1.00 |
| 2,2-Dichloropropane | U | | 0.161 | 1.00 |
| Di-isopropyl ether | U | | 0.105 | 1.00 |
| Ethylbenzene | U | | 0.137 | 1.00 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4042756-3 03/04/24 22:29

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|--------------------------------|-----------|--------------|--------|----------|
| | ug/l | | ug/l | ug/l |
| Hexachloro-1,3-butadiene | U | | 0.337 | 1.00 |
| Isopropylbenzene | U | | 0.105 | 1.00 |
| p-Isopropyltoluene | U | | 0.120 | 1.00 |
| 2-Butanone (MEK) | U | | 1.19 | 10.0 |
| Methylene Chloride | U | | 0.430 | 5.00 |
| 4-Methyl-2-pentanone (MIBK) | U | | 0.478 | 10.0 |
| Methyl tert-butyl ether | U | | 0.101 | 1.00 |
| Naphthalene | U | | 1.00 | 5.00 |
| n-Propylbenzene | U | | 0.0993 | 1.00 |
| Styrene | U | | 0.118 | 1.00 |
| 1,1,1,2-Tetrachloroethane | U | | 0.147 | 1.00 |
| 1,1,2,2-Tetrachloroethane | U | | 0.133 | 1.00 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.180 | 1.00 |
| Tetrachloroethene | U | | 0.300 | 1.00 |
| Toluene | U | | 0.278 | 1.00 |
| 1,2,3-Trichlorobenzene | U | | 0.230 | 1.00 |
| 1,2,4-Trichlorobenzene | U | | 0.481 | 1.00 |
| 1,1,1-Trichloroethane | U | | 0.149 | 1.00 |
| 1,1,2-Trichloroethane | U | | 0.158 | 1.00 |
| Trichloroethene | U | | 0.190 | 1.00 |
| Trichlorofluoromethane | U | | 0.160 | 5.00 |
| 1,2,3-Trichloropropane | U | | 0.237 | 2.50 |
| 1,2,4-Trimethylbenzene | U | | 0.322 | 1.00 |
| 1,2,3-Trimethylbenzene | U | | 0.104 | 1.00 |
| 1,3,5-Trimethylbenzene | U | | 0.104 | 1.00 |
| Vinyl chloride | U | | 0.234 | 1.00 |
| Xylenes, Total | U | | 0.174 | 3.00 |
| (S) Toluene-d8 | 102 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 106 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 90.8 | | | 70.0-130 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4042756-1 03/04/24 21:31 • (LCSD) R4042756-2 03/04/24 21:51

| Analyte | Spike Amount | LCS Result | LCSD Result | LCS Rec. | LCSD Rec. | Rec. Limits | LCS Qualifier | LCSD Qualifier | RPD | RPD Limits |
|---------------|--------------|------------|-------------|----------|-----------|-------------|---------------|----------------|-------|------------|
| | ug/l | ug/l | ug/l | % | % | % | | | % | % |
| Acetone | 25.0 | 22.6 | 20.4 | 90.4 | 81.6 | 19.0-160 | | | 10.2 | 27 |
| Acrolein | 25.0 | 19.2 | 18.0 | 76.8 | 72.0 | 10.0-160 | | | 6.45 | 26 |
| Acrylonitrile | 25.0 | 25.1 | 25.2 | 100 | 101 | 55.0-149 | | | 0.398 | 20 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4042756-1 03/04/24 21:31 • (LCSD) R4042756-2 03/04/24 21:51

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | <u>LCS Qualifier</u> | <u>LCSD Qualifier</u> | RPD % | RPD Limits % |
|-----------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|----------------------|-----------------------|----------|-----------------|
| Benzene | 5.00 | 5.06 | 5.28 | 101 | 106 | 70.0-123 | | | 4.26 | 20 |
| Bromobenzene | 5.00 | 5.60 | 5.35 | 112 | 107 | 73.0-121 | | | 4.57 | 20 |
| Bromodichloromethane | 5.00 | 5.43 | 5.14 | 109 | 103 | 75.0-120 | | | 5.49 | 20 |
| Bromoform | 5.00 | 5.50 | 5.33 | 110 | 107 | 68.0-132 | | | 3.14 | 20 |
| Bromomethane | 5.00 | 4.66 | 4.79 | 93.2 | 95.8 | 10.0-160 | | | 2.75 | 25 |
| n-Butylbenzene | 5.00 | 5.19 | 5.41 | 104 | 108 | 73.0-125 | | | 4.15 | 20 |
| sec-Butylbenzene | 5.00 | 5.76 | 5.65 | 115 | 113 | 75.0-125 | | | 1.93 | 20 |
| tert-Butylbenzene | 5.00 | 5.61 | 5.41 | 112 | 108 | 76.0-124 | | | 3.63 | 20 |
| Carbon disulfide | 5.00 | 5.42 | 5.49 | 108 | 110 | 61.0-128 | | | 1.28 | 20 |
| Carbon tetrachloride | 5.00 | 5.97 | 6.30 | 119 | 126 | 68.0-126 | | | 5.38 | 20 |
| Chlorobenzene | 5.00 | 5.85 | 5.79 | 117 | 116 | 80.0-121 | | | 1.03 | 20 |
| Chlorodibromomethane | 5.00 | 5.27 | 5.24 | 105 | 105 | 77.0-125 | | | 0.571 | 20 |
| Chloroethane | 5.00 | 5.70 | 5.61 | 114 | 112 | 47.0-150 | | | 1.59 | 20 |
| Chloroform | 5.00 | 5.35 | 5.31 | 107 | 106 | 73.0-120 | | | 0.750 | 20 |
| Chloromethane | 5.00 | 5.53 | 5.62 | 111 | 112 | 41.0-142 | | | 1.61 | 20 |
| 2-Chlorotoluene | 5.00 | 5.81 | 5.50 | 116 | 110 | 76.0-123 | | | 5.48 | 20 |
| 4-Chlorotoluene | 5.00 | 5.53 | 5.37 | 111 | 107 | 75.0-122 | | | 2.94 | 20 |
| 1,2-Dibromo-3-Chloropropane | 5.00 | 4.85 | 5.04 | 97.0 | 101 | 58.0-134 | | | 3.84 | 20 |
| 1,2-Dibromoethane | 5.00 | 5.25 | 5.30 | 105 | 106 | 80.0-122 | | | 0.948 | 20 |
| Dibromomethane | 5.00 | 5.60 | 5.48 | 112 | 110 | 80.0-120 | | | 2.17 | 20 |
| 1,2-Dichlorobenzene | 5.00 | 5.43 | 5.09 | 109 | 102 | 79.0-121 | | | 6.46 | 20 |
| 1,3-Dichlorobenzene | 5.00 | 5.69 | 5.36 | 114 | 107 | 79.0-120 | | | 5.97 | 20 |
| 1,4-Dichlorobenzene | 5.00 | 5.43 | 5.15 | 109 | 103 | 79.0-120 | | | 5.29 | 20 |
| Dichlorodifluoromethane | 5.00 | 7.98 | 8.06 | 160 | 161 | 51.0-149 | J4 | J4 | 0.998 | 20 |
| 1,1-Dichloroethane | 5.00 | 5.40 | 5.78 | 108 | 116 | 70.0-126 | | | 6.80 | 20 |
| 1,2-Dichloroethane | 5.00 | 5.10 | 5.10 | 102 | 102 | 70.0-128 | | | 0.000 | 20 |
| 1,1-Dichloroethene | 5.00 | 5.86 | 5.92 | 117 | 118 | 71.0-124 | | | 1.02 | 20 |
| cis-1,2-Dichloroethene | 5.00 | 5.45 | 5.51 | 109 | 110 | 73.0-120 | | | 1.09 | 20 |
| trans-1,2-Dichloroethene | 5.00 | 5.71 | 5.81 | 114 | 116 | 73.0-120 | | | 1.74 | 20 |
| 1,2-Dichloropropane | 5.00 | 5.30 | 5.26 | 106 | 105 | 77.0-125 | | | 0.758 | 20 |
| 1,1-Dichloropropene | 5.00 | 5.44 | 5.56 | 109 | 111 | 74.0-126 | | | 2.18 | 20 |
| 1,3-Dichloropropane | 5.00 | 5.36 | 5.36 | 107 | 107 | 80.0-120 | | | 0.000 | 20 |
| cis-1,3-Dichloropropene | 5.00 | 4.90 | 4.89 | 98.0 | 97.8 | 80.0-123 | | | 0.204 | 20 |
| trans-1,3-Dichloropropene | 5.00 | 5.68 | 5.82 | 114 | 116 | 78.0-124 | | | 2.43 | 20 |
| 2,2-Dichloropropane | 5.00 | 5.64 | 5.72 | 113 | 114 | 58.0-130 | | | 1.41 | 20 |
| Di-isopropyl ether | 5.00 | 5.03 | 4.96 | 101 | 99.2 | 58.0-138 | | | 1.40 | 20 |
| Ethylbenzene | 5.00 | 5.80 | 5.82 | 116 | 116 | 79.0-123 | | | 0.344 | 20 |
| Hexachloro-1,3-butadiene | 5.00 | 5.62 | 5.40 | 112 | 108 | 54.0-138 | | | 3.99 | 20 |
| Isopropylbenzene | 5.00 | 5.86 | 5.89 | 117 | 118 | 76.0-127 | | | 0.511 | 20 |
| p-Isopropyltoluene | 5.00 | 5.59 | 5.43 | 112 | 109 | 76.0-125 | | | 2.90 | 20 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4042756-1 03/04/24 21:31 • (LCSD) R4042756-2 03/04/24 21:51

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|--------------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| 2-Butanone (MEK) | 25.0 | 21.7 | 22.2 | 86.8 | 88.8 | 44.0-160 | | | 2.28 | 20 |
| Methylene Chloride | 5.00 | 5.16 | 5.18 | 103 | 104 | 67.0-120 | | | 0.387 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 25.0 | 26.1 | 25.8 | 104 | 103 | 68.0-142 | | | 1.16 | 20 |
| Methyl tert-butyl ether | 5.00 | 5.40 | 5.30 | 108 | 106 | 68.0-125 | | | 1.87 | 20 |
| Naphthalene | 5.00 | 5.69 | 5.51 | 114 | 110 | 54.0-135 | | | 3.21 | 20 |
| n-Propylbenzene | 5.00 | 5.73 | 5.57 | 115 | 111 | 77.0-124 | | | 2.83 | 20 |
| Styrene | 5.00 | 5.53 | 5.61 | 111 | 112 | 73.0-130 | | | 1.44 | 20 |
| 1,1,1,2-Tetrachloroethane | 5.00 | 5.48 | 5.54 | 110 | 111 | 75.0-125 | | | 1.09 | 20 |
| 1,1,2,2-Tetrachloroethane | 5.00 | 4.90 | 4.67 | 98.0 | 93.4 | 65.0-130 | | | 4.81 | 20 |
| 1,1,2-Trichlorotrifluoroethane | 5.00 | 5.73 | 5.84 | 115 | 117 | 69.0-132 | | | 1.90 | 20 |
| Tetrachloroethene | 5.00 | 6.99 | 6.83 | 140 | 137 | 72.0-132 | J4 | J4 | 2.32 | 20 |
| Toluene | 5.00 | 5.74 | 5.67 | 115 | 113 | 79.0-120 | | | 1.23 | 20 |
| 1,2,3-Trichlorobenzene | 5.00 | 5.44 | 5.22 | 109 | 104 | 50.0-138 | | | 4.13 | 20 |
| 1,2,4-Trichlorobenzene | 5.00 | 5.16 | 5.31 | 103 | 106 | 57.0-137 | | | 2.87 | 20 |
| 1,1,1-Trichloroethane | 5.00 | 5.51 | 5.57 | 110 | 111 | 73.0-124 | | | 1.08 | 20 |
| 1,1,2-Trichloroethane | 5.00 | 5.81 | 5.68 | 116 | 114 | 80.0-120 | | | 2.26 | 20 |
| Trichloroethene | 5.00 | 5.60 | 5.78 | 112 | 116 | 78.0-124 | | | 3.16 | 20 |
| Trichlorofluoromethane | 5.00 | 6.43 | 6.77 | 129 | 135 | 59.0-147 | | | 5.15 | 20 |
| 1,2,3-Trichloropropane | 5.00 | 5.05 | 5.19 | 101 | 104 | 73.0-130 | | | 2.73 | 20 |
| 1,2,4-Trimethylbenzene | 5.00 | 5.32 | 5.20 | 106 | 104 | 76.0-121 | | | 2.28 | 20 |
| 1,2,3-Trimethylbenzene | 5.00 | 5.51 | 5.40 | 110 | 108 | 77.0-120 | | | 2.02 | 20 |
| 1,3,5-Trimethylbenzene | 5.00 | 5.59 | 5.45 | 112 | 109 | 76.0-122 | | | 2.54 | 20 |
| Vinyl chloride | 5.00 | 6.38 | 6.33 | 128 | 127 | 67.0-131 | | | 0.787 | 20 |
| Xylenes, Total | 15.0 | 18.1 | 17.8 | 121 | 119 | 79.0-123 | | | 1.67 | 20 |
| (S) Toluene-d8 | | | | 102 | 100 | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | 106 | 106 | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 93.9 | 93.9 | 70.0-130 | | | | |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4044069-2 03/11/24 11:20

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Trichloroethene | U | | 0.190 | 1.00 |
| (S) Toluene-d8 | 109 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 99.2 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 102 | | | 70.0-130 |

Laboratory Control Sample (LCS)

(LCS) R4044069-1 03/11/24 10:34

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---------------------------|----------------------|--------------------|---------------|------------------|---------------|
| Trichloroethene | 5.00 | 4.47 | 89.4 | 78.0-124 | |
| (S) Toluene-d8 | | | 111 | 80.0-120 | |
| (S) 4-Bromofluorobenzene | | | 101 | 77.0-126 | |
| (S) 1,2-Dichloroethane-d4 | | | 100 | 70.0-130 | |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|--|
| C3 | The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable. |
| C5 | The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result. |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J4 | The associated batch QC was outside the established quality control range for accuracy. |
| J5 | The sample matrix interfered with the ability to make any accurate determination; spike value is high. |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

ACCREDITATIONS & LOCATIONS

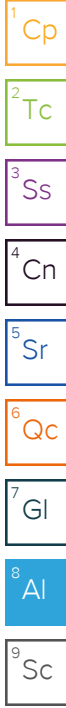
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|-------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey-NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio-VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA-Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



State of Oregon Chain of Custody

| | | | |
|--|--|---|---|
| Agency, Authorized Purchaser or Agent: GSI Water Solutions for ODEQ Send Lab Report To: Mark Pugh Address: 700 NE Multnomah Street, Suite 600 Portland, OR 97232-4100 Tel. #: 503-229-5587 Email: Mark.PUGH@deq.oregon.gov, cmartin@gsiws.com, amccarthy@gsiws.com, mfaragher@gsiws.com, dbs@gsiws.com | Contract Laboratory Name: Pace Analytical National Lab Batch #: ODEQ/Business Office 700 NE Multnomah Street, Suite 600 Portland, OR 97232 Email: DEQEXP@deq.state.or.us | Lab Selection Criteria: Proximity (if TAT < 48 hrs) Prior work on same project Cost (for anticipated analyses) Other labs disqualified or unable to perform requested services Emergency work | Turn Around Time: 10 days (std.) 5 days 72 hours 48 hours 24 hours Other _____ |
|--|--|---|---|

Project Name: OREGON DEQ-MILWAUKIE INTERNATIONAL WAY

Project #: 2060.007

Sampler Name: Alex McCarthy

| | | | | | |
|---|----------------------------|--|--|--|------|
| Solids: MeOH Liquids: HCl Liquids: HCl 40 ml 4/11 | Sample Preservative | | | | A109 |
| | Requested Analyses | | | | |

| Sample ID# | Collection Date | Collection Time | Matrix | Number of Containers | VOCs by 8260D | VOCs by 824 | Hold | Comments |
|------------|-----------------|-----------------|--------|----------------------|---------------|-------------|------|-------------------|
| EXT-2R | 2/29/24 | 915 | AQ | 3 | X | | | L17110 3S - 91 |
| EXT-3R | 2/29/24 | 1000 | AQ | 3 | X | | | - 92 |
| EXT-4 | 2/29/24 | 930 | AQ | 3 | X | | | - 93 |
| EFF | 2/29/24 | 1625 | AQ | 3 | | X | | - 94 |
| TREP BLANK | 2/29/24 | - | AQ | 1 | | | X | - 95 |

Sample Receipt Checklist

COC Seal Present/Intact: Y N If Applicable

COC Signed/Accurate: Y N VOA Zero Headspace: Y N

Bottles arrive intact: Y N Pres. Correct/Check: Y N

Correct bottles used: Y N

Sufficient volume sent: Y N

RA Screen <0.5 mR/hr: Y N

NOTES: Contact Alex McCarthy (202.538.4166, amccarthy@gsiws.com) or Chris Marting (503.432.5979, cmartin@gsiws.com) with questions. Include DEQ EDD with final lab report.

| | | | |
|--|---|--|--|
| Relinquished By: Alex McCarthy Signature: [Signature] | Agency/Agent: GSI on behalf of DEQ Time & Date: 1130 2/29/24 | Received By: [Signature] Signature: [Signature] | Agency/Agent: Time & Date: |
| Relinquished By: Signature: | Agency/Agent: Time & Date: | Received By: [Signature] Signature: [Signature] | Agency/Agent: PACE Time & Date: 3-1-24 9:00 |

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S & C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.

7210 2108 9456
 RPA9 2.2 + 0 = 2.2

Data Validation Report

Milwaukie International Way

GSI First Quarter 2024 Data

April 9, 2024

Prepared by: Mitchell Fargher



GSI Water Solutions, Inc.

650 NE Holladay Street, Suite 900, Portland, OR 97232

Report Narrative

The data in this abbreviated validation and usability report (EPA Stage 2A) were reviewed using the guidance presented in the following:

- Project QAPP (where required)
- Method Specific Control Limits
- Laboratory Standard Operation Procedures (SOPs) & Control Limits
- *National Functional Guidelines for Organic Data Review (USEPA 2020)*
- *National Functional Guidelines for Inorganic Data Review (USEPA 2020)*
- *National Functional Guidelines for High Resolution Superfund Methods Data Review (USEPA 2020)*

Data that is not qualified meets the data quality objectives specified in the referenced documents and can be used for decision-making purposes. Data qualified as estimated (J/UJ) may be used for decision-making purposes but should be used in conjunction with the reason codes assigned to the qualifier for further context. Data that is rejected (R) should not be used for any decision-making purposes due to significant deviations in quality control requirements.

Sample Delivery Group (SDG) Summary

| SDG | Analytical Laboratory | Sample Receipt Date | Lab Report Date |
|----------|-----------------------|---------------------|-----------------|
| L1711035 | Pace Analytical | 03/01/2024 | 03/15/2024 |

Analytical Methods & Technical Holding Times

| Analytical Method | Sample Matrix | Technical Holding Time (4 °C) |
|-------------------|---------------|-------------------------------|
| EPA 8260D | Aqueous | 14 Days |
| EPA 624.1 | Aqueous | 14 Days |

Sample Delivery Group: L1711035

Sample Delivery Group L1711035

was comprised of a single Pace Analytical laboratory report. The section below contains qualifications related to the entirety of the package.

Sample Identification

The following 4 field samples were included in this sample delivery group:

| Field Sample ID | Lab Sample ID | Sample Date | Matrix | Sample Type |
|-----------------|---------------|----------------|-------------|-------------|
| EXT-2R | L1711035-01 | 02/29/24 09:15 | Groundwater | Normal |
| EXT-3R | L1711035-02 | 02/29/24 10:00 | Groundwater | Normal |
| EXT-4 | L1711035-03 | 02/29/24 09:30 | Groundwater | Normal |
| EFF | L1711035-04 | 02/29/24 10:25 | Waste Water | Normal |

Sample Management

Sample Receipt

All sample receipt documentation was complete and correct. Samples were shipped to the laboratory by the client. Samples were received intact, and the bottle labels agreed with the COC. No anomalies were noted.

Holding Time/Preservation

The samples were analyzed within the technical holding times and were properly preserved.

Laboratory QA/QC

Initial & Continuing Calibration (ICV/CCV)

Not independently verified during abbreviated Stage 2A/B validation with access to only the Level 2 lab report. Lab did not flag any sample results having an associated ICV/CCV outside of specified control limits except for:

| Batch | Method | Analyte | Reason | Qualifier |
|-----------|-----------|----------------|-----------|-----------|
| WG2239493 | EPA 8260D | Acrolein | CCV < LCL | J- |
| WG2239493 | EPA 8260D | Vinyl chloride | CCV > UCL | J+ |

Method Blanks

Method blanks were performed per lab batch and no analytes were detected or did not affect qualification of samples.

Reporting Limits

Reporting limits were not verified against project specific requirements.

Sample Dilutions

Reported sample dilutions were reviewed and detected analytes were reported from a sample analysis with the lowest dilution.

Surrogate Spikes / Labeled Standards

Surrogates or labeled standards were added to field and QC samples as required per the method where applicable. Sample surrogate percent recoveries for were within QC acceptance limits.

Matrix Spike (MS)/Matrix Spike Duplicates (MSD)

The MS and MSD analyses performed on SDG samples met all QC acceptance criteria for percent recovery and relative percent difference (RPD) where required per the method.

Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

An LCS was analyzed for each batch and all recoveries were within QC acceptance criteria or did not affect qualification of samples except for:

| Batch | Method | Analyte | Reason | Qualifier |
|-----------|-----------|-------------------|-----------|-----------|
| WG2239493 | EPA 8260D | Tetrachloroethene | LCS > UCL | J+ |

Laboratory Duplicates

Laboratory duplicate analyses were analyzed where required and all recoveries were within QC acceptance criteria.

Target Compound Identification

All target compound identifications were within validation criteria for relative retention times, characteristic ions, and relative ion abundances where applicable.

Tentatively Identified Compounds (TIC)

No results were reported as TICs as a part of this SDG.

Field QA/QC

Field Duplicates

Field duplicates were not collected or analyzed as part of this SDG.

Equipment Blanks

Equipment blanks were not collected or analyzed as part of this SDG.

Trip Blanks

Trip blanks were not collected or analyzed as part of this SDG.

SDG Overall Assessment

The data found in this report complied with the data quality objectives as specified. The data, as qualified, are acceptable to use for decision-making purposes. No results were rejected. Data qualifiers are summarized in the following table (results qualified as U due to being non-detect were not included in the table below):

| Field Sample ID | Analyte | Result | Qualifier | Validation Code |
|-----------------|--------------------------|--------|-----------|-----------------|
| EFF | 1,1-Dichloroethene | 0.537 | J | BRL |
| EFF | Tetrachloroethene | 0.715 | J | BRL |
| EFF | trans-1,2-Dichloroethene | 0.884 | J | BRL |
| EXT-2R | 1,1-Dichloroethene | 0.267 | J | BRL |
| EXT-2R | Acrolein | 2.54 | UJ- | CCV |
| EXT-2R | Tetrachloroethene | 0.969 | J+ | LCS |
| EXT-2R | trans-1,2-Dichloroethene | 0.92 | J | BRL |
| EXT-2R | Vinyl chloride | 0.241 | J | BRL |
| EXT-3R | Acrolein | 2.54 | UJ- | CCV |
| EXT-3R | Vinyl chloride | 24.4 | J+ | CCV |
| EXT-4 | Acrolein | 25.4 | UJ- | CCV |
| EXT-4 | trans-1,2-Dichloroethene | 1.64 | J | BRL |

ATTACHMENT B

Weekly O&M Logs

GSI
INTERNATIONAL WAY-SITE REPORT

- Routine Inspection & Maintenance (weekly)
- Non-Routine O&M/Repair (as needed-work order)
- Alarm Response (as needed-work order)

DATE: 1-4-24 PERSONNEL: Pat Yodanis
 WEATHER: Overcast Showers

| System Components | Inspect | Clean | Perform Maintenance* |
|---------------------------|-------------------------------------|--------------------------|---|
| Auto Dialer | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> off Lin |
| Control Panel / PLC | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper Blower | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Stripper Pre-Filters | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Equalization Tank | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Groundwater Transfer Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Carbon Vessels | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Sump Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ext-1 Sequestriant | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> EXT-3 only. |

| | | | | | | |
|-----------------|-------------------|-------------|--------------|--|-----------|------------|
| Groundwater Sys | <u>24</u> | East Filter | <u>24</u> | West Filter | <u>26</u> | Pre-Filter |
| Effluent total | <u>0000131644</u> | Time | <u>15:10</u> | | | |
| EXT-4 total | <u>0774404</u> | Time | <u>15:10</u> | | | |
| EXT-2 total | <u>1753917</u> | Time | <u>15:10</u> | | | |
| EXT-3 total | <u>9677840</u> | Time | <u>15:10</u> | | | |
| Trench total | <u>1654904</u> | Time | <u>15:10</u> | <i>Pump may Be Plugged on open List.</i> | | |

Comments: _____

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INTERNATIONAL WAY-SITE REPORT



Routine Inspection & Maintenance (weekly)



Non-Routine O&M/Repair (as needed-work order)



Alarm Response (as needed-work order)

DATE: 1-11-24

PERSONNEL: Pat Yodanis

WEATHER: Overcast

Stowers

System Components

| | Inspect | Clean | Perform Maintenance* |
|--------------------------------|-------------------------------------|--------------------------|--|
| Auto Dialer | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> off line waiting on new Modem |
| Control Panel / PLC | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper Blower | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Stripper Pre-Filters | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Equalization Tank | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Groundwater Transfer Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Carbon Vessels | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Sump Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ext-1 Sequestriant | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> EXT-3 only. |

Groundwater Sys 24 East Filter 24 West Filter 26 Pre-Filter

Effluent total 0000131814 Time 15:05

EXT-4 total 0801470 Time 15:05

EXT-2 total 1835121 Time 15:05

EXT-3 total 9729980 Time 15:05

Trench total 1654904 Time 15:05

off line Plugged for Lines

Comments:

* 3/4 Box Bag filter Remain
 * 2 full Drums Sequestered Remain
 * In anticipation of Cold Days approaching Left 2 Heaters Running in Compound
 * all Systems Operational On Departure

GSI

INTERNATIONAL WAY-SITE REPORT

| |
|-------------------------------------|
| <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> |
| <input type="checkbox"/> |

Routine Inspection & Maintenance (weekly)

Non-Routine O&M/Repair (as needed-work order)

Alarm Response (as needed-work order)

DATE: 1-18-24

PERSONNEL:

WEATHER: Extreme weather Conditions

| System Components | Inspect | Clean | Perform Maintenance* |
|---------------------------------|-------------------------------------|--------------------------|--|
| Auto Dialer | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> NOT operational |
| Control Panel / Auto | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper Blower | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Stripper Pre-Filters | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Equalization Tank | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Groundwater Transfer Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Carbon Vessels | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Sump Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ext-1 Sequestriant | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Groundwater Sys 23 East Filter 23 West Filter 26 Pre-Filter

Effluent total 000131858 Time 13:00

EXT-4 total 0808594 Time 13:00

EXT-2 total 1856193 Time 13:00

* EXT-3 total 9743171 Time 13:00 * off waiting TO THAW .

* Trench total 1654904 Time 13:00 * off Needs xfer Line Pump Repair.

Comments: * As Warmer air arrives was able TO Reconnect and Restart EXT-2R EXT-4

* EXT-3 is still Frozen Left off

* Trench Pump Needs Replaced and Or xfer Lines Cleaned

* Let SYSTEM Cycle 2 Times Complete Cycles all Running except mentioned

* Weather is predicted warmer with Rain Hence Leaving SYSTEMS On.

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INTERNATIONAL WAY-SITE REPORT



Routine Inspection & Maintenance (weekly)



Non-Routine O&M/Repair (as needed-work order)



Alarm Response (as needed-work order)

DATE: 1-25-24

PERSONNEL:

Pat Yodanis

WEATHER: Overcast

| System Components | Inspect | Clean | Perform Maintenance* |
|---------------------------|--------------------------------------|--------------------------|--|
| Auto Dialer | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Control Panel / PLC | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper | <input type="checkbox" value="OFF"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper Blower | <input type="checkbox" value="OFF"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Stripper Pre-Filters | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Equalization Tank | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Groundwater Transfer Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Carbon Vessels | <input type="checkbox" value="OFF"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Sump Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ext-1 Sequestriant | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> EXT-3. |

Groundwater Sys 24 East Filter 24 West Filter 26 Pre-Filter

Effluent total 000132003 Time 16:00

EXT-4 total 0826492 Time 16:00

EXT-2 total 1946320 Time 16:00

EXT-3 total 9772682 Time 16:00

* Trench total 1654904 Time 16:00 xbr line Plugged

Comments: 3/4 Box Bag filters Remain

* Sequestal OK.

GSI

INTERNATIONAL WAY-SITE REPORT

Routine Inspection & Maintenance (weekly)

Non-Routine O&M/Repair (as needed-work order)

Alarm Response (as needed-work order)

DATE: 2-8-24

PERSONNEL:

Pat Yordon

WEATHER:

Light Rain

| System Components | Inspect | Clean | Perform Maintenance* |
|-------------------------------|-------------------------------------|--------------------------|--|
| Auto Dialer | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> <i>Remains NOT functional</i> |
| Control Panel / 24 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper Blower | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Stripper Pre-Filters | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Equalization Tank | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Groundwater Transfer Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Carbon Vessels | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Sump Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ext-1 Sequestriant | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> EXT-3 |

Groundwater Sys 24 East Filter 24 West Filter 24 Pre-Filter

| | | | |
|----------------|-------------------|------|--------------|
| Effluent total | <u>0000132342</u> | Time | <u>18:00</u> |
| EXT-4 total | <u>0880155</u> | Time | <u>18:00</u> |
| EXT-2 total | <u>2117580</u> | Time | <u>18:00</u> |
| EXT-3 total | <u>9867676</u> | Time | <u>18:00</u> |
| Trench total | <u>1654904</u> | Time | <u>18:00</u> |

x Fer Lines Plugged

Comments: _____

GSI

INTERNATIONAL WAY-SITE REPORT



Routine Inspection & Maintenance (weekly)



Non-Routine O&M/Repair (as needed-work order)



Alarm Response (as needed-work order)

DATE: 2-22-24

PERSONNEL:

Pat Yaden

WEATHER:

Clear clouds 50s

| System Components | Inspect | Clean | Perform Maintenance* |
|-------------------------------|-------------------------------------|--------------------------|---|
| Auto Dialer | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Remains off line |
| Control Panel 1000 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper Blower | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Stripper Pre-Filters | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Equalization Tank | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Groundwater Transfer Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Carbon Vessels | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Sump Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ext-1 Sequestriant | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> EXT-3 & EXT-4 |

Groundwater Sys 24 East Filter 24 West Filter 26 Pre-Filter

| | | | |
|----------------|---------------------|------|-------------|
| Effluent total | 0000132661 | Time | 14:10 |
| EXT-4 total | 0933000 | Time | 14:10 |
| EXT-2 total | 2279375 | Time | 14:10 |
| EXT-3 total | 9957230 | Time | 14:10 |
| Trench total | off line 1654904 | Time | as Reported |

Comments:

* Tested all Vault A/C Power now all functional
 EXT- 2R Sequest Pump is not operational as well
 as its Vault Sump Bath at 230 VAC
 * EXT-4 now has operational Sequest Pump and Vault
 Sump reported to Chris with GSI

GSI

INTERNATIONAL WAY-SITE REPORT



Routine Inspection & Maintenance (weekly)



Non-Routine O&M/Repair (as needed-work order)



Alarm Response (as needed-work order)

DATE: 2-29-24

PERSONNEL: Pat Yodan

WEATHER: Rain

| System Components | Inspect | Clean | Perform Maintenance* |
|---------------------------|-------------------------------------|--------------------------|-------------------------------------|
| Auto Dialer | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> off line |
| Control Panel / PLO | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper Blower | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Stripper Pre-Filters | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Equalization Tank | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Groundwater Transfer Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Carbon Vessels | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Sump Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ext-1 Sequestriant | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Groundwater Sys 29 East Filter 29 West Filter 26 Pre-Filter

| | | | |
|----------------|------------|------|---------------------------|
| Effluent total | 0000132819 | Time | 15:00 |
| EXT-4 total | 0959730 | Time | 15:00 |
| EXT-2 total | 2358753 | Time | 15:00 |
| EXT-3 total | 0000875 | Time | 15:00 * Meter Turned over |
| Trench total | OFFLINE | Time | --- |

Comments: * Repair former gac system Freeze Break Piping it had residual water remaining in the decommissioned piping placed cap on 150 psi Flange Block No w OK no Leaks

* Installed EXT-2R New Sequest Pump Now Operational

* Could Not Access EXT-4 as gate was Locked??

* Reported To Chris GSI

GSI

INTERNATIONAL WAY-SITE REPORT



Routine Inspection & Maintenance (weekly)



Non-Routine O&M/Repair (as needed-work order)



Alarm Response (as needed-work order)

DATE: 3-7-24

PERSONNEL:

Pat Yodor

WEATHER:

clear

| System Components | Inspect | Clean | Perform Maintenance* |
|--------------------------------|-------------------------------------|--------------------------|--|
| Auto Dialer | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> off line |
| Control Panel / etc | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper Blower | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Stripper Pre-Filters | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Equalization Tank | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Groundwater Transfer Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Carbon Vessels | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Sump Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ext-1 Sequestriant | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Groundwater Sys

24 East Filter

24

West Filter

26

Pre-Filter

Effluent total 0000132970 Time 14:50

EXT-4 total 0986361 Time 14:50

EXT-2 total 2438080 Time 14:50

EXT-3 total 0039799 Time 14:50

Trench total 1054904 Time 14:50 off line reported

Comments: * installed cover container for chem pump in EXT-2R

* install New Chem Pump in EXT-4 as it's has failed

GSI
INTERNATIONAL WAY-SITE REPORT

- Routine Inspection & Maintenance (weekly)
- Non-Routine O&M/Repair (as needed-work order)
- Alarm Response (as needed-work order)

DATE: 3-21-24 PERSONNEL: Pat Yodon
 WEATHER: Overcast

| System Components | Inspect | Clean | Perform Maintenance* |
|--------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| Auto Dialer | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Control Panel / PLC | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Air Stripper Blower | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Stripper Pre-Filters | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Equalization Tank | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Groundwater Transfer Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Carbon Vessels | <input type="checkbox"/> OFF | <input type="checkbox"/> | <input type="checkbox"/> |
| Sump Pump | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ext-1 Sequestriant | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Groundwater Sys 24 East Filter 24 West Filter 26 Pre-Filter

| | | | |
|----------------|--------------------|------|-----------------------------------|
| Effluent total | <u>0000 133257</u> | Time | <u>13:40</u> |
| EXT-4 total | <u>1026333</u> | Time | <u>13:40</u> |
| EXT-2 total | <u>2594721</u> | Time | <u>13:40</u> |
| EXT-3 total | <u>0117116</u> | Time | <u>13:40</u> |
| Trench total | <u>7654904</u> | Time | <u>13:40 off line as reported</u> |

Comments: * 1 1/4 Barrels of Sequestal Remains * Bag filters OK. 2 Boxes remain
* EXT-4 Newer SEQ pump switch has failed? it stays ON will not cycle?
* Cochran Mike at site
* When I arrived the site door was open lights were ON NO ONE was at the site? and the door was open not just unlocked.
* Ran into Mike @ Cochran He was at a well hence door left open

